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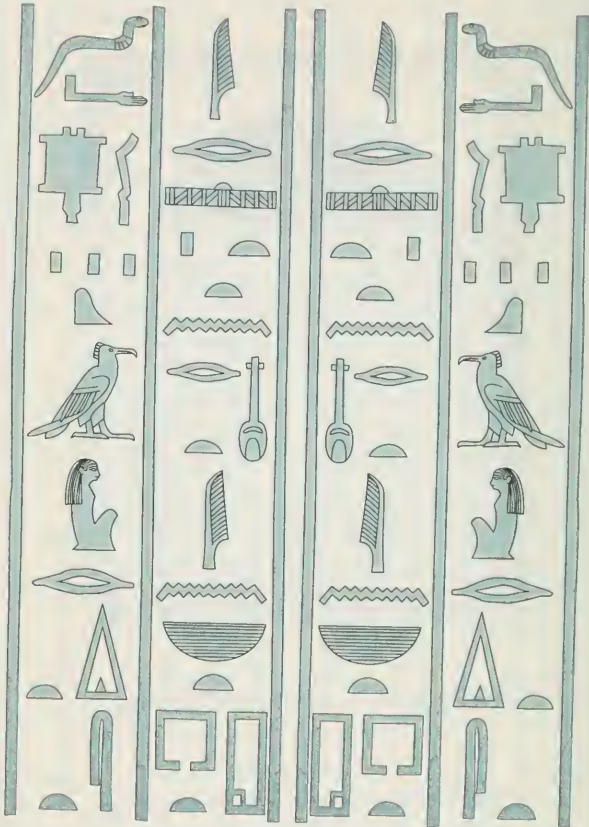




Fig. 1

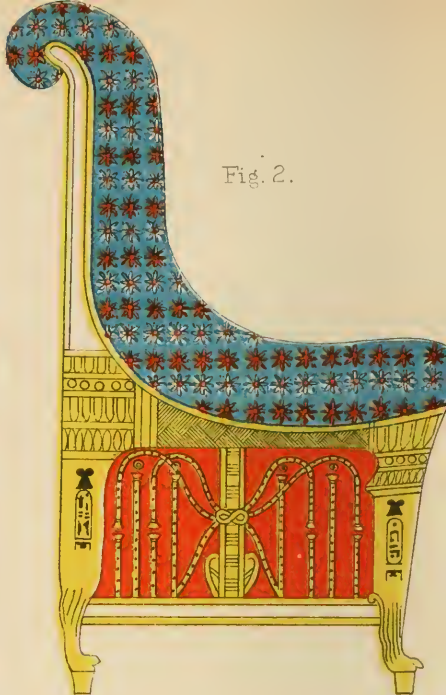


Fig. 2.

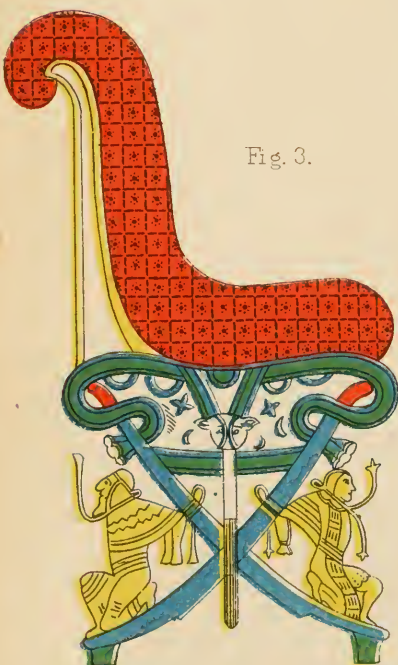


Fig. 3.

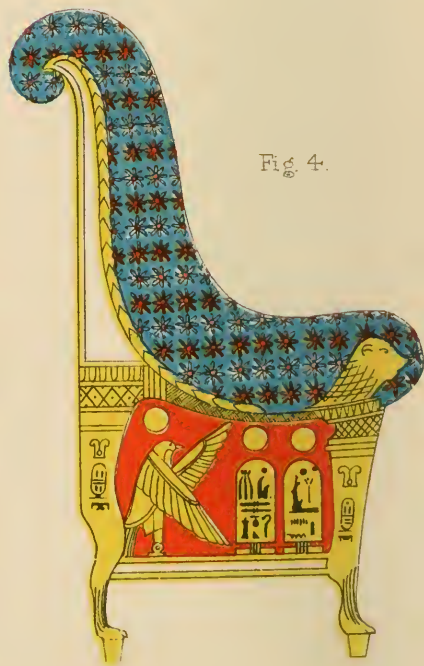


Fig. 4.

THE
MANNERS AND CUSTOMS
OF
THE ANCIENT EGYPTIANS.

BY

SIR J. GARDNER WILKINSON, D.C.L., F.R.S., F.R.G.S.,

Vice-Pres. British Archaeological Association; Hon. Member of the Royal Institute of British Architects; Corresp. M. of the Entomological Soc.; M. of the Ethnological Soc. of London; Hon. Cor. M.R.S.L.; Hon. M. of the Egyptian Institute of Alexandria; Hon. M. of the Ethnological and Oriental Societies of America; Cor. M. of the Bombay Branch of the R. Asiatic Soc.; Hon. M. of the Egyptian Soc. of Cairo; V.-P. of the Cambrian Arch. Assoc.; Cor. M. of the Arch. Soc. of Edinburgh; V.-P. of the Lincoln Diocesan Soc.; Hon. M. of the Ethnol. and Orient. Soc. of New York; Hon. M. of the Archit. Soc. of Oxford; Hon. M. of the Orient. Soc. of Paris; M. of the Inst. of Arch. Cor. of Rome; Cor. M. R. Acad. of Turin; Cor. M. of the R. and I. Acad. of Vienna, etc.

A NEW EDITION, REVISED AND CORRECTED

BY SAMUEL BIRCH, LL.D., D.C.L.,

KEEPER OF THE EGYPTIAN AND ORIENTAL ANTIQUITIES IN THE BRITISH MUSEUM;
PRESIDENT OF THE SOCIETY OF BIBLICAL ARCHÆOLOGY, ETC.

IN THREE VOLUMES.—VOL. I.

WITH ILLUSTRATIONS.

NEW YORK
DODD, MEAD AND COMPANY
PUBLISHERS

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TO
THE EARL OF BEACONSFIELD

This Edition

OF THE

“MANNERS AND CUSTOMS OF THE ANCIENT EGYPTIANS”

IS, BY HIS PERMISSION, DEDICATED
IN GRATEFUL RECOGNITION OF RESPECT SHOWN TO
THE MEMORY OF THE AUTHOR, AND OF
KINDNESS TO HIS WIDOW.

FEBRUARY 2, 1878.

P R E F A C E.

IN order to form an accurate opinion of the manners of an ancient people, it is of paramount importance to inquire into their origin and history, and to trace the progress of those steps which gradually led to their improvement and civilization. To judge impartially of their character, we must examine the comparative state of other neighboring and contemporary nations, and measure it by the standard of the era in which they lived. We should also bear in mind the general habits of that portion of the globe whence they derived their origin, or which they inhabited, and, in contemplating the customs of an Eastern people, avoid as much as possible the invidious comparison of European and Oriental manners. Many of those laws or customs which are wise and beneficial to society in one part of the world are deemed superfluous, and even injurious, in another; and the same system which by some is looked upon as indispensable for their welfare and happiness, would be rejected by others as incompatible with the feelings of an independent spirit.

The necessity of discrimination on this point must, therefore, be evident to every one who considers the subject with a view to truth and impartiality; and, in order to enable the reader to form a just opinion of the character of the Egyptians, I commence the present work with a brief account of the general history and early advancement of that ancient state. But if, as must necessarily be the case, this account is deficient and unsatisfactory, I plead as my excuse the scanty means of information afforded either by the writers of antiquity or by monumental record; and trust that the reader will indulgently consider the difficulties which present themselves in so intricate a question.

If, too, in the date assigned for the accession of Menes, and the era of the 18th Dynasty, as well as some other points of chronology, I differ from the learned Professor Rosellini, it should be remembered that many doubts and discrepancies occur both in chronology and the details of events, even in what is considered the *known* history of other nations.

It would doubtless be satisfactory both to the reader and themselves, if all writers on the subject of hieroglyphics and of ancient Egypt were agreed, and if all their investigations were attended with the same results; but, since a diversity of opinion on a difficult question has a tendency to elicit truth, and finally to establish accurate and impartial evidence, we may cease to regret that it prevails at the commencement of these inquiries. And, indeed, it is highly satisfactory to find that the researches of Dr. Young, Champollion, Rosellini, Major Felix, and my own, have, in most instances, led to similar conclusions.

Professor Rosellini is a man of erudition, and a gentleman, and one whose enthusiastic endeavors, stimulated by great perseverance, are tempered by judgment, and that modesty which is the characteristic of real merit. To be engaged in the same pursuits with him must, therefore, be highly satisfactory, from the persuasion that, however we may differ on some questions, our opposite opinions will be maintained with those feelings which ought to actuate men who labor in the same field and for the same object.

Egyptian history, and the manners of one of the most ancient nations, cannot but be interesting to every one; and so intimately connected are they with the Scriptural accounts of the Israelites, and the events of succeeding ages relative to Judæa, that the name of Egypt need only be mentioned to recall the early impressions we have received from the study of the Bible.

Another striking result derived from the examination of Egyptian history is the conviction that, at the most remote period into which we have been able to penetrate, civilized communities already existed, and society possessed all the features of later ages. We have been enabled, with a sufficient degree of precision, to fix the bondage of the Israelites and the arrival

of Joseph; and though these events took place at an age when nations are generally supposed to have been in their infancy and in a state of barbarism, yet we perceive that the Egyptians had then arrived at as perfect a degree of civilization as at any subsequent period of their history. They had the same arts, the same manners and customs, the same style of architecture, and were in the same advanced state of refinement as in the reign of Rameses II.; and no very remarkable changes took place, even in ever-varying taste, between the accession of the first Usertesén and the death of that conqueror, who was the last monarch of the 18th Dynasty. What high antiquity does this assign to civilization! The most remote point, to which we can see, opens with a nation possessing all the arts of civilized life already matured; and though penetrating so far into the early history of the world, we find that the infancy of the Egyptian state is placed considerably beyond our reach. And if Egypt presents no other attractions, the certainty of its being the oldest state of which we have any positive and tangible records, must awaken feelings of interest to which no contemplative mind can remain indifferent.

It is to be regretted that the partial details relating to the reigns of the early Pharaohs, given by Herodotus and Diodorus, do not sufficiently agree with the more authentic information derived from the monuments, so as to be embodied with this last as a continuous history: but, in order not to omit the accounts of those two writers, I have introduced them separately; which, though in some measure it breaks in upon the thread of the history, does not perplex the reader by the examination of controverted points, and he is enabled to form his own opinion respecting their statements, and the information derived from other sources.

Finding the materials accumulate much beyond my expectations will, I trust, plead my excuse for omitting many subjects and details that could not have been comprised within the limits of this work, unless treated in an imperfect and brief manner, which their importance would not sanction.

It may also occur to the reader that I have repeated some

remarks already introduced ; but this I have sometimes thought preferable to a too frequent reference to the preceding part of the work, especially when they were directly connected with the present subjects.

The first chapter contains remarks on the early state of Egypt, with the lists of kings given by Manetho, Herodotus, Diodorus, and other authors ; and a conjecture is offered on the origin of the Shepherd Kings. I suppose them to have come from Assyria, and to have invaded and taken possession of Lower Egypt, and suggest that this event happened about the period of Semiramis. Some objection, however, may be offered to this conjecture, especially on the plea of the invaders having been a pastoral people, while the Assyrians were an agricultural nation, with all the institutions and customs of a civilization already far advanced, in the time even of Semiramis. We might, therefore, look for them among the wandering hordes of Asia ; and rather suppose them to have been a Scythian tribe, who, at that early epoch, already commenced the casual inroads which they are known to have made in the same direction at subsequent periods. The notion of their having been the founders of the Pyramids is devoid of every shadow of probability.

The fourth chapter treats of the husbandmen, with other members of the second caste ; the laws and government of Egypt in early times, and under the Romans. In the next, the houses, villas, gardens, vineyards, and the processes of making wine and beer, are described. The sixth contains an account of the furniture of their rooms, the entertainment of guests, their musical instruments, and dances ; and afterwards their vases, the preparation and serving of dinner, their games, exercises, and amusements, in the house and out of doors, are described.

The eighth chapter contains the chase of wild animals, fowling, and fishing.

The ninth treats of the arts of the Egyptians ; the early use of glass, and those manufactures in which the sculptures and ancient writers show them to have excelled ; the mode of engraving and sculpturing hard stones ; their fine linen and

other stuffs; the papyrus, and manufacture of paper; potteries; boats and ships employed in war and on the Nile; and the use of tin and other metals.

In chapter the tenth, the style of art at various epochs, the early use of the arch, the mechanical skill of the Egyptians, some inventions of an early period, their dresses, the study of medicine, and numerous customs are introduced.

I cannot conclude without expressing the obligations I owe to the valuable assistance afforded me by Lord Prudhoe, Mr. W. Hamilton, and Sir William Gell, as well as to Mr. Burton (to whom I am indebted for two plates which are copied from his drawings in the tombs of Thebes), and to Mr. Pettigrew. But, while it is a pleasure to offer my acknowledgments for their kindness, it is melancholy to be obliged to accompany them with feelings of deep regret at the death of so excellent a friend as Sir W. Gell. In him the literary world has sustained a great loss: but friendship and gratitude combine to increase my sorrow; and I can never forget that, for all the satisfaction I have derived from the prosecution of researches to which he first directed my attention—however unimportant their results—I am indebted to his kindness and instruction. To many has he lent his powerful assistance in those studies, the advancement of which his ‘classic’ talents so ably promoted: no distinction of nation ever prevented his generous mind from aiding others in investigating subjects of which he possessed such an extensive knowledge, and no deficiency of good feeling and liberality checked his exertions, or damped his zeal, in furthering the object of those who followed the same pursuits.

‘Multis ille bonis flebilis occidit.’

NOTE. — Into this Preface to the First Edition some portions of those appended to the Second Edition, and the Second Series, have been interwoven.

This Preface was written in 1836, when Sir Gardner Wilkinson’s sorrow for the friend of his youth was very fresh in his heart. It was Sir William Gell who, perceiving his enthusiasm for antiquities, the accuracy (even at that early date) of his pencil, and the advantage he possessed in his hereditary love for classical learning, determined the fate of his life by persuading him to abandon his intention of entering the army, and to devote his life to the study of Egyptian and other archæology.

Sir William Gell was one of the first of that devoted band of friends, all older than himself, and all men of honored names, whom Sir Gardner Wilkinson won in his early life—men whose names have ever been associated with his, and whose deaths were the ever-present sorrow of his manhood and his age.

P R E F A C E

TO

SECOND PART OF FIRST EDITION.

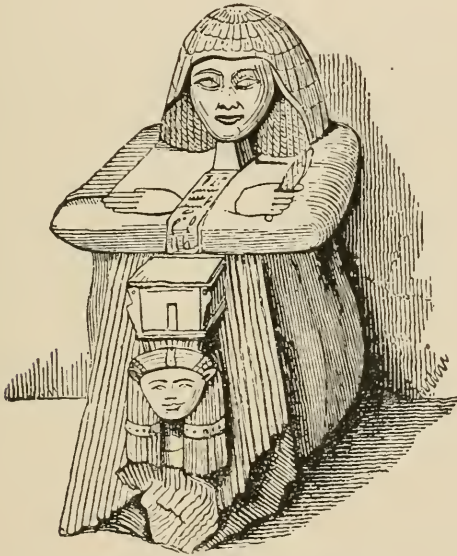
IN the previous portion of this work, I was under the necessity of omitting certain subjects, which, though intimately connected with the manners and customs of the Ancient Egyptians, could not have been introduced without increasing it to a disproportionate size. But in order to fulfil my original intention of giving a new summary view of the more striking usages of the people, I have now put together those which were omitted in the previous volumes; and if there be any want of connection in the agriculture and religion, it will be explained by the reason already stated.

In offering my remarks on so obtruse and mysterious a subject as the religion of the Egyptians, I must observe that my view has been rather to present the results of observations derived from the monuments, than to suggest my own opinion respecting it: feeling persuaded that the progress of discovery in hieroglyphical literature will at length explain the doctrines of that people, without the necessity of unsatisfactory and doubtful conjecture. Whatever statements I have ventured to make are open to correction, and await the sentence of more matured opinions derived from the experience of future discoveries.

Many interesting comparisons might be brought forward of the religious notions of the Greeks, Hindoos, and others, with those of the Egyptians; but a minute examination of them would lead to a lengthened disquisition, which neither the limits of this work, nor the taste of the generality of readers, would permit. Those who are interested in the subject will find their curiosity

amply repaid by a reference to the work of Dr. Prichard, and to the various publications which treat of the religions of other nations. They will find some striking analogies in most of them, which appear to connect them in a greater or less degree with each other, and which, by proclaiming a common origin at a most remote period, tend, like discoveries in language and other modern investigations, to point out the important truths of the Mosaical history of the world.

LONDON, July, 1840.



Statue of Rui, a priest, from Thebes.

British Museum.

PREFACE
TO
THE PRESENT EDITION.

THE present edition of the 'Manners and Customs' has been prepared from the notes and manuscript which the late Sir Gardner Wilkinson left behind, with the addition of fresh matter contributed by the Editor. In order to distinguish the respective contributions, the initials G. W. have been placed after the new notes and text of the Author, and S. B. after insertions into the original text and notes appended by the present Editor, so as to enable the reader to discriminate between the two new portions. Very little of the original text has been omitted, and only those statements and opinions which the progress of science no longer regards as useful or correct; while new views and facts acquired by the progress of Egyptian research have been embodied in notes or inserted in the text.*

With the progress of research and the frequent publication of fresh monuments and inscriptions — for which students are mainly indebted to the labors in this country of the late C. W. Goodwin, P. Le Page Renouf, Canon Cooke, and Professor Lushington; in Germany to those of Professors Lepsius, Brugsch-Bey, Duemichen, Eisenlohr, and L. Stern; and in France to those

* The Appendix to vol. iii of the old edition has been omitted, as the information there afforded will be found in the 'Handbook for Travellers in Egypt,' by the same Author. It was also desirable to bring the contents of the five original volumes into the more convenient form of the three of the present edition.

of M. Chabas, Revillout, Maspero, and Pierret, besides those of M. Naville of Geneva and M. Golenischeff of St. Petersburg — the materials have increased in some branches : for example, those derived from the numerous writers upon Egypt, and translators of hieroglyphical texts. The information derived from the classical authorities of Greece and Rome has become, by the light of the learning of the last half-century, of secondary value. Egyptian ideas deduced from Egyptian sources, having far more importance to the student and reader than those transmitted from classical writers, have been given wherever practicable.

The great merit of the acute observation of the Author, and the exhaustive illustrations of Egyptian manners and customs as depicted by the monuments, have made the present work a text-book on the subject, both for the general public and individual students ; its chief excellence consists in the great trouble which the author took in explaining and comparing Egyptian and Greek notions.

It has been necessary to make alterations in the orthography of a few of the leading names, in order to bring the work up to the standard adopted by Egyptologists at the present day. The system of transliteration of Egyptian words and names is still in a transitional state ; but, in the interest of comparative philology and general science, it is hoped that some final settlement, such as was proposed at the Congress of Orientalists held in London in 1874, will soon be universally adopted. This system has been followed wherever the Egyptian words are cited in the native form, but not when they are mentioned by classical authors.

The work thus reappears in the present edition in the form most acceptable to the general reader, and as best calculated to diffuse a knowledge of the manners and customs of one of the most remarkable peoples of ancient civilization.

The Editor must express his deep obligation to Lady Wilkin-son for notes and additions supplied from the manuscripts of her late husband, who continued to the last his Egyptian studies and researches ; he has also to thank Mr. William Chappell for some

observations on Egyptian music; and his son, Mr. Walter de Gray Birch, for general assistance throughout the progress of the work, and for the preparation of an index of a more comprehensive character than those of the previous editions.

S. BIRCH.

LONDON, February 9, 1878.



Propylon. (Mystically the door represents Osiris, the towers Isis and Nephthys. — S. B.

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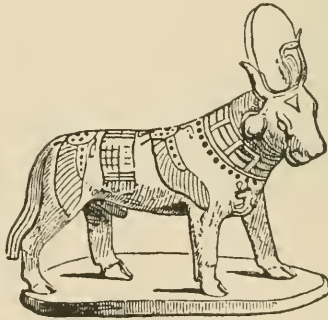
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Harper.

THE

ANCIENT EGYPTIANS.



VIGNETTE A. —The Pyramids, during the inundation, from near the fork of the Delta.

CHAPTER I.

Origin of the Egyptians — Slow Increase of the Delta — The *Ægyptus* of Homer — Ethiopia sometimes put for the Thebaïd — Early State of Society — The Hunter, Shepherd, and Agriculturist — Hierarchy of Egypt — Menes the first King — Neither Osiris nor any other Deity ever supposed by the Egyptians to have lived on Earth — Period elapsed from Menes to the Persian Invasion — Oldest Monuments of Egypt — The Pyramids — Usertesen contemporary of Joseph — The Pastor Kings not the Jews — Early Advancement of Egypt, from the Monuments and Scripture History — Nothing certain before Usertesen I.

THE oldest and most authentic record of the primeval state of the world is unquestionably the Scripture history; and, though the origin of its early inhabitants is only traced in a general and comprehensive manner, we have sufficient data for conjecture on some interesting points.

[The Egyptian tradition of the origin of mankind referred at a later age the creation of man to the demiurgos Chnoumis, who was supposed to have made man out of clay upon a potter's wheel. Another legend, also of comparatively recent growth, attributed the dispersion of mankind to the god Harmachis,¹ one of the forms of Ra, when he triumphed over his enemies in the Apollonopolite nome. Those who escaped the massacre of the war fled to the south and became the inhabitants of Kush, the fugitives of the north were turned into the Amu, those who sought the west the

¹ Chabas, 'Études,' p. 1. Naville, 'Mythe d'Horus.'

Tamahu or Libyans, and the others who escaped to the east the Shasu. Such were the Egyptian notions of the four great races of the family of mankind which inhabited the earth. Other demiurgic legends called Tump the creator of existences and assigner of the color of the different types: yellow to the Semetic; pink, or white, to the Aryan; and black, and copper-color, to the Nigritic races.¹ The first period of national existence was supposed to be a kind of golden age, in which the different deities of Egypt reigned in succession, and were succeeded by a race of primitive inhabitants called the *Shasu en Har*, or 'Followers of Horus,'² who immediately preceded the first monarch of the dynasties of mortals. There is apparently some indication that the Egyptians considered themselves autochthonous inhabitants of the Nile; but the general idea is that they entered Egypt from the East by the Isthmus of Suez, repulsed the primitive Nigritic inhabitants, and established themselves in the Valley of the Nile.]

Every one who considers the features, the language, and other peculiarities of the ancient Egyptians, will feel convinced that they are not of African extraction, but that, like the Abyssinians and many inhabitants of the known valley of the Nile,³ they bear the evident stamp of an Asiatic origin; and Juba, according to Pliny,⁴ affirms that 'the people of the banks of the Nile, from Syene to Meroë, were not Ethiopians,⁵ but Arabs.' And if feature and other external appearances are insufficient to establish this fact, the formation of the skull, which is decidedly of the Caucasian variety,⁶ must remove all doubt of their valley having been peopled from the East: and some may even consider it directly alluded to in the Book of Genesis,⁷ where Ham, the son of Noah, and his immediate descendants, are said to have inhabited the lands of Ethiopia, Egypt,⁸ Libya, and Canaan. The name of

¹ Grebaut, 'Hymne à Ammon,' p. 11.

² Maspero, 'Histoire Ancienne,' p. 18.

³ That is, the Neel-el-Azrek, 'the Blue,' or more properly 'the Black Nile,' in contradistinction to the Neel-el-Abiad, 'the White (River) Nile.' Azrek is commonly used to signify black as well as blue.

⁴ Plin. lib. vi. 34.

⁵ That is, *Blacks*.

⁶ The Caucasian type of the Egyptians, as deduced from the monuments, is generally admitted (Maspero, 'Histoire Ancienne,' p. 15; Morton, 'Crania Ægyptia'; 'Intern. Congress of Orientalists,' Professor Owen, Svo. London, 1876, p. 355), although

they have been supposed by Professor Huxley to have descended from the primeval inhabitants of an ancient continent, and to resemble the Australians. — S. B.

⁷ Gen. x. 1-6.

⁸ Mizraim, or Mizrim, a plural word applied to Egypt (Gen. i. 11, *et passim*), is the Hebrew mode of expressing the 'two regions of Egypt,' so commonly met with in the hieroglyphics, or the 'two Misr,' a name still used by the Arabs, who call all Egypt, as well as Cairo, Musr or Misr. Thummim or Thmim is in like manner 'the two truths.'

Ham¹ is, in fact, the same as that of Egypt, Khem, or Cham; and Moses may have pointed out the eastern origin of the Egyptians by introducing him as a son of Noah. But it is more reasonable to suppose that a colony of Asiatics settled in Egypt at a subsequent period, and that to this cause we ought to attribute the marked distinction between the head of the Egyptians and that of the Negroes.

There has always been a striking resemblance between the Egyptians and Asiatics, both as to their manners, customs, language, and religion; and some authors have considered the valley they inhabited to belong to Asia rather than to Africa:² others, again, have divided the country into two parts, the east and west banks of the Nile,³ assigning the former to Asia, the latter to Africa, and taking the river as the boundary line of the two continents. In manner, language, and many other respects, Egypt was certainly more Asiatic than African.

There is no appearance of the Hindoo and Egyptian religions having been borrowed from one another, which many might be induced to conclude from their great analogy in some points, yet it is not improbable that those two nations may have proceeded from the same original stock, and have migrated southwards from their parent country in Central Asia.⁴

It has been the opinion of many that colonization and civilization descended the Nile from Ethiopia, and that the parents of Egyptian science came from the land of Cush. But this notion appears from modern investigation to be totally at variance with fact; and the specimens of art that remain in Ethiopia are not only inferior in conception to those of the Egyptian school, but are deficient in that character which evinces originality.⁵ Indeed, I question if the name Ethiopians was exclusively applied to the inhabitants of the country lying beyond Syene; and there is abundant reason to believe, as I shall presently show, that Ethiopia, when mentioned in the sacred history and by many profane authors, in conjunction with Egypt, frequently signified the Thebaid, the school of learning and the parent of Egyptian science.

Ethiopia, though a vague name, was applied to that country, lying beyond the cataracts, which in the Scriptures, and in the

¹ Ham is also put for Egypt, as in Psalm lxxviii. 51; and other parts of Scripture.

² Plin. v. 9.

³ [Pliny, vi. 29, who founded Heliopolis near Memphis. — G. W.]

⁴ [There are peculiarities in the form of the Egyptian head, which is very prominent at the back. — G. W.]

⁵ Also later in point of time. — S. B.

reign, would suffice for the formation of the *whole* Delta? Remarks which apply with still greater force to Pelusium, Taposiris, and Canopus, which actually stood upon the sea-shore: for, as the learned Bochart justly observes, since the Egyptians themselves reputed the Tanitic Mouth, and the towns of Busiris, Taposiris, Butus, and Pelusium, to have existed even in the early time of Osiris and Horus, they must have known them not to be of recent date: and Homer allows Menelaus to have come to Canopus.¹ And that Tanis² was already built in the age of Rameses the Great, we have evidence from the sculptured monuments now existing in its ruins, in addition to the positive authority of Scripture, Moses himself assuring us that it was founded long before the Exodus, seven years after the town of Hebron.³

It is, then, evident that neither was the period elapsed between the Deluge and the building of Tanis sufficient to form the Delta, nor the constant accumulation of the alluvial deposit of the Nile capable of making so perceptible a change in the extent of that district, as to authorize us to suppose the upper parts of the country peopled and civilized, while the Delta was a marsh; how much less then can we suppose Ethiopia to have been already inhabited by the ancestors of the future colonizers of Egypt, while that part of the valley lying below the cataracts of Syene was undergoing its formation?

Much consequence has been attached to an expression of Homer, that 'the distance from the Isle of Pharos to *Αἴγυπιος* was as much as a vessel with a fair wind could perform in one day,' and this is constantly adduced as a decisive proof of the great accumulation of alluvial soil in the Delta,⁴ and of its rapid advances into the Mediterranean, since the era of the Trojan war. But a very slight acquaintance with the situation of the Isle of Pharos, and the nature of the ground on which Alexandria is built, ought to have prevented so erroneous a conclusion; and if we readily account for the misconstruction of the *Αἴγυπιου προπέλοισ*⁵ of

¹ Bochart, Saera, hb. iv. c. 24.

² The remains of the Hyksos or Shepherd Kings, who reigned prior to the eighteenth dynasty, have been found at Tanis. (Mariette, 'Lettre à M. le Vicomte de Rougé sur les Fouilles de Tanis,' p. 16.) Abandoned or neglected till the time of Rameses, it was then called Paramesses. (Brugsch, 'L'Exode et les Monuments Égyptiens,' 1874.)—S. B.

³ Numbers xiii. 22: 'Hebron was built

seven years before Zoan.' It already existed in the days of Abraham. 'And Sarah died in Kirjath-arba: the same is Hebron.' (Gen. xxiii. 2; conf. Josh. xv. 13, and Judg. i. 10).

⁴ Plutarch, de Iside, s. 40.

⁵ Odys. Δ 355. By the harbor and fresh water at the Isle of Pharos Homer evidently alludes to the site of the modern Alexandria, close to the island. [Conf. Diodor. i. 31.—G. W.]

the poet, we are surprised at the notion which extends the river and its alluvial deposit *over the space between* the Canopic mouth and the Pharos, hitherto unwashed by the fertilizing waters of the rising Nile. [So trifling is the accumulation of soil at the shore of the Delta, we can only suppose that the quantity of mud constantly taken down to be deposited in the sea must be carried off by strong currents setting from the coast of Syria, which sweep off the greater proportion of the mud from the Mediterranean shore: and the lightness of the Nile water, though holding so much mud in suspension, carries it over the dense salt water of the sea to a distance, as *some have supposed*, of 40 miles from the shore. — G. W.] And if a certain deposit does take place *in the harbor* of Alexandria, it is very trifling, and by no means capable of having united Pharos to the shore, which was done artificially¹ by means of the Heptastadium. [Seven stadia from the shore, or three-quarters of a mile from the inner or eastern harbor. Though the depth of the soil has greatly increased, and is still increasing, in various ratios in different parts of the valley, the first deposit did not take place after man existed in Egypt; and as marine productions have not been met with in boring to the depth of 40 feet in the Delta, it is evident that its soil was deposited from the very first on a space already above the level of the Mediterranean. The formation of the Delta of Egypt is not like that of some other rivers, where the land has been protruded far into the sea; on the contrary, the Nile, after pursuing its course through the alluvial soil, enters the sea at the same distance north of the Lake Mœris as it did in the age of the early kings of Egypt. The sites of the oldest cities are as near the sea-shore as when they were inhabited of old; and yet the period now elapsed since some of them were built is nearly double that between Menes and Herodotus. The Pharos Isle and the coast of Alexandria both being *rock*, the distance between them has always been the same. Another great reason for the Delta not encroaching on the sea is that the land is always sinking along the north coast of Egypt (while it rises at the head of the Red Sea); and there is evidence to show that the Mediterranean has encroached, and that the Delta has lost instead of gaining, along the whole of its extent from Canopus to Pelusium. The distance that the Mediterranean is discolored by the Nile during the inundation is

¹ [V. Amm. Marcel 22, p. 342, edit. 1681; Cæsar, 'de Bell. Civ.' lib. iii. *passim*;

Strabo, xvii. p. 545, edit. 1587; Josephus, 'Ant.' xii. c. 2, s. 13. — G. W.]

very great, and the same takes place in a minor degree at the mouths of rivers on the Syrian coast, but without their forming any deltas; nor is the shallow sea off the coast of Egypt more a part of the Delta of the Nile now than when sounded in Herodotus' time, about 2300 years ago; and 11 orgyies (or fathoms) at a day's sail from the coast would alarm a sailor even at the present day. For you only come into 11 fathoms water at about 12 or 13 miles off the coast, about Abukir; and at 25 or 30 miles you have 60, 70, 80, and 90 fathoms, with sand and mud. At five or six miles from the mouth of the Nile the water on the surface is nearly fresh, and the bottom mostly a stiff mud. The longest day's sail, according to Herodotus,¹ is 700 stadia, about 79½ English miles, or 540 stadia, about 61 miles, where the soundings would be at least the same number of fathoms. — G. W.] The Heptastadium, increased in breadth by many subsequent additions, now forms the base of the chief part of the modern city. Ancient Alexandria, the successor of the town of Rakôtis, stood on the *rock* of the Libyan desert, which is still beyond the reach and above the level of the inundation; and the distance from the line of the coast to Pharos is the same as in the days of Homer. The error respecting its having been a day's journey from Egypt originated in the misinterpretation of the word *Ægyptos*, which is used by the poet to designate both the Nile and Egypt;² and that the river was so called in ancient times is testified by the authority of Diodorus, who states that Nileus, one of the early monarchs³ of the country, transferred his name to the stream, 'which previously bore that of Ægyptus.'⁴ Arrian⁵ again justly observes, 'that the river, now called by the Egyptians and others Nile, is shown by Homer to have been named Ægyptus, when he relates⁶ that Menelaus anchored his fleet at the mouth of the Ægyptus;' and the bare inspection of the verse to which he alludes suffices to prove his remark to be correct. It is, then, to the Nile, not to the coast of Egypt, that Homer alludes: and thus the argument derived from his authority must cease to be brought forward in support of the great

¹ iv. 86.

² Various conjectures have been made as to the name of Egypt; lately it has been supposed to be derived from *Ita-ka-ptah*, the sacred name of Memphis. — S. B.

³ Diodorus places him as the predecessor of Chembres, who erected the great pyramid.

⁴ Manetho says Egypt took its name

from Sethosis, who was also called Ægyptus, and was brother of Armaïs. (Josephus, *contra Ap.* lib. i. c. 15.) Aulus Gellius tells us Egypt was formerly named Aeria (xiv. 6). Diodorus, i. 19.

⁵ Arr. *Exped. Alex.* lib. v. and lib. vi. [*Conf. Amm. Marcell. lib. xxii. p. 333; edit. 1681.* — G. W.]

⁶ *Odys.* Δ 477, and Ξ 257.

encroachments of the Delta, and of the constant advance of the land into the receding sea.

To any persons who has examined the levels of the alluvial deposits of the Nile in various parts of its course, as from the first cataract to its mouth at Rosetta,¹ it is well known that the perpendicular stratum of soil, if I may so call it, decreases in thickness as it approaches the sea; and thus at Elephantine the land has been raised about nine feet in 1700 years, at Thebes about seven, and so on, gradually diminishing to the mouth. There, indeed, the deposit is lessened in a very remarkable degree, much more than in the same decreasing ratio, in consequence of the greater extent of the land, east and west, over which the inundation spreads; so that, in a section representing the accumulated soil and the level of the low Nile, the angle of inclination would be much smaller from the fork of the Delta to the Sea, than from the Thebaïd to the Delta. And this is satisfactorily proved by the increase of the banks and the surface of the country at Elephantine, Thebes, Heliopolis, the vicinity of old Cairo, and other places, where the positions of ancient monuments attest the former levels of the land's surface, and enable us to ascertain the increase within a known period. Around the base of the obelisk at Heliopolis, erected by Usertesen I. about 1700 years before our era, the alluvial soil has accumulated² to the height of five feet ten inches;³ and, comparing this with Elephantine, we shall find that a monument placed there at the same period would have been buried to the depth of about nineteen feet. Heliopolis stood to the south of the Delta; and the diminution northwards, for every mile, in an expanse of increasing breadth, must have been proportionately greater as it approached the sea, till at the shore it became almost imperceptible, even after the lapse of many ages.⁴

¹ The banks during the low Nile are upwards of 30 feet high in parts of Nubia, in middle Egypt 20, and decrease as they are nearer the mouth.

[I find Shaw calculates 'somewhat more than a foot in a hundred years' (c. ii. s. 3). — G. W.]

² [The water-mark, to which the Nile rises, is 5ft. 10in. on the W. side, and 5ft. 6in. on the N. side, above the level of the ground. — G. W.]

[See, also, a full examination of this question in a paper by Sir Gardner Wilkinson, 'On the Present and Former Levels

of the Nile.' Journ. Roy. Geog. Soc., vol. ix., 1839, p. 431. — C. C. W.]

³ In my 'Egypt and Thebes' (p. 313), I have said 'between seven and eight feet.' This was from information I received at Cairo, and suspecting it to be erroneous, I sent to have it ascertained, and found it to be as stated above.

⁴ Some attempt to determine the age of the civilization, by the depth in the alluvial Nile mud at which objects have been found, has been made by L. Horner, 'On the Alluvial Land of Egypt,' in the Philosophical Transactions, 1858, p. 75,

Having endeavored to show that no argument can be derived from the appearance of the Delta, to favor the supposition of this district having been formed at a period when the upper part of the country was already inhabited, it is necessary to observe that I limit my remarks exclusively to the Nile, whose nature is very different from that of most rivers, and particularly those whose deltas have been created and rapidly increased by materials brought down by their waters, and deposited at their mouths. These, consisting of trees and other vegetable productions, have tended to form here and there a nucleus for the construction of islands, afterwards connected with the mainland, and consolidated by alluvial deposit and fresh materials constantly adhering to them: but this peculiarity is totally unknown at the mouth of the Egyptian Nile.

It is not my present intention to enter into any speculation upon the formation of the alluvial land of Egypt, and its Delta; and much less shall I attempt to fix the time required for such an event. This would be irrelevant and presumptuous, even if we were not limited to the period elapsed between the Deluge and the age of those early Pharaohs, in whose time all the country, as it now exists, was densely peopled. Nor would any one be permitted to assert the priority of a *nation* from the apparent antiquity of the soil which clothes the rocks of the country. But of this we may be assured, that the formation of Egypt and its extensive Delta is beyond the reach of our inquiry, and of a date long anterior to the epoch at which that country or Ethiopia was inhabited.

With regard to the word Ethiopia, used by ancient authors, we have many reasons for supposing it was sometimes intended to designate, or was confounded with, the Thebaid or Upper Egypt. The expression of Pliny, 'Ethiopia was evidently renowned and powerful, even to the time of the Trojan war, . . . and extended its empire over Syria,'¹ though he is speaking of Ethiopia proper, can only have been borrowed from a tradition relating to the Thebaid, since the Diospolite monarchs ruled and received tribute from Ethiopia, and actually did extend their dominion over Syria; which the Ethiopians could not have done without first obtaining possession of Egypt, and that, too, at a period when

which gives 12,000 years at the assumed rate of deposits of 3.5 inches per century at Memphis, from the fragments of vase

found at 70 feet; but the whole inquiry is for many reasons more than unsatisfactory. — S. B.

¹ Plin. vi. 35.

the Pharaohs were in the zenith of their power. Nor is the assertion of the prophet Nahum, that Ethiopia and Egypt were the strength of Nô, less remarkable; Nô, or, as the Hebrew gives it, Na-Amûn, being the name of Thebes.¹ According to Aristotle,² 'the Thebaïd was formerly called Egypt;' the rest of the country being deemed of minor importance, and the Thebaïd bearing this name *par excellence*: and Herodotus says, that 'Egypt in ancient times was called Thebes.'³ Whence it may be supposed that Lower Egypt was conquered by, or annexed to, the Thebaïd, or, as it was then styled, Egypt; and, if this be true, we can have no hesitation in ascribing to it the precedence of the upper country, [in the hieroglyphic legends; unless it be from the eighteenth Theban dynasty having driven out the Shepherds and again brought all Egypt under one sceptre; or from the early precedence of This, of which Menes was a native. — G. W.]

The question respecting the comparative antiquity and civilization of the Egyptians and Ethiopians has now become obsolete. I do not, therefore, detain the reader by any further mention of the numerous arguments to be adduced from the monuments of both countries, to decide the priority of the Egyptians, which even those ancient writers, whose authority some have supposed to militate against that opinion, do not fail to prove: Diodorus⁴ allowing that 'the Thebans consider themselves the oldest of men, and affirm that philosophy and astrology were invented by them,' in no way acknowledging the Ethiopians as their predecessors, and Herodotus⁵ distinctly stating that the manners of the Egyptian troops who deserted from Psammetichus had a very sensible effect in civilizing the Ethiopians.⁶

¹ Nahm iii. 8, 9. This passage is very interesting. 'Art thou better than populous Nô, that was situate among the waters, that had the waters round about it; whose rampart was the sea, and her wall was from the sea? Ethiopia and Egypt was her strength: Put and Lubin were thy helpers.' The word יַרִימִים *Iarim*, 'the rivers, is the Hebrew plural of the Egyptian word *iaro*, 'River,' applied to the Nile. The word *sea* is, in Hebrew, water or waters, and does not apply exclusively to the sea. 'Populous Nô' should be Nô or Na-Amûn, taken from the Egyptian HI N AMOYN or AMOYN-III, 'the abode of Amûn,' or Diospolis, Thebes. There is no appearance of the name 'Egypt' on the ancient monuments, where the country is called 'Chemi,' repre-

sented in hieroglyphics by the tail of a crocodile. Chemi, 'the black land,' 'the land of Ham,' or of Khem (the Egyptian god Pan, or the Generative principle of Nature), is said by Plutarch to have been so called from the blackness of the soil.

² Aristot. Meteorol. lib. i. 14.

³ Herod. ii. 15.

[Strabo, on the other hand, speaks of the whole of Egypt being the low country, and then mentions the Thebaïd separately (lib. xvii. p. 563; edit. 1587). — G. W.]

⁴ Diod. i. 50.

⁵ Herod. ii. 30.

⁶ [A people who elected their kings for their physical powers (Herod. iii. 20), proving that they still had the habits of uncivilized races. — G. W.]

Of the state of Egypt at the epoch when the arrival of Joseph, or the Exodus of the Israelites, took place, some little information may be obtained from the Bible, and from the monuments that remain, both of which bespeak a people already far advanced in the arts and customs of civilized life. And though we must remain ignorant of their origin, and of the form of government at the commencement of Egyptian history, we may venture to explain, from reason and probability, some of the causes of their early and rapid progress.

But the primeval history of states, especially at so remote an epoch, must necessarily be a matter of pure conjecture, since they are beyond the reach of authentic records; and if those nations themselves had handed down to us what they deemed their real annals, we should find them so complicated and improbable, that it would be out of our power to separate truth from fiction. Such is the character of the uncertain fragments of Manetho, preserved by later writers; and even the early history of the Greeks is so incumbered with allegory, and a mysterious system of mythology, that it is difficult to distinguish between real events and religious fable: a mode of uniting history and a metaphysical theory not peculiar to the Greeks, but adopted by other, perhaps by all, nations of antiquity; and, wherever we have been able to examine the basis on which it was constructed, a striking similarity is observable in its general outline.

Whether Egypt was originally governed by an hierarchy or a monarchy is still a question. It is true that infant states are more usually governed by some individual, pre-eminent for his abilities either as a statesman or a warrior, than by a body of persons with equal authority; but, as the former opinion appears to be less at variance with what history has imparted to us, it is more reasonable to conclude that, like Judæa before the time of Saul, Egypt was ruled by an hierarchy, until the accession of its first king, Menes.

Any attempt to fix the precise era of this political change must be fruitless and unsatisfactory: if, however, it is beyond our reach, there are positive grounds for the conviction, that no Egyptian deity was ever supposed to have lived on earth:¹ and

¹ *Vide* Herod. ii. 143. The priests also assured him that no deity had ever lived on earth (*Ibid.* ii. 142); and Plutarch, de Iside, v. 21, observes that the inhabitants of the Thebaid entertained the same

opinions. Works of imagination, however, represented the gods as coming on earth and walking there, and the historical lists supposed that they reigned on earth. — S. B.

the story of Osiris's rule in this world is purely allegorical, and intimately connected with the most profound and curious mystery of their religion. And so great was their respect for the important secret, and for the name of Osiris, that Herodotus¹ scrupled to mention him; and Plutarch² says the Egyptian priests talked with great reserve even of his well-known character as ruler of the dead.

The Egyptians justly ridiculed the Greeks for pretending to derive their origin from deities. They showed Hecataeus and Herodotus a series of three hundred and forty-five high priests, each of whom, they observed, was 'a man, son of a man,' but in no instance the descendant of a god: thus censuring the folly of Hecataeus, who claimed a deity as his sixteenth ancestor. Such is the meaning of the expression in Herodotus,³ 'a *piromis*, son of a *piromis*:' and it is singular that the historian should not have understood the signification of the word *rômi*,⁴ man, or *pirômi*, the man, as the sense alone suffices to point it out; and his translation proves how ignorant he was of the language of the country in which he travelled. Indeed, the information of Herodotus was frequently of a very imperfect kind, owing sometimes to an excess of credulity, of which the humorous Egyptians gladly took advantage in a Greek, and sometimes to a want of scrutiny, as may be seen in the account he gives of the sources of the Nile.⁵

The kings of Egypt are arranged by Manetho in twenty-six dynasties, from the time of Menes to the invasion of Cambyses, which happened B.C. 525;⁶ but whether any dependence can be placed on the names and number of the kings before the accession of the eighteenth dynasty, is a matter of great doubt;⁷ and some of the authors to whom we are indebted for the fragments of his work disagree in their arrangement. Nor do the monuments render us any assistance in this portion of the early history; though the great similarity in the names and order of the monarchs, in the eighteenth and some of the succeeding dynasties, suggests the probability of the original work of Manetho having been derived from authentic sources.

¹ Herod. ii. 86, *et alibi*.

² Plut. de Is. s. 79.

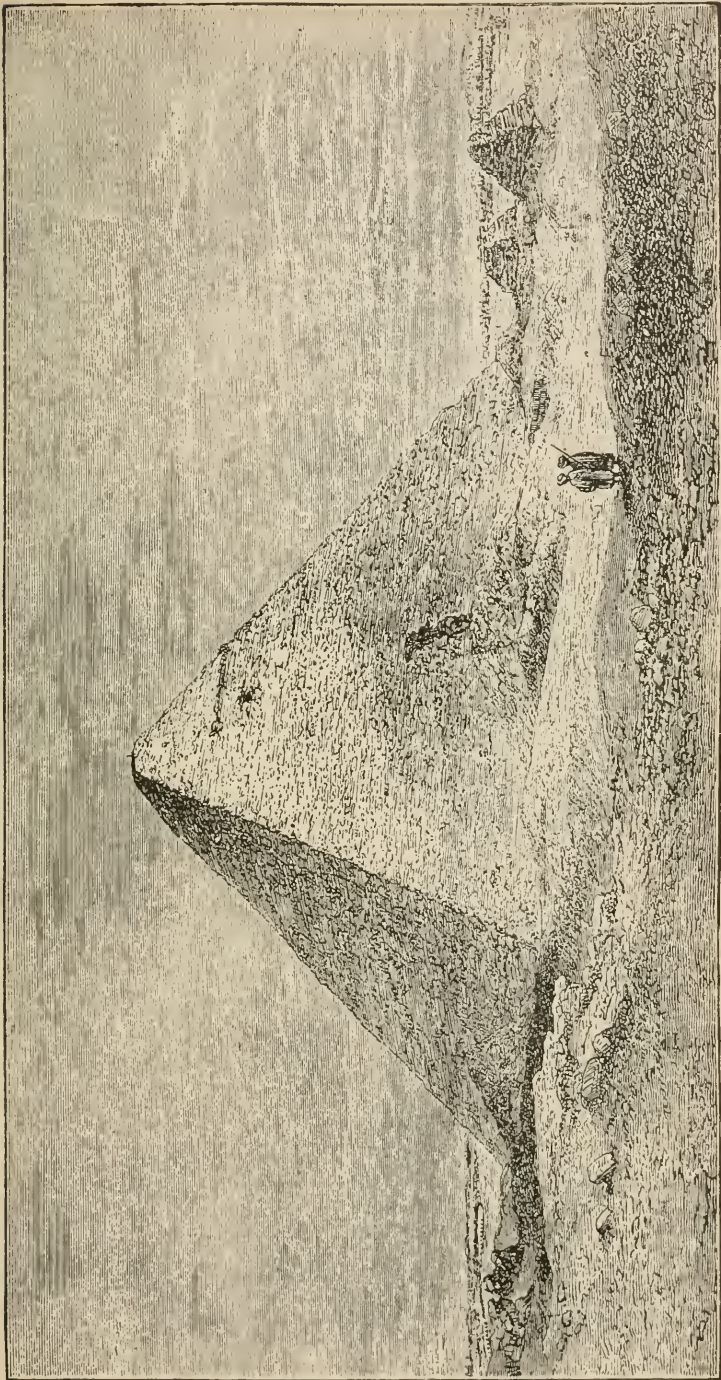
³ Herod. ii. 143.

⁴ *Rômi* in the old language did not signify 'man,' which was expressed by *rot*. The word *rômi* is found in the later demotic and Coptic. — S. B.

⁵ Herod. ii. 28.

⁶ The last received date is B.C. 527. — S. B.

⁷ Although the exact number of the kings before the eighteenth dynasty is not known, the names of most of the monarchs now are. — S. B.



View of South side of Great Pyramid.

Gizeh.

One great difficulty arises from the long duration assigned to the Egyptian monarchy: the sum of years from Menes to the Persian invasion being, according to Manetho, about 4750 years, without reckoning the fourteenth dynasty; and Herodotus' account, who was assured by the priests that 330 kings succeeded that prince,¹ requires, on an average of fifteen years to a reign, about 4950 years for the same period. A similar objection applies to the statements of Diodorus and other writers; but, as the examination of controverted questions can offer little interest to the reader, I shall only venture a few remarks on the period previous to the arrival of Joseph.

The oldest monuments of Egypt, and probably of the world, are the pyramids to the north of Memphis;² but the absence of hieroglyphics, and of every trace of sculpture precludes the possibility of ascertaining the exact period of their erection, or the names of their founders. From all that can be collected on this head, it appears that Suphis and his brother Sensuphis³ erected them about the year 2120 B.C.;⁴ and the tombs in their vicinity may have been built, or cut in the rock, shortly after their completion.⁵ These present the names of very ancient kings, whom we are still unable to refer to any certain epoch, or to place in the series of dynasties; but whether they were contemporary with the immediate predecessors of Usertesen,⁶ or ruled the whole of Egypt, is a question that I do not as yet pretend to answer.

Previous to the accession of the first Usertesen, who probably

¹ L. ii. s. 100. He may mean 330 kings from Menes to Amasis, though he says to Mæris; and in s. 143, he speaks of 345 kings and high priests, and in s. 142, of 341 generations before Sethos. He confounds reigns with generations. For the chronology of Herodotus, cf. Lepsius, 'Einleitung.'—S. B.

² Altogether, about sixty-six pyramids are known. The oldest is that of Senefru of the fourth dynasty at Meidoum prior to those of Cheops and Cephren or the two Suphis. The latest pyramids are those of the last kings of the twelfth dynasty at the Lake Mæris. All were sepulchres.—S. B.

³ Sensuphis signifies 'the brother of Suphis,' agreeing with the relationship mentioned by Herodotus between Cheops and Cephren. They were succeeded by Moscheris or Mencheres, the Mycerinus of the Greek historian. Suphis, according to Manetho, was the second king in the

fourth dynasty of Memphites. [Sensuphis is now recognized as Suphis II., the *sen* having been erroneously repeated by the scribe in the list of Eratosthenes, from the previous word *ebasitensen*.—S. B.]

⁴ The tombs of the royal families and principal officers of state of the fourth, fifth, and sixth dynasties.—S. B.

⁵ This is following Eratosthenes, who places Suphis or Saophis the fourth before Apappus, whom I suppose to have been the contemporary of Abraham, B.C. 1920. For if Jacob's arrival, B.C. 1706, is referred to the reign of Apappus, the antiquity of these monarchs is unnecessarily increased, and the additional 214 years augment our perplexities on the subject.

⁶ If we may believe Josephus, Manetho speaks of kings of the Thebaïd and the rest of Egypt uniting in a common cause; and thereby shows the existence of contemporary dynasties.

lived about 1740 B.C. and was therefore contemporary with Joseph, we have little to guide us upon the monuments of Egypt;¹ but we may safely conjecture from the state of those erected during his reign, that the Egyptians were already far advanced in the arts of civilized life, and had arrived nearly at the same state in which they continued during what may be styled the Augustan era of the eighteenth dynasty. This is further confirmed by the scriptural sketch of Egyptian manners in the time of Joseph; but we have nothing to lead to any conclusion respecting the exact duration of the previous reigns, the organization and progress of the political state of the country, or the period from which its civilization dates its commencement.

Nor can anything satisfactory be derived from the imperfect history² of the shepherd kings given by Manetho, or at least by his copyists: and his account of their aggressions is not sufficiently clear to enable us to determine whether he alludes to the Assyrians, Phœnicians, or Arabs.³ That they were not Jews is evident; though, as I have already observed in a former work, the Exodus of the Israelites may possibly, through the inattention of some authors, have been confounded with the expulsion of the Pastor tribes: and their abomination of shepherds necessarily originating in serious injuries received from them, as it already existed in the time of Joseph, proves their hostile invasions to have happened before that period.

About the epoch of the Jewish captivity, Egypt must have

¹ Since this was written the publication of Lepsius' 'Denkmäler der Aegypten,' Abth. iii.; and Mariette-Bey, 'Monuments divers,' Paris, 1875, have thrown great light on the tombs, and De Rouge, 'Les six premières Dynasties,' 4to, Paris, great light on the history of Egypt. — S. B.

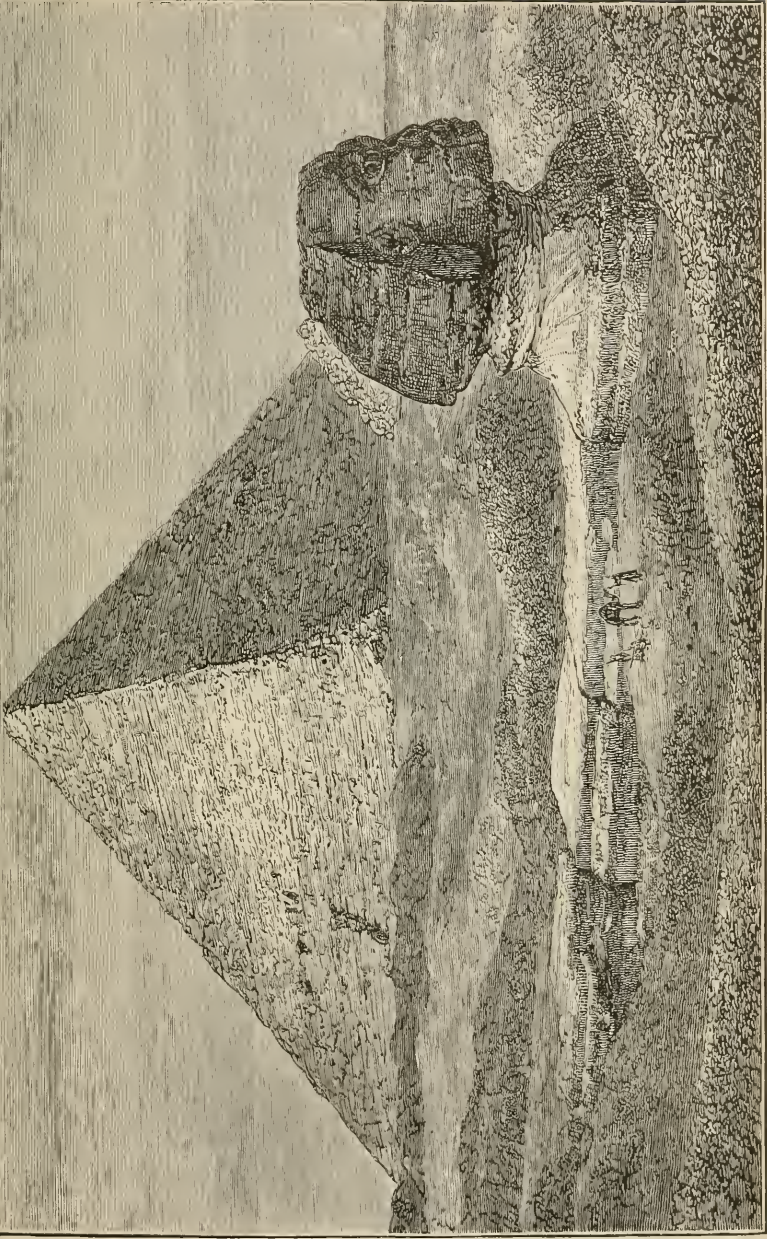
² Many histories of Egypt were written at different periods, by native as well as foreign authors, which have unfortunately been lost. (Conf. Cicero, de Repub. iii. 8.) The principal authors were Hecataeus, Herodotus, Manetho, Diodorus, and Charemon. — S. B.

³ Herodotus calls Sennacherib 'king of Arabia and Assyria' (lib ii. 141).

[More probably Asiatic Ethiopians, Cushites of Asia, who had long possession of Arabia, as well as the southern parts of the country east of the Ionian Gulf, Susa being a Cushite or Ethiopian city. Of the same race were the Phœnicians

who migrated from the Persian Gulf about the modern Bahrayn. They long possessed the islands of Aradus and Tylos, etc.; those Cushites were also parents of the Ethiopians of the Upper Nile, *i.e.* that part corresponding to the modern Nubia. Having crossed over from the S.W. corner of Arabia at a more remote period, and being Asiatics, accounts for the Ethiopians of the Nile bearing the Asiatic, not the African, character of features, hair, etc. The same Cushites probably peopled part of Egypt also at that remote period and became united with another race, perhaps a Semitic, already established in Northern Egypt.

Cush (Kush, or Kish) is the cuneiform, and Ethaush the Coptic name of 'Ethiopia;' the name of Cush had already been given to Ethiopia on the monuments before the invasion of the Shepherds, at the beginning of the twelfth dynasty. — S. B.]



Gizeh.

View of the Great Pyramid and Sphinx.

been engaged in a war with some powerful enemies, since the reason of the oppression exercised against the unresisting Hebrews is stated to have been the fear of their uniting with them ;¹ and, indeed, it appears from the sculptures of Beni-Hassan, that the Egyptians already, as early as the reign of Usertesén, had extended their arms into Asia, had thence brought many captives to Egypt, and had perhaps enrolled some of the conquered people in their army, as was frequently the case at a later period. This war with foreign nations is another strong argument against the opinion of Josephus that the Jews were the Shepherds, and the pretended power of his countrymen at so early an epoch is inconsistent with reason and probability. The Jews, even in the most flourishing state, when in firm possession of the promised land, and united under one king, never did arrive at the degree of power which he has ascribed to them in Egypt ; and the whole is at variance with Scripture history.

[Recent discoveries have thrown a strong light on the history of the Shepherd dynasty. The fall of the fourteenth or Xoite dynasty was followed by the simultaneous invasion of Egypt from Canaan consequent on the Asiatic immigration into the Delta. Established at Memphis, five of the Shepherd kings, Bnon, Apachnas, Apappus, and Iannias, for two centuries carried on war with the southern princes, and Asses subjected Northern Egypt. These conquerors bore the Semitic name of Shasu or pillagers, and their princes called *haq* were the Hykshos of Manetho. Their monuments and remains have been found as far south as the Fyoun, and it appears that the Theban princes of the sixteenth dynasty were tributary to them. Ultimately they were expelled by the monarchs of the eighteenth dynasty. Apepi or Apappus II. demanded of the Theban monarch Taakan assistance towards the building of the temple of Sutech or Set, and quarrelled about the distribution of the waters. War broke out between the Shepherd and Egyptian rulers, and after a contest continued for several years Avaris or Tanis was finally besieged by Aahmes I. of the eighteenth dynasty, and taken in the fifth year of his reign : the Shepherd ruler Tatuan and his Asiatic host departing for Asia, whither they were pursued as far as Samhen or Sharon, in the sixth year of Aahmes I. The monuments of the Shepherds

¹ Exodus i. 10: 'Lest . . . when there falleth out any war, they join also unto our enemies and fight against us.' According to Manetho, the Egyptians had

obtained possession of Libya long before this epoch, since he speaks of the Libyans revolting from the first king of the *third* dynasty.

found at Tanis represent them with Asiatic features and characteristics and of a type very different from the Egyptians.¹—S. B.]

And in order to present a comparative view of the succession from Menes to the invasion of Cambyses, according to Herodotus and Diodorus, I shall arrange the names given by those historians separately in opposite columns.

EGYPTIAN KINGS.

<i>According to Herodotus.</i>		<i>According to Diodorus.²</i>
—341 Generations, (or Kings,) "equal to 11,340 (5115) years," Herod. ii. 142. 330 Sovereigns.	Menes. { 18 Ethiopians and Queen Nitocris. (The Nitocris of Manetho is placed in the 6th Dynasty, and after Sapphis the founder of the great pyramid.) } Mœris, built the labyrinth and excavated the Lake Mœris. Sesostris, the great conqueror. Pheron, his son. A Memphite, whose name according to the Greeks is Proteus. Rhampsinitus. Cheops, built the great pyramid and reigned 50 years. Cephren, his brother, built the 2d pyramid and reigned 56 years.	Menes, or Menas. Then 2 of his de- } During a period of scendants. } more than 1,400 Then 52 Kings. } years. Busiris. Then 8 of his descendants; the last of whom bore the same name as the first, ³ and was said to have founded Thebes. His 8th descendant, who bore the name of his father, Uchorens, reputed to be the founder of Memphis. Then 12 generations of Kings. Moiris, dug the lake above Memphis. Seven generations of Kings. Sesoösis I, the great conqueror. Sesoösis II. Many kings succeeded him. Amasis, who was conquered by Actisanes. Actisanes the Ethiopian. Mendes, or Marrhus, an Egyptian, who built the labyrinth as a tomb for himself. An interregnum for 5 generations. Ketna, or Ketes, who is Proteus. Remphis. Seven Kings of no note, from one of whom, Nileus, the river was called Nilus, having formerly borne the name of Ægyptus. The eighth was Chembes, or Chemmis, the Memphite. He reigned 50 years and built the great pyramid. Cephren, his brother, reigned 56 years; others say he was his son, and call him Chabryïs.

¹ A full account of the war has been given by M. Chabas, 'Les Pasteurs en Egypte,' 1868; Maspero, 'Histoire Ancienne,' p. 176.

² It is worthy of remembrance that Diodorus does not introduce the name of

Osymandyas in this list of kings, though he mentions him as a Theban monarch in his description of that city.

³ Some suppose him to have been Busiris II.

EGYPTIAN KINGS.

According to Herodotus.

Mycerinus, son of Cheops, left a pyramid.

Asychis.

Anysis, who was blind. The Egyptian crown passed to an Ethiopian line.

Sabaco, the Ethiopian, retired after 50 years.

Anysis restored.

Sethos the priest of Vulcan, contemporary of Sennacherib and Tirhaka.

The 12 Kings reigned over Egypt, divided into 12 parts¹ (or nomes).

Psammitichus, one of the 12, 54 years.

Necos, his son, reigned 11 years.

Psammis, his son, 6 years.

Apries, his son, 25 years.

Amasis, having usurped the throne, 44 years.

Psammenitus, his son, reigned 6 months.

According to Diodorus.

Mycerinus, or Mecherinus, son of the founder of the great pyramid. He began a third, and died before it was finished.

Tnephachthus, the Technatis of Plutarch.

Bocchoris the Wise, his son.

After a long time, Sabacôn, the Ethiopian.

An interregnum of 2 years.

Twelve chiefs (nomarchs) 18 years.

Psammetichus the Saïte, one of them, 54 years.

After 4 generations, came

Apries, who reigned 22 years.

Amasis, 55 years.

The dynasties of Egyptian monarchs, according to Manetho (on the authority of Africanus and Eusebius), are as follow:—

1st Dynasty, of 8 Kings, either Thinites or Thebans.

Observations.

Name.	Duration of Reign. Yrs.	
1. Menes, the Thinite, succeeded the Demigods, killed by a hippopotamus	62	Called a Theban by Eratosthenes, and apparently so according to the monuments. Eusebius mentions 7 or 17 sons of Menes.
2. Athôthis, his son, built the palace at Memphis, and wrote the anatomical books, being a physician	57	
3. Cencenes (Kenkenes), his son	31	
4. Venephes (Enephes or Venephres), his son, raised the pyramids near the town of Cochine (Cochoma or Choe). A great plague in Egypt during his reign	23	
5. Usaphædos (Saphaidos or Usaphaes), his son	20	According to Africanus 253, Eusebius 252; the sum being really 263.
6. Miebidos (Miebes or Miebais), his son	26	
7. Semempses (Semenpses or Mempses), his son. A terrible pestilence raged in Egypt	18	
8. Biênaches (Ubienthes or Vibethis), his son	26	
Total	233	

¹ The same division of Egypt into 12 provinces or beyliks was retained to the time of the Memlooks.

2d Dynasty, of 9 Thinite Kings.

Observations.

Name.	Duration of Reign. Yrs.	Observations.	
1. Boethus the first (or Bôchus). In his reign the earth opened at Bubastis, and many were killed	38	This introduction of the worship of sacred animals is remarkable.	
2. Cæechos (Chous or Ceechous). Under him the bulls Apis in Memphis, and Mnevis in Heliopolis, and the Mendesian goat were appointed to be gods	39		
3. Binôthris (or Biophis), under whom it was enacted that women might hold the reins of government	47		
4. Tlas	} According to Eusebius, these three, and their four successors, did nothing worthy of commemoration, and he omits their names.		
5. Setheues			17
6. Chæres			17
7. Nepercheres (the seventh successor of Biophis, according to Eusebius). Fabulists reported the Nile to have flowed with honey during eleven days	25		
8. Sesôchris, who was 5 cubits (7 ft. 6 in.) in height, and 3 in breadth; or, according to Eusebius, 3 palms	48		
9. Cheneres (or Keneres). Name omitted by Eusebius	30		
Altogether	302	Eusebius gives 297 years.	

3d Dynasty, of 9 Memphite Kings.

1. Necherôphes (Echerophies or Necherôchis). In his reign the Libyans revolted from the Egyptians; but, alarmed by an unexpected increase of the moon, submitted	28	Eusebius mentions six others after Sesorthus, who were not famed for any memorable exploit: and he omits their names.	
2. Tosorthrus (or Sesorthus), called Asclepius by the Egyptians, from his medical skill. He introduced the mode of building with hewn stone, and patronized literature	29		
3. Tyris	} Eusebius mentions six others after Sesorthus, who were not famed for any memorable exploit: and he omits their names.		
4. Mesôchris			7
5. Sôÿphis (Sônphis or Zôuphis)			17
6. Tosertatis			16
7. Aches			19
8. Sephuris			42
9. Cerpheres	30		
Altogether	214	Eusebius gives the total 197 years.	

4th Dynasty, of 8 Memphite Kings of a different branch.

1. Sôris	29	Eusebius omits the name of Sôris, and considers Suphis the 3d of this Dynasty.
2. Suphis. Built the largest pyramid, which Herodotus says was constructed by Cheops. He was arrogant towards the gods, and wrote the sacred book, which is regarded by the Egyptians as a very precious work ¹	63	

¹ This is very contradictory.

4th Dynasty, of 8 Memphite Kings of a different branch — continued.

Observations.

Name.	Duration of reign, Yrs.
3. Suphis (the 2d)	66
4. Mencheres . . .	63
5. Rhatoeses . . .	25
6. Bicheris . . .	22
7. Sebercheres . . .	7
8. Thamphthis . . .	9
} The names of these are omitted by Eusebius.	
Altogether	284

According to Eusebius
448 years.

5th Dynasty, of 9 Elephantine Kings.

1. Usercheres . . .	28	
2. Sephres . . .	13	
3. Nephercheres (or Nerchepheres)	} Eusebins reckons 31 Ele- phantine Kings, but omits all their names, and introduces Othius and Phiops into this Dy- nasty.	
4. Sisires (Sisichis or Sisiris)		20
5. Cheres (or Echeres)		7
6. Rathures (or Rathuris)		20
7. Mencheres (or Mercheres)		44
8. Tancheres (or Tacheres)	9	
9. Obnus (Unus or Onnus)	44	
Altogether	248	

The sum is 218.

6th Dynasty, of 6 Memphite Kings.

1. Othóes (Othius or Thóês), killed by his guards	30
2. Phiús	53
3. Methusuphis	7
4. Phiops (or Aphiops), who began to reign at the age of 6 years, and reigned until he completed his 100th year	94
5. Menthesuphis	1
6. Nitócris. ¹ The handsomest woman of her time, of a florid complexion and flaxen hair; built the third pyramid	12
Total	203

Omitted by Eusebius.

As Eusebius calls Phiops the 4th King, he evidently intends to place him in the Sixth Dynasty. Is he not the same as Apophis?

Nitocris, or Minerva Victrix.

Should be 197.

7th Dynasty, of 70 Memphite Kings, who reigned 70 days; or, according to Eusebius, 5 Kings, who reigned 75 days or years.

8th Dynasty, of 27 Memphite Kings, who reigned 156 years. Eusebius gives 5 Kings and 106 years.

¹ This name is either Neit-gori or Neit-acri. The Queen of Psammaticus III. was also called Nit-akar.

15th Dynasty, of the Shepherds. According to Eusebius, of Diospolitans, who reigned 250 years.

Observations.

Name.	Duration of Reign. Yrs.
These were 6 foreign Phœnician Kings, who took Memphis.	
1. The first was Saïtes, from whom the Saïte ¹ nome borrowed its name. The Shepherds founded a city in the Sethroïte nome, from whence they invaded and conquered all Egypt	19
2. Bêôn (Bnôn, Anôn, or Byon)	44
3. Pachnan (or Apachnas)	61
4. Staân	50
5. Archles (or Anehles)	49
6. Apôphis (or Aphobis)	61
Altogether	284

Probably meaning Lower Egypt, which even in the time of the Romans was distinguished from the Thebaïd by the name Ægyptus.

Aphoph signifies a giant.
According to Eusebius 250.

16th Dynasty, of 32 Hellenic Shepherd Kings, who reigned 518 years. Eusebius gives 5 Theban Kings, who reigned 190 years.

17th Dynasty, of 43 Shepherd Kings and 43 Theban Diospolitans. Eusebius introduces the Kings of the 15th Dynasty of Africanus, whom he calls Phœnician Shepherds.

17th Dynasty of Africanus.	17th Dynasty of Eusebius.
Yrs.	Yrs.
The contemporary reigns of the Shepherds and Thebans lasted 151 (He omits their names.)	1. Saits 19
	2. Bnôn (Anôn) 40
	3. Archles (Aphôphis) 30
	4. Apophis (Archles) 14
	Total 103

Differing from the total of the 15th Dyn. of Africanus.

18th Dynasty.

According to Africanus, of 16 Diospolite Kings.	According to Eusebius, of 14 Diospolite Kings.
Yrs.	Yrs.
1. Amos, in whose time Moses went out of Egypt	1. Amoses (Amosis) 25
2. Chebros 13	2. Chebron 13
3. Amenôphthis 24	3. Amophis (Amenôphis) 21
4. Amersis (Amensis) 22	4. Miphris (Memphres, Mephres) 12
5. Misaphris (Miphris) 13	5. Mispfragnuthôsis (Myspharmuthôsis, or Mispfragnuthôs) 26
6. Mispfragnuthôsis (Mispfragnuthôsis), in whose time happened the deluge of Deucalion 26	6. Tuthmosis 9
7. Tuthmosis 9	

Amensis is omitted by Eusebius, being a Queen.
V. Thothes II. in my list of Kings, agreeing with the date of the deluge of Deucalion.

¹ Very improbable.

18th Dynasty — continued.

Observations.

<i>According to Africanus, of 16 Diospolite Kings.</i>		<i>According to Eusebius, of 14 Diospolite Kings.</i>	
	Yrs.		Yrs.
8. Amenôphis, supposed to be Memnon of the musical stone . . .	31	7. Aménôphis (Amnophis). It is he who is supposed to be Memnon of the musical stone . . .	31
9. Horus . . .	37	8. Orus . . . 36, 27, or 37	
10. Acherrhes . . .	32	9. Achencheres (Achencheres, or Achencherres) . . .	16 or 12
11. Rathôs . . .	6	[10. Athôris, 39 (Achoris)] . . .	7
12. Chebres . . .	12	[11. Chencherres.] In his time Moses led the Jews out of Egypt . . .	18
13. Acherres . . .	12	10. [12.] Acherres . . .	8
14. Armeses . . .	5	11. [13.] Cherres . . .	15
		12. [14.] Armais, who was also called Danaus, reigned . . .	5
		After which he was expelled by his brother Ægyptus, and fled to Greece. He took Argos, of which he became King.	
15. Ramesses (Ameses or Armesis) . . .	1	13. Ramesses (Ammeses), called also Ægyptus [15. Remesses] . . .	68
16. Amenophath (or Amenoph) . . . (262)	19	14. Amenophis (or Memôphis) [16. Menophes] . . .	40
Total . . .	263	Total . . .	348

In the Armenian text Achoris and Chencherres are omitted, and the Exodus follows the name of Achencheres.

Or 380, 369, 378, 384 or 337.

19th Dynasty.

<i>According to Africanus, of 7 Diospolite Kings.</i>		<i>According to Eusebius, of 5 Diospolite Kings.</i>	
	Yrs.		Yrs.
1. Sethos . . .	51	1. Sethos . . .	55
2. Rapsaces . . .	61	2. Rampses (or Rapses) . . .	66
3. Ammenepthes . . .	20	3. Amenephtthis (or Aménôphthis) . . .	8
4. Rameses . . .	60	4. Ammenemes . . .	26
5. Ammonemnes . . .	5	5. Thuoris, the Polybus of Homer . . .	7
6. Thuoris, called by Homer Polybus, the husband of Alcandra, in whose reign Troy was taken . . .	7		
Total . . .	209	Total . . .	194

In this 2d book of Manetho are 96 Kings, who ruled 2121 years.

THIRD BOOK OF MANETHO.

20th Dynasty, of 12 Diospolite Kings, who reigned 135 years, or according to Eusebius 172 years. Their names are omitted.

21st Dynasty, of 7 Tanite Kings.

According to Africanus.

	Yrs.
1. Smendes	26
2. Psusenes (Psuneses, or Psusemmes)	46
3. Nephelcheres	4
4. Amenôphthis or Amenenôphthis	9
5. Osochôr (Osochôn)	6
6. Psinaches (Pinaches)	9
7. Psusennes (Susen- nes)	14
Total	130

According to Eusebius.

	Yrs.
1. Smendis (or Amen- dis)	26
2. Psusenmus	41
3. Nephercheres (Ne- pherchenes)	4
4. Amenophthis	9
5. Osochôr	6
6. Psinnaches	9
7. Psoennes	35
Total	130

Observations.

Scaliger omits this Dynasty, and introduces the same Kings in the 20th Dynasty.

Syncellus gives in the 20th Dynasty: Nechepsos, 19 years. Psammuthis, 13 yrs. ———, 4 years. Certus, 16 years. Rhampsis, 45 years. Amenses, or Ammenemes, 26 years. Ochyras, 14 years.

And in one version Amenophthis is placed before Nephcheres, in the 21st Dynasty.

22d Dynasty.

According to Africanus, of 9 Bubastite Kings.

	Yrs.
1. Sesonchis (Seson- chosis)	21
2. Osorthon	15
3. { Three names not given, of kings who reigned. }	25
4. Tacelôthis (Tacello- this)	13
5. { Names omitted, reigned }	42
6. { Names omitted, reigned }	42
7. { Names omitted, reigned }	42
8. { Names omitted, reigned }	42
9. { Names omitted, reigned }	42
Total	120

According to Eusebius, of 3 Bubastite Kings.

	Yrs.
1. Sesonchusis (Seson- chosis)	21
2. Osorthos (Osorthôn)	15
3. Tacellothis (Takel- lothis)	13
Total	44

23d Dynasty.

According to Africanus, of 4 Tanite Kings.

	Yrs.
1. Petoubates. In his time the Olympiads began	40
2. Osorchô (Osorchôn), whom the Egyptians call Hercules	8
3. Psammus	10
4. Zêt (34 or) 31	31
Total	89

According to Eusebius, of 3 Tanite Kings.

	Yrs.
1. Petubastis	25
2. Osorthon	9
3. Psammus	10
Total	44

24th Dynasty.		Duration of Reign.	Observations.
Name.		Yrs.	
Bocchôris, the Saïte, in whose reign a sheep spoke		6	Called the Wise. No mention is made of his father Tnephachus.
<i>25th Dynasty, of 3 Ethiopian Kings.</i>			
		<i>According to Eusebius.</i>	
	Yrs.		Yrs.
1. Sabaco (Sabbacôn), who took Bocchoris and burnt him alive, reigned	8	. . . . .	12
2. Sebichus (Sebichôs, or Sevêchus), his son	14	. . . . .	12
3. Tarcus	18	Taracus	20
Total	40	Total	44
<i>26th Dynasty, of 9 Saïte Kings.</i>			
	Yrs.		Yrs.
1. Stephinates	7	1. Ammeres the Ethiopian	18
2. Neehepsos	6	2. Stephinathis (Stephanthes)	6
3. Neehao I. (Neehao)	8	3. Neehepsôs	6
4. Psammetichus (Psammetichus, Psammetychus, or Psammiticus)	54	4. Neehao I.	6
5. Neehao II. Took Jerusalem, and carried Joachaz the King captive to Egypt	6	5. Psammetichus	44
6. Psammuthis	6	6. Neehao II.	6
7. Vaphris, to whom the remainder of the Jews fled when Jerusalem was taken by the Assyrians	19	7. Psammnthes, called also Psammaticus	17
8. Amosis		8. Vaphres	25
9. Psammecherites (Psammacherites) reigned	6 months	9. Amosis	42
Total	150 yrs. 6 months	Total	167
<i>27th Dynasty, of 8 Persian Kings.</i>			
			Yrs.
1. Cambyses reigned over Persia 5 years, and over Egypt			36
2. Darius, son of Hystaspes			6
3. Xerxes the Great			21
4. Artabanus			7 months

27th Dynasty, of 8 Persian Kings — continued.

Observations.

Name.	Duration of Reign.
	Yrs.
5. Artaxerxes	41
6. Xerxes	2 months
7. Sogdianus	7 months
8. Darius the son of Xerxes	19

Total 124 years 4 months.

Eusebius gives 120 years and four months.

28th Dynasty.

	Yrs.
Amyrteus of Saïs (Amyrtæus, Amyrteôs)	6

29th Dynasty, of 4 Mendesian Kings.

Yrs.	Yrs.
1. Nepherites (Nepherites) 6	1. Nepherites 6
2. Achôris 13	2. Achoris 13
3. Psammuthis 1	3. Psammuthes 1
	4. Muthes 1
4. Nephorites (Nephorotis, or Nephorotes) 4 months	5. Nephrites (or Anepherites) 4 months

One version places Muthes after Nephrites II.

Total 20 yrs. 4 months. | Total 21 yrs. 4 months.

30th Dynasty, of 3 Sebennyte Kings.

Yrs.	Yrs.
1. Nectanebes 18	. . . . . 10
2. Teos 2	. . . . . 2
3. Nectanebes (Nectanebus) 18	. . . . . 8
Total 38	Total 20

31st Dynasty, of Persians.

Yrs.	Yrs.
1. Ochus (Artaxerxes III.) ruled Persia 20 years, and Egypt 2	1. Ochus, who in his 20th year obtained possession of Egypt and reigned 6
2. Arses 3	2. Arses, son of Ochus 4
3. Darius 4	3. Darius, conquered by Alexander 6
Total 9	Total 16

(The whole number of years in the third book of Manetho is 1050.)¹

Such is the imperfect list of Kings given by the copyists of Manetho; but though many of the Dynasties are questionable, yet from a comparison with the old Chronicle and the Canon of Theban Kings from Eratosthenes, some general conclusions may

¹ Vide Mr. Cory's very useful collection of 'Ancient Fragments.'

be obtained respecting their succession and the different families who enjoyed the sovereign power. From Menes to the 18th, or at least to the 16th Dynasty, there is great obscurity; and Manetho's work is unsatisfactory, both in the number of monarchs who reigned and in the names of the Dynasties.

In the Old Egyptian Chronicle, after the demi-gods are enumerated 15 generations of the Cynic cycle, which occupied 443 years. The

	Yrs.
16th Dynasty is of Tanites, eight descendants, during	190
17. Of Memphites, 14 in descent	103
18. Of Memphites, 4 in descent	348
19. Of Diospolites, 5 in descent	194
20. Of Diospolites, 8 in descent	228
21. Of Tanites, 6 in descent	121
22. Of Tanites, 3 in descent	48
23. Of Diospolites, 2 in descent	19
24. Of Saïtes, 3 in descent	44
25. Of Ethiopians, 3 in descent	44
26. Of Memphites, 7 in descent	177
27. Of Persians, 5 in descent	124
28. . . . .	. . . . .
29. Of Tanites, in descent	39
30. A Tanite, 1 in descent	18

Total 30 Dynasties and 36,525 years, including 3984 of the reigns of Cronus and the other 12 Deities.

The Kings of Thebes, according to Eratosthenes, are —

	Yrs.
1. Menes the Theban, which is by interpretation Dionius: he reigned	59
2. Athothes the son of Menes, by interpretation Hermogenes	32
3. Athothes II.	19
4. Diabhis, the son of Athothes, signifying Philetærus	18
5. Pemphos (or Semphós), the son of Athothes, called Heraclides	79
6. Tøgar-amachus Momchîri the Memphite, called a man redundant in his members (or Toigaramos)	6
7. Stæchus, his son, who is Arés the Senseless	30
8. Gosormies, called Etesipantos	26
9. Mares, his son, signifying Heliodorus	20
10. Anoyphis, which is 'a common son'	18
11. Sirius, or 'the Son of the Cheek,' or 'Abascantus'	22
12. Chnubus Gneurus, which is Chryses the son of Chryses	13
13. Rauosis, which is Archicrator	10
14. Biyris . . . . .	. . . . .
15. Saophis 'Comastes,' or according to some 'Chrematistes.' { These three are probably the Suphis I. & II. and Mencheres of Manetho; the Cheops, Cephrenes, and Mycernius of Herodotus. }	27
16. Saophis II.	29
17. Moscheres or 'Heliodotus'	31
18. Musthis	33
19. Pammus Archondes	35
20. Apappus or 'Maximus,' one hour less than	100
21. Achesus Oearas	1
22. Nitoeiris or 'Athena Nicephora,' Minerva Victrix, instead of her husband	6
23. Myrtæ 'Ammonodotus'	22
24. Thyosimares 'the robust,' who is called 'the sun'	12
25. Thinillus, which signifies the augmentor of his country's strength	8

	Yrs.
26. Semphucrates, which is Hercules Harpocrates	18
27. Chuther Taurus the tyrant	7
28. Meures Philosorus, 'the beloved of the Sun'	12
29. Chomaephtha, 'Cosmus Phil-hephaestus'	11
30. Sœcuniosochus the tyrant	60
31. Pente-athyres	16
32. Stamenemes II.	23
33. Sistosichernes, 'Hercules the Strong'	55
34. Maris	43
35. Siphos, 'Hermes the son of Vulcan'	5
36.	14
37. Phiruron or Nilus	5
38. Amuthantæus	63



No. 1.

Shooting at a target.

Thebes.



VIGNETTE B. — Cattle during the inundation in the Delta.

CHAPTER II.

HISTORY OF EGYPT.

Dynastic Succession — Tables of early Dynasties — Usertesen I. and Kings of 12th Dynasty — 18th Dynasty — Early Inventions — Use of Iron — Rameses II. — Canal of the Red Sea — Glories of Rameses III. — Sesostris — Tomb of Osymandyas — Memnonium — Right of Succession — Duties — Helen — Rhampsinitus — Tnephachus — Sabaco — Shishak — Dodecarehy — Psammaticus — Aeoris — Nectanebo.

IN the previous chapter, I have shown the difficulty of elucidating the early period of Egyptian history, owing to the want of monumental records and the deficiency of authentic historical information: a slight difference of opinion may also exist respecting the age of Usertesen I., and even that of the glorious princes of the 18th Dynasty: it will, however, be proper to accompany my historical notice with a chronological table of kings, and the inquiring reader will not consider it uninteresting to compare the succession of those whose names occur on the monuments with the accounts of ancient authors. Many of the first monarchs are omitted, from the persuasion that conjecture, unsupported by positive authority, is unnecessary and presumptuous, and I am less anxious to introduce them into the following series, as the lists of Manetho and Eratosthenes have been already given.

SUPPOSED SUCCESSION OF EGYPTIAN KINGS.

Name from ancient Authors.	Name from the Monuments.	Events.	Ascended the Throne.
<i>1st Dynasty, of 1 Theban.</i>			
Menes. Minæus of Josephus	Menai . . .	{ First King of Egypt. According to Josephus, Menes lived upwards of 1300 years before Solomon (who was born in 1032, and ascended the throne in 1015), and founded Memphis (Antiq. viii. c. 6).	B. C. 2320

Name from ancient Authors.	Name from the Monuments.	Events.	Ascended the Throne.
<i>2d to the 15th¹ Dynasty, of Memphites ?</i>			
Athothis, his son . . . .	. . . .	{ Builds the palace at Memphis. ² and transfers the court to it. This 2d Dynasty was perhaps in consequence called Memphite. }	B. C. 2300
His successors uncertain.			
Suphis, ³ or Saophis . . . .	. . . .	{ Foundation of the kingdom of Assyria by Nimrod, 2204. Eratosthenes gives 569 years for the 19 kings who preceded Apappus. } { Foundation of the kingdom of Sicyon, 2089. He built the great pyramid. These three kings should be the Cheops, Cephren (<i>his brother</i>), and Mycerinus of Herodotus, whom he has strangely misplaced, making them posterior to Sesostris and Mœris. Diodorus calls Cheops Chemmis, or Chembes. }	2123
Suphis II., or Sen Saophis, <i>i. e.</i> Saophis's brother	During part at least of this period, Egypt appears to have been divided into two distinct states, each governed by its own king.	{ Era of the Chinese emperor Yao, 2057. }	2083
Mœcheris, or Mencheris		Built the third pyramid	2043
Musthis ? . . . .		. . . . .	2022
Pamunus Archondes . . . .		. . . . .	2011
Apappus, or Aphoph		Abraham visits Egypt, 1920 ⁴	2901
Acheseus Ocaras ? . . . .		. . . . .	1901
Nitocris		{ A queen, called Nicaule by Josephus (<i>Antiq. viii. 6</i>). }	1900
Myrtæus ? . . . .		. . . . .	1890
Thyosimares ? . . . .		. . . . .	1880
Thinillus ?		{ Kingdom of Argos founded, } { 1856 }	1866
Semphucrates	Deluge of Ogyges in Attica	1848	
<i>15th Dynasty, of 1 Diospolite King ?</i>			
(Uncertain) . . . .	. . . . .	. . . . .	1830

¹ The number of Manetho's Dynasties from Athothis to Menmoph is probably too great.
² Manetho, according to Africanus. Menes is said to have reigned 60 years. Elian (*Nat. Hist. lib. ii. 40*), on the authority of Apion, mentions (Enis, a son of Menes, as having been king of Egypt.
³ The name of this Pharaoh was prob-

ably Shofu, or Khof, the *sh* and *kh* being frequently used indifferently in Egyptian names. They are easily converted into Suphis or Cheops by adding the Greek termination.
⁴ [From Abraham to David, 11 generations; from David to the carrying into Babylon, 14 generations; and from the captivity to Christ, 14 generations. — G. W.]

Name from ancient Authors.	Name from the Monuments.	Events.	Ascended the Throne.
<i>16th Dynasty, of Tanites?</i>			
(Uncertain)	<i>Vide</i> the list of kings in Plate I. of my 'Egypt and Thebes.'		
Misartesen ¹	Osirtesen I.	Arrival of Joseph, 1706	1740
	Amun-emha I.	.	1696
	Amun-emha II.	.	1686
<i>17th Dynasty, of Memphites?</i>			
(Uncertain)	Osirtesen II.	.	1651
	Nofri-Ftep, or } Osirtesen III. }	Joseph died 1635	1636
	Amun-emha III.	.	1621
	(Name unknown)	.	1580

[LIST OF THE PRINCIPAL KINGS OF THE FIRST SIX DYNASTIES FOUND ON THE MONUMENTS.]

Tablets of Abydos.	Saqqarah.	Turin Papyrus.	Greek Name.
<i>1st Dynasty.</i>			
Mena . . . . .	.	Mena	Menes.
Teta . . . . .	.	Atet	Athothis.
Atota.			
Ata.			
Hesep . . . . .	.	.	Ousaphais.
Merba	Merbaipen . . . . .	.	Miebis.
Kabeh	Kabehu.		
<i>2d Dynasty.</i>			
Butau . . . . .	.	.	Boethos.
Kakau	Kakau . . . . .	.	Kaiechos.
Bainutern	Bainuter . . . . .	.	Binothris.
Utnes	Utnes . . . . .	.	Tlas.
Senta . . . . .	.	.	Sethenes.
Tata.			
	Raneferka . . . . .	.	Nephercheres.
	Sekari Neferka	Neferka Sekar	Sesochris.
	Tefa.		
	Bubui	Bubu.	
<i>3d Dynasty.</i>			
Nebka . . . . .	.	Nebka.	
Ser-bes	Ser	Sera.	
Tata	Ser-Teta	Ser-Teta	Tureis.
Set-es . . . . .	.	.	Toser-tasis.
Raneferka	Ra nebka.		
	Huni	Hu.	

¹ The error in this name arose from the ω having been mistaken for μ.

Tablets of Abydos.	Saqqarah.	Turin Papyrus.	Greek Name.
Senefru. . . .			4th Dynasty.
Khufu	Khufu . . . .	. . . .	Cheops.
Ratat-ef	Ra tatuf . . . .	. . . .
Ra-shaf	Ra shauf . . . .	. . . .	Chephren.
Ra-men-ka . . . .	. . . .	. . . .	Mencheres.
User-kaf . . . .	. . . .	. . . .	Ousercheres.
Ra-sahu . . . .	. . . .	. . . .	Sephres.
			5th Dynasty.
	Ra nefer-ar-ka . . . .	. . . .	Nepherchores.
Ra en user . . . .	. . . .	. . . .	Rathoures.
Har-men-ka . . . .	. . . .	. . . .	Mencheres II.
Ra-tat-ka . . . .	. . . .	Tat	Tancheres.
Unas	Unas . . . .	. . . .	Obnus.
			6th Dynasty.
Tata	Tota . . . .	. . . .	Othoes.
Ra meri	Pepi . . . .	. . . .	Phiops.
Merenra . . . .	. . . .	. . . .	Methensouphis.
			S. B.]

The accession of the first Usertesen I conceive to date about the year 1740 B.C., and the length of his reign must have exceeded forty-three years. If the name of this monarch was not ennobled by military exploits equal to those of the Rameses, the encouragement given to the arts of peace, and the flourishing state of Egypt during his rule, evince his wisdom; and his pacific character satisfactorily accords with that of the Pharaoh¹ who so generously rewarded the talents and fidelity of a Hebrew stranger.

Some insight into Egyptian customs during his reign is derived from the story of Joseph, with whom I suppose him to have been coeval: and the objects taken thither by the Ishmaelites, consisting of spices, balm, and myrrh, which were intended for the purposes of luxury as well as of religion: the subsequent mention of the officers of Pharaoh's household; the state allowed to Joseph;² the portion of lands allotted to the priesthood, and

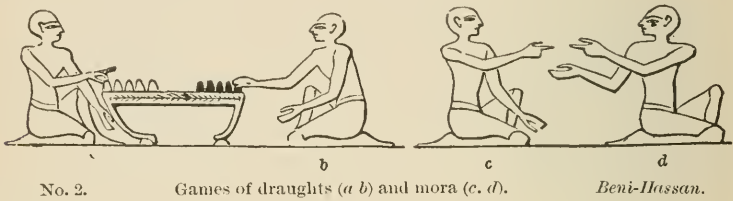
¹ I have frequently had occasion to notice the true reading and purport of this name: I shall, therefore, only observe, that it is written in Hebrew Phrah, פִּרְהָ, and is taken from the Egyptian word Pire or Phre (pronounced Phra), signifying the sun, and represented in hieroglyphics by the hawk and globe, or sun, over the royal banners. It was through the well-known system of analogies that the king obtained this title, being the chief of earthly, as the

sun was of heavenly bodies. But the word is not derived from or related to *ouro*, 'king,' as Josephus supposes (Antiq. viii. c. 6). Phouro is like Pharaoh: but the name is Phrah in Hebrew, and Pharaoh is an unwarranted corruption. (*Vide* my 'Egypt and Thebes,' p. 5, note.) [The last idea is that it is derived from *Per-âu*, 'the great house,' or 'court,' and the Pharaoh, 'the great houses of life.'—S. B.]

² Gen. xli. 42, 43.

other similar institutions and customs—tend to show the advanced state of society at this early epoch.

From the sculptures of Beni-Hassan,¹ we learn that the Egyptians were acquainted with the manufacture of linen, glass, cabinet work, gold ornaments, and numerous objects indicative of art and refinement; and various gymnastic exercises, the games of draughts,² ball, *mora*, and other well-known modern amusements, were common at the same period.



No. 2.

Games of draughts (a b) and *mora* (c. d).

Beni-Hassan.

The style of architecture was grand and chaste, and the fluted columns of Beni-Hassan are of a character calling to mind the purity of the Doric, which indeed seems to have derived its origin from Egypt.

It was during the reign of Usertesen that the temple of Heliopolis was either founded or received additions, and one of the obelisks bearing his name attests the skill to which they had attained in the difficult art of sculpturing granite. Another of the same material indicates the existence of a temple erected or embellished by this monarch in the province of Crocodilopolis, afterwards known by the names of Arsinoïte nome and el Fyoom; and the remains of a colonnade in the great temple of Karnak prove, as well as the title 'lord of the upper and lower country,' accompanying his name, that he was sole monarch of the Thebaid and Lower Egypt.

Of the Pharaohs in the two last Dynasties, Amenemha II. and Usertesen II. were the most remarkable after Usertesen I. Independent of the encouragement given by them to the agricultural interests of the country, they consulted the welfare of those who were employed in the inhospitable desert; and the erection of a temple, and a station to command the wells and to serve for their

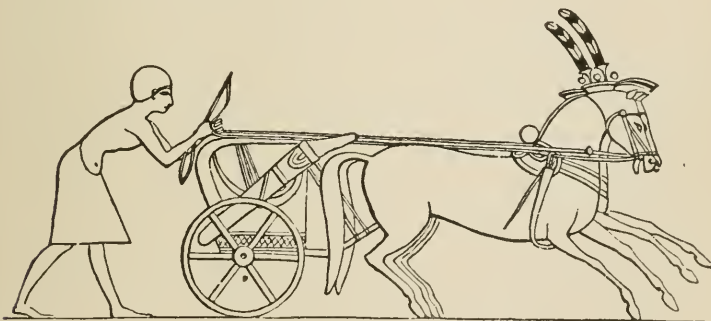
¹ Grottoes on the east bank of the Nile, near the Speos Artemidos.

² There are other instances of this

game: one of the time of Rameses III., where the king himself is playing; the other of Psammaticus II.; both at Thebes.

abode in the Wadée Jasoos,¹ proved that they were mindful of their spiritual as well as temporal protection. The breccia quarries of the Kossayr road were already opened, and probably also the emerald mines of Gebel Zabára; and the wars with the foreigners of Pount² are recorded in a tablet³ at Wadée Jasoos, bearing the date of the 28th year of Amenemha II. This last is a very important fact, as it shows that the arms of Egypt already extended into some of the very same countries afterwards noticed among the conquests of the Pharaohs.

It is highly probable that the port of Philoteris, or Ænnum, on the Red Sea, was already founded, since the station at Wadée Jasoos appears to have been principally intended to protect the wells which then supplied and still continue to supply that port⁴ with water: and thus we have an additional reason for concluding the commerce with Arabia to have commenced at a very early period; and that its gums and spices found a ready market in the opulent Egypt,⁵ is sufficiently proved by the Ishmaelites or Arabs of those days bringing them for sale into the lower country.



No. 3.

An attendant holding the car.

Alabastron.

No monument now remains of Usertesen III.,⁶ though his name frequently occurs in tablets sculptured on the rocks of Upper Egypt and Mount Sinai: and we learn nothing of interest concerning these monarchs, either from sacred or profane records, till the accession of the 18th Dynasty.

¹ Or Gasoos: the *g* in Arabic being properly always soft. This is the modern name of the valley.

² N. Arabia or Somali.

³ In the collection of the Duke of Northumberland at Alnwick.—S. B.

⁴ The modern town of Kossayr is a short

distance to the south of Philoteris Portus, or old Kossayr, and consequently a little farther from Wadée Jasoos.

⁵ Punt, either Somali or N. Arabia, is mentioned as early as the 4th Dynasty.—S. B.

⁶ *Vide* my 'Egypt and Thebes,' p. 500.

[The kings of the 12th Dynasty were succeeded by the monarchs of the 16th, who bore the names of Sebakhety and Neferhety, and appear to have sprung from the Arsinoïte nome, or the Thebaïd. Their reigns were not remarkable, and they appear to have been restricted to Egypt proper. They, like their predecessors, have left records at Samneh of the height of the Nile at this remote period, nearly 24 feet above the present level; but although a few monuments bear their names, they executed no great work, and, pressed on by the Asiatic enemies of Egypt, were unable to hold northern possessions. — S. B.]

Name from ancient Authors.	Name from the Monuments.	Events. ¹	Ascended the Throne.
<i>18th Dynasty, of Theban or Diospolitan Kings.</i>			B.C.
Amosis (Chebron)	(Chebron) Ames ²	{ " There arose a new (dynasty, or) king, who knew not Joseph " (Exod. i. 8). Moses born, 1571. Joseph says Pharaoh's daughter was called Thermuthis, ³ Cecrops leads a colony from Sais, ⁴ and founds the kingdom of Athens, B.C. 1556. }	1575
Amenoph . . . Amesses, or Amenses, his sister Mephres, Mespriis, or Mephra - Tuthmosis . . .	Amenoph I. . . { Amense, his sister ⁵ . . . }	{ Included in the reign of Thothmes I. }	1550
Misphra - Tuthmosis or Tothmosis . . .	Thothmes I. . .	{ His 14th year found on the monuments. }	1532
Thunmosis, or Tothmosis . . .	Thothmes II. . .	{ The reign of Amunnum Hasheps included in this. }	1505
Amenophis . . . Horus . . .	Amenoph II. . . Thothmes IV. . .	{ Exodus of the Israelites, 1491, 430 years after the arrival of Abraham. }	1495
Achenchres (a queen) . . .	{ Mant-emua (Regency) . . . }	Moses died 1451	1456 1446
Rathotis . . .	Amenoph III. . .	{ Included in the reign of her son, Amenoph III. }	1430
Achencheres, or Chebres . . .	{ [Khuenaten. — S. B.] . . . }	{ The supposed Memnon of the vocal statue. His brother ⁶ not admitted into the list of kings. }	1408

¹ For a more detailed chronological table *vide* my 'Egypt and Thebes,' p. 510.

² I have given my reasons for considering these two the same king in my 'Hieroglyphical Extracts,' pp. 10, 12.

³ Joseph. Antiq. ii. 9.

⁴ Neith or Nét, Minerva, was the deity of Sais, and her name seems to have led to that of the Greek goddess, and of the new city. In Egyptian it was written from right to left, OHN, and the Greeks

[very possibly, though not very probably — G. W], by adding an A at either end, would make it AOHNA; reading from left to right.

⁵ *Vide* my 'Materia Hieroglyphica,' Pl. I. of the Kings. Syncellus gives Amenses.

⁶ Amen-Toonh [Tutanchamen — S. B.], probably Danaus, who lived at this time; *vide* p. 22.

Name from ancient Authors.	Name from the Monuments.	Events.	Ascended the Throne.
Achencheres, or Acherres.	{ Remessu, or Rameses I. }	. . . . .	1395
Armais . . .	Seti I. (Osirèè)	{ Calculating 900 years from the time of Herodotus, Mœris should have lived at this period. The similarity of Mœris (Mai-re) and Armais is singular. }	1385
Rameses Miamun	{ Amen-mai. Rameses, Rameses II., or the Great. }		
Amenophis . .	{ Pthahmen [Menepthah — S. B.] his son. }	{ The supposed Sesostris of the Greeks. The date of his 44th and 62d year found on the monuments. Manetho allows him 66. }	1355
		. . . . .	1289

Amosis or Ames was the leader of the 18th Dynasty, and the period of his accession and this change in the reigning family strongly confirm the opinion of his being the 'new king who knew not Joseph.' And if we consider that he was from the distant province of Thebes, it is reasonable to expect that the Hebrews¹ would be strangers to him, and that he was likely to look upon them with the same distrust and contempt with which the Egyptians usually treated foreigners. They stigmatized them with the name of impure Gentiles;² and the ignoble occupation of shepherds was for the Jews an additional cause of reproach.³ Indeed it is possible that the Jews, who had come into Egypt on the occasion of a famine, finding the great superiority of the land of Egypt both for obtaining the necessaries of life and for feeding their flocks, may have asked and obtained a grant of land⁴ from the Egyptian monarch, on condition of certain services being performed by them and their descendants. As long as the Memphite Dynasty continued on the throne this grant was respected, and the only service required of them was that agreed upon in the original compact. But on the accession of the Theban family, the grant being rescinded and the service still required, they were reduced to a state of bondage; and as despotism seldom respects the rights of those it injures, additional labor was

¹ Or the people of Joseph; 'for Joseph was dead, and all his brethren, and all that generation.' (Exod. i. 6.) He had been dead about 60 years.

² 'Nations,' an expression adopted by the Jews. The hieroglyphical character refers to a hilly country in contradistinction to the plains of Egypt.

³ 'Every shepherd is an abomination unto the Egyptians.' (Gen. xvi. 31.) 'Thy servants are shepherds, both we and also our fathers.' (xlvii. 3.)

⁴ Some of them were tillers of land as well as shepherds. (Exod. i. 14; Deut. x. 11.)

imposed upon this unresisting people.¹ And Pharaoh's pretended fear, lest in the event of war they might make common cause with the enemy, was a sufficient pretext with his own people for oppressing the Jews, at the same time that it had the effect of exciting their prejudices against them. Affecting therefore some alarm at their numbers, he suggested that so numerous a body might avail themselves of the absence of the Egyptian troops and endanger the tranquillity and safety of the country,² and that prudence dictated the necessity of obviating the possibility of such an occurrence. With this view they were treated like the captives taken in war, and were forced to undergo the gratuitous labor of erecting public granaries and other buildings for the Egyptian monarch.³ These were principally constructed of crude brick; and that such materials were commonly used in Egypt, we have sufficient proof from the walls and other buildings of great size and solidity found in various parts of the country, many of which are of a very early period: and the bricks themselves, both at Thebes and in the vicinity of Memphis, frequently bear the names of the monarchs who ruled Egypt during and prior to the epoch to which I am now alluding. The crude brick remains about Memphis are principally pyramids: those at Thebes consist of walls enclosing sacred monuments and tombs, and some are made with and others without straw. Many have chopped barley and wheat straw, others bean haulm and stubble;⁴ and in the tombs we find the process of making them represented among the sculptures. But it is not to be supposed that any of these bricks are the work of the Israelites, who were never occupied at Thebes; and though Josephus affirms they were engaged in building pyramids, as well as in making canals and embankments, it is very improbable that the crude brick pyramids of Memphis, or of the Arsinoïte nome, were the work of the Hebrew captives.

Towards the latter end of Amosis' reign happened the birth of Moses. His flight must have taken place in the second year of Thothmes I., and his return to Egypt after the death⁵ of this and the succeeding prince.

¹ Whenever the Arabs become settled in villages on the banks of the Nile, the Turks are always anxious that they should fix themselves in villages, in order to get them within their power.

² Exod. i. 10. He evidently did not fear their obtaining possession of any part of

Egypt; but of their committing depredations, and then *escaping* out of the country.

³ They built 'treasure cities, Pithom and Raamses.' (Exod. i. 11.)

⁴ Exod. v. 12. Some bricks were made 'with stubble instead of straw.'

⁵ Exod. iv. 19.

[Aahmes, or Amasis, was descended from the kings of the 17th Dynasty, who held Southern Egypt and the Thebaid against the Shasu or Shepherds, the Hykshos of Manetho. He continued the war against them commenced by his predecessor, Taakan, and in the fifth year of his reign took their stronghold, Avaris, and pursued Taturan, the last of the Hykshos' rulers, to Shahuran, in his sixth year. His reign lasted twenty-two years. — S. B.]

Few monuments remain of his reign; but a tablet at the Trojan mountain,¹ behind el Massara, shows that the stone of those quarries was used by him for the erection of some building at Memphis or in the vicinity.²

Amosis was succeeded by Amenophis I. [Amunoph or Amun-ôthph.— G. W.], a prince whose name occurs in numerous parts of Thebes, and who seems to have been a great encourager of the arts of peace. He married an Ethiopian princess, called Nefer-tari, a name common to many Egyptian queens [B.C. 1478.— G. W.].

Some buildings of the time of Thothmes I.³ still exist, but the second of that name has left little to mark the history of his reign. [Thothmes I. was succeeded by his daughter, the queen Hatasu or Hasheps.— S. B.] But whether she was only regent during the minority of Thothmes II. and III., or succeeded to the throne in right of Thothmes I., in whose honor she erected several monuments, is still uncertain, and some have doubted her being a queen.⁴ Her name has been generally erased, and those of the second and third Thothmes are placed over it; but sufficient remains to prove that the small temple of Medeenet Haboo, the elegant edifice under the Qoorneh rocks, and the great obelisks of Karnak, with many other handsome monuments, were erected by her orders, and the attention paid to the military caste is testified by the subjects of the sculptures. That the invention of glass was known at this time, is satisfactorily proved

¹ The 'Troici lapidis Mons' of Strabo and Ptolemy. It is about nine miles to the south of Cairo.

² Some may suppose it to have been for the pyramids, but his era does not agree with the time of their erection. It is, however, from these quarries that the stone used for the outer tier, or casing, was taken, which is alluded to by Strabo and other authors.

³ Thothmes I., as I am assured by Lord Prudhoe, penetrated into Ethiopia as far

as the Isle of Argo, where he left an inscription. The 2d Thothmes' name is found at Napata (Berke), and the 3d probably went still farther south. Did they possess this country by right of the marriage of Amunoph I. with an Ethiopian princess?

⁴ The constant use of the female sign, and the title Daughter of the Sun, seem to require it to be so, notwithstanding the dress, which is that of a king. (*Vide* 'Egypt and Thebes,' p. 92.)

by the discovery of a large bead bearing the name of this queen ;¹ and I shall have occasion to show that we have evidence of the use of it in the early time of the first Usertesén. The mode of irrigation was by the *shadoof*, or pole and bucket of the present day ; and it is remarkable that the modern Egyptians have a tradition that it was derived from their Pharaonic² predecessors. The manufacture of linen cloth, the arch, and other notable inventions are also represented in the sculptures of the same reign ; but as I shall notice them in their proper place, it is unnecessary here to enter into any detail concerning those interesting subjects.

The reign of Thothmes III. [B.C. 1463. — G. W.] is one of the most remarkable that occurs in the history of Egypt. He was a prince who aspired to the merit of benefiting his country by an unbounded encouragement of the arts of peace and war. But whether his military expeditions were conducted by himself in person, or whether he confided the management of the war to expert generals, we have ample testimony of the extent of his power by the tributes laid at his feet by ‘the chiefs of foreign countries,’ who present him with the riches of Pount,³ of Kufa,⁴ of the Rot-en-nu,⁵ and of ‘the southern districts of Western Ethiopia.’⁶

It was in the 4th year⁷ of his reign that I suppose the exodus of the Israelites to have taken place, and the wars he undertook and the monuments he erected must date subsequently to that event. Indeed there is no authority in the writings of Moses for supposing that Pharaoh was drowned in the Red Sea ;⁸ and from our finding that wherever any fact is mentioned in the Bible history we do not discover anything on the monuments which tends to contradict it, we may conclude that these two authorities will not here be at variance with each other. And in order to show that in this instance the same agreement exists between

¹ There is some doubt if this bead is not obsidian. — S. B.

² Ebn Pharaon, ‘son of Pharaoh,’ is, however, a great term of reproach with the modern Egyptians, and almost equivalent to ‘son of a Frank.’ But the climax is ‘a Jew’s dog.’

³ Somali on the African coast, or else Southern Arabia.

⁴ Or Kéft, Phœnicia.

⁵ Syria.

⁶ From the monuments of Thebes ; where deputies from those nations bear the

tribute to the monarch seated on his throne. Kufa and Rot-en-nu are two northern people, of which the latter is the more distant from Egypt. They were long at war with the Egyptians.

⁷ We find the date of his 54th year on the monuments.

⁸ *Vide* my ‘Materia Hieroglyphica,’ remarks at the end of p. 4. The Arabs have a tradition that the exodus happened under King Amioos, a name very like Amosis or Thothmosis (Ames or Thothmes), both of which have a similar import.

them, and to prevent a vulgar error, perpetuated by constant repetition,¹ from being brought forward to impugn the accuracy of the Jewish historian, it is a pleasing duty to examine the account given in the Book of Exodus. According to it, Pharaoh led his army in pursuit of the fugitives, and overtook the Israelites encamping by the sea, beside Pi-Hahiroth, before Baalzephon.² The Israelites having entered the channel of the sea, the army of Pharaoh, 'his chariots and horsemen,'³ pursued them, and all those who went in after them were overwhelmed by the returning waters. This however is confined to the 'chariots and the horsemen and all the host of Pharaoh, that came into the sea after them.'⁴ and neither here nor in the Song which Moses sung on the occasion of their deliverance is any mention made of the king's death,⁵—an event of *sufficient* consequence at least to have been *noticed*, and one which would not have been omitted. The authority of a Psalm can scarcely be opposed to that of Moses, even were the death of Pharaoh positively asserted, but this cannot even be argued from the expression, he 'overthrew Pharaoh and his host in the Red Sea,'⁶ since the death of a monarch is not the necessary consequence of his defeat and overthrow.

The departure of the Israelites enabled Thothmes to continue the war with the northern nations before mentioned with greater security and success, and it is not impossible that its less urgent prosecution after the time of Amenemha II. was owing partially to the sojourn of the Jews in Egypt.⁷ At all events we find evidence of its having been carried on by this monarch with more than usual vigor; and in consequence of the encouragement given to the arts of peace, the records of his successes sculptured on the monuments he erected, have been preserved to the present day. He founded numerous buildings in Upper and Lower Egypt, and in those parts of Ethiopia into which his arms

¹ Among many others are the two humps of a dromedary, and the inability of a crocodile to turn round quickly, both in direct opposition to truth.

² Exod. xiv. 9.

³ Exod. xiv. 23.

⁴ Exod. xiv. 28.

⁵ Exod. xv. 4: 'Pharaoh's chariots and his host hath He cast into the sea: his *chosen captains* also are drowned in the Red Sea.'

⁶ Psalm cxxxvi. 15.

⁷ The failure of historical monuments of

this period prevents our deciding the question. I had formerly supposed the Jews and Pastors the same people (Materia Hieroglyphica, p. 84), and that the expulsion of the latter happened under Thothmes III. This last must have occurred long before, and I believe the two events and the two people to have been confounded by historians, or by the copyists of Manetho. The captives represented in the tombs of Thebes are not Jews, as I have observed in 'Egypt and Thebes,' but rather of those nations bordering on Assyria.

had penetrated: he made extensive additions to the temples of Thebes; and Coptos, Memphis, Heliopolis, and other cities in different parts of the country, benefited by his zeal for architectural improvements. In many of the monuments¹ he founded, the style is pure and elegant; but in the reversed capitals and cornices of a columnar hall behind the granite sanctuary at Karnak, he has evinced a love of change consistent neither with elegance nor utility, leaving a lasting memorial of his caprice, the more remarkable as he has elsewhere given proofs of superior taste.

After a reign of fifty-four years² he was succeeded³ by his son Amenophis II., who, besides some additions to the great pile of Karnak, founded the small temple of Amada in Nubia, which was completed by his son and successor Thothmes IV. The great sphinx at the pyramids also bears the sculptures of the son of Amenophis; but whether it was commenced by him or by the third Thothmes, is a question which it would be curious to ascertain. At all events, the similarity of the names may have given rise to the error of Pliny, who considers it the sepulchre of Amasis.

Amenophis III. and his elder brother Amun-Toônh succeeded to the throne on the death of the fourth Thothmes; but as they were both young, the office of regent and tutor during their minority was confided to their mother, the Queen Maut-emua.

During the early part of their reign, stations on the road to the emerald mines were either built or repaired; and the care bestowed on their construction is proved by our finding hewn stones carved with hieroglyphics.

The palace-temple of Luqsor and that behind the vocal statue⁴ were also founded at Thebes, and the sculptures in a side chamber of the former seem to refer to the birth and early

¹ Several obelisks were cut by his order, as the two now at Alexandria, others at Rome, and one at Constantinople. More scarabæi and small objects have been found bearing the name of this king than of any one who reigned before or after him, not excepting Rameses the Great.

² The original date given was thirty-nine years, but recent discoveries show that he entered on his fifty-fourth year, and it has been altered in accordance.—S. B.

³ The return of the Shepherds or Pastors during his reign, mentioned by Manetho, is very doubtful. They are out of place

here, and we know that the Jews did not revisit Egypt.

⁴ The vocal statue of the supposed Memnon is of Amenophis III. [Alciphron mentions it in his epistles, but they are of later date.—G. W.] I have already noticed this error in my 'Egypt and Thebes,' p. 33; 'Extracts,' p. II; and 'Materia Hierog.' p. 88. With the Romans everything curious or striking in Egypt was given to Memnon, as with the Arabs every large grotto is the stable (stable of) Antar. English sailors in like manner fix upon another remarkable person.



Khuenaten distributing gifts to his courtiers.

education of the young prince. Many other buildings were erected in different parts of the country¹ during this reign: extensive additions were made to the temple of Karnak, and the name and monuments of Amenophis III. are found in Ethiopia and even at the distant city of Napata.² The conquests of the Egyptians in Ethiopia and Asia were also continued by this monarch, and some of the enemies³ with whom they fought under Thothmes III. again appear in the sculptures of Amenophis.

It was about the same period, B.C. 1406, that some suppose the use of iron⁴ to have been first discovered in Greece; but whether it was *already* known in Egypt or not is a question hitherto unanswered. We are surprised at the execution of

¹ I do not here notice all the monuments erected by the Pharaohs. They will be found in the description of the different towns of ancient Egypt given in my 'Egypt and Thebes.'

² I suppose Gebel Berkel to mark the site of Napata. From this place were brought Lord Prudhoe's beautiful lions. They were sculptured at the early part of his reign, and immediately before the secession of his brother. [Some years after this was written Sir Gardner Wilkinson visited and made extensive surveys of Gebel Berkel, completely confirming the supposition that this was the site of Napata, the capital of Tirhaka. These are still unpublished.—C. C. W.]

³ Those of Pount, who are among the number of northern nations.

⁴ Hesiod (in his 'Opera et Dies') makes the use of iron a much later discovery. In Theseus' time, who ascended the throne of Athens in 1235, iron is conjectured not to have been known, as he was found buried with a brass sword and spear. Homer generally speaks of brass arms [that is to say, *bronze*, which we translate *brass*—G. W.], though he mentions iron. [Neither ornaments nor utensils of brass were common in Egypt. Indeed, it was rare even amongst the Greeks and Romans in early times; and though we translate *χαλκός* 'brass,' that word *usually* signified 'bronze,' which last is composed of copper and tin; brass being composed of copper and zinc. When, therefore, we read of 'brazen vessels,' of 'brass helmets,' and of other objects in 'brass,' which are described in Greek under the name of *χαλκός* or *χάλκος*, it is *generally* an error in the translation, which should have been 'bronze.' But the notions which some have entertained, that brass was unknown

to the Greeks, and even to the Romans, is incorrect. They evidently had brass, and the term *orichalcus*, or *aurichalcus*, seems with good reason to be considered 'brass,' as in this line of Horace, 'Ars Poet.' 202:

'Tibia non ut nunc orichalco vineta;'

and gold was often imitated by that metal. But I do not know of any brass of ancient Egyptian time, though I had in my possession (now given to Harrow School with the rest of my collection) a brass ring of ancient Egypt—*v.* fig. E. 434 of my Harrow Catalogue—which, perhaps, had an alloy of gold like one kind of 'Corinthian brass,' used for mirrors, etc., which contained silver mixed with copper and tin, or else an alloy of gold: of this last, other specimens besides my ring have been found in Egypt and Greece, and they closely resemble gold. Of this fine quality were doubtless the 'two vessels of fine copper, precious as gold,' mentioned by Ezra, viii. 27. Pliny also mentions vases of it, more precious than those of gold. The brass of the ancients differed from that of modern times (which was introduced into England from Germany), but they used calamine, or native carbonate of zinc, mixed with copper and charcoal, and this last reducing the zinc ore to a metallic state, enabled it to combine with the copper and form brass.

That which was called Cyprian brass, or *coronarium*, was used for making thin metal leaves, which were colored with oxgall, to look like gold, and of these leaves garlands or crowns were composed for the stage and other occasions (see Pliny xxiv. 9). The best preparations for brass are thought to be 2 parts copper to 1 of zinc, or 66 $\frac{2}{3}$ to 33 $\frac{1}{3}$, but some use 70 copper to 30 zinc, or 80 to 20 in 100.—G. W.]

hieroglyphics cut in hard granite and basaltic stone, to the depth of two inches, and naturally inquire what means were employed, what tools were used? If the art of tempering steel was unknown to them, how much more must our wonder increase! and the difficulty of imagining any mode of applying copper to this purpose adds to our perplexity.

The era of Amenophis III. was noted for the great spirit and beauty of its sculptures, which seem gradually to have improved from the reign of Usertesén to that of Rameses the Great, though without any great change, the general character being already established even at that early period, and only undergoing certain modifications of style.

The features of this monarch cannot fail to strike every one who examines the portraits of the Egyptian kings, having more in common with the negro than those of any other Pharaoh, but it is difficult to say whether it was accidental, or in consequence of his mother having been of Ethiopian origin.

It is singular that the sepulchres of the kings who preceded him are not met with, and that he is the first of the 18th Dynasty whose tomb occurs at Thebes. But it is not in the same valley as those of his successors;¹ and the next monarch whose tomb has been discovered is Rameses I., grandfather of the great conqueror of the same name. The tomb of Taia, the queen of Amenophis, is, in company with many others, in a valley behind the temple of Medcenet Haboo at Thebes; a circumstance which proves that they were not generally buried in the same sepulchres with the kings, though some exceptions may occasionally have been made.²

His successor has recorded his lineal descent from the third Thohtmes on a block of stone used in the wall of a temple at Thebes, in the following manner:³—‘The father of his father’s father, Thohtmes III.’; but the monuments of his reign are few and inconsiderable, consisting chiefly of additions to the previously existing buildings.

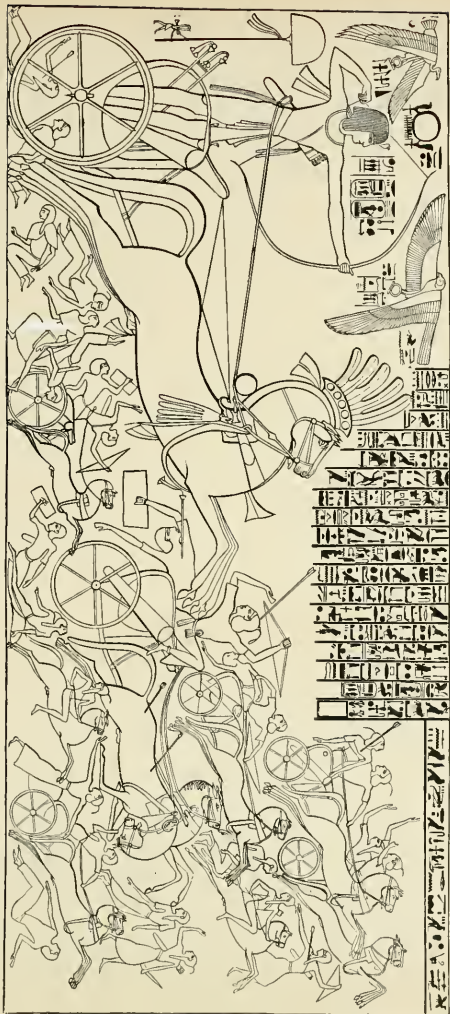
Rameses I. has left little to elucidate the history of the era in which he lived, nor does he appear to have been conspicuous

¹ The tomb of Amenophis III. is mentioned in the papyrus Abbott (Chabas, ‘Spoliation des Hypogées, Mém. Égypt.’ 3^e série), and was at the El Assasif with three of the kings of the 11th Dynasty, but has not been found; that of his suc-

cessor is in the western valley of Thebes.—S. B.

² As in the tomb No. 10 of Biban-el-Moolook at Thebes, and perhaps in No. 14.

³ *Vide* ‘Materia Hierog.’ Pl. I., name c. d.



Battle-scene of Seti I. and the Khita.

for any successes abroad, or the encouragement of the arts at home. It is probable that both he and his predecessor were pacific monarchs, and to this neglect of their foreign conquests we may ascribe the rebellion of the neighboring provinces of Syria, which Seti I.¹ was called upon to quell in person on his accession to the throne. That the revolt of those countries is alluded to in the sculptures of Seti I I feel persuaded, from his being the only king who is represented attacking any country in the immediate vicinity of Egypt, and from the remarkable fact that some of the people through whose territory he passes are on friendly terms, and come forward to pay the stipulated tribute,² or to bring presents to the monarch. And the names of Canana³ and Lebanon,⁴ added to the circumstance of its being at the commencement⁵ of his reign, tend strongly to confirm this opinion.

Seti was the son and successor of Rameses I., and father of the second of that name. He extended his conquests to a considerable distance in the 'north and south countries;' but the destruction of the upper part of the walls of Karnak has unfortunately deprived us of great part of the interesting historical bas-reliefs which describe them. Among the people against whom the war was principally directed we distinguish the Rot-en-nu, who, from their color and dress, as well as the productions of their country, appear to have lived in a colder climate than Egypt, which produced elephants and bears.⁶ The march of the monarch is described with great spirit on the walls of Karnak. Leaving Egypt with a considerable force, he advanced into the heart of the enemy's country; attacked and routed them in the field; and following up his successes, he laid siege to their fortified

¹ In the original edition *Osirei* is given, not Seti; but the name of Seti is recognized as the oldest and corrected form, for which *Osirei* or *Uasiri* was substituted at a much later period.—S. B.

² The tributes levied on the countries conquered by the Egyptians are not only mentioned in the sculptures of Thebes, but also by Tacitus: 'Legebantaur indicta gentibus tributa haud minus magnifica quam nunc vi Parthorum, aut potentia Romana jubentur.' (An. ii. 60.)

³ The Pharaoh whose daughter Solomon married, destroyed 'The Canaanites that dwell in Gezer, and burnt it with fire;' probably for the same reason—neglect in paying the tribute they owed—which

brought the vengeance of Seti upon them on this occasion. (1 Kings ix. 16.)

⁴ The common custom of substituting *m* for *b* in Coptic, and the representation of a mountainous and woody country in which the chariots could not pass, convince me of this being intended for Mount Lebanon. In the compartment immediately below it is the 'land of Canana.' (*Vide* 'Egypt and Thebes,' pp. 190, 192.) This name is now supposed to be read Ermenen for Armenia.

⁵ In his first year, according to the hieroglyphics.

⁶ From a tomb at Thebes. (*Vide* 'Egypt and Thebes,' p. 153.)

cities, and obliged them to surrender at discretion. And in order to indicate the personal courage of the hero, he is represented alighting from his car, and, having laid aside his bow, engaging hand to hand with the hostile chiefs. Having established his dominion in the conquered countries, he returned to Egypt, and dedicated the rich booty and numerous captives he had made to the deity of Thebes.

The subsequent part of his reign was employed in erecting the monuments which still serve to commemorate his victories, and the glory he acquired; and the splendor of Egypt at this period is sufficiently demonstrated by the magnificence and grandiose scale of the buildings and by the sculptures that adorn his splendid tomb.¹

Seti was succeeded by his son, Rameses the Great,² who bore the name of Amun-mai-Rameses, or Rameses-mi-amun,³ and was reputed to be the famous Sesostris of antiquity. The origin of the confusion regarding Sesostris may perhaps be explained. He is mentioned by Manetho in the 12th Dynasty, and Herodotus learned that he preceded the builders of the pyramids: I therefore suppose that Sesostris was an ancient king famed for his exploits, and the hero of early Egyptian history; but that after Rameses had surpassed them, and become the favorite of his country, the renown and name of the former monarch were transferred to the more conspicuous hero of a later age; and it is remarkable that when Germanicus went to Egypt, the Thebans did not mention Sesostris, but Rhameses, as the king who had performed the glorious actions ascribed in olden times to their great conqueror. Nothing, however, can justify the supposition that Sesostris, or, as Diodorus calls him, Sesosis, is the Shishak of Scripture.

The reign of Rameses was conspicuous as the Augustan era of Egypt, when the arts attained a degree of perfection which no after age succeeded in imitating,⁴ and the arms of Egypt were

¹ Discovered and opened by Belzoni at Thebes.

² Champollion and Rosellini are of opinion that there intervened another king between this and Osirei (Seti), to whom they give the name of Rameses II. Lord Prudhoe, Major Felix, and myself think them to have been one and the same monarch, and that the variation in the mode of writing the name was owing to

his having altered it some time after he ascended the throne.

³ I have noticed the synonymous use of these titles, Amen-mai and Mai-amun (Mi-amun), in the names of Rameses III. and others, when written horizontally and vertically.

⁴ The head now in the British Museum, and erroneously called that of the Young Memnon, is of Rameses II. We smile at the

extended by this prince considerably farther into the heart of Asia than during the most successful invasions of his predecessors. He had no sooner ascended the throne than he zealously devoted himself to military affairs: and we find that in his fourth year he had already waged a successful war against several distant nations.¹ His march lay along the coast of Palestine, and the record of that event is still preserved on the rocks of the Lycus near Beiróot, where his name and figure present the remarkable circumstance of a Pharaonic monument without the confines of Egypt. But that this nation extended its arms and dominion far beyond the valley of the Nile, is abundantly proved by the monuments and by Scripture history, and some of their northern possessions were retained by the Egyptians until Nebuchadnezer king of Babylon took from Pharaoh Neco all that belonged to him, 'from the Euphrates to the river of Egypt.'² From Syria their march probably extended towards the N. E.; but I do not pretend to decide the exact nations they invaded, or the names of the people over whom the victories of the great Rameses are recorded on the walls of the Memnonium.³ Champollion supposes them the Scythians, and perhaps the hieroglyphics may admit of such a reading: but let it suffice for the present that they were a northern nation, skilful in the art of war, and possessing strong towns and a country traversed by a large river. Indeed, from their general appearance and the mode of fortifying their towns, we may conclude them to have been far above the level of a barbarous state; and the double fosses that surrounded their walls, the bridges⁴ over them, and the mode of drawing up their phalanxes of infantry, suggest a considerable advancement in civilization and the art of war. Their offensive and defensive arms, consisting of spears and swords, helmets,

name 'young' applied to a statue because it was smaller than a colossus in the same temple; a distinction formerly adopted at the Louvre, where a statue was called '*le jeune Apollon*,' because it had not *yet* attained the size of the Belvedere.

¹ *I*vide my 'Egypt and Thebes,' p. 193.

² Kings xxiv. 7. This river of Egypt is not the Nile, but the 'rivulet' or 'torrent of Egypt;' and is mentioned by Joshua (xv. 4) as the boundary-line, a little to the south of the modern Gaza (Ghuzzeh).

𐤍𐤏𐤍 (nachar) is a rivulet, and not a river, as some have supposed, which is 𐤍𐤏𐤍 (nahar),

as in Arabic. Much less is nahl related to the Nile. Neco also 'went up to fight against Carchemish by Euphrates' (2 Chron. xxxv. 20). For the first copy of the name of Rameses on the Lycus we are indebted to Mr. Wyse. [Strabo says the rule of the Egyptians extended over Scythia, Bactria, India, and what is now called Ionia. — G. W.]

³ I use this name for the palace-temple of Rameses II. because it is better known than any other.

⁴ As they are seen from above, it is not possible to ascertain how they were constructed.

shields,¹ and coats-of-mail, were light and effective; and two-horsed chariots, containing each three men, formed a well-constituted and powerful body of troops. Some fought on horses, which they guided by a bridle, without saddles,² but the far greater part in cars and these instances of the use of the horse seem to be introduced to show a peculiarity of Asiatic people.

I do not find the Egyptians thus represented, and though it is probable they had cavalry as well as chariots, mention being made of it in ancient authors,³ the custom of employing large bodies of horsemen does not appear to have been so usual in Egypt as in some Eastern countries.⁴

The Egyptian cars contained but two persons,⁵ the warrior and his charioteer; and to the great number of their chariots, and their skill in archery, may be attributed the brilliant successes of this people in a long series of wars waged against populous nations: and it is remarkable that their mode of drawing the bow was similar to that of our ancestors, who, for the glorious victories they obtained over armies far exceeding them in numerical force, were principally indebted to their dexterity in the use of this arm.

Great light is thrown on the mode of warfare at this early period by the sculptures of the Memnonium, where a very satisfactory representation is introduced of the scaling-ladder and testudo;⁶ and it is highly probable that the Egyptians, accustomed as they were to subterraneous excavations, adopted the latter as coverts while mining⁷ the besieged towns, as well as for facilitating the approach of their men. Indeed, since they are not formed of shields, but of a covering or framework supported by poles, and are unaccompanied, in this instance, by the

¹ In form bearing a slight resemblance to the Theban Greek buckler.

² The Numidian cavalry had neither. [The Khita are supposed to be the Hittites or people lying to the N.E. of Egypt. The great campaign of the monarch against them was in his fifth year, when the king defeated them in a great battle at Khadesh, on the Orontes. This war is described in the poem of Pentaur or the Sallier papyrus. — S. B.]

³ We read of the Egyptain horsemen in Isaiah xxxvi. 9: 'Put thy trust in Egypt for chariots and horsemen;' and in Miriam's Song, 'the horse and his rider,' Exod. xv. 21. Shiska had with him 1200 chariots and 60,000 horsemen; 2 Chron. xii. 3. (*Vide* my 'Egypt and Thebes,' p. 194, note.)

⁴ Homer's heroes are also mounted in cars. He mentions one cavalier ('Iliad,' vi. 684) using two horses. The Greeks did not employ such cavalry until after the Persian war.

⁵ The Indian chariots, according to Megasthenes, contained each two persons, besides the charioteer. (*Vide infra*, on the Castes, in chap. iii.)

⁶ It was already in use 400 years before this period, in the reign of Useratesen I., as well as a sort of battering-ram. The Aries, or Ram, is said by Vitruvius to have been invented by the Carthaginians at the siege of Gades, lib. x. 19.

⁷ For mines, see Herodotus iv. 200, and v. 115.

battering-ram, we may conclude that the men posted beneath them were so employed, especially as they appear, in no ostensible manner, to be connected with the fight.¹ In some instances, however, they served as a cover to those who directed the ram² against the walls, and were then very similar in use and principle to the *testudo arietaria* of the Romans.

The wars and successes of the great Rameses are again recorded on the walls of Karnak, and in the temples of Nubia, and the number of nations he subdued, and the extent of his arms in the north and south, are the subjects of many historical pictures. The Egyptians had already formed alliances with some of the nations they subdued, and the auxiliary troops enrolled in their army assisted in extending the conquests of the Pharaohs. Their principal allies, at this period, were the Shairetana, a maritime people, and the same who afterwards continued to assist the Egyptians in the time of Rameses III. Other alliances were also formed by the last-mentioned monarch, many distant tribes were subdued by him, and the reigns of Seti and the second and third Rameses appear to have been the most remarkable for the extent of foreign conquest.

According to Herodotus, Sesostris,³ whom I assume to be the same as Rameses II., fitted out long vessels⁴ on the Red Sea, and was the first who went beyond the straits into the Indian Ocean. Diodorus says they amounted to no less a number than 400, and the historian supposes him to have been the first monarch who built ships-of-war; though these as well as merchant vessels, as I have before observed, were probably used by the Egyptians at a much earlier period. And we may reasonably conclude the fleet to have been connected with the Indian trade as well as the canal he cut from the Nile to what is now called the Gulf of Suez.⁵

This canal commenced about twelve miles to the N. E. of the

¹ The wooden horse is, perhaps, the first hint of a mine in ancient history. Rameses II. lived about 150 years before the taking of Troy.

² Their ram was a long pike armed with a metal point, by which they loosened the stones of the wall; the *terebra* of the Romans, and the *ρόβηρον* of the Greeks.

³ Sesostris, or Sesoosis, according to Diodorus, during his father's reign, had led an expedition into Arabia, as well as Libya; and we may, perhaps, trace some

indications of this fact in the sculptures of Karnak, where the son of Osirei returns from the war with his father (Diod. i. 53). Can Ses-Osirei, or Se-Osirei, the 'son of Osirei,' bear any relation to the name of Sesostris?

⁴ Or ships-of-war.

⁵ Strabo, Pliny, and Aristotle attribute its commencement to Sesostris; ['before the Trojan war.' Strabo, xvii. p. 553, edit. 1587. — G. W.]

modern town of Belbays,¹ called by the Romans Bubastis Agria, and, after following a direction nearly E. for about thirty-three miles, it turned to the S. S. E., and continued about sixty-three more in that line to the extremity of the Arabian Gulf. Several monarchs are reputed to have been the authors of this grand and useful undertaking; some writers attributing it to Sesostris, others to Neco, and its completion to Darius and Ptolemy Philadelphus. Pliny, indeed, supposes it never to have been finished, and states, that after it had reached the bitter springs (lakes), the canal was abandoned from fear of the greater height of the Red Sea:² but it is evident that it was completed, and there is reason to believe even as early as the reign of the second Rameses; nor is it improbable that the captives he had taken in war assisted in the construction³ of this noble work. But the vicinity of the sands, amidst which it was excavated, necessarily prevented it from remaining in a proper condition without constant attention; and we can easily conceive that, in the time of Neco and of the Ptolemies, it was found necessary to re-open it, before it could be again applied to the use for which it was intended.⁴

Herodotus says,⁵ it was commenced by Neco, who lived about the year 610 before our era, that it was four days' journey in length, and broad enough to admit two triremes abreast; and that it began a little above Bubastis, and entered the sea near the town of Patumos,⁶ and since Diodorus⁷ says its mouth was close to the port of Arsinoë,⁸ this last may have succeeded to the old town mentioned by Herodotus. Some have reckoned its length at upwards of 1000 stadia; its breadth at 100 cubits, or, according to Pliny,⁹ 100 feet, and its depth forty; and he reckons thirty-seven Roman miles from its western entrance to the bitter lakes. Six-score thousand Egyptians were said to have perished in the undertaking:¹⁰ but this is very incredible; nor can we even believe that the lives of the captives taken in war, who

¹ [Strabo (xvii.) says it began at the village of Phacensa, near that of Philon. — G. W.]

² Plin. vi. c. 29, s. 33, and Aristot. 'Meteorol.' lib. i. c. 14. Diodorus says that Darius was prevented from completing it, owing to the greater height of the Red Sea; but that the second Ptolemy obviated this objection by means of sluices (i. 33). (*Vide* 'Egypt and Thebes,' pp. 320, 321.)

³ Herodotus (ii. 108) says that Sesostris

employed his prisoners to cut the canals of Egypt.

⁴ It is evident that it entered the sea very near the modern town of Suez.

⁵ Herodot. ii. 158.

⁶ Pa or Pi-Thom.

⁷ Diod. i. 33.

⁸ Strabo calls it 'Arsinoë, or, as some style it, Cleopatris' (lib. xvii.).

⁹ Plin. vi. s. 33.

¹⁰ Diodor. loc. cit.

were probably employed in the more arduous parts of this as of other similar works, were so inhumanly and unnecessarily thrown away. At the mouth of the canal were sluices, by which it was opened or closed according to circumstances; and thus, at one period of the year, the admission of the sea-water into the canal was regulated, as the Nile water was prevented, during the inundation, from discharging itself too rapidly from the canal into the sea. Though filled with sand, its direction is still easily traced, as well from the appearance of its channel as from the mounds and vestiges of ancient towns upon its banks, in one of which I found a monument bearing the sculptures and name of Rameses II. — the more satisfactory, as being a strong proof of its having existed at least as early as the reign of that monarch. After the time of the Ptolemies and Cæsars, it was again neglected, and suffered to go to decay; but on the revival of trade with India, this line of communication from the Red Sea to the Nile was once more proposed, the canal was re-opened by the Caliphs, and it continued to be used and kept in repair till the commerce of Alexandria was ruined by the discovery of the passage round the Cape.

Herodotus also tells us that Sesostris was the only king who ruled in Ethiopia,¹ but his assertion is contradicted by the monuments which still exist there.

The family of Rameses II., by his two wives, was numerous, consisting of twenty-three sons and three daughters, whose names² and figures are introduced in the Memnonium.

The duties of children were always more severe in the East than among any European people, and to the present day a son is not expected to sit in the presence of his father without express permission. Those of the Egyptian princes were equally austere. One of their offices was ‘fan-bearer on the left of the king,’ and they were also obliged to carry the monarch in his palanquin or chair of state. As fan-bearers, they attended him while seated on his throne, or in processions to the temples; and in this capacity they followed his chariot on foot³ as he celebrated his triumphant return from battle.⁴ Nor did they lay aside their insignia of

¹ This may refer to the original Sesostris, above mentioned. There is, perhaps, some analogy between the name and that of Usertesén.

² The names of the daughters are omitted. The families in the east are fre-

quently mentioned by ancient authors as being very numerous. Artaxerxes had 153 children; Rehoboam beget 28 sons and 60 daughters.

³ [Conf. 1 Samuel viii. 11-18. — G. W.]

⁴ *Vide* Plate V.

office in time of war ; and sometimes in the heat of battle, whether mounted in cars or engaged on foot, they carried them in their hand or slung behind them : and, as a distinguishing mark of princely rank, they wore a badge depending from the side of the head, perhaps intended to cover and enclose the lock of hair which, among the Egyptians, was the sign of extreme youth, and the usual emblem of the god Harpocrates.

The reign of Rameses the Great was long and prosperous ; nor does the period of sixty-six years appear too much, when we consider the extent of his conquests and the many grand monuments he erected in every part of Egypt, after his victorious return. Indeed, the number I have stated is derived from the authority of Manetho : and in the monuments, we have already met with the date of his 62d year. The extensive additions to the great temples of Karnak and Luqsor, where two beautiful obelisks of red granite, bearing his name, proclaim the wonderful skill of the Egyptians in sculpturing¹ those hard materials : the elegant palace-temple of the Memnonium, and many other edifices at Thebes and Abydus : the temples hewn in the hard grit-stone rock of Aboosimbel : those erected at Dayr, Sabooa, and Gerf Hossayn in Nubia : the obelisks at Tanis, and vestiges of ruins there and in other parts of the Delta,— bear ample testimony to the length of time required for their execution : and from these we may infer a proportionate number founded or enlarged by him at Memphis,² and other of the principal cities, whose sites are now unknown or concealed by mounds.

Besides his military exploits, another very remarkable event is said³ to have distinguished his reign : the partition of the lands among the peasants,⁴ who were required to pay a fixed tax to the government, according to the extent of the property they obtained. But that this division could have been the origin of land surveying, as Herodotus supposes, is contrary to probability ; and the evidence of the Bible as well as of the sculptures, both of which show the rights and limits of landed property to have been long since well defined, and the necessity of ascertaining the quantity of land irrigated by the Nile or changed by the effect of the inundation, must have led a people already highly civilized

¹ Many of the hieroglyphics are two inches deep. One of the obelisks has been removed to Paris ; the other has been ceded to the city of Marseilles.

² At Memphis, a Colossus, and frag-

ments of several statutes, bearing his name, are still met with,

³ *Vide infra*, chap. iv. under Different Lawgivers.

⁴ Herodot. ii. 109.

before the accession of this prince, to the practice of geometry at least some centuries previous to his era. The Bible informs us that a Pharaoh, the contemporary of Joseph, bought all the land (except that of the priests) from the Egyptian landholders: the partition of land mentioned by the historian, could not therefore have been the first instance of such a system in the country; and he may either allude to a new regulation made subsequently to the time of Joseph, or to the very change that took place by his advice. In this case, the tax imposed refers to the fifth part¹ annually paid to the government by the Egyptian peasant, which continued to be the law of the country long after the time of Joseph;² and hence some may derive an argument in favor of the idea before suggested, that the *original* Sesostris (so often confounded with Rameses II.) was Usertesén I.,³ the Pharaoh in whose reign Joseph arrived in Egypt.⁴

His thirteenth son, Meneptah,⁵ succeeded him; and, from the kingly oval accompanying his name at the Memnonium, it is highly probable that the first prenomén he took on ascending the throne was afterwards changed to that by which he is known in the lists of the Egyptian monarchs. But his reign was not marked by any military event of consequence, nor by any particular encouragement given to the arts of peace. He may be the Sisoosis II. of Diodorus, and the Pheron of Herodotus — a title mistaken by the latter historian for the name of the monarch, and evidently corrupted from Phra or Pharaoh.⁶ Two obelisks are reported⁷ to have been erected by him, at Heliopolis, in honor of the sun, but they no longer remain; and though his name appears on some of the monuments of his father and of his predecessors, those founded by him were comparatively few, at least in Upper Egypt. And the additions he made to those buildings are neither numerous nor remarkable for their magnificence.

¹ Gen. xlvii. 24.

² Gen. xlvii. 26: 'A law over the land of Egypt *unto this day*, that Pharaoh should have the *fifth* part; except the land of the priests only, which became not Pharaoh's.

³ Usertesén having lived posterior to the erection of the pyramids is an objection. The name of Rameses is found in the papyri written Sesura and Sesutra, from which the name of Sesostris has been derived. The idea of Sesostris belonging to an earlier dynasty has been put forth, but the political events of the 12th Dynasty do not answer to the legends about Sesostris. — S. B.

⁴ I must, however, confess that Herodo-

tus's statement does not agree exactly with that mentioned in Genesis; the people then selling their lands for corn, and afterwards farming it from the king.

⁵ Sir G. Wilkinson, in the original edition, gives this name as Pthahmen, but it is now universally read Meneptah. — S. B.

⁶ The Arabs now call Phrah, or Pharaoh, Pharon.

⁷ Pliny calls him Nuncoreus, and says that he dedicated two obelisks to the sun on the recovery of his sight. Herodotus states the same of Pheron. (Plin. xvi. 16; Herodot. ii. 111.)

In Pthahmen terminated the 18th Dynasty, and a second family of Diospolitan or Theban¹ monarchs succeeded to the dominion of Upper and Lower Egypt, and reigned eighty-nine years.

19th Dynasty of 1 Memphite ? and 6 Diospolite Kings.

Name from Ancient Authors.	Name from the Monuments.	Events.	Ascended the Throne.
Sethos	{ Pthah-men- Se-ptah. }	{ Was probably either a Mem- phite, or succeeded to the throne by right of marriage with the Princess Taosiri. }	B.C. 1269
Rampses	{ Osirei II., or Osiri - men - pthah [Seti II. — S.B.] . }	. . . . .	1255
Amenophthis	{ Osirita ? Re- merer ? Am- un-mai [Set- necht — S.B.] }	. . . . .	1245
Rameses	{ Rameses III., Mi-amun or Amun-mai. }	. . . . .	1235
Ammenemes	Rameses IV. . . . .	. . . . .	1205
Thuoris	Rameses V.	{ Troy taken 1184 (Arundel marbles), and in the reign of a Rameses, according to Pliny. }	1195
— ?	Rameses VI. . . . .	. . . . .	1180

Thus far I have stated my own opinions respecting the accordance of the monuments with some of the historical data furnished by Manetho; particularly about the period of his 18th Dynasty. I have placed the arrival of Joseph in the reign of Usertesen I.; the birth of Moses in that of Amosis, the leader of this Theban succession, whom I suppose to be the ‘new king who knew not Joseph;’ and the Exodus of the Israelites in that of the third Thothmes. I have assigned the date of 1355 for the accession of the great Rameses, and have had the satisfaction of finding the period thus fixed for his reign fully accords with, and is confirmed by, the astronomical ceiling of the Memnonium. But as another opinion, which ascribes to these events a higher antiquity, may also be maintained by many forcible arguments, and as my object is to examine the question impartially, and to be guided by what appears most probable, I gladly avail myself of

¹ Sethos, or Pthah-men-Se-ptah (Siptsah), appears to have been an exception, and was, perhaps, a Memphite, or from

Lower Egypt, as his name is omitted in the lists of Thebes and Abydos. It also seems to indicate a Memphite origin.

this opportunity of introducing Lord Prudhoe's view of the subject, which he has done me the favor to embody in the following remarks:— 'It is extremely difficult to determine the data of the Exodus in Egyptian history, from the want of sufficient data in the Bible, and from the incorrectness of names given by ancient historians; but the event is so important, that even an attempt to ascertain that date must be interesting.

'The first text bearing on the subject is, "Pharaoh spake unto Joseph, saying, Thy father and thy brethren are come unto thee: the land of Egypt is before thee; in the best of the land make thy father and brethren to dwell; in the land of Goshen let them dwell."¹ "And Joseph gave them a possession in the land of Egypt, in the best of the land, in the land of Rameses, as Pharaoh had commanded."² In this quotation it does not appear that the land was called Rameses when Pharaoh gave it to Jacob: his words are, "give them the best of the land:" the remainder of the text is in the form of a narration by Moses. But the land was called Rameses when Moses wrote, and consequently it was so called before the Exodus. It probably received its name from one of the Pharaohs; we may therefore conclude the Exodus did not take place until after the reign of a Rameses: and the earliest king of that name³ is distinguished among students in hieroglyphics by the title of Rameses I.

"Now there arose up a new king over Egypt, which knew not Joseph."⁴ This text would agree with Rameses I., who appears to have been the first king of a new dynasty, and might well be ignorant of the benefits conferred on Egypt by Joseph. "Therefore they did set over them (the children of Israel) taskmasters to afflict them with their burdens. And they built for Pharaoh treasure-cities, Pithom and Raamses."⁵ The last was the name of the Pharaoh; and it is remarkable that the prefix used to designate Rameses II. was compounded of Pi "the," and Thme "Justice." And though the figure of the goddess Thme is introduced into the names of his father and of other Pharaohs, he is the first Rameses in whose prefix it occurs, and we may therefore conclude it was for this monarch that the Hebrews built the treasure-cities.

'Another instance of the name so used is confirmed by the testimony of Strabo and Aristotle, who attribute the making of

¹ Gen. xlvii. 5, 6.

² Gen. xlvii. 11.

³ Private individuals bore the name long

before; but it is uncertain whether there was any older king Rameses.

⁴ Exod. i. 8.

⁵ Exod. i. 11.

the Suez canal to Sesostris; and Herodotus says that it entered the sea near the town of Patumos. Sesostris is now generally considered to be Rameses II., and the circumstance of his name being found on buildings near the canal, gives another Pithom built by this king.

Lysimachus mentions, "that in the reign of Bocchoris, king of Egypt, the Jewish people, being infected with leprosy, scurvy, and sundry other diseases, took shelter in the temples, where they begged for food; and that in consequence of the vast number of persons who were seized with the complaint there became a scarcity in Egypt. Upon this, Bocchoris sent persons to inquire of the oracle of Ammon respecting the scarcity: and the god directed him to cleanse the temples of all polluted and impious men, and to cast them out into the desert, when the land would recover its fertility." This the king did with much cruelty.

If Bocchoris could be a mistake for the Coptic name OCIPI, with the article II prefixed, it was Osiri, the father of Rameses II., who thus oppressed them. Again, the son of Rameses II. was called Pthamenoph. Josephus states, that "the king Amenophis was desirous of beholding the gods, as Orus, one of his predecessors in the kingdom, had done. And having communicated his desire to the priest Amenophis, the son of Papis, the priest returned for answer, that it was in his power to behold the gods if he would cleanse the whole country of the lepers, and other unclean persons who abounded in it; upon which the king gathered them together, and sent them to work in the quarries." Josephus relates, in continuation, that a revolt was a consequence of this measure: and after some delays and difficulties, King Amenophis marched with 300,000 Egyptians against the enemy, defeated them, and pursued them to the bounds of Syria, having previously placed his son Sethos under the care of a faithful adherent.

It is probable that by Amenophis Josephus meant Pthamenoph: and this opinion is twice confirmed: 1, by his son Sethos, the Se-ptha of the hieroglyphics, which is the only instance of a king so called in the known series of the Pharaohs; and, 2, when he describes Horus as one of his predecessors: for the grandfather of Pthamenoph succeeded to Horus, who was the only Egyptian monarch who bore that name.

If these corrections of names be permitted, six Pharaohs, who succeeded each other in regular succession, are mentioned, either as a direct or a collateral evidence of the Exodus having taken place at this era: 1, Horus, one of the predecessors of

Amenophis: 2. Rameses I., the new king who knew not Joseph: 3. Osiri I., who oppressed the Jews: 4. Rameses II., who built Pithom and Raamses: 5. Pthamenoph, the Pharaoh of the Exodus: 6. Sethos, his son, who was placed with an attendant.

From the many complaints of oppression in the Bible, it appears that the bondage was both severe and of some duration; these two reigns may therefore not be too long: but what, may be inquired, would be the effect in Egypt of an oppression of so numerous a population, and of their subsequent exodus? for even if the number of "600,000 men, besides children," had not been mentioned, it is evident, from the previous account of their increased numerical force, that the Jews were a very large body.

1. To oppress and keep them in bondage required a powerful monarch, and a warrior; and such were in an eminent degree Osiri I.¹ and Rameses II. 2. The labors of so great a population could not fail to be distinguished; and no Pharaohs have left finer or more numerous buildings than these two kings. 3. A successful revolt could only take place under a feeble monarch, and such was Pthamenoph: and the loss of so great a population would inflict a blow on the prosperity of Egypt, and cause a lasting debility. Such was the state of Egypt after the reign of Rameses II., when a sudden decline of the arts and power of the country ensued; and if at the accession of Rameses III. they for a time reappeared, and in great splendor, yet with this monarch the glory of ancient Egypt departed forever.

From the preceding statement, it is evident that Lord Prudhoe places the Exodus in the reign of Pthahmen (or, as he writes it, Pthamenoph), the last king of the 18th dynasty;² and that consequently the dates of those monarchs are all thrown back about 200 years. The decision of this interesting question I leave to the learned reader; and shall feel great satisfaction, when the subject becomes so well understood as to enable a positive opinion to be pronounced upon it. I now return to the 19th Dynasty.

Pthahmen Septhah appears to have been the Sethos³ of Manetho and other authors, and the second part of his phonetic nomen may have been the origin of the name it so much

¹ Seti I. — S. B.

² [There is another calculation which may reconcile the date of the Exodus at a later time with the opinion that Ames was the new king who knew not Joseph. The Israelites were only 215 years in Egypt after the arrival of Jacob (430 years date from the covenant with Abram); and if

Ames began to reign about B.C. 1500, 215 years would bring the Exodus to 1315, in the latter part of the reign of Rameses II. — G. W.]

³ So often mistaken for Sesostris. This rests on the authority of Josephus's version of Manetho: 'Σεθῶν τὸν Ῥαμῆσσην ὠνομάσαμεν.'

resembles. His right to the sceptre and admission into this dynasty were probably derived from his wife Taosiri, while his Memphitic origin excluded him from the privilege of being inserted in the list of Diospolite monarchs, unless this was owing to his expulsion from the throne.¹ Nothing of note occurred during his reign: and whatever buildings he may have founded at Memphis and in Lower Egypt, few bear even his name at Thebes, or in any other city of the Upper provinces. Those of his two successors are equally obscure in the history of their country, and little else remains of the monuments they erected except the avenue of Sphinxes, and the small chambers in the front area of Karnak, which the first of them added to that splendid edifice. But the name of the third Rameses is conspicuous in the annals of his country, as a conqueror and as a zealous encourager of the arts. The war in Asia had been neglected subsequently to, and perhaps, in consequence of, the decisive successes of Rameses the Great, and the usual tribute from the conquered provinces was deemed a sufficient acknowledgment of their submission. But either some remissness in its payment, or his own ambition, stimulated the new king to a renewal of hostilities, and great preparations were made at Thebes and other parts of Egypt for a formidable expedition. Large bodies of chariots, and of archers, spearmen, and other corps of infantry were collected,² and the usual route was taken to the intended seat of war.

During their previous invasions,³ the Egyptians had overrun several provinces,⁴ in what I suppose to be the vicinity of the Caspian Sea: and in order to secure their possessions, and the fidelity of those who had entered their service as allies, they took the precaution to leave military colonies in the places where their presence was most essential, or which proved most suitable to the purpose: and proper officers were appointed to urge and accompany⁵ the annual tribute paid to the Egyptian king. We

¹ It would account for his name being erased in the tomb No. 14, at Thebes, which M. Champollion supposed to be an instance of a king refusing the right of burial for his bad conduct: *vide* Champollion, pp. 76, 255. [It seems that Sethos cut his name over that of another king; and that another king cut his over that of Sethos, leaving the queen's name (Taosiri) in some instances, sometimes putting his figure over hers, and appropriating all her

legends in spite of the female sign. This is not really Sethos, who was the son of Osirei I. — G. W.

² Represented at Medeenet Haboo.

³ *Vide* Diodorus's Account (lib. i. 28) of the Egyptian Colonies.

⁴ Diodorus (i. 71) says, 'many nations were conquered by them.' (*Vide* also Tacit. Ann. ii. 60.)

⁵ According to the pictures in the tombs at Thebes.



Ramesses III. returning with his prisoners.

many hence account for the readiness shown by the allies to join the Pharaohs when invading the hostile countries: and they are represented in the historical bas-reliefs united with the Egyptians in the field of battle.

Some of the people attacked by the third Rameses are frequently alluded to on various monuments, as the enemies¹ of Egypt: but others appear to be situated farther in the interior, and to have been previously unknown to, or unassailed by, the Egyptians. This last would, indeed, argue that ambition or the love of spoil was the main object of the monarch who planned the expedition; and it was probably owing to some injustice on his part, that two of the nations who fought under his banners in the capacity of allies, were induced to quit their allegiance, and unite against the aggressions of the invader. These were the Shairetana and the Tokkari:² and that the costume of the latter bears a remarkable analogy to those of the vicinity of Persia, may be seen by comparing it with the figures brought from Persepolis.³ But whether the conquests, or any of the captives represented in the sculptures of the tombs and temples, can be referred to the rebellion and defeat of the Bactrians, is a question which I do not intend to discuss, since it would lead to arguments uninteresting to the general reader.

It is possible that this monarch extended his conquests in one direction, even farther than his predecessor Rameses II.: but the people represented at the Memnonium, and who have been supposed by M. Champollion to be the Scythians, do not appear to have been invaded to the same extent by the third Rameses.⁴

After subduing several nations, whose troops he had defeated in the open field, in fortified towns, and by water, he returned with immense booty⁵ to the valley of the Nile, and distributed rewards to his troops whose courage and superior discipline had added so much to his glory, and to the power of their native

¹ Some of the allies at Medeenet Haboo are also a new people. They may have been represented on earlier monuments, now destroyed. Medeenet Haboo has been better preserved even than the Memnonium.

² The Tokkari rebelled first, and were then joined by the Shairetana, who had been allies of the Egyptians at least from the time of Rameses II.

³ *Vide infra*, Chap. iii., Enemies of Egypt.

⁴ Or perhaps gave no cause for the renewal of war; and their names may only be noticed at Medeenet Haboo, as among the nations tributary to Egypt.

⁵ If this king is the same as the Rhampsinitus of Herodotus, his successful wars may have been one of the great sources of the immense wealth he is said to have possessed.

country. And the latter part of his reign¹ was occupied, like those of his victorious ancestors, in erecting or embellishing many of the noblest monuments of Egypt.

[Succeeding his father Setnekht, who had recovered the sovereignty of Egypt and driven out the Asiatic and Libyan invaders of the country, Rameses defeated a confederation of Sardinians, Italians, and Libyans who had advanced beyond Memphis, in the eighth year of his reign, was victorious in a second campaign in Palestine, and was successful in a third war against the Libyans, in his eleventh year, the enemy losing their leader and above four thousand dead in the battle which ensued. He re-organized the country, established general tranquillity, and enriched with magnificent donations the temples of Heliopolis, Memphis, and Thebes, from the spoils of his conquests and the valuable tributes he received from the south and north. He reigned rather more than thirty-one years.—S. B.]

The sculptures of this period were elegant, as the architecture was magnificent; but a peculiar innovation, introduced into the style of the hieroglyphics, was the forerunner, though not the cause, of the decline and downfall of Egyptian art. The hieroglyphics had ceased to be executed in relief from the accession of the second Rameses; but the change made in the reign of his fifth successor was by carving the lower side of the characters to a great depth, while the upper face inclined gradually from the surface of the wall till it reached the innermost part of the intaglio, so that the hieroglyphics could be distinguished by a person standing immediately beneath, and close to the wall on which they were sculptured. It was a style not generally imitated by his successors; and the presence of hieroglyphics of this kind may serve to fix the monuments in which they occur to the era of the third Rameses. Some attempt was made by the monarchs of the 26th dynasty to revive the beauty of ancient sculpture; and so great was the care bestowed on the execution of the hieroglyphics and small figures, that a person unacquainted with the purity of the more ancient style feels inclined, at first sight, to consider them the most elegant productions of this school. But on more careful consideration, and judging with a full understanding of true Egyptian design, they will be found to derive their effect from

¹ Among the Turks, it was long an established rule that no mosque could be founded by a Sultan who had not de-

feated the infidels, the enemies of their religion, of which he was the chief.

the minuteness of their detail, rather than from the boldness or superiority of their execution.

At the close of his reign we bid adieu to the most glorious era of Egyptian history.¹ But what was done by the labors of individuals zealous in the prosecution of the arts of peace, or what advances science and general knowledge underwent previous and subsequently to his era, still remains a secret; though it is probable, judging from similar events in other countries, that the epoch of conquest and military renown was accompanied by a proportionate development of intellectual powers.

That the Bible history makes no mention of the conquests of the Egyptian monarchs of the 18th Dynasty is not surprising, when we consider the state of the newly-occupied land at the epoch in question; and, as the history of the Jews only relates to themselves, or to those people with whom they were at war, we readily perceive the reason of their silence. They had not, in fact, become settled in the promised territory; they were engaged in war with neighboring tribes: and the passage of the Egyptian army along the sea-coast of Palestine could in no way disturb or alarm them. Nor could they have had any object in imprudently provoking the hostilities of a nation far more powerful than those petty states whose aggressions they found so much difficulty to resist: and we observe that, at a subsequent period, the insolent interference of Josiah on a similar occasion cost him his kingdom and his life,² and had the additional effect of rendering his country tributary to Egypt.

Whether the successors of Rameses III. preferred the encouragement of the arts of peace and the improvement of the internal administration of the country, or, contented with the annual payment of that tribute which the arms of their warlike predecessors had imposed on the vanquished states, ceased to thirst for further conquest, military expeditions on the grand scale of those equipped by the two Rameses and Seti³ were now abandoned; and the captives represented in their sculptures may be referred to the tributary people, rather than to those brought from any newly-acquired territory.

The immediate successors of the third Rameses were his sons.

¹ [In the coronation ceremony of Rameses III., his queen's name is not inserted in the oval over her figure. Was he separated from her? — G. W.]

² 2 Kings xviii. 30, 34. 2 Chron. xxxv. 20 *et seq.*, and xxxvi. 3.

³ Osirei in the former edition. — S. B.

They all bore the name of their father, and completed the series of the 19th¹ Dynasty. To them succeeded five other Rameses: but the total of the 20th and 21st Dynasties is yet uncertain; nor can the arrangement of their names be ascertained with any degree of precision, owing to their having erected few buildings, at least in those cities whose monuments remain. Nor do the Dynasties of Manetho assist in the history of this period; and, indeed, the unsatisfactory form in which they have been transmitted to us, precludes the possibility of our using them, in any instance, without some confirmation or assistance from the more trustworthy records of the monuments.

[There is, indeed, little historical information to be obtained from the monuments after Rameses III. In the sixteenth year of Rameses IX. the tombs of some of the kings of Thebes were violated by robbers, and in the fifteenth year of Rameses XII. the ark of the god Chons, with the accompanying priests, was sent to the land of Bakhtan, to aid in driving away an evil spirit supposed to possess the younger sister of the queen of Egypt and daughter of the king of Bakhtan. The ark returned after a successful mission, in the thirty-third year of the reign of the monarch. After Rameses XIII. the throne of Egypt was occupied by the high priests of Amen, the first and most important of whom was Harhor, the first of the 21st Dynasty. — S. B.]

Of the same epoch, little information is to be obtained either from Herodotus or Diodorus; nor can we place much confidence in the accounts given by those authors of any portion of Egyptian history. Previous to the reign of Psammaticus, the names of nearly all the sovereigns they mention are questionable, and great confusion is caused by their misplacing Sesostris, or by their ascribing events of the later reign of a Rameses to that conqueror. The cause of this error I have already endeavored to explain, by supposing Sesostris to have been the original hero of Egypt, and the conquests of the second Rameses to have been attributed to the former monarch, whose exploits he had eclipsed; the two persons thus becoming confounded together. However, as Herodotus and Diodorus mention some amusing details of the reigns of the early Pharaohs, I shall introduce them as a collateral account of the history of the Egyptian kings.²

¹ 20th Dynasty. — S. B.

² The History of Egypt written by the authors of the 'Universal History,' has been compiled chiefly from those two

historians; I therefore avail myself occasionally of some extracts from that work, adding my own remarks on the events there detailed.

Menes, or Menas, as already stated, is allowed by universal consent to have been the first sovereign of the country; and was the reputed founder of Thebes,¹ as well as Memphis, the capitals of Upper and Lower Egypt.

Having diverted the course² of the Nile, which formerly washed the foot of the sandy mountains of the Libyan chain, he obliged it to run in the centre of the valley, nearly at an equal distance between the two parallel ridges of mountains which border it on the east and west; and built the city of Memphis in the bed of the ancient channel. This change was effected by constructing a dyke about a hundred stadia above the site of the projected city, whose lofty mounds and strong embankments turned the water to the eastward, and effectually confined the river to its new bed. The dyke was carefully kept in repair by succeeding kings; and even as late as the Persian occupation of Egypt, a guard was always maintained there, to overlook the necessary repairs, and to watch over the state of its embankments. For, adds Herodotus, if the river was to break through the dyke, the whole of Memphis would run a risk of being overwhelmed with water, especially at the period of the inundation. Subsequently, however, when the increased deposit of the alluvial soil had heightened the circumjacent plains, these precautions became unnecessary; and though we may still trace the spot where the diversion of the Nile was made, which is pointed out by the great bend it takes, about fourteen miles³ above the sight of ancient Memphis, the lofty mounds once raised there are no longer visible. The accumulated deposit of the river has elevated the bank about Kafr-el-Iyat to a level with their summit; and a large canal runs, during the inundation, close to the villages of Saqqara and Mit-rahenny, which occupy part of the old city, without endangering their security. Nor, judging from the great height of several mounds still existing at Memphis, could that city have been overwhelmed⁴ at any

¹ [The name of Thebes is almost always written in the plural by the Greeks and Romans — *Θηβαι*, *Thebæ* — but Pliny writes 'Thebe portarum centum nobilis fama.' The Egyptian name of Thebes was *Ap* or *A'pé*, the 'head,' or 'capital.' This, with the feminine article, became *Tápé*, and in the Memphitic dialect *Thapé*, pronounced, as by the Copts, *Thaba*, whence *Θηβα*, in Ionic Greek. The oldest known monuments in Western Thebes were of

Amun-em-ha I. at Karnak, and of his successor *O-irtasen I.*, who ruled immediately after the 6th Dynasty ended at Memphis, about B.C. 2080. — G. W.

² If this is true, it shows great scientific knowledge at that period.

³ I have noticed this in my 'Egypt and Thebes,' p. 341.

⁴ Herodotus says, *Κίνδυνος πάση Μέμφι κατακλυσθήναι ἔστι* (lib. ii. 99).

period by the rising Nile; though much damage might have been done to some of the lower portions of it which may have stood on less elevated ground.

On the north and west of Memphis, Menes excavated a lake, which stood without the town, and communicated with the Nile by a canal: it did not, however, extend to the east, because the river itself was on that side.¹ He also erected at Memphis a large and magnificent temple to Vulcan, who was called by the Egyptians Ptah, — the demiurgos, or creative power.

Menes was the first who instructed the Egyptians in religious matters, introduced domestic magnificence and luxury, and instituted the pomp of feasts; and the change he made in the primitive simplicity of the Egyptians was, in after-times, so much regretted by Tnephackthus, the father of Bocchoris, surnamed 'the Wise,' that he ordered a curse against the memory of Menes to be engraved and set up in the temple of the Theban Jupiter.

A great blank is left after the death of Menes, both in Herodotus and Diodorus. The former relates that 330 sovereigns succeeded him; among whom were eighteen Ethiopians, and one queen, a native of Egypt, whose name was Nitocris. He fails to inform us if she preceded or followed the Ethiopian princess; and we are left in ignorance of the events which led to their obtaining possession of the country — whether it was from conquest, or in consequence of intermarriages with the royal family of Egypt. Nitocris was a woman of great beauty; and, if we may believe Manetho, she had a fair complexion and flaxen hair. Her immediate predecessor was her brother, who was put to death by his subjects, but neither his name nor the cause of that event is mentioned by Herodotus. Resolved on revenging herself upon the authors of this outrage, Nitocris had no sooner ascended the throne than she invited those she suspected of having been privy to it to a festival. A large subterraneous hall was prepared for the occasion; and though it had the appearance of being fitted up with a view to celebrate the proposed feast, it was in reality designed for a very different purpose: for when the guests were assembled, the water of the Nile was introduced by a secret canal into the apartment; and thus by their death she gratified her revenge, without giving them an opportunity of suspecting her designs. But she did

¹ But apparently at some distance from it.

not live long to enjoy the satisfaction she had anticipated; and fearing the indignation of the people, she put an end to herself by suffocation.

No one monarch of the long series above mentioned was distinguished by any act of magnificence or renown, except Mœris, who was the last of them. He built the northern propylæum of the temple of Vulcan at Memphis, and excavated a lake called after him—a work of great splendor and utility, near¹ which he erected two pyramids—and the most wonderful of all buildings² either in Egypt or in any part of the world. This was the famous labyrinth,³ from whose model that of Crete was afterwards copied by Dædalus;⁴ and in which, says Pliny,⁵ not a single piece of wood was used, being entirely constructed of stone. Herodotus attributes the foundation to the twelve kings, in the time of Psammaticus, but tradition seems to have ascribed it to Mœris; though it is possible that the son of Neco and his colleagues may have completed and enlarged it. Pliny says⁶ it was first built by King Petesuccus,⁷ or Tithoes; though others affirm it to have been the palace of Motherus, or the sepulchre of Mœris;⁸ and received opinion maintains that it was dedicated to the Sun. Diodorus mentions Mendes, or, as some call him, Maron or Marrus, as the founder; and others have put forth the claims of Ismandes⁹ and various other monarchs.

The entrance and some of the courts¹⁰ were made of white stone resembling marble:¹¹ and the columns with which several of the corridors were adorned, as well as many other parts of

¹ Herodotus (ii. 149) says the pyramids stood *in* the lake, 200 cubits above the surface of the water, and the same below it; and on each of them was a colossus of stone, seated on a throne.

² Herodot. ii. 148.

³ Pliny (xxxvii. 19) mentions an emerald in this building, of which a statue of the god Serapis was made, nine cubits in height. Another stone of the same quality was sent to Egypt by a king of Babylon, four cubits long and three broad. These I suppose to have been of the smaragdite, or root of emerald, or of glass, but even then their dimensions are extraordinary. His smaragdus is here evidently not the real emerald.

⁴ Plin. xxxvi. 13.

⁵ Plin. v. 11.

⁶ Plin. xxxvi. 13.

⁷ Or Petesuccus. The commencement of his name bears an Egyptian character.

⁸ The Lake Mœris is found by recent researches to have been commenced by Amenemha III. of the 12th Dynasty. The pyramids contained his sepulchre, and that of his successor, Amenemha IV., whose names were found at the Labyrinth, and Sebak nefn or Skemiophris. Possibly the prenomen Maenra or Ma-kher-ra may have suggested the names of the classical authorities. — S. B.

⁹ Probably, as I have elsewhere suggested, the same as Mendes and Osymandyas, in which we trace the name of the god Mandoo, from which that of the king was derived.

¹⁰ Herod. ii. 148.

¹¹ Pliny says, 'of Parian marble.' The stones which I found amidst the ruins on its site are, a hard white limestone, which takes a polish almost like marble, and red granite.

the building, were of red granite of Syene.¹ It was divided into sixteen parts, according to the number of the nomes of Central Egypt, and contained a temple to each of the deities: and with such remarkable solidity² was the whole constructed, that time, says Pliny, could not destroy it, though assisted by the Heracleopolites, from whose ill-will it sustained considerable damage.

Whether the lake (or rather canal) Mœris was really commenced by, and owed its origin to, this monarch, it is difficult to determine; but from the name still given by the Egyptians to the canal which carries the water of the Nile to the Fyoom³ and its lake, and from traditions concerning it, I am inclined to attribute its commencement to Menes, from whom the modern appellation El Ménhi appears to have been borrowed. That the Lake Mœris was in reality a name applied to the canal, as well as to the lake itself, we have the authority of Pliny, who asserts that 'the Lake Mœris was a large canal, which lay between the Arsinoïte and Memphite nomes:'⁴ and the great difficulty which has arisen on the subject is owing to the imperfect description of Herodotus, who has confounded the two; omitting to designate the canal as an artificial work, and the lake as a natural formation. It has not only perplexed many of his readers, but has even misled the learned geographer D'Anville, who, in order to account for his statement, suggested the existence of the Bathen; an hypothesis entirely disproved by an examination of its supposed site: and of all authors who have written on this lake and canal, or the position of the labyrinth, none can be consulted with greater satisfaction than Strabo,⁵ in whose valuable work we only regret too much conciseness.

During the period which elapsed from Menes to Sesostris, no monarch of note reigned in Egypt, if we except those above mentioned, and the Mnevis and Sasyches of Diodorus,⁶ who held a conspicuous place among the legislators of their country. But the exact periods of their reigns is uncertain, and the historian has failed to inform us if Sasyches was the immediate successor of the former, and whether they both preceded or followed

¹ Plin. loc. cit.

² Ibid. Strabo, xvii.

³ The modern name of the Arsinoïte, or Crocodilopolite, nome.

⁴ 'Mœridis lacus, hoc est, fossa grandis.' (Plin. xxxvi. 16, and v. 9.)

⁵ Vide Strabo's account of the lake and its canal, as well as the position of the labyrinth (lib. xvii.).

⁶ Diodor. l. 94. The name calls to mind Susachis, or Shishak; though Diodorus places him before Sesostris (Sesoosis).

MÆRIS: Mnevis is represented to have been the first to teach the people to obey and respect the laws, and to have derived his sanction as a lawgiver from Mercury himself; a fable which, with the name of the prince, argues strongly in support of the opinion that Diodorus has confounded him with Menes, the founder of the Egyptian monarchy. Sasyches, a man of great learning, made numerous and important additions to the existing code, and introduced many minute regulations respecting the service of the gods. He was also the reputed inventor of geometry; and ordained that astronomy should be taught, as an important branch of education.

With the exception of these few reigns, Egyptian history presents a blank from the foundation of the monarchy to the era of Sesostris: it is, however, probable that a portion of it may be filled by an event which, though not fixed to any precise time by historians, is universally allowed to have occurred; the occupation of the country by the Shepherds. If this and the sojourn of the Israelites in Egypt have been confounded by Josephus, perhaps intentionally, and by other writers accidentally, the exploits of Sesostris and of Rameses the Great have experienced the same treatment from Herodotus and others; as the following extracts from his writings cannot fail to prove, with which I continue my comparative view of Egyptian history.

‘Sesostris was the first who, passing the Arabian Gulf in a fleet of long vessels, reduced under his authority the inhabitants of the coasts bordering on the *Mare Erythreum*; ¹ and proceeding still farther, he came to a sea which, from the great number of its shoals, was not navigable. On his return to Egypt, according to the authority of the priests, he levied a mighty army, and made an expedition by land, subduing all the nations he met with on his march. Whenever he was opposed by a people who proved themselves brave, and who discovered an ardor for liberty, he erected tablets ² (*stelæ*) in their country, on which he inscribed his name and that of his nation, and how he had conquered them by the force of his arms: but where he met with little or no opposition, upon similar tablets, which he erected.

¹ The *Mare Erythreum*, or Red Sea, was that part of the Indian Ocean without the Straits of Bab-el-Mandeb; and in later times was applied to the Arabian Gulf, or *Sinus Arabicus*.

² No doubt, similar to those about

E’Souan and other places, many of which are commemorative of victories of the Pharaohs. That on the Lyons, near Beirut, is probably one of the stelæ alluded to by Herodotus.

was added a symbol emblematic of their pusillanimity. Continuing his progress, he passed from Asia to Europe,¹ and subdued the countries of Scythia and Thrace; there, however, I believe his army to have been stopped, since monuments of his victories only appear thus far, and none beyond that country. On his return he came to the river Phasis; but I am by no means certain whether he left a detachment of his force as a colony in that district, or whether some of his men, fatigued with their laborious service, remained there of their own accord.² The Colchians, indeed, appear to be of Egyptian origin; and a strong argument in support of this conjecture is derived from the fact of their being the only people, except the Egyptians and Ethiopians, and, I may add, the Phœnicians and Syrians of Palestine, who use circumcision; and these last two acknowledge that they borrowed the custom from Egypt. The Colchians have also another point of resemblance to the Egyptians: the manufacture of linen is alike in both countries, and peculiar to them; and, moreover, their manners and language are similar.

‘The greater part of the stelæ erected by Sesostris in the places he conquered are no longer to be found. I have myself seen some in Palestine of Syria, with the disgraceful emblem and inscriptions above mentioned: and in Ionia are two figures of the same king hewn in the rock — one on the way from Ephesus to Phocæa, the other between Sardis and Smyrna. They both represent a man, five palms in height, holding in his right hand a javelin, and in his left a bow; the rest of his armor being partly Egyptian and partly Ethiopian. Across his breast, from shoulder to shoulder, is this inscription, in the sacred or hieroglyphic writing of Egypt — “I conquered this country by the force of my arms.”³ Who or whence he is, are not specified, both being mentioned elsewhere;⁴ and though some who have examined it suppose it to be Memnon, I am persuaded they are mistaken in the name of the monarch.’

There is little doubt that one of the tablets or stelæ alluded to by the historian still exists in Syria, bearing the name of Rameses II. It is at the side of the road leading to Beirout,

¹ Conf. Valer. Flac. Argon. v. 418; . . . ‘ut prima Sesostris intulerit rex bella Getis.’

² Rather as a garrison for one of the military posts he established, in order to secure the conquered territory and the

exaction of tribute.

³ Or ‘shoulders.’ Conf. Claudian, Bell. Gild., 114: ‘Terras *humeris* pontumque subegi.’

⁴ Probably in the lines of hieroglyphics on the tablet accompanying the figure.

close to the river Lycus, now Nahr-el-Kelb; and though the hieroglyphics are much erased, sufficient remains to show by whose order it was sculptured. Near it is another, accompanied by the figure of an Assyrian king, and inscribed with the arrow-headed character, copies of which have been made by Mr. Bonomi; and thus the memorials of the passage of the Egyptian army, marching triumphant over Asiatic nations, and that of the Assyrians¹ victorious over Syria and Egypt, are recorded in a similar manner at the same spot.

Diodorus mentions several princes who reigned in Egypt between Menes and Sesostris, some of whom preceded, and others followed, Mœris, or, as he calls him, Myris. Menes, according to that historian, was succeeded by two of his descendants, who in Manetho are his son Athothes and his grandson Ceneenes, or, as Eratosthenes states, Athothes I. and II. Fifty-two kings, whose names are omitted, succeeded them; then Busiris, who was followed by eight of his descendants, the last of whom bore the same name as the first, and was said to have been the founder of Thebes. This honor, we have seen above, has also been claimed for Menes: but it is more probable, as I have elsewhere shown, that the city existed even before his era, especially as he is said to have been a native of Thebes. Nor can we agree with Diodorus in ascribing the foundation of Memphis to Uchoreus II., who is said to have borne the same name as his father, and was the eighth in descent from the monarch he supposes to have been the builder of Thebes. Uchoreus was followed by twelve generations of kings, after whom came Myris, who excavated the lake above Memphis, and is the Mœris of Herodotus. If we admit the authority of Diodorus, seven generations intervened between Mœris and Sesostris; but Herodotus seems to place the latter as his immediate successor.

Sesostris, or, as Diodorus calls him, Sesosis, was reputed by some to have been the son of Amenophis; and about the period of his birth, the god Vulcan appeared to his father in a dream, informing him that his child should become lord of the whole earth. Impressed with the truth of this vision, and anxious to profit by the admonition of the deity, he ordered all the male children throughout Egypt who were born on the same day as his son,²

¹ [A little to the south of this is another — *v. Arch. of Rome*. They are Assyrian, not Persian. — G. W.]

² Of about the same age as his son,

would have been more consistent with probability. Voltaire ridicules this account very severely ('*Phil. de l'Hist.*,' p. 50).

to be brought to him, and, having appointed nurses and proper persons to take charge of them, he gave instructions that they should be educated and treated in every respect as the young prince: being persuaded that those who were his constant companions in childhood and youth would prove his most faithful adherents and affectionate fellow-soldiers. They were abundantly furnished with everything needful: as they grew up, they were by degrees inured to laborious and manly exercises, and were even forbidden to taste any food till they had performed a course of 180 stadia, or nearly twenty-three Roman miles. By this severe training of the body, and by a suitable cultivation of the mind, they were equally fitted to execute and to command. And at length, resolving to give him and his companions an opportunity of proving themselves worthy of the pains bestowed upon their education, the monarch sent them with an army into Arabia; and as soon as they had subdued that unconquered country, they passed into Africa,¹ great part of which they overran.

Sesostris having ascended the throne, turned his attention to the internal administration of the country; and having divided all Egypt into thirty-six nomes, or provinces, he appointed a governor over each. He then prepared to put his military designs into execution, and to extend the conquests of Egypt into the most remote countries. With this view he collected an army of 600,000 foot, 24,000 horse, and 27,000 chariots, and appointed the companions of his youth, in number upwards of 1700, to the chief command.² Leaving his brother Armais regent in his absence, he invested him with supreme power, forbidding him only the use of the diadem, and commanding him to respect and defend the queen, the royal family, and the household: and having marched into Ethiopia, and exacted from that country a tribute of gold, ebony, and ivory, he proceeded to the promontory of Dira, near the straits of the Arabian Gulf, where he erected a stele, with an inscription in the sacred character, to commemorate his successes: and advancing to the country that produces cinnamon, he raised other monuments there, which were seen many ages after his time.

The fleet of Sesostris consisted of 400 sail, and by having

¹ Libya was always considered to form part of the territories of Egypt, even to the time of the Ptolemies. Thus Ptolemy, the son of Lagus, was deputed by Alexander

to preside over Egypt and Africa, as well as part of Arabia. (Justin. xiii. 4.)

² Diod. i. 54.

ships of war in the Mediterranean as well as the Arabian Gulf, he commanded the coast of Phœnicia, and made himself master of many of the Cyclades. Having vanquished numerous southern and eastern nations, he returned to Egypt; and on his arrival at Daphne of Pelusium, he was met by his brother, who, with the plea of celebrating and welcoming this joyful event, invited him to a feast. Sesostris, little suspecting his designs, repaired to the house fitted up for his reception, accompanied by his principal friends and the different members of his family. The house had been previously filled with combustibles, which, by the command of his brother, were ignited as soon as they had all retired to rest. Sesostris, roused from his sleep, perceived the imminent danger to which they were exposed, and seeing no other means of escape but by placing two of his children across the parts which were burning, he came to the resolution of making this sacrifice for the preservation of himself and the rest of his family. According to other accounts, his brother, having seized the throne during his absence, openly rebelled against him, and even offered violence to the queen; and they ascribe his hurried return to the anxiety he felt on receiving intelligence of his perfidy.

Sesostris was no sooner delivered from the sinister attempts of his brother, than he returned thanks to the gods for his escape, and raised six colossal marble statues before the temple of Ptah, or Vulcan, at Memphis; two of himself and the queen, which were thirty cubits in height, and four of twenty cubits, each representing one of his children. Many splendid monuments were also erected by him in different parts of Egypt, in token of his gratitude to the gods for the great victories he had obtained; and the captives he took in war were employed in transporting the immense blocks of stone used in the construction of the temple at Memphis, and in other ornamental and useful works. He also set up two splendid obelisks,¹ and dedicated a ship 280 cubits in length to the god of Thebes; and his statue, which was erected in the temple of Vulcan, together with those of his predecessors, in order to show the esteem in which he was held by his countrymen, had the first and most conspicuous post assigned to it, nor did any succeeding monarch obtain permission to place his own before that of Sesostris. Darius, indeed, claimed this honor, upon the plea that his conquests had equalled those of his Egyptian precursor: but, after they had weighed his claims,

¹ Diodorus (i. 57) says 120 cubits (180 feet) high!

the priests of Memphis declared him to have been eclipsed by Sesostris, inasmuch as he had vanquished the Scythians, who had never yielded to the arms of Darius. This candid remonstrance of the priests was far from displeasing to the Persian monarch, who, in acknowledging the justice of his precedence, expressed a hope that, if he lived as long as Sesostris, he should be enabled to equal his exploits.

In every building erected by his captives he put up an inscription, purporting that it was the work of those he had taken in war, and that no native¹ was employed in the laborious part of the undertaking; and in every city of Egypt he dedicated a monument to the presiding deity of the place. The same captives were also employed in digging large canals, and in raising dykes and embankments, for the purposes of irrigation, the protection of the towns² and lands, and the distribution of the water of the Nile during the inundation; and though these had been previously established throughout the country by his predecessors, the superior scale on which they were now constructed, the many wise regulations he introduced relative to landed property, and the accurate surveys he ordered to be made, in order to ascertain the levels and extent of every person's estate, obtained for Sesostris the credit of having been the first to intersect the plains of Egypt with canals, and of having introduced the science of mensuration and land surveying. Herodotus supposes that Egypt, 'previous to his reign, was conveniently adapted to those who travelled on horses or in carriages,' and that afterwards it became disagreeable to traverse the country on horseback, and utterly impossible in chariots; but as many dykes were raised, as at present, to facilitate the communication from one town to another, and as the journey along the edge of the desert is not only more commodious but shorter for those who go by land from Lower to Upper Egypt, neither Sesostris nor his predecessors were guilty of the great impediments complained of by the historian. Nor is it probable that this monarch was the first to suggest the expediency of ascertaining the quantity of land irrigated by the rising Nile, or the justice of proportioning the taxes to the benefits derived from its fertilizing influence; and however we may be inclined to believe that geometry may have originated

¹ Diod. i. 56.

² Herodotus in another place (ii. 137)

says, the towns were elevated in the reign of Sesostris, when the canals were made.

in Egypt in consequence of the necessity of ascertaining the changes which annually take place on the banks of the Nile, we cannot suppose that no means were devised for this purpose previous to his reign.

Sesostris is reported to have raised a wall on the east side of Egypt,¹ extending from Pelusium along the edge of the desert by Heliopolis,² 1500 stadia in length, or about 187 Roman miles: and that such a wall was actually made by one of the Egyptian monarchs, we have positive proof from the vestiges which remain in different parts of the valley. It was not confined to Lower Egypt, or to the east of the Delta, from Pelusium to Heliopolis, but continued to the Ethiopian frontier at Syene; and though the increase of the alluvial deposit has almost concealed it in the low lands overflowed during the inundation by the waters of the Nile, it is traced in many of the higher parts, especially when founded upon the rocky eminences bordering the river. The modern Egyptians have several idle legends respecting this wall, some of which ascribe it to a king, or rather to a queen, anxious to prevent an obnoxious stranger from intruding on the retirement of her beautiful daughter: and the name applied to it is Gisir el Agoós, or 'the old woman's dyke.' It is of crude brick: the principal portion that remains may be seen at Gebel e'Tayr,³ a little below Minyeh; and I have even traced small fragments of the same kind of building on the western side of the valley, particularly in the Fyoom.

Of the humane character of the ancient Egyptians, we have several strong proofs; but, if we may trust the authority of Diodorus⁴ and Pliny,⁵ Sesostris tarnished his glory by an act of great oppression, compelling captive monarchs to draw his chariot as he proceeded to celebrate his triumph. And the Theban artists have not been ashamed to introduce a similar instance of cruelty in the sculptures of the temple at Medeenet Haboo, representing the triumphal return of Rameses III.,⁶ after his conquests in the Eastern war: where three captives are tied beneath the axle of his chariot, while others bound with ropes walk by his horse's side, to be presented to the deity of the place.⁷

¹ In my 'Egypt and Thebes' (p. 368) I have shown that Voltaire is wrong in the inference he draws from this fact. [Sesostris is Rameses II. of the 19th Dynasty. — S. B.]

² Diod. (i. 57), says, *to* Heliopolis.

³ I have already noticed it in my 'Egypt and Thebes,' p. 367.

⁴ Diod. i. 58.

⁵ Plin. xxxiii. 15.

⁶ And of Osirei (Seti I.) at Karnak.

⁷ *Vide* Plate IV.

The latter days of Sesostris were embittered by the misfortune of losing his sight, which so affected him that he put a period to his existence: an act far from being considered unworthy of a pious and good man, but looked upon by his subjects, and even by the priests themselves, as becoming a hero admired by men and beloved by the gods, whose merited gifts of eternal happiness he had hastened to enjoy.

He was succeeded by his son, the Pheron of Herodotus, the Sesoosis II. of Diodorus, and the Nuncoreus of Pliny. Like his father, he was affected by a weakness of the eyes, which terminated in total blindness: but though it continued during eleven years, he at length recovered, owing more probably to some operation which the noted skill of the Egyptian surgeons had suggested, than to the ridiculous cause assigned by Herodotus. Diodorus and Pliny both agree with the historian of Halicarnassus, that he dedicated two obelisks to the sun at Heliopolis, in token of gratitude for the recovery of his sight; and this I suppose to refer to the son of Rameses II., as I have observed in noticing the reign of Meneptah.

Many ages after him, according to Diodorus, Amasis ascended the throne. He is represented to have been a cruel and despotic prince: and having oppressed his people for some time, he was deposed by Actisanes,¹ an Ethiopian, who made war upon him, probably in consequence of the representations of his subjects, and who succeeded to the throne of Egypt. Actisanes proved himself worthy of the confidence reposed in him and of the choice made by the Egyptians. He behaved with great moderation and impartiality, and introduced some beneficial laws. Instead of punishing theft with death, he caused all robbers to be banished and confined in the most remote part of Egypt, on the edge of the desert bordering Syria, their noses having been previously cut off, as an eternal stigma, and as a means of recognising them in the event of their escape. And the town of Rhinocolura,² where they lived, was said to have received its name from this mutilation of the inhabitants. The spot was dreary and unproductive. On one side was the sea: on the E., W., and S. all was desert: and the torrent or dry 'river of Egypt,' the boundary line of the Syrian frontier, afforded no water but during

¹ The name of Actisanes has not been found on the monuments. The whole of this account of Diodorus is transposed, and

does not correspond to the monumental history. — S. B.

² Dioid. i. 60.

the partial rains which sometimes fell in winter. The wells were salt or brackish; nothing could be cultivated without excessive labor, and so destitute were they of the necessaries of life, that they gladly availed themselves of any opportunity of providing themselves with food. At one season numerous quails visited the district, which they caught in long nets made with split reeds,¹ but this temporary relief only acted as a contrast to their wants during the remainder of the year, when they depended principally on the fish of the neighboring sea.

Actisanes was succeeded by Mendes, or Marrhus, the sceptre now returning to the Egyptian line. This Mendes, according to Diodorus, built the labyrinth in the Crocodilopolite nome, ascribed by Herodotus to Mæris; whence it is evident that he considers Mendes a different person from Mæris, who excavated the lake, and is called by him Myris.² Mendes, indeed, may have continued the building, as the twelve kings are supposed to have done, at a later period, and thereby have obtained the title of its founder: nor is it improbable that Mendes is the Ismandes of Strabo, who was also reputed to be the builder of the labyrinth, and the same as the Mandoof or Mandooftep³ of the hieroglyphics. And the circumstance of there being two towns in the vicinity still bearing the name Isment is very remarkable. Diodorus does not fix the exact epoch at which Osymandyas, whose tomb he describes at Thebes, reigned in Egypt; but, if we may be allowed to infer the identity of Ismandes and Mendes,⁴ we are enabled to assign him a position in the series given by the historian, Ismandes being unquestionably the same as Osymandyas.

Osymandyas signalized himself both for the victories he obtained in the East, and for the monuments with which he adorned the cities of Egypt. In his reign the Bactrians, who had been subdued by Sesostris, rebelled, and threw off their allegiance to the Egyptians. Resolving to punish their defection and recover the conquered country, he levied a formidable army and marched against them. He was victorious; he again reduced

¹ The framework of some nets, in the Egyptian paintings, seems to be made of reeds.

² The *oi* and *u* of the Greeks had the sound of our *ee*.

³ Mentuhetep was the name of some of the monarchs of the 11th Dynasty. This

name has not been found at the labyrinth. — S. B.

⁴ Strabo says, 'If, as some suppose, Memnon is called by the Egyptians Ismandes, the labyrinth must be Memnonian, the work of the same person who erected the buildings at Abydos and Thebes, which are there styled Memnoneia' (lib. xvii.)

them under the dominion of Egypt, and, returning triumphant to Thebes, he erected a magnificent monument, supposed by Hecataeus to have been afterwards used as his tomb, on which he commemorated his victory, and his gratitude to the god Amun and the co-templar deities. It is thus described by Diodorus,¹ on the authority of that ancient author: ‘Ten stadia from the first sepulchres in the Theban Necropolis, where the pallacides of Jove are buried, stood the tomb of Osymandyas. Its entrance was by a propylon of variously colored stone,² two *plethra* in length³ and forty-five cubits in height.⁴ Behind was a square area, surrounded internally by an avenue of columns,⁵ each side measuring four plethra, and having a (partial) roof supported by figures of animals⁶ of solid stone, sixteen cubits high, sculptured in the antique fashion. The ceiling, which was of compact masonry⁷ (covering the space between the outer walls and the columns), was upwards of two *orygiai* (twelve feet) in breadth, and was ornamented with stars studded on an azure ground.⁸ At the upper end of this you came to a doorway leading to a second area, with a propylon, similar in all respects to the former, but sculptured with a greater variety of subjects; and close to the entrance was a colossal group of three figures (the workmanship) of Memnon of Syene.⁹ One of them was in a sitting posture, and was reputed to be the largest statue in Egypt, whose foot exceeded seven cubits in length. The other two, very inferior in size, reached only to its knees (and were attached in an upright position to the front of the throne), one on the right, the other on the left side, and represented the daughter and mother of the king. It was a monument remarkable as well for the excellence of its workmanship as for the dimensions and nature of the stone, in which no crack or even flaw could be found; and upon it was this inscription: “I am Osymandyas, king of kings; if anyone wishes to know what I am and where I lie, let him surpass me in

¹ Diodor. i. 47 *et seq.*

² This appears to allude to the painted sculptures usual on Egyptian buildings, or to granite.

³ The plethrum, according to some, was 100 feet, others reckon it about 92 feet, English.

⁴ Or $67\frac{1}{2}$ feet, which can only apply to the pyramidal towers.

⁵ Literally, ‘after you passed through this, was a square peristyle of stone.’

⁶ He evidently alludes to the Osiride figures, not of animals, but of men, in the areas of Egyptian temples.

⁷ *Μονόλιθον* signifies here, as in Strabo’s description of the labyrinth, ‘a solid masonry,’ not of a single stone. The Osiride pillars, said also to have been monolithic, were no doubt built, as usual, of several blocks.

⁸ These ceilings are very commonly met with in ancient Egyptian edifices.

⁹ In this may have originated the idea of its being the statue of Memnon, as well as the name Memnonium attached to the building here described.

some of my exploits." Near it was a statue of his mother, twenty cubits in height, and of a single stone, bearing three crowns upon her head, which purported that she was the daughter, wife, and mother of a king.¹ Behind the propylon was another peripteral area, adorned with a variety of sculpture. On it was represented a war waged by the monarch in the country of the Bactrians, who had revolted from him, and against whom he led an army of 400,000 foot and 20,000 horse, in four divisions, each commanded by one of his sons. On the first wall the king was seen besieging a fortress, surrounded by a river, and contending in the foremost ranks with the enemy, accompanied by a lion, which appeared to aid him in the fight. Some indeed affirm that the sculptor intended to represent a real lion, which the king had brought up, and was accustomed to take with him to battle, to intimidate his foes: but others are of opinion that it merely alludes to the courage of the monarch, of which it was deemed an appropriate emblem. On the second wall, captives were conducted without hands or the signs of virility, purporting them to be men destitute of courage and the power of resistance: and the third wall presented various subjects and appropriate sculptures, indicating the sacrifices and triumph of the king. In the centre of the open court was an altar of very beautiful stone, admirable for its size as well as for its workmanship; and close to the end wall were two sitting statues, of a single block each, measuring twenty-seven cubits² in height. Three entrances led from the area to a hall supported throughout by columns, and built in the manner of an *odeum*, which measured on each side two plethra. Here were several wooden statues, representing persons engaged in lawsuits, and judges listening to the causes. These last were thirty in number, with the chief justice in the centre, who had many books lying near him, and wore an image of Truth with her eyes closed, suspended from his neck: an emblematic figure, purporting that the duty of a judge was to receive nothing,³ and

¹ Hieroglyphics bearing the same import are found to precede the names of queens who were similarly circumstanced, as Neitacri, the wife of Psammaticus III., and others.

² 40 feet 6 inches. He evidently alludes to the two small colossi of the Memnonium, which stood on each side of the steps leading from the second court of that building. The head of one is in the British Museum, and was formerly called that of the young Memnon. From this court, three entrances

lead to the hall of assembly, agreeing well with the description of Diodorus in his account of the tomb.

³ Diodorus has omitted to mention their being 'without hands;' which, however, we learn from Plutarch: 'The statues of judges at Thebes without hands, with their chief or president at their head, with his eyes turned downwards, signify that justice ought neither to be accessible to bribes, nor guided by favor and affection.' (De Isid. s. 10.)

that the chief justice should have his mind intent on truth alone. After this was a corridor filled with numerous chambers, where all kinds of food most agreeable to the palate were introduced. The king also appeared in the sculptures, painted in elegant colors, dedicating to the deity the gold and silver he annually received from the mines throughout Egypt, which in silver alone amounted to 3200 myriads of minæ.¹ To these chambers succeeded the sacred library, over which was inscribed "The balsam of the soul;" and contiguous to it were figures of all the gods of Egypt, to each of whom the monarch presented a suitable offering; in order that Osiris, and the assessors who attended beneath him, might know that through life he had acted with piety towards the gods and benevolence towards men. Adjacent² to the library was a chamber elegantly fitted up with twenty couches, where the statues of Jupiter, Juno, and the king were placed; and here it was supposed that the body of the prince reposed. Around were several rooms, having beautiful paintings of all the sacred animals of the country, and from them an ascent³ to the whole tomb; beyond which, and immediately over the sepulchre, was a golden planisphere, carried away in later times by Cambyses when the Persians invaded Egypt. It measured 365 cubits⁴ in circumference and one in thickness, and was divided and marked at every cubit with the days of the year, the rising and setting of the stars according to their natural revolutions, and the signs ascertained from them by Egyptian astrologers.⁵

In re-examining this description of Diodorus, I am still more inclined to the opinion I before stated of his having in view the Memnonium, or palace-temple of Rameses II. 1. The distance from the first tombs, where the pallasides of Jove were buried, agrees very satisfactorily with that from the tombs of the queens⁶ to the Memnonium. 2. Its having the largest statue in Egypt, which is the sitting colossus of Rameses, in that building. 3. The plan of the tomb, its three entrances from the second area, and the succeeding hall of columns, agree perfectly with those of the Memnonium; and if the dimensions of the areas exceed the

¹ The Egyptian mina was 1 lb. 5 oz. 6 dwts. English.

² Ομότροχον, having a common wall with the library.

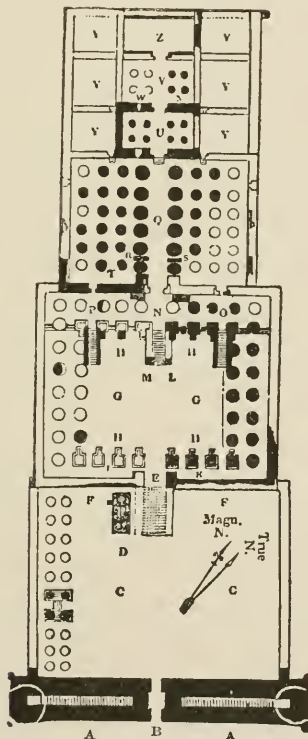
³ From the position of the Memnonium on a rising rock, you ascend towards the upper end of the building.

⁴ 574½ feet, or about 182 feet in diameter.

⁵ Another astronomical ceiling is met with at the Memnonium, in the central chamber, immediately behind the grand hall, in which all the Egyptian months and various stars are introduced, with figures and hieroglyphic legends.

⁶ The Egyptian princesses and queens held that office in the service of Amun or Jove. (*Videmy 'Egypt and Thebes,' p. 80.*)

truth, or appear inconsistent, the objection is one which equally applies to any other Egyptian edifice. I had supposed the word *πυλῶνα* to refer to an entrance court or propylæum; but I perceive that he alludes to the pyramidal towers of the propylon, to which he gives the length of two plethra. The area behind them was four plethra square, and we must therefore conclude the towers to be *each* two plethra, without including the intermediate gateway, which will accord very well with the proportions of an Egyptian temple. However, his measurements may be exaggerated, and I consider it better to leave his plethrum of indeterminate length. And in order that the reader may perceive the relative dimensions and usual arrangement of these courts, and compare Diodorus' description with the Memnonium, I insert a plan of that building, and leave him to form his own opinion.



No. 4. Plan of the Memnonium, showing its great resemblance to the description of the Tomb of Osymandyas, given by Diodorus.

Α, Α, Towers of the Propylon, 'πυλῶνα τετραοῦκοντα καὶ πέντε πηχῶν.' Β, the entrance, 'τὴν εἴσοδον.' C, C, the Arcs, . . τὸ μὲν μήκος διπλεθρον, τὸ δ' ὕψος

That two Theban buildings, the palace of Rameses III. at Medeenet Haboo and the Memnonium, are united in this description of the historian appears not altogether improbable, from a comparison of the plans and sculptures of those edifices. And the revolt of an Eastern people, the lion accompanying Rameses III., and the mutilation of the bodies of the enemy slain in the fight, which occur at Medeenet Haboo in the sculptures of the inner and outer walls, as well as the fortified town surrounded by a river at the Memnonium, and the presence of his sons in the battle, show a striking resemblance to the circumstances detailed by Diodorus.¹

After Mendes, or Osymandyas, ensued an interregnum, which

‘διελθόντι δὲ αὐτὸν εἶναι λίθινον περίστυλον τετράγωνον ἐκάστης πλευρᾶς οὔσης τεττάρων πλέθρων.’ . . . ‘ἀντὶ τῶν κίωνων, ζώδια . . . μονόλιθα,’ as at H, H, in the next court; the area was open in the centre and covered at the sides, ‘τὴν ὁροφὴν . . . ἐπὶ πλάτος δευτεῖν ὀργυίων.’ . . . ‘ἕξις δὲ τοῦ περιστύλου τούτου πάλιν ἑτέραν εἰσοδὸν καὶ πυλῶνα.’ . . . ‘παρὰ δὲ τὴν εἰσοδὸν (E) ἀνδριάντας εἶναι τρεῖς ἕξ ἑνὸς . . . λίθου . . . τούτων ἕνα μὲν καθήμενον (D) ὑπάρχειν μέγιστον πάντων τῶν κατ’ Αἴγυπτον.’ D is the large sitting Colossus of Rameses the Great, close to the second entrance, E. ‘μετὰ δὲ τὸν πυλῶνα (F, F) περίστυλον τοῦ προτέρου ἀξιολογώτερον (G, G) ἐν ᾧ γλυφῆς . . . δηλοῦσας τὸν πόλεμον.’ The battle-scenes occur on these walls, and at I are traces of sculptures relating to the war; but that part, as well as J, is now in ruins. At K, the first wall on the right entering, the king is besieging a city surrounded by a river, ‘κατὰ τὸν πρῶτον τῶν τοίχων (K) τὸν βασιλέα . . . πολιορκοῦντα τείχος ὑπὸ ποταμοῦ περιβήντον.’ On the second wall were the captives led by the king, ‘τὰ τε αἰδοῖα καὶ τὰς χεῖρας οὐκ ἔχοντας,’ as at Medeenet Haboo; and in the centre of the area was an altar in the open air, ‘ὑπαιθρίον,’ showing this court was also hypæthral in the centre. ‘Κατὰ δὲ τὸν τελευταῖον τοίχον ὑπάρχειν ἀνδριάντας καθήμενος δύο,’ L and M — the head of the latter of which is now in the British Museum; ‘παρ’ οἷς εἰσόδους τρεῖς (N, O, P) ἐκ τοῦ περιστύλου καθ’ ἕνα οἶκον

‘ὑπάρχειν ὑπόστυλον (Q) ὁδεῖου τρόπον κτισκασμένον, ἐκάστην πλευρὰν ἔχοντα διπλέθρων.’ R and S are pedestals, perhaps belonging to some of the statues he mentions. ‘ἕξις δ’ ὑπάρχειν περίπατον οἶκων παντοδαπῶν πλήρη,’ perhaps referring to the whole space containing the chambers U, V, Y, Z. ‘ἕξις δ’ ὑπάρχειν τὴν ἱεράν βιβλιοθήκην’ (U or V) ‘συνχεῖς δὲ ταύτη τῶν θεῶν ἀπάντων εἰκόνας, τοῦ βασιλέως, δημοῦς δωροφοροῦντος, ἃ προσήκον ἦν ἐκάστοις,’ which is referred to in the sculptures of W and X. Whether his description of the parts beyond this are correct we cannot decide, as the chambers are entirely destroyed, and the general plan is scarcely to be traced; and as it is probable that Hecateus, who is his authority, was not admitted beyond the great Hall, Q, the information obtained of this part must have rested solely on report. Indeed, in this portion he appears to have united or founded two buildings, the temple of Rameses the Great and that of Rameses III. at Medeenet Haboo; though, with the exception of the measurement of the areas (four plethra square), his description of the first part of the tomb of Osymandyas agrees very closely with the edifice before us; but we may be allowed to question its having been a tomb, or having been erected by that monarch.

T, Battle-scene, where the testudo occurs. (Diod. i. 47, 48.)

¹ The building is now recognized to be the Ramesseion, the sculptures of which record the war of the fifth year of Rameses

II. (Maspero, ‘Hist. Anc.’ pp. 225-6.)—S. B.

lasted five generations, until Cetes or Cetna, a Memphite, 'who in the Greek language was called Proteus,' ascended the throne. The shrine of this monarch was still visible at Memphis in the time of Herodotus. It stood on the south of the temple of Vulcan, and was magnificently ornamented. The Phœnicians of Tyre, who had settled in Egypt, lived in its vicinity when the historian visited the country, and the whole of the environs thence obtained the name of the Tyrian camp. There was also in the same spot a small temple dedicated to Venus the stranger;¹ and this goddess, Herodotus, with the vanity of a Greek, conjectures to be the Grecian 'Helen,² who was said to have lived some time at the court of Proteus.' 'On inquiring,' he continues, 'concerning her, the priests gave me the following information:—Paris (or Alexander) having carried off Helen from Sparta, was returning home, when, meeting with contrary winds in the Ægean, he was driven into the Egyptian sea; and as they continued unfavorable, he proceeded to Egypt, and putting into the Canopic mouth of the Nile, landed at the Tarichæa,³ near a temple of Hercules, which still exists there. If on any occasion a slave fled for refuge to this shrine, and, in testimony of his consecrating himself to the service of the god, submitted to be marked with certain characters, no one was permitted to molest him: and the same custom has been strictly observed, from its first institution to the present period. The servants of Paris, aware of the privileges of the temple, fled thither from their master, and with a view of injuring him became suppliants to the deity. They revealed the whole affair concerning Helen, and the wrong he had done to Menelaus; and they not only related it to the priests, but also to Thonis, who was governor of that mouth of the river.

'Thonis instantly despatched a courier to Memphis, with this message to the king:—"A certain Trojan is arrived here, who has perpetrated an atrocious crime in Greece. He has seduced the wife of his host, and has carried her away, with a quantity of treasure. Adverse winds have forced him hither: shall I suffer him to depart without molestation, or shall I seize his person and property?" Upon this, Proteus gave an order that whoever the

¹ Probably alluded to by Horace:

'O, quæ beatam, Diva, tenes Cyprum, et
Memphin earentem Sithonia nive.'

Od. lib. iii. 26, 10.

Strabo also mentions it (lib. xvii.).

² Strabo says that some consider this Venus to be a Greek goddess, and others suppose the temple to be dedicated to the moon.

³ Or the Salt-pans.

man was, who had thus violated the rights of hospitality, he should be arrested and brought before him. Thonis therefore sent Paris, with Helen and all his wealth, to Memphis, and detained his ships. As soon as he was admitted into the presence of the king, Proteus inquired who he was and whence he came. Paris faithfully related the name of his family and country, and from what place he had set sail. But when he was questioned concerning Helen, and how he had obtained possession of her person, he hesitated in his answers, and endeavored to conceal the truth, till the slaves who had deserted him explained all the circumstances of his guilt. Proteus thereupon pronounced this sentence, "If I did not consider it a very heinous crime to put any stranger to death, who may have been driven on my coast by contrary winds, I would assuredly, thou worst of men, avenge the Greek whose hospitality thou hast betrayed in a most treacherous manner: thou hast seduced his wife; and not contented with this, thou hast carried her off by stealth, and still detainest her; and, as if this crime was not sufficient, thou hast robbed his house. However, as I think it right not to put a stranger to death, I suffer thee to depart; but this woman and the wealth thou hast brought I forbid thee to take: these shall remain with me till the Greek himself shall come and demand them. In three days leave my coast with thy companions, or expect to be treated as enemies."

'Helen was therefore detained by Proteus till the arrival of Menelaus, who, finding at the capture of Troy that his wife was not in the possession of Paris, but had been left by him in Egypt, repaired to the court of the Egyptian king. On his arrival, he related the object of his journey. He was received with great hospitality, and Helen, who had been treated with respect, was restored to him with all his treasure. He then returned to the coast, intending to set sail immediately: but the winds were contrary; and Menelaus, forgetting the gratitude he owed to his benefactors, clandestinely seized two children of the country and offered them as a sacrifice.¹ This was no sooner made known to the Egyptians than they resolved on punishing the perpetrator of so great an outrage: but as he fled by sea to Africa, they were unable to overtake him, and Menelaus escaped their indignation, and the punishment his perfidy deserved.'

The fable related by the Greeks of the wonderful powers of

¹ Conf. Virg. Æn. ii. 116.

Proteus,¹ in assuming a multiplicity of shapes, is thought by Diodorus² to be explained from a custom common to the Egyptian kings of adorning their heads with various figures and emblematic devices, intended to strike the beholders with awe; but this is neither satisfactory nor probable.³ The head-dresses of the kings represented in the sculptures, when offering to the gods, are numerous and varied (especially in the later times of the Ptolemies and Cæsars); yet such slight changes could never account for a similar fable among the Egyptians, who were fully acquainted with the intention of every vesture and crown of ceremony.

Rhemphis or Rhampsinitus⁴ succeeded Proteus. He does not appear to have been distinguished for the extent of his conquests abroad, but he surpassed all his predecessors in the immense wealth he possessed, and in his fondness for riches. Diodorus considers him of so avaricious a character that he was unwilling to employ any of the treasure he had amassed either for the service of the gods or the benefit of his subjects; but the monuments he erected at Memphis disprove this statement, and claim for him a place among the patrons of religion and the encouragers of art. 'The western vestibule of the temple of Vulcan,' says Herodotus, 'was added by his order, as were two colossal statues twenty-five cubits in height, which stand in front of it. The northern statue⁵ is called by the Egyptians Summer, the other to the south, Winter; and though they treat the latter with no manner of respect, they reverence the former, and even worship it.'

Herodotus concurs in representing Rhampsinitus as the most opulent of all the Egyptian kings who reigned before or after him; and if he does not state the amount of his wealth, which the former historian calculates at no less than 400,000 talents, he relates the great care he took in its preservation.⁶ 'For this purpose he constructed a stone edifice, one side of which was attached to the wall of his palace. But the architect he employed, with a

¹ [Plutarch mentions the enchantments of Proteus, the Egyptian Sophist Euthydemus, p. 200. — G. W.]

² Diodor. i. 62.

³ The Egyptian accounts of Homer have been considered in detail by Professor Lauth, 'Homer und Aegypten,' 8vo. Munich, 1867; and the Right Hon. W. E. Gladstone, 'Homeric Synchronisms,' 8vo. London, 1876. According to Lauth, p. 37,

Proteus was the personified navigation (*Perhot*) of the coast. — S. B.

⁴ Rameses III.

⁵ Or that on the left entering.

⁶ The treasury of Rameses III. at Medeenet Haboo is the place referred to. It is given in Champollion, 'Notices descriptives,' p. 257; Duemichen, 'Die historische Inschriften.' — S. B.

dishonest view, so disposed one of the stones of the outer wall that two or even one man might easily remove it. The building being completed, the king there deposited his treasures in supposed security. Some time afterwards, the architect finding his end approaching, sent for his two sons, and told them how their future prosperity was provided for by an artifice he had adopted in building the king's treasury. He then explained all the secret of the stone: its dimensions and position; the mode of removing it; and, if they used proper caution, the certainty of participating in the royal wealth. After the death of their father, they were not long before they availed themselves of the advice he had given them; and repairing by night to the palace, they found the stone as described, and having easily removed it, they carried away a large sum of money. When the king entered the apartment he observed a sensible diminution of the gold in the vases; but as he had no suspicions of any person, and the lock and its seals were intact, he was greatly perplexed. At length, finding the same diminution continue, the thieves constantly repeating their visits, he resolved on placing traps round the vases which contained the money. They returned as usual, and one of them on going to the spot was caught in the trap. He instantly called to his brother; and explaining his situation, he requested him without loss of time to cut off his head, as the only means of preventing detection and preserving his own life. The advice appeared good; and having overcome his scruples, he complied, replaced the stone, and ran home, carrying with him the head of his brother.

‘As soon as it was light, the king entered the apartment; and seeing the body of a person without a head secured in the trap, the walls entire, and showing no place of exit or ingress, he was more astonished than ever. Still he hoped to unravel the mystery; and ordering the body to be exposed from the wall, he stationed guards on the spot, and directed them to seize and bring before him whoever should discover any symptoms of sorrow or compassion at the sight. The mother, exasperated at this treatment of her son's body, threatened the surviving brother if he did not contrive some means of removing and bringing it away, she would go herself to the king and accuse him as an accomplice in the robbery. In vain did he endeavor to excuse himself; at length, finding her determined, he had recourse to the following artifice. He loaded some asses with skins of wine, and drove them to the place where the guards were stationed to watch the

body of his brother. As soon as he approached them, he secretly drew the pegs from the mouths of two or three of the skins, and, when the wine gushed out, he began to beat his head and to cry vehemently, running to and fro with pretended confusion, as if uncertain to which of the asses he should go first. The soldiers perceiving the accident, ran with vessels; but instead of assisting him, all the wine they could save they considered themselves entitled to as their own. At first he abused them in apparent anger; then, feigning to be pacified by their endeavors to console him he led his asses aside out of the road, put the skins in order, and began to enter into conversation with them. Affecting to be pleased with the drollery of one of them, he gave him a skin of wine; and having accepted their invitation to stay and drink with them, he sat down, and, to reward their civility, he added another. It was not long before the wine had its effect: the soldiers became intoxicated and fell asleep, and as soon as night came on, he took down the body of his brother; and having shaved the right cheek¹ of the guards, in derision, he put the body into a sack on one of his asses and drove home.

‘When Rhampsinitus heard what had happened, he was enraged beyond measure; but being resolved on discovering the robber, he is said to have had recourse to this stratagem, which to me appears very improbable. He commanded his daughter to receive every man indiscriminately, on condition he would tell her the most artful as well as the most wicked thing he had ever done; and if any one confessed the crime of which this robber had been guilty, she was to seize him and prevent his escape. The daughter obeyed the orders of her father; and the thief, guessing what was intended, prepared to thwart the artful scheme of the king. He cut off the arm of a body recently dead, which he concealed under his cloak during his visit to the princess, and when asked the same question as the rest, he replied “that the most wicked thing he had ever done was to cut off the head of his brother who had been caught in a trap in the king’s treasury.— the most artful thing, his making the guards drunk and removing the body.” She immediately endeavored to apprehend him; but as it was dark, he held out the dead arm, and on her seizing it, effected his escape. This being reported to

¹ This, like the rest of the story, is very questionable. The Egyptian soldiers had no beards, and Herodotus himself allows that the Egyptians shaved, and only allowed

‘the hair of their head and beard to grow in mourning’ (ii. 36). That this last is true is proved by the sculptures representing soldiers and other individuals.

the king, he was still more astonished at the art and audacity of the man, and issued a proclamation that if the offender would declare himself he should not only be pardoned, but rewarded handsomely. Trusting to his word, the thief presented himself before him, and Rhampsinitus, being much pleased with his address, gave him his daughter in marriage; for knowing the Egyptians to be superior in ingenuity to all other people, and finding he had surpassed even the Egyptians, he looked upon him as infinitely more clever than any other human being.'

Such is the story told by Herodotus; but we must do him the justice to say that he expresses his disbelief of it, as well as of the same king's visit to the lower regions, where Rhampsinitus was reported to have played at dice with the goddess Ceres, alternately winning and losing, and to have been presented on leaving her with a napkin embroidered with gold.¹ The period of his supposed return was celebrated by the Egyptians as a solemn festival, and continued even to the time of Herodotus; but what the real origin or import of the ceremony may have been the historian is unable to inform us. 'The ministers,' he adds, 'who officiate on that occasion, wear a vest woven within the space of a day; and this is put on by one of them, whose eyes are blinded, and who is conducted to a path leading to the temple of Ceres, where he is left, and whence two wolves are said to take him to the temple, distant twenty stadia from the city, bringing him back to the same spot when the ceremony is concluded. But I leave every reader to judge for himself regarding the credibility of what I here relate.'

Till the reign of Rhampsinitus, Egypt was fortunate, as well in the tranquillity and justice it enjoyed, as in the blessings of abundance. But Cheops,² his successor, abandoned himself to every kind of depravity. He closed all the temples, forbade the Egyptians to offer sacrifices, and ordered their labors to be confined to his own purposes. Having the project of building a pyramid, he compelled some to hew stones in the quarries of the Arabian mountains,³ and to drag them to the bank of the Nile; others were appointed to receive them from the boats and transport them to the mountain of Libya; and for this service 100,000

¹ Rameses III., or Rhampsinitus, is represented playing at draughts in the bas-reliefs of his palace at Medenect Haboo, with goddesses representing the upper and lower countries. (See Rhampsinitus and the Game of Draughts, 'Trans. Roy.

Soc. of Literature,' vol. ix. pp. 256 and foll.—S. B.)

² The Chemmis, Chembes, or Chemnis of Diodorus. This anachronism of placing Cheops after the Trojan war, must be obvious to every one.

³ Conf. Plin. xxxvi. 17; Strabo, lib. xvii.

men¹ were employed, who were relieved every three months. In the operation of forming the road, by which the stones were carried, ten years were consumed; and this arduous undertaking appears scarcely inferior to the pyramid itself, which, independent of the time employed in preparing the hill where it stands, occupied twenty years.' The historian then proceeds to describe the pyramids: but as I have given an account of them in a previous work,² I think it unnecessary to repeat it here, and resume my history of the successors of this monarch.

After a reign of fifty years, Cheops, who, as I have already stated, appears to have been the Supleis of Manetho and the Chembes of Diodorus, was succeeded by Cephren his brother. He reigned fifty-six years, and erected a pyramid similar to that of his brother, but of rather less dimensions.

Mycerinus, the son of Cheops, was his successor. He was a good and religious prince; and his memory was revered by the Egyptians beyond that of all his predecessors, not only because of the equity of his decisions, but because his love of justice was so great that if complaint was made of his conduct he always showed a willingness to redress the injury. He had an only daughter, who died some time after he ascended the throne, which was the first misfortune he experienced; and being much afflicted by her death, and wishing to honor her funeral with more than ordinary splendor, he enclosed her body in a heifer made of wood, richly ornamented with gold. It was not buried, but remained even to the time of Herodotus in the palace at Saïs, in a magnificent chamber, where exquisite perfumes burnt before it every day, and brilliant illuminations continued throughout the night.³

Mycerinus afterwards met with a second calamity. The oracle of Buto sent to inform him he should live six years and die the seventh; and though he represented his piety and upright conduct, the same answer was returned, with this addition, that his early death was in consequence of his virtues.⁴

During this period of his reign he occupied himself in constructing a pyramid; and if we may believe Diodorus, he died

¹ Plin. Nat. Hist. lib. xxxvi. c. xii. s. 17.

² 'Egypt and Thebes,' p. 323.

³ It is very questionable if this heifer referred to the daughter of Mycerinus, and judging from what the historian adds of the Egyptians flagellating themselves in

honor of a certain god (Osiris), it would rather seem to belong to Isis, or to Athor.

⁴ Herodotus mentions a ridiculous story of his passing the night in revelry, and endeavoring to convict the oracle of falsehood, by turning night into day, and thus doubling the number of years.

before its completion. It stands near those of his father and his uncle; and though much smaller, was considered, when entire, far more elegant than the other two, being cased with red granite.¹ On the northern face he inscribed his name; and the entrance, though still closed and undiscovered, may be looked for on this side, like those of the other two pyramids. The Greeks erroneously attributed its erection to the courtesan Rhodopis; but, as Herodotus observes, it is improbable that a monument which cost several thousand talents should have been erected by her, and even impossible, since she did not live at the same epoch, but during the reign of Amasis.

The immediate successor of Mycerinus is uncertain. According to Herodotus, it was Asychis, who appears to have been a Memphite. Diodorus, however, here introduces the names of Tnephachthus and his son Bocchoris, both omitted by Herodotus, as Asychis and Anysis are in his catalogue of kings.

Tnephachthus, or as Plutarch calls him Technatis, the Neochabris of Athenæus,² is only known as being the father of Bocchoris,³ and as having led an expedition into Arabia, where he endured great privations and hardships, owing to the loss of his baggage in so inhospitable a country. And being obliged to put up with the poor and slender diet he there met with, and finding his sleep in consequence much more sound and refreshing, he felt persuaded of the ill effects resulting from a luxurious mode of living, and was resolved on his return to Thebes to record his abhorrence of the conduct of Menes, who had induced the Egyptians to abandon their frugal and simple habits: he, therefore, erected a stele, with an inscription to that purpose, in the temple of Amunat Thebes, where his son also made considerable additions to the sacred buildings dedicated to the deity.

Bocchoris,⁴ his son, a Saïte by birth, succeeded him. He is represented to have been despicable in his person, but the qualities of his mind fully compensated for any imperfections of the body; and so far did he surpass all his predecessors in wisdom and prudence, that he obtained the distinctive surname of 'the Wise.' He is reputed to have been one of the Egyptian law-

¹ Pliny lib. xxxvi. c. xii. s. 17. Herodotus says, it was of Æthiopian stone, as far as the middle of its height.

² Athen. Deip. lib. x. p. 418.

³ A leader or petty prince of Libyan troops of this name, called Tefnakht, who ruled the greater part of North Egypt, is mentioned in the account of the invasion of

Egypt by the Ethiopian monarch Pianchi. (Rev. Canon Cooke, 'Inscription of Pianchi, Records of the Past,' vol. vi. p. 79, who cites the previous translators and works where published.) — S. B.

⁴ Called in the hieroglyphic inscriptions Bakenranef: several monuments are known of his reign. — S. B.

givers, and in this capacity to have introduced many useful regulations in the ancient code respecting debt¹ and fiscal matters; though some have supposed his care of the revenue to proceed from a feeling of avarice, rather than from a desire to benefit the State.² He was said to have been taken prisoner by Sabaco the Ethiopian, and to have been burnt alive; but this assertion is destitute of probability, and there is great doubt whether Sabaco was his immediate successor, or whether, as I have already observed, several kings intervened between Bocchoris and that monarch.³ To enable us to solve these questions,⁴ we require more positive authority, either from the monuments or from history, and it is equally useless to inquire if Asychis was the same as Bocchoris. I therefore proceed to notice the reigns of Asychis and Anysis,⁵ as given by Herodotus.⁶

The former was not only an encourager of art, but a benefactor to his country by the introduction of some salutary laws respecting debt. Finding that commercial interests suffered from an extreme want of money, he passed an ordinance that any one might borrow money, giving the body of his deceased father as a pledge: by which law the sepulchre of the debtor fell into the power of the creditor; for if the debt was not discharged, he could neither be buried with his family in that or in any other tomb, nor was he suffered to inter any of his children.⁷

Among the monuments erected by Asychis⁷ was a pyramid of brick, with this inscription engraved on a marble slab, 'Compare me not with the stone pyramids, for I am as superior to them as

¹ Diodor. i. 79. *Vide infra* on the Laws of Egypt.

² Diodor. i. 94.

³ This is also the opinion of Diodorus, i. 65.

⁴ Sabaco was the son of Kashta, and brother of the queen Ameritis, or Amenartas, and conquered Egypt and Bocchoris. Later, he allied himself with the Syrians, and was defeated by Sargon at Raphia, B.C. 714. (Maspero, 'Histoire Ancienne,' pp. 387-395, 487-8.)—S. B.

⁵ Supposed to be a descendant of Bocchoris, who had fled to the Delta.

⁶ [No mention is made by Herodotus of Bocchoris (nor of his father Tnephachthus, the Technatis of Plutarch); and the lists of Manetho, as well as of Diodorus, omit the Asychis and Anysis of Herodotus. Sethôs again, whom Herodotus calls a contemporary of Sennacherib, is unnoticed in Manetho's lists; and as Tirhakah was king of the whole country from Napata in

Ethiopia to the frontier of Syria, no other Pharaoh could have ruled at that time in Egypt. We may therefore conclude that Herodotus has given to a *priest* of Pthah the title of *king*. The miraculous defeat of the Assyrian king mentioned both by the Egyptians and the Jews is remarkable. Some have attributed the destruction of his army to a plague; but plague does not destroy upwards of 185,000 men in one night. The omission of all notice of Tirhakah by the Egyptian informants of Herodotus may have been owing to jealousy of the Ethiopians. The Assyrians defeated by Tirhakah are represented at Medeenet Haboo in Thebes, and in his temple at Gebel Berkel, wearing cross-belts.—G. W., in Rawlinson's 'Herodotus.']

⁷ Asychis is supposed to be a King Aserkaf, or Shepeskaf, of the 4th Dynasty, and there were no Egyptian pyramids after the 12th Dynasty.—S. B.

Jove is to the other gods. Thus was I made: men probing with poles the bottom of a lake drew forth the mud which adhered to them, and formed it into bricks.'

Four pyramids built of these materials still remain in Lower Egypt, independent of several smaller ones at Thebes, and it is probable that one of them is that alluded to by Herodotus as having been erected by Asychis. Two are close to Memphis and the modern town of Dashoor; the others stand at the entrance of the Fyoom. Near the former are two pyramids of stone; and this circumstance, and their vicinity to Memphis, induce me to believe one of them to be the crude brick monument in question; for it is reasonable to suppose it would be erected near the city where the prince resided, and in the vicinity of stone pyramids, to which it forbade the spectator to compare it. In what its superiority consisted we are unable to decide. Dr. Richardson ingeniously ascribed it to the vaulted roofs of its chambers, whose construction was the result of the novel invention of the arch. But though chambers did exist in the brick pyramids, vestiges of which I have myself seen in one of those at Dashoor, and their roofs, as he justly concludes, were vaulted, other pyramids of similar materials had long before been erected at Thebes, with roofs of the same construction, and the arch was invented and used in Upper Egypt many centuries before the accession of this monarch.¹

According to Herodotus, Asychis was succeeded by Anysis, a native of a town of the same name, who was blind. In his reign, Sabaco the Ethiopian invaded and conquered Egypt, of which he continued in possession fifty years; and during the whole of that period Anysis remained concealed in the lowlands of the Delta, at a place called the Isle of Elbo, which he is said to have formed for himself of ashes and earth, neither daring nor having the power to dispute the authority of the invader.

Sabaco, while he ruled Egypt, refrained from punishing any crime with death; but, according to the magnitude of their offence, he condemned all criminals to raise the ground around the place to which they belonged: in order to elevate the different towns throughout the country, and to place them above the reach of the inundation. This had been previously done during the reign of Sesostris, when the canals were made: but the mounds now added by order of the Ethiopian were much more extensive:

¹ The arch was invented as early as the 5th Dynasty. — S. B.

so that every city was raised at this period, and particularly Bubastis.' Manetho differs from the historian of Halicarnassus in his character of Sabaco, and in the name of the prince whose throne he usurped, since he affirms that he took Bocchoris captive and burnt him alive; nor is Herodotus's own account consistent, when he mentions his having put to death 'Necos, the father of Psammitichus.'¹ Again, Manetho limits his reign to eight or eighteen years, while Herodotus allows him fifty; and states that he relinquished the throne of Egypt, and returned to Ethiopia, in consequence of a dream, in which 'a person appeared advising him to assemble all the priests of Egypt, and to inflict upon them the cruel death of cutting them asunder . . . but, rather than perpetrate such a deed, he resolved to retire from the throne, especially as the duration of his reign over Egypt, according to the oracles, was now fulfilled; for Sabaco, while in Ethiopia, having consulted them, was informed he should reign fifty years in Egypt; and this period being accomplished, the vision so alarmed him that he voluntarily withdrew.'

On the secession of Sabaco, Anysis was recalled from his place of concealment, and assumed the reins of government; but for what length of time Herodotus fails to inform us. He was succeeded by Sethos, a priest of Vulcan, who, as I shall presently have occasion to observe, was contemporary with Tirhakah, and who, in consequence of the contempt with which he treated the military class, endangered the safety of the whole of Lower Egypt, when Sennacherib, king of Assyria, threatened to invade it. This, and the events which occurred in the reigns of Sabaco, Psammatichus, and succeeding monarchs, will also be noticed in my account of the 25th and 26th Dynasties; and having, as I proposed, introduced a comparative view of the history of the early Egyptian princes, from Menes to Sethos, from the works of Herodotus and Diodorus, I resume my chronological inquiry, which I had carried down to the end of the 19th Dynasty, and consequently now return to the kings who succeeded the sons of the third Rameses, and who composed the 20th, 21st, and the following Dynasties.

¹ This I shall presently show to have been impossible. (Herod. ii. 152.)

The 20th and 21st Dynasties, on the authority of the Monuments,¹ were composed of—

Name from the Monuments.	Ascended the Throne.
	B.C.
Rameses VII.	1170
Rameses VIII.	1155
Rameses IX.	1140
Rameses X.	1125
Rameses XI.	1110
Amun-mai-Harhor	1095
Amun-meses?	1080
Reigned till about	1068

[20th Dynasty, from the Monuments.

Kings.	Monumental date.
1. Setnekht	
2. Rameses III.	
3. Rameses IV.	32 years.
4. Rameses V.	18 years.
5. Rameses VI.	
6. Rameses VII.	
7. Rameses VIII.	
8. Rameses IX.	16 years.
9. Rameses X.	2 years.
10. Rameses XI.	
11. Rameses XII.	33 years.
12. Rameses XIII.	17 years.
Total of kings 12	Total of known years 98 S. B.]

[21st Dynasty, from the Monuments.

Kings.	Monumental date.
1. Harhor	
2. Panetem I.	
3. Petukhana I.	
4. Panetem II.	
5. Harpasebsha	
Total of kings 5	Total of years unknown. S. B.]

22d Dynasty, from the Monuments.

Kings.	Monumental date.
1. Shashanqa I.	21 years.
2. Uasarkan I.	
3. Takeloth I.	
4. Uasarkan II.	23 years.
5. Shashanqa II.	
6. Takeloth II.	14 years.
7. Shashanqa III.	28 years.
8. Pamai	2 years.
9. Shashanqa IV.	37 years.
Total of kings 9	Total of known years 135

¹ This table requires considerable revision; Rameses XII. and XIII. are omitted, and Harhor is of the 21st Dynasty.— S. B.

[23d Dynasty, from the Monuments.

Kings.	Monumental date.
1. Petsibast	
2. Uasarkan	
3. Psamut	S. B.]

The succession is doubtful for a period of about ninety years, when a more interesting period opens to view, in the 22d Dynasty, where we recognize a great similarity between the names¹ of Manetho's list, and those on the monuments.

22d Dynasty, of Diospolitans.

Name from ancient Authors.	Name from the Monuments.	Events.	Ascended the Throne.
Sesonchis	Sheshonk I.	{ Shishak of S.S., who plundered the temple of Jerusalem, B.C. 971 } Contemporary with Zerah, the Ethiopian king who fought with Asa, B.C. 941	B.C. 981.
Orsorthon Tacellothis	Osork Takelothé		945. 925.

23d Dynasty.

Name from ancient Authors.	Name from the Monuments.	Events.	Ascended the Throne.
(Uncertain)	Osorkon II. ² Sheshonk II. (Then, probably, one or more kings, oc- cupying a space of about 50 years.)	Homer flourished about 907	B.C. 908. 890 or to about 860, then a blank till the reign of Boccho- ris, who as- cended the throne in 812.
Tnepachthus, the father of Bocchoris, according to Dio- dorus, the Techna- tis of Plutarch, ought to be one of this Dynasty ?			

Sheshonk³ was supposed by the learned Sir I. Marsham, and other distinguished chronologists, to be the same as Sesostris;

¹ Manetho begins with Sesonchosis or Sesonchis and Orsorthon, but places three other uncertain kings between this last and Tacellothis, and with three others completes the 22d Dynasty. In the 23d Manetho begins with Petubastes (Pet-Pasht, a name not yet met with, then Orsorthon or Osorchon, and two other kings. (*Fide* his catalogue at p. 23.)

² [Before this king, Manetho places

Petoubastes, in whose time the Olympiads began, in B.C. 776; but this does not agree with the era of Shishak of the Bible.—G. W.]

³ It was to this king that Jeroboam fled in 980. Solomon had married the daughter of Pharaoh, probably his immediate predecessor, about the year 1014. Josephus says that Egypt and Ethiopia were at that time under the same monarch; but he

but this untenable hypothesis has long since been abandoned, and Sesostris has resumed his place among the monarchs of an earlier dynasty. He was the Shishak of Scripture, who, in the fifth year of Rehoboam, B.C. 971, marched against Judæa with 1200 chariots and 60,000 horse, and a numerous body of infantry, composed of Libyans, Sukkiim,¹ and Ethiopians; took all the walled towns of Judah, and pillaged the temple of Jerusalem;² and though no very extensive buildings remain erected by him, the sculptures he added on the walls of Karnak suffice to show that this campaign is recorded with the names of the captured places. The king, as usual, presents his prisoners to the deity of the temple, and to each figure is attached an oval, indicating the town or district he represents: one of which M. Champollion concludes to be the Yooda Melchi, or kingdom of Judah, a name whose component letters agree with the hieroglyphics, though the place it holds is not sufficiently marked to satisfy the scruples of a rigid sceptic.³

The era of Sheshonk is the first fixed point for the establishment of chronological data; and we have been enabled, by reckoning backwards to the Exodus, and from inscriptions on the monuments, to fix the probable duration and date of each reign. From the accession of Thothmes III., about 1495 B.C., to the year 1068, twenty-three kings succeeded to the throne of Egypt, which gives about eighteen years to each reign; and the ninety years intervening at the end of the 21st Dynasty may readily be accounted for by assigning them to sovereigns whose names are lost.

A very favorable argument in support of the dates I have given is derived from the astronomical subject on the ceiling of the Memnonium at Thebes, erected by Rameses the Great: where the heliacal rising of Sothis is found to coincide with the beginning of Thoth, which could only have happened in the year 1322 B.C.; and this falls, according to my table, in the

commits a great error in supposing that 'no Egyptian king bore the title of Pharaoh after the father-in-law of Solomon,' the reverse being proved by the Jewish books which he pretends to quote. Witness Pharaoh-Necho and Hophra. (Joseph. 'Antiq.' lib. viii. 6.)

¹ Some have supposed the Sukkiim to be the fabulous Troglodytes, and have placed them near the Red Sea. Others bring them from Central Egypt. Some who have seen or heard of the sepulchral grottoes hewn in the rocks at Thebes have

innocently fixed on these as the habitations of the live Troglodytes, previous to their appropriation for the dead Thebans.

² 2 Chron. xii. 9.

³ *Yutaha Maluk* is now supposed to mean Jerusalem, which otherwise is not mentioned in the inscriptions, or else some town of that name. It occurs in connection with such names as Rabboth, Taanach, Sunem, Rehob, Hapharaim, Adoraim, Mahanaim, Gibeon, Bethoron, and Megiddo. — S. B.

middle of his reign.¹ But whatever I offer on such intricate questions is given with much deference, and I shall willingly yield to the sounder judgment of the scientific reader.

The aggressions of the Egyptian monarch in Judæa do not appear to have been repeated; and the Jewish Chronicles show that previous to the battle with Zerah,² king of Ethiopia,³ the land of Judah was free from invasion, 'and had no war in those years,'⁴ which gave Asa an opportunity of repairing and building fortified towns, for the protection of his country. Nor do we find the successors of Sheshonk undertaking any important military expedition; and little remains on the monuments relating to the other kings of the 22d and 23d Dynasties, except some tablets and religious subjects in the temple of Karnak.

24th Dynasty, of 1 Saïte.

Name from Ancient Authors.	Name from the Monuments.	Ascended the Throne.
Bocchoris (the Wise) son of Tnephachthus . . }	Pehor, Bakhor, or Amun-se-Pehor .	B.C. 812

[24th Dynasty, from the Monuments.

Kings.	Monumental date.
1. Tafnakht	
2. Bekenranf	6 years
3. [Sêt]	
Total of kings 3	Total of years 6 S. B.]

The 25th Dynasty consisted of an Ethiopian Family.

Name from Ancient Authors.	Name from the Monuments.	Events.	Ascended the Throne.
Sabaco, So of S.S.	Sabakoph .	Rome founded 753 B.C.	B.C. 773
Sebechon, Sevechus.	Shebek .	Captivity of the ten tribes, 721	723
Teraces, Tearchus, Tearcon of Strabo, Tirhakah of S.S.	Tehraqa .	Sennacherib attacks Judah .	{ 710 to 689

¹ [*Vide* paper by Mr. Tomlinson in 'R Soc Lit., vol. iii. part i. pp. 84-93. — G. W.]

² [By some supposed to be Orsokon I. — G. W.]

³ This indefinite name Ethiopia, the country of burnt or black faces, always perplexes. Zerah could not have come

from Ethiopia to the south of the Cataracts while Sheshonk or Osorkon ruled Egypt. In the Arabic version he is styled King of India, and his name in the Septuagint is written Zare. In 2 Chron. xvi. 8 mention is made of the Ethiopians with the Libyans (Libyans).

⁴ 2 Chron. xiv. 1, 6, 7.

[25th Dynasty, from the Monuments.]

Kings.	Monumental date.
1. Shabaqa	12 years.
2. Shabataqa	
3. Taharqa	36 years.
Total of kings 3	Total of years 48 S. B.]

Bocchoris and his father Tnephachthus have been already mentioned; and if we are unable to decide whether this last should be introduced into the 23d or 24th Dynasty, the same difficulty exists in the position of Asyehis and Anysis.¹

The reign of Sabaco has also been noticed; and Herodotus, as we have seen, supposes Anysis to have been restored to the throne after the secession of the invader, and to have been succeeded by Sethos,² a priest of Pthah or Vulcan, who was contemporary with Sennacherib and Tirhakah. Manetho, on the contrary, states that Sabaco usurped the throne of Bocchoris, and Diodorus introduces other monarchs between this last and the Ethiopian. That he was not the Sabaco who put Neco to death is evident, from a comparison of the eras of Psammaticus and the Ethiopian monarchs; nor could the flight of Psammaticus have taken place during his reign; and unless we suppose the son of Neco to have lived to the age of more than 120 years, he could not have fled even from the second of that name, or Shebek, the predecessor of Tirhakah.

Sabaco is generally supposed to be the So³ of Scripture, who made a treaty with Hoshea, king of Israel; ⁴ an event which led to the taking of Samaria, and to the captivity of the ten tribes by Shalmaneser, king of Assyria: and this I believe to have happened a few years before the close of his reign. Of Shebek, or Sabaco II., the name occurs only on the monuments of Thebes, and in the catalogue of Manetho. By some he has been considered the Sethos of Herodotus; but this name, which is properly Se-ptah,⁵ bears so strong a stamp of Memphitic origin that we cannot feel disposed to assign it to the Ethiopian monarch.

With Tirhakah we are acquainted, both from sacred and profane records; and his successful opposition to the power of

¹ *Vide supra.*

² Se-ptah.

³ So, Soa, Sua, or Sara שׂוֹ; Σήσωρ of the Septuagint.

⁴ 2 Kings xvii. 4.

⁵ Or the 'Son of Pthah.' According to Lepsius, the name Sethos has not been found on the Monuments. — S. B.

Assyria is noticed in the Bible,¹ may be traced in Herodotus,² and is recorded on the walls of a Theban temple.³ It is possible that in the early part of his reign Sethos shared the kingdom with him, and ruled in Lower Egypt, while the Ethiopian monarch possessed the dominion of the upper country; and this would account for the absence of the name of Sethos on the monuments of Thebes. Whether Tirhakah's and Sabaco's claims to the throne of Egypt were derived from any right acquired by intermarriage with the royal family of that country, or whether their dominion was at first confined to the Thebaïd, it is difficult to determine; but the respect paid by their Egyptian successors to the monuments⁴ they erected, argues the probability of their having succeeded to the throne by right, rather than by usurpation or the force of arms.

During the reign of Tirhakah, Sennacherib, king of Assyria, threatened an incursion into Lower Egypt; and owing to the disaffection of the troops of Sethos, Memphis and all that part of the country was in danger of falling a prey to the invader. Sethos, who had been a priest of Phtah, was more solicitous, even after his elevation to the throne, for the observance of religious ceremonies than the welfare of the State; and, induced by fanaticism to consider the services of the soldier unnecessary for the security of a country entrusted to the protection of the gods, 'he treated that class with extreme contempt, and, among other indignities, deprived them of their *aruræ*, or fields, which, by way of reward, his predecessors had allowed to each soldier. They, therefore, refused to march against the Assyrians; and in this dilemma the priest-king retired to the shrine of the god, before which he lamented his danger and misfortunes. He there sunk into a profound sleep; and the deity appearing to him in a dream, promised that if he marched to meet the enemy he should experience no injury, for that he would furnish him with assistance. Inspired with confidence from this vision, he put himself at the head of his adherents, and advanced to Pelusium, the entrance of Egypt, unaccompanied by a single soldier, his army being entirely composed of tradesmen and artisans.'⁵ Nor was

¹ 2 Kings xix. 9: 'And when he (Sennacherib) heard say of Tirhakah king of Ethiopia, Behold, he is come out to fight against thee;' Isaiah xxxvii. 9. El Berkel (formerly Napata) was his Ethiopian capital, where his name and monuments are found.

² Herod. ii. 141.

³ At Medeenet Haboo are the figure and name of this king, and the captives he took.

⁴ Sabaco's name is found at Abydos.

⁵ Herodot. ii. 141. It might be supposed that the sections 164-168 of the same book were intended to have been introduced here.

it long before this assistance arrived. Tirhakah, having heard of the approach of Sennacherib, marched with a numerous army from the Thebaid, and entering Palestine, defeated the Assyrians; thus delivering Lower Egypt as well as Judea from the arms of this powerful invader. But the ingratitude, perhaps the jealousy of the Memphites, disguised the truth from the Greek historian, and the miraculous interposition of Pthah was affirmed to have been the cause of Sennacherib's defeat. Concealing the assistance received from the army of Tirhakah, the priests assured¹ Herodotus, that when the Assyrians or Arabians and the feeble party commanded by Sethos were encamped opposite each other, a prodigious number of rats infested the enemy's camp by night, and gnawed in pieces their quivers and bows, as well as the handles of their shields; so that in the morning, finding themselves without arms, they fled in confusion, and lost great numbers of their men. And in order to commemorate the event, a marble statue of Sethos was erected in the temple of Pthah at Memphis, representing the king holding a rat in his hand, with this inscription: 'Whoever thou art, learn from my fortune to reverence the gods.'

'From Menes to this prince,' adds the historian, 'was a period of 341 generations, in which there had been as many high priests, and the same number of kings. And as three generations are equal to 100 years, the total of these may be estimated at 11,340 years.' Such are the extravagant dates given by ancient writers.

That Tirhakah ruled at Napata and in the Thebaid at the same period is sufficiently proved by the additions he made to the temples of Thebes, and by the monuments he built in Ethiopia; nor did the Egyptians efface his records, or forget the gratitude they owed to the defender of their country. The name of Nectanebo has indeed usurped the place of Tirhakah's ovals in one or two instances among the sculptures at Thebes; but such substitutions are not uncommon, and the name of the

¹ The Assyrian cuneiform records show that Tirhakah, who had been driven out of Egypt by Esarhaddon, retook Egypt from the Assyrians about the commencement of the reign of Assurbanipal, B.C. 668, who marched to Egypt and defeated the Ethiopian monarch at the battle of Karbanit. Tirhakah fled to Thebes, but the Assyrian and unled Egyptian army arrived there

forty days afterwards, and Tirhakah left for Ethiopia. The Egyptians being subsequently discontented with the rulers of the Assyrians, again invited Tirhakah to regain the country, who died after being driven out a second time. (G. Smith, 'Assyria from the Earliest Times to the Fall of Nineveh,' 8vo., 1874, pp. 139-141.) — S. B.

Ethiopian has not been erased from any ill-will, so often evinced when an obnoxious monarch had ceased to reign. That he was a very potent prince, is evident from his defeat of the numerous army of Sennacherib,¹ as well as from the monuments he has left both in Egypt and Ethiopia, and his maintenance of the Egyptian possessions in Asia; and however Strabo may have exaggerated his power when he affirms that he extended his conquests, like Sesostris, into Europe, even as far as the Pillars of Hercules, yet his authority is of use, as it leads to the conclusion that Tirhakah, or, as he calls him, Tearcon,² ruled Lower as well as Upper Egypt, to which he, perhaps, succeeded on the death of the priest-king Sethos.

According to Herodotus, twelve kings, or rather nomarchs,³ succeeded to the dominion of all Egypt; but it is probable they did not assume the title of Pharaoh, being only governors of the twelve provinces or nomes⁴ into which the country

¹ In the Syriac and Arabic versions he is called Sanherib.

² Strabo, lib. xv.

³ Herodotus, ii. 147.

⁴ [If this division took place, it was only temporary, as Egypt had been, at least as early as the time of Sesostris, composed of 36 nomes. The number of the nomes or cantons varied at different times. Herodotus mentions only 18; but in the time of Sesostris there were 36, and the same under the Ptolemies and Cæsars; 10, according to Strabo, being assigned to the Thebaid, 10 to the Delta, and 16 to the intermediate province. This triple division varied at another time, and consisted of Upper and Lower Egypt, with an intervening province containing 7 nomes, and hence called Heptanomis. In after-times an eighth, the Arsinoïte, was added to Heptanomis; and the divisions were, 1. Upper Egypt, to the Thebaïca phylaké (φυλακί), now *Daroot e' Shereef*. 2. Heptanomis, to the fork of the Delta. And 3. Lower Egypt, containing the northern part to the sea. Pliny gives 44 nomes to all Egypt, some under other than the usual names. Ptolemy mentions 24 in the Delta, or Lower Egypt, which under the later Roman emperors was divided into four districts — Augustamnica prima and secunda, Ægyptus 1^a and 2^a, still containing the same nomes; and in the time of Arcadius, the son of Theodosius the Great, Heptanomis received the name of Arcadia. The Thebaid was made into two parts, Upper and Lower, the line of separation

being Panopolis and Ptolemæis-Hermii; and the nomes were then increased to 58, of which the Delta contained 35, including the Oasis of Ammon. These nomes were as on the following pages, 98 and 99.

Each nome was governed by a Nomarch, to whom was entrusted the levying of taxes, and various duties connected with the administration of the province.

The Busirite nome was next to the Sebennyitic, and to the south of it.

The tract between the Sebennyitic, or Busiritic branch, and the Thermuthiac, ran to the east of Xoïs. It is singular that only two nomes of Upper Egypt are here mentioned, Thebes and Chemmis. But as Herodotus has mentioned so few of the nomes, it is more probable that he has overlooked some, than that no soldiers belonged to any nome in Upper Egypt but the Theban and Chemmite. The largest force was necessarily *quartered* in these northern nomes, being wanted for defence against the enemy from the eastward; but it does not follow that they were nearly all *raised* there. Besides the nome of Thebes on the east, was the Pathyritic on the opposite bank, which contained 'the Libyan suburb' of Thebes, or the 'Memnoneia.' (See Dr. Young, 'Disc. Eg. Lit.,' p. 66.) It was called Pa-Athor, 'belonging to Athor' (Venus), who presided over the West. The Theban and Chemmite may have been the two that furnished the troops of the Ethiopian frontier, and of the garrisons in Upper Egypt. According to Herodotus the whole force was 410,000

was divided.¹ On this occasion the historian sarcastically observes, that, as the Egyptians were not capable of existing

men. Diodorus (i. 54) makes it amount, in the time of Sesostris, to 600,000 foot, 24,000 horse, and 27 chariots; but he

probably included in those the auxiliaries. The position of the nome of Aphthis (Herodot. ii. 166) is uncertain.—G. W.]

The Nomes of the Delta, or Lower Egypt, beginning from the East, were :

Province.	Nome.	Chief City.	Modern Name.
Augustamnica Prima et Secunda.	1. Heliopolis	Heliopolis	Matereh.
	2. Bubastites	Bubastis	Tel Basta.
	3. Anthribites (with the Isle of Myc- phoris) }	Athribis	Benha-el-Assal.
	4. Heroöpolites	Hero	Abookeshâyd (?).
	5. Phagroriopoles	Phagroriopolis	Shekh Hanâydik (?).
	6. Arabia	Phacusa	Tel Fakkoos.
	7. Sethroïtes	{ Sethrum or Hera- } cleopolis Parva. }	Tel Sharéeg (?).
	8. Tanites	Tanis	San.
	9. Pharbæthites	Pharbæthus	Harbayt, or Heurbayt.
	10. Leontopolites	Leontopolis	Tanbool (?).
	11. Neout (Neut)	Panephrisis	Menzaleh.
	12. Mendesiuis	Mendes	Aslmoon (?).
	13. Papremites	Papremis.	
	14. Busirites	Busiris	Abooseer (?).
	15. Sebennytes	Sebennytus	Semenhood.
Egyptus. Secunda.	16. Anysis	Anysis, or Iseum (?).	Bebayt.
	17. Sebennytes Inferior	Pachnamunis.	
	18. Elearchia.		
	19. The Isle of Natho.	Natho	Sahragt.
	20. Xoïtes	Xois	Sakha.
	21. Onuphites	Onuphis	Banoob (?).
	22. Nitrites (Nitriotis).	Nitria	Zakeek (?).
	23. Prosopites	Prosopis or Niciu	{ Menoof or } deli (?). Ibshâ-
	24. Phthemphites	Tava	Shooni (?).
	25. Saïtes	Saïs (Ssa).	Sa-el Hâgar.
Egyptus Prima.	26. Phtheneotes	Bntos.	
	27. Cabasites	Cabasa	Kom Shabas.
	28. Naueratites	Naueratis.	
	29. Metelites	Metelis	Fooah.
	30. Alexandrinorum	{ Alexandria } { Racotis }	Iskenderéeh.
	31. Hermopolites	Hermopolis Parva. . . .	Damanhoor.
	32. Menelaïtes	Menelaïs.	
	33. Letopolites	{ Letopolis } { Latome Civitas }	Weseem (?).
	34. Marea, Libya	Marea.	El Hayt (?).
	35. Hammoniacus	Hammonis	Seewah (Siwah).

(For the Delta, its towns, and branches of the Nile, see 'Egypt and Thebes,' vol. i. pp. 399-455.) [The Nomes

¹ Esarhaddon divided Egypt into twenty governments, at the head of which was Necho, king of Saïs, and Memphis. These

appear to have been subsequently reduced to twelve.—S. B.

a single instant without a king, they elected twelve,' each enjoying equal rank and authority. They connected themselves by intermarriages, solemnly promising to promote their common interests, and never to engage in any acts of separate policy; their principal motive in this union being to guard against the declaration of an oracle, which had predicted that whoever among them should offer a libation in the temple of Vulcan from a brazen vessel, should be sole sovereign of

The Nomes of Upper Egypt, or the Thebaid, and of Heptanomis, beginning from the North, were :

Province.	Nome.	Chief City.	Modern Name.
Heptanomis.	1. Memphites . . .	Memphis	Mitrahenny.
	2. Aphroditopolites . .	Aphroditopolis	Atfêh.
	3. Arsinoïtes	{ Crocodilopolis, or } { Arsinoë. }	Medeénet el Fyóom.
	4. Heracleopolites . . .	Heracleopolis	Ahnas el Medineh.
	5. Oxyrhinchites	Oxyrhinchus	Anásieh.
	6. Cynopolites	Cynopolis	Béhnesa.
	7. Hermopolites	Hermopolis Magna . . .	El Kays.
	8. Antinoïtes ('in which are in- cluded the two Oases.' Ptol. 4, 5)	Antinoë	{ Oshmoonáyn. Shekh Abádeh, or Insiné.
Low. Theb.	9. Lycopolites	Lycopolis	Sioót.
	10. Hypselites	Hypselis	Shodb.
	11. Antæopolites	Antæopolis	Gow (Kow) el Kebeér.
Upper Thebais.	12. Aphroditopolites . .	Aphroditopolis	Itfoo.
	13. Panopolites	Panopolis	Ekhmin, or Akhmeem.
	14. Thinites	{ 'This, near Aby- dus:' afterwards the capital was { Ptolemaïs-Hermii	Birbeh (?) or El Beer- beh (?). Menshéeh.
	15. Diospolites	Diospolis Parva	How.
	16. Tentyrites	Tentyris, Tentyra . . .	Denderah.
	17. Coptites	Coptos	Koft, or Kebt.
	18. Thebarum	{ Thebæ, Diospolis } { Magna, 'Egyp- tian Thebes' }	Karnak, and Luxor.
	19. Pathyrites	{ The Libyan, or } { Western part of } { Thebes }	Koorna.
	20. Hermonthites	Hermonthis	Ermént.
	21. Latopolites	Latopolis	Esné.
22. Apollinopolites . . .	Apollinopolis Magna . .	Edfoo.	
23. Ombites	Ombos	Kôm-Ombo.	

¹ [They were probably only governors of the twelve principal nomes, not of all Egypt but of the Delta, to which Strabo gives ten and Ptolemy twenty-four, and which in later times contained thirty-five, including the Oasis of Ammon. Pliny

speaks of sixteen nomes of all Egypt who met in the Labyrinth (xxxvi. 13); and Strabo (xvii. p. 558) states that the number of nomes corresponded to that of its chambers when it was first built. — G. W.]

Egypt. For many years they continued the management of affairs in perfect amity and mutual confidence, and no administration was more eminent for justice and impartiality. An accident at length occurred to interrupt their friendship. 'On a certain occasion they were called upon to offer sacrifice in the temple of Vulcan; and when the last day of the festival came, they prepared to make the accustomed libation. For this purpose the chief priest presented the golden cups used on those solemnities; but having mistaken the number, he brought only eleven. Psammitichus,¹ who was the last, not having a cup, took off his helmet, which was of brass, and poured from it the libation. The other princes had similar helmets, and wore them on the present occasion, so that the circumstance of this one king using his was accidental and unpremeditated; but when they observed what Psammitichus had done, and remembered the prediction of the oracle, they examined him, suspecting he had acted designedly. Finding, however, that it was purely accidental, they did not think him worthy of death, but were satisfied with depriving him of his regal power; and confining him to the lowlands of Egypt, they forbade him to leave that district, or to hold any communication with the rest of the country.'

Things continued in this state for some time: the eleven kings having taken the whole direction of affairs, and the dethroned prince still remaining in exile. Psammaticus, however, could not passively submit to this uncalled-for treatment; and feeling the strongest resentment for the injury, he determined to be revenged upon his oppressors. With this view he sent to consult the oracle of Latona at Buto, which had among the Egyptians the highest character for veracity, and received for answer that the sea should avenge his cause by producing brazen men: He was little inclined to believe that such an event could ever occur; but some time afterwards a body of Ionians and Carians, who had been engaged in a voyage of plunder, were compelled by stress of weather to touch at Egypt, and landed there, clad in brazen armor.² Some Egyptians, alarmed at their appearance, hastened to carry the news to Psammaticus; and as they had never before

¹ This is Herodotus's mode of writing the name of Psamatik, or Psammaticus.

² According to the Assyrian cuneiform annals, these were the army sent by Gyges,

who had entered into an alliance with Psammaticus against the Assyrians, whom the allies drove out of Egypt. (G. Smith's 'History of Assyria,' p. 147.) — S. B.

seen persons so armed, they described them as brazen men,¹ who had arisen from the sea, and were plundering the country. He instantly conceived this to be the accomplishment of the oracular prediction; and having entered into an alliance with the strangers, and engaged them by splendid promises to unite with his Egyptian adherents, he vanquished the eleven kings, and made himself master of the whole country.

Previous to this event, the twelve kings are said by Herodotus to have erected the famous labyrinth in the nome of Crocodilopolis, afterwards called Arsinoë; but since the prior claims of Moeris as the builder of that monument appear to be fully established, we can only suppose that Psammatichus and his coadjutors completed a work commenced many ages previously by one of their early predecessors.

‘In acknowledgment,’ continues the historian, ‘of the assistance he had received from the Ionian and Carian strangers, Psammitichus conferred upon them certain lands termed the *camp*, which were situated opposite each other, on either bank of the river, and, having fulfilled all his engagements with them, he entrusted to their care some Egyptian children to be instructed in the Greek language; and from those the present interpreters of Egypt are said to be descended. The district they inhabited was near the sea-coast, a short distance below Bubastis, on the Pelusiatic branch of the Nile, and the same Greek settlers continued in possession of it for a considerable period; till Amasis, wishing to avail himself of their services against the Egyptians, removed them to Memphis. They were the first foreigners whom the Egyptians received among them;’² and Herodotus³ affirms that, even in his time, ‘the places they formerly occupied, the docks of their ships, and the vestiges of their houses, might still be seen.’ Such is his account of the temporary reign of the twelve kings, and of the accession of Psammatichus to the throne.

According to Diodorus,⁴ the anarchy which prevailed in Egypt, during two whole years, after the rule of the Ethiopian princes, and the commotions excited by popular frenzy, sug-

¹ The surprise of the Egyptians on seeing men clad in bronze or brass armor would seem to imply that they used *iron* for the same purpose. But can we trust this statement of Herodotus? Psammatichus's helmet was also of *bronze*, according to the same author.

² This is not correct, as the Mashuasha or Maxyes, the Shairetana or Sardinians, and Kahaka were established in Egypt as early as Rameses III. — S. B.

³ Herodot. ii. 154.

⁴ Diod. i. 66.

gested to the chief men of the country the expediency of assuming the reins of government, and restoring order to the State. With this view, twelve of the most influential persons were chosen to preside with regal power. Each had a peculiar province allotted to him, in which his authority was paramount; and though independent of one another, they bound themselves by oaths of mutual concord and fidelity.

During fifteen years their relations were maintained with the greatest harmony, but as Psammaticus, whose sway extended to the Mediterranean, had availed himself of the opportunities offered by the seaports within his province of establishing commercial intercourse with the Phœnicians and Greeks, and had amassed considerable wealth by these means, his colleagues, jealous of his increasing power, and fearing lest he should eventually employ it against them, resolved to prevent his supposed designs, and to dispossess him of his province. They therefore prepared to attack him, and by this step obliged Psammaticus to adopt measures which his ambition might not have contemplated. Apprised of their resolutions, and finding himself threatened by the formidable army of all the upper provinces, he sent to Arabia, Caria and Ionia, and, having succeeded in raising a considerable body of mercenaries, he was soon in a fit state to oppose them; and putting himself at the head of these and his native troops, he gave them battle at Momephis, routed their combined forces, and, obliging those of the princes who had escaped the slaughter to fly to Libya, became possessed of an undivided throne. This account is more consistent with reason than that of Herodotus, which Diodorus afterwards notices, and which he had the good judgment not to adopt. The fortuitous arrival of any great number of Greeks is in itself improbable; but the necessity of believing that a party of pirates, driven upon the coast by adverse winds, paralyzed a country so powerful and well garrisoned as Egypt then was, and uniting with the few adherents of the exiled Psammaticus, overcame the combined forces of the eleven kings, is alarming even to the credulous.

No mention is made of the accession and dethronement of the twelve kings in the catalogue of Manetho; and some might feel inclined to doubt the veracity of the two historians, did not some traces of these events appear in the sculptures.

Psammaticus was son of that Neco who is said by Herodotus to have been put to death by Sabaco, and perhaps the same who occurs as the third king in the 26th Dynasty of Manetho: but

there is no reason to suppose him one of the twelve kings: and if he really enjoyed the sovereign power, and ruled the whole of Upper and Lower Egypt, it is probable that his reign preceded the accession of those princes.

26th Dynasty, of Saite Kings.

Name from Ancient Authors.	Name from the Sculptures.	Observations.	Ascended the Throne.
Stephinathis . . . Nechepsus . . . Nechao I. . . Psammitichus . . . Psammatichus . . .	. . . . . Psamatik I. ¹ . . .	The Twelve Kings. { Josiah defeated and slain, } 610 B.C. { Neco's defeat by Nebuchad- } nezzar, 606. A stela in the } museum of Florence gives 71 } years from the 3d of Neco to } the 35th of Amasis.	B. C. 664 610
Nechao II.	Neco	{ Captivity of Jehoiakim, 599 } B.C.	600
Psammitichus . . . Psammutis or . . . Psammis . . .	Psamatik II. . .	{ Pharaoh Hophra of S. S.; } probably not the same as } Psamatik III. { Babylon taken by Cyrus, 538. } Date of his 44th year on the } monuments.	596
Vaphres or Apries . . .	Psamatik III. . .		571
Amasis or Amosis . . .	Ames-Neit-se . . .		571
Psammicherites } or Psammeni- } tus . . . . .	. . . . .	. . . . .	525

[26th Dynasty, from the Monuments.

Kings.	Monumental date.
1. Psametik I.	52 years
2. Nekau II.	8 years
3. Psametik II.	16 years
4. Uah-ab-ra	19 years
5. Aahmes II.	45 years
6. Psametik III.	1 year
Total of kings 6	Total of years 141 S. B.]

Psammatichus had no sooner become sole master of Egypt than he turned his attention to the internal administration of the country, and the suppression of party feeling consequent upon the late events. With this view he endeavored to ingratiate himself with the priesthood and the people, by erecting many splendid monuments, and beautifying the sacred edifices in the principal cities of Upper and Lower Egypt. At Thebes he made

¹ [The discovery of the stela in the Apis tombs by M. Mariette, now shows that Psammatichus I. was the immediate successor of Tirhakah. — G. W.]

considerable additions to the great temple of Amun, now called Karnak; and at Memphis the southern vestibule of the temple of Pthah was erected by him, and opposite to it a magnificent edifice for Apis, where he was kept when publicly exhibited. The walls were richly decorated with sculpture, and its roof was supported by colossal figures twelve cubits in height, which served the purpose of columns, and represented the king himself in the character of Osiris, whose emblems he bore in either hand; and in order to give the reader some idea of this building, I have made a view of the interior, restored according to the style and proportions of similar courts in the temple of Thebes.

In the meantime, a strong feeling of jealousy was excited among the troops, in consequence of the marked favor shown by the king to the foreign auxiliaries; and though they submitted patiently for many years, at length their secret discontent was openly manifested. That Psammaticus should have been indebted for the possession of his crown to the aid and interposition of strangers, who, viewed through the unfavorable medium of strong prejudice, appeared an inferior and impure race, was in the highest degree humiliating to the Egyptian army, however disposed they might have been to acknowledge his claims and the injustice of his previous exile; and more tact was required to soothe the ruffled feelings of the soldier than of the people or the priests. The precautions necessary under these circumstances were altogether neglected by the king, who either failed to observe their growing disaffection, or totally disregarded it, 'discovering on all occasions a preference of the foreigners, to the disparagement of his native troops:'¹ and he was not only guilty of injustice towards many of them, by prolonging their usual time of garrison duty,² in the frontier towns of Marea, Daphne of Pelusium, and Elephantine, where they continued three years without being relieved, but he even deprived them of the post of honor in the Syrian war, and assigned the right wing to the Greek troops, and the left to the Egyptians.³ Upon this, their indignation knew no bounds: and, quitting the camp, they, joined by other regiments which had remained in Egypt, abandoned the service of Psammaticus, and, to the number of 240,000, retired into Ethiopia. As soon as the king received intelligence of it, he endeavored to dissuade them from their

¹ Diod. i. 67.

² Herodot. ii. 30.

³ Diod. i. 67.

project; and having followed them himself as far as Elephantine,¹ he sent forward the Greek auxiliaries, and some of his most faithful Egyptian adherents, with instructions, if possible, to prevail on them to return. It was not till after they had passed Aboccis² in Ethiopia, that these emissaries of the Egyptian monarch overtook them; and using every kind of remonstrance and entreaty, they solemnly conjured them not to desert the gods of their country, their wives and families: but all without effect; and one of them tauntingly observed, that wherever they went, provided they had their arms and proved themselves to be men, they could always obtain both wives and children.

Continuing their march into Upper Ethiopia, they entered the service of the monarch of that country, and in return received a considerable extent of territory upon the confines, from which the Ethiopian prince ordered them to expel a tribe of people at that time in rebellion against him: and this migration of the Egyptian troops, introducing the arts and manners of a refined nation, had a very sensible effect in civilizing the Ethiopians.³

The exact position of the country they occupied is unknown. Herodotus places it on the Nile, at about the same distance beyond Meroë as this last is from Elephantine, or fifty days' journey;⁴ and adds, that these Automoli (deserters) 'are known by the name of Asmach, which being translated signifies "standing on the left hand" of the king.' Strabo⁵ states that 'they settled near Meroë, which was afterwards governed by their queen;' and calls them 'Sebritæ, a name implying strangers;' but Pliny,⁶ on the authority of Aristocreon, reckons 'seventeen days from Meroë to Esar, a city' of the Egyptians who fled from Psammaticus, and who are reported to have lived there 300 years.'

A singular connection may be observed between the names given by different writers to this people and their country. 'Esar,' says Pliny, 'is called by Bion Sopen, and is supposed to mean strangers;' and the neighboring Symbari, Semberitæ, Sambri, and Sembolitis, cannot fail to recall the Sebrites of

¹ Diodorus says he first sent to them, and then followed by water to the confines of Egypt. The inscription at Aboosimbel, written by the Greeks who accompanied him, confirms this, stating positively that 'King Psammaticus went as far as Elephantine.' ΒΑΣΙΛΕΥΣ ΕΛΘΩΝΤΟΣ ΕΣ ΕΛΕΦΑΝΤΙΝΑΝ ΨΑΜΑΤΙΝΟ.

² Aboccis I suppose to have stood near Aboosimbel. They must have gone beyond this place before they overtook them.

³ Herodot. ii. 30.

⁴ This distance is unreasonable.

⁵ Strabo, xvi.

⁶ Plin. vi. 30.

⁷ Strabo calls their country Tenesis.

Strabo, or the great similarity of the word *shemmo*, 'a stranger,' and *beri*, 'new,' in the ancient Egyptian language. It is not less remarkable that Esar is the pure Arabic word signifying 'the left hand,' synonymous with *shemal*; and this last is plainly pointed out in the ἄσμαχ of Herodotus, where the letter ζ has been accidentally changed for the λ it so much resembles. It is highly improbable that 240,000 men could have had any duty 'on the left of the king;' a post, moreover, reserved for the sons of the monarch, or the chief persons of the country: and we may rather conclude this name to have been assumed in commemoration of the affront offered them by Psammaticus, and the cause of their desertion; or to have been given these strangers¹ in consequence of their coming from the left, or north, which was considered the left² of the world, and is still so called (*shemal*) by the Arabs of the present day.

The reign of Psammaticus continued fifty-four years, twenty-nine of which he employed in the siege and capture of a large town of Syria called Azotus;³ and since Diodorus tells us that the defection of his troops happened during the Syrian war, it is probable that the taking of Azotus preceded that event.

It was in his reign, and by his order, that an idle experiment, since repeated in later times, was made to discover the language of nature, or at least to ascertain the oldest nation and the oldest tongue. The account is thus given by Herodotus:⁴—'Before the reign of Psammitichus, the Egyptians considered themselves the most ancient of men; but this prince having taken considerable pains to investigate the truth of the matter, the result was, that they reckoned the Phrygians more ancient than themselves, and themselves than the rest of mankind. Psammitichus himself suggested the following method of solving the question. A shepherd was ordered to take two children just born, of humble parentage, and to pay particular attention to their early habits and the mode of bringing them up. He was strictly enjoined never to speak in their presence, to place them in a sequestered hut, and at proper intervals to allow them to suck the milk of goats, whilst he was attending to other employments. By this means the king expected to ascertain what word they would of

¹ They had, perhaps, the two names—'strangers' and 'people from the left.'

² The east was the front, the west the back, of the world. Plutarch supposes the north to be the right side of the world. (De Isid. s. 32.)

³ Now Ezdod, or Eshdóod. Azotus (Ashdod) was on the coast between Gaza and Joppa.

⁴ Herodot. ii. 2.

their own accord first articulate. The experiment succeeded to his wish: the shepherd complied with every particular of his instructions; and at the end of two years, on paying his usual morning visit and opening the door of their apartment, both the children extended their arms towards him, in an attitude of supplication, and pronounced the word "becos."¹ It did not at first excite his attention; but, on their repeating the same expression whenever he appeared, he thought it right to mention the circumstance to his master, who ordered the children to be brought before him. When Psammitichus heard them repeat the same word, he sought to discover among what people it was used, and found it was the Phrygian name for bread; and on this account the Egyptians, after they had seriously considered the matter, were led to the conclusion that the Phrygians were of greater antiquity than themselves. That this experiment was really made, I myself heard at Memphis from the priests of Vulcan; but the Greeks, in order to embellish the story, relate that Psammitichus caused the children to be nursed by women whose tongues had been previously cut out.'

During the whole of his reign, Psammaticus maintained a direct intercourse with the Greeks, and established commercial relations with them as well as the Phœnicians;² and so much encouragement was given to foreigners, that many settled in Lower Egypt; and by means of the constant communication between Europe and Egypt, the Greeks became acquainted with a country whose history and internal administration had been previously unknown to them. And the liberal policy of this monarch continued to be followed at a subsequent period, particularly by Amasis, who reigned before, and by Nectanebo, who lived after, the Persian invasion.

In the reign of Psammaticus the Scythians,³ having subjugated the whole of Asia, advanced towards Egypt with the intention of invading that country. They had expelled the Cimmerians

¹ Or Bec; the *os* being a Greek termination. M. Larcher ingeniously supposes it to have been in imitation of the cry of the goats. [The word βέκος has been thought connected with the German 'backen' and our 'bake.' Lassen, however, throws doubt on this connection, and suggests a formation from the Sanscrit root *pac*, which becomes (he says) in Greek *πίρ-ω* Latin *coq-uo*, German *coch-en*, our 'cook,' Servian *pec-en*, &c. (See his

Essay 'Ueber die Lykischen Inschriften, und die Alten Sprachen Kleinasiens,' p. 369.) But this connection, which may be allowed, does not prevent the other from being also real. See on this point, and on the general subject of the Phrygian language, the Essays appended to Book i. Essay xi., 'On the Ethnic Affinities of the Nations of Western Asia,' § 12. — G. W.]

² Diod. i. 56.

³ Herodot. i. 104, 105.

from Europe; and, led by their valiant king Madyas, they overran the provinces to the left of Mount Caucasus on their way from the Palus Maëotis, and defeated Cyaxares, the Median monarch, who was besieging Ninus (Nineveh), the capital of Assyria. They then penetrated into Syria; and Psammaticus, alarmed at their approach, went forward to meet them, and partly by presents, and partly by entreaty, prevailed upon them to desist from their project; thus saving Egypt from the aggressions of a dangerous foe.

Psammaticus was succeeded by his son Neo II., whose wars and successes in Syria are recorded by sacred as well as profane writers. Studious of military renown and the promotion of commerce, he had no sooner ascended the throne than he applied himself to the reorganization of the army and the equipment of a powerful fleet; and, recollecting the imprudent conduct of his father, he avoided all innovations which might tend to alienate the good will of his people, or sow the seeds of discord among his troops; and while he courted the friendship of the Greeks, and appreciated the important services he received from auxiliaries of that nation, he laid aside every appearance of partiality, treating them with proper consideration, and giving them a post next to the Egyptian troops, as his wise predecessors had done to their allies in the wars of Asia.

In the Mediterranean¹ he fitted out a fleet of triremes, and another in the Red Sea; and, having engaged some expert Phœnician pilots and mariners, he sent them on a voyage of discovery along the coast of Africa. 'They were ordered to start from the Arabian Gulf, and come round through the Pillars of Hercules (now the Straits of Gibraltar) into the North Sea, and so return to Egypt. Sailing, therefore, down the Gulf, they passed into the Southern Ocean: and when autumn arrived they laid up their ships, and sowed the land. Here they remained till harvest time; and, having reaped the corn,² they continued their voyage. In this manner they occupied two years; and the third having brought them by the Pillars of Hercules to Egypt, they related (what to me appears incredible, however others may be disposed to believe it) that they had the sun on their right hand; and by these means was the form of Africa first

¹ Herodotus calls it the North Sea. The Arabs now style it the White Sea: [and also the North Sea. — G. W.]

² It may appear singular that they should

carry grain for this purpose; but the same was done by Timûr in his march to China, who had with his army wagons laden with seed corn.

known.' The historian¹ then relates, on the authority of the Carthaginians, a second attempt to circumnavigate that continent under Sataspes, the son of Teaspes, a Persian, who, being alarmed at the length of the voyage and the dreary solitude of those regions, returned without accomplishing his task. He had been condemned to the cross by Xerxes for offering violence to the daughter of Zopyrus, the son of Megabyzus; but his mother, the sister of Darius, obtained his pardon on condition of his going round Africa. He therefore repaired to Egypt; and having there engaged a ship and crew, he sailed to the Pillars of Hercules, entered the ocean and passed the promontory of Soloeis on the coast of Africa.² He thence continued southwards; but, after spending several months at sea, he returned to Egypt, and endeavored to exculpate himself to the king, saying he found it impossible to proceed. Xerxes, however, rejected this excuse, and inflicted upon him the punishment to which he had been previously condemned.

That similar expeditions round Africa were performed by other people is testified by ancient authors; and that of the Carthaginians under Hanno was described in Punic by the commander himself, and afterwards translated into Greek. Pliny states³ that 'Hanno, a Carthaginian, circumnavigated the continent of Africa, from Gades to the extremity of the Arabian Gulf, and wrote all the details of his voyage, which was undertaken at the period when Carthage was most flourishing;' and 'founded several towns on the coast,' none of which remained in the reign of Vespasian. He also mentions a certain Eudoxus, a contemporary of Cornelius Nepos and of Ptolemy Lathyrus,⁴ who went round Africa from the Arabian Gulf to Gades; and others before him were reported to have performed the same journey for the purposes of commerce.⁵

The voyage of Hanno happened some time after that undertaken by order of Neco; the honor, therefore, of being the first to equip an expedition for the purpose of making this discovery belongs to the Egyptian monarch, who thereby ascertained the peninsular form of Africa, about twenty-one centuries before

¹ Herod. iv. 42, 43.

² The promontory of Soloeis, or Solœntia, called also the Libyan headland; and supposed by some to be the Cape Cantin of modern Africa, at the western extremity of Mount Atlas.

³ Plin. ii. 67, and v. 1; and Arrian's 'Rerum Indic.' *ad fin.*

⁴ Strabo, ii. p. 67. Pliny says he fled from that king, 'cum Lathurum regem fugeret;' but forcibly sent by him is more probable. (Plin. ii. 67.)

⁵ Plin. *loc. cit.* lib. ii.

the Cape of Good Hope was seen by Diaz,¹ or doubled by Vasco da Gama.

In mentioning the expedition sent by Neco, Herodotus makes one remark which is singular, from its confirming the truth of the statements detailed to him by the Egyptians: for it is evident they could not have passed the Cape of Good Hope without observing the phenomenon he mentions; and the assertion that the sun (when rising) was on their right hand, though so improbable to Herodotus, is highly satisfactory to his modern readers, who are indebted to him for thus expressing his doubts, and the proofs of a fact which might otherwise have been called in question.

Previous to projecting this voyage of discovery, Neco had commenced reopening the canal from the Nile to the Red Sea, which had been cut many years before by Sesostris, or Rameses the Great. The work, however, if we may believe Herodotus, was abandoned; an oracle warning the Egyptian monarch that he was laboring for the barbarian.² This may be true; but we cannot attach any credit to the statement that 120,000 Egyptians perished before he desisted from the undertaking, or that he was the first who commenced the canal;³ and not only do Pliny,⁴ Strabo,⁵ and Aristotle attribute it to Sesostris, but the monuments which remain in the towns upon its banks afford a satisfactory testimony of the accuracy of those writers,⁶ and of the erroneous information of Herodotus and Diodorus.

Neco also turned his attention to the Egyptian conquests in Asia, and, taking advantage of the falling power of the Assyrians, determined to attack the enemy on his own frontier. With this view he collected a powerful army, and, entering Palestine, followed the route along the sea-coast of Judea previously taken by the Egyptians under various kings who had penetrated into Asia, intending to besiege the town of Carehemish⁷ on the

¹ Bartholomew Diaz discovered it in 1487, in the reign of John II., king of Portugal, but did not land. He named it Capo Tormentoso, from the storms he experienced there; but the king afterwards changed its name to Cape of Good Hope; and Emanuel, his successor, sent Vasco da Gama, in 1497, with orders to double it and proceed to India.

² The same may be applied to the projected communication by the Euphrates.

³ *Vide supra.* Herodotus and Diodorus

mention Neco as the projector of the canal.

⁴ Plin. vi. 33.

⁵ Strabo (xvii.) says, 'The canal was commenced by Sesostris before the Trojan war. Some suppose by Psammaticus, the son, who only began the work, and died. It was afterwards finished by Darius.'

⁶ Assuming him to be Rameses II.

⁷ Called Manbeg **منبع** in the Arabic, and Mabog in the Syriac versions.

Euphrates.¹ But Josiah, king of Judah, offended at the passage of the Egyptian army through his territories, resolved to impede, if he was unable to prevent, their march. Neco,² learning the approach of the Jewish monarch and apprised of his intentions, sent messengers to engage him to desist from his uncalled-for interference, assuring him he had no hostile intentions against Judæa, but against an enemy with whom he was at war; that his expedition was undertaken by the sanction, and at the express command of God; and warning Josiah lest his imprudence should be fatal to him.³ This conciliatory message was of no avail; and Josiah, having posted himself in the valley of Megiddo, prepared to oppose the Egyptians.

Megiddo was a city in the tribe of Manasseh, between forty and fifty miles to the north of Jerusalem, and within three hours of the coast, and is called by Herodotus Magdolus. In this valley the feeble forces of the Jewish king attacked the Egyptians; but they were routed with great slaughter, and Josiah being wounded in the neck with an arrow,⁴ ordered his attendants to take him from the field. Escaping from the heavy showers of arrows with which their broken ranks were overwhelmed, they removed him from the chariot in which he had been wounded, and placing him in 'a second one that he had,' they conveyed him to Jerusalem, where he died.⁵

Intent upon his original project, Neco did not stop to revenge himself upon the Jews for the affront they had offered him; but continued his march to the Euphrates. Three months had scarcely elapsed, when, returning victorious from the capture of Carchemish and the defeat of the Babylonians, he learned that, though Josiah had left an elder son, Jehoahaz had caused himself to be proclaimed king on the death of his father, without intimating his intention, or soliciting him to sanction his election; and, considering this neglect as a token of hostile feeling, he was highly incensed, and resolved on punishing his insolence. With this view he ordered Jehoahaz to meet him 'at Riblah⁶ in the land of Hamath;⁷ and having deposed him, and condemned the

¹ 2 Chron. xxxv. 20.

² In the Targum or Chaldee Paraphrase, and the Syriac and Arabic versions, Neco is called the 'lame Pharaoh.'

³ 2 Chron. xxx. 21.

⁴ On the authority of the Arabic version, which also says he was killed at

Megiddo, being wounded by Pharaoh with two arrows.

⁵ 2 Chron. xxxv. 22 *et seq.*

⁶ The Syriac and Arabic versions have Deblath. The Hebrew *d* and *r* are easily mistaken.

⁷ 2 Kings xxiii. 33. Now Hamah.

land to pay a tribute of 100 talents of silver¹ and a talent of gold,² he carried him a prisoner to Jerusalem. On arriving there, Neco made Eliakim, the eldest son of Josiah, king, in the room of his father, and changed his name to Jehoiakim; and, taking the silver and gold which had been levied upon the Jewish people, returned to Egypt with the captive Jehoahaz, who there terminated his short and unfortunate career.

The victories and triumphant return of Seti, the Rameses, and many Egyptian monarchs, are represented on the walls of the Theban temples, or in other parts of Egypt and Nubia; and the conquerors are seen to present their prisoners to the deity to whose special favor they supposed themselves indebted for the success of their arms. We might, therefore, reasonably expect to find some indication of the victory gained over the Babylonians and Jews, especially as the name of Neco occurs among the hieroglyphics in the great hall of Karnak: but this is the sole record of him at Thebes, and merely tends to show that he ruled both the upper and lower country. And though his ovals occur on vases and some small objects of art, no sculptures record his victories, or the glories of his reign; and a subject of such great interest as the defeat of the Jewish king is in vain looked for on the monuments of Egypt.

The success of Neco in his conflict with Josiah at Megiddo, and the taking of Jerusalem, are noticed by profane as well as by sacred writers. Herodotus,³ who includes the Jews under the general name of Syrians, says that he routed them at Magdulus, and afterwards took Cadytis, a large city of Syria, in Palestine, which, he adds, in his opinion, 'is very little less than Sardis.'⁴ And that by Cadytis he means Jerusalem is evident, from the ancient Jewish as well as the modern Hebrew and Arabic name of that city; Kadúsha,⁵ 'the holy,' being an epithet applied by the Hebrews to Jerusalem, as el Qods or Cots is the name by which it is known to the Arabs at the present day. This title it received after the building of the Temple by Solomon.

Pleased with his successes, the Egyptian monarch dedicated the dress he wore in the campaign to the deity who was supposed to have given him the victory, whom Herodotus, with

¹ Reckoning the Hebrew silver talent at 353*l.* 11*s.* 10½*d.*, this sum is 35,359*l.* 7*s.* 6*d.*

² 5075*l.* 15*s.* 7½*d.* The total being 40,435*l.* 3*s.* 1½*d.*

³ Herod. ii. 159.

⁴ Ibid. iii. 5.

⁵ The *sh* is easily converted into *th*, even in Eastern dialects, and still more readily is *t* substituted for *sh* by the Greeks, who had not the sound of the Hebrew and Arabic *sh*. El Qods also signifies 'the holy.'

the prejudices natural to a Greek, believed to be the Apollo of Miletus.¹ But Neco did not long enjoy the advantages he had obtained; and in the fourth year after that expedition, alarmed at the increasing power of the Babylonians, and desirous to check their incursions into those provinces which had long been tributary to Egypt and had cost his predecessors much trouble to subdue, he again marched into Syria, and advanced to the Euphrates.² The Babylonians were prepared for his approach: Nebuchadnezzar opposed him with a powerful army, completely routed the Egyptians, recovered the town of Carchemish,³ and, pushing his conquests through Palestine, took from the Egyptian monarch all the territory belonging to the Pharaohs, from the Euphrates to the southern extremity of Syria.⁴ Nor was it in the power of Neco to recover the provinces thus wrested from him; and he was obliged patiently to submit to these losses, and to content himself with the defence of his own frontier.⁵

Jerusalem now became subject to the victorious Babylonian; and some time after, being displeased with the Jewish king, Nebuchadnezzar carried away the sacred vessels from the temple, and led many noble youths, with Jehoiakim himself, prisoners to Babylon. The calamities of the Jews did not terminate here. The ensuing year Nebuchadnezzar⁶ sent for Jehoiachin, the son of the deposed monarch, who, though only eight years of age,⁷ had been chosen to succeed him, and appointed Zedekiah, 'his father's brother,' king in his stead. Ten thousand captives, among whom were the principal people of Jerusalem, 7000 fighting men, and 1000 smiths and artificers, with the treasures of the Temple and the palace, were carried to Babylon; and Zedekiah became a vassal of the Chaldean monarch.

A short time previous to the captivity of Jehoiakim Neco died, and was succeeded by Psammaticus II., whom Herodotus calls Psammis. Little worthy of remark took place during his reign, except an expedition into Ethiopia, and the arrival of an

¹ 'The vest he consecrated to Apollo, and sent to the Milesian Branchidæ' (ii. 159). Nothing can be more improbable, considering the contempt in which the Greeks and their religious notions were held by the Egyptians, than that Neco should have preferred a Greek deity to the whole Pantheon of his own gods.

² Necho, in the first campaign allied with the Babylonians, marched on Carchemish, and was attacked by Josiah, who attempted to oppose his march. — S. B.

³ B.C. 607.

⁴ 2 Kings xxiv. 7.

⁵ This defeat of Neco 'happened in the fourth year of Jehoiakim.' (Jer. xvi. 2.)

⁶ Or Nabuchodonosor II., the son of Nabopolassar, who had associated him in the kingdom. The Arabs call him Bokhtomir.

⁷ 2 Chron. xxxvi. 9, differing from the account in 2 Kings xxiv. 8.

embassy from the Eleans.¹ ‘These people boasted that the regulations of the Olympic games were the most just and unobjectionable that had ever been instituted; and that even the Egyptians, who were considered the wisest of men, could not invent any of a more perfect kind. On their arrival in Egypt they explained the object of their mission; the king, therefore, convoked an assembly of men reputed for their wisdom and experience, before whom the Eleans stated the rules of their games, inquiring at the same time if they could suggest any improvements. After some consultation, the Egyptians asked whether any of their fellow-citizens were permitted to contend at the games; and upon being informed that every one, either of their own or any other Greek state, was at liberty to enter the lists, they decided that such regulations were directly at variance with every notion of justice; since it was impossible for them not to favor their fellow-citizens, to the prejudice of a candidate from another place.

‘And they concluded by saying, “If you are really anxious for impartiality, and have come to Egypt to learn our opinion, we recommend you to exclude the Eleans, and to confine the games to foreign competitors.”’

Psammaticus II. was succeeded by Apries. Of Apries, or Vaphres, we have some account in Herodotus and Diodorus, and he is styled in the Bible history Pharaoh-hophra.² His contemporary in Judæa was Zedekiah, who had been made king by Nebuchadnezzar, and who, thinking that a favorable opportunity now presented itself for throwing off the Babylonian yoke, made a treaty with the king of Egypt. But the war in which Apries was engaged with the Syrians, and afterwards with the Cyrenæans, prevented his affording any great assistance to his ally; and though his ‘army,’ by entering Judæa, obliged ‘the Chaldeans’ to raise the siege of Jerusalem³ and retire from their positions, the king of Babylon, having again advanced to that capital, succeeded in taking it in the eleventh year of Zedekiah, razed it to the ground, and carried away the remainder of the people captives. And this momentary aid, and the inutility of placing reliance on the protection of Apries, led Ezekiel to compare the Egyptians to a broken reed,⁴ which was to pierce the hand of him who leaned upon it.

¹ Herod. ii. 160. Diodorus (i. 95) says they sent to Amasis.

² Phrah Hophra, פְּרָה־חֹפְרָה. In the

Chaldee Paraph. פְּרָה־חֹפְרָה.

³ Jer. xxxvii. 8, 11.

⁴ Ezek. xxix. 6, 7.

Many other prophecies respecting the calamities consequent upon this treaty with Egypt, and the rebellion of the Jews against the Babylonians, are met with in the Bible; and Egypt itself was threatened by the arms of the victorious Nebuchadnezzar. But it is difficult to determine in what time and in what manner the last prophecy was accomplished, or to discover the extent of the calamities which happened to Egypt from the conquests of the Babylonians, though the scriptural account appears to fix those events to the time of Nebuchadnezzar. They may, however, refer to the reverses of Apries, and to the subsequent confusion which prevailed in Egypt after the rebellion of Amasis.

The commencement of the reign of Apries was prosperous, and he was considered ‘the most fortunate monarch who had hitherto ruled in Egypt, next to his grandfather Psammaticus.’¹ He sent an expedition against the island of Cyprus; besieged and took Gaza² and the city of Sidon: engaged and vanquished the king of Tyre by sea; and, being uniformly successful, he made himself master of Phœnicia and Palestine, recovering much of the territory, and that influence in Syria which had been taken from Egypt by the victories of Nebuchadnezzar. He next sent an army against the Cyrenæans of Libya; but here fortune deserted him: his troops were defeated, and, mortified by this severe and unexpected check, they attributed their disgrace to Apries himself, imagining that so disastrous a project could only have been devised by one who was desirous of their destruction. They felt persuaded that his views were to weaken the power of the military class, and thus to remove the only barrier to that ambition which aimed at nothing less than absolute dominion, and the subversion of the liberty of his subjects: and excited by these feelings, and meditating revenge for the sufferings and disgrace they had already endured, the recurrence of which could only be prevented by a timely declaration of their sentiments, they refused to acknowledge his authority; and being joined by the friends of those who had been slain, they openly raised the standard of revolt. The news of this event greatly surprised and exasperated the king; but deeming it more prudent to adopt mild and conciliatory measures, he sent Amasis, one of his ablest generals, with orders to use every endeavor to appease the tumult, and to persuade the mutineers to return to their duty.

¹ Herod. ii. 161.

² Foretold by Jeremiah, xlvii. 1.

Amasis, having arrived at the camp, addressed the soldiers in an appropriate speech; begging them to desist from their purpose, and to pay respect to the royal authority, as they had previously done, and as was due to one who had their interest at heart. While he was speaking, an Egyptian, who stood behind him, placed a helmet on his head, proclaiming him king, and affirming, in the name of his comrades, that they were willing to acknowledge him as their master and the ruler of Egypt. Though far from expecting such a proceeding, Amasis required little persuasion to accept the honor conferred upon him by so powerful a body; and being sensible that further attempts to recall their allegiance to Apries would be fruitless, and to sacrifice his own advantage would not benefit his sovereign, he acquiesced in the resolutions of those who had elected him as their chief, and put himself at their head.

Apries, on receiving intelligence of what had happened, despatched Patarbemis, one of the most eminent men of his court, with directions to bring Amasis alive to his presence. Having arrived at the camp, he told Amasis the purport of his mission, and the order of the king to appear before him. Amasis, who was seated on horseback, treated Patarbemis with indignity, and sent an insulting message to his master; adding, that he intended to go of his own accord, and hoped Apries would not take any trouble in looking for him, as he should soon present himself to his majesty with several companions. Patarbemis, fully comprehending his intention, from his manner of speaking, and seeing the preparations he was making, returned without loss of time to acquaint his sovereign with the state of affairs. No sooner had he arrived than Apries, finding he had failed to bring Amasis, without either inquiring the reason or listening to his statement, commanded his nose and ears to be cut off: an order which was immediately carried into execution. This barbarous and uncalled-for outrage, committed upon one so much esteemed by all classes, exasperated even those who had hitherto sided with Apries, and the greater part without hesitation deserted him and went over to Amasis. Finding himself thus abandoned by the Egyptians, he collected the auxiliary troops who were about him, consisting of 30,000 Ionians and Carians, and prepared to oppose the enemy. The hostile armies met at Momemphis, Apries leading his small band of Greeks and the few Egyptians who had remained faithful to him, and Amasis at the head of the native troops. The foreigners fought bravely, but, greatly

inferior in numbers, they were obliged at length to give way; and Apries, falling alive into the hands of the Egyptians, was carried prisoner to Saïs, where he was confined in the palace he had previously inhabited as king, which now belonged to his rival.

Amasis did not show himself unworthy of the success he had obtained, and the singular favor of fortune. He treated his royal prisoner with great kindness, and used all his influence to preserve his life, in opposition to the representations and wishes of the Egyptians; nor did he yield to their urgent request, till they accused him of treating them with injustice, by showing favor to one who was their enemy. Unable, therefore, to oppose demands put forth under color of a right, Amasis consented, with reluctance, to deliver up his captive to their resentment; and 'having strangled the unfortunate Apries, they buried him in the tomb of his ancestors, which was in the sacred enclosure of Minerva's temple, very near the principal edifice, on the left, entering. In this building all the princes of the Saïte house were interred, and among the number, Amasis also; but his sepulchre is more remote from the principal building than those of Apries and his predecessors.'

Such, according to Herodotus, was the tragical end of Apries; a monarch who, in the zenith of his glory, felt persuaded it was not in the power of a deity to dispossess him of the kingdom, or to shake the stability of his sway.¹ And this account of his arrogance satisfactorily accords with the Bible, where Ezekiel² speaks of 'the king of Egypt' as 'the great dragon that lieth in the midst of the rivers, which hath said, My river is mine own, and I have made it for myself;' and his overthrow and subsequent captivity and death are foretold by Jeremiah, with remarkable precision, in the following words: 'I will give Pharaoh-hophra, king of Egypt, into the hand of his enemies, and into the hand of them that seek his life.'³

The slight acquaintance we are able to obtain of the state of Egypt prevents our discovering the precise mode in which the fulfilment of the other predictions took place. Amun-No,⁴ or Thebes, and Egypt, with their gods and kings, were to be pun-

¹ Herod. ii. 169.

² Ezek. xxix. 3.

³ Jer. xlv. 30.

⁴ Jer. xlvi. 25. In the Hebrew ver-

sion it is 'Amun of No,' or Nay; in the Syriac, 'Amun of the waters;' in the Targum, or Chaldee Paraph., 'Alexandria,' which was not yet founded.

ished, and Pharaoh, and all that trusted in him, to be delivered into the hand of Nebuchadnezzar and of his servants; Egypt was to be given into the hands of the people of the north,¹ and afterwards to be inhabited as in the days of old.

Still more severely is it denounced in the prophecies of Ezekiel.²

The Deity threatens to make the land of Egypt 'utterly waste and desolate, from the tower of Syene³ even unto the border of Ethiopia.⁴ No foot of man shall pass through it, nor foot of beast shall pass through it, neither shall it be inhabited forty years. And I will make the land of Egypt desolate in the midst of the countries that are desolate, and her cities among the cities that are laid waste shall be desolate forty years: and I will scatter the Egyptians among the nations, and will disperse them through the countries. Yet . . . at the end of forty years will I gather the Egyptians from the people whither they were scattered: and I will bring again the captivity of Egypt, and will cause them to return into the land of Pathros, into the land of their habitation; and they shall be there a base kingdom. It shall be the basest of the kingdoms; neither shall it exalt itself any more above the nations: for I will diminish them, that they shall no more rule over the nations. And it shall no more be the confidence of the house of Israel.' 'And the sword shall come upon Egypt. . . . Ethiopia, Libya, and Lydia,⁵ and all the mingled people,⁶ and Chub,⁷ and the men of the land that is in league, shall fall with them by the sword. . . . I will also make the multitude of Egypt to cease by the hand of Nebuchadnezzar king of Babylon; . . . they shall draw their swords against Egypt, and fill the land with the slain.⁸ . . . I will also destroy their idols, and cause their images to cease out of Noph;⁹ and

¹ Jer. xvi. 24-26.

² Ezek. xxix. 10 *et seq.*

³ In the Septuagint and Arabic versions it is 'from Migdol and Syene (E'Sooan) unto the borders of Ethiopia.' The Hebrew and Syriac, as well as the Targum, have 'from the tower of Syene,' or 'from Migdol to Syene (מִגְדֹּל סֵנַי), and to the confines of Ethiopia' (Cush). Syene being on the borders of Ethiopia, the sense seems to require 'from the towers of Syene,' or from Migdol to Syene,' (which is) 'on the confines of Ethiopia.' Migdol is a 'tower' in Hebrew (*vide* Gen. xi. 4).

⁴ Syene, Elephantine, and Philæ continued to be the frontier towns of Egypt,

even in the time of the Romans, though their dominions in the Pharaonic time extended beyond. (Lucan, x. 313; *vide* also Strabo and Procopius.)

⁵ In Hebrew, Cush, Phut, and Lud.

⁶ In Hebrew, מִצְרַיִם, *erab*. The same word is used for the 'mixed multitude' which went out with Moses at the Exodus.

⁷ Hebrew, Cub. Probably the Cubii of Ptolemy, a people who lived in Marcotis.

⁸ Ezek. xxx. 4 *et seq.*

⁹ Noph was Memphis; called by the Egyptians Memfi, Mefi, Menfi, or Menbe, and Men-nofri, or Ma-nofri, 'the place of good,' as well as Pthah-êi, 'the abode of Pthah.' In Hosea ix. 6 it is styled Moph.

there shall be no more a prince of the land of Egypt: . . . and I will make Pathros¹ desolate, and will set fire in Zoan,² and will execute judgments in No.³ And I will pour out my fury upon Sin,⁴ the strength of Egypt; and I will cut off the multitude of No. . . . The young men of Aven⁵ and of Pibeseth⁶ shall fall by the sword: and these cities shall go into captivity. At Tephlahmes⁷ also the day shall be darkened, when I shall break there the yokes of Egypt: and the pomp of her strength shall cease in her, . . . and her daughters shall go into captivity; . . . and I will scatter the Egyptians among the nations, and disperse them through the countries.⁸

I shall now endeavor to show how these predictions were accomplished, and to explain the probable reason of Herodotus's silence upon the subject of Nebuchadnezzar's invasion.

The defeat and death of Apries, before mentioned, are given on the authority of Herodotus, who represents Amasis as a rebel chief, taking advantage of the disaffection of the army to dethrone his sovereign. This information he received from the Egyptian priests; but no mention was made of the signal defeat their army experienced, or of that loss of territory in Syria which resulted from the successes of the victorious Nebuchadnezzar. It is therefore reasonable to conclude they disguised the truth from the Greek historian; and, without mentioning the disgrace which had befallen their country and the interposition of a foreign power, attributed the change in the succession, and the elevation of Amasis to the throne, solely to his ambition and the choice of the Egyptian soldiery. Megasthenes and Berosus affirm that Nebuchadnezzar conquered a great part of Africa, and, having invaded Egypt, took many captives, who were committed to the

The Arabs call it Ma-nouf, or Menouf. In hieroglyphics it is written Men-noufi, followed by a *pyramid*.

¹ Pathros or Pathures, in the Septuagint *Φαθωρίς*, is Pa-athyris, 'belonging to Athor,' or Aphrodite. It might be supposed to refer to Aphroditopolis, or *Athribis*, or *Atarbechis*; but there is more reason to believe it to be Pathyris, or the district of Western Thebes, which was afterwards made into a separate nome of that name, and so called from the same goddess.

² Tanis.

³ No, or No Amun, Thebes, Diospolis Proper, on the east bank. It is also written Na-Amun [or Amun-na]; the Egyptian Amun-êi, the abode of Amun.

(*Vide* Nahum iii. 8.) The Septuagint gives *ἐν Διοσπόλει*.

⁴ The Septuagint has *Σαῖς*; the Latin translation of the Hebrew, 'Pelusium;' the Arabic, 'San;' the Hebrew version and Targum, 'Sin.' Pelusium, which was the bulwark of Egypt on the N.E. frontier, is to be preferred. It is now called Tinch.

⁵ Aon, *Ἡλιούπολις*, Heliopolis, or On, as in Gen. xli. 45.

⁶ Bubastis, Pa-bast.

⁷ In the Septuagint *ἐν Τάφναις* [In the original spelt differently in different places — G. W.]; or, as Herodotus calls it, *Δάφνησι τῆσι Πελουσίησι*. (Herod. ii. 107 and 30.) Daphne was a little distance from Pelusium, and higher up that branch of the Nile.

⁸ Ezek. xxx. 13 *et seq.*

charge of persons appointed to conduct them after him to Babylon. But as this is said to have happened at the period of his father's death, and consequently in the reign of Neco, it cannot refer to the point in question. Josephus, however, expressly states that the Assyrian¹ monarch 'led an army into Cœle-Syria, of which he obtained possession, and then waged war on the Ammonites and Moabites. These being subdued, he invaded and conquered Egypt; and, having put the king of that country to death, he appointed another in his stead.'² If Josephus be correct in this statement, there is reason to suppose he alludes to Apries being deposed and succeeded by Amasis; and we can readily imagine that the Assyrians, having extended their conquests to the extremity of Palestine, would, on the rumor of intestine commotions in Egypt, hasten to take advantage of the opportunity thus afforded them of attacking the country. And the civil war, and the fatal consequences of the disturbed state of Egypt, appear to be noticed by Isaiah³ in the following prophecy: 'I will set the Egyptians against the Egyptians: and they shall fight every one against his brother, and every one against his neighbor; city against city, and kingdom against kingdom; . . . and they shall seek to the idols, and to the charmers, and to them that have familiar spirits, and to the wizards.'⁴ And the Egyptians will I give over into the hand of a cruel lord; and a fierce king shall rule over them.'

From a comparison of all these authorities, I conclude that the civil war between Apries and Amasis did not terminate in the single conflict at Momemphis, but lasted several years; and that either Amasis solicited the aid and intervention of Nebuchadnezzar, or this prince, availing himself of the disordered state of the country, of his own accord invaded it, deposed the rightful sovereign, and placed Amasis on the throne, on condition of paying tribute to the Babylonians. The injury done to the land and cities of Egypt by this invasion, and the disgrace with which the Egyptians felt themselves overwhelmed after such an event, would justify the account given in the Bible of the fall of Egypt:⁵ and to witness many of their compatriots taken captive to Baby-

¹ [Meaning perhaps Babylonian.— G. W.]

² Joseph. Antiq. lib. x. c. ix. 7.

³ Isaiah xix. 2 *et seq.*

⁴ That is, consult the oracles, as Amasis is said to have done previous to his obtaining the sovereignty of Egypt. The account given by Herodotus (ii. 174) of Amasis'

early conduct, and the answers of the oracles, is ridiculous.

⁵ [It is frequently unnecessary to interpret prophecies literally; and it is more consistent to take the general sense than to bind them to the minutæ of each word, as may be observed in examining many of them.— G. W.]

lon, and to become tributary to an enemy¹ whom they held in abhorrence, would be considered by the Egyptians the greatest calamity, as though they had forever lost their station in the scale of nations.

Athenæus attributes the previous rise of Amasis to the circumstance of his having presented Apries² with a chaplet of flowers on his birthday, which so delighted the king that he invited him to the feast, and admitted him among the number of his friends. Diodorus, however, who is more to be depended upon in this instance, asserts that Amasis was a person of considerable consequence, which accords with his rank as a general and a distinguished member of the military caste, as well as with monumental record, and his marriage with the daughter of his sovereign. And the idle tales told by the priests respecting his rise and the fall of Apries seem only to have been intended to deceive Herodotus, and to conceal from him the real state of Egypt at that period.

According to the same historian, the reign of Amasis was the epoch at which Egypt was most flourishing, both 'with regard to the advantages conferred by the river on the soil, and by the soil on the inhabitants;' and that country 'could boast no less than 20,000 well-inhabited cities.'³ The former assertion, indeed, if not fully proved, gains considerable weight, from the appearance of public and private buildings raised during the reigns of this monarch and his two predecessors, from the number of splendid monuments erected by Amasis, and from the immense booty carried out of Egypt by the Persians. That private persons enjoyed unusual affluence is evident from the style and richness of their sepulchres, far exceeding in extent and ornamental detail any of those executed during the flourishing era of the 18th Dynasty: and this can only be attributed to an increase of wealth. In order, therefore, to reconcile that fact with the state of Egypt mentioned in the prophecies, we may suppose the tributary condition to which it was reduced by the Babylonian conqueror, though severely wounding the pride of the Egyptians and degrading them as a nation, did not affect the riches of individuals, which might continue to increase through the immense resources of a fertile country, or, to repeat the words of Herodotus, through 'the advantages conferred by the

¹ Ammianus Marcellinus says, the Carthaginians also invaded Egypt; but this statement is very improbable.

² Whom he calls Partamis, on the authority of Hellenicus.

³ Herodot. ii. 177. Plin. v. 11.

river on the soil, and by the soil on the inhabitants:’ and the historian may refer to the latter end of Amasis’ reign, when he had been freed from the humiliating necessity of paying tribute to the Babylonians, themselves at length conquered by the arms of Cyrus. It is very possible that the prophecies may *partly* relate to the intervention of Nebuchadnezzar, and the degraded condition of Egypt, as tributary to the Babylonians; and *partly* to the final downfall of the country, when the Persians invaded it under Cambyses: for so remarkable an event would scarcely be omitted in a prophecy announcing the ‘desolation of Egypt;’ and, if this last and the previous invasion of the Babylonians are not distinctly described, we may conclude that both are included in the general prediction.¹

Nor was the military power of Egypt annihilated by the civil war between Apries and Amasis, or by the unfortunate intervention of Nebuchadnezzar; and though Amasis did not think it prudent, by refusing the tribute he had promised to pay, and by invading Syria, to provoke a powerful enemy, or to engage in a doubtful struggle with that prince, yet he was sufficiently strong to make himself feared and respected by his neighbors, and to extend his arms beyond the frontiers of Egypt. And so confident was he of his power towards the close of his reign, that he defied the mighty Persia, little expecting he would thereby entail great and real calamities upon his country. [The Egyptians had, indeed, assisted Cræsus in his struggle with Cyrus. — G. W.]

After remedying the evils which civil commotion and the other events already alluded to had caused, at the close of his predecessor’s reign, his attention was directed to the improvement of the military strength, as well as the commercial interests of Egypt; and having fitted out a formidable expedition against Cyprus, he succeeded in taking the cities of that island,² and subjecting it to his power; being the first who had made it tributary³ to the Pharaohs. He also gave great encouragement to foreigners who were willing to trade with his subjects; and as an inducement to them he favored their interests, and showed them marked indulgence upon all occasions. Such Greeks as wished to maintain a regular com-

¹ Xenophon pretends that Cyrus even invaded Egypt; but his mode of expressing himself is as vague as the circumstance is

improbable. (Xen. Cyropæd., preliminary section.)

² Diod. i. 68.

³ Herodot. ii. 182.

munication with Egypt, he permitted to have a settlement at Naucratis: and to others, who did not require a fixed residence, being only engaged in occasional commerce, he assigned certain places for the construction of altars and the performance of religious rites; and the Greeks,' says Herodotus,¹ 'still possess a very spacious and celebrated temple in Egypt, called Hellenium. It was built at the joint expense of the Ionians of Chios, Teos, Phocæa, and Clazomenæ: of the Dorians of Rhodes, Cnidus, Halicarnassus, and Phaselis; and of the Æolians of Mitylene. Hellenium is the common property of all these cities, who appoint proper officers for the regulation of their commerce; and the claims of other cities to these distinctions and privileges are totally unfounded. The Æginetæ, however, constructed for themselves a temple to Jupiter, as did the Samians to Juno, and the Milesians to Apollo.

'Naucratis soon became a flourishing town, in consequence of the exclusive privileges it enjoyed, being the sole emporium of the Greeks in Egypt; and not only was every merchant required to unload his cargo there, but if he came to any other than the Canopic mouth of the Nile, he was obliged to swear it was entirely accidental, and was compelled to go thither in the same vessel; or, if contrary winds prevented his making that passage, his goods were taken out and conveyed in boats of the country by inland navigation, through or round the Delta to Naucratis.'

'Many other marks of favor and liberality were bestowed by Amasis on the Greeks. When the temple of Delphi was consumed by fire, he presented the Delphians with a very large contribution towards rebuilding it; and, having made an amicable confederacy with the Cyrenians, he sent a golden statue of Minerva, with a portrait of himself, to their city. To a temple of that goddess at Lindus he gave two marble statues, with a linen corslet, deserving of admiration: and a thorax of the same materials was dedicated by him to the Minerva of Rhodes, which, according to Pliny, was of remarkably fine texture.² He also presented two figures of himself, carved in wood, to the temple of Juno at Samos; which were placed immediately behind the gates, where they remained till the time of Herodotus.³

'The kindness shown by Amasis to Samos was owing,' says

¹ Herodot. ii. 178.

³ Herodot. ii. 182.

² 'CCCLXV filis singula fila constare.' (Plin. xix. 2.)

the historian, 'to the friendship which subsisted between him and Polycrates, the son of *Æaces*; but he had no such motive of attachment to Lindus, and was only moved by the report of the temple of *Minerva* having been erected there by the daughters of *Danaus*, when they fled from the sons of *Ægyptus*;' and his affection for the *Cyrenians*, according to the same author,¹ arose from his having married *Ladice*, a native of that country, who was afterwards sent back by *Cambyzes* to her parents, when he conquered *Egypt*.

The friendship of *Amasis* and *Polycrates* commenced at the period of the war between the *Lacedæmonians* and the latter, who had forcibly possessed himself of *Samos*. It had been cemented by various presents on both sides, and appeared to promise a long continuance; 'but the wonderful prosperity and uninterrupted success of *Polycrates* excited the attention and anxiety of *Amasis*; and as they were observed by him invariably to increase, he was induced to write him the following letter:—

“*Amasis to Polycrates.*

“To learn that a friend and ally is blessed with prosperity, cannot fail to give me the greatest satisfaction; but, knowing the invidiousness of fortune, your extraordinary success excites my apprehension. For my own part, if I might be allowed to choose for myself or those I regard, I should prefer prosperity on some occasions, and on others disappointment; and thus pass through life with an alternation of good and evil, rather than be fortunate in every undertaking. For I never remember to have heard of a man blessed with unceasing felicity, who did not end his career overwhelmed with calamities. Take, therefore, my advice, and apply this counterpoise to your prosperity; endeavor to discover some favorite object whose loss would occasion you the deepest regret; and as soon as this has been ascertained, remove it from you in such a manner that it can never be recovered. If then your good fortune still continues unchecked by adversity, I strongly recommend you to repeat the remedy I propose.”²

Polycrates, having received his letter and deliberated on its contents, felt persuaded that *Amasis* had given him excellent

¹ Herodot. ii. 181.

² Ibid. iii. 40.

advice, and therefore determined to follow it. Accordingly he searched among his treasures for something whose loss would most afflict him, and at length fixed upon a signet ring which he was in the habit of wearing. It was an emerald set in gold, the work of Theodorus the Samian, beautifully engraved.¹ Resolved on sacrificing this precious jewel, he went on board a fifty-oared vessel, and ordered the men to pull out into the open sea; and when they were a considerable distance from land, Polycrates, taking off the ring, in the presence of his attendants, cast it into the sea, and then gave orders for their return to Samos.

The sacrifice he had made, though voluntary, afflicted him much; and, returning to his palace, he gave way to an excess of grief. Five or six days after, a fisherman having caught a fish of very great size and beauty, repaired to the palace, and requesting admission into his presence, presented it to Polycrates in these words: 'Although, Sire, I live by the produce of my industry, I thought so fine a fish ought not to be exposed for sale in the public market-place; and deeming it worthy of your majesty's table, I have brought it for your acceptance.' Pleased with his conduct, Polycrates replied, 'My good man, not only is your present, but the manner in which you have expressed yourself, highly gratifying to me; and I invite you to supper at the palace.'² The fisherman, delighted with this mark of favor, returned home.

Shortly after, the servants, on opening the fish, discovered the ring, and with great eagerness and joy carried it to the king, relating in what manner it had been found. Polycrates, concluding that such a circumstance could only be the effect of Divine interposition, carefully noted down every particular, and sent it to Egyp^t. Amasis no sooner perused his letter, than he felt convinced it was out of the power of one mortal to deliver another from the fate which awaited him; and that Polycrates, who had been so uniformly lucky, and who had even recovered

¹ The word *σφραγίς* answers exactly to the *Khátom* of the Arabs; a ring with an engraved stone, or entirely of gold, with a name or device cut upon it. Pliny and Solinus say the ring of Polycrates was a sardonyx; and the former adds that in his time they showed one at Rome, in the Temple of Concord, given by Augustus, which was said to be of the Samian king. Clement of Alexandria, *Prædagog.* lib. iii. p. 106, supposes a lyre was figured upon it. The Arabs have the story of Polycrates's

ring, but they omit his name, and the reason of its loss; relating that it fell into the sea by accident. (*Vide* Plin. xxxvii. 2, and Solin. c. xxxiii. p. 63.)

² It is not necessary that the fisherman should have eaten at the same table as his royal host. Herodotus (iii. 42) uses the expression, 'I invite you to supper.' *σε ἐπὶ δείπνον, καλέομεν.* Many persons are invited to sup at the house of a great man in the East, without sitting at table with him.

what he had taken pains to lose, could not terminate his days in tranquillity. He therefore sent a herald to Samos, disclaiming all connection with him for the future, in order that, when any grievous calamity befell Polycrates, he might not have to bewail the misfortunes of a friend.

Such is the account given by Herodotus of Amasis's desertion of Polycrates; which took place previous to the difficulties he experienced from the disaffection of his subjects and the intervention of the Lacedæmonians, and some time before his cruel murder by the treacherous Orætes.¹ Diodorus,² however, assigns a different reason for the conduct of Amasis. He affirms that the Egyptian monarch was offended with the tyrannical conduct of Polycrates, and foresaw, from the feeling excited against him, both amongst his subjects and foreigners, that his fate was inevitable; and, indeed, the flight of many Samians to Crete,³ and numerous instances of their discontent and of his oppression, are recorded by Herodotus, and many ancient writers.⁴

Polycrates has been represented as a great encourager of learning, and the patron of eminent men, spending great part of his time in the company of persons of talent, among whom were Anacreon and Pythagoras. And his friendship with Amasis enabled him to recommend the latter to that monarch,⁵ when he visited Egypt, and to obtain for him those facilities in studying the mysterious sciences and profound secrets of the Egyptians, which few foreigners were permitted to enjoy. Some,⁶ however, deny that his journey was undertaken at the suggestion, or even with the approbation, of Polycrates: and affirm, on the contrary, that Pythagoras abandoned his native country, being unable to endure the tyranny of his sovereign.

Solon also visited Egypt during the reign of Amasis;⁷ and

¹ Herodot. iii. 125. Valer. Max. calls him Orontes, vi. 9.

² Diod. i. 95.

³ Herodot. iii. 44.

⁴ Valer. Max. vi. 9. Plin. xxxvii. 2. Diogenes, Porphyry, Gellius, Eusebins, Diodorus, &c.

⁵ Pliny says the name of the king who reigned in Egypt when Pythagoras visited it was Semneserteus. Can this have been corrupted from Neit-se, or Se-Neit, 'the Son of Neith, which was the cognomen of Amasis, Ames-Neit-se, or Ames-se-Neit? It rather resembles the name Sen-Osiri.

(Plin. xxxvi. 14.) Another reading gives Semneserteus, perhaps mistaken for, or corrupted from, the name of Psammenitus, the son of Amasis.

⁶ The authors mentioned in a preceding note.

⁷ Herodot. i. 30. Thales is said, by Plutarch, in his Banquet of the Seven Sages, to have been in Egypt in the reign of Amasis; and he mentions the improbable story of his showing the Egyptians how to measure the height of the pyramid by its shadow.

being much pleased with the laws of the Egyptians, which, through the liberality of the king, he had every facility of studying, he introduced many of them into the code established by him at Athens.

That Amasis was a great encourager of art, we have ample testimony from the monuments which remain, as well as from the statements of ancient writers; and being a native of Saïs, or, as Herodotus affirms, of Siuph, in the Saïte nome, his attention, as is reasonable to suppose, was directed more particularly toward the embellishment of that city. With this view he erected at Saïs a magnificent propylæum in honor of Minerva, — a splendid building, far excelling any other of the kind, as well in size and grandeur as in the quality and magnitude of the stones used in its construction: and before it were placed several large colossi, with a series of immense androsphinxes, which formed the avenue or dromos leading to the main entrance. The propylæum was a large court, open in the centre, and surrounded in the inside by rows of columns, with the usual pyramidal towers in front, forming one of the approaches to the temple of Minerva, in the same manner as the propylæa attached to the temples at Thebes constitute the entrance-halls of those edifices.¹ Portions of the same building which had been erected by his predecessors, requiring some repairs. Amasis collected for this purpose a quantity of stones of amazing thickness, part of which were brought from the quarries of Memphis,² and part from the cataracts of Syene. ‘But what, in my opinion,’ says Herodotus, ‘deserves the greatest admiration is an edifice of a single stone, brought from the city of the Elephantine, a distance of about twenty days’ journey.³ Two thousand men, chosen from the class of boatmen, were employed for the space of three years in transporting it to Saïs. Its external length is twenty-one cubits, its breadth fourteen, and height eight: and in the inside it measures eighteen cubits and twenty digits in length, twelve in breadth, and five in height. It stands near the entrance of the temple; and the reason of its being left in this

¹ At Karnak, in Thebes, are some instances of the avenues of sphinxes; they only differ in being criosphinxes, or surmounted with the head of a ram instead of a man.

² Herodotus means the mountains opposite Memphis, of the Troici Iapidis mons, which he mentions in the same manner on another occasion, when speaking of the

canal to the Red Sea. (Lib. ii. s. 158.) Inscriptions recording the opening of the quarries there are known to have been found. — S. B.

³ From Elephantine or E'Sooan, where the granite quarries may still be seen, to Saïs, is about 700 miles by land. It must have crossed the river once at least.

spot was that the architect, wearied with the tedious duration of the undertaking, had been heard to fetch a deep sigh while they were employed in dragging it forward; upon which Amasis, who happened to be present, gave orders they should stop, and carry it no farther. Some, however, affirm that one of the men while moving it with a lever was crushed to death, and that on this account they were ordered to desist.

Amasis made many and magnificent presents to other temples, both in Upper and Lower Egypt. At Memphis, he placed a colossal recumbent figure, seventy-five feet long, before¹ the temple of Vulcan; and on the same basement two other colossi of Ethiopic stones, or granite, each twenty feet in height, one on either side of the principal part² of the building. There is at Saïs another statue similar to that of Memphis, and lying in the same position:³ and this prince erected the grand temple of Isis at Memphis, which deservedly claims universal admiration.

Many monuments still exist in different parts of Egypt, bearing the name of Amasis, one of which, a red granite monolith, at Tel-et-mai, resembles in form⁴ that described by Herodotus as having been brought from Elephantine to Saïs. Thebes and other places also present memorials of the encouragement he gave to architecture and other branches of art; and at the quarries of Syene several inscriptions indicate the removal of granite blocks for the construction or decoration of edifices raised by him in the valley of the Nile.

Pliny⁵ affirms that some imagined him to have been buried in the celebrated Sphinx:⁶ but this erroneous notion arose from the similarity of the names, Amosis and Thothmosis,⁷ and readily obtains that indulgence which cannot be extended to an assertion of Lucan, burying Amasis in the pyramids them-

¹ Strabo says, 'Before the dromos of the temple lies a colossus of a single stone; and in this dromos are held the bull-fights' (lib. xvii.).

² Probably by the *μεγαρον* Herodotus means the temple, properly speaking, independent of the outer court; or the isolated sanctuary in the centre of the temple, which was independent of the inner adytum, as at Luqsor, and the smaller temple of Medeenet Haboo at Thebes.

³ They were very uncommon in Egypt.

⁴ I am indebted to Mr. Burton for its dimensions, which are 21ft. 9in. high, 13ft. broad, and 11ft. 7in. deep, outside; and 19ft. 3in., 8ft., and 8ft. 3in. inside.

⁵ Plin. xxxvi. 17.

⁶ The Sphinx is, from recent discoveries, supposed to be as old as the 4th Dynasty, (De Rougé, 'Six premières Dynasties,' pp. 46-50.) The first representation of a sphinx is, however, not older than the 18th Dynasty.

⁷ This is still more striking when we consider that A, Aah, or Ioh, the moon, and Thoth, are the same deity; and that Amosis, the leader of the 18th Dynasty, has been called by some Tethmosis. Amosis or Amasis, are the same; the real name being Ames. 'Ioh' is also the first month.

selves.¹ To Lucan, however, accuracy was never imputed; and no one after reading his extravagant description of the cataracts at Philæ² is surprised to find him deposit the remains of the Ptolemies in the same monuments.³

The situation of Amasis' tomb is mentioned by Herodotus.⁴ It stood, like all those of the Saïte monarchs, within the precincts of the temple of Minerva, in the chief city of that nome; which, during the reign of the princes of the 26th Dynasty, had become the royal residence and nominal metropolis of Egypt; though Thebes and Memphis still retained the titles of capitals of the upper and lower countries.

Towards the latter end of the reign of this monarch, Cambyses sent to Egypt to demand his daughter in marriage; a step to which he had been prompted by a certain Egyptian, an enemy of Amasis. This man was a physician: and when Cyrus had requested of the Egyptian king the best medical advice he could procure, for a disorder in his eyes, Amasis forced him to leave his wife and family and go into Persia. Meditating revenge for this treatment, he instigated his successor to require the daughter of Amasis, that he might either suffer affliction at the loss of his child, or, by refusing to send her, provoke the resentment of Cambyses. Amasis detested the character of the Persian monarch; and persuaded that his treatment of her would neither be honorable nor worthy of a princess, he was unwilling to accept the overture: but fearing to give a positive refusal, he determined on sending the daughter of the late king. Her name was Neitatis, or, as Herodotus calls her, Nitetis. She was possessed of great personal attractions; and Amasis, having dressed her in the most splendid attire, sent her into Persia as his own child. Not long after, Cambyses happening to address her as the daughter of Amasis, she explained the manner in which he had been deceived, by a man who had dethroned and put Apries her father to death, and had seized upon the throne, through the assistance of a rebellious faction: upon which Cambyses was so enraged that he resolved to make war upon the usurper, and immediately prepared to lead an expedition into Egypt.⁵

¹ Lucan, *Phars.* ix. 155. Diodorus, i. 64, says some attribute the second pyramid to Amasis, the first to Armaeus, and the third to Inaron, as well as to Rhodope.

² Lucan, lib. x. 315 *et seq.*

³ *Ibid.* viii. 696.

⁴ The lake mentioned by Herodotus still exists at Saïs (now Sa-el-Hagar), as well as

its extensive' and solid crude brick walls. (Herodot. ii. 170.)

⁵ Other reasons are given by Herodotus, iii. 2. That of Cambyses being born of the daughter of Apries is quite Eastern, and resembles the Persian account of Alexander the Great.

Such is the principal cause alleged by Herodotus for his invasion of that country; but it will not bear the test of examination. Nitetis is represented to have been sent to Persia towards the close of the reign of Amasis, which, according to the historian, lasted forty-four years; and allowing her to have been born immediately before Apries was dethroned, she would have been of an age which in Egypt and Persia is no longer a recommendation, or the associate of beauty.¹

But whatever may have been the real motive for this war, it is certain that Cambyses was greatly exasperated against Amasis; and Egypt, when invaded by the Persian monarch, was treated with unusual barbarity.²

Temples and public buildings were destroyed; tombs were violated, and the bodies burnt; religion was insulted, private property pillaged or destroyed, and everything which could tempt the avarice or reward the labor of the spoiler was seized and appropriated either by the chief or his troops.³ Gold and silver statues and other objects of value were sent to Persia; and it appears that numerous Egyptian captives were also transported to that country.

The death of Amasis, which happened six months before the arrival of the Persians, prevented Cambyses from satiating his meditated revenge on the Egyptian monarch; and judging from the savage rage which the Persian conqueror vented upon his body it was fortunate for Amasis that he had not fallen alive into his hands, and had died unconscious of what was about to happen.

Many circumstances occurred to induce Cambyses to undertake the invasion of Egypt and the overthrow of Amasis, independent of any insult he may have offered him, or the ambition of a rising empire; one of which is thus detailed by Herodotus:⁴—Among the auxiliaries of Amasis was a man named Phanes, a native of Halicarnassus, greatly distinguished by his mental as well as his military accomplishments. This person being for some reason incensed against Amasis, fled in a vessel from Egypt, for the purpose of having a conference with

¹ [It is more probable that the assistance given by Amasis to Cæsus against Cyrus was the cause of the hatred of Camby-es. — G. W.]

² It is remarkable that the officers of the French frigate *Luxor*, who removed the obelisk from Thebes, found the sarcophagus of the queen of Amasis in a pit at El Qoorneh, the body entirely burnt,

though placed in its original repository. The tomb had been violated, probably, by the Persians, who burnt the body, and was afterwards relosed by the Egyptians with masonry. The body had been gilded.

³ *Vide* Herodot. i. 77; and Xenophon, *Cyrop.* vi., who says the Egyptian allies amounted to 120,000.

⁴ Herodot. iii. 4.

Cambyses. As he possessed considerable influence, and was perfectly acquainted with the affairs of Egypt, it was of paramount importance that his designs should be prevented. Amasis, therefore, despatched the most faithful of his eunuchs in a trireme, with orders to overtake and bring him back. The pursuit was successful, and Phanes was taken in Lycia: but having circumvented his guards, he effected his escape, and fled to Persia. Cambyses readily accepted his services, and listened to the valuable information and advice he gave respecting the affairs of Egypt, and the precautions necessary for passing the desert on the frontier. At his suggestion a treaty was made with the Arabians, to supply the Persians with guides and abundance of water, and thus enable the army to pass a barren and inhospitable tract which would have been fatal to numbers of the invaders: 'and the Arabian prince having ordered all his camels to be laden with skins, filled with water, retired into the desert, and there awaited the arrival of Cambyses and his army.'¹

At the death of Amasis, Psammenitus,² his son, succeeded to the throne. Conscious of the great danger to which his empire was exposed, from the threatened invasion of Cambyses, he made great preparations for the defence of the frontier; and advancing with his Egyptian troops, and the Ionian and Carian auxiliaries, to Pelusium, he encamped in a plain near the mouth of the Nile. The Persians, having passed the desert, took up a position opposite the Egyptian army, and both sides prepared for battle. The Greeks, irritated with the treachery of Phanes, who had introduced a foreign invader into Egypt,³ and wishing to show their resentment against him, brought his two sons forward into a conspicuous place, and slew them over a large vase in the sight of their father. This being done, they mingled wine and water with the blood; and having all drunk of it they rushed against the enemy. The conflict soon became general throughout the whole line, and the battle was for a long time obstinately disputed; till at length, a considerable slaughter having been made on both sides, the Egyptians gave way, and fled.

From Pelusium to Memphis was now open to the invader, and with rapid marches he hastened towards the ancient capital of Lower Egypt. Hoping, however, to obtain advantageous terms without the necessity of another battle, Cambyses sent a Persian

¹ Herodot. iii. 9.² Psammaticus III.³ Herodot. iii. 11.

up the river in a Mitylenian vessel, to treat with the Egyptians: but as soon as they saw the vessel enter Memphis, they rushed in a crowd from the citadel, destroyed it, and tore the crew to pieces. At the news of this outrage, the indignation of Cambyses was excessive: he immediately laid siege to Memphis, and, having succeeded in reducing the place, he indulged his resentment by putting many of the inhabitants to the sword:¹ the king was taken prisoner, and 2000 Egyptians of the same age as the son of Psammenitus, preceded by the young prince, being compelled to march in procession before the conqueror, were condemned to death as a retaliation for the murder of the Persian and Mitylenian heralds; ten of the first rank among the Egyptians being chosen for every one of those who suffered on that occasion.² Psammenitus himself was pardoned; and such was the respect entertained by the Persians for the persons of kings³ that he would in all probability have been restored to a tributary throne, if he had not entered into an ill-timed conspiracy against the monarch who had spared his life.⁴

Egypt now became a province of Persia; and Cambyses and his seven successors compose the 27th Dynasty.⁵

A visitor to the slate and breccia quarries on the road from Coptos to the Red Sea, has, at a later period, recorded the name of this monarch in hieroglyphics, adding to it the date of his sixth year. Two other ovals also occur: one of Darius, with the

¹ Diodorus, i. 46, says that at this time numerous artificers and immense wealth were carried off to Persia; and that the palaces and splendid buildings of Persepolis, Susa, and the cities of Media, were erected by them at the command of the victors. The statues of the gods carried off by the Persians are mentioned in the decree of Canopus; some were brought back in the reign of Ptolemy Euergetes II. about B.C. 238. — S. B.

² There were, therefore, 200 Mitylenians in the vessel destroyed at Memphis.

³ Herodot. iii. 14, 15. 'The Persians,' says the historian, 'are accustomed to honor the sons of kings, and to restore the throne to those whose parents have rebelled against them.' The same feeling is evinced by the Turks and other Asiatics; and respect for the person of a king was strongly marked in the case of Charles XII.

⁴ The conduct of Cambyses is described by the sacred scribe and high officer Utharsun, in the hieroglyphic inscriptions on his statue of black basalt at present in the Vatican. After describing how the Persian

monarch had confirmed his appointments, the Egyptian proceeds to say: 'After that, I informed his majesty of the dignity of Saïs, which is the abode of Neith the great mother of Ra (the sun), who is the first born, not begotten but brought forth, also all the information about the greatness of the principal temple of Neith in all its extent,' &c. He then states: 'I made a complaint before his majesty against the people who had established themselves in the temple of Neith, in order that they might be chased out, so that the temple of Neith should be re-established in all its rights, as it was before. His majesty ordered all who had established themselves to be chased out, and all their houses to be destroyed.' Subsequently Cambyses ordered the great sacrifices to be renewed, and the festivals to be celebrated as formerly, and himself made offerings in the temple. (De Rougé, 'La Statuette Naophore, in the Revue Archéologique, vol. iii. 1851.) — S. B.

⁵ See Table, p. 133.

27th Dynasty, of Persian Kings.

Name from Ancient Authors.	Name from the Monuments.	Monumental Date.	Events.	Ascended the Throne.
Cambyses .	Kanbutha .	6 years .	{ Conquers Egypt in his 4th year }	B. C. 525 ¹
Darius, son of Hystaspes }	Ntareeusha } Ndareush. }	36 years .	{ Battle of Marathon, 490; Egypt revolts, 486. . . }	521
Xerxes the Great }	Khsheersha .	12 years .	{ Xerxes reconquers Egypt 484; birth of Herodotus }	485
Artabanus .	. . . . .	. . . . .	Artabanus reigns 7 months	472
Artaxerxes .	Artkhshashas	36 years .	{ Egypt revolts, and Inarus and Amyrteus are elected kings, 463; Herodotus visits Egypt 460 }	472
Xerxes II. .	. . . . .	. . . . .	Reigns 2 months	425
Sogdianus .	. . . . .	. . . . .	Reigns 7 months	425
Darius Nothus, the son of Xerxes . }	. . . . .	. . . . .	. . . . .	{ 424 to 414 }

number 36; the other of Xerxes, with the year 12, showing the inscription to have been written in the twelfth of Xerxes; and the date 36, intended as the full extent of Darius's reign, accords with the authority of ancient history. On another rock, at the same place, are the twelfth year of Xerxes, and the fifth and sixteenth of Artaxerxes (Longimanus); and these four are the only monarchs of the 27th Dynasty whose names I have seen in Egypt.² In the principal temple at El Khargeh, in the Great Oasis, that of Darius again occurs, a considerable portion of the building having been erected by him; and it is remarkable that he is the only Persian king whose phonetic name is accompanied by a prenominal, like those of the ancient Pharaohs of Egypt: a circumstance satisfactorily confirming the remark of Diodorus, 'that he obtained while living the appellation of Divus,³ which was applied to no other of the (Persian) kings, and received after death the same honors which it had been customary to bestow upon the ancient sovereigns of the country.'

The rule of Darius was mild and equitable;⁴ and he was not

¹ At present the date of the conquest of Egypt has been raised two years, to B.C. 527.—S. B.

² The recent journey of the Grand Duke of Oldenburg, accompanied by Captain Philippsborn and Brugsch-Bey, to the temple of the oasis, has discovered the names of Darius Hystaspes and another on the site. They had different prenomens. (H. Brugsch, 'Ueber die Oase Khargeh,'

Zeitschrift f. ägypt. Spr. 1875, p. 51.)—S. B.

³ The title 'Good God,' *neter neter*, was given by the Egyptians to the Pharaohs.

⁴ Diodor. i. 25. Utaharsun states on his statue that Darius ordered him to go to Egypt when Darius was in Aram or Elam, and appointed him a kind of monarch, with orders to restore to the temple of Neith at Saïs all its rights and dues. (De Rouge, Rev. Arch. *loc. cit.*)

only careful to avoid everything that might offend the religious prejudices, or hurt the feelings, of his foreign subjects; but having made diligent inquiry respecting the jurisprudence and constitution of the Egyptians, he corrected some abuses, and introduced many salutary laws, which continued to form part of their code, until, in common with many of those enacted by his Pharaonic predecessors, they were altered or abrogated by the Ptolemies, after the Macedonian conquest.¹

Impatient, however, of foreign rule, and anxious to free their country from the presence of a people whose cruelties at the time of Cambyses' invasion they could never pardon or forget, the Egyptians, thinking the reverses of Persia during the Greek war offered a favorable opportunity for throwing off the yoke, revolted towards the close of Darius's reign,² and succeeded in expelling the Persians from the whole valley of the Nile. For upwards of a year they continued in open rebellion, and defied the power of his successor; but in the second year of Xerxes they were again subdued, and treated with increased severity, Achæmenes, the brother of the king, being appointed governor of the country.

Affairs remained in this state one-and-twenty years, until the death of Xerxes, when considerable confusion took place in Persia; which being augmented by the intrigues of Artabanus,³ and the rebellion of Bactria, afforded the Egyptians another opportunity for asserting their independence; and prevailing on the Athenians to assist them with a fleet of forty sail, they attacked and overwhelmed the Persian garrisons. Upon intelligence of this, an army of 400,000 foot and a fleet of 200 sail⁴ were equipped by Artaxerxes, and placed under the command of Achæmenes. Inarus the son of Psammaticus, a native of Libya, and Amyrtaeus⁵ of Saïs, who had been invested with sovereign power and were charged with the defence of the country, made every effort to resist him: and the two armies having met, the Persians were defeated with the loss of 100,000 men, and

¹ Diodor. *loc. cit.*

² Herodotus (vii. 1, 7) says Darius reigned 36 years, and that the revolt of the Egyptians took place in the fourth year after the battle of Marathon, the year before his death.

³ Ctesias, in Pers., calls him Artapanus, and makes Achæmenes a brother of Artaxerxes.

⁴ Ctesias, Persica, s. 32, says 80 ships. Diodorus considers Achæmenes the son of Darius (lib. xi.).

⁵ Ctesias, Pers., s. 32, only says, 'Inarus the Lydian and another Egyptian.' Thucydides (lib. i.) and other authors mention Amyrtaeus. Some consider Inarus a Libyan; and Thucydides styles him 'king' of that country.

Achæmenes received a mortal wound from the hand of Inarus, of which he died.

Enraged at the failure of an expedition which he had undertaken contrary to the advice of his friends,¹ Artaxerxes resolved on sending an overwhelming force, under the combined command of Megabyzus and Artabazus, consisting of 200,000 men and a fleet of 300 sail, independent of the remnant of the former army, which swelled the amount to 500,000. Both armies fought valiantly, and many were slain on either side; at length Megabyzus having wounded Inarus in the thigh, obliged him to leave the field, and the rout became general. Inarus, with a body of Greek auxiliaries, having taken refuge in Byblus, which was strongly fortified, obtained for himself and companions a promise of pardon from Megabyzus, upon condition of their surrendering themselves to the Persian monarch; but the remembrance of the death of Achæmenes overcame the regard he owed to the promise of his general, and Inarus, by the command of Artaxerxes, was treacherously crucified. Amyrtæus was more fortunate: he escaped to the Isle of Elbo, and, remaining concealed there, awaited better times; the Persian troops again taking possession of the fortified towns, and Sarsamas being appointed satrap or governor of Egypt.

No attempts to throw off the Persian yoke were made by the Egyptians during the remainder of this reign; and though the Athenians sent them a fleet of sixty sail,² in the fifteenth year of Artaxerxes, and some hopes were entertained of restoring Amyrtæus to the throne, these projects were abandoned, and the Persians continued in undisturbed possession of the country till the tenth year of Darius Nothus.

Percieving that the Egyptians bore with great reluctance the presence of a foreign governor, and anxious to allay as much as possible the turbulent spirit and prejudices of that people, the Persians had permitted Thannyras the son of Inarus, and Pausiris the son of Amyrtæus,³ to hold the office and nominal power of governors, or tributary kings; but nothing could conciliate the Egyptians. They beheld their fortified towns garrisoned by Persian troops; the degradation of paying tribute to a people they detested was insupportable; and nothing but the restoration of an independent monarch could satisfy them.

¹ Ctesias, in Pers. s. 32.

² Thucyd. lib. i. The same sixty ships are mentioned by Plutarch in his Life of Cimon, as having been sent by him to the coast of Egypt.

³ Herodot. iii. 15. This must have happened previous to the year 445, since Herodotus had then completed his history.

They therefore made secret preparations for expelling the Persians; and Amyrtæus being invited to put himself at their head, advanced from his place of concealment, routed the Persians, and finally succeeded in obtaining possession of Memphis and the whole country.

Amyrtæus now became independent master of Egypt; and he is stated in Manetho's list to have been the only monarch of the 28th Dynasty. His reign continued six years, during which period he labored to repair the many losses sustained by his country from the hostile aggressions of Persia. Numerous restorations were made to the temples of Thebes and other cities, many of which had suffered from the sacrilegious fury of Cambyses. In order still further to weaken their power, and to remove the Persians to a distance from his territories, he engaged the Arabians, by a treaty, to assist him, and advanced into Phœnicia. His conquests, however, in that quarter, were not extensive, and his efforts were chiefly confined to the defence of his own frontier.

According to Manetho, he was succeeded by Nepherites,¹ the first king of the 29th Dynasty: though Diodorus mentions another, called Psammaticus, descended from the first of that name, whom he supposes to have preceded Nepherites or Nephreus; but it is uncertain whether he really ruled at this time, or whether he was confounded by the historian with the father of Inarus.²

Of the character of Psammaticus, Diodorus draws a very unfavorable picture,³ representing him to have been guilty of an act of cruelty and meanness unequalled in the history of his country. Tamus, a Memphite by birth, had been appointed by the Persians prefect of Ionia; and having held that post some time, he was obliged to leave his province, in order to avoid the resentment of Tissaphernes, and fly to his own country. Feeling persuaded he had nothing to fear from Psammaticus, whom he had formerly obliged by many friendly offices, he scrupled not to take with him all his riches, and to confide in the protection of the Egyptian monarch; but no sooner had Psammaticus become acquainted with this circumstance, than, regardless of the laws of humanity and of the indulgence he owed to a friend, he perfidiously seized his treasures, and deprived him of life.

For the name⁴ of this Psammaticus it is needless to look on

¹ His Egyptian name is Naifaunt; it occurs on some monuments at Thebes, and on a clay seal in the British Museum.—S. B.

² Herod. vii. 7.

³ Diodor. lib. xiv.

⁴ Manetho makes no mention of this Psammaticus.

Egyptian monuments; nor do the sculptures of Inarus appear on any of the temples at Thebes, or in the lower country: and Manetho omits the mention of Inarus¹ in his catalogue of kings. But that he was an independent, though not the sole, monarch of Egypt, during the short period which elapsed between the commencement of their second revolt and the victory of Megabyzus, is proved by the authority of several ancient historians; and as the unsettled state of affairs during the whole of his reign, and the preparations required in order to resist the expected attack of the Persians, deprived the Egyptians of that tranquillity necessary for the encouragement of art, the absence of monuments bearing the name of Inarus is readily accounted for. By some writers he is supposed to have been a king of Libya, by others an individual of Libyan origin; but as Libya was included within the dominions of Egypt, it appears more probable that he was the rightful heir to the throne, and had taken refuge there to avoid the tyranny of the Persians, and await an opportunity, which afterwards offered, of liberating his country from a foreign yoke. And the fact of his being a native of Egypt is still further confirmed by the name of his father, Psammaticus, which is purely Egyptian.

The 28th and 29th Dynasties, according to Manetho and the monuments, are as follow:—

28th Dynasty, of 1 Saïte King.

Name from Ancient Authors.	Name from the Monuments.	Events.	Ascended the Throne.
Amyrteus . . }	B.C.
Amyrteus . . }			414

29th Dynasty, of Mendesian Kings.

Name from Ancient Authors.	Name from the Monuments.	Events.	Ascended the Throne.
Nepherites . . }	Naifaurut . .	. . . . .	B.C.
Nepheus of Diodorus . . }			408
Achoris . . }	Hakor . .	{ Death of Cyrus the younger. }	402
Acoris . . }				{ 401 . . . . . }
Psammouthis . .	Pse-maut . .	. . . . .	389
Nepherites . .	{ Not met with on the monuments . . }	. . . . .	{ 388
Mouthis . .				{ 388

¹ Diodorus omits Amvrteus.

Few monuments of this period occur in Egypt. The arts, which had long been on the decline, received a severe blow from the Persian invasion; and many of the finest buildings were mutilated or destroyed. Numerous artificers were sent to Persia, and, with the encouragement required for the very existence of art, Egypt had lost the skill for which she was once so conspicuous. Of Nepherites the phonetic name once occurs amidst the ruins of Thebes; and if some additions were made by his two successors to the temples¹ there and in Lower Egypt,² the style of the sculpture, like the scale of their monuments, was degraded, and unworthy of a Pharaonic era. Egypt, however, free from a foreign yoke, enjoyed that tranquillity which had been so long denied, and Nepherites was even enabled to join in active hostilities against the enemies of his country. He therefore entered into a confederacy with the Lacedæmonians, and sent a fleet of 100 ships to their aid, with a supply of corn for their army: though this last fell into the hands of the enemy, in consequence of the transports putting into Rhodes, which had lately submitted to the Persians.

Achôris, who succeeded Nepherites, reigned thirteen years. He made a treaty with Euagoras, king of Cyprus, against the Persians, and endeavored, by every means in his power, to weaken the strength and thwart the schemes of his adversary; and the defection of Gaus, the son of Tamus,³ who had been for some time commander of the Persian fleet, and now, abandoning their service, had entered into a league with Achôris and the Lacedæmonians, added to the intrigues of Orontes, so embarrassed the affairs of Artaxerxes, that Egypt was enabled to enjoy perfect security, and to defy his threatened projects of invasion.

Nothing of consequence transpired during the reign of Psammouthis, which lasted only one year. Of the short period occupied by his two successors, Nepherites II. and Mouthis, little can be learned either from the monuments or from the accounts of ancient writers, but that the Persians, intent upon the recovery of a country they had long possessed, prepared to make a descent upon Egypt, which was attempted without success in the reign of the succeeding monarch.

Mouthis was the last of the 29th or Mendesian Dynasty; and

¹ The name of Acoris occurs in the temple of Medeenet Haboo.

² During his reign many stones were taken from the quarries of the Troici lapidis

Mons, opposite Memphis, probably for the erection of buildings in that city.

³ Diodor. xv. c. 9, 18.

the 30th was composed, according to Manetho, of three kings from Sebennytus.

30th Dynasty, of Sebennyte Kings.

Name from Ancient Authors.	Name from the Monuments.	Events.	Ascended the Throne.
Nectanebes	Nakhtharheb . . . . .	. . . . .	B.C.
Nectabis of Pliny			387
Teos			
Tachos of Diodorus . . . . .	. . . . .	. . . . .	369
Nectanebes	Nakhtnebef	{ Defeated by the Persians, and } { flies to Ethiopia, B.C. 340. }	362 to 340
Nectanabis of Plutarch			

In the commencement of Nectanebo's reign, the Persian monarch equipped a formidable expedition, by land and sea, and sent it to Egypt under the command of Pharnabazus and Iphierates. He confidently expected that so imposing a force would speedily reduce the strongholds, and firmly establish his authority throughout the country; but the jealousy of the two commanders prevented that union which was necessary to insure success. Pelusium was found to be impregnable, and all the fortified towns had been put into a proper state of defence. Pharnabazus, therefore, despairing of making any impression upon them, advanced into the interior; but being opposed by the Egyptian king with a considerable force, and, in consequence of the want of boats, being constantly impeded in his movements by the various channels of the rising Nile, he was obliged to retreat, and relinquish the hope of driving Nectanebo from his throne, and of subjecting his country to the yoke of Persia.

The Egyptian monarch, now free from the dread of foreign aggression, directed his attention towards the internal administration of affairs and the encouragement of art. Many temples in various parts of the country, from Philæ to the sea-coast, were repaired or enlarged: a fine obelisk was cut, and transported from the quarries of Syene:¹ and the name of Nectanebo still occurs in Upper and Lower Egypt, as a lasting testimony of his munificence in the erection of public buildings. If he was censured, in a dream, by the god Mars, for allowing his temple at Sebennytus to remain unrepaired during the early part of his

¹ Pliny says it was without hieroglyphics. He calls him Nectabis.

reign, he made ample amends for this unintentional neglect by the manner in which the commands of the deity were obeyed, the building being restored with great splendor; and this circumstance, unnoticed by any ancient writer, is recorded in a curious Greek papyrus, which chance has preserved and modern researches have discovered in an Egyptian tomb.¹

Nectanebo, after a reign of eighteen years, was succeeded by Teos or Tachos. He had scarcely ascended the throne when he was alarmed by the warlike preparations of the Persian monarch, who threatened once more to invade his country. He therefore applied to Sparta for assistance; and Agesilaus, eager to assist a nation which had previously befriended the Lacedæmonians, repaired himself to Egypt with a strong force of Greek auxiliaries.

On the arrival of the Spartan prince, Tachos, whose expectations had been raised by his high military reputation, and who looked for a person of striking exterior, was greatly disappointed by the appearance of a little old man, whose figure and habits seemed contemptible, and unworthy of a king. Treating him, therefore, with scorn and disrespect, he refused him the post of generalissimo which had been promised; and reserving it for himself, appointed Agesilaus to the command of the auxiliaries, and intrusted the fleet to Chabrias the Athenian. Nor did he regard the counsels of the Spartan general relative to the movements of the army; and, contrary to his advice, led his troops in person into Phœnicia, committing the whole direction of affairs at home to the hands of a viceroy. He had no sooner quitted the country than Nectanebo, his uncle, aided by one of his principal generals, conspired against him:² and Agesilaus, partly from resentment at his previous conduct, and partly from an interested motive, having basely deserted him, the Egyptian monarch was obliged to fly to Sidon. Mendesius,³ however, whom Tachos had designed as his successor, resolved on opposing the usurper, and marched to attack him with an army of 100,000 men. In number they were very superior to the troops of Nectanebo, but, being composed principally of townsmen and artificers, were inferior in military skill: and being opposed by the experience of Agesilaus.

¹ From a Greek papyrus of the Anastasi collection at Paris. — S. B.

² According to Plutarch. This is differently related by Diodorus; who says that, instigated by the viceroy he had left,

his son Nectanebo conspired against him, and was defeated by Agesilaus, who thus restored Tachos to the throne.

³ Or the Mendesian chief of the town of Mendes. — S. B.

they were routed at the first onset ; and thus, through the Spartan general, Nectanebo obtained undisputed possession of the Egyptian throne.¹

On the death of Artaxerxes Mnemon, which happened about the second year of Nectanebo II.,² Ochus or Artaxerxes III. ascended the throne of Persia.

During his reign, the Sidonians and Phœnicians having revolted from the Persians, entered into a confederacy with the Egyptians, and, assisted by 4000 Greeks, sent by Nectanebo under Mentor the Rhodian, succeeded in expelling the Persians from their territories. This event seemed to have removed the enemy, and every prospect of an attack, to a convenient distance from the frontier, and the Egyptian monarch felt secure against their aggressions. Shortly after, a formidable army, led by Ochus in person, having reduced all Phœnicia, and Mentor treacherously deserting to the enemy, the affairs of Nectanebo began to wear an alarming aspect, and Egypt was itself invaded. Every precaution which skill or courage could suggest was taken by the Egyptian monarch : the passes were well guarded ; all the fortified towns were strongly garrisoned ; and, though inferior in numbers, his troops, both natives and Greek auxiliaries, were animated with that enthusiasm which valor, confidence, and a good cause alone can impart. The soldiers were eager to meet the enemy, and boldly rushed to battle. The fight was obstinate ; but numbers prevailed. After a severe contest, the Persians were victorious ; and Nectanebo, having abandoned his positions, in order to retire upon and secure Memphis, his army became dispirited, Pelusium surrendered, and resistance was no longer offered to the arms of Ochus. Flying, therefore, from Memphis, Nectanebo retired into Upper Egypt, and at length withdrew to Ethiopia ; the Delta and all Lower Egypt falling a prey to the conqueror, who finally succeeded in reducing the whole country, about the year 340, in the 21st of his reign.³

During the previous occupation of Egypt by the Persian troops, the inhabitants had been exposed to cruel persecutions. They were now doomed to greater sufferings. If Cambyses had

¹ Agesilaus received 220 talents from Nectanebo, for his aid in obtaining the kingdom. According to the same author, Chabrias was recalled by the Athenians, in consequence of a representation made to them by the Persian monarch. He calls Tachus Thamus, and, in another

place, Thacus. (Cornelius Nepos, Agesilaus and Chabrias.)

² Diodorus only allows 43 years for the reign of Artaxerxes II.

³ From a sepulchral figure recently found, Nectanebo seems to have been buried at Memphis. (Mariette-Bey, 'Monuments divers,' 1872, pl. 32.)

committed unheard-of enormities; if he had derided the religion and insulted the deities of Egypt; if he had ordered the bull Apis to be brought before him, and had stabbed it with his dagger,¹ — had been guilty of every species of oppression, — these were trifling compared with the enormities of Ochus. Wanton injustice, murders, profanation of religious rites, and continual persecutions, seemed to delight him. The sacred Apis was slain, and served up at a banquet, of which Ochus and his friends partook; and all Egypt groaned under the tyranny of this inhuman despot. Two years, however, fortunately relieved them from his caprices; and the Egyptians, to show their abhorrence for him and their hatred of his name, substituted for it the representation of a sword, the emblem of destruction, in their catalogue of kings.²

Ochus and his two successors constituted the 31st Dynasty of Manetho: during which period nothing happened worthy of notice; and the invasion of the Macedonians in the year 332 put an end to the dominion of the Persians in Egypt.

31st Dynasty, of Persians.

Name from Ancient Authors.	Name from the Monuments.	Events.	Began to Reign.
Ochus (or Artaxerxes III.) Arses.	Not met with on the monuments.	In his 20th year. Death of Philip, 338	B.C. 340
		Alexander makes himself master of Egypt, 332; dies, 323: Ptolemy Lagus becomes governor and king of Egypt, 322-305	338 336
Darius Codomanus			

The arrival of Alexander was greeted with universal satisfaction. Their hatred of the Persians, and their frequent alliances with the Greeks, who had fought under the same banners against a common enemy, naturally taught the Egyptians to welcome the Macedonian army with the strongest demonstrations of friendship, and to consider their coming as a direct interposition of the gods: and so wise and conciliatory was the conduct of the early Ptolemies, that they almost ceased to regret the period when they were governed by native princes.

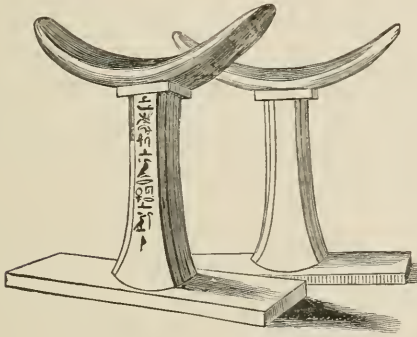
To detail the events of the Ptolemaic history is not my

¹ Herodot. iii. 29.

² Plut. de Iside et Osiride, s. ii.

present intention, nor is it necessary to introduce any account of their reigns in a work which purposes to relate solely the history and manners of the *ancient* Egyptians: but if the reader is desirous of consulting a chronological notice of those princes, I refer him to that work¹ from which I have taken the dynasties inserted in the preceding pages.

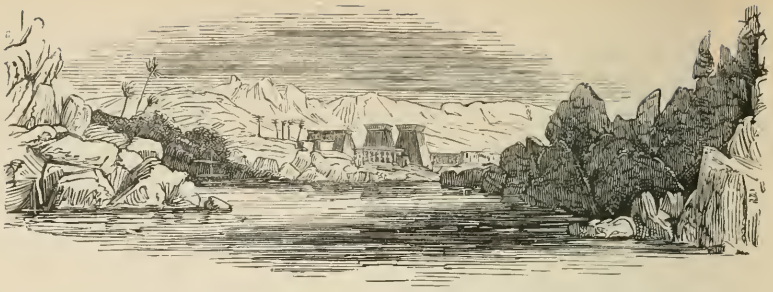
¹ My 'Egypt and Thebes,' pp. 508 *et seq.*



No. 5.

Alabaster pillow for the head.

Alnwick Museum.



VIGNETTE C. — View of the ruins and vicinity of Philæ.

CHAPTER III.

Extent of the Country — Revenue and Commerce — Seaports — The Castes of the Egyptians — The Sacerdotal Order — Kings — First Caste — The Priests — Second Caste — Military Class — Troops — Auxiliaries — Arms — The Enemies and Conquests of the Egyptians — March to War — Their Humanity — Triumph — Captives — Military Laws and Punishments — Other Members of the Second Caste — Third Caste — Fourth Caste — Laws and Government — The Kings — Judges — Laws — Passports — Murder — Right of Fathers — Minor Offences — Theft — Debt — Deeds — Marriages — Slaves — Children — Respect for Old Age, and for their Kings — Gratitude of the Egyptians — Uniformity of their Laws — Different Lawgivers — Governors of Provinces.

EGYPT, properly so called, is that portion of the valley of the Nile lying between latitude $24^{\circ} 3'$ and $31^{\circ} 37'$, or between the island of Philæ at the cataracts of E'Sooan¹ and the Mediterranean Sea.² With the exception of the northern part about the Delta, its breadth is very limited; and the cultivated, and consequently inhabited portion, is frequently confined to less than half the distance between the eastern and Libyan chains. The average breadth of the valley from one mountain range to the other, between Cairo in Lower and Edfoo in Upper Egypt, is only about seven miles; and that of the cultivable land, whose limits depend on the inundation, scarcely exceeds five and a half, being in the widest part ten and three-quarters, and in the narrowest two miles, including the river.³

The extent in square miles of the northernmost district between

¹ According to the Oracle of Ammon, all those who drank the water of the Nile and lived to the north of Elephantine were Egyptians. (Herodot. ii. 18.)

² At Cape Boorlos.

³ That is, in Middle Egypt, and to the

north of Edfoo; between which town and E'Sooan the valley is so narrow that in some places there is scarcely any soil on either side of the river, so that this part does not enter into the general average I have given.

the pyramids and the sea is considerable, and that of the Delta alone, which forms a portion of it, may be estimated at 1976 square miles; for though it is very narrow about its apex, at the junction of the modern Rosetta and Damietta branches, it gradually widens on approaching the coast, where the base of this somewhat irregular triangle is eighty-one miles. And as much irrigated land stretches on either side E. and W. of the two branches, the northern district, with the intermediate Delta included, will be found to contain about 4500 square miles, or double the whole arable land of Egypt, which may be computed at 2255 square miles, exclusive of the Fyoom, a small province consisting of about three hundred and forty.

The number of towns and villages reported to have stood on this tract, and in the upper parts of the valley of the Nile, appears almost incredible; and Herodotus affirms that 20,000 populous *cities* existed in Egypt during the reign of Amasis.¹ Diodorus, with more caution and judgment, calculates 18,000 large villages and towns; and states that, under Ptolemy Lagus, they amounted to upwards of 30,000, a number which remained even at the period when he wrote, or about forty-four years before our era. But the population was already greatly reduced, and of the seven millions who once inhabited Egypt, about three² only remained in the time of the historian.

Josephus³ in the reign of Vespasian,⁴ still reckons seven millions and a half in the valley of the Nile, besides the population of Alexandria, which amounted to more than 300,000 souls; and, according to Theocritus,⁵ the number of towns at an earlier period was 33,333: we may here, however, include some of the neighboring provinces belonging to Egypt, as he comprehends Ethiopia, Libya, Syria, Arabia, Pamphylia, Cilicia, Caria, and Lycia within the dominions of Ptolemy Philadelphus: and other authors may occasionally have extended the name of Egypt to its possessions in Libya, Ethiopia, and Syria; since, making every allowance for the flourishing condition of this highly fertile country, the number of towns they mention is too disproportionate for the sole valley of Egypt lying between the cataracts and the sea.

¹ Herodot. ii. 177.

² Diod. i. 31. There are two readings of this passage: according to the other, Diodorus reckons 7,000,000, and in his own time a no less number.

³ De Bello Jud. ii. 16, 4.

⁴ Or he may allude to the period when Egypt was conquered by the Romans.

⁵ Theocr. Id. xvii. 82.

The produce of the land was doubtless much greater in the earlier periods of its history than at the present day, owing as well to the superior industry of the people as to a better system of government, and sufficed for the support of a very dense population; yet Egypt, if well cultivated, could now maintain many more inhabitants than at any former period, owing to the increased extent of the irrigated land: and if the ancient Egyptians enclosed those portions of the uninundated edge of the desert which were capable of cultivation, the same expedient might still be resorted to; and a larger proportion of soil now overflowed by the rising Nile offers additional advantages. That the irrigated part of the valley was much less extensive than at present, at least wherever the plain stretches to any distance east and west, or to the right and left of the river, is evident from the fact of the alluvial deposit constantly encroaching in a horizontal direction upon the gradual slope of the desert; and as a very perceptible elevation of the river's bed, as well as of the land of Egypt, has always been going on, it requires no argument to prove that a perpendicular rise of the water must cause it to flow to a considerable distance over an open space to the east and west.

Thus the plain of Thebes, in the time of Amenophis III., or about 1430 before our era, was not more than two-thirds of its present breadth; and the statues of that monarch, around which the alluvial mud has accumulated to the height of nearly seven feet, are based on the sand that once extended some distance before them.¹ How erroneous, then, is it to suppose the drifting sands of the encroaching desert² threaten the welfare of this country, or have in any way tended to its downfall; and how much more reasonable is it to ascribe the degraded condition to which Egypt is reduced to causes of a far more baneful nature,—foreign depotism, the insecurity of property, and the effects of that old age, which it is the fate of every country, as well as every individual, to undergo.

¹ The ancient Egyptians were constantly obliged to raise mounds round the old towns to prevent their being overwhelmed by the inundation of the Nile, from the increased height of its rise after the lapse of a certain number of years. (Herod. ii. 137.)

² It is true that the sand has accumulated about Bahasa, and the edge of the irrigated land in its vicinity, as well as about Kerdasseh and a few other places,

owing to the form of the valleys which open on those spots from the Libyan desert, but it is not general throughout the valley of the Nile, even on this side of the river; and the progress of the sand can never be very great in any part of Egypt, however it may extend itself in Nubia over the exposed and narrow strip of land which the west bank presents above the cataracts of E'Sooan.

Besides the numerous towns and villages in the plain, many were prudently placed by the ancient Egyptians on the slope of the desert, at a short distance from the irrigated land, in order not to occupy more than was necessary of soil so valuable for its productions; and frequently with a view of encouraging some degree of cultivation in the desert plain, which, though above the reach of the inundation, might be irrigated by artificial ducts, or by water raised from inland wells. Mounds and ruined walls still mark the sites of these villages in different parts of Egypt; and in a few instances the remains of magnificent temples, or the authority of ancient authors, attest the existence of large cities in similar situations. Thus Abydus, Athribis, Tentyris, parts of Memphis¹ and Oxyrhynchus, stood on the edge of the desert; and the town that once occupied the vicinity of Qasr Kharóon, at the western extremity of the Fyoom, was far removed from the fertilizing influence of the inundation.

When towns or villages were surrounded with sand, the constant attention of the inhabitants prevented their being encumbered by it; but, so soon as they were deserted, it began to accumulate around them, and we sometimes find their monuments half buried in large drifts collected by the wind.² As population and industry decreased, the once cultivated spots of land on the desert plain were gradually abandoned, and the vestiges of canals or artificial watercourses, the indication of fields once portioned into squares, or the roots of fruit trees, only now serve to attest the unremitting exertions of a civilized people. It is not, however, to be inferred that the irresistible encroachments of moving dunes have curtailed the limits, or threatened the existence, of this fertile country; and the fearful picture drawn by M. de Luc³ must rather be looked upon as a composition than a study from nature. 'The sands of Egypt,' he observes, 'were formerly *remote* from that country; and the *oases*, or habitable spots, still appearing in the midst of them, are the remains of soil which formerly *extended the whole way to the Nile*; the sand, transported thither by the western winds, having overwhelmed and buried this extensive tract, and doomed to sterility a land *once* remarkable for its fruitfulness.' This singular statement is partly

¹ Strabo says the Serapeum was 'in a very sandy spot.'

² As at Abydus; but considering the length of time this city has been deserted,

and its position, the state of the ruins there is not surprising.

³ In the 'Mercure de France,' September, 1809, on the Moving Sands of Africa.

founded on the report of Denon, who, in his visit to Bahnasa,¹ Oxyrhynchus, observed some buildings near the town so much encumbered with sand that their summits were scarcely visible above it, and who consequently concluded the Libyan desert had made proportionate encroachments along the whole of the western side of the valley. The opening here formed by the accidental position of the hills and neighboring ravines, and the quantity of drifted sand in the interior of the desert to the westward, have been the cause of its accumulation, and of the partial formation of downs in the vicinity: but neither these, nor any other sand drifts in similar exposed situations, could, after a careful examination of the whole valley, be deemed of such a nature as to endanger the fertility of Egypt; though it is possible that, if no inundation of the Nile counteracted its effects, or if the alluvial deposit did not continue to increase in height, the sand might then interfere with the extent of the arable land and gradually tend to narrow its limits. For the satisfaction of those who are contented with simple facts, it will be sufficient to state that the breadth of the irrigated portion of the valley is much more extensive than it was at any former period, and this increase will continue in spite of the very few local impediments which the drifted sand may accidentally offer; and it may not be irrelevant to observe that no soil is better suited to many kinds of produce than the irrigated edge of the desert,² even before it is covered by the fertilizing deposit of the inundation.

M. de Luc's idea respecting the oases is novel and amusing; and if Egypt once extended to that distance westward, instead of considering the accounts of ancient writers on its former populousness at all exaggerated, we should be inclined to think they had failed to ascribe an adequate number of inhabitants to so extensive a region. So far from being the remains of a once cultivated and level tract, extending to the valley of the Nile, the oases are surrounded by limestone mountains, rising to the height of several hundred feet, and generally bounding them on all sides; whose level summit is part of the same table-land, or

¹ The proper orthography of this name is Bahnasa, Behnasa, or Béhneseh, and is said to have been given it from one of its queens (or the wife of the governor of the place), signifying Bahanissa, 'the beauty of woman,' or 'the most beautiful of

women.' Such is the account given in an Arabic MS. history of that city, written by Aboo Abdillah Mohammed Ebn Mohamammed el Mukkari.

² It generally consists of a clay mixed with sand.

mountain plain, extending to and bordering the western side of Egypt, which is overlooked by these precipitous cliffs in the same manner as the similarly depressed though less extensive tracts of the oases.¹ Like other provinces of Egypt, they were much more densely peopled than at present; and remains of towns and villages attest their flourishing condition, even to the late period of the Roman dominion.

Nubia, or that part of Ethiopia lying between the cataracts of E'Sooan and Wadee Halfeh, was at all times a thinly inhabited and unproductive province; and the vicinity of mountains, frequently reaching to the water's edge, prevented its receiving those benefits from the inundation which the very great rise of the water would have afforded to a more level and extensive tract.² It is in this narrow strip of land that the noxious approach of moving sand is more particularly felt, since its advances are more sudden and overwhelming than on a gradual slope; and the ancient towns and temples on the west side of the Nile are therefore frequently surrounded or partially buried by its accumulating drifts.³ They are mostly built on this bank; and it is not improbable that the unproductive nature of the soil was the principal reason for placing the towns there; the land on one side, which they were taught to consider so valuable, not being thus unnecessarily wasted, and the religious respect due to the abode of their gods, and regard for their own comfort, being sufficient motives for industriously striving to prevent the encroachments of the desert on the other. For that they were aware of the danger threatened by the sand is evident from the crude brick walls frequently erected there as a protection to the monuments; and the fall of one of those barriers gave ingress to the torrent which was overwhelmed and concealed the entrance of the great temple at Aboosimbel.

That the conquests of the ancient Egyptians extended beyond the limits of their valley, is abundantly proved by ancient authors and monumental records; but as I have already noticed this fact in the foregoing chapter, I shall proceed to the consideration of

¹ The oases look very much like a portion of the valley of the Nile surrounded by the same kind of limestone mountains, but without any river.

² The more southward the greater the perpendicular rise of the Nile. It decreases, of course, gradually towards the mouth; and while in Nubia it is upwards

of ten yards, at Rosetta it is only a very few feet.

³ Anciently the Nile rose much higher than the present level in Nubia. (Professor Lepsius, in the 'Proceedings of the Academy of Natural Sciences of Philadelphia,' vol. ii. 1845, pp. 193-5.) — S. B.

the revenues arising from them, as well as the commerce and other fiscal resources of the country.

Judging from the sculptures of Thebes, the tribute annually received by the Egyptians from nations they had subdued in Asia and Northern Ethiopia was of immense value, and tended greatly to enrich the coffers of the State; and the quantity of gold and silver in rings and ingots, the various objects of luxury, vases of porcelain and different metals, ivory, rare woods, precious stones, horses, dogs, wild animals, trees, seeds, fruits, gums, perfumes, spices, and other foreign productions there described, perfectly accord with the statements of ancient authors.¹ And though they are presented to the king, as chief of the nation, we may conclude they formed part of the public revenue,² and were not solely intended for his use; especially in a country where royalty was under the restraint and guidance of salutary laws, and where the welfare of the community was not sacrificed to the caprice of a monarch. According to Strabo, the taxes, even under Ptolemy Auletes, the father of Cleopatra, the most negligent of monarchs, amounted to 12,500 talents, or between three and four millions sterling; and the constant influx of specie resulting from commercial intercourse with foreign nations, who purchased the corn³ and manufactures of Egypt, during the very careful administration of its native sovereigns, necessarily increased the riches of the country, and greatly augmented the revenue at that period.

Among the exports were yarn,⁴ fine linen cloth, and embroidered work,⁵ purchased by the Tyrians and Jews; chariots and horses,⁶ bought by the merchants of Judæa in the time of Solomon at 600⁷ and 150⁸ shekels of silver; and other commodities, produced or manufactured in the country.

The Egyptians also derived important advantages from their intercourse with India and Arabia;⁹ and the port of Philotas — which, there is reason to believe, was constructed at a very remote

¹ Tacitus, Ann. ii. 60.

² The conquered nations paid an annual tribute, *htar renpa*, in the time of Thothmes III. and his successors of the 18th and 19th Dynasties, and the mines of mineral wealth both in Egypt and its dependencies belonged to the Pharaoh, who worked them by commission. The spoil taken in war also belonged to the king, as did certain crown lands, which he bestowed on distinguished military officers.

Besides these productive sources, the king, it appears, levied taxes in kind upon the temples and probably upon the proprietors. — S. B.

³ Gen. xli. 57.

⁴ 1 Kings x. 28; 2 Chron. i. 16.

⁵ Ezek. xxvii. 7.

⁶ 2 Chron. i. 16, 17; and 1 Kings x.

⁷ 70l. sterling.

⁸ 17l. 10s.

⁹ The *mafqa* turquoise and copper came

period,¹ long before the exodus of the Israelites — was probably the emporium of that trade. It was situated on the western coast of the Red Sea, in latitude 26° 9'; and though small, the number of ships its basin would contain sufficed for a constant traffic between Egypt and Arabia, no periodical winds there interfering with the navigation, at any season of the year.

Whether they had a direct communication with India at the same early epoch, or were supplied through Arabia with the merchandise of that country, it is not possible now to determine: but even an indirect trade² was capable of opening to them a source of immense wealth; and that the productions of India did actually reach Egypt we have positive testimony from the tombs of Thebes.

The Scripture history shows the traffic established by Solomon with India, through the Red Sea, to have been of very great consequence, producing, in one voyage, no less than 450 talents of gold,³ or 3,240,000*l.* sterling; and to the same branch of commerce may be ascribed the main cause of the flourishing condition of Tyre itself. And if the Egyptian trade was not so direct as that of Solomon and the Tyrians, it must still be admitted that *any* intercourse with India at so remote a period would be highly beneficial to the country, since it was enjoyed without competition, and consequently afforded increased advantages.

The other harbors in this part of the Arabian Gulf — Myos Hormos, Berenice, Arsinoe, Nechesia, and Leucos Portus — were built in later times: and the lucrative trade they enjoyed was greatly increased after the conquest of Egypt by the Romans: 120 vessels annually leaving the coast of Egypt for India, at midsummer, about the rising of the dog-star,⁴ and returning in the month of December or January. 'The principal objects of Oriental traffic,' says Gibbon, 'were splendid and trifling: silk, a pound of which was esteemed not inferior in value to a pound

from the mines of the Wady Magarah and Mount Sinai. From Arabia came incense, and from Punt, supposed to be the modern Somali, on the eastern coast of Africa, were brought incense, gums, monkeys, cosmetics, panther-skins, apes, and hounds. (Chabas, 'Études sur l'Antiquité historique,' Paris, 1872, pp. 149-176.) — S. B.

¹ It was previously called Ennum. It received the name of Philoteris from the

sister of the Philadelphus Ptolemy. (Strabo, lib. xvii. Plin. vi. 29.)

² Strabo thinks that in former times a fleet of twenty ships never passed the Straits of Babelmandeb; but the Indian trade might have been carried on through Arabia. (Strabo, lib. xvii., on Alexandria.)

³ 2 Chron. viii. 18; 1 Kings ix. 26.

⁴ The Periplus gives 'the month of July, which is Epiphi;' and Pliny, lib. vi. 26, 'before the dog-star,' about July 26.

of gold, precious stones, and a variety of aromatics.' When Strabo visited Egypt, Myos Hormos seems to have superseded Berenice, and all the other maritime stations on the coast; and indeed it possessed greater advantages than any other, except Philoteras and Arsinoe, in its overland communication with the Nile: yet Berenice, in the later age of Pliny, was again preferred to its rival. From both ports the goods were taken on camels¹ by an almost level road across the desert to Coptos,² and thence distributed over different parts of Egypt; and, in the time of the Ptolemies and Cæsars, those particularly suited for exportation to Europe went down the river to Alexandria, where they were sold to merchants who resorted to that city at a stated season.

At a subsequent period, during the reigns of the Arab caliphs, Apollinopolis Parva, or Qoos, succeeded Coptos as the rendezvous of caravans from the Red Sea: and this town flourished so rapidly, in consequence of the preference it enjoyed, that in Aboolfidda's time it was second only to Fostat, the capital of Egypt; until it ceded its place to Qeneh, as Myos Hormos was destined to do in favor of Kossayr. Philoteras, however, continued to be resorted to after the Arab conquest; and it was during the reigns of the Egyptian caliphs that the modern Kossayr³ took the place of that ancient port.

The Myos Hormos, called also Aphrodite,⁴ stood in latitude $27^{\circ} 22'$, upon a flat coast, backed by low mountains, distant from it about three miles; where a well, the Fons Taduos,⁵ supplied the town and ships with water. The port was more capacious than those of Berenice and Philoteras; and though exposed to the winds, it was secure against the force of a boisterous sea. Several roads united at the gates of the town, from Berenice and Philoteras on the south, from Arsinoe on the north, and from Coptos on the west; and stations supplied those who passed to and from the Nile with water and other necessaries.

Berenice owed its foundation to Ptolemy Philadelphus, who called it after the name of his mother, the wife of Lagus or Soter.⁶ The town was extensive, and was ornamented with a small but elegant temple of Serapis; and though the harbor

¹ At the time of Rameses III., asses were used for the purpose. — S. B.

² Plin. v. 9. Strabo, xvii.

³ Philoteras, now in ruins, is known by the name of Old Kossayr.

⁴ Now called Abooshar. (Strabo, lib. xvii.) Agatharcides says, it was afterwards called the Port of Venus.

⁵ Plin. vi. 29.

⁶ Ibid.

was neither deep nor spacious, its position in a receding gulf¹ tended greatly to the safety of the vessels lying within it, or anchored in the bay. A road led thence direct to Coptos, furnished with the usual stations, or hydremas; and another, which also went to the emerald mines, joined, or rather crossed it, from Apollinopolis Magna.

Arsinoe, which stood at the northern extremity of the Red Sea, near the modern town of Suez, was founded by the second Ptolemy, and so named after his sister.² Though vessels anchored there rode secure from the violence of the sea, its exposed situation, and the dangers they encountered in working up the narrow extremity of the gulf, rendered its position³ less eligible for the Indian trade than either Myos Hormos or Berenice; and had it not been for the convenience of establishing a communication with the Nile by a canal, and the shortness of the journey across the desert in that part, it is probable it would not have been chosen for a seaport.

The small towns of Nechesia and the Leucos Portus were probably of Roman date, though the natural harbors they possess may have been used at a much earlier period. Their positions are still marked by the ruins on the shore, in latitude 24° 54' and 25° 37', where I discovered them in 1826, while making a survey of this part of the coast from Suez to Berenice. The former stands in, and perhaps gave the name to, the Wadee Nukkaree; the latter is called E'Shoona, or 'the Magazine,'⁴ and, from being built of very *white* limestone, was readily indicated by the Arabs when I inquired of them the site of the White Harbor.

Many other ports, the 'Portus multi' of Pliny,⁵ occur along the coast, particularly between Berenice and Kossayr: but though they all have landmarks to guide boats in approaching their rocky entrances, none of them have any remains of a town, or the vestiges of habitations.

¹ Strabo. The headland of Cape Nose stretches out on the east of it to the distance of 21 miles from the line of the shore, agreeing with another remark of the geographer, that 'an isthmus projects into the Red Sea near the city of Berenice, which, though without a port, affords a convenient shelter, from the vicinity of the headland.'

² Plin. vi. 29.

³ It probably succeeded to some more ancient town. It is not certain that Clysmia stood there; but Qolzim appears

to have occupied the site of Arsinoe and part of the modern Suez. ('Egypt and Thebes,' p. 540, note †.) Herodotus, ii. 158, says the canal entered the Red Sea near to Patumos; we may therefore conclude that town stood on the same spot as Arsinoe. We again trace in Patumos the name Pi-thom. It was common to many towns.

⁴ This word is taken from the Arabic Mukhzen, of similar import.

⁵ Plin. vi. 29.

The principal objects introduced in early times into Egypt, from Arabia and India, were spices and various Oriental productions required either for the service of religion, or the purposes of luxury; and a number of precious stones, lapis lazuli, and other things brought from those countries, are frequently discovered in the Tombs of Thebes, bearing the names of Pharaohs of the 18th Dynasty. The mines of their own desert did, indeed, supply the emeralds they used; and these were worked as early, at least, as the reign of Amenophis III., or 1425 B. C., but many other stones must have come from India; and some plants, as the *Nymphaea Nelumbo*, could only have been introduced from that country.¹

Though we cannot ascertain the extent or exact quality of the various imports, of goods re-exported from Egypt, or the proportion which these last bore to the internal consumption, it is reasonable to conclude that every article of luxury was a source of revenue to the government; and that both native and foreign productions coming under this denomination, whether exported or sold in Egypt, tended to enrich the State, to which they belonged, or paid a duty.

That the riches of the country were immense is proved by the appearance of the furniture and domestic utensils, and by the great quantity of jewels of gold, silver, precious stones, and other objects of luxury in use among them in the earliest times: their treasures became proverbial throughout the neighboring states,² and a love of pomp and splendor³ continued to be the ruling passion of the Egyptians till the latest period of their existence as an independent state, which is fully demonstrated by the history of the celebrated Cleopatra.

Another source of wealth was derived from the gold mines in the desert of the upper country. Their position,⁴ still known to the Arabs, is about S. E. from Baháyreh, a village opposite the town of Edfoo,⁵ or Apollinopolis Magna, and at a distance of nearly ten days' journey from that place, in the mountains of the

¹ It was evidently not indigenous to Egypt, from the care that was necessary in planting it, and is now totally unknown in the valley of the Nile. Before they introduced it, would they not have seen the plant? and who was likely to bring the roots but some of their own people?

² [The love of riches was, according to Plato (Repub. iv. p. 642), inherent in the

character of the Egyptians and Phœnicians. — G. W.]

³ Exod. xii. 35; Ezek. xxxii. 12; Heb. xi. 26.

⁴ Visited by Monsieur Linant and Mr. Bonomi, who found the account of the Arabs to agree very well with their position.

⁵ Edfoo is in latitude 24° 58'.

Bisharéh. The Arab authors, Edrisi, Ebn-Saïd, and Aboolfida,¹ place them at Gebel Ollágee, a mountain situated in the land of Begá; and this last word at once points out the Bisháree desert, being still used by the tribe as their own name. The gold lies in veins of quartz,² in the rocks bordering an inhospitable valley and its adjacent ravines: but the small quantity they are capable of producing by immense labor, added to the difficulty of procuring water, and other local impediments, would probably render the re-opening of them at the present day an unprofitable speculation; and indeed in the time of Aboolfida they only just covered their expenses, and have never been worked since they were abandoned by the Arab caliphs. According to the account of Agatharcides, the toil of extracting the gold was immense: it was separated from the pounded stone by frequent washings, and this process appears to be represented in the paintings of tombs executed during the reign of Usertesén, and other ancient Pharaohs. We have no positive notice of their first discovery, but it is reasonable to suppose they were worked at the earliest periods of the Egyptian monarchy;³ and the total of their annual produce is stated by Hecataeus⁴ to have been recorded in a temple founded by a monarch of the 18th Dynasty. He also notices an immense sum annually produced from the silver mines of Egypt, which amounted to 3,200 myriads of minæ. Besides these, were valuable mines of copper, lead, iron, and emeralds,⁵ all of which still exist in the deserts of the Red Sea; and the sulphur which abounds in the same districts, was not neglected by the ancient Egyptians.

The riches, then, of the country were principally derived from taxes, foreign tribute, monopolies, commerce, mines, and, above all, from the productions of a fruitful soil. The wants of the poorer classes were easily satisfied; the abundance of grain, herbs, and esculent plants afforded an ample supply to the inhabitants of the valley of the Nile, at a trifling expense, and

¹ Or Emad-e'deen-Aboolfida Ismail-ben-Nasser. He was king of Hamah in Syria, and lived about the year 730 of the Hegira, A. D. 1334.

² Mohammed Ali had an idea of re-opening them. Wherever the ancients met with veins of quartz in the desert, I observed they invariably broke up portions of it, doubtless to try if it contained gold.

³ The gold mines at Rhedesieh and Kouban were worked in the reigns of Seti I., or Sethos, and Rameses II. of the

19th Dynasty; and a plan of the mines on a papyrus of the period exists in the Museum of Turin. (Birch, in the 'Archæologia,' xxxiv. p. 357. Chabas, 'Une inscription historique de Seti I.,' Chalonsur-Saône, 1856; 'Les Inscriptions des Mines d'Or,' Paris, 1862.)—S. B.

⁴ Diodorus, i. 49.

⁵ At Zabarah. (Cailliand, 'Voyage à l'Oasis de Thèbes,' Paris, 1821. Prisse, Mon. Egypt, pl. xxxix., and the amount given by Rameses III. to the different temples.)—S. B.

with little labor; and so much corn was produced in this fertile country, that after sufficing for the consumption of a very extensive population, it offered a great surplus for the foreign market;¹ and the quantity on hand enabling the peasant to sell it at a low rate necessarily afforded considerable profit to the government, being exported to other countries, or sold to the traders who visited Egypt for commercial purposes.

Though the lower classes of the people appear to have been contented with their condition, there is no evidence of their having participated in the affluence enjoyed by the higher orders; and the very great distinction between them and the richer classes is remarkable, as well in the submissive obeisance to their superiors as in their general appearance, their dress, and the style of their houses. Some, indeed, seem to have been little better lodged and fed than those of the present day;² and the degrading custom of prostration before those in authority argues that they were subject to severe discipline and punishment, though, doubtless, only administered according to the rules of justice. That they were happy under their native princes, and contented with the laws and early institutions of the Pharaohs, is strongly argued by the constant feeling of dissatisfaction evinced by them against foreign rule, not only in the time of the despotic Persians, but of the Ptolemies, who sought, on many occasions, to flatter their religious prejudices, to content the priesthood, and even to court the good will of the people. And though some allowance must be made in these cases for the effect of change, the influence of the priests, and the impatience common to all people under a foreign master, we may fairly conclude that the spirit of their laws, under the original system, was dictated by a scrupulous regard to justice and the benevolence of a paternal government.

The great distinction of classes³ maintained in Egypt was characteristic of the East, and custom naturally removed every unpleasing impression which so readily occurs to men educated with different habits and ideas; and provided justice was regarded, it offered no cause of discontent in an Eastern nation.

¹ The quantity of corn may be imagined from the produce offered to Amenophis III., in the 30th year of his reign. ('Records of the Past,' vol. vi. p. 21. Eisenlohr, 'Der grosse Papyrus Harris,' Leipzig, 1872. 'Zeitschrift f. ägypt. Spr.' 1872, p. 119; 1873, pp. 9, 34; 1874, pp. 23-25, etc.) — S. B.

² Herodotus, ii. 47. Diod. i. 80.

³ The Etruscans were also divided into four castes; but this institution appears rather to have been derived from the East than to have taken its rise in Italy. They were, 1. the Larthes, Tyrani, or lords; 2. the Tusei, or priesthood; 3. the Rasene, or warriors; and, 4. the people, or popular caste.

The division of Egyptian society into separate classes, or castes, has been noticed by many authors. Herodotus¹ says they were divided into seven tribes, one of which was the sacerdotal, another of the soldiers, and the remaining five of the herdsmen, swineherds, shopkeepers, interpreters, and boatmen. Diodorus² states that, like the Athenians, who being an Egyptian colony derived this institution from the parent country, they were distributed into three classes — the priests, the peasants or husbandmen (from whom the soldiers were levied), and the artisans, who were employed in handicraft and other similar occupations, and in common offices among the people; but in another place³ he extends the number to five, and reckons the pastors, husbandmen, and artificers, independent of the soldiers and priests. Strabo⁴ limits them to three — the military, husbandmen, and priests; and Plato⁵ divides them into six bodies — the priest, artificers, shepherds, huntsmen, husbandmen, and soldiers: each peculiar art, or occupation, he observes, being confined to a certain subdivision of the caste, and every one engaged in his own branch, without interfering with the occupation of another: as in India and China, where the same trade or employment is followed in succession by father and son.

From the statements above noticed, the exact number of classes into which the Egyptians were divided appears uncertain; but as there is reason to conclude that some authors have subdivided the main castes into several of their minor branches, while others have been contented with the collective divisions, I shall endeavor to point out (as I have already had occasion to do in a former work⁶) the four great comprehensive classes, and the principal subdivisions of each.

The first caste was the sacerdotal order; the second, the soldiers and peasants, or agricultural class; the third was that of the townsmen; and the fourth, the *plebs*, or common people. The first was composed of the chief priests or pontiffs,⁷ as well as minor priests of various grades belonging to different deities, prophets, judges, hierophants, magistrates, hierogrammats or sacred scribes, basilicogrammats or royal scribes, sphragistæ,⁸

¹ Herod. ii. 164.

² Diod. i. 28.

³ Ibid. i. 74.

⁴ Strabo, xvii. p. 541.

⁵ Plato, in Timæo, *ad init.*

⁶ 'Egypt and Thebes,' p. 230.

⁷ 'Each deity has several priests and a high-priest.' (Herod. ii. 37.)

⁸ Plutarch, de Isid. s. xxxi., says the sphragistæ were a class of priests whose office was to examine the victims, and to put a seal upon them, previous to their being sacrificed. Herod. ii. 38.

hierostoli¹ or dressers and keepers of the sacred robes, doctors, embalmers, hierophori,² pterophori,³ præcones (who appear to have been the same as the pastophori⁴) keepers of the sacred animals,⁵ hierolaotomi or masons of the priestly order, sacred sculptors and draughtsmen, beadles, sprinklers of water, and apomyoi (mentioned by Hesychius, who drove away the flies with *chowries*), and several inferior functionaries attached to the temples.

The second was divided into the military, farmers, husbandmen, gardeners, huntsmen, boatmen, and others; the third consisted of artificers, tradesmen, shopkeepers, musicians, builders, carpenters, masons, sculptors, and probably potters, public weighers,⁶ and notaries; and in the fourth may be reckoned pastors, poulterers, fowlers, fishermen, laborers, servants, and, generally speaking, the common people. Many of these were again subdivided, as the artificers and tradesmen, according to their peculiar trade or occupation, and as the pastors, into oxherds, shepherds, goatherds, and swineherds; which last were, according to Herodotus, the lowest grade, not only of the class but of the whole community, since no one would either marry their daughters or establish any family connection with them; and so degrading was the occupation of tending swine, that they were looked upon as impure, and were even forbidden to enter a temple without previously undergoing a purification. Herodotus, indeed, affirms, 'they could not *enter* a temple;'⁷ and the prejudices of the Indians against this class of persons almost justify our belief of the historian.

[As the information afforded by the monuments upon the castes of Egypt does not agree with the statements of Herodotus, Plato, and Diodorus, it is necessary to consider here how far hereditary castes existed in that country. That certain important classes of society prevailed, as in modern civilization, there is not the least doubt; and that the sacerdotal or priestly order, that of scribes, of the military, and a host of functionaries comprising a vast bureaucracy, existed from the earliest period, is attested by the monuments. Of the lower orders, slaves, laborers, and mechanics, less information is afforded, but the condition

¹ Plutarch, de Isid. s. iii.

² The bearers of sacred emblems in the religious processions.

³ Those who bore the flabella and fans in the processions in which the statues of the gods were carried.

⁴ Bearers of the small statues, or shrines, of the gods. (*Vide* Diod. i. 29.) [Apol. Metam. xi. 250. — G. W.]

⁵ Herod. ii. 68.

⁶ The *Gabbāneh* of the present day; who are also public scribes. ⁷ Herod. ii. 47.

of the middle and upper classes, who could afford more expensive sepulchres and embalmment, is well known from the monuments which have been discovered. The three great classes of society, priests, scribes, and warriors, were by no means castes in sense of hereditary succession; for though a son often followed the profession of his father, owing to habit, thoughts, education, or patronage and connection, which have existed at all times and in all countries, these three orders were not so distinct from each other as at the present day. The priest of a god was often a military or naval commander, exercised the office of scribe, and invested with the supervision of public works or local government. A general in the army could marry the daughter of a priest, and his children could be scribes, priests, or public functionaries. Whence the Greek authors derived their notions of Egyptian castes is uncertain; it was probably due to imperfect information or misconception, and in Egypt, as elsewhere, it was without doubt difficult if not almost impossible for members of the poorer classes of society to elevate themselves to the higher grades. There is reason to believe that there was an hereditary territorial aristocracy, but even they were reinvested by the sovereign with their lands, either on account of a kind of feudal tenure, or that the crown was the great landlord of the whole country, and the monarch presented lands to distinguished military officers. Public employments were monopolized by a few great families, considered by some to be an advantageous arrangement of civil government, but the keystone of caste, the limitation of marriage to the women of the same order, is unknown to monumental Egypt. The hereditary transmission of handicraft and trades is so common to nations that have no caste, that it does not enter into the question.¹—S. B.]

It was also from one or other of those two orders that the king was obliged to be chosen; and if he had been a member of the military class, previous to his ascending the throne, it was peremptorily required by the laws² that he should then be admitted into the sacerdotal order, and be instructed in all the secret learning of the priests.

¹ See Ampère, 'Des Castes et de la Transmission héréditaire des Professions dans l'ancienne Égypte,' in the 'Journal de l'Instruction publique,' 1848. The thesis of castes has been sustained by Meiners, 'De causis ordinum sive castarum in veteri

Ægypto,' in the 'Comment. Soc. Reg. Goti,' x. pt. iii. pp. 181 and fol., and the 'De veterum Ægyptiorum origine,' *Ibid.* p. 74; and O. Müller, 'Handb. d. Archäologie d. Kunst,' s. 219.

² Plutarch, *de Isid.* ix.

He was the chief of the religion and of the State;¹ he regulated the sacrifices in the temples, and had the peculiar right of offering them to the gods² upon grand occasions; the title³ and office of 'president of the assemblies' belonged exclusively to him, and he superintended the feasts and festivals in honor of the deities. He had the right of proclaiming peace and war; he commanded the armies of the State,⁴ and rewarded those whose conduct in the field, or on other occasions, merited his approbation; and every privilege was granted him which was not at variance with good policy or the welfare of his people.






[The immense difference of rank between the king and the highest nobles of the land is shown by their all walking on foot in attendance on the chariot of the king. And part of the great honor conferred on Joseph was his being placed in the second chariot that the king had; giving him, in fact, the attendance of a king, as no one had a chariot or car while attending on a king. — G. W.]

The sovereign power descended from father to son; but in the event of an heir failing, the claims for succession were determined by proximity of parentage, or by right of marriage. Nor were queens forbidden to undertake the management

¹ Like the caliphs and Moslem sultans.

² Psammaticus offered libations with the other eleven kings. (Herod. ii. 151.) In the sculptures the kings always make the offerings in the temples. At Rome, the sovereign held the office of Pontifex maximus.

³ The king had five names and titles.

1. The Horns or 'Harmachis' title 
which was enclosed in a rectangular front or building, sometimes bolted. 2. The diadem title  'lord of the diadems of the cities of the north and south.' 3. The Horus, or 'Hawk of Gold' title 
4. The official or divine title of 
'king of the south or upper and the north or lower Egypt,' enclosed in a cartouche. 5. The family name, also enclosed in a cartouche, and generally preceded by 

'The Son of the Sun,' or the god Ra. The 6th name was not introduced till the 5th Dynasty; and from the 1st to the close of the 12th, the same expressions were uniform in the 1st, 2d, and 3d titles of the same king. The four titles are as old as Seneferu of the 3d Dynasty, and till the 12th a kind of 6th title or pyramid appellation is added after the 5th title. (Cf. Brugsch-Bey, 'Histoire d'Égypte,' Leipzig, 1875, p. 46.) — S. B.

⁴ The king received also all foreign tributes and deputations or embassies, and gave direct answers to requests preferred for public works, improvements, and other civil matters. He appears to have been attended in war by the council of the thirty, composed apparently of privy councillors, scribes, and high officers of State. He appointed royal commissions, and all religious offerings were made in his name. — S. B.

⁵ This I conclude from the mode of deriving their right from ancient kings, sometimes passing over many intermediate names, when they mention their predecessors.

of affairs,¹ and on the demise of their husbands they assumed the office of regent; but, though introduced into the annals of Manetho, and Nitocris is mentioned by Herodotus as a queen, their names do not appear in the lists of sovereigns sculptured in the temples of Thebes and Abydos.²

In some instances the kingdom was usurped by a powerful chief, as in the case of Amasis, or by some Ethiopian prince, who either claiming a right to the Egyptian crown from relationship with the reigning family, or taking advantage of a disturbed state of the country, secured a party there, and obtained possession of it by force of arms; but there are no grounds for supposing that the Egyptian monarchy was elective, as Synesius would lead us to conclude. He affirms that the candidates for the throne of Egypt repaired to a mountain at Thebes, on the Libyan side of the Nile, where all the voters assembled, and according to the show of hands and the proportionate consequence of each voter, who was either of the sacerdotal or military order, the election of the king was decided. But his authority is not of sufficient weight on so doubtful a question, and, from being at variance with all that history and monumental record have imparted to us, cannot possibly be admitted.

We find the kings recorded on the monuments as having succeeded from father to son for several generations; and if the election of a king ever took place in Egypt, it could only have been when all lawful aspirants were wanting. Diodorus³ says, 'In ancient times kings, instead of succeeding by right of inheritance, were selected for their merits:' but whether this really was the case at the commencement of the Egyptian monarchy it is difficult to determine. Indeed, both Herodotus and Diodorus mention the first kings being succeeded by their children; and we have positive authority from the sculptures that this was the case during the eighteenth and succeeding dynasties: nor did Plutarch⁴ in saying 'the kings were chosen from the priests or the warriors,' mean that the monarchy was

¹ The Egyptians, at a later period, do not seem to have been favorable to female government, and obliged Cleopatra to marry her younger brother, on the death of the elder Ptolemy; and even afterwards we find the name of her son, Neocæsar or Cæsarion, introduced into the sculptures with her own.

² It was the maternal descent that gave the right to property and the throne. The

same prevailed in Ethiopia. If the monarch married out of the royal family, the children did not enjoy a legitimate right to the crown. From the time of the 1st Dynasty, a female, probably in default of male issue, or during a regency, could succeed, and many did so. (Brugsch-Bey, 'Histoire d'Égypte, p. 44.) — S. B.

³ Diød. i. 43.

⁴ Plut. de Isid. ix.

elective, except when an heir was wanting. And this is further confirmed by the formula in the Rosetta stone: 'The kingdom being established unto him and unto his children forever.' But they did not presume, in consequence of the right of succession, to infringe the regulations enacted for their public and private conduct; and the laws of Egypt, which formed part of the sacred books, were acknowledged to be of divine origin, and were looked upon with superstitious reverence. To have called them in question, or to have disobeyed them, would have been considered rebellion against the Deity, and the offender would have paid the forfeit of his presumption and impiety.¹

That their laws were framed with the greatest regard for the welfare of the community is abundantly proved by all that ancient history has imparted to us; and Diodorus² observes, 'This unparalleled country could never have continued throughout ages in such a flourishing condition, if it had not enjoyed the best of laws and customs, and if the people had not been guided by the most salutary regulations.' Nor were these framed for the lower orders only; for their kings, says the same author,³ so far from indulging in those acts of arbitrary will, unrestrained by the fear of censure, which stain the character of sovereigns in other monarchical states, were contented to submit to the rules of public duty, and even of private life, which had been established by law from the earliest times. Even their daily food was regulated by prescribed rules, and the quantity of wine was limited with scrupulous exactitude. The king was distinguished from his subjects by his attire, principally the *uræus* or asp diadem, which no subject could assume; he wore also the crowns of the various gods, and special and royal robes, but had no distinguishing sceptre. In war he appears with a particular kind of helmet, *khepersk*, on his head. [Princes were distinguished by a badge hanging from the side of the head, which enclosed, or represented, the lock of hair emblematic of 'a son;' in imitation of the youthful god Horus, the son of Isis and Osiris, who was held forth as the model for all princes, and the type of royal virtue. For though the Egyptians shaved the head, and wore

¹ The monuments show that the monarchy was hereditary, and the monarch supposed to be descended from the gods, in the male and female line. The idea of election is expressed in some of the royal names, but then it is a divine election.

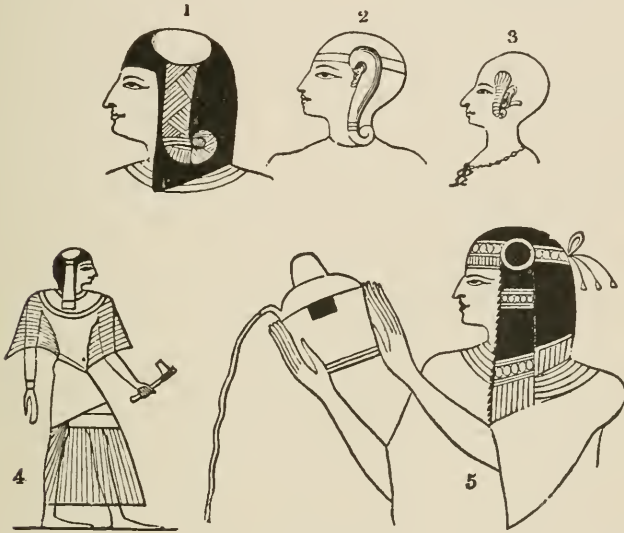
The monarch nominated or appointed *tehar*, during life an heir apparent or *repai*; there were, of course, disputed successions.

—S. B.

² Diod. i. 69.

³ Ibid. i. 70.

wigs or other coverings to the head, children were permitted to leave certain locks of hair; and if the sons of kings, long before they arrived at the age of manhood, had abandoned this youthful custom, the badge was attached to their head-dress as a mark of their rank as princes; or to show that they had not, during the lifetime of their father, arrived at *kinghood*: on the same principle that a Spanish prince, of whatever age, continues to be styled 'an infant.' — G. W.]



No. 6.

Princes and children.

Thebes.

1. Head-dress of a prince. 2 and 3. Lock of hair worn by children. 4. Dress of a son of Rameses III. 5. Head-dress of a prince, Rameses.

When a sovereign, having been brought up in the military class, was ignorant of the secrets of his religion, the first step, as I have already observed, on his accession to the throne, was to make him acquainted with those mysteries, and to enrol him in the college of the priests. He was instructed in all that related to the gods, the service of the temple, the laws of the country, and the duties of a monarch; and, in order to prevent any intercourse with improper persons, who might instil into his mind ideas unworthy of a prince, or at variance with morality, it was carefully provided that no slave or hired servant should hold any office about his person, but that the children of the first families of the priestly order,¹ who had arrived at man's estate,

¹ Diod. i. 70.

and were remarkable for having received the best education and profited by it, should alone be permitted to attend him. And this precautionary measure was dictated by the persuasion that no monarch gives way to the impulse of evil passions, unless he finds those about him ready to serve as instruments to his caprices, and to encourage his excesses.

It was not on his own will that his occupations depended, but on those rules of duty and propriety which the wisdom of his ancestors had framed, with a just regard for the welfare of the king and his people.¹ They argued that he was an officer of the State; that the situation he held had not been made for his sole benefit, but for that of the nation, which he was bound to serve as well as to govern; and the king was thought rather to belong to the nation than the nation to the king. Impressed with these ideas, the Egyptian monarchs refused not to obey those lessons which the laws had laid down for their conduct: their occupations, both by day and night, were regulated by prescribed rules; a time was set apart for every duty, and a systematic method of transacting business was found to lead to those results which a disregard of order usually fails to produce. At break of day² public business commenced, all the epistolary correspondence was then examined, and the subject of each letter was considered with the attention it required. The ablutions for prayer were then performed, and the monarch, having put on the robes of ceremony, and attended by proper officers, with the insignia of royalty, repaired to the temple to superintend the customary sacrifices to the gods of the sanctuary. The victims being brought to the altar, it was usual for the high priest to place himself close to the king, while the whole congregation³ present on the occasion stood round at a short distance from them, and to offer up prayers for the monarch,⁴ beseeching the gods to bestow on him health and all other blessings,⁵ in return

¹ A few injunctions for the conduct of a Jewish king are given in Deut. xvii. 16.

² Diod. i. 70. Herodotus, ii. 173, says that Amasis employed himself about public business from daybreak till market time, or about the third hour of the day.

³ This ceremony must have taken place in the court of the temple and not in the sanctuary, since the people were admitted to it. The entrance into the holy of holies, or the sanctuary, was only on particular occasions, as with the Jews. (Exod. xxviii. 29; Ezek. xlii. 13, 14.)

⁴ As in the Moslem mosques, from the times of the caliphs to the present day. On the conquest of Egypt by Soltan Scleem, the aristocracy of the Memlooks was left, on condition of annual tribute to the Osmanlis, obedience in matters of faith to the Mooltee of Constantinople, and the insertion of the name of the soltan in the public prayers and on the coin. Mohammed Ali had an idea of introducing his own instead of Soltan Mahmood's name during the war of Syria in 1832-33.

⁵ Conf. the Rosetta stone: 'In return

for his respect to the laws, his love of justice, and his general conduct towards the people he ruled. His qualities were then separately enumerated; and the high priest particularly noticed his piety towards the gods, and his elemency and affable demeanor towards men. He lauded his self-command, his justice, his magnanimity, his love of truth, his munificence and generosity, and, above all, his entire freedom from envy and covetousness. He exalted his moderation in awarding the most lenient punishment to those who had transgressed, and his benevolence in requiting with unbounded liberality those who had merited his favors. These and other similar encomiums having been passed on the character of the monarch, the priest proceeded to review the general conduct of kings, and to point out those faults which were the result of ignorance and misplaced confidence. And it is worthy of remark, that this ancient people had already adopted the principle that the king should be exonerated from blame,¹ while every curse and evil was denounced against his ministers, and those advisers who had given him injurious counsel. The object of this oration, says Diodorus, was to exhort the sovereign to live in fear of the Deity, and to cherish that upright line of conduct and demeanor which was deemed pleasing to the gods; and they hoped that, by avoiding the bitterness of reproach and by celebrating the praises of virtue, they might stimulate him to the exercise of those duties which he was expected to fulfil. The king then proceeded to examine the entrails of the victim, and to perform the usual ceremonies of sacrifice; and the hierogrammateus, or sacred scribe, read those extracts from the holy writings which recorded the deeds and sayings of the most celebrated men.

It was recommended that the prince should listen to that good advice which was dictated by experience, and attend to those lessons which were derived from the example or history of former monarchs; and he was particularly enjoined to conform to a line of conduct which in other instances had proved beneficial to the State. But it was not in public alone that he was warned of his duty; and the laws subjected every action of his private life to as severe a scrutiny as his behavior in the administration

for which, the gods have given him health, victory, power, and all other good things, the kingdom being established unto him and unto his children forever;’ which is,

perhaps, the real formula here alluded to by Diodorus.

¹ That the king could do no wrong is a much older notion than we generally imagine. (Diod. i. 70.)

of affairs. The hours of washing, walking, and all the amusements and occupations of the day, were settled with precision, and the quantity as well as the quality of his food were regulated by law: simplicity was required both in eating and drinking, and Diodorus affirms that their table only admitted the meat of oxen and geese.¹ A moderate allowance of wine was also permitted; but all excess was forbidden and prevented, upon the principle that food was designed for the support of the body, and not for the gratification of an intemperate appetite. And though we cannot admit the opinion of Plutarch,² — who, on the authority of Eudoxus, affirms that wine³ was not allowed to the kings previous to the time of Psammaticus, — this statement of Diodorus derives from it an additional testimony that the kings at all times conformed to the laws in private as well as in public life. In short, he adds, the regulations concerning food and temperance were of such a salutary nature that one would rather imagine them the regimen of some learned physician, who anxiously consulted the health of the prince, than an extract from a legislative code.

But the most admirable part of their institutions, says the same historian, did not consist in sanitary regulations, which forbade the sovereign to transgress the rules of temperance, nor has the conduct of the princes who submitted themselves to such laws the chief claim upon our admiration; our praise is mainly due to those wise ordinances which prevented the chief of the State from judging or acting thoughtlessly, and from punishing any one through the impulse of anger, revenge, or any other unjust motive. And as he was thus constrained to act in obedience to the laws, all punishments were inflicted according to real justice and impartiality.

To persons habituated to the practice of virtue, these duties became at length a source of gratification, and they felt convinced that they tended as well to their own happiness as to the welfare of the State. They acknowledged the mischief which would arise from allowing the passions of men to be unbridled, and that love, anger, and other violent impulses of the mind, being stronger than the recollection of duty, were capable of leading away those

¹ They were the most usual meats; but they had also the wild goat, gazelle, oryx, and wild fowl of various kinds, as we learn from the sculptures.

² De Isid. et Osir. s. vi.

³ We find that as early as the time of Joseph the Egyptian kings drank wine; since the chief *butter* of Pharaoh is mentioned in virtue of his office pouring out wine to the monarch. (Gen. xl. 11.)

even who were well acquainted with the precepts of morality. They, therefore, willingly submitted to those rules of conduct already laid down and sanctioned by competent legislators; and by the practice of justice towards their subjects, they secured to themselves that good will which was due from children to a parent; whence it followed that not only the college of priests but the whole Egyptian nation was as anxious for the welfare of the king as for that of their own wives and children, or whatever was most dear to them. And this, Diodorus observes, was the main cause of the duration of the Egyptian state, which not only lasted long, but enjoyed the greatest prosperity, waging successful wars on distant nations, and being enabled by immense riches, resulting from foreign conquest, to display a magnificence, in its provinces and cities, unequalled by that of any other country.

Love and respect were not merely shown to the sovereign during his lifetime, but were continued to his memory after his



No. 7.

People throwing dust on their heads, in token of grief.

Thebes.

demise; and the manner in which his funeral obsequies were celebrated tended to show that, though their benefactor was no more, they retained a grateful sense of his goodness and admiration for his virtues. And what, says the historian, can convey a greater testimony of sincerity, free from all color of dissimulation, than the cordial acknowledgment of a benefit, when the person who conferred it no longer lives to witness the honor done to his memory?

On the death¹ of every Egyptian king, a general mourning was instituted throughout the country for seventy-two days,²

¹ The king on his death was said to ascend to heaven. — S. B.

² Diodor. i. 72. Conf. the custom of

the Jews, and Gen. 1. 3: 'The Egyptians mourned for Jacob threescore and ten days.'

hymns commemorating his virtues were sung, the temples were closed, sacrifices were no longer offered, and no feasts or festivals were celebrated during the whole of that period. The people tore their garments,¹ and, covering their heads with dust and mud, formed a procession of 200 or 300 persons of both sexes, who met twice a day in public to sing the funeral dirge. A general fast was also observed, and they neither allowed themselves to taste meat nor wheaten bread, and abstained, moreover, from wine and every kind of luxury.

In the meantime, the funeral was prepared, and on the last day the body was placed in state within the vestibule of the tomb, and an account was then given of the life and conduct of the deceased. It was permitted to any one present to offer himself as an accuser, and the voice of the people might prevent a sovereign enjoying the customary funeral obsequies; a worldly ordeal, the dread of which tended to stimulate the Egyptian monarchs to the practice of their duty far more than any feeling inculcated by respect for the laws or the love of virtue. [The same was customary amongst the Jews, who deprived wicked kings of the right of burial in the tombs of their ancestors.² Josephus says this was continued to the time of the Asmoneans.³—G. W.]

The Egyptians, as I have already observed, were divided into four principal castes: the sacerdotal order, the peasants, the townsmen, and the common people. Next to the king, the priests held the first rank, and from them were chosen his confidential and responsible advisers,⁴ the judges, and all the principal officers of State. They associated with the monarch, whom they assisted in the performance of his public duties, and to whom they explained, from the sacred books, those moral lessons which were laid down for his conduct, and which he was required to observe: and by their great experience, their knowledge of the past, and their skill in augury and astronomy,⁵ they were sup-

¹ A common custom to the present day in rage and grief. (Conf. the Scriptures, *passim*.) They have different modes of rending their garments, according to the degree of anger, the excess of grief, or the display of feeling requisite upon each occasion; and thus, when bewailing the loss of a parent, the rent is proportionably greater than when mourning the death of an acquaintance.

² After death some monarchs were deified and had prophets, *netep pent*, or flamens, attached to their worship. At the time of the 4th Dynasty Seneferu appears to have been thus honored, and Cheops and

Chephren received the same honors, and other monarchs are found on the inscriptions so deified till the time of the Ptolemies, when the leading priest was the flamen of Alexander the Great. — S. B.

³ Joseph. Ant. xiii.-xv. p. 367.


⁴ Isaiah xix. 11. Diodorus, i. 73.

⁵ The *her seshta en pa*, 'over the secrets of the heaven;' there were also the *her seshta en ta*, 'over the secrets of the earth,' and others of the same class over the depths or mines, cellars, etc.; but it is uncertain if they belonged to the order of priests. — S. B.


posed to presage future events, and to foresee an impending calamity, or the success of any undertaking. It was not one man or one woman, as Diodorus observes, who was appointed to the priesthood, but many were employed together in performing sacrifices and other ceremonies; and each college of priests was distinguished according to the deity to whose service it belonged, or according to the peculiar office held by its members.

The principal classes into which the sacerdotal order was divided have been already enumerated;¹ there were also many minor priests of various deities, as well as the scribes and priests of the kings, and numerous other divisions of the caste. Nor should we omit the priestesses of the gods, or of the kings and queens, each of whom bore a title indicating her peculiar office. Of the former, the Pellices, or Pallakides, of Amen, are the most remarkable, as the importance of their post sufficiently proves; and if we are not correctly informed of the real extent and nature of their duties, yet, since females of the noblest families, and princesses, as well as the queens themselves, esteemed it an honor to perform them, we may conclude the post was one of the highest to which they could aspire in the service of religion.²


They are the same whom Herodotus mentions as holy women,³ consecrated to the Theban Jove, whose sepulchres, said by

¹ The principal classes into which the priests were divided are, 1.  *neter hent*


'prophets,' the highest in the hierarchy, and of which there were certainly as many as four attached to the principal gods, who succeeded by seniority or election to the

place of high priest; 2.  the *neter*


atef, or 'divine fathers' of inferior rank, but eligible to the grade of prophet; 3 the

 *ab*, 'purifiers' or washers,


lower grade of the priesthood; 4. the


 *neter meri*, 'beloved of god,' still

a lower order. Besides these were the


 *fai, sen-neter*, 'incense-



bearers' and other officers charged with the care, superintendence, or duties of the temple and its property; the

 *kar heb*, who recited funeral prayers and per-


formed other offices; and the 


or *hesi*, 'bards' of the gods, also attached to the divine service. Besides the high priests were superintendents, who looked after the general body. In the days of Energetes I., B.C. 238, the priests were divided into four *phylai*, 'tribes' or orders, and another tribe added — S. B.

² The women engaged in the service of the gods were the  *neter hem*, the

'divine wife,' the  or  *neter*

tut, 'divine handmaid,' a dignity and office explained by the Pallakis; the

 *qema*, or 'singers,' and the



ahi, or 'sistrum-players.' Under the so-called old Empire *neter hent*, prophetesses, are found, but they ceased before the 12th Dynasty. Besides these were the *henemt* or 'pallakides' of Amen; and a few other offices held by women in the temples. — S. B.

³ Herod. ii. 54.

Diodorus to have been about ten stadia from the tomb of Osymandyas,¹ are still seen at Thebes, in a valley 3000 feet behind the ruins of Medeenet Haboo: and this fact strongly confirms, and is confirmed by, the evidence of the sculptures, which show them

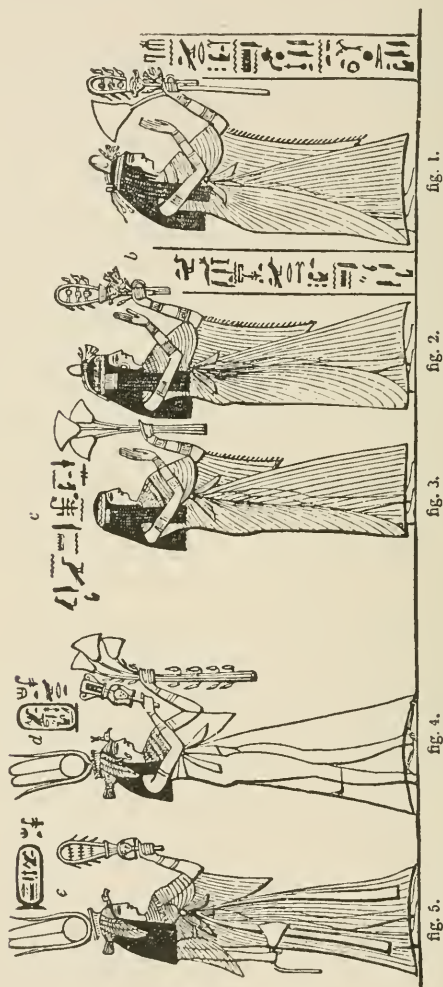


fig. 1.

fig. 2.

fig. 3.

fig. 4.

fig. 5.

Thebes.

The mother, daughter, and sister of a priest.

The mother, daughter, and sister of a priest.

The queens of Rameses the Great.

No. 8. Sacred offices held by women.

to have been females of the highest rank, since all the occupants of those tombs were either the wives or daughters of kings.

Besides this class of priestesses, was another of similar rank, apparently a subdivision of the same, who fulfilled certain duties

¹ Diod. i. 47.

entrusted only to the wives and daughters of priests, and not unusually to members of the same family as the Pallakides. They had also the privilege of holding the sacred sistra in religious ceremonies, before the altar and on other occasions, and were attached to the service of the same deity.

The ridiculous story of their prostitution could only have originated in the depraved notions and ignorance of the Greeks,¹ fond of the marvellous, and notorious as they were for a superficial acquaintance with the customs of foreign nations; and it is unnecessary to request a sensible person to consider whether it is more probable that women who devoted themselves to the service of religion among the most pious people of profane nations, and who held the rank and consequence necessarily enjoyed by the wives and daughters of a monarch and of the principal nobles of a country, should have sacrificed every feeling of delicacy and virtue, or that the authors of the story were deceived, and perhaps intended to deceive others.

Herodotus states that women were not eligible to the priesthood, either of a male or female deity, and that men were alone admitted to this post:² but his remark evidently applies to the office of pontiff, or at least to some of the higher sacerdotal orders, from his referring in another place³ to women devoted to the service of Amen, as well as from the authority of other writers. Diodorus,⁴ indeed, describes Athyrtis, the daughter of Sesostris, so well versed in divination that she foretold to her father the future success of his arms, and engaged him to prosecute his designs of conquest; her knowledge in these matters being sufficient to influence the conduct of the monarch, who was himself, in the capacity of high priest, well versed in all the secrets of religion: and her visions and omens were observed *in* the temple itself. Again, in the Rosetta stone, and the papyri of Paris and Sig. D'Anastasy,⁵ we find direct mention made of the priestesses of the queens. In the former, 'Areia, the daughter of Diogenes, being priestess of Arsinoe, the daughter of Philadelphus: and Eirene, the daughter of Ptolemy, priestess of Arsinoe, the daughter of Philopator: and Pyrrha, the daughter of Philinus, being canephoros (or basket bearer) of Berenice, the daughter of Euergetes;' — and, in the latter, are 'the priestess of

¹ Strabo, xvii. p. 561.

² Herod. ii. 39.

³ *Ibid.*, ii. 54.

⁴ Diod. i. 53.

⁵ Böckh, 'Corpus Inscript. Græc.' vol. iii. p. 307. — S. B.

Arsinoe, the father-loving; and 'the prize-bearer of Berenice Euergetes: the basket-bearer of Arsinoe Philadelphus: and the priestess of Arsinoe Eupator: and those of the three Cleopatras.¹

The same office usually descended from father to son² [and it is probable that the same dress of investiture was kept, and put on by the son to be anointed and invested in, as was the law of the Jews³—G. W.], but the grade was sometimes changed;⁴ and it is probable that even when a husband was devoted to the service of one deity, a wife might perform the duties of priestess to another. They enjoyed important privileges, which extended to their whole family. They were exempt from taxes; they consumed no part of their own income in any of their necessary expenses:⁵ and they had one of the three portions into which the land of Egypt was divided, free from all duties. They were provided for from the public stores,⁶ out of which they received a stated allowance of corn and all the other necessaries of life; and we find that when Pharaoh, by the advice of Joseph, took all the land of the Egyptians in lieu of corn,⁷ the priests were not obliged to make the same sacrifice of their landed property, nor was the tax of the fifth part of the produce entailed upon it, as on that of the other people.⁸ Diodorus states that the land was divided into three portions, one of which belonged to the king, the other to the priests, and the third to the military order; and I am inclined to think this exclusive right of freehold property is alluded to in the sculptures of the Egyptian tombs. And if the only persons there represented as landed proprietors are the kings, priests, and military men,⁹ this accordance of the sculptures with the scriptural account is peculiarly interesting, as it recalls the fact of Pharaoh's having bought all the land of the Egyptians, who farmed it afterwards for the proprietor of the soil, on condition of paying him a fifth of the annual produce; though Herodotus would lead us to infer that Sesostris divided the lands among the people,¹⁰ and, having allotted to each a certain

¹ Young, Hierogl. Literat., p. 72.

² Diod. i. 73.

³ Exod. xxix. 29.

⁴ The king nominated his own priests; others were chosen by election. — S. B.

⁵ Herodot. ii. 37.

⁶ They drew supplies or rations from the temples, and Euergetes I. ordered that bread given to the wives and daughters of the priesthood should be made into a loaf, and stamped with the name or title of Berenice his daughter. (Lepsius, 'Das

bilingue Dekret von Kanopus,' Berlin, 1876.) — S. B.

⁷ Gen. xlvii. 20, 22.

⁸ Gen. xlvii. 26.

⁹ The priests and soldiers had an allowance from the government; though the latter are not mentioned as having profited by this during the famine in the time of Joseph.

¹⁰ Herodot. ii. 189. Unless he means that the crown lands were portioned out, and given to the peasants to farm, on pay-

portion, received an annual rent from the peasant by whom it was cultivated.

In the sacerdotal, as among the other classes, a great distinction existed between the different grades, and the various orders of priests ranked according to their peculiar office. The chief and high priests held the first and most honorable station; but he who offered sacrifice in the temple appears to have had, at least for the time, the highest post, and one that was usually filled by the kings themselves. It is, however, probable that the chief priests took it by turns to officiate on those occasions, and that the honor of doing sacrifice was not confined to one alone; but the priests of one deity were not called upon to perform the ceremonies in the temple of another, though no injunction prevented any of them making offerings to the contemplar gods, and still less to Osiris in his capacity of judge of Amenti. Some also, who were attached to the service of certain divinities, held a rank far above the rest; and the priests of the great gods were looked upon with far greater consideration than those of the minor deities. In many provinces and towns, those who belonged to particular temples were in greater repute than others, and it was natural that the priests who were devoted to the service of the presiding deity of the place should be preferred by the inhabitants, and be treated with greater honor. Thus the priests of Amun held the first rank at Thebes, those of Pthah at Memphis, of Re at Heliopolis, and the same throughout the nomes of which these were the chief cities.

One of the principal grades of the priesthood was the prophets. They were particularly versed in all matters relating to religion, the laws, the worship of the gods, and the discipline of the whole order; and they not only presided over the temple and the sacred rites, but directed the management of the priestly revenues.¹ In the solemn processions, their part was conspicuous; they bore the holy *hydia*, or vase, which was frequently carried by the king himself on similar occasions; and when any new regulations were introduced in affairs of religion, they, in conjunction with the chief priests, were the first whose opinion was consulted, as we find in the Rosetta stone, where in passing a decree regarding the honors to be conferred on Ptolemy Epiphanes, 'the chief

ment of a certain rent, or a fifth of the produce, as mentioned in Gen. xlvii. 26.

¹ Clem. Alex. Strom. i. p. 758.

priests and prophets' headed the conclave assembled in the temple of Memphis.¹

The sacred office of the priests, by giving them the exclusive right to regulate all spiritual matters, as well as to announce the will, threaten the wrath, and superintend the worship of the gods, was calculated to insure them universal respect; and they were esteemed for a superior understanding, and for that knowledge which could only be acquired by the peculiar nature of their education. In consideration of the services they were bound to perform in the temples, for the welfare of the country and of its inhabitants, they were provided with ample revenues, besides numerous free gifts; for the Egyptians deemed it right that the administration of the honors paid to the gods should not be fluctuating, but be conducted always by the same persons, in the same becoming manner, and that those who were above all their fellow-citizens in wisdom and knowledge ought not to be below any of them in the comforts and conveniences of life. With a similar view, a stated portion was assigned also to the kings in order that they might be enabled to reward the services of those who merited well of their country, and that, by having ample means for supporting their own splendor and dignity, they might not burden their subjects with oppressive and extraordinary taxes.²

The chief cause of the ascendancy they acquired over the minds of the people was the importance attached to the mysteries, to a thorough understanding of which the priests could alone arrive; and so sacred did they hold those secrets that many members of the sacerdotal order were not admitted to a participation of them, and those alone were selected for initiation who had proved themselves virtuous and deserving of the honor: a fact satisfactorily proved by the evidence of Clement of Alexandria, who says, 'The Egyptians neither intrusted their mysteries to every one, nor degraded the secrets of divine matters by disclosing them to the profane, reserving them for the heir apparent of the throne, and for such of the priests as excelled in virtue and wisdom.'³

From all we can learn on the subject, it appears that the mysteries consisted of two degrees, denominated the greater and

¹ Rosetta stone, line 6.

² Diod. i. 73.

³ Clem. Alex. Strom. i. p. 670. He

adds, 'Therefore, in their hidden character, the enigmas of the Egyptians are very similar to those of the Jews.'

the less; and in order to become qualified for admission into the higher class, it was necessary to have passed through those of the inferior degree: and each of them was probably divided into ten different grades. It was necessary that the character of the candidate for initiation should be pure and unsullied; and novitiates were commanded to study those lessons which tended to purify the mind and to encourage morality. The honor of ascending from the less to the greater mysteries was as highly esteemed as it was difficult to obtain: no ordinary qualification recommended the aspirant to this important privilege; and, independent of enjoying an acknowledged reputation for learning and morality, he was required to undergo the most severe ordeal, and to show the greatest moral resignation; but the ceremony of passing under the knife of the Hierophant was merely emblematic of the regeneration of the neophyte.

That no one except the priests was privileged to initiation into the greater mysteries, is evident from the fact of a prince, and even the heir apparent, if of the military order, neither being made partaker of those important secrets nor instructed in them until his accession to the throne, when, in virtue of his kingly office, he became a member of the priesthood and the head of the religion. It is not, however, less certain that, at a later period, many besides the priests, and even some Greeks, were admitted to the lesser mysteries; yet in these cases also their advancement through the different grades must have depended on a strict conformance to prescribed rules.

On the education of the Egyptians Diodorus¹ makes the following remarks:—‘The children of the priests are taught two different kinds of writing,²—what is called the sacred, and the more general; and they pay great attention to geometry and arithmetic. For the river, changing the appearance of the country very materially every year, is the cause of many and various discussions among neighboring proprietors about the extent of their property; and it would be difficult for any person to decide upon their claims without geometrical reasoning,

¹ Diod. i. 81. Conf. Herod. ii. 36.

² Perhaps Diodorus and Herodotus both refer to the hieratic and enchorial or demotic, without considering the hieroglyphic; but Porphyry and Clement of Alexandria are more explicit. The former states that Pythagoras (when in Egypt) became acquainted with the three kinds of writing,—the epistolographic, the hiero-

glyphic, and the symbolic; and the latter says, ‘that in the education of the Egyptians three styles of writing are taught: the first is called the epistolary (enchorial or demotic); the second, the sacerdotal (hieratic), which the sacred scribes employ; and the third, the hieroglyphic.’ (Porph. in Vitâ Pythag., p. 15. Clem. Alex. Strom. v. vol. ii. p. 657.)

founded on actual observation. Of arithmetic they have also frequent need, both in their domestic economy, and in the application of geometrical theorems, besides its utility in the cultivation of astronomical studies; for the orders and motions of the stars are observed at least as industriously by the Egyptians as by any people whatever; and they keep record of the motions of each for an incredible number of years, the study of this science having been, from the remotest times, an object of national ambition with them. They have also most punctually observed the motions, periods, and stations of the planets, as well as the powers which they possess with respect to the nativities of animals, and what good or evil influences they exert; and they frequently foretell what is to happen to a man throughout his life, and not uncommonly predict the failure of crops or an abundance, and the occurrence of epidemic diseases among men and beasts: foreseeing also earthquakes and floods, the appearance of comets, and a variety of other things which appear impossible to the multitude. It is said that the Chaldæans in Babylon are derived from an Egyptian colony, and have acquired their reputation for astrology by means of the information obtained from the priests in Egypt. But the generality of the common people learn only from their parents or relations that which is required for the exercise of their peculiar professions, as we have already shown; a few only being taught anything of literature, and those principally the better classes of artificers.'

Hence it appears they were not confined to any particular rules in the mode of educating their children, and it depended upon a parent to choose the degree of instruction he deemed most suitable to their mode of life and occupations, as among other civilized nations.¹

In their minute observations respecting every event of consequence, Herodotus states that the Egyptians surpassed all other men; and 'when anything occurs,' says the historian,² 'they put it down in writing, and pay particular attention to the circumstances which follow it; and if in process of time any similar occurrence takes place, they conclude it will be attended with the same results.'

If the outward show and pomp of religion, for which the ancient Egyptians were so noted, appear to us unnecessary, and

¹ The condition of the hierarchy under the Ptolemics is given by Franzius in Böckh, 'Corp. Inscr. Græc.' vol. iii. pars xxix. Aegyptus. — S. B. ² Herod. ii. 32.

inconsistent with real devotion, we must make suitable allowance for the manners of an Eastern nation, and bear in mind that the priests were not guilty of inculcating maxims they did not themselves follow ; but on the contrary, by their upright conduct and by imposing on themselves duties far more severe than those required from any other class of the community, they set an example to the people by which they could not fail to benefit. And the strict purification of body and mind they were bound to undergo, both as members of those sacred institutions and as persons devoted to the service of the gods, not only obtained for them the esteem of the rest of the Egyptians, but tended also to ameliorate their own character ; and their piety and virtue were as conspicuous as their learning.

We may, perhaps, feel disposed to blame the Egyptian priests for their exclusiveness in the study of religion, and in keeping concealed from the people those secrets which it imparted ; but it was argued that, being fully engaged in the temporal occupations of the world, the theories of metaphysical speculation were unnecessary for their welfare, and incompatible with their employments. They deemed it sufficient to warn them of their duty, and urge them to conform to the rules laid down for the encouragement of morality ; and the dread both of a temporal and a future ordeal was held out to them as an inducement to lead a just and virtuous life. Restrained by the fear of punishment hereafter and by the hope of a happier state, and dreading the displeasure of their rulers and the severity of the laws, they were necessarily taught to command their passions, and to practise, or at least to appreciate, virtue ; and respect for their spiritual pastors being heightened by the idea of their possessing superior talents, they obeyed their commands with deference and submission.

It appears to have been the object of the priests to enhance the value of their knowledge, and thereby more easily to gain an ascendancy over the minds of a superstitious people ; a measure which naturally strikes us as illiberal and despotic : but if we remember how much the force of habit and the sanctity of established laws serve to reconcile men to the form of government under which they have long lived, we cease to be surprised at the fondness of the Egyptians for their ancient institutions ; and if they were so well satisfied with them that every innovation was resisted, and the Ptolemies and Cæsars vainly endeavored to suggest improvements in their laws, we may conclude that the

system and regulations of the Egyptian priests were framed with wisdom, and tended to the happiness as well as to the welfare of the people. And when the members of the legislative body are possessed of superior talents, even though their measures are absolute, they frequently govern with great benefit to the community; and this paternal authority is certainly more desirable in the ruling power than physical force.

Some will also question the policy or the justice of adopting such exclusive measures in the study of religion; but we may be allowed to doubt the prudence of allowing every one, in a nation peculiarly addicted to speculative theory,¹ to dabble in so abstruse a study. We have observed the injury done to the morals of society in Greece, at Rome, and in other places, by the fanciful interpretation of mysteries and hidden truths, which being misunderstood, were strangely perverted; and license in religious speculation has always been the cause of schism, and an aberration from the purity of the original. At a later period, when every one was permitted to indulge in superstitious theories, the Egyptians of all classes became notorious for their wild and fanciful notions, which did not fail eventually to assail Christianity, for a time tainting the purity of that religion; and we find from Vopiscus, that the Emperor Aurelian considered them ‘smatterers in abstruse science, prophecy, and medicine; eager for innovation, which formed the subject of their songs and ballads; always turning their talents for poetry and epigram against the magistrates, and ready to assert their pretended liberties.’

There is therefore less reason to censure the Egyptian priests for their conduct in these matters, though a little insight into the foundation of their theological system would have been more beneficial to the people than the blind creed of an imaginary polytheism, which was contrary to the spirit of the religion they themselves professed, but which the people were taught or left to believe: for it was unjust and cruel to conceal under the fabulous guise of a plurality of gods that knowledge of the attributes and omnipotence of the Deity which the priests themselves possessed:² and it was iniquitous to degrade the nature of the Divinity by bringing it down to the level of the gross imaginations of the people, when they had had the means of raising

¹ Ammianus Marcellinus, lib. xxii. c. 16.

² I allude to the priests of an early

epoch, and not to those of the time of the Romans.

their minds, by giving them an insight into some of those truths which have merited the name of 'the wisdom of the Egyptians.' The unity of the Deity would have been a doctrine which all classes might have been taught; and the eternal existence and invisible power of *Îhôah*¹ would have offered a higher notion of the Cause and Ruler of all things than any mention of His attributes, or the fanciful representation of a god in the sculptures of their temples. It would have been unnecessary to explain the nature or peculiar occupation of a trinity, the mysterious connection between truth and the creative power (which is referred to in their sculptures); and imprudent to confuse their ideas with the notion of intermediate temporal and intellectual agents, or with the abstruse science of numbers and geometrical emblems.

If the priests were anxious to establish a character for learning and piety, they were not less so in their endeavors to excel in propriety of outward demeanor, and to set forth a proper example of humility and self-denial; and if not in their houses, at least in their mode of living, they were remarkable for simplicity and abstinence. They committed no excesses either in eating or drinking; their food was plain and in a stated quantity,² and wine was used with the strictest regard to moderation.³ And so fearful were they lest the body should not 'sit light upon the soul,'⁴ and excess should cause a tendency to increase 'the corporeal man,' that they paid a scrupulous attention to the most trifling particulars of diet: and similar precautions were extended even to the deified animals: Apis, if we may believe Plutarch,⁵ not being allowed to drink the water of the Nile, since it was thought to possess a fattening property.

They were not only scrupulous about the quantity, but the quality of their food; and certain viands were alone allowed to appear at table. Above all meats, that of swine was particularly obnoxious; and fish both of the sea and the Nile were forbidden them,⁶ though so generally eaten by the rest of the Egyptians.

¹ I use the Hebrew name of the deity in unity, 'The Being of Beings,' 'who is and was;' Jehovah (*Yehouah*). This word has been still further changed by our custom of giving *J* the force of *G*: of which there are many instances, as Jacob, Judah, jot, and others.

² Herodot. ii. 37.

³ During the fasts, which were frequent, Plutarch says that they abstained from it

entirely. (Plut. de Isid. s. vi.) The Jewish priests were not permitted to drink wine when they went 'into the tabernacle of the congregation.' (Levit. x. 9.)

⁴ Plut. de Isid. s. v.; on the principle of *plus de corps moins d'esprit*.

⁵ Plut. de Isid. s. v.

⁶ Pythagoras borrowed his aversion to fish from Egypt. (Plut. Symp. viii. 8.)

And indeed, on the 9th of the month Thoth,¹ when a religious ceremony obliged all people to eat a fried fish before the door of their houses, the priests were not even then expected to conform to the general custom, and they were contented to substitute the ceremony of burning theirs at the appointed time. Beans they held in utter abhorrence; and Herodotus affirms² that 'they were never sown in the country; and if they grew spontaneously, they neither formed an article of food, nor even if cooked were ever eaten by the Egyptians.' But this aversion, which originated in a supposed sanitary regulation, and which was afterwards so scrupulously adopted by Pythagoras, 'did not,' as I have already had occasion to observe,³ 'preclude their cultivation; and Diodorus⁴ expressly states that some only abstained from them, as from others of the numerous pulse and vegetables which abounded in Egypt. Of these, lentils, peas, garlic, leeks, and onions⁵ were the most objectionable, and no priest was permitted to eat them under any pretence; but that the prohibition regarding them, as well as certain meats, was confined to the sacerdotal order is evident from the statements of many ancient writers: and even swine were,⁶ if we may believe Plutarch,' not forbidden to the other Egyptians at all times: 'for those who sacrifice a sow to Typho once a year, at the full moon, afterwards eat its flesh.'

It is a remarkable fact that onions, as well as the first-fruits of their lentils,⁸ were admitted among the offerings placed upon the altars of the gods, together with gourds,⁹ cakes, beef, goose or wild fowl, grapes, figs, wine, and the head of the victim: and they were sometimes arranged in a hollow circular bunch, which, descending upon the table or altar, enveloped and served as a cover to whatever was placed upon it. And the privilege of presenting them in this form appears, though not without exceptions, to have been generally enjoyed by that class of priests who wore the leopard-skin dress.¹⁰

¹ Plutarch says, 'the first month,' which was Thoth. The 1st of Thoth coincided, at the time of the Roman conquest, with the 29th of August. (Plut. de Isid. s. vii. Vide Herodot. ii. 37.)

² Herodot. ii. 37.

³ 'Egypt and Thebes,' p. 216.

⁴ Diod. i. 89.

⁵ Plut. s. viii. Diod. i. 81. Juv. Sat.

xv.

⁶ 'On the day of the full moon,' says Herodotus, 'the people eat part of the

victim they have sacrificed to that deity, but on no other occasion do they taste the meat of swine.' (ii. 47.)

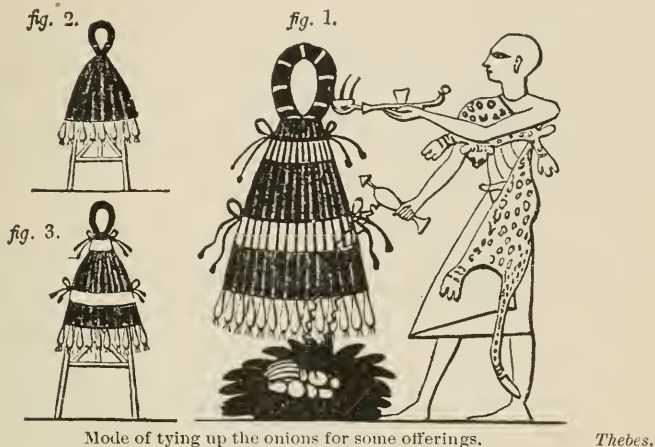
⁷ Plut. de Isid. s. viii.

⁸ They were offered in the month of Mesore, August. (Plut. de Isid. s. lxxviii.)

⁹ *Cucurbita lagenaria*, Linn. Arab. *garra touel*.

¹⁰ This spotted skin has been mistaken for that of the *nebris*, or fawn. (Plut. de Isid. s. xxxv.)

In general, 'the priests abstained from most sorts of pulse, from mutton, and swine's flesh; and in their more solemn



No. 9.

Mode of tying up the onions for some offerings.

Thebes.

purifications, even excluded salt from their meals;¹ but some vegetables were considered lawful food, being preferred by them for their wholesome nature, and it is certain that the leguminous productions and fruits of Egypt are frequently introduced into the sculptures, and are noticed by Pliny and other authors² as abundant, and of the most excellent quality.

In their ablutions, as in their diet, they were equally severe, and they maintained the strictest observance of numerous religious customs. They bathed twice a day and twice during the night:³ and some who pretended to a more rigid observance of religious duties, washed themselves with water which had been tasted by the ibis, supposed in consequence to bear an unquestionable evidence of its purity; and shaving the head and the whole body every third day, they spared no pains to promote the cleanliness of their persons, without indulging in the luxuries of the bath.⁴ A grand ceremony of purification took place previous and preparatory to their fasts, many of which lasted from seven to forty-two days,⁵ and sometimes even a longer period: during

¹ Plut. de Isid. s. v.

² When Alexandria was taken by Amer, 4000 persons were engaged in selling vegetables in that city.

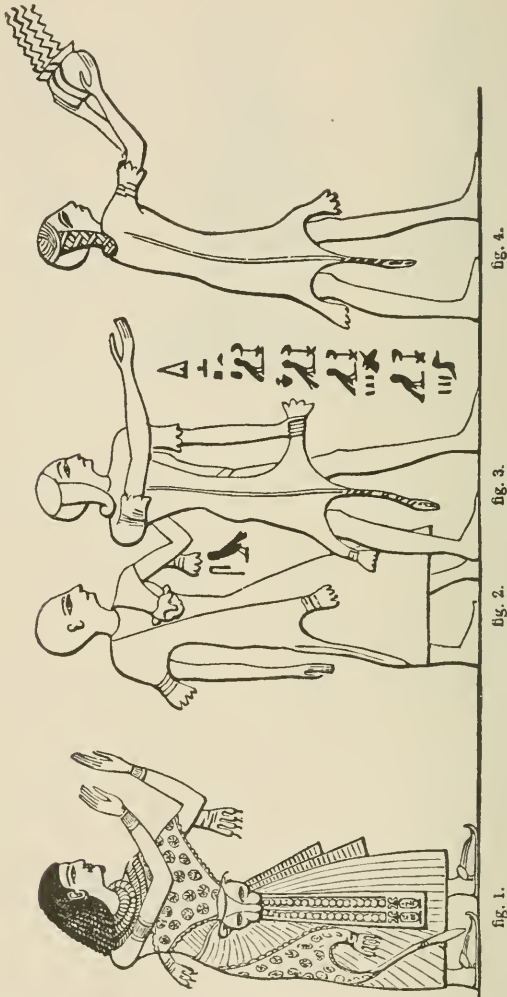
³ Herodot. ii. 37. Porphyrus says thrice a day, and the nocturnal ablutions were

only required on certain occasions.

⁴ It is supposed that Homer alludes to this when speaking of the priests of Jove (Il. xvi. 238), though he describes them with unwashed feet.

⁵ Porph. de Abstinentiâ, lib. iv. s. 7.

which time they abstained entirely from animal food, from herbs and vegetables, and above all from the indulgence of the passions.



Thebes.

fig. 4.

fig. 3.
Priests clad in leopard-skins.

fig. 2.

fig. 1.

No. 10.

Their dress was simple ; but the robes of ceremony were grand and imposing, and each grade was distinguished by its peculiar costume.

The high-priest who superintended the immolating of the victims, the processions of the sacred boats or arks, the presenta-

tion of the offerings at the altar or at funerals, and the anointing of the king, was covered with a sort of mantle made of an entire leopard-skin; and this badge was also attached to the dress of the monarch when engaged in a similar office. Various insigña were worn by them, according to their rank or the ceremony in which they were engaged; and necklaces, bracelets, garlands, and other ornaments were put on during the religious ceremonies in the temples. Their dresses were made of linen, which, as Plutarch observes, is perfectly consistent with the



No. 11.

Various priests.

customs of men anxious to rid themselves of all natural impurities; for certainly, he adds, it would be absurd for those who take so much pains to remove hair and all other superfluities from the body, to wear clothes made of the wool or hair of animals. [Their attention to cleanliness was very remarkable, as is shown by their shaving the head and beard, and removing the hair from the whole body, by their frequent ablutions, and by the strict rules instituted to insure it. The same motive of cleanliness led them to practise circumcision, which Herodotus afterwards mentions. Nor was this confined to the priests, as we learn from the

mummies and from the sculptures, where it is made a distinctive mark between the Egyptians and their enemies; and in later



No. 12. Priest in a leopard's skin.



No. 13. Funeral priest and scribe.



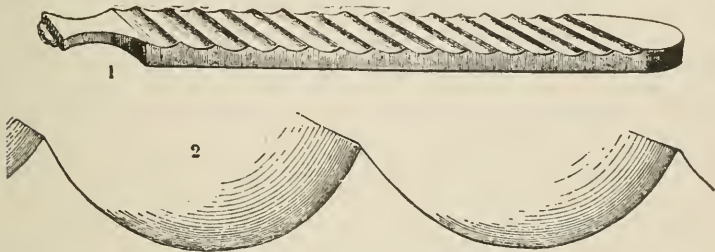
No. 14. Priest and functionary.

times, when Egypt contained many foreign settlers, it was looked upon as a distinctive sign between the orthodox Egyptian and the stranger, or the non-conformist. Its institution in Egypt reaches to the most remote antiquity: we find it existing at the earliest period of which any monuments remain, more than 2400 years before our era, and there is no reason to doubt that it dated still earlier.

Walking abroad, or officiating in the temple, they were permitted to have more than one garment. The priest styled *Sem* always wore a leopard-skin placed over the linen dress as his costume of office. The Egyptian and Jewish priests were the only ones (except perhaps those of India) whose dresses were ordered to be of linen. That worn by the former was of the finest texture, and the long robe with full sleeves, which covered the body and descended to the ankles, was perfectly transparent, and placed over a short kilt of thicker quality reaching to the knees. Some wore a long robe of linen, extending from the neck to the ankles, of the same thick substance, and some officiated in the short kilt alone, the arms and legs being bare. Some again had a long thin dress, like a loose shirt, with full sleeves, reaching to the

ankles, over which a wrapper of fine linen was bound, covering the lower part of the body, and falling in front below the knees:

the hieraphoros, while bearing the sacred emblems, frequently wore a long full apron, tied in front with long bands, and a strap, also of linen, passed over the shoulder to support it; and some priests wore a long smock reaching from below the arms to the feet, and supported over the neck by straps (see No. 11, fig. 4). Their head was frequently bare, sometimes covered with a wig or a tight cap; but in all cases the head was closely shaved. They had a particular mode of gaufering their linen dresses (also adopted in Greece, to judge from the ancient statues and



No. 15.

Instrument for gaufering the dress.

the vases, as well as in Etruria), which impressed upon them the waving lines represented in the paintings, and this was done by means of a wooden instrument, divided into segmental partitions $1\frac{1}{2}$ inch broad on its upper face, which was held by the hand while the linen was pressed upon it. One of them is in the Museum of Florence (fig. 2 gives the real size of the divisions). — G. W.]

Their prejudice, however, against woollen garments was confined to the under robes, it being lawful for them to put on a woollen upper garment for the purpose of a cloak; and cotton dresses were sometimes worn by the priests, to whom, if we may believe Pliny,¹ they were particularly agreeable. But no one was allowed to be buried in a woollen robe, from its engendering worms, which would injure the body; nor could any priest enter a temple without previously taking off this part of his dress.² Their sandals were made of the papyrus³ and palm leaves, and the simplicity of their habits extended even to the bed on which they slept. It was sometimes a simple skin extended upon the bare ground;⁴ sometimes it consisted of a sort of wicker-work

¹ Plin. xix. 1. Herodotus says they only wore linen (iii. 37).

² Herod. ii. 81.

³ Herod. ii. 37.

⁴ Eustath. in Homer, Il. xvi. 235.

made of palm branches,¹ on which they spread a mat or skin; and their head, says Porphyry, was supported by a half-cylinder of wood, in lieu of a pillow.

The same mode of resting the head was common to all the Egyptians, and a considerable number of these stools have been found in the tombs of Thebes: generally of sycamore, acacia, or tamarisk wood; or of alabaster, not inelegantly formed, and frequently ornamented with colored hieroglyphics. In Abyssinia, and in parts of Upper Ethiopia, they still adopt the same support for the head; and the materials of which they are made are either wood, stone, or common earthenware. Nor are they peculiar to Abyssinia and the valley of the Nile: the same custom prevails in far distant countries; and we find them used in Japan, China, and Ashantee,² and even in the island of Otaheite, where they are also of wood, but longer and less concave than those of Africa. Though excesses in their mode of living and all external display of riches were avoided by the priests, we cannot reconcile the great distinction maintained between the different classes of society, or the disproportionate extent of their possessions, with the boasted simplicity of their habits; and, judging from the scale of their villas and the wealth they enjoyed, we feel disposed to withhold much of that credit we should otherwise have bestowed upon the Egyptian priesthood. Besides their religious duties, the priests fulfilled the important offices of judges³ and legislators, as well as counsellors of the monarch; and the laws, as among many other nations of the East,⁴ forming part of the sacred books, could only be administered by members of their order.

But as the office of judge and the nature of their laws will be mentioned in another part of this work, it is unnecessary to enter upon the subject at present, and I therefore proceed to notice the military class, which was the first subdivision of the succeeding or second caste. To these was assigned one of the three portions into which the land of Egypt was divided by an edict of Sesostris,⁵ in order, says Diodorus,⁶ 'that those who expose themselves to danger in the field might be more

¹ No doubt the same as the *caffass* of the present day, which is so generally used for bedsteads in Egypt. Porphyry, lib. iv. s. 7, is right in saying the palm branch, in Arabic *gereet*, was called *bai*.

² Those of the Chinese and Japanese are

also of wood, but they are furnished with a small cushion.

³ Elian, Hist. Var. lib. xiv. c. 34.

⁴ The Jews, Moslems, and others.

⁵ Diodor. i. 54.

⁶ Ibid., i. 73.

ready to undergo the hazards of war, from the interest they felt in the country as occupiers of the soil; for it would be absurd to commit the safety of the community to those who possessed nothing which they were anxious to preserve. Besides, the enjoyment of comfort has a great tendency to increase population; and the result being that the military class becomes more numerous, the country does not stand in need of foreign auxiliaries: and their descendants receiving privileges handed down to them from their forefathers, are thus encouraged to emulate their valor; and studying from their childhood to follow the advice and example of their fathers, they become invincible by the skill and confidence they acquire.' For it was forbidden that a child should follow a different profession from that of his father, or that the son of a soldier should belong to any other profession than that of arms.¹

[At an early age the youth destined for the profession of arms was sent to the military school or barracks, and his miseries there are described by a contemporary of Rameses II., as also the additional ones of the warrior of a chariot or cavalry, who went accompanied by five slaves, and was instructed in taking to pieces, readjusting his chariot, and driving.² — S. B.]

Each man was obliged to provide himself with the necessary arms, offensive and defensive, and everything requisite for a campaign: and they were expected to hold themselves in readiness for taking the field when required, or for garrison duty. The principal garrisons were posted in the fortified towns of Pelusium, Marea, Eilethyas,³ Hieraconopolis,⁴ Syene, Elephantine, and other intermediate places; and a large portion of the army was frequently called upon by their warlike monarchs to invade a foreign country, or to suppress those rebellions which occasionally broke out in the conquered provinces.⁵

Herodotus tells us each soldier, whether on duty or not, was allowed twelve arouræ of land,⁶ free from all charge and tribute; which was probably the mode of dividing the portion mentioned by Diodorus,⁷ though it may of course be inferred that every one obtained a share proportionate to his rank.⁸ And this system of

¹ Herodot. ii. 166.

² Maspero, 'Genre épistolaire chez les anciens Égyptiens,' Paris, 1872, pp. 41-43

³ So I conclude, from the fortified enclosures that remain there distinct from the walls of the town.

⁴ This town and Eilethyas are nearly

opposite each other, and command the passage of the valley.

⁵ Diodor. i. 47, and the sculptures.

⁶ Herodot. ii. 168. The aroura was a square measure, containing 10,000 cubits.

⁷ Diodor. i. 54, 73.

⁸ The military officer Aahmes, son of

portioning out land, more particularly of a conquered country, and making allotments for soldiers, has been prevalent at all times throughout the East.

Another important privilege was that no soldier¹ could be cast into prison for debt; and this law, though it extended to every Egyptian citizen, was particularly provided by Bocchoris in favor of the military, who, it was urged, could not be arrested by the civil power without great danger to the State, of which they were the chief defence.

The whole military force, consisting of 410,000 men,² was divided into two corps, the Calasiries and Hermotybies. They furnished a body of men to do the duty of royal guards, 1000 of each being annually selected for that purpose; and each soldier had an additional allowance of five minæ of bread,³ with two of beef,⁴ and four arusters of wine,⁵ as daily rations, during the period of his service.

The Calasiries⁶ were the most numerous, and amounted to 250,000 men, at the time that Egypt was most populous. They inhabited the nomes of Thebes, Bubastis, Aphthis, Tanis, Mendes, Sebennytus, Athribis, Pharbæthis, Thmuis, Onuphis, Anysis, and the Isle of Myecphoris, which was opposite Bubastis; and the Hermotybies—who lived in those of Busiris, Saïs, Chemmis, Papremis, and the Isle of Prosopitis, and half of Natho—made up the remaining 160,000. It was here that they abode while retired from active service, and in these nomes the farms or portions of land before alluded to were probably situated: which were not only a substitute for regular pay,⁷ but tended to encourage habits of industry, and to instil a taste for the occupations of a country life. For the Egyptians justly considered that such employments promoted the strength of the body, as much as the idleness of a town life injured the physical and moral constitution, and the soldier was taught to look upon the pursuits of a

Abana, received as a reward of his military services 60 arouras, *sta*, from the monarch in whose services he was engaged. ('Records of the Past,' vol. vi. p. 5.)—S. B.

¹ Diod. i. 79.

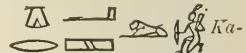
² Herodot. ii. 165, 166. Diodor. i. 54, gives a much larger amount to the army of Sesostris, which, he says, consisted of 600,000 foot, besides 24,000 horse, and 27,000 chariots. He must have included the auxiliaries.

³ 5 lbs. 5 oz. 1 dwt.

⁴ 2 lbs. 2 oz. 8 grs.

⁵ If the aruster is the same as the cotyle, these four will be little less than 2 pints English.

⁶ The word



lāsher or Calasiris occurs in a papyrus of the Roman period. (Bunsen, 'Egypt's Place,' vol. v. p. 410.) *Hermotybios* has not yet been found or identified.—S. B.

⁷ The military chiefs, like the kings and priests, let out their lands to husbandmen.

mechanic as unmanly and contemptible. Indeed, they were absolutely forbidden to engage in any such occupation ; as in Sparta, they made war their profession, and deemed it the most worthy pursuit of generous and freeborn souls. They did not, however, confine the exercise of trades to slaves, like the Lacedæmonians, because the number of the military class alone, in a country so well peopled as Egypt, sufficed for all the purposes of defence ; but their prejudices against mechanical employments, as far as regarded the soldier, were equally strong as in the rigid Sparta.

The sports of the field and gymnastic exercises were recommended, as beneficial to their physical force, and as diversions peculiarly suited to the active habits of a soldier ; and mock fights, wrestling, leaping, eudgelling, and numerous feats of strength and agility,¹ were their constant amusement.



fig. 1.
Shairetana.
[Sardinians.]

fig. 2.
Tuirsha.
[Etruscans.]

fig. 3.
Uashasha.
[Osci.]

fig. 4.
Taanauna.
[Danai or Dauni.]

No. 16.

Allies of the Egyptians.

Thebes.

Besides the native corps they had also mercenary troops, who were enrolled either from the nations in alliance with the Egyptians, or from those who had been conquered by them.

¹ According to Diodorus, i. 53, when Sesostris was a boy he was obliged, like all the others educated with him, to run 180 stadia, or between 22 and 23 miles, every

morning before breakfast. The heat of an Egyptian climate must have added greatly to the unpleasant part of this feat.

They were divided into regiments, sometimes disciplined in the same manner as the Egyptians, though allowed to retain their arms and costume; but they were not on the same footing as the native troops; and instead of land they had regular pay, like other hired soldiers. Strabo speaks of them as mercenaries¹ [who, he says, the Egyptian kings from very early times were in the habit of employing — G. W.]; and the million of men he mentions must have included these foreign auxiliaries. When formally enrolled in the army, they were considered as part of it, and accompanied the victorious legions on their return from foreign conquest; and it is not improbable that they assisted in performing garrison duty in Egypt, in the place of those Egyptian troops which were left to guard the conquered provinces.

[At all periods of their history the Egyptians employed auxiliaries and mercenaries. Under the sixth dynasties they had Nubian or Nigritic levies. Rameses II. had a contingent of Shaietana or Sardinians, Tuirsha or Etruscans, Uashasha or Oscans, and one of the Pelasgic races, either the Dauni or Teuceri, besides Mashuasha or Maxyes, a Libyan people, and Kahaka, an unknown people from the West, in his service. Under the dodecarchy the Asiatic Greeks, Ionians, and Carians entered the Egyptian service; and, later, the assistance to the rival monarchs or Egyptian sovereigns, rendered by Athens and Sparta, was of a mercenary nature, and paid by subsidies.² — S. B.]

The strength of the army consisted in archers, whose skill appears to have contributed mainly to the success of the Egyptian arms, as it did in the case of our own ancestors during the wars waged by them in France. They fought either on foot or in chariots, and may therefore be classed under the separate heads of a mounted and unmounted corps; and they probably constituted the chief part of both wings. Several bodies of heavy infantry, divided into regiments, each distinguished by its peculiar arms, formed the centre; and the cavalry, which, according to the scriptural accounts, was numerous, covered and supported the foot.

Though we have no representation of Egyptian horsemen in the sculptures, we find them too frequently and positively noticed in sacred and profane history to allow us to question their

¹ Strabo, lib. xvii. p. 548, &c., edit. 1587.

² Chabas, 'Études sur l'Antiquité historique,' pp. 295 and fol.

employment; and it is reasonable to suppose them well acquainted with the proper mode of using this serviceable force. In the battle scenes in the temples of Upper Egypt we meet with five or six instances of men fighting on horseback; but they are part of the enemy's troops, and I can therefore only account for their exclusive introduction, and the omission of every notice of Egyptian cavalry, by supposing that the artists intended to show how much more numerous the horsemen of those nations were than of their own people.¹

We find only two instances of an Egyptian mounted on horseback; one in the hieroglyphics of the portico at Esneh,



No. 17.

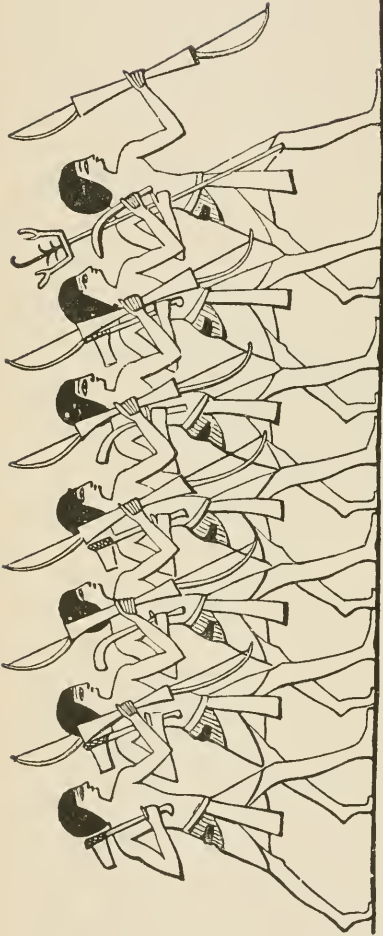
Egyptian on horseback.

Esneh.

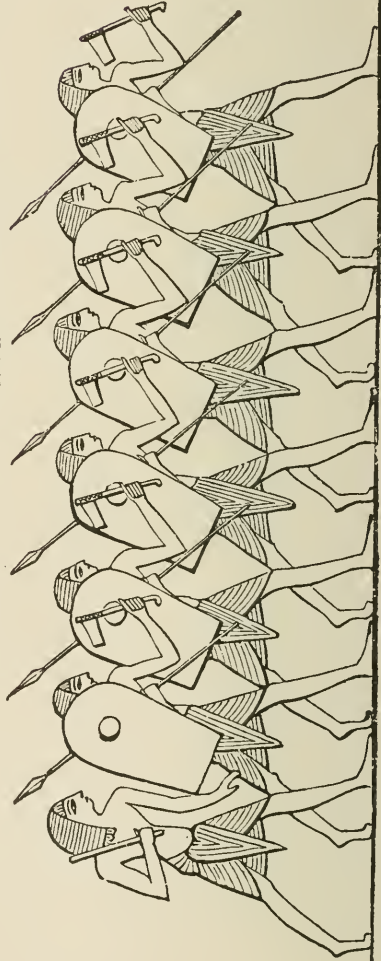
which are of a Roman era, and unconnected with any historical bas-relief [and one on an arch of Edfoo, the attitude of each one nearly the same, a copy of the former of which I have here introduced — G. W.].

The Greeks before the Persian war had little cavalry, the country of Attica and the Peloponnesus being ill-suited for the employment of that arm; and it was not till they were called upon to cope with an enemy like the Persians that they became aware of its utility. The same argument may be urged in the case of the Egyptians: and their distant expeditions into Asia, and the frequent encounters with troops which served on

¹ The Egyptian army.



Part 2.



Disciplined troops.



Thebes.

horseback, would necessarily teach them the expediency of employing cavalry, even if they had not done so previously. Egypt was in fact famous for its breed of horses, which were not less excellent than numerous, and we find they were even exported to other countries.¹

At Jacob's funeral a great number of chariots and *horsemen* are said to have accompanied Joseph;² *horsemen* as well as chariots³ pursued the Israelites on their leaving Egypt;⁴ the song of Miriam mentions in Pharaoh's army the 'horse and his rider';⁵ Herodotus also⁶ represents Amasis 'on horseback' in his interview with the messenger of Apries; and Diodorus speaks of 24,000 horse in the army of Sesostris, besides 27,000 war chariots. Shishak, the Egyptian Sheshonk, had with him 60,000 horsemen when he went to fight against Jerusalem;⁷ and mention is made of the Egyptian cavalry in other parts of sacred and profane history: nor are the hieroglyphics silent on the subject; and we learn from them that the 'command of the cavalry' was a very honorable and important post, and generally held by the most distinguished of the king's sons.

The Egyptian infantry was divided into regiments, very similar, as Plutarch observes, to the *lochoi* and *taxeis* of the Greeks; and these were formed and distinguished according to the arms they bore.⁸ They consisted of bowmen, spearmen, swordsmen, clubmen, slingers, and other corps, disciplined according to the rules of regular tactics;⁹ and the regiments¹⁰ being probably divided into battalions and companies, each officer had his peculiar rank and command, like the chiliarchs, hecatontarchs, decarchs, and others among the Greeks, or the captains over thousands, hundreds, fifties, and tens, among the Jews.¹¹ Masses of heavy infantry, armed with spears and shields, and a falchion, or other weapon, moved sometimes in close array

¹ 2 Chron. i. 17.

² Gen. l. 9.

³ 2 Kings xviii. 24.

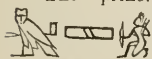
⁴ Exod. xiv. 9, 28.


⁵ Exod. xv. 21.

⁶ Herod. ii. 162.

⁷ 2 Chron. xii. 3. *Vide* also Isaiah xxxvi. 9.

⁸ The principal infantry were the

 *masa*, 'archers,' armed with war axes, bows and arrows, and the

 *nefer*, 'young troops,' or con-

scripts. They were conscribed and officered by various grades: the *menh* or lieutenant, the *aten* or *adonai*; the *mer*, captain; the *haut*, colonel or general. — S. B.

⁹ See woodcut on the preceding page.

¹⁰ The army of Rameses II. in the campaign against the Khita was divided into four *corps d'armée* or brigades, called the brigades of Amen, Ra, Pthah, and Set. ('Records of the Past,' vol. ii. p. 68)—S. B.

¹¹ Deut. i. 15.

in the form of an impregnable phalanx;¹ sometimes they deployed, and formed into long columns or small distinct bodies; and the bowmen as well as the light infantry were taught either



No. 19.

Phalanx of heavy infantry.

Thebes.

¹ See woodcut above. [In the Egyptian phalanx in the army of Cræsus, the commanders of 10,000 formed each of their bodies into 100 men, arranging (as was their custom at home) which they would first charge through, though Cræsus wished to show a longer front. They

withstood the Persians when all the rest were defeated, and received honorable terms; being allowed the cities of Larissa and Cyllene as their abode, where their descendants were in the time of Xenophon (Cyrop. vi., vii.). — G. W.]

to act in line, or to adopt more open movements, according to the nature of the ground or the state of the enemy's battle.

Each battalion, and indeed each company, had its particular standard, which represented a sacred subject, — a king's name,



No. 20.

Egyptian standards.

Thebes.

a sacred boat, an animal,¹ or some emblematic device; and the soldiers either followed or preceded it, according to the service on which they were employed, or as circumstances required.²

¹ Similar to these were some of the Greek banners. Those of Athens had an owl, of Thebes a sphinx, &c.

² These probably represent the divisions of the army. 1. Name of the queen

Hatasu or Hasheps; 5. The west; 7. The royal person; 8. Oryx and feather; 10. Plumes of Amen Ra; 11. Head and plumes of a deity; 14. Horus; 15. Sebak; 19. Mentu Ra.

The objects chosen for their standards were such as were regarded by the troops with a superstitious feeling of respect; and it is natural to suppose they must have contributed greatly to the success of their arms,¹ since every soldier was ready to stand by and defend what prejudice as well as duty forbade him to abandon; and their wonderful effects in rallying desponding courage, and in urging men to court danger for their preservation, have not only been recorded in the history of Roman battles, where a general frequently ordered a standard to be thrown into the opposing ranks to stimulate his troops to victory, but are witnessed in every age.

Being raised, says Diodorus,² on a spear or staff, which an officer bore aloft,³ each standard served to point out to the men their respective regiments, enabled them more effectually to keep their ranks, encouraged them to the charge, and offered a conspicuous rallying-point in the confusion of battle. And though we cannot agree with Plutarch,⁴ that the worship of animals originated in the emblem chosen by Osiris to designate the different corps into which he divided his army, it is satisfactory to have his authority for concluding that the custom of using these standards was of an early date in the history of Egypt.

The post of standard-bearer was at all times of the greatest importance. He was an officer, and a man of approved valor; and in the Egyptian army he was sometimes distinguished by a peculiar badge suspended from his neck, which consisted of two lions, the emblems of courage, and two other devices apparently representing flies,⁵ so poetically described by Homer as characteristic of an undaunted hero, who, though frequently repulsed, as eagerly returns to the attack.⁶

Besides the ordinary standards of regiments, I ought to mention the royal banners, and those borne by the principal persons of the household near the king himself. The peculiar office of carrying these and the *flabella* was reserved for the royal princes or the sons of the nobility, who constituted a principal part of the staff corps. They had the rank of generals, and were either


¹ Solomon, in his Song, says, 'Terrible as an army with banners' (vi. 4). They were used by the Jews (Ps. xx. 5; Isaiah xiii. 2).

² Diodor. i. 86.

³ *Vide* woodcut No. 18.

⁴ Plut. de Isid. s. 72.

⁵ The decorations given by the Pharaohs

for military valor, were the  *nub*,

or gold collar, and the  *āf*, or

order of the fly, bracelets or armlets, daggers, and war axes — S. B.

⁶ Homer, II., p. 570.

despatched to take command of a division, or remained in attendance upon the monarch; and their post during the royal triumph, the coronation, or other grand ceremonies, was close to his person. Some bore the fans of state behind the throne, or



No. 21.

Officers of the household.

Thebes.

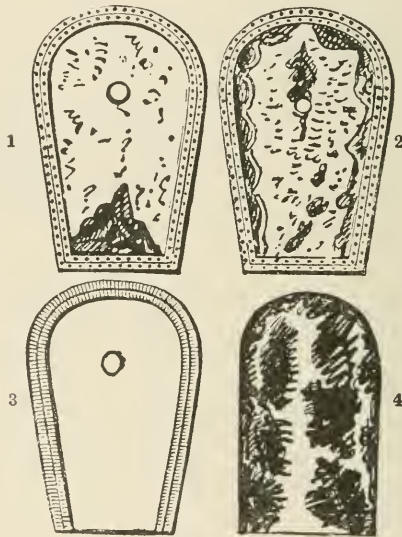
supported the seat on which he was carried to the temple; others held the sceptre, and waved flabella before him; and the privilege of serving on his right or left hand depended on the grade they enjoyed. But as the processions in which the flabella were carried appertain more properly to the ceremonies than to the military affairs of the Egyptians, I shall defer the description of them for the present.

The troops were summoned by sound of trumpet; and this instrument, as well as the long drum, was used by the Egyptians at the earliest period into which the sculptures have given us an insight; trumpeters being frequently represented in the battle scenes of Thebes, sometimes standing still and summoning the troops to form, and at others in the act of leading them to a rapid charge. [Clemens¹ says the Egyptians marched to battle to the sound of the drum, an assertion fully confirmed by the sculptures: but the instrument used for directing their evolutions was the trumpet. — G. W.]

[¹ Clem. Alex. Pædag. lib. ii. c. iv. p. 54. — G. W.]

The offensive weapons of the Egyptians were the bow, spear, two species of javelin, sling, a short and straight sword, dagger, knife, falchion,¹ or *ensis falcatus*, axe or hatchet, battle-axe, pole-axe, mace or club, and the *lissán*,² a curved stick similar to that still in use among the Ababdeh and modern Ethiopians. Their defensive arms consisted of a helmet of metal, or a quilted headpiece; a cuirass, or coat of armor, made of metal plates, or quilted with metal bands; and an ample shield. But they had no greaves; and the only coverings to the arms were a part of the cuirass, forming a short sleeve, and extending about half-way to the elbow.

The soldier's chief defence was his shield,³ which, in length, was equal to about half his height, and generally double its own



No. 22.

Shields.

Thebes.

breadth. It was most commonly covered with bull's hide, having the hair outwards, like the *laisëion* of the Greeks, sometimes strengthened by one or more rims of metal,⁴ and studded with nails or metal pins; the inner part being probably wickerwork,⁵

¹ *Khepsh*, so called from its resemblance to the jaw or the haunch of an animal. — S. B.

² *Lissán* is the modern name of this weapon, and signifies, in Arabic, a tongue, which it is supposed in form to resemble.

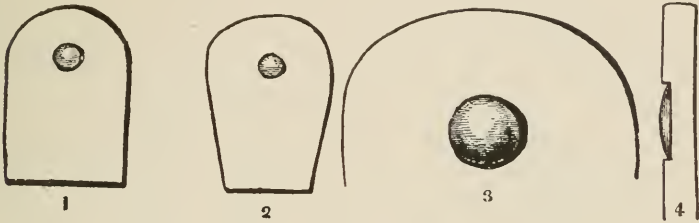
³ Called *aqam*. — S. B.

⁴ Hom. Il. M, 425; N, 161, 163, 406; and II, 360.

⁵ Those of their enemies were in many instances wicker, and not covered with any hide. (Conf. Virg. Æn. vii. 632.)

or a wooden frame, like many of those used by the Greeks and Romans, which were also covered with hide.¹

The form of the Egyptian shield was similar to the ordinary

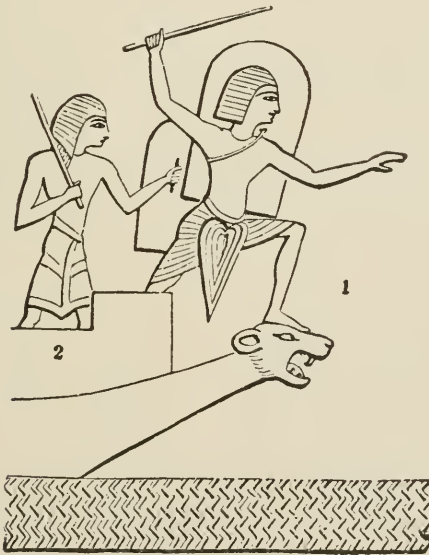


No. 23.

Boss of the shield.

Thebes.

funeral tablets found in the tombs. circular at the summit and squared at the base, frequently with a slight increase or swell towards the top; and near the upper part of the outer surface



No. 24.

Thong inside the shield.

Thebes.

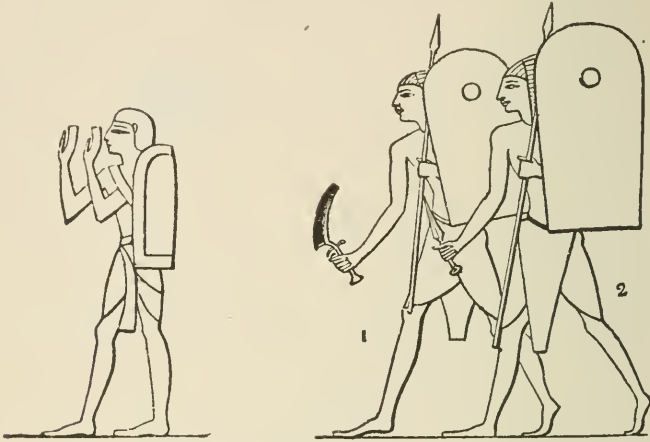
was a circular cavity in lieu of a boss.² This cavity was deeper at the sides than at its centre, where it rose nearly to a level

¹ That of Ajax had seven folds, that of Achilles nine folds, of bull's hide.

² [The shield of the Kanembo Negro in Africa, of which Denham and Clapperton

give an engraving, has a similar form to that of No. 2 above given, and was held with the round end uppermost, as by the Egyptians. — G. W.]

with the face of the shield; but there is great difficulty in ascertaining for what purpose it was intended, nor does its appearance indicate either an offensive or defensive use. To the inside of the shield was attached a thong,¹ by which they



No. 25. Concave shield (in perspective).
Thebes.

No. 26. Grasping a spear while supporting the shield.
Thebes.

suspended it upon their shoulders; and an instance occurs of a shield so supported, which is concave within, and, what is singular, the artist has shown a knowledge of perspective in his mode of representing it. Sometimes the handle was so situated that



No. 27.

Handle of shield.

Thebes.

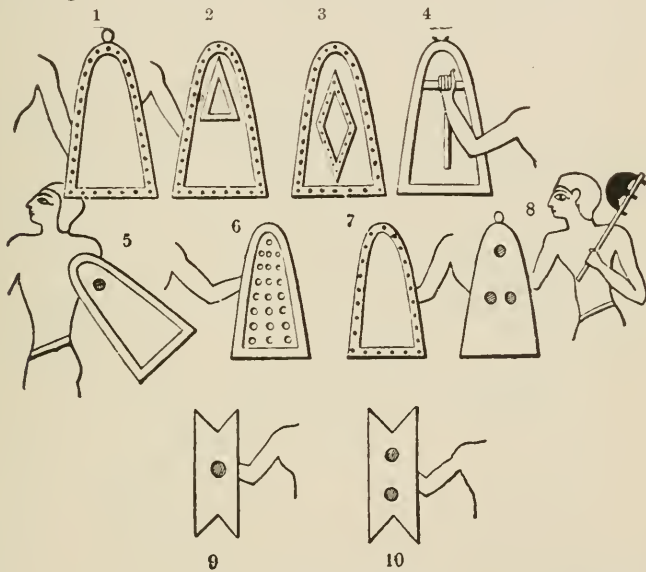
they might pass their arm through it and grasp a spear; but this may be another mode of representing the shield slung at their back, the handle being frequently fixed in a position which

¹ The *τελαμών* of the Greeks. (Cf. Hom. Ill. B, 388; Γ, 334; κ, 149; M, 409; Ξ, 404; O, 479; II, 803, *et alibi*.) [Xenophon says

the Egyptian shield was suspended in this manner over the shoulder. Cyrop. vii. — G. W.]

would prevent their holding the spear in that manner; and though instances occur of the horizontal as well as the perpendicular handle, the latter appears to have been the more usual of the two.

Some of the lighter bucklers were furnished with a wooden bar, placed across the upper part, which was held with the hand; not intended, as in some round Greek shields,¹ for passing the arm through, while the hand was extended to the thong encircling the cavity of the inside, but solely as a handle; and from their general mode of holding it, we may conclude this bar was sometimes placed longitudinally, an indication of which is even traced in that of fig. 4. They are, however, seldom represented, except



No. 28.

Bucklers of unusual form.

Beni-Hassan.

at Beni-Hassan, having been either peculiar to certain troops and employed solely on particular occasions, or confined to foreigners in the pay of Egypt; like those of a still more unusual appearance figured in the same paintings.

Some Egyptian shields were of extraordinary dimensions, and varied in form from those generally used, being pointed at the summit, not unlike some Gothic arches; but as we seldom find any instances of them, we may conclude they were rarely of such an unwieldy and cumbrous size. [Though Xenophon

¹ Hope's 'Costumes,' pl. lxxvii.

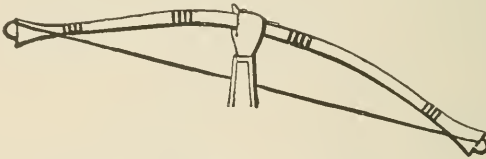
describes the Egyptians in the army of Crœsus as carrying shields that covered them from head to foot, in the phalanxes of 10,000 men, 100 in each face were so armed. These shields, he says,



No. 29. Large shield. *E'Siout.*

were supported by a belt over their shoulders.¹—G. W.]² Indeed, the common Egyptian shield was as large as was consistent with convenience, and, if not constructed of light materials, would have been an encumbrance in long marches, or even in the field; and we may even doubt if it *ever* was covered with a surface of metal.

The Egyptian bow was not unlike that used in later times by European archers. The string was either fixed upon a projecting piece of horn, or inserted into a groove or notch in the wood, at either extremity, differing in this respect from that of the Kefa and some other Asiatic people, who secured the string by passing it over a small nut which projected from the circular heads of the bow.



No. 30. String of bow belonging to the Kefa (Phœnicians). *Thebes.*

The Ethiopians and Libyans, who were famed for their skill in archery, adopted the same method of fastening the string as the Egyptians, and their bow was similar in form and size to that of their neighbors: and so noted were the latter for their dexterity in its use, that their name is accompanied in the hieroglyphics by a representation of this weapon.

The Egyptian bow was a round piece of wood, from five to five feet and a half in length, either almost straight and tapering to a point at both ends, some of which are represented in the

¹ Cyrop. vi.

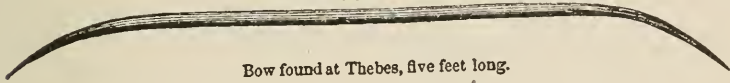
² They are met with in a tomb at E'Siout (Lycopolis), of very ancient date. To them the description of Tyrtæus would

apply; and the expression of Virgil, *Æn.* ii. 227. (Conf. *Hom. Il.* ̄, 266; *N.* 405; and *P.* 128.)

sculptures and have even been found at Thebes, or curving inwards in the middle, when unstrung, as in the paintings of the tombs of the kings; and in some instances a piece of leather or wood was attached to or let into it, above and below the centre.

In stringing it the Egyptians fixed the lower point in the ground, and, standing or seated, the knee pressed against the inner side of the bow, they bent it with one hand, and then

fig. 1.



Bow found at Thebes, five feet long.

fig. 2.

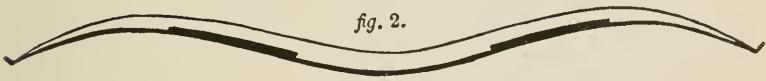
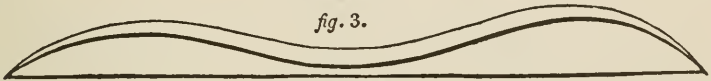


fig. 3.



No. 31.

Egyptian bows.

Thebes.



Mode of stringing the bow.

No. 32.

Thebes and Beni-Hassan.



Stringing a bow.

No. 33.

Beni-Hassan.

passed the string with the other into the notch at the upper extremity; and one instance occurs of a man resting the bow on his shoulder, and bracing it in that position. While shooting they frequently wore a guard on the left arm, to prevent its receiving an injury from the string; and this was not only fastened round the wrist, but was secured by a thong tied above the elbow. Sometimes a groove of metal was fixed upon the fore knuckle, in which the arrow rested and ran when dis-

charged;¹ and the chasseur, whose bow appears to have been less powerful than those used in war, occasionally held spare arrows in his right hand, while he pulled the string.²



No. 34.

A guard worn on the wrist.

Thebes.

No. 35.

Carrying spare arrows in the hand.

Thebes.

Their mode of drawing it was either with the forefinger and thumb, or the two forefingers; and though in the chase they sometimes brought the arrow merely to the breast, instances of

¹ I found an instance of this in a tomb at Thebes; the person was a chasseur. I regret my being unable to give a copy of

it, having mislaid the drawing.

² This is rare; I have only met with it twice so represented.

which occur in the two preceding woodcuts, their custom in war, as with the old English archers, was to carry it to the ear, the shaft of the arrow passing very nearly in a line with the eye.

The ancient Greeks, on the contrary, adopted the less perfect mode of placing the bow immediately before them, and drawing the string to the body; ¹ whence the Amazonian women are reported to have cut off the right breast, lest it should be an impediment in its use. And if the Greeks, in later times, abandoned that inefficient method, and handled the bow in the same manner as the Egyptians, they never did attach much importance to it, ² and few only excelled in archery, with the exception of the Cretans, who, from their skill, were supposed by some to have been the original inventors of the bow. The Scythians, Persians, and other Oriental nations, also placed their principal reliance on this arm, whose power was often severely felt by the disciplined troops of Greece and Rome; and our own history furnishes ample testimony to the advantages it presented throughout the whole course of a battle, and in every species of conflict.

The Egyptian bowstring was of hide, ³ catgut, or string; and so great was their confidence in the strength of it and of the bow, that an archer from his car sometimes used them to entangle his opponent, whilst he smote him with a sword.

Their arrows varied from twenty-two to thirty-four inches in length; some were of wood, others of reed; frequently tipped with a metal head and winged with three feathers, glued longitudinally, and at equal distances, upon the other end of the shaft, as on our own arrows. Sometimes, instead of the metal head, a piece of hard wood was inserted into the reed, which terminated in a long tapering point; ⁴ but these were of too light and powerless a nature to be employed in war, and could only have been intended for the chase. In others, the place of the metal was supplied by a small piece of flint, or rather agate, or other sharp stone, secured by a firm black paste; ⁵ and though used

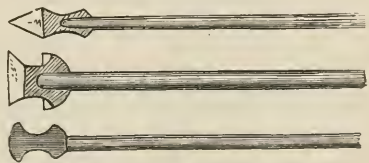
¹ Hom. Il., Δ, 123.

² Hom. Il., O, 711.

³ Conf. Hom. Il., Δ, 122.

⁴ [Herodotus, vii. 61 *et seq.*, on the arms of the troops of Xerxes, speaks of Indians with reed arrows and *iron* points. — G. W.]

⁵ The flint arrow-heads were either triangular, or else flat at the point, or like the blade of a small hatchet; side blades of flint were sometimes added. (Chabas, *Études*, p. 380.) — S. B.

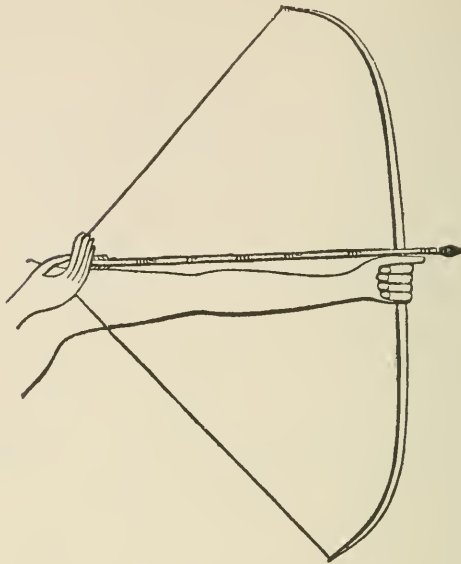


No. 35a. Arrows with flint heads

occasionally in battle, they appear from the sculptures to have belonged more particularly to the huntsman; and the



British Museum.



No. 36.

Arrow made of reed.

Thebes.

arrows of archers are generally represented with bronze heads,¹ some barbed, others triangular, and many with three or four projecting blades, placed at right angles, and



fig. 4.

fig. 3.



fig. 2.



fig. 1.



fig. 5.

No. 38.

Metal heads of arrows. Alnwick Museum and Thebes.

meeting in a common point. Stone-tipped arrows were not confined to an ancient era, nor were they peculiar to the

¹ Vide woodcut No. 35, p. 204.

Egyptians alone; the Persians and other Eastern people frequently used them, even in war; and recent discoveries have ascertained that they were adopted by the Greeks themselves, several having been found in places unvisited by the troops of Persia,¹ as well as on the plain of Marathon, and other fields of battle where they fought.

Each Bowman was furnished with a capacious quiver, about four inches in diameter, and consequently containing a plentiful supply of arrows, which was supported by a belt, passing over the shoulder and across the breast to the opposite side. Their mode of carrying it differed from that of the Greeks, who bore it upon their shoulder,² and from that of some Asiatic people, who suspended it vertically at their back, almost on a level with the elbow; the usual custom of the Egyptian soldier being to fix it nearly in a horizontal position, and to draw out the arrows from beneath his arm. Many instances also occur in the sculptures of the quiver placed at the back, and projecting above the top of the shoulder; but this appears to have been only during the march, or at a time when the arrows were not required. It was closed by a lid or cover, which, like the quiver itself, was highly decorated, and, when belonging to a chief, surmounted with the head of a lion, or other ornament; and this, on being thrown open, remained attached by a leathern thong.³

They had also a case for the bow,⁴ intended to protect it against the sun or damp, and to preserve its elasticity; which was opened by drawing off a movable cap of soft leather sewed to the upper end. It was always attached to the war chariots; and across it inclined, in an opposite direction, another large case, containing two spears and an abundant stock of arrows;⁵ and besides the quiver he wore, the warrior had frequently three others attached to his car.

Archers of the infantry were furnished with a smaller sheath for the bow,⁶ of which it covered the centre, leaving the two ends exposed; and, being of a pliable substance, probably leather, it was put round the bow, as they held it in their hand during a march. Besides the bow, their principal weapon of offence, they,

¹ I am indebted for this curious fact to Colonel Leake, whose valuable researches are known to every reader.

² Apollo is so described by Homer, II. A, 45. (Hope's 'Costumes,' pl. ccxx.)

³ Woodcut No. 85.

⁴ The Greeks sometimes had the bow-case attached to the quiver, but open at the top. (Hope's 'Costumes,' pl. lxxvi. and cxxvi.)

⁵ Woodcut No. 62.

⁶ Woodcut No. 18.

like the mounted archers, who fought in cars, were provided with a falchion, dagger, curved stick, mace, or battle-axe, for close combat, when their arrows were exhausted; and their defensive arms were the helmet, or quilted headpiece, and a coat of the same materials; but they were not allowed a shield, being considered an impediment to the free use of the bow.

The spear, or pike, was of wood,¹ between five and six feet in length, with a metal head, into which the shaft was inserted and fixed with nails; and one of them, preserved in the Berlin Museum,² satisfactorily accords with the general appearance of those represented in the sculptures. The head was of bronze or iron, sometimes very large, usually with a double edge, like that of the Greeks; ³ but the spear does not appear to have been furnished with a metal point at the other extremity, called *σαυγοριῆς* by Homer,⁴ which is still adopted in Turkish, modern Egyptian, and other spears, in order to plant them upright in the ground, as the spear of Saul was fixed near his head, while he 'lay sleeping within the trench.'⁵ Spears of this kind should perhaps come under the denomination of javelins, the metal being intended as well for a counterpoise in their flight as for the purpose above alluded to; and such an addition to those of the heavy-armed infantry would neither be requisite nor convenient.

The javelin, lighter and shorter than the spear, was also of wood, and similarly armed with a strong two-edged metal head, generally of an elongated diamond shape, either flat, or increasing in thickness at the centre, and sometimes tapering to a very long point;⁶ and the upper extremity of its shaft terminated in a bronze knob, surmounted by a ball, to which were attached two thongs or tassels, intended both as an ornament and a counterpoise to the weight of its point.⁷ It was sometimes used as a spear, for thrusting, being held with one or with two hands; and sometimes, when the adversary was within reach, it was darted and still retained in the warrior's grasp, the shaft being allowed to pass through his hand till stopped by the blow, or by the fingers suddenly closing on the band of metal at the end; a custom I have often observed among the modern Nubians and

¹ Woodcuts Nos. 18, 19, 26.

² This spear is about five feet and a half long, but the shank of its bronze head is much longer than usual. (*Vide* woodcut No. 40, *fig.* 1.)

³ Hom. Il. O, 712.

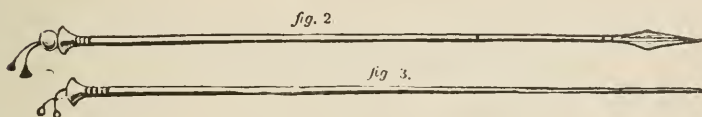
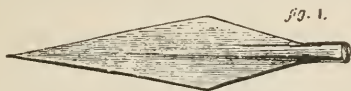
⁴ Hom. Il. K, 151.

⁵ 1 Sam. xxvi. 7. Conf. Virg. *Æn.* xii. 130.

⁶ Woodcut No. 92, *fig.* 9.

⁷ It resembles the Parthian javelin. (*Hope's 'Costumes,'* vol. i. pl. xiii.)

Ababdeh. They had another javelin apparently of wood, tapering to a sharp point, without the usual metal head; ¹ and a still lighter kind, armed with a small bronze point, ² which was fre-



No. 39.

Javelins and spear-head.

Thebes.

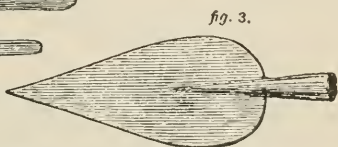
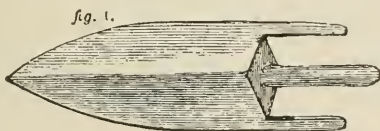


No. 40.

Spear-head and drum-stick.

Berlin Museum.

quently four-sided, three-bladed, ³ or broad and nearly flat; and, from the upper end of the shaft being destitute of any metal counterpoise, ⁴ it resembled a dart now used by the people of



No. 41.

Heads of small javelins.

Atwick Museum and Thebes.

Darfoor, and other African tribes, who, without any scientific knowledge of projectiles or the curve of a parabola, dexterously strike their enemy with its falling point.

¹ Woodcut No. 39, *fig. 3.*

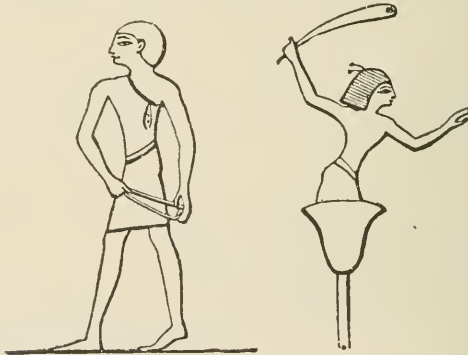
³ Woodcut No. 41, *fig. 2.*

² Woodcut No. 41, *fig. 1.*; and woodcut No. 92, *fig. 8.*

⁴ Woodcut No. 41, *fig. 4.*

Another inferior kind of javelin was made of reed, with a metal head; but this can scarcely be considered a military weapon, nor would it hold a high rank among those employed by the Egyptian chasseur, most of which were of excellent workmanship, and adapted to all the purposes of the chase, whether in the river or the field. Of these last, the most remarkable was one used for spearing fish: it was propelled by the hand with the assistance of a thin cord¹ passing over its notched summit, and extending down the shaft: but being solely intended for sportsmen, and not among the arms borne by the soldier, it is unnecessary here to describe it more minutely.

The sling was a thong of plaited leather² or string,³ broad in the middle, and having a loop at one end, by which it was fixed upon and firmly held with the hand; the other extremity terminating in a lash, which escaped from the fingers as the stone was thrown; and when used, the slinger whirled it two or three times over his head, to steady it and to increase the impetus.⁴



No. 42. Slingers. Slinger at the mast-head of a galley. *Beni-Hassan and Thebes.*

The Egyptians employed round stones for this purpose, which they carried in a small bag, hanging from a belt over the shoulder.⁵

The Egyptian sword was straight and short, from two and a half to three feet in length, having apparently a double edge, and tapering to a sharp point; and Herodotus⁶ compares the sword of Cilicia to that of Egypt. It was used for cut and thrust;

¹ The amentum. (Virgil, *Æn.* ix. 665.)

² Homer, *Il.* N. 599, mentions one made of a sheep's fleece.

³ As that still used in Europe to drive away birds from the corn-fields. *Vide*

woodcut No. 92, *figs.* 4 and 5.

⁴ Virg. *Æn.* ix. 587.

⁵ Woodcut No. 42, *fig.* 1.

⁶ Herodot. vii. 91.

but on some occasions they held it downwards, and stabbed as with a dagger. The handle was plain, hollowed in the centre, and gradually increasing in thickness at either extremity; sometimes inlaid with costly stones, precious woods, or metals;

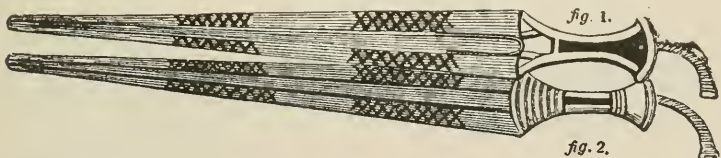


No. 43.

Stabbing an enemy.

Thebes.

and the pommel of that worn by the king in his girdle was frequently surmounted by one or two heads of a hawk, the symbol of Phrah, or the sun, a Pharaonic title given to the monarchs of the Nile. Strictly speaking, the short sword, so worn, should come under the denomination of a dagger, which was also a common Egyptian weapon, as is proved by those found in the excavated ruins of Thebes. It was much smaller than the



No. 44.

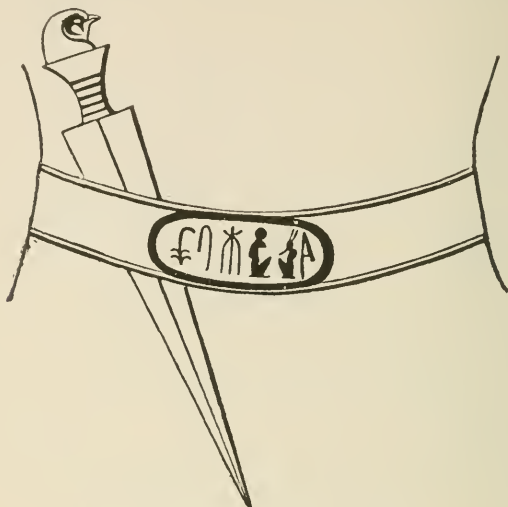
Daggers in their sheaths, with inlaid handles.

Thebes.

sword: its blade was about ten or seven inches in length, tapering gradually in breadth, from one inch and a half to two-thirds of an inch, towards the point; and the total length, with the handle, only completed a foot or sixteen inches. The handle, like that of the sword, was generally inlaid:¹ the blade was bronze, thicker in the middle than at the edges, and slightly

¹ Vide woodcut No. 92, fig. 7.

grooved in that part; and so exquisitely was the metal worked, that some of those I have examined retain their pliability and spring after a period of several thousand years, and almost

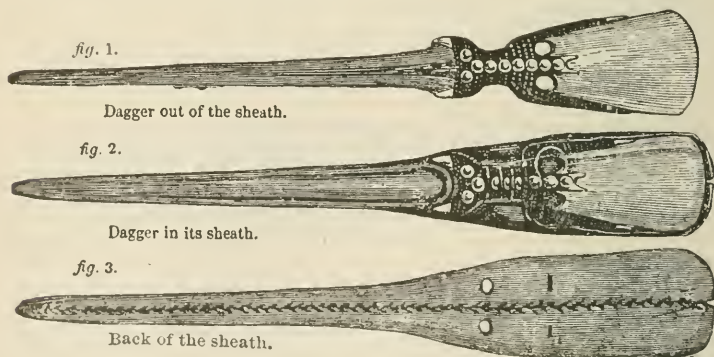


No. 45.

Mode of wearing the dagger by Rameses II.

Thebes.

resemble steel in elasticity. Such is the dagger of the Berlin Collection, which was discovered by Sig. Passalacqua in a Theban tomb; and, in noticing it, I avail myself of the opportunity of

*fig. 1.*

Dagger out of the sheath.

fig. 2.

Dagger in its sheath.

fig. 3.

Back of the sheath.

No. 46.

Dagger, with its sheath.

Berlin Museum.

acknowledging his kindness, which has enabled me to introduce a representation of it, in the actual state in which it was found, enclosed in a leathern sheath.¹ The handle is partly covered

¹ Woodcut No. 46, *fig. 2.*

with metal, and adorned with numerous small pins and studs of gold,¹ which are purposely shown through suitable openings in the front part of the sheath; but the upper extremity consists solely of bone, neither ornamented, nor covered with any metal casing: other instances of which have elsewhere been found,² offering, in this respect, remarkable exceptions to the usual inlaid handles of Egyptian daggers,³ already noticed.⁴

The knife was also shorter than the sword, and had a single edge, intended only for cutting, as was the falchion, a species of *ensis falcatus*.⁵ This last was called Shopsh, or Khopsh; and the resemblance of its form and name to the *kopis*⁶ of the Greeks, suggests that the people of Argos, an Egyptian colony, by whom it was principally adopted, originally derived that weapon from the falchion of Egypt. It was more generally used than either the knife or the sword, being borne by light as well as heavy armed troops; and that such a weapon must have inflicted a severe wound is evident, as well from the size and form of the blade as from the great weight it acquired by the thickness of the back, which was sometimes cased with brass, the blade itself being of bronze or iron.⁷

Officers as well as privates carried the falchion; and the king himself is frequently represented in close combat with the enemy, armed with it, or with the hatchet, battle-axe, pole-axe, or mace. A simple stick is more usually seen in the hand of officers commanding corps of infantry, though we cannot thence infer that they were not always provided with some other more efficient weapon; and in leading their troops to the charge, we see them armed in the same manner as the king when he fought on foot. In chariots they had the bow; and every chief prided himself upon his dexterity in archery, and emulated the skill as well as the valor of the monarch.

The axe, or hatchet, was small and simple, seldom exceeding

¹ Like the swords mentioned by Homer. (Il. II, 135; and T, 372.)

² A dagger in the British Museum. The hole in the handle is for the insertion of the finger and thumb when stabbing. Daggers were called *bagasu* or *maqasu* by the Egyptians. — S. B.

³ Another dagger with a simple unornamented handle is given in woodcut No. 92, *fig.* 3; but I am not certain about its date.

⁴ A dagger with a stone blade of flint,

and part of a leathern scabbard, from the Hay Collection in the British Museum, is figured by Chabas, 'Mélanges,' p. 386. — S. B.

⁵ One of peculiar shape is figured by Chabas, 'Études,' p. 93.

⁶ Q. Curtius, lib. iii. Apul. Metam. lib. xi. [V. Xenophon, 'Cyrop.' 6, c. ii. 10. — G. W.]

⁷ From the color of those in the tombs of the kings, we may conclude iron or steel.

two or two and a half feet in length; it had a single blade, and no instance is met with of a double axe resembling the bipennis of the Romans.¹ Of the same form was that used by the Egyptian carpenters; and not only did the soldiers carry it as a serviceable weapon in close combat, but even for breaking down the gates of a town, and felling trees to construct engines for an assault. Independent of bronze pins which secured the blade, the handle was bound in that part with thongs of hide, in order to prevent the wood, split to admit the metal, from opening when exposed

to the sun; and the same precaution was adopted in those belonging to joiners and others, who worked in their own shops.

The axe was less ornamented than other weapons: some bore the figure of an animal, a boat, or fancy device, engraved upon the blade; and the handle, frequently terminating in the shape of a gazelle's foot, was marked with circular and diagonal lines, representing bands, as on the projecting torus of an Egyptian temple, or like the ligature of the Roman fasces.² The soldier, on his march, either held it in his hand, or suspended it at his back, with the blade downwards; but it does not appear from the sculptures whether it was covered by a sheath, nor is any mode of wearing a sword indicated by them, except as a dagger in the girdle, the handle sloping to the right.³

The blade of the battle-axe was, in form, not unlike the Parthian⁴ shield; a segment of a circle, divided at the back into two smaller segments, whose three points were fastened to the handle with metal pins. It was of bronze, and sometimes, if we may be allowed to judge from the color of those in the paintings at Thebes, of steel; and the length of the handle was equal to, or more than double that of, the blade. Mr. Salt's collection, part of which was purchased



No. 47. Axes or hatchets.
Thebes, and in the British Museum.

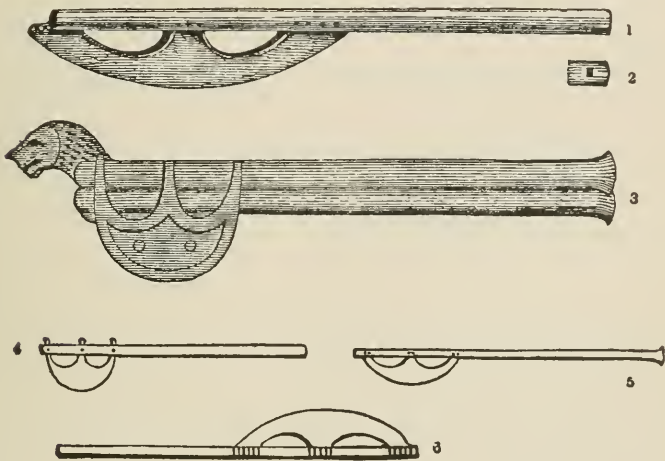
¹ It was called *aka* or *akas*.

² Woodcut No. 47, and No. 92, *fig.* 1.

³ As in woodcut No. 45.

⁴ Hope's 'Costumes,' vol. i. pl. xx.

by the British Museum, contained a portion of one of these weapons,¹ whose bronze blade was thirteen inches and a half long, and two and a half broad, inserted into a silver tube, secured with nails of the same metal. The wooden handle once fixed into this tube was wanting; but, judging from those represented at Thebes, it was considerably longer than the tube, and even protruded a little beyond the extremity of the blade, where it was sometimes ornamented with the head of a lion or other device, receding slightly,² so as not to interfere with the blow; and the total length of the battle-axe may have been from three to four feet. In some battle-axes the handles were very short,³



No. 48.

Battle-axes.

Thebes and Beni-Hassan.

scarcely exceeding the length of the silver tube above mentioned, which in this specimen is only eleven inches and a half longer than the blade, and may have been the entire handle; the small aperture at the lower end⁴ serving equally for admitting the pin which secured the wood inserted into it, whether this extended beyond, or merely filled the tube.

The blades of the battle-axes represented in the paintings of Thebes offer two forms, one of which is more circular⁵ than that of Mr. Salt's; from the excellence, however, of its workmanship and materials, we may conclude that this last was of the most general and approved shape, and perhaps belonged to

¹ Woodcut No. 48, *fig. 1.*

² As *fig. 3.*

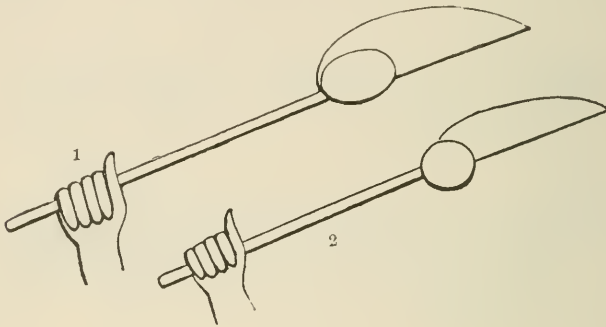
³ As *fig. 6*, which is from the sculptures

⁴ *Fig. 2.*

⁵ *Figs. 3 and 4.*

some military chief, or to the king himself; and it is singular that an axe very similar to this was formerly used by the Germans, and other European infantry.

The pole-axe was about three feet in length, but apparently more difficult to wield than the preceding, owing to the great weight of a metal ball to which the blade was fixed; and if this increased its force, and rendered the blow more destructive, it required, like the mace, a powerful as well as a skilful arm to use it with success, and to make it as efficient a weapon as the battle-axe.



No. 49.

Pole-axes.

Thebes.

We rarely find an entire corps of men armed with it; the only instance I remember occurring at E'Sioot, where the same soldiers bear the cumbrous shields already noticed;¹ it may, therefore, have been peculiar to certain troops, and to the chiefs, in whose hands it is usually represented. The handle was generally about two feet in length, sometimes much longer: the ball four inches in its greatest diameter,² and the blade varied from ten to fourteen inches, by two and three in breadth.

The mace was very similar to the pole-axe, without a blade, and appears to correspond to the *koryne* of the Greeks, which was frequently of iron. That used by the Egyptians was of wood, bound with bronze, about two feet and a half in length, and furnished with an angular piece of metal, projecting from the handle, which may have been intended as a guard, though in many instances they represent the hand placed above it, while the blow was given.³

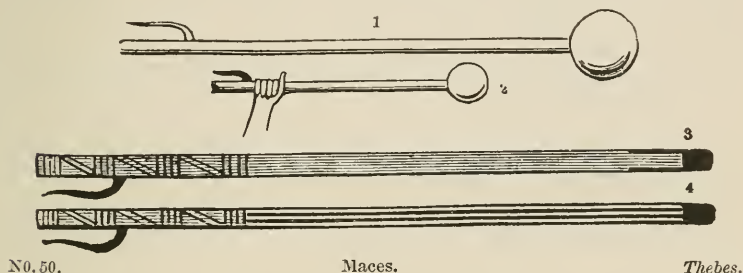
¹ Woodcut No. 29.

² I suppose it to have been a ball, rather than a flat, circular piece of metal; the ball whipped with leathern straps crossed,

to hold the whole firm. — S. B.

³ Woodcut No. 50, *fig. 2*; the Egyptian *hut*. — S. B.

They had another mace,¹ similar in many respects to this, without the ball, and, to judge from its frequent occurrence in the sculptures, more generally used, and evidently far more manageable; but the former was a most formidable weapon against armor, like that used for the same purpose by the Memlooks² and the modern people of Cutch; and no shield, helmet, or cuirass could have been a sufficient protection against the



No. 50.

Maces.

Thebes.

impetus given it by a powerful arm. Neither of these was peculiar to the chiefs: all the soldiers in some infantry regiments were armed with them; and a charioteer was furnished with one or more, which he carried in a case attached with the quiver to the side of his car.³

In ancient times, when the fate of a battle was frequently decided by personal valor, the dexterous management of such arms was of primary importance; and a band of resolute veterans, headed by a gallant chief, spread dismay among the ranks of an enemy; as Homer describes Areithous alone breaking through an opposing phalanx with his iron mace.⁴ Notwithstanding the great improvements which have taken place in the art of war, by the introduction of artillery and the musket, and by the machinery of modern armies, physical strength and individual courage are still considered the highest recommendation in close combat: thus the Egyptians, though they placed their chief reliance in the skill of their archers, failed not to attach great importance to heavy infantry, and paid particular attention to the nature of their offensive as well as defensive arms. And the variety of weapons used by different corps, as well as the care they took in allotting to each its respective duties during action, in selecting those best suited for a peculiar

¹ Woodcut No. 50, *figs.* 3 and 4.

² Called dabóss, or dabbóos.

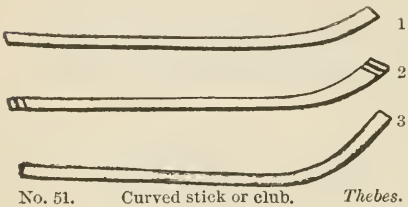
³ Egyptian chariot, in woodcut No. 62, p. 230.

⁴ Homer, *Il. II.*, 138.

service, and in the judicious arrangement of the army and its component parts, argue the great experience acquired by the Egyptians in the art of war.

They had another kind of mace, sometimes of uniform thickness through its whole length, sometimes broader at the upper end, without either the ball or guard, and many of their allies carried a rude, heavy club;¹ but no body of native troops was armed with the last, and indeed it cannot be considered an Egyptian weapon.

The curved stick or club, now called *lissán*,² was used by heavy and light-armed troops as well as archers; and if it does not appear a formidable arm,



yet the experience of modern times bears ample testimony to its efficacy in close combat. To the Bisharieen it supplies the place of a sword; and the Ababdeh, content with this, their spear, and

shield, fear not to encounter the hostile Maazy, whom they frequently defeat, though armed with the matchlock and the *atagan*.³ In length, that of the ancient Egyptians was probably the same, about two feet and a half, and made of a hard thorn wood, as the mimosas, *sellem* and *sumr*; which are still used for the same purpose, as well as for the shafts of the Ababdeh lance.

The shield, their principal defence, I have already noticed. The helmet was usually quilted, but rarely of metal; and though bronze helmets are said to have been worn by the Egyptians,⁴ we may conclude that, in accordance with the authority of the sculptures, they preferred and generally adopted the former, which being thick, and well padded, served as an excellent protection to the head, without the inconvenience resulting from the metal in so hot a climate.⁵ Some of them descended to the shoulder,⁶ others only a short distance below the level of the ear;⁷ and the summit, terminating in an obtuse point, was

¹ Woodcut No. 16, *fig.* 3.

² *i.e.*, 'tongue,' in Arabic.

³ A long knife, or straight sword, worn in the girdle, and called *gembééh*, 'side-arm,' by the Arabs.

⁴ Herod. ii. 151.

⁵ This alone would not be a sufficient objection, since metal helmets are still

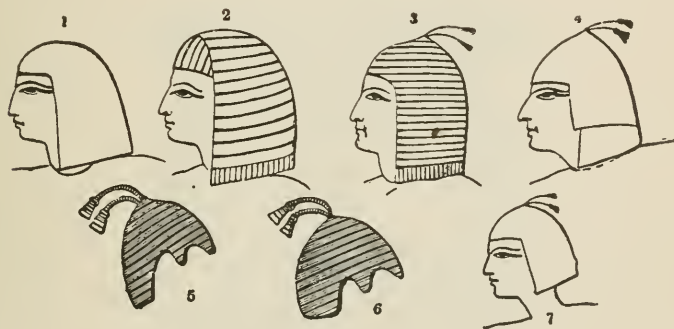
worn even in the far hotter climates of Darfoor and Kordofan. The helmet of the Pharaoh was called *khepersé*; the other soldiers wore no helmet, only a skull cap, *namms*, or quilted cap.—S. B.

⁶ Woodcut No. 52, *figs.* 1 and 3.

⁷ *Figs.* 5, 6, 7.

ornamented with two tassels.¹ They were of a green, red, or black color; and the long helmet, which fitted less closely to the back of the head, was fringed at the lower edge with a broad border,² and in some instances consisted of two parts, or an upper and under fold.³ Another, worn also by the spearmen and many corps of infantry and charioteers, varied slightly from these, though very similar in many respects, being quilted, and descending to the shoulder with a fringe; but it had no tassels, and fitting close to the top of the head, it widened towards the base—the front, which covered the forehead, being made of a separate piece⁴ attached to the other part.

If there is no representation of an Egyptian helmet with a crest, we are less surprised, since even the ancient Greeks did not always adopt it,⁵ but that of the Shairetana, once enemies and afterwards allies of the Pharaohs, is particularly interesting,



No. 52.

Helmets or head-pieces.

Thebes.

since it shows the existence of a custom as early as two hundred years before the Trojan war, which was afterwards introduced by the Greeks, of adorning the helmet with horns; whence the name *keras*, 'horn,' was sometimes chosen to signify a crest.⁶

The outer surface of the cuirass, or coat of armor, consisted of about eleven horizontal rows of metal plates, well secured by bronze pins: and at the hollow of the throat a narrower range of plates was introduced, above which were two more, completing the collar or covering of the neck. The breadth of each plate or scale was little more than an inch, twelve of them sufficing to

¹ Woodcut No. 52, *figs.* 3, 4, 5, 6, 7.

² *Figs.* 2, 3. ³ *Fig.* 4. ⁴ *Fig.* 2.

⁵ This helmet was called *kataityx*. (Homer, *Il.* κ, 258.)

⁶ According to Suidas. Our word crest bears a strong resemblance to the Greek. (Hope's 'Costumes,' plate cxxx.; and *infra*, on the enemies of the Egyptians.)

cover the front of the body; and the sleeves, which were sometimes so short as to extend less than half-way to the elbow, consisted of two rows of similar plates.¹ Many, indeed most, of the cuirasses were without collars; in some the sleeves were rather longer, reaching nearly to the elbow, and they were worn both by heavy infantry and bowmen. The ordinary cuirass may have been little less than two feet and a half in length: it sometimes covered the thighs nearly to the knee; and in order to prevent its pressing heavily upon the shoulder, they bound their girdle over it, and tightened it at the waist. But the thighs, and that part of the body below the girdle, were usually covered by a kilt,² or other robe, detached from the cuirass; and many of the light and heavy infantry were clad in a quilted vest of the same form as the coat of armor, for which it was intended to be a substitute: and some wore corslets, reaching only from



No. 53.

Corslet, worked in colors.

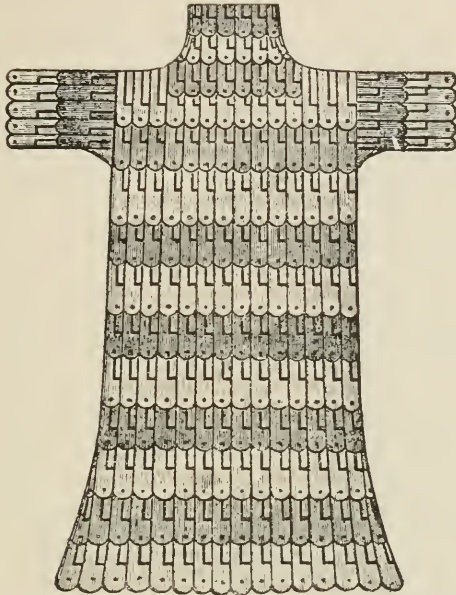
the waist to the upper part of the breast, and supported by straps over the shoulder, which, to judge from the sculptured representations of them, appear to have been faced with metal plates.³

¹ [V. Paus. Att. xxi. p. 152, edit. Siebelis. — G. W.]

² The *zoma*, or *zoster*, of the Greeks.

³ Vide woodcut No. 55, figs. 10, 11, 12.

Among the arms painted in the tomb of Rameses III., at Thebes, is a piece of defensive armor,¹ which, from the hollowed space left for the arm, seems to have been a sort of coat, or



No. 53a.

Corselet with metal scales.

Tomb of Rameses III., Thebes.

covering for the body, and were it not so highly ornamented, might be considered a *μίτρον* or belt worn beneath the cuirass as a coat of mail.¹ It is made of a rich stuff, worked or painted with the figures of lions and other animals, devices common upon the shield and other parts of Greek armor, and is edged with a neat border, terminating below in a broad fringe; and though there is no appearance of metal plates, it may have been intended as a substitute for the more weighty coat of mail, which was not worn on all occasions either by infantry or charioteers. Some wore corselets, reaching only from the waist to the upper part of the breast, and supported by straps over the shoulder, which were faced with bronze plates. A



No. 54. Plates of scale-armor. With the name of Sheshanqa.

¹ See also Prisse, 'Mon. Egypt,' pl. xvi. 3, p. 8.

portion of one is in Dr. Abbott's collection. It is made of bronze plates (in the form of Egyptian shields), overlapping each other, and sewed upon a leathern doublet; two of which have the name

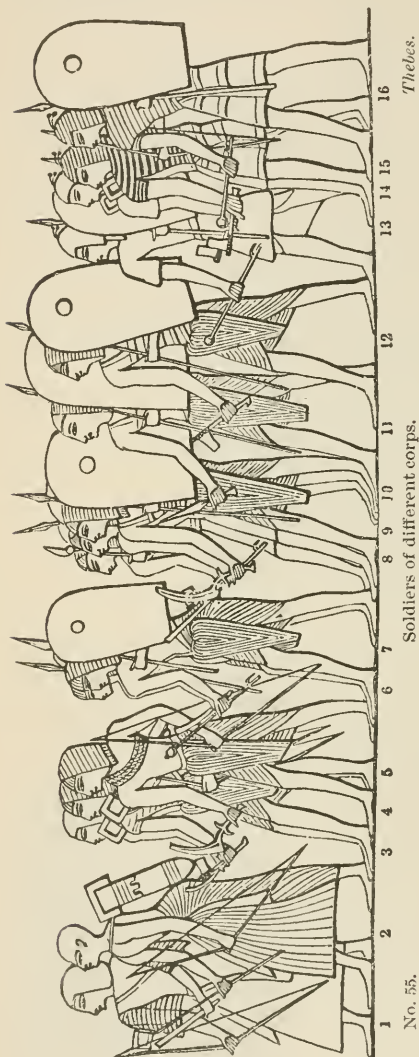
of Sheshanqa (Shiskah), showing it either belonged to that king, or to some great officer of his court. The Greeks in like manner made some thoraces of hide, hemp, linen, or twisted cord.

Heavy-armed troops were furnished with a shield and spear; some with a shield and mace; and others, though rarely, with a battle-axe or a pole-axe and shield. They also carried a sword, falchion, curved stick or *lissán*, simple mace, or hatchet, which may be looked upon as their side-arms.¹

The light troops, who were not archers, had nearly the same weapons, but their defensive armor was lighter: and some were without the incumbrance of a shield, as the slingers,² and a few others, whose duty required great agility, and who fought in scattered parties, like the Velites of the Romans. The arms of the bowmen have been already mentioned. Of the Egyptian cavalry we are unable to obtain any satisfactory information; and it

now remains to notice the corps of chariots, which constituted a very large and effective portion of the Egyptian army.

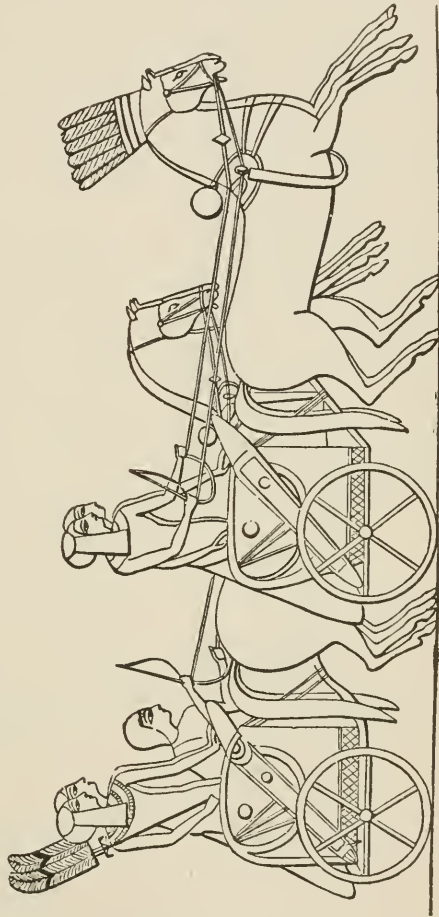
Each car contained two persons, like the *diphros* of the



¹ Woodcut No. 55.

² *I*vide woodcut No. 42.

Greeks.¹ On some occasions it carried three, the charioteer or driver and two chiefs; but this was rarely the case, except in triumphal processions, when two of the princes or noble youths accompanied the king in their chariot, bearing the regal sceptre, or the *flabella*, and required a third person to manage the reins.² In the field each had his own car, with a charioteer; and the insignia of his office being attached behind him by a broad belt,³ his hands were free for the use of the bow and other arms. When on an excursion for pleasure, or on a visit to a friend, an Egyptian gentleman, or even the king, mounted alone, and drove himself, footmen and other attendants running before and behind the car, like the *Syis* or grooms of modern Egypt and India, who, when the carriage stopped, were ready to take the reins, and walked the horses till their master returned, continuing, however, on foot,⁴ and not venturing to step into it; a custom equally observed by those who wished to show marked respect to



Thebes.

The royal princes in their chariots.

No. 56.

¹ A name which implies carrying two. The Roman war chariot also contained two persons; the *bellator*, or warrior, and the *auriga*, or driver. (Virg. *Æn.* ix. 330; ii. 469, 624, 737.) Conf. Isaiah xxi. 7: or rather 1 Kings xx. 20, and 2 Chron. xvi. 8; since the former appears to

refer to men riding on horses, פָּרָשִׁים. *Fares* is also, in Arabic, a horseman or a Persian; and *fāras*, the mare, is the horse *par excellence*.

² Woodcut No. 56, fig. 1.

³ Woodcut No. 57.

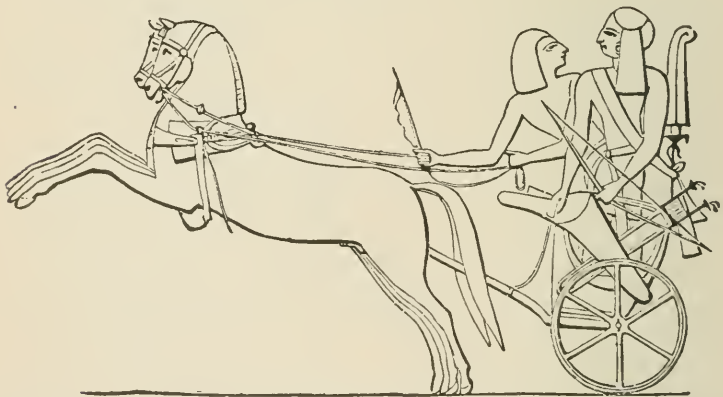
⁴ Woodcut No. 3, p. 33.

the king, when passing before or following him, in state processions.

In battle, also, many attendants were always in readiness; and whenever a general dismounted from his car, to lead his troops over hilly and precipitous heights inaccessible to chariots, to the assault of a fortified town, or for any other purpose, they took charge of the horses, and keeping them in some secure place they awaited his return, or followed at a short distance; and a second car¹ with fresh horses was always ready in the rear, in order to provide against accident, or the still less welcome chance of a defeat.

In the battle-scenes of the Egyptian temples, the king is represented alone in his car, unattended by any charioteer,² the reins fastened round his body, while engaged in bending his bow against the enemy; but it may be doubted whether we are to infer the absence of that person: and he may have been omitted, in order not to interfere with the principal figure and feature of the picture, which, with a similar notion of exclusiveness, they were accustomed to draw of colossal dimensions.

The cars of the whole chariot corps contained each two warriors,³ comrades of equal rank, both joining in the labors



No. 57.

The son of King Rameses, with his charioteer.

Thebes.

and glory of the fight; and if the charioteer who accompanied a chief⁴ did not hold the same high station, he was probably appointed to the post as a mark of distinction; and from the

¹ 2 Chron. xxxv. 24.

² Conf. Homer, gods and heroes, *passim*.
The charioteer was called *gatsen*.—S. B.

³ In the battle with Rameses II. the

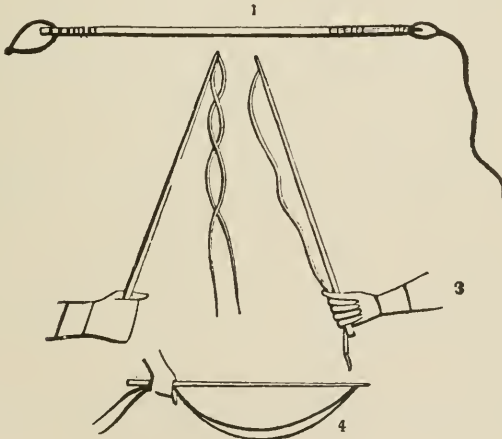
Khita had three in each chariot,—the charioteer, shield-bearer, and warrior.—S. B.

⁴ Conf. Hom. Il. A, 399; and M, 84.

familiar manner in which one of them is represented conversing with a son of the great Rameses, we may conclude the office was filled by persons of consideration, who were worthy of the friendship they enjoyed.¹

As with the Greeks, the employment was neither servile nor ignoble; and if Hector,² Nestor,³ Ulysses,⁴ and others were not ashamed to act in this capacity, Egyptian officers of note, in like manner, undertook the management of their own cars, and prided themselves on their skill in driving, as in wielding the javelin and bow: but whether the chariot race was instituted in Egypt does not appear; and we may conclude from the absence of the subject in their sculptures, and of the hippodrome in the precincts of towns of early date, that the celebration of games similar to those of Greece was unknown there previous to the Macedonian conquest: the only hippodromes being at Alexandria, and at the Roman town of Antinoë, founded by Hadrian, in Upper Egypt.

In driving, the Egyptians used a whip, like the heroes and charioteers of Homer; and this, or a short stick, was generally



No. 58.

Whips.

Thebes.

employed even for beasts of burden, and for oxen at the plough, in preference to the goad. The whip consisted of a smooth round wooden handle, and a single or double thong: it sometimes had a lash of leather, or string, about two feet in length, either

¹ Conf. Hom. Il. ̑, 120; and A, 518.

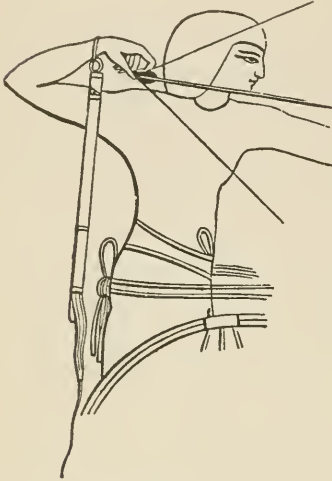
² Il. ̑, 352. And the gods frequently.

³ Il. ̑, 116. Nestor mounts the car of

Diomedes and takes the reins and whip.

⁴ Il. κ, 513.

twisted or plaited; and a loop being attached to the lower end, the archer was enabled to use the bow, while it hung suspended from his wrist.¹



No. 59. Whip suspended from the wrist of an archer. *Thebes.*

When a hero encountered a hostile chief, he sometimes dismounted from his car, and substituting for his bow and quiver the spear, battle-axe, or falchion, he closed with him hand to hand, like the Greeks and Trojans described by Homer: and the lifeless body of the foe, being left upon the field, was stripped of its arms by his companions. Sometimes a wounded adversary, incapable of further resistance, having claimed and obtained the mercy of the victor, was carried from the field in his chariot;² and the ordinary captives, who laid down their arms and yielded to the Egyptians,

were treated as prisoners of war, and were sent bound to the rear under an escort, to be presented to the monarch, and to grace his triumph after the termination of the conflict. The hands of the slain were then counted before him; and this return of the enemy's killed was duly registered, to commemorate his success and the glories of his reign, — a subject which occurs more than once on the walls of Medeenet Haboo; and the great picture sculptured in the inner area of that building represents Rameses seated in his car, while the tellers, taking the hands by the thumb, place them in a heap before him, and count them to the military scribes.

From the position of the king in this picture, the Egyptian chariot might appear to be furnished with a seat; but judging from the usual representations in the Theban sculptures, and from the nature of other ancient cars, it is more probable that he is seated on the side or front.³ Indeed, for persons frequently

¹ Woodcut No. 59.

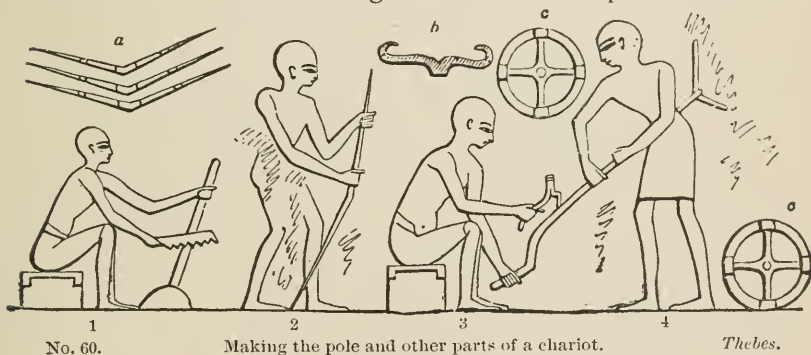
² At Karnak king Osirei (Seti I.) is represented carrying under each arm two vanquished chiefs; and many inferior captives, bound with cords, follow him to his car.

³ [An instance does, however, occur of the king seated in his car. Greek vases also represent a car made with a seat and place for the feet. — G. W.]

accustomed to forego the use of seats, there could be little necessity for its introduction; and though the Egyptian rooms were furnished with chairs and raised sofas, it was not unusual for persons of all ranks to sit upon the ground, crouched like the Nubians on a pedestrian journey, or cross-legged like the modern inhabitants of Eastern countries, when in the house, and even in their carriages. The same remark applies to the chariots of those enemies with whom they fought; and the representation of wounded warriors falling backwards out of their car, frequently occurring in the battle scenes of Thebes, and so forcibly calling to mind the descriptions of Homer,¹ may be adduced as an additional argument to prove the absence of any seat or bench within it.

In some Egyptian chariots, the bottom part consisted of a frame interlaced with thongs or rope, forming a species of network, in order, by its elasticity, to render the motion of a carriage without springs more easy: and this custom is very prevalent at the present day in Italy and other countries in carts and carriages used by the lower orders; but it is difficult to determine whether it was adopted in every Egyptian car.

That the chariot was of wood² is abundantly proved by the sculptures, wherever workmen are seen employed in making it; and the fact of their having, at the earliest period of their



known history, already invented and commonly used a form of pole whose introduction into our own country dates only about a century ago,³ is a remarkable instance of the truth of Solomon's

¹ Il. 6, 122; and E, 585.

² In Joshua we read of the Canaanites having 'chariots of iron' (xvii. 16). Solomon made a chariot of the wood of Lebanon. (Sol. Song, iii. 9).

³ The pole of the Greek chariots was usually straight; but instances are met with of it curved, as in those of Egypt.

assertion, 'there is no new thing under the sun,'¹ and shows the advancement they had made at that very remote era, and the skill of their workmen. And that this last was of wood, and not, as some have imagined, of bronze or other metal, we have a decided proof, from the representations of workmen cutting and fashioning it with an axe.²

The body of the car was exceedingly light, consisting of a wooden framework, strengthened and ornamented with metal and leather binding, like many of those mentioned by Homer:³ the bottom part, on which the charioteer stood, was flat, whether of an entire piece or of the thongs already alluded to, the whole resting on the axle-tree and lower extremity of the pole, which was itself inserted into the axle. Its centre was not placed directly over the axle, in order to be on an equilibrium, but much more forward, the back part seldom extending behind the middle of the wheel, so that the body pressed considerably upon the pole, to which also the upper rim of its front was connected by means of thongs or straps. The weight was therefore divided between the wheels and the horses; but as a chariot was easily carried by one man,⁴ we may conclude that even with the addition of two persons it was not such as to fatigue the horses, and this mode of placing it had the advantage of rendering the motion far more easy to the driver.⁵ When the horses were taken out, the pole, unless propped up in some manner, fell to the ground; they therefore rested it on a support, which was sometimes a wooden figure of a man, intended to represent a captive, or enemy, who was considered fitted for this degrading office.

The greater portion of the sides, and the whole of the back, were open; the latter indeed entirely so, without any rim or framework above; and the hinder part of the lateral framework commenced nearly in a line with the centre of the wheel, and rising perpendicularly, or slightly inclined backwards, from the base of the car, extended with a curve, at the height of about two feet and a half, to the front, serving as well for a safeguard to the driver as a support for his quivers and bow-case. To strengthen it, three thongs of leather were attached at either

¹ Eccles. i. 9.

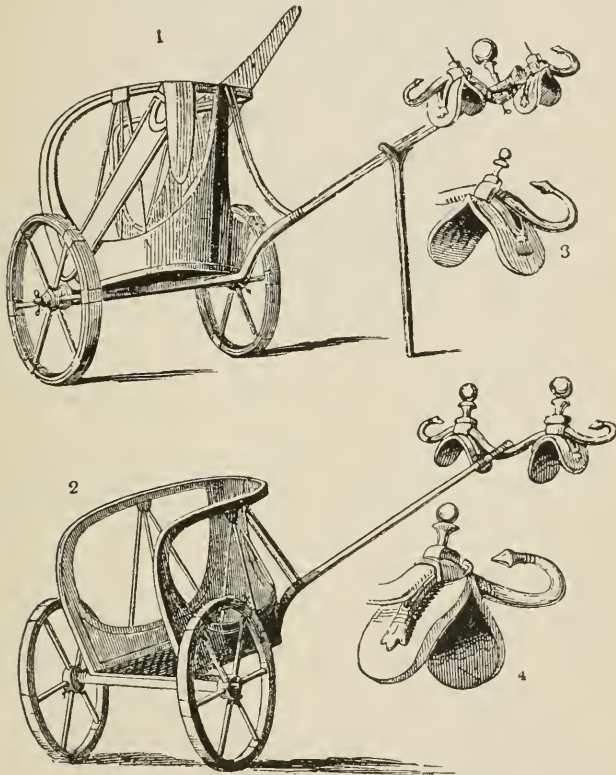
² Woodcut No. 60, *fig.* 3.

³ Homer, *Il.* κ, 438. Rhesus' car was bound with gold and silver; that of Diomedes, with gold and tin.

⁴ In the sculptures. Another supports the pole and traces.

⁵ The body of the Greek car was also placed very forward, less so than that of Egypt; but it must have been much heavier.

side, and an upright of wood connected it with the base of the front part immediately above the pole, where the straps before mentioned were fastened; as may be seen in those I have already given from the ancient paintings and sculptures of Thebes, and in the accompanying view of the simple body of a car, represented according to our European mode of drawing.



No. 61.

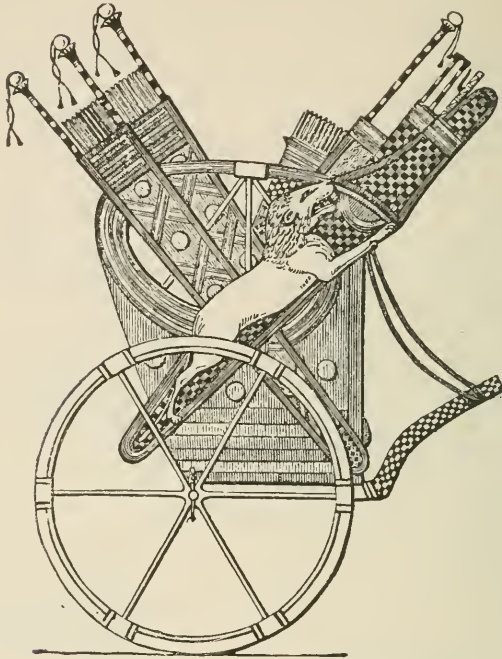
Figs. 1, 2. Chariots, in perspective.
3, 4. Saddles and part of the yoke. From different Sculptures.

It is, however, reasonable to suppose that they sometimes varied slightly in form, and that the car of war was of a different construction in some respects from the *plaustrum*,¹ or from the curriole of towns; and we not only find the two last destitute

¹ The Roman *plaustrum* had two, sometimes four, wheels. The wagons, or rather carts, sent by Pharaoh for Jacob are called, in Hebrew, עֲגֻלֹת, wheeled car-

riages; the chariot was מִרְכָּבָה, or רֶכֶב (*une monture*). *Plaustrum* is here used for a two-wheeled chariot drawn by oxen.

of all the cases for weapons except that of the bow, and some



No. 62.

A war chariot, with bow-cases and complete furniture.

Thebes.

No. 63.

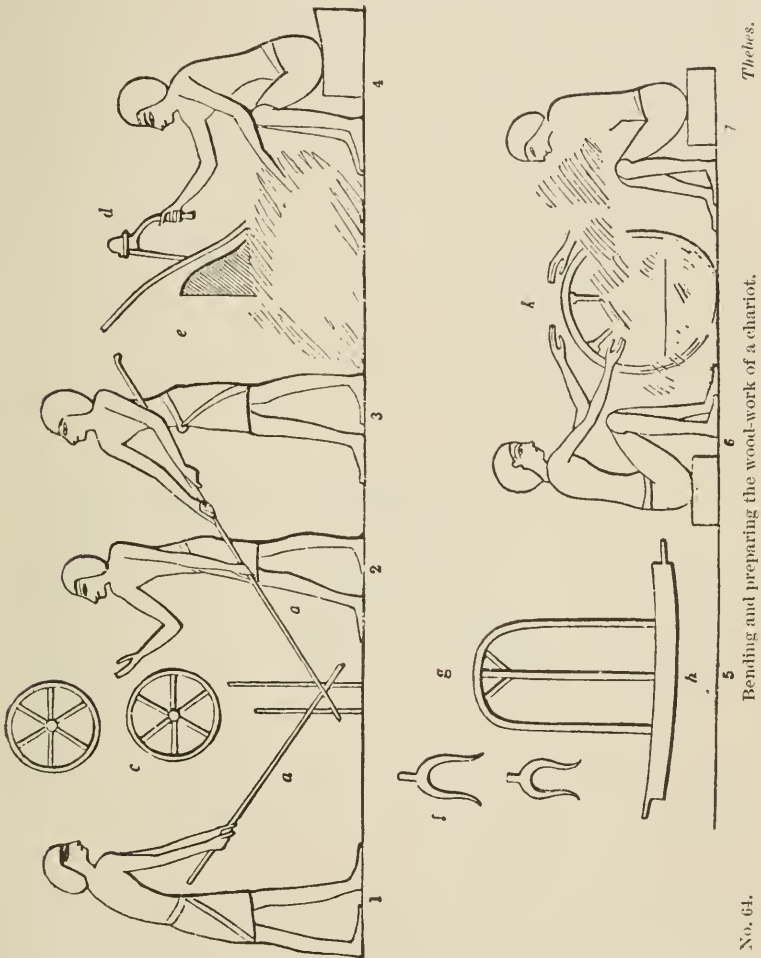
Chariot of the Rut-en-nu.

Thebes.

times of that also, but the solid portion of their sides was generally lower than in the former, where greater protection was

required for those within; and on this account the Greek cars were entirely closed, except at the back.¹

The bow-case, frequently richly ornamented with the figure of a lion or other devices, was placed in an inclined position,



Thebes.

Bending and preparing the wood-work of a chariot.

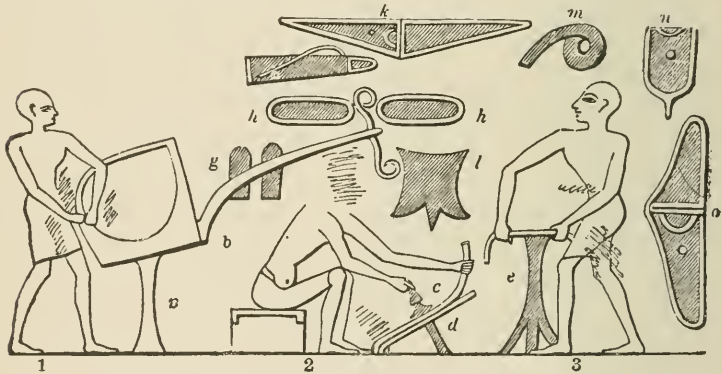
No. 64.

pointing forwards; its upper edge, immediately below the flexible leather cover, being generally on a level with the summit of the framework of the chariot; so that when the bow was drawn out, the leather cover fell downwards, and left the upper part on an uninterrupted level. In battle this was of course a

¹ In pl. iii. of Hope's 'Costumes' is a car less closed than usual.

matter of no importance; but in the city, where the bow-case was considered an elegant part of the ornamental hangings of a car, and continued to be attached to it, they paid some attention to the position and fall of the pendent cover, deprived as it there was of its bow, since, as I have elsewhere observed, the civilized state of Egyptian society required the absence of all arms, except on service. The quivers and spear-cases were suspended in a contrary direction, pointing backwards; sometimes an additional quiver was attached close to the bow-case, with a mace and other arms, and every war chariot containing two men was furnished with the same number of bows.

The framework, as I have stated, was of wood, like the pole, wheels, and other parts of the chariot; and we even find the mode of bending the wood for that purpose represented in the sculptures.¹ In the ornamental trappings, hangings, and binding of the framework and cases, leather was principally used, dyed of various hues, and afterwards adorned with metal edges and studs, according to the taste of the workman or purchaser; and



No. 65.

Cutting leather and binding a car.

Thebes.

the wheels, strengthened at the joints of the felloe with bronze or brass bands, were bound with a hoop of metal.² The Egyptians themselves have not failed to point out what parts were the peculiar province of the carpenter and the currier. The body and framework of the car, the pole, yoke, and wheels, were the work of the former; the cases for the bows and other arms, the saddle and harness, the binding of the framework, and the coverings of the body, were finished by the currier; and lest it

Woodcut No. 64, in the preceding page.

² Conf. Hom. Il. E, 724.

should not be sufficiently evident that they are engaged in cutting and bending the leather for this purpose, the artist has distinctly pointed out the nature of the substance they employed, by figuring an entire skin, and the soles of a pair of shoes,¹ or sandals, suspended in the shop; and no European can look at the subject without remarking that the semi-circular knife² used by the Egyptians to cut leather was precisely similar to our own, even in the remote age of King Amenophis II., who lived 1450 years before our era.

In war chariots, the wheels had six spokes;³ in many curricles, or private cars, employed in towns, only four;⁴ and the wheel was fixed to the axle and by a small lynch-pin, sometimes surmounted with a fanciful head, and secured by a thong which passed through the lower end: plainly proving that the axle-tree itself did not turn, as some have imagined. There are no instances of chariots with more than two wheels;⁵ *currus falcati*, or cars armed with scythes, were unknown in Egypt,⁶ being probably contemned by them as by all nations who made any great advances in military tactics: nor was it their custom to use camels, or elephants in war, like the Indians and some other nations of antiquity;⁷ and it is probable that the former were only employed in their army for the transport of baggage and provisions, much of which was carried upon asses,⁸ in those parts where water is abundant. One instance alone occurs of an Egyptian carriage with four wheels, similar to that mentioned by Herodotus.⁹

¹ Woodcut No. 65, *l* and *g*.

² It occurs very frequently. Woodcut No. 65, *c*. It was like the Greek *arbēlon*. — S. B.

³ The spokes appear to have been generally round.

⁴ Homer gives the car of Juno wheels with eight spokes (Il. E, 723), which is the usual number in the Greek sculptures; instances, however, occur of four, six, and twelve. (*Vide* Hope's 'Costumes,' pl. iii. 205 and 236.)

⁵ There is only one representation of a carriage with four wheels: woodcut No. 69, p. 237.

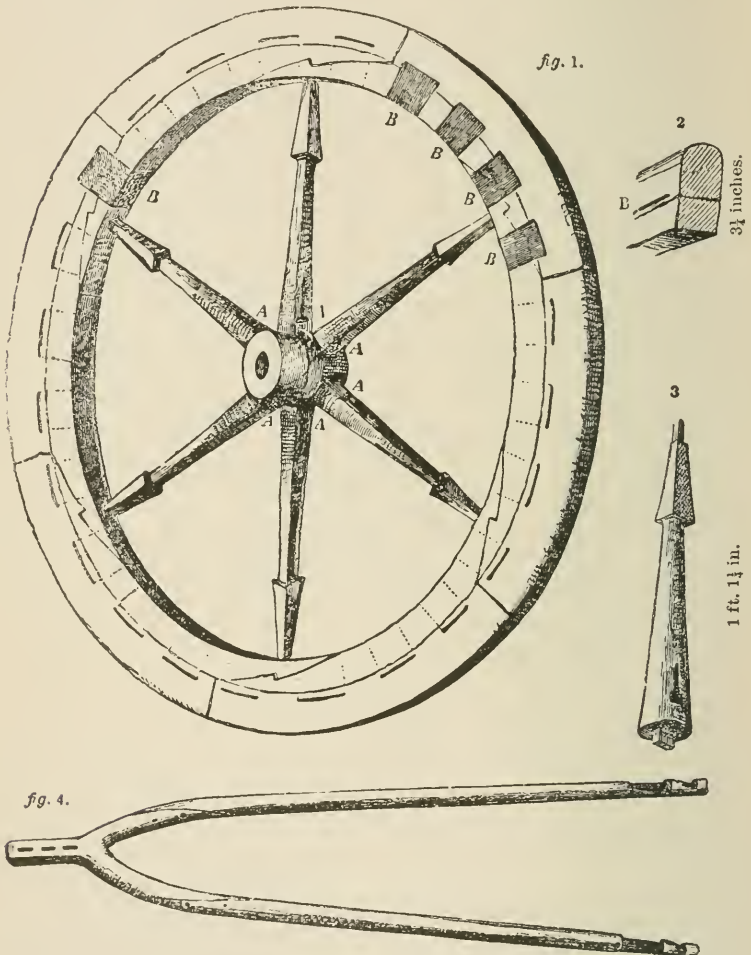
⁶ [They were used by Cyrus, and had other scythes pointed downwards against the fallen enemy. The cars had also turrets in them, reaching to the elbow of the driver, and the men in them were clad in armor covering all but the eyes. (Xen. Cyrop. 6.) The axle-tree was very low, to prevent their upsetting. — G. W.]

⁷ And even by the Greeks after the time of Alexander.

⁸ Baggage carried by asses is represented at Thebes and other places, but no camels have yet been met with, either in the sculptures or the hieroglyphics; a remark which has been made even by Abd-el-Azees, the Arab historian. For this I can give no reason, since we know that camels existed in Egypt in the time of Abraham. (Gen. xii. 16.) [I have, however, in my possession a singular instance of two camels, with a vase between them, on a seal or stamp from Taphis in Nubia. It is rudely engraved on a facet an inch and a half long by rather more than half an inch wide. — G. W.] This is now in the museum of Harrow School. — C. C. W.

⁹ Herod. ii. 63. Athenæus also (Deip. v. p. 200, edit. 1598) mentions a four-wheeled car.

No instance occurs of Egyptian chariots with more than two horses; nor is there any representation of a carriage with shafts drawn by one horse; but a pair of shafts have been found, with a wheel of curious construction, having a wooden tire to the felloe, and an inner circle, probably of metal, which passed through,



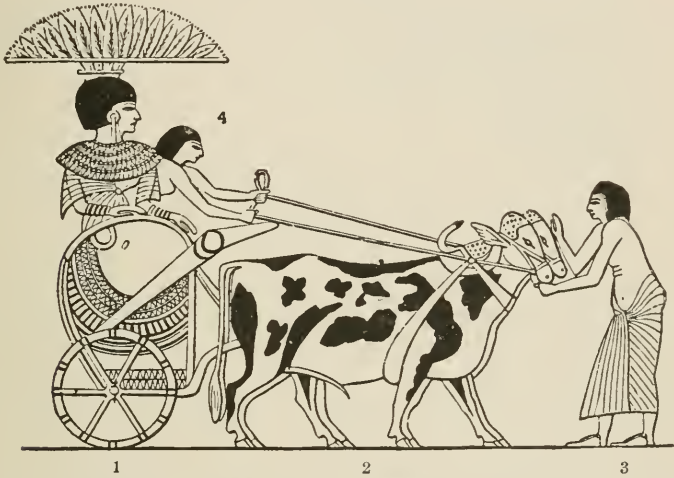
No. 66.

Fig. 1. Wheel; 3 ft. 1 in. diameter. In the Collection of Dr. Abbott.
 2. Shafts; 11 feet in total length.

and connected, its six spokes a short distance from the nave (A A). The diameter of the wheel was about 3 ft. 1 in. The felloe was in six pieces, the end of one overlapping the other; and the tire was fastened to it by bands of raw hide passing through

long narrow holes made to receive them (B B). It is uncertain whether the carriage they belonged to had two or four wheels; for though an instance does occur of an Egyptian four-wheeled car, it is a singular one, and it was only used for religious purposes, like that mentioned by Herodotus.¹

The travelling carriage drawn by two oxen was very like the common chariot; but the sides appear to have been closed. It had also one pair of wheels with six spokes, and the same kind of pole and harness. An umbrella was sometimes fixed over it



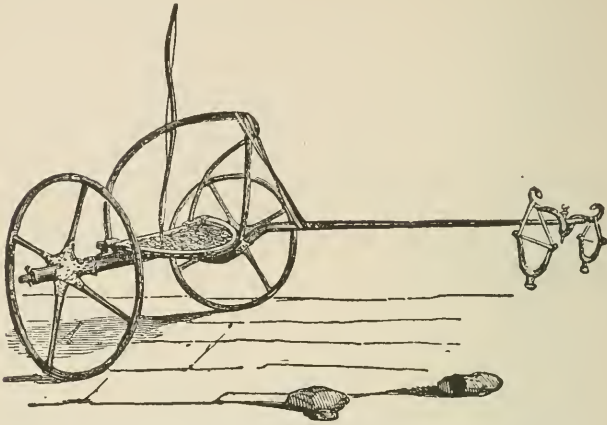
No. 67. An Ethiopian princess travelling in a *plaustrum* or car drawn by oxen. Over her is a sort of umbrella. 3. An attendant. 4. The charioteer or driver. *Thebes.*

when used for women of rank, as over the king's chariot on certain occasions; and the bow-case with the bow in it shows that a long journey from Ethiopia required arms; the lady within being on her way to pay a visit to the Egyptian king. She has a very large retinue with her, bringing many presents: and the whole subject calls to mind the visit of the Queen of Sheba to Solomon.

The chariots used by contemporary Eastern nations with whom the Egyptians were at war, were not dissimilar in their general form, or in the mode of yoking the horses (even if they differed in the number of persons they contained, having usually three instead of the two in Egyptian and Greek cars); as may be seen

¹ Herod. ii. 63.

from that which is brought, with its two unyoked horses, as a present to the Egyptian monarch, by the conquered people of



No. 68. Car and bow, in the Collection at Florence (from the great work of Professor Rosellini).

Rut-en-nu, and one found in Egypt, and now in the museum at Florence.¹ This last is supposed to have been taken in war from the Scythians: but it appears rather to be one of those brought to Egypt with the rest of a tribute, as a token of submission, being too slight for use.

In Solomon's time chariots and horses were exported from Egypt, and supplied Judæa, as well as 'the kings of the Hittites, and of Syria';² but in early times they appear not to have been used in Egypt, and they are not found on the monuments before the 18th Dynasty. For though the Egyptian name of the horse was *hthor*, the mare was called, as in Hebrew, *sûs*, in the plural *susim*,³ which argues its Semitic origin; *fâras*, 'the mare,' being still the generic name of the Arab horse: and if its introduction was really owing to the invasion of the Shepherds, they thereby benefited Egypt as much as by causing the union of the whole country under one king.

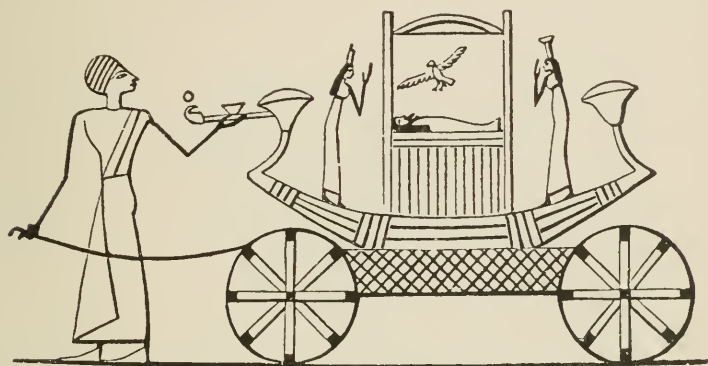
The Egyptians sometimes drove a pair of mules, instead of horses, in the chariots used in towns or in the country; an instance of which occurs in a painting now in the British Museum.

¹ Woodcut No. 68.

² 1 Kings x. 29. ³ Chron. i. 16, 17.

³ *Htar* means rather 'the pair' of horses of the chariot. — S. B.

A representation of a car bearing a small shrine in a boat, found on the bandages of a mummy belonging to Signor d'Athanasi, seems to be similar to the one mentioned by He-



No. 69. Four-wheeled hearse. From an inscribed wrapper.

rodotus, with this difference, that the figure representing the deceased is recumbent instead of being the standing image of a deity.

[A painting from the side of a tomb in the British Museum, Egyptian Galleries, represents a chariot drawn by two white mules, and is of the time of the 18th Dynasty. The first appearance of the war chariot of two horses, called *urr*, *akaruta*, is in the reign of Amenophis III., no chariots being represented, and the horse unknown, before the Shepherd invasion of Egypt.

Under the 4th and 5th Dynasties the ass only was used, and the wheel had not been invented, the substitute for a carriage being a board or seat placed between two asses, to which it was strapped, on which the person sat as on a kind of open litter. Under the 18th Dynasty, chariots of wood, plated with gold and silver, and painted, were brought from the Rut-en-nu or Syrians and other Asiatic nations as tribute. — S. B.]



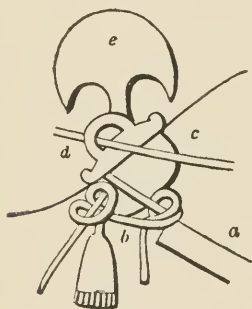
Car without wheel strapped to two asses.
4th Dynasty. Gizeh.

No. 70.

Gizeh.

The harness of curricles and war chariots was nearly similar; and the pole in either case was supported on a curved yoke fixed to its extremity by a strong pin, and bound with straps or thongs

of leather. The yoke, resting upon a small well-padded saddle, was firmly fitted into a groove of metal; and the saddle, placed upon the horses' withers, and furnished with girths and a breast-band, was surmounted by an ornamental knob; and in front of it a small hook secured the bearing rein. The other reins passed through a thong or ring at the side of the saddle, and thence over the projecting extremity of the yoke; and the same thong secured the girths, and even appears in some instances to have been attached to them. In the war chariots, a large ball, placed upon a shaft, projected above the saddle, which is generally supposed to have been connected with the reins, and to have been intended to give a greater power to the driver,¹ by enabling him to draw them over a groove in its centre; but there is reason to believe it was added solely for an ornamental purpose, like the fancy head-dresses of the horses, and fixed to



Saddle of a horse yoked in a Persian car.
No. 71. *British Museum.*

the yoke immediately above the centre of the saddle,² or to the head of a pin which connected the yoke to the pole.³ The same kind of ornament,⁴ though of a different form, is met with in Persian⁵ cars; and that it was not a necessary part of the harness is shown by the many instances of its omission in Egyptian curricles, and even in some of the chariots of war.⁶

The traces were single, one only on the inner side of each horse, fastened to the lower part of the pole, and thence extending to the saddle; but no exterior trace was thought necessary; and no provision was made for attaching it to the car. Indeed the yoke sufficed for all the purposes of draught as well as for backing the chariot; and being fixed to the saddle, it kept the horses at the same distance and in the same relative position, and prevented their breaking outwards from the line of draught, a remark which applies equally to the Greek car; and the description given of it by Homer⁷ agrees very nearly with

¹ Such was my own opinion; but on further examination of numerous drawings of chariots, I am inclined to believe it stood on the yoke or the pole.

² Woodcut No. 61, *fig. 2.*

³ Woodcut No. 61, *fig. 1.*

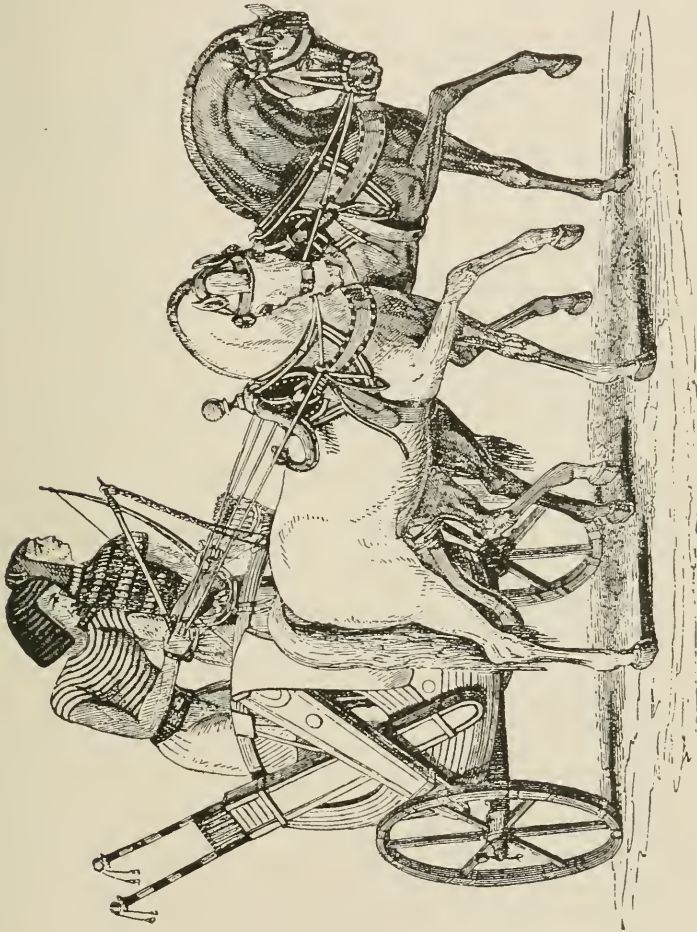
⁴ Woodcut No. 71, at *e.*

⁵ *J. Rollin, 2.*

⁶ Woodcuts Nos. 56 and 57.

⁷ *Il. E., 922 et seq.*

that used by the Egyptians. In order to render this more intelligible, I shall introduce a pair of horses yoked to a chariot according to the rules of European drawing, derived from a comparison of the numerous representations in the sculptures,



No. 72. An Egyptian car and horses in perspective, designed from a comparison of different sculptures.

omitting only their housings and head-dress, which may be readily understood in an Egyptian picture.

On grand occasions the Egyptian horses were decked¹ with fancy ornaments: a rich striped or checkered housing,² trimmed

¹ Conf. Virg. *Æn.* vii. 275; and Hom. *Il.* Ω , 230.

² Plate V.

with a broad border and large pendent tassels, covered the whole body, and two or more feathers inserted in lions' heads, or some other device of gold, formed a crest upon the summit of the head-stall. But this display was confined to the chariots of the monarch, or the military chiefs; and it was thought sufficient, in the harness of other cars and of the town curriole, to adorn the bridles with rosettes, which resemble, and cannot fail to call to mind, those used in England at the present day.¹

Blinkers² were deemed unnecessary, as in many countries of modern Europe; but a severe bit appears to have been employed by the Egyptians³ as by other ancient people;⁴ though, from their mode of representing it, we should rather feel disposed to consider it a sort of snaffle than a curb.

The head and upper part of the neck were frequently enveloped in a rich covering similar to the housing, trimmed with a leather fringe; and the bridle, consisting of two cheek-pieces, a throat-lash, head-stall, and the forehead and nose straps, though simple, was not unornamental.

No instance occurs of Egyptian chariots with more than two horses, nor of any carriage furnished with shafts and drawn by one horse; they therefore resembled those in general use among the early Greeks, as described by Homer;⁵ though the poet occasionally mentions the four-horsed car, answering to the *quadriga* of the Latins, so frequently represented in sculpture and on ancient coins. [The representation, however, of these cars is not seen after the 20th Dynasty, so that it is uncertain when the transition took place from the two-horse to the four-horse chariot. The absence of representations, either in the later temples or tombs, of chariots in battle-scenes of importance, quite prevents the determination of the first use of the *quadriga*, which is, however, seen on monuments of the Ptolemaic period long after it had appeared in Greece. The *htar*, or pair of horses, bore a single name, and each horse was not separately designated. No name has been found given to chariots, although other articles had often an appropriate name or appellation by which they were distinguished from others. — S. B.]

¹ Woodcut No. 72.

² In one or two instances we find something projecting above and at the side of the eyes, which may be intended to represent blinkers.

³ This I conclude from the appearance of

their mouths; and a simple bit may be made very severe.

⁴ Hor. Od. lib. i. 8.

⁵ Hom. Il. E, 195. Like the *biga* of the Romans.

The harness of the Persian chariots figured at Persepolis is equally simple; and as it is interesting to compare the customs of different ancient nations, it may not be irrelevant to the subject to introduce a copy of one taken from the work of Sir R. Ker Porter.¹



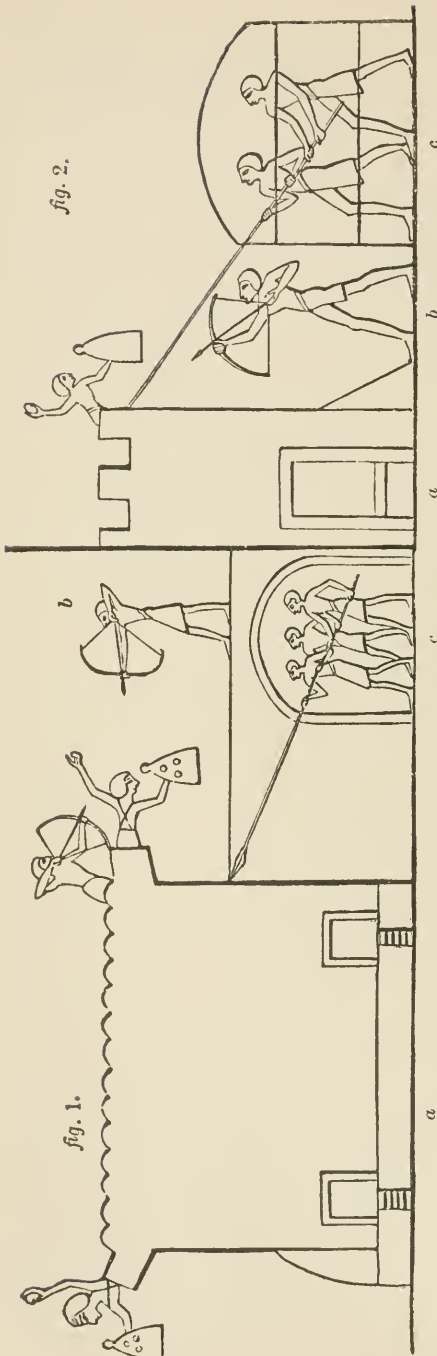
No. 73.

Persian car (from Sir R. Ker Porter).

The Egyptian chariot corps, like the infantry, were divided into light and heavy troops, both armed with bows: the former chiefly employed in harassing the enemy with missiles, and in evolutions requiring rapidity of movement; the latter called upon to break through opposing masses of infantry, after having galled them during their advance with a heavy shower of arrows: and in order to enable them to charge with greater security they were furnished with a shield, which was not required for the other mounted archers, and a long spear was substituted on these occasions for the missiles they had previously employed. The light-armed chariot corps were also supplied with weapons adapted to close combat, as the sword, club, and javelin; but they had neither the spear nor shield; and indeed this last was confined to certain corps, even of infantry, as the spearmen and others, already mentioned. But the heavy foot, and light troops employed in the assault of fortified towns, were all provided with shields, under cover of which they made approaches to the place; and so closely was the idea of a siege connected with this arm,² that a figure of the king, who is sometimes introduced in the

¹ It may be seen in the British Museum.
See also woodcut No. 71.

² Conf. 2 Kings xix, 32; Isaiah xxxvii. 33.



Use of the testudo.

No. 74.

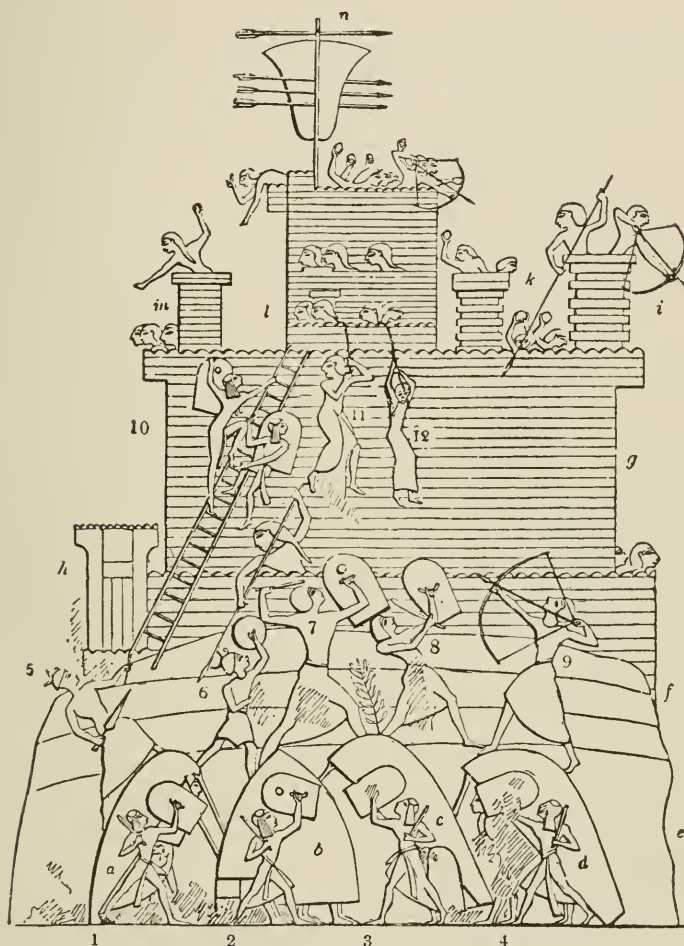
sculptures as the representative of the whole army, advancing with his shield before him, is intended to show that the place was taken by assault.

In attacking a fortified town, they advanced under cover of the arrows of the bowmen; and either instantly applied the scaling-ladder to the ramparts, or undertook the routine of a regular siege: in which case, having advanced to the walls, they posted themselves under cover of testudos, and shook and dislodged the stones of the parapet with a species of battering-ram,¹ directed and impelled by a body of men expressly chosen for this service. But when the place held out against these attacks, and neither a *coup de main*, the ladder, nor the ram were found to succeed, they probably used the testudo for concealing and protecting the sappers, while they mined the place;² and certainly,

¹ See woodcut No. 74, a, b, c.

² The *testudo ad fodiendum* of Vitruvius, which, he says,

of all people, the Egyptians were the most likely to have recourse to this stratagem of war, from the great practice they had in underground excavations, and in directing shafts through the solid rock.



No. 75.

Assault of a fort. The testudo and scaling-ladder.

Thebes.

The testudo was of framework, sometimes supported by poles having a forked summit, and covered, in all probability, with hides; it was sufficiently large to contain several men, and

the Greeks call *oryx* (lib. x. c. 21). There was another, '*quæ ad congestionem fossa-*

rum paratur' (lib. x. c. 20). — 'Egypt and Thebes,' p. 235, note †.

so placed that the light troops might mount upon the outside, and thus obtain a footing on more elevated ground, apply the ladders with greater precision, or obtain some other important advantage; and each party was commanded by an officer of skill, and frequently by those of the first rank.¹

The *trypanon* or pike of the *testudo arietaria* of the Greeks and Romans, and the covering or *vinea* which protected the men while they worked the battering-ram, were nearly on the same principle, and the Greeks most probably borrowed theirs originally from Egypt.

They also endeavored to force open the gates of the town, or hew them down with axes; and when the fort was built upon a rock, they escalated the precipitous part by means of the *testudo*, or by short spikes of metal, which they forced into the crevices of the stone,² and then applied the ladder to the ramparts.

It is reasonable to conclude that several other engines were employed in sieges with which the sculptures³ have not made us acquainted; and the bulwarks used by the Jews⁴ on their march to the promised land were doubtless borrowed from those of Egypt, where they had lived until they became a nation, and from whence they derived the greater part of their knowledge upon every subject. These bulwarks, being only constructed in the case of a siege, appear to have been similar to some of the mounds or towers employed by the Greeks in later times: they were of wood, and made on the spot during the siege, the trees of the neighboring country being cut down for the purpose. But the Jews deemed it unlawful to fell a fruit tree for the construction of warlike engines, nor were they permitted to use any other than those which grew wild, or in an uncultivated spot.⁵

Besides bulwarks or movable towers, we may also suppose the Egyptians adopted destructive missiles for burning the houses and works of the besieged, like the fire-balls, *pyroboloi lithoi*, of the Greeks, or the *scyrtalaia*, wooden staves, armed with an iron point, and carrying with them lighted firebrands; and the same mode of protecting their own works from the assaults

¹ Woodcut No. 75. Four of the king's sons command the four *testudos*, *a*, *b*, *c*, *d*.

² Woodcut No. 75, *fig.* 5.

³ The scaling-ladder is most frequently

represented, and seems to have been very generally used.

⁴ Dent. xx. 20.

⁵ Dent. xx. 19.

of the besieged, was probably resorted to by the Egyptians as by that people.

The northern and eastern tribes against whom the Egyptians fought, were armed in many instances with the same weapons as the disciplined troops of the Pharaohs, as bows and spears; they had besides long swords, rude massive clubs, and knives; and their coats-of-mail, helmets, and shields varied in form, according to the custom of each nation. They also used stones, which were thrown by the hand, while defending the walls of a besieged town; but it does not appear that either the Egyptians or their enemies threw them on any other occasions, except with a sling. Indeed we seldom find any people armed with stones, except those who have not yet advanced beyond their infancy in the art of war;¹ and the same remark applies to the Greeks during the siege of Troy, some of whom are introduced by Homer, fighting with these rude weapons,—an era when Grecian manners and military tactics were only beginning to emerge from a state of primitive simplicity.

The most distinguishing peculiarities of some of the nations at war with the Egyptians, were the forms of the head-dress and shield. One of these, the Shairetana,² a people inhabiting a maritime country,³ wore a helmet ornamented with horns projecting from its circular summit, and frequently surmounted by a crest, consisting of a ball raised upon a small shaft, which, as I have before observed, is remarkable, from being the earliest instance of a crest, and bears testimony to the accuracy of Herodotus in ascribing to it an Asiatic origin. He mentions it as an invention of the Carians, from whom it was borrowed by the Greeks, together with the custom of introducing certain figures upon the exterior, and of fixing handles to the interior, of the shield; for previously those who were in the habit of using shields carried them without handles, supporting them by means of leathern thongs, which passed over the neck and the left shoulder.⁴ [Herodotus also mentions the people of Bithynia, as forming part of the army of Xerxes, and armed with javelins, daggers, and light shields.⁵—G. W.]

¹ Horace, Sat. i. 3, 101; and Lucretius (lib. v. ver. 1283) mentions the hands, nails, teeth, stones, and branches of trees, as the earliest weapons.

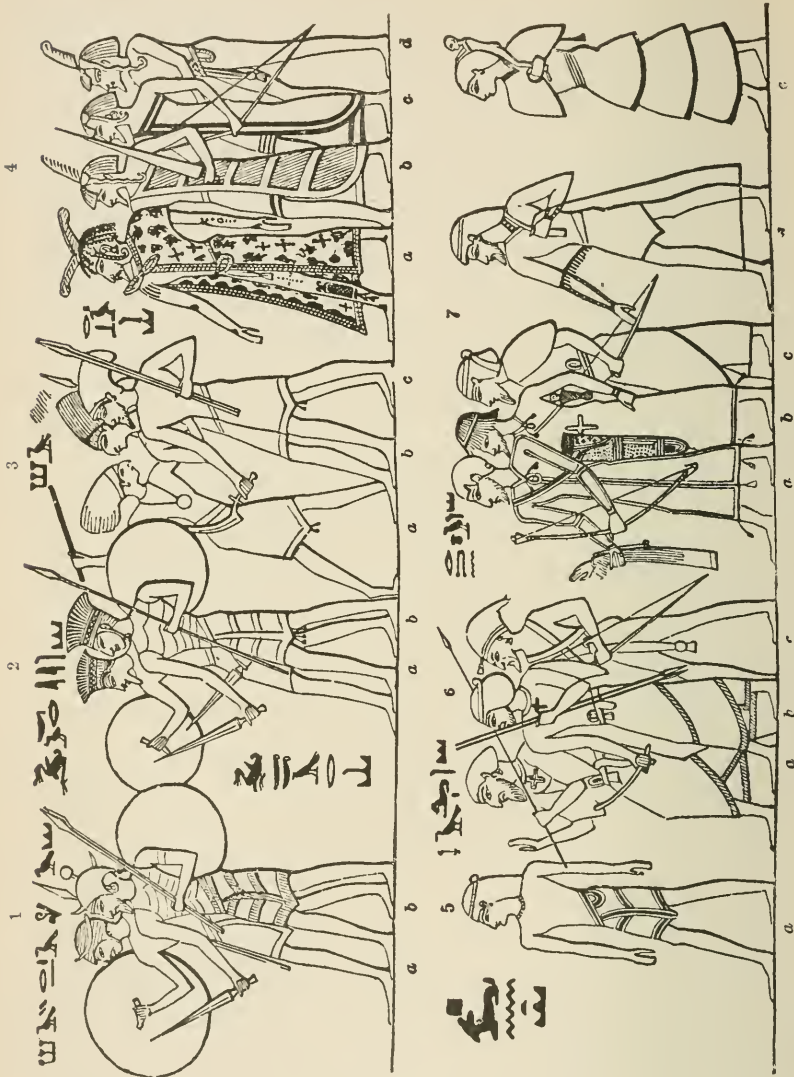
² The Shairetana appear in the reign of Rameses II. as the guard.—S. B.

³ Or a country situated near some large piece of water, as a lake: those who lived near a river had not the same distinction, as the Sheta.

⁴ Herodot. i. 171.

⁵ [F. Herodot. vii. p. 75.—G. W.]

The Shairetana were also distinguished by a round shield,¹ and the use of long spears and javelins, with a pointed sword ;



No. 76.

Some of the people with whom the Egyptians were at war.

1. Shairetana, Sardinians. 2. Takkari or Teueri. 3. Shasu, Arabs. 4. Rebu or Libyans. 5. Punt, Somal or S. E. Africans. 6. Kharu, N. Syrians. 7. Kut-en-nt, E. Syrians.

they were clad in a short dress, and frequently had a coat-of-

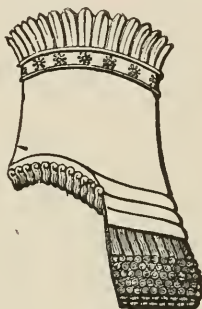
¹ The Greeks had usually round shields; this kind was called *aspis*, the *clypeus* of the Romans. They also used the Ama-

zonian buckler, or *pellè*; the Theban buckler, and an oblong concave shield, *thyreos*, the *scutum* of the Romans.

mail, or rather a cuirass, composed of broad metal plates overlying each other, adapted to the form of the body, and secured at the waist by a girdle. Some allowed their beards to grow; and they very generally adopted a custom, common to most early nations, of wearing large earrings.¹

Their features were usually large, the nose prominent and aquiline; and in their complexion as well as their hair they were of a far lighter hue than the Egyptians. At one time they were the enemies, at another the allies,² of the Pharaohs; and the duration of their friendship and subsequent rupture with the Egyptians I have already alluded to, and shall have occasion again to notice.

The Takkari³ wore a helmet in form and appearance very similar to those represented in the sculptures of Persepolis, some of which have been brought to England, and are now in the British Museum.⁴ It appears to have been made of a kind of cloth, marked with colored stripes;⁵ the rim adorned with a row of beads or other ornamental devices, and it was secured by a thong or ribbon tied below the chin. They had also a round shield and short dress,



No. 77. Persian head-dress (from Sir R. Ker Porter.)

frequently with a coat of armor similar to that of their neighbors, the Shairetana; and their offensive weapons consisted principally of a spear and a large pointed knife or straight sword. They sometimes, though rarely, had a beard, which was still more unusual with the chiefs. Their features were regular, the nose slightly aquiline; and whenever the Egyptian artists have represented them on a large scale, their face presents a more pleasing outline than the generality of these people. They fought like the Egyptians, in chariots; and had carts or wagons, with two solid wheels similar to the *tympana* of the

¹ Woodcut No. 76, *fig. 1, a, b*. For the identity of the Sardinians and Shairetana, cf. Chabas, 'Études,' pp. 186-300

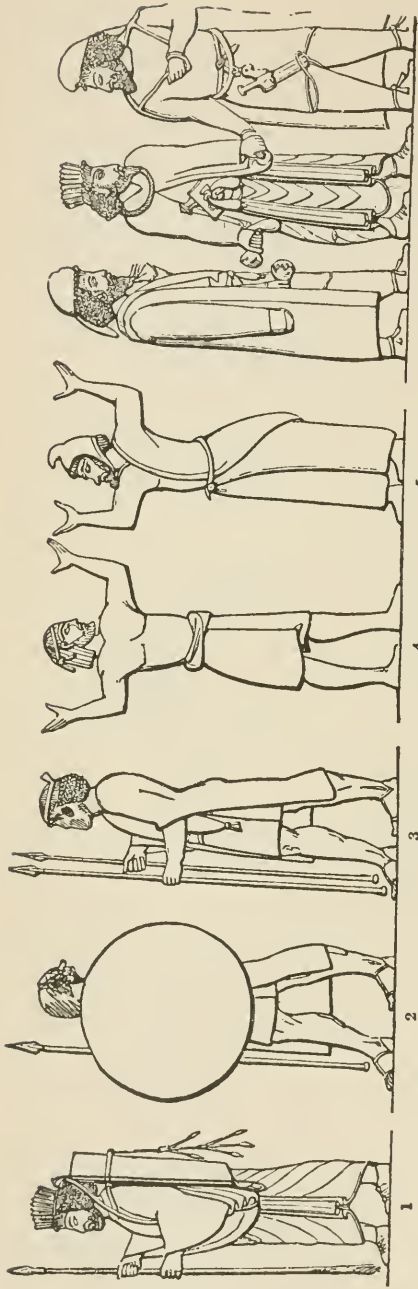
² Woodcut No. 75, *figs. 5 and 6*.

³ The Takkarni, Takkari, or Tsekkarin, are recognized as the Tenkroi, or Tenerians of the Pelasgic family; they are allied to

the Dardani, the Leka or Lycians, and the Maasu or Mysians. (Chabas, 'Études,' p. 294.) — S. B.

⁴ Woodcuts No. 77 and No. 78, *figs. 1 and 7*.

⁵ Woodcut No. 76, *fig. 2, a, b*.



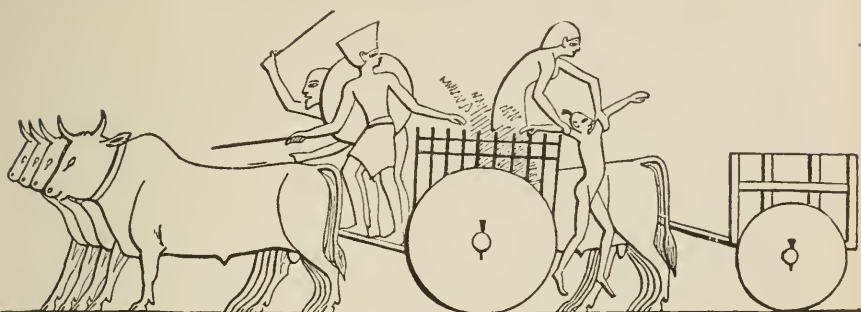
No. 78. Persepolitan figures (from Sir R. Ker Porter). [Observe the peculiarity of the sleeves, figs. 6, 7, and 8, and also that the sword or dirk is worn on the right side. — G. W.]



No. 79. Persepolitan figures.

British Museum.

Romans, drawn by a pair of oxen, which appear to have been placed in the rear, as in the Seythian and Tartar armies. This



No. 80.

Carts of the Takkari, at the time of their defeat.

Thebes.

circumstance, and that of their women carrying off the children in these carts at the moment of a defeat, might lead us to infer them to have been a roving people, who did not live in towns; which is still farther argued by their taking refuge, when routed by Rameses III., in the ships of their neighbors, the Shairetana, already mentioned; but their civilized appearance argues against this opinion. They were also at one time allies of the Pharaohs, and assisted them in their long wars against the Rebu.

Another people whose name is lost,¹ were distinguished by a costume of a very Oriental character, consisting of a high fur cap, not unlike one worn by the ancient Persians, and that of the modern Tartars and Dellee Turks; a tight dress with the usual girdle; and a short kilt, common to many Asiatic nations, which, apparently divided and folding over in front, was tied at the bottom with strings. Round their neck, and falling upon the breast, was a large round amulet,² very similar to those of agate worn by the dervishes of the East, in which they resembled the Assyrian captives of Tirhakah, represented on the walls of Medeenet Haboo.³ Their features were remarkable; and though in the sculptures they occasionally vary in appearance, from the presence or the absence of a beard, the strongly-defined contour of the face and the high bridge of their prominent nose sufficiently distinguish them from other people, and show that the artist has intended to convey a notion of these peculiar characteristics.

¹ Woodcut No. 76, *fig. 3*. It is the *Shasu* or *Shôs*, a people of the Arab race, and the former conquerors of Egypt.—S.B.

² Woodcut No. 76, *fig. 3 a*.

³ Woodcut No. 81, *fig. 1*.

Their arms consisted of two javelins, a club, a falchion, and a shield like that of the Egyptians, with a round summit. They were on terms of friendship with the third Rameses, and assisted him in his wars against the Rebu; and though they occur among the foreigners who had been conquered by the arms of Egypt, the same feeling of inveterate enmity, resulting from a repeated succession of conflicts, did not exist towards them as towards many other Asiatic tribes. The same remark applies to another people, represented at Medeenet Haboo¹ as allies of the Egyptians, whose name has been unfortunately lost: they were clad in a short tight dress, and carried a shield, like the former, with a bow and a heavy club; but of their features we have little or no knowledge, owing to the imperfect state of the sculptures.

One of the most formidable Asiatic enemies encountered by the Egyptians were the Rebu,²—a fact attested by the frequent representations of severe contests; the large masses of troops they brought into the field; the great duration of a war which, commencing at a very remote era, continued long after the accession of the 19th Dynasty.³

One of the principal military events in the glorious reign of the great Rameses was his success against these powerful enemies; and three victories over the Rebu, won with great slaughter, by Rameses III. about a century later, added a far brighter lustre to his name than the numerous defeats of other Asiatic people, though they enriched him with immense booty, and considerably increased the extent of the Egyptian conquests.⁴ In these encounters several thousand of the enemy were killed, as reported in the Egyptian returns; and the obstinacy of the fight, and the firm resistance they opposed to the highly disciplined and numerous forces of their antagonists, distinctly prove them to have been a nation both powerful and skilled in the art of war. They were defeated, but not conquered: nor would any portion of them submit to become allies of the Egyptians. And from the long duration of the war, the

¹ The allies, in woodcut No. 16, *fig.* 3.

² Woodcut No. 76, *fig.* 4.

³ The Rebu are the Libyes or Libyans. They, or the Tamahu or Tahennu, also Libyan nations, are represented amongst the four races of mankind in the tomb of Seti I. at Thebes.—S. B.

⁴ The campaign against the Rebu, the

Mashnasha, the Tamahu, and Libyans of the fifth and eleventh years of the reign of Rameses III., is detailed by Chabas ('*Etudes*,' pp. 231 and foll.): 2175 Maxyes were killed on the spot, and 2052 prisoners taken, besides 239 sabres, 603 bows, 92 cars, 2310 quivers, 92 lances, 185 horses and asses, and 139 bulls.—S. B.

repeated attempts made by the Pharaohs to subjugate their country, their marked hatred of them, and their eagerness to commemorate each victory, we may conclude the Egyptians had also suffered during these campaigns; and though, as might be expected, the sculptured history in the Theban temples merely relates the victories of the Pharaohs, the Rebu themselves had probably reason to record their own successful resistance, and sometimes even the defeat of the invaders.

From the style of their costume, and the lightness of their complexion, it is evident they inhabited a northern¹ country, very distant from Egypt, and of a far more temperate climate. Their dress consisted of an under-garment, with the usual short kilt, and a long outer robe, highly colored, and frequently ornamented with fancy devices, or a broad rich border which descended to the ankles, and was fastened at the neck with a large bow, or by a strap over the shoulder, the lower part being open in front. It was not bound by a girdle: this was worn beneath it; though the Egyptian artists occasionally represent it as if worn above, or seen through the transparent robe. But the substance of the latter was generally too thick to admit of this, being sometimes of bull's hide or leather, and sometimes of a woollen stuff. Their girdle was highly ornamented, and the extremity falling down in front terminated in a large tassel;² and so fond were they of decorating their persons, that besides earrings, necklaces, and trinkets common to Asiatic and other tribes, the chiefs decked their heads with feathers, and some painted or tattooed their arms and legs.

If the costumes of several foreign nations met with in the Egyptian sculptures call to mind those of Persia and Parthia, none perhaps resemble them more than that of the Rebu, or of the Rut-en-nu,³ whom I shall presently describe. The hair of the Rebu was not less singular than their dress: it was divided into separate parts, one of which fell in ringlets over the forehead, and the other over the back of the head; and a plaited

¹ Besides color, we have always a distinguishing mark in the termination of the bands that secure the prisoners; which have an entire edged flower, supposed to be the papyrus, to denote those nations living to the north of Egypt, and the three-leaved flower of another water-plant, to point out the African or southern tribes, as may be seen in the woodcut No 81, *fig.* 6, of the Amazu, and *fig.* 10, of a black

captive from Africa. These two plants, in like manner, are chosen as emblems of the lower or northern, and upper or southern, divisions of Egypt.

² Very like that of a Persepolitan figure in woodcut No. 78, *fig.* 3.

³ The inhabitants of Northern Syria or Mesopotamia. From the animals brought as tribute, it appears they extended to India. — S. B.

lock of great length, passing nearly over the ear, descended to the breast, and terminated in a curled point. In feature they were as remarkable as in costume; and the Egyptians have not failed to indicate their most striking peculiarities, as blue eyes, aquiline nose, and small red beards. Their arms consisted principally of the bow, and a long straight sword with an exceedingly sharp point, and it is probable that to their skill in the use of the former we may attribute their effectual resistance to the repeated invasions of the Egyptians,

Another Eastern nation, with whom the Egyptians were already at war in the remote age of Amenemha II.,¹ or about 1680 years before our era, was the Pount;² who were subsequently compelled to pay tribute to Egypt in the reign of the third Thothmes. Proud of their liberty, they neglected no opportunity to throw off the yoke; and the records of the repeated invasion of their country by successive Pharaohs prove their independent spirit, and their courage in expelling the invaders.

Their features were less marked than those of many Oriental people represented in the sculptures: they shaved their beards, and wore their hair enveloped in a large cap, bound with a fillet, like many of the tribes of the interior, and the Syrians who bordered upon Egypt. Their dress consisted chiefly of a short kilt, secured with the usual girdle: and though of a lighter hue than the Egyptians, they appear to have inhabited a region lying more to the south than the Rut-en-nu or the Kufa, who were also tributary at the same period to Thothmes III. Among the presents brought by them to the Egyptian monarch were the ibex, leopard,³ baboon, ape, ostrich eggs and feathers, dried fruits and skins; and exotic shrubs, with ebony and ivory, seem to prove that they lived in a cultivated country as well as a warm climate.⁴

The Shari⁵ were another Eastern or Northern people, against whom the Egyptians waged a successful war, principally in the

¹ Mentioned on a stone found by Mr. Burton in the desert of the Red Sea; where I met with the small temple and station of Wadec Gasoos, mentioned in my 'Egypt and Thebes,' p. 364.

² Or, Pount. Woodcut No. 76, *fig.* 5. [The correct name is Pun or Punt, and it is supposed to be the country situated on the eastern bank of the Red Sea. It is mentioned as early as the time of Cheops,

and was inhabited by a mixed population, partly Nigritic. Some see in it the modern Somal or Somali. — S. B.]

³ Very like the hunting leopard of India, or *Felis jubata*.

⁴ Upper line of figures in Plate II.

⁵ The Shari, or rather Kharu, were the inhabitants of Northern Palestine, and the coast generally of Palestine and South Asia Minor. — S. B.

reigns of Osirei¹ and his son, the great Rameses; and I am inclined to think them either an Assyrian tribe, or the inhabitants of some part of Arabia. The former appears more probable, though the fact of the Arabian Gulf having been called by the Egyptians the Sea of Shari may argue in favor of the latter. Their features were marked by a prominent aquiline nose and high cheek-bones: they had a large beard; and their head-dress consisted either of a cap bound, like that of the Point, with a fillet, or a skull-cap fitting loosely to the head, secured by a band, and terminating at the end, which fell down behind, in a ball or tassel.² Their dress consisted of a long loose robe reaching to the ankles, and fastened at the waist by a girdle, the upper part furnished with ample sleeves. The girdle was sometimes highly ornamented: and men as well as women wore earrings; and they frequently had a small cross suspended to a necklace, or to the collar of their dress. The adoption of this last was not peculiar to them; it was also appended to, or figured upon, the robes of the Rut-en-nu; and traces of it may be seen in the fancy ornaments of the Rebu, showing that it was already in use as early as the fifteenth century before the Christian era.

Their principal arms were the bow, spear, two javelins, and a sword or club; and their country was defended by several strongly fortified towns. But no want of courage prevented their resisting the Egyptian invaders in the open field; and it was only after severe struggles that they retired to those strongholds, which were bravely, though unsuccessfully, defended. Some wore a sort of double belt, crossing the body and passing over each shoulder; and this, together with the pointed cap, so much resembling the dress



No. 81. Prisoners of Tirhakah. Thebes.

¹ Seti I.

² Woodcut No. 76, fig. 6 c.

of Tirhakah's captives,¹ cannot fail to remind us of the Syrians or Assyrians. whose name bears a strong analogy to the one before us.

The Rut-en-nu,² supposed by M. Champollion to be Lydians,³ were a nation with whom the Egyptians waged a long war, commencing at least as early as, and perhaps prior to, the reign of the third Thothmes. Their white complexion, tight dresses, and long gloves,⁴ decide them to have been natives of a much colder climate than Egypt or Syria; and the productions of their country, which they bring as a tribute to the victorious Pharaoh, pronounce them to have lived in the East. These consist of horses, and even chariots, with four-spoked wheels,⁵ very similar to the Egyptian curricule, rare woods, ivory, elephants, and bears,⁶ and a profusion of elegant gold and silver vases, with rings of the same precious metals, porcelain, and jars filled with choice gums and resins used for making incense, of which a greater quantity was derived from their country than from any other tributary to Egypt. Their features were regular, without the very prominent nose that characterizes some Eastern people represented in the sculptures; and they were of a very light color, with brown or red hair, and blue eyes. Their long dress, usually furnished with tight sleeves⁷ and fastened by strings round the neck, was either closed or folded over in front, and sometimes secured by a girdle. Beneath the outer robe they wore a kilt: and an ample cloak, probably woollen, like the modern *herám*, or blanket, of the coast of Barbary, was thrown over the whole dress;⁸ the head being generally covered with a close cap, or a fuller one bound with a fillet.

The women wore a long garment secured with a girdle, and trimmed in the lower part with three rows of flounces; the

¹ Woodcut No. 81. The same may be observed in the Persian figures of the beautiful tessellated pavement lately discovered at Pompeii.

² Woodcut No. 76, *fig. 7.*

³ The Ruten, or Rut-en-nu, are translated in the inscription of the trilingual tablet of Canopus, of the reign of Ptolemy Euergetes I., B. C. 38, as Syrians in the extended sense of the word, and ruled all Syria till the rise of the Khita, and carried on war with Egypt during the reigns of Thothmes I., Thothmes III., and their successors. They appear to have been the ancient Assyrians or Babylonians. (Cf. Chabas, 'Études,' p. 129.)—S. B.

⁴ *Vide* Plate II. There are other instances of gloves in Egyptian sculptures; but they are very rare. The expression 'shoe' in Ruth iv. 7, is in the Targum 'right-hand glove.' [The object is not a glove, but a silver rhyton or cup, in shape of a human arm.—S. B.]

⁵ Woodcut No. 63. The Egyptian town curricule had four spokes; the war-car six.

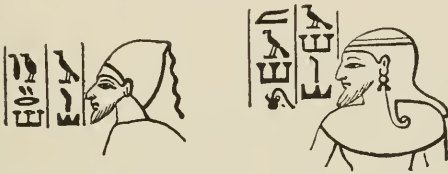
⁶ The *Ursus Syriacus*, Linn.

⁷ A dress with sleeves is seen in woodcut No. 78, *fig. 6.*

⁸ Woodcut No. 89, and No. 76, *fig. 7 d.*

sleeves sometimes large and open, sometimes fastened tight round the wrist; and the hair was either covered with a cap, to which a long tassel was appended, or descending in ringlets was encircled with a simple band.¹

The Tuirsha,² a maritime people,³ are also mentioned among the enemies of Egypt; and their close cap, from whose pointed summit a crest of hair falls to the back of the neck, readily distinguishes them from other Eastern tribes. Their features offer no peculiarity; and we have not sufficient data from the sculptures to form any opinion respecting their wars with the Egyptians, though they are introduced among the tribes conquered by the third Rameses. The same applies to the Mashuasha,⁴ who resemble the former in their general features



No. 82. Other enemies of the Egyptians. 1. Tuirsha. 2. Mashuasha. *Thebes.*

and the shape of their beards; but their head-dress is low, and rather more like that of Tirhakah's prisoners, already mentioned,⁵ descending in two points at the side and back of the head, and bound with a fillet.

The people of Kufa⁶ appear to have inhabited a part of Asia lying considerably north of the latitude of Palestine; and their long hair, rich dresses, and sandals of the most varied form and color, render them remarkable among the nations represented in Egyptian sculpture.⁷ In complexion they were much darker than the Rut-en-nu, but far more fair than the Egyptians; and to

¹ Woodcut No. 89, and No. 76, *fig.* 1.

² Woodcut No. 82, *fig.* 1.

³ The Tuirsha, called also the Tuirsha of the Sea, are recognized to be the Etruscans, the *Tyrse-noi* of the Greeks. They invaded Egypt in alliance with the Libyans in the reigns of Menephtah and Rameses II. (Chabas, 'Études,' p. 302.)—S. B.

⁴ Woodcut No. 82, *fig.* 2. The Mashuasha—identical with the Maxyes, Mazyes, or Mazaces of the ancients—were a Libyan people. They invaded Egypt from the west, in the reign of Menephtah, in

alliance with the Achæans or Greeks, Etruscans, Lycians, Sardinians, and Sicilians, and fought the battle of Paarisheps or Prosopis, and were defeated with great slaughter. Part of the Mashuasha were at the time in the service of Egypt, 12,535 being killed in battle. They renewed the war in the fifth and eleventh years of Rameses III.—S. B.

⁵ Woodcut No. 81.

⁶ The Phœnicians, according to the trilingual inscriptions of Canopus.—S. B.

⁷ Plate II., second line from the top.

judge from the tribute they brought to the Pharaohs, they were a rich people, and, like the Rut-en-uu, far advanced in the arts and customs of civilized life. This tribute, which is shown to have been paid to the Egyptians as early as the reign of Thothmes III., consisted almost entirely of gold and silver, in rings and bars, and vases of the same metals. Many of the latter were silver, inlaid with gold, tastefully ornamented, of elegant form, and similar to many already in use among the Egyptians; and from the almost exclusive introduction of the precious metals, and the absence of animals, woods, and such productions as were brought to Egypt by other people, we may suppose the artist intended to convey a notion of the great mineral riches of their country: and they are occasionally represented carrying knives or daggers, beads, a small quantity of ivory, leathern bottles, and a few bronze and porcelain cups. Their dress was a simple kilt, richly worked and of varied color, folding over in front, and fastened with a girdle; and their sandals, which, being closed like boots, differed entirely from those of the Egyptians, appear to have been of cloth or leather, highly ornamented, and reaching considerably above the ankle. Their long hair hung loosely in tresses, reaching more than half-way down the back; and from the top of the head projected three or four curls, either of real or artificial hair.

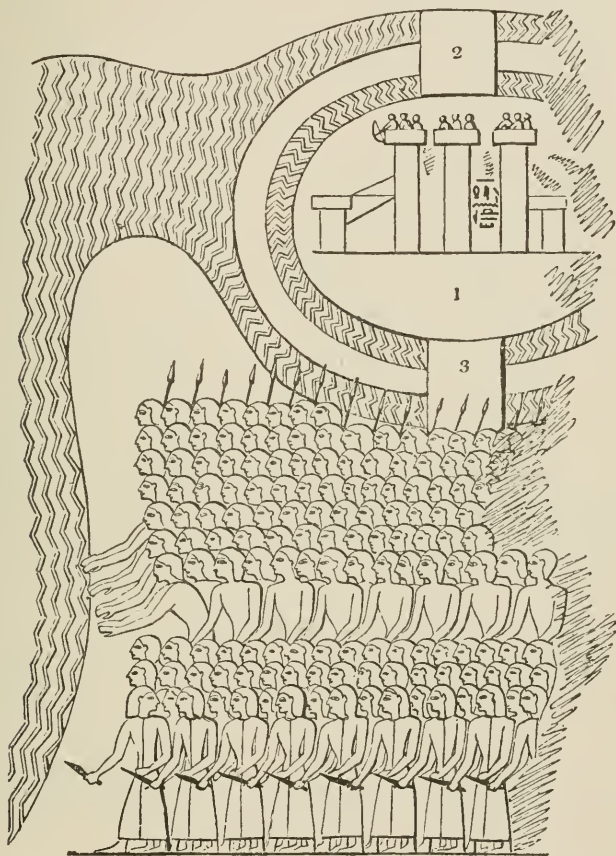
The Khita or Sheta¹ were a warlike people of Asia, who had made considerable progress in military tactics, both with regard to manœuvres in the field, and the art of fortifying towns, some of which they surrounded with a double fosse. It is worthy of remark, that in these cases the approach to the place led over a *bridge*;² and the sculptures acquainting us with the fact are highly interesting, as they offer the earliest indication of its use, having been executed in the reign of the great Rameses, about 1350 years before our era. But whether the bridges were supported on arches, or simply of wooden rafters resting on piers of the same materials, we are unable to decide, since the view is given as seen from above, and is therefore confined to the level upper surface.³ Their troops appear to have been disciplined; and the close array of their phalanxes of infantry, the style of their chariots, and the arms they used, indicate a great

¹ Khita, Sheta, Getæ, or *Skeethæ* (Scythai), Scythians, are the same name. *Kh* and *Sh* were sometimes used synonymously by the Egyptians.

² There was a bridge at Tsaru, or Tanis, in the reign of Seti I. (Rosellini, 'Monumenti Reali,' No. 1.) — S. B.

³ Woodcut No. 83, *figs.* 2 and 3.

superiority in military tactics, compared with other Eastern nations of that early period. The wars waged against the Khita by the Egyptians, and the victories obtained over them by the great Rameses, are pictured on the walls of his palace at Thebes,¹ and are again alluded to in the sculptures of Rameses III. at



83. Phalanx of the Khita, drawn up as a *corps de reserve*, with the fortified town, Katesh on the Orontes, surrounded by double ditches, over which are bridges (figs. 2 and 3). Thebes.

Medcenet Haboo, where this people occurs in the list of nations conquered by the Pharaohs. Their arms were the bow, sword, and spear; and their principal defence was a wicker shield, either rectangular or concave at the sides, and convex at each end, approaching in form the Theban buckler.

Usually called the Memnonium

Their dress consisted of a long robe, reaching to the ankles, with short sleeves, open, or folding over in front, and secured by a girdle round the waist; but though frequently made of a very thick stuff, and perhaps even quilted, it was by no means an effectual substitute for armor, nor could it resist the spear or the metal-pointed arrow. They either wore a close or a full cap; and their arms were occasionally decked with bracelets, as their dresses with brilliant colors. Their cars were drawn by two horses, like those of Egypt, but they each contained three men,¹ and some had wheels with four instead of six spokes; in both which respects they differed from those of their opponents. They had some cavalry: but large masses of infantry, with a formidable body of chariots, constituted the principal force of their numerous and well-appointed army; and if, from the manner in which they posted their *corps de reserve*, we may infer them to have been a people skilled in war, some idea may also be formed of the strength of their army from the numbers composing that division, which amounted to 24,000 men,² drawn up in three close phalanxes, consisting each of 8000.

The nation of Khita seems to have been composed of two distinct tribes,³ both comprehended under the same name, uniting in one common cause, and probably subject to the same government. They differed in their costume and general appearance: one having a large cap, and the long loose robe, with open sleeves or capes covering the shoulders, worn by many Asiatic people already mentioned, a square or oblong shield,⁴ and sometimes a large beard;⁵ the other the dress and shield before described, and no beard. They both fought in cars and used the same weapons; and we even find they lived together, or garrisoned the same towns.

Whether they were Scythians,⁶ or a nation inhabiting the banks of the Euphrates, I do not yet pretend to decide: the

¹ In the poem of Pentaur describing the campaign of Rameses II. against the Khita, the confederation is described as coming three men in a chariot. ('Records of the Past,' vol. ii. p. 69.) — S. B.

² At the Memnonium. 'Egypt and Thebes,' p. 19.

³ Woodcut No. 84, *figs.* 2, 3, 4 and 5.

⁴ The Persian shield was square or oblong, or of the form of a diamond, called *geron* by the Greeks. (Strabo, xv.)

⁵ [Clemens describes the Scythians with

long hair of a flaxen or red color ('Pædagog.' iii. 3). He speaks of the sobriety of the Scythians (ii. 62). — G. W.]

⁶ The Khita are supposed to be the Hittites. They were divided into two races, the northern in the gorges of the Amanos, and the southern in the mountain ranges to the west of the Dead Sea. (Maspero, 'Histoire ancienne,' pp. 192-3.) They are supposed to have been of Turanian origin, and used a kind of hieroglyphic writing, the so-called Hamathite. — S. B.



No. 84.

Other enemies of the Egyptians.

1. Kufa — Phoenician. 2-5. Kufita — Hitite. *h.* Amauru — Hitite. *i.* Romenen — Aramean. *k.* Kanana — Canaanite. *l.* Turuses. *m.* Taruau — Negro. *n.* Kush — Ethiopian Negro. *p.* The chiefs of Kush or Ethiopia.

name strongly argues in favor of the former opinion, which is that of the much-regretted Champollion; and if any confirmation can be obtained from the sculptures of the accounts given by Herodotus, Diodorus, Tacitus, and other historians, relating to the march of Sesostris or Rameses,¹ it is certainly to be looked for in those of the second and third Rameses; and the possibility of such extended conquests is not inconsistent with the known power and resources of ancient Egypt.

Several other nations and tribes, who inhabited parts of Asia, are shown by the monuments² to have been invaded and reduced to subjection by the arms of the Pharaohs; and in the names of some³ we recognize towns or districts of Syria, as in Amauri,⁴ Lemanon,⁵ Kanana,⁶ and Ascalon. The inhabitants of the first two are figured with a round full head-dress, bound with a fillet: and those of Kanana are distinguished by a coat-of-mail and helmet, and the use of spears, javelins, and a battle-axe similar to that of Egypt.⁷

Thus we find that the Theban sculptors intentionally maintained a marked difference in the arms and costume peculiar to many of these people, though the same attention was not always extended to their faces. They were frequently conventional; a certain general style being adopted for eastern nations, another for those of the north, a third for the Ethiopians, and a fourth for the Blacks of the interior of Africa; and accuracy in portraying the features was dispensed with, except in the larger and more detailed sculptures, or when any remarkable difference was observable, as in the prominent nose of one of their allies.⁸

Some are clad in loose, others in tight dresses; some have shields of a square, others of an oblong, round, or other form, which are merely held by a single handle in the centre, like those now used by the Ababdeh and modern Ethiopians.

The country of Lemanon is shown by the artist to have been mountainous, inaccessible to chariots, and abounding in lofty trees, which the affrighted mountaineers are engaged in felling, in order to impede the advance of the invading army. Having taken by assault the fortified towns on the frontier, the Egyptian

¹ 'Egypt and Thebes,' p. 22, and the Introduction.

² Woodcut No. 84, preceding page.

³ Woodcut No. 84, *figs.* 6, 7, and 8.

⁴ The Amorites.

⁵ Ermenen or Armenia

⁶ Canaan.

⁷ Woodcut No. 84, *fig.* 8. In Joshua xvii. 16, the Canaanites are said to 'have chariots of iron.'

⁸ Woodcut No. 16, *fig.* 2, and woodcut No. 76, *fig.* 3.

monarch advances with the light infantry in pursuit of the fugitives who had escaped and taken refuge in the woods: and sending a herald to offer terms on condition of their surrender, the chiefs are induced to trust to his clemency, and return to their allegiance; as are those of Kanana, whose strongholds yield in like manner to the arms of the conqueror.

That these two names point out the inhabitants of Mount Lebanon and Canaan is highly probable, since the campaign is said to have taken place in the first year, or soon after the accession, of Osirei,¹ the father of the great Rameses; and the events which previously occurred in Egypt, during the reign of Amenophis III., and the unwarlike character of his two successors, may have given an opportunity to these people, though so near Egypt, to rebel, and assert their independence.

Many black nations were also conquered by the early monarchs of the 18th and 19th Dynasties, as the Toreses, the Taruau, and another whose name is lost,² as well as the Cush,³ or Ethiopians. These last were long at war with the Egyptians; and part of their country, which was reduced at a very remote period by the arms of the Pharaohs, was obliged to pay an annual tribute to the conquerors: but whether the name of Cush was applied merely to the lower districts of Ethiopia, or comprehended the whole of the southern portion of that country, I am unable to determine.

The Blacks,⁴ like the Ethiopians, wore short aprons of bulls' hides,⁵ or the skins of wild beasts, frequently drawn by the Egyptian artists with the tail projecting from the girdle, for the purpose of adding to their grotesque appearance by this equivocal addition: the chiefs, decked with ostrich and other feathers, had large circular gold earrings, collars, and bracelets; and many of the Ethiopian grandees were clad in garments of fine linen, with leathern girdles highly ornamented, a leopard-skin being occasionally thrown over the shoulder.⁶ It is reasonable to suppose that the linen was purchased from the Egyptians, whose conquests in the country would naturally lead to its intro-

¹ Seti I. The name of Osirei was a later substitution, consequent on a religious revolution. — S. B.

² Woodcut No. 84, *fig.* 12.

³ It is the scriptural as well as the hieroglyphical name. Woodcut No. 84, *fig.* 13, *a*, *b*, *c*, and *d*.

⁴ The Blacks were called generally *Nahsi* or revolters. — S. B.

⁵ [V. Strabo, p. 565, edit. 1587. Strabo says the Ethiopians wore skins, and that sheep have no wool in Ethiopia, but hair like goats, which is true. — G. W.]

⁶ Woodcut No. 84, *fig.* 13, *c*, *d*.

duction among them; and this is rendered more probable, from its transparent fineness being represented in the same manner as in the dresses of the Egyptians, and from its being confined to the chiefs as an article of value, indicative of their rank.

The Ethiopian tribute consisted of gold and silver, precious stones, ostrich feathers, skins, ebony, ivory, apes, oxen of the long-horned breed still found in Abyssinia, lions, oryxes, leopards, giraffes, and hounds; and they were obliged to supply the victors with slaves, which the Egyptians sometimes exacted even from the conquered countries of Asia. Their chief arms were the bow, spear, and club:¹ they fought mostly on foot, and the tactics of a disciplined army appear to have been unknown to them.

The names of foreign nations who acted as auxiliaries of the Egyptians I have already noticed. The first unequivocal mention of these alliances² is in the sculptures of the great Rameses,³ where the Shairetana⁴ unite with him in an expedition against the Khita.⁵ They had been previously conquered by the Pharaohs, with whom they entered into a treaty, agreeing to furnish troops and to assist them in their future wars: and firm to their engagements, they continued to maintain a friendly intercourse with the Egyptians for a considerable length of time, and joined the army of the third Rameses, when, about a century later, he marched into Asia, to attack the Takkari⁶ and the Rebu.⁷ In the war against the Rebu, Rameses was assisted by another body of auxiliaries, whose high fur cap sufficiently denotes their Oriental origin;⁸ and a third tribe, whose name is likewise lost, aided the Egyptians in the same campaign.

It is evident that the Takkari also united with the invaders against the Rebu, and contributed to the successes of the third Rameses; but either a portion of their tribe still remained hostile to the Egyptians, or some cause of complaint alienated their friendship, and we find that they were soon afterwards engaged in war with that monarch. Being joined by many of the Shairetana, to whose country they fled for refuge after their first defeat, and relying on the protection promised them by the fleet of that maritime people, they offered battle to the Egyptians:

¹ [Herodotus describes the Ethiopian dresses and arms in Bk. vii. 69. — G. W.]

² Perhaps we may also trace them in the time of U'sertesen I.

³ At the Memnonium and Aboosimbel. Woodcut No. 75, *figs.* 5 and 6.

⁴ Sardinians.

⁵ Hittites.

⁶ Teuceri.

⁷ Libyans.

⁸ The Shasu or Arabs. Woodcut No. 16, *fig.* 2, the same as *fig.* 3 in woodcut No. 76.

but their combined efforts were ineffectual; they were again reduced to subjection; and Rameses, loaded with booty and a considerable number of captives, returned to Egypt, accompanied by the auxiliary legions of those of the Shairetana,¹ Takkari,² and the other allies who had remained faithful to him.

When an expedition was resolved upon against a foreign nation, the necessary preparations were made throughout the country, each province furnishing its quota of men; and the members of the military class were summoned to muster in whatever numbers the monarch deemed it necessary to require. The troops were generally commanded by the king in person; but in some instances a general was appointed to that post, and intrusted with the sole conduct of the war.³ A place of rendezvous was fixed, in early times, generally at Thebes, Memphis, or Pelusium; and the troops having assembled in the vicinity, remained encamped there, awaiting the leader of the expedition. As soon as he arrived, the necessary preparations were made; and orders having been issued for their march, a signal was given by sound of a trumpet; the troops fell in, and with a profound bow each soldier in the ranks saluted the royal general, and acknowledged his readiness to receive his orders, and to follow him to the



No. 85. A body of archers. Thebes.

field. The march then commenced;⁴ the chariots led the van; and the king, mounted in his car of war and attended by his chief officers⁵ carrying flabella, took his post in the centre, preceded and followed by bodies of infantry armed with bows, spears, or other weapons, according to their respective corps.

¹ Sardinians.

² Teveri.

³ This was the case when the army was sent by Apries against the Cyreneans (Herod ii. 161.)

⁴ It is represented at Medeenet Haboo.

If the whole of the back part of that temple were cleared, much more might be obtained from those interesting sculptures.

⁵ If he had sons, they held this office, which was considered a very honorable post.

On commencing the attack in the open field, a signal was again made by sound of trumpet. The archers drawn up in line first discharged a shower of arrows on the enemy's front, and a considerable mass of chariots advanced to the charge; the heavy infantry, armed with spears or clubs, and covered with their shields, moved forwards at the same time in close array, flanked by chariots and cavalry,¹ and pressed upon the centre and wings of the enemy, the archers still galling the hostile columns with their arrows, and endeavoring to create disorder in their ranks.²

Their mode of warfare was not like that of nations in their infancy, or in a state of barbarism; and it is evident, from the number of prisoners they took, that they spared the prostrate who asked for quarter: and the representations of persons slaughtered by the Egyptians who have overtaken them, are intended to allude to what happened in the heat of action, and not to any wanton cruelty on the part of the victors. Indeed, in the naval fight of Rameses III.,³ the Egyptians, both in the ships and on the shore, are seen rescuing the enemy, whose galley has been sunk, from a watery grave; and the humanity of that people is strongly argued, whose artists deem it a virtue worthy of being recorded among the glorious actions of their countrymen.

Indeed, when compared with the Assyrians and other Asiatic conquerors, the Egyptians hold a high position among the nations of antiquity from their conduct to their prisoners; and the cruel custom of flaying them alive, and the tortures represented in the sculptures of Nineveh, show the Assyrians were guilty of barbarities at a period long after the Egyptians had been accustomed to the refinements of civilized communities.

To judge from the mode of binding their prisoners, we might suppose they treated them with unnecessary harshness and even cruelty, at the moment of their capture, and during their march with the army: and the contempt with which they looked upon all foreigners, whom they stigmatized by the name of impure gentiles, did probably lead many of the soldiers to commit acts of brutal severity. They tied their hands behind their backs, or over their heads, in the most strained positions, and a rope passing round their neck fastened them to each other; and some

¹ The chariots are represented in this position; the cavalry I suggest from probability, though not indicated in the sculptures.

² At Medeenet Haboo, in Thebes.

³ At Medeenet Haboo.

had their hands enclosed in an elongated fetter of wood,¹ made of two opposite segments, nailed together at each end; such are still used for securing prisoners in Egypt at the present day. In the capture of a town some were beaten with sticks,² in order to force from them the secret of the booty that had been concealed; many were compelled to labor for the benefit of the victors; and others were insulted by the wanton soldiery, who pulled their beards and derided their appearance. But when we remember how frequently instances of harsh treatment have occurred, even among civilized Europeans, at an epoch which deemed itself much more enlightened than the fourteenth century before our era, we are disposed to excuse the occasional insolence of an Egyptian soldier; and the unfavorable impressions conveyed by such scenes are more than counterbalanced by the proofs of Egyptian humanity, as in the sea-fight above mentioned. Indeed, I am inclined to think the captives bound beneath the chariot of the conqueror in his triumph,³ a license of the sculptors, who, as Gibbon⁴ observes, 'in every age have felt the truth of a system which derives the sublime from the principle of terror.'

I cannot therefore suppose that the Egyptians, who surpassed all others in the practices of civilized life, were in the habit of indulging in wanton cruelty, and much less do I believe that the captives represented on the façades of their temples, bound at the feet of the king, who holds them by the hair of the head, and with an uplifted arm appears about to immolate them in the presence of the deity, were intended to refer to a human sacrifice:⁵ but rather that the subject was a religious allegory, purporting to be an acknowledgment of the victory he had obtained by the assistance of the deity, — in short, an emblematic record of his successes over the enemies of Egypt; and this is strongly confirmed by the fact of our finding the same subject on monuments erected by the Ptolemies and Cæsars.⁶

Those who sued for mercy and laid down their arms were spared and sent bound from the field; and, as I have already observed, the hands of the slain being cut off and placed in

¹ *Vide* woodcut No. 111, at the end of chap. IV.

² This is the usual mode in the East of eliciting the truth at the present day.

³ At Medeenet Haboo and Karnak.

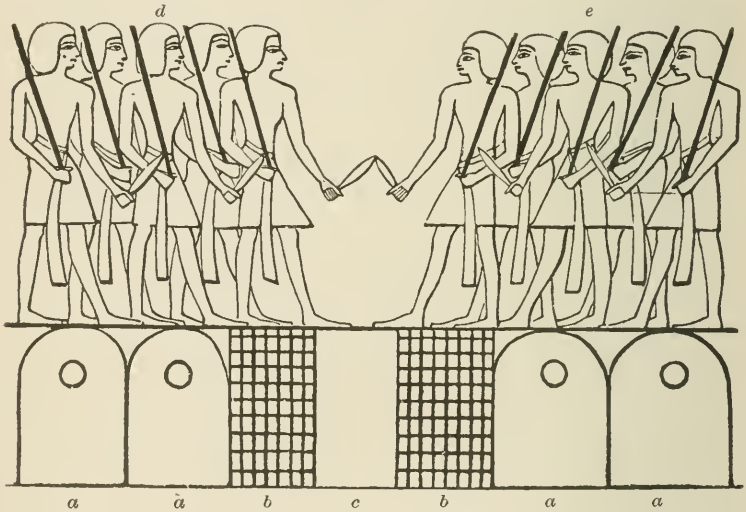
⁴ Gibbon, vol. ii. 64, note.

⁵ Herodotus justly blames the Greeks for their ignorance of the Egyptian character, in taking literally their allegorical tales of human sacrifices (ii. 45).

⁶ At E'Dayr, near E'sné, at Dendera, and other places.

heaps before the king, immediately after the action, were counted by the military secretaries in his presence, who thus ascertained and reported to him the amount of the enemy's slain. Sometimes their hands, with occasionally other members, were laid before him in the same manner; in all instances being intended as authentic returns of the loss of the foe: for which the soldiers received a proportionate reward, divided among the whole army: the capture of prisoners probably claiming a higher premium, exclusively enjoyed by the captor.

The arms, horses, chariots, and booty taken in the field, or in the camp, were also collected, and the same officers wrote an account of them, and presented it to the monarch. The booty was sometimes collected in an open space, surrounded by a temporary wall, indicated in the sculptures by the representation of shields placed erect, with a wicker gate,¹ on the inner and



No. 86.

A guard at the gates of an encampment.

Thebes.

outer face of which a strong guard was posted, the sentries walking to and fro with drawn swords. The subject from which this is taken² may serve to show their mode of encamping; for though, after they had been victorious and no longer feared an attack, the strongly-fortified camp was unnecessary, its general form may be hence inferred; and the only difference between this and a permanent station, or regular encampment, the *castra*

¹ Woodcut No. 86.

² On the N.E. tower of the Memnonium, at Thebes.

stativa of the Romans, probably consisted in the latter being constructed with greater attention to the principles of defense, and furnished with ditches and a strong efficient rampart. Judging from those of El Kab, Hieracon, and other fortified places in the valley of the Nile, distinct from the towns themselves, their fixed stations were surrounded by a massive and lofty wall of brick, whose broad rampart, having a wide staircase, or inclined way,¹ was furnished with a parapet wall, for the protection of the soldiers; and though, from the nature of the ground or other accidental causes, they were not strictly confined to the figure of a square, the quadrangular form was always preferred, and no instance occurs of a round camp like that of the Lacedæmonians. It was forbidden to the Spartan soldier, when on guard, to have his shield, in order that, being deprived of this defence, he might be more cautious not to fall asleep; and the same custom appears to have been common also to the Egyptians, since we find the watch on duty at the camp gates are only armed with swords and maces, though belonging to the heavy-armed corps, who, on other occasions, were in the habit of carrying a shield.²

The field encampment was either a square or a parallelogram, with a principal entrance in one of the faces; and near the centre were the general's tent, and those of the principal officers. In form it resembled a Roman camp; but the position of the general's tent agreed with the Greek custom mentioned by Homer,³ and differed from that of the Romans, who placed the prætorium⁴ on the side most distant, or least exposed to attack from the enemy. The general's tent was sometimes surrounded by a double rampart or fosse, enclosing two distinct areas, the outer one containing three tents, probably of the next in command, or of the officers on the staff; and the guards, like the Roman *excubiæ*, slept or watched in the open air. Other tents were pitched without these enclosures; and near the external circuit, a space was set apart for feeding horses and beasts of burden, and another for ranging the chariots and baggage. It was probably near the general's tent, and within the same area, that the altars of the gods, or whatever related to religious matters, the standards, and the military chest, were kept; and we find an instance of persons kneeling before certain

¹ The ramp. — S. B.

² Woodcut No. 86.

³ Hom. II. ̑, 222.

⁴ Or general's tent.

sacred emblems beneath a canopy, within an enclosure similar to that where the tent stood, which formed a portable chapel for the army, like the Jewish tabernacle or tent. The sculptures at the Memnonium in Thebes show their mode of encamping on the field, when they had been victorious and no longer feared an attack; but the permanent station, or regular encampment, was constructed with greater attention to the principles of defence, and furnished with ditches and a strong efficient rampart.

A system of regular fortification was adopted in the earliest times. The form of the fortress was quadrangular; the walls of crude brick 15 feet thick, and often 50 feet high, with square towers at intervals along each face. These were generally the same height as the walls, and when they only reached part of the way up they were rather buttresses; and sometimes the whole wall was doubled by an outer casing, leaving a space between the two, filled in here and there by a solid buttress, which strengthened and united them, and prevented any one passing freely round the inner wall when the outer one was broken through. The towers, like the rest of the walls, consisted of a rampart and parapet, which last was crowned by the usual round-headed battlements, in imitation of Egyptian shields, like those on their stone walls. But a singular arrangement was followed in the position of the towers at the corners, two being placed not upon, but at each side of the very angle which remained recessed between them, and was slightly rounded off. Whenever it was possible, the fortress was square, with one or occasionally two entrances; but generally with one, and a sally-port, or a water-gate, if near the river; and, when built on an irregularly-shaped height, the form of the works was regulated by that of the ground.

One great principle in the large fortresses was to have a long wall, on the side most exposed to attack, projecting from 70 to 100 feet, at right angles from, and at the same height as, the main wall, upon which the besieged were enabled to run out and sweep the faces, or curtains, by what we should call a 'flanking fire.' But the great object was, of course, to keep the enemy as far from the main wall as possible. This was done by raising it on a broad terrace or basement, or by having an outer circuit, or low wall of circunvallation, parallel to the main wall, and distant from it, on every side, from 13 to 20 feet; and a tower stood at each side of the entrance, which was towards one

corner of the least exposed face. This low wall answered the purpose of a second rampart and ditch; it served to keep the besiegers' movable towers and battering-rams at a distance from the main wall, who had to carry the outer circuit before they could attempt a breach in, or an assault on, the body of the fortress; while, from the lowness of the outer circuit, they were exposed to the missiles of the besieged.

Another more effectual defence, adopted in larger fortifications, was a ditch with a counterscarp, and in the centre of the ditch a continuous stone wall, parallel to the face of the curtain and the counterscarp, a sort of ravelin, or a tenaille, and then came the scarp of the platform on which the fortress stood. Over the ditch was a wooden bridge, which was removed during a siege.

Occasionally, as at Semneh, there was a glacis of stone, sloping down from the counterscarp of the ditch towards the level country; so that they had in those early days some of the peculiarities of our modern works, the glacis, scarps and counterscarps, and a sort of ravelin (or a tenaille) in the ditch. But though some were kept up after the accession of the 18th Dynasty, the practice of fortifying towns seems to have been discontinued, and fortresses or walled towns were not then used, except on the edge of the desert, and on the frontiers where large garrisons were required. To supply their place, the temples were provided with lofty pyramidal stone towers, which, projecting beyond the walls, enabled the besieged to command and rake them, while the parapet-wall over the gateway shielded the soldiers who defended the entrance; and the old plan of an outer wall of circumvallation was carried out by the large crude brick enclosure of the *temenos*, within which the temple stood. Each temple was thus a detached fort, and was thought as sufficient a protection for itself and for the town as a continuous wall, which required a large garrison to defend it; and neither Thebes nor Memphis, the two capitals, were walled cities.

On returning from war, the troops marched according to the post assigned to each regiment, observing the same order and regularity as during their advance through the enemy's country: and the allies who came with them occupied a position towards the rear of the army, and were followed by a strong corps of Egyptians. Rewards were afterwards distributed to the soldiers, and the triumphant procession of the conqueror was graced by the presence of the captives, who were conducted in bonds beside his chariot.

On traversing countries tributary to or in alliance with Egypt, the monarch received the homage of the friendly inhabitants, who, greeting his arrival with joyful acclamations and rich presents, complimented him on the victory he had obtained; and the army, as it passed through Egypt, was met at each of the principal cities by a concourse of people, who, headed by the priests, and chief men of the place bearing bouquets of flowers, green boughs, and palm branches, received them with loud acclamations, and welcomed their return.¹ Then addressing themselves to the king, the priests celebrated his praises; and, enumerating the many benefits he had conferred on Egypt by the conquest of foreign nations, the enemies of his country, they affirmed that his power was exalted in the world like the sun in the heavens, and his beneficence only equalled by that of the deities themselves.²

Having reached the capital, preparations commenced for a general thanksgiving in the principal temples: and suitable offerings were made to the presiding deity, the guardian of the city, by whose special favor and intercession the victory was supposed to have been obtained. The prisoners were presented to him, as well as the spoils taken from the enemy, and the monarch acknowledged the manifest power of his all-protecting hand, and his own gratitude for so distinguished a proof of heavenly favor to him and to the nation. And these subjects, represented on the walls of the temples, not only served as a record of the victory, but tended to impress the people with a religious veneration for the deity towards whom their sovereign set them so marked an example of respect. The troops were also required to attend during the performance of the prescribed ceremonies, and to return thanks for the victories they had obtained, as well as for their personal preservation; and a priest offered incense, meat-offerings, and libations in their presence.³ Each soldier carried in his hand a twig of some tree, probably olive, with the arms of his peculiar corps; and being summoned by sound of trumpet, they marched forwards to the temple, to the beat of drum.

Not only the light infantry, but even the heavy-armed troops, presented themselves on this occasion without shields; and we may infer from their absence, and the substitution of a green

¹ Burton, 'Excerpta,' plate xxxvi.

² Conf. Rosetta stone, where King Ptolemy is compared to Horus, the son of Isis and Osiris, and is called a beneficent deity.

³ Such is the subject of a procession met with in the small temple in the Assaseef, at Thebes.

branch, emblematic either of peace or victory, that the artist intended to convey an idea of the security they felt, under the protecting influence of the deity to whose presence they were summoned. It is difficult to decide whether this were a twig of olive, or what peculiar tree among the Egyptians was symbolic of peace or of victory; and if the bay-tree were cultivated in Egypt, there is no reason to suppose it bore the same emblematic force as in Greece.¹

A judicious remark has been made² respecting the choice of the olive as the emblem of peace. After the devastation of a country by hostile invasion, and the consequent neglect of its culture, no plantation requires a longer period to restore its previously flourishing condition than the olive grove; and this tree may therefore have been appropriately selected as the representative of peace.³ There is, however, reason to suppose that its emblematic character did not originate in Greece, but that it dated from a far more remote period; and the tranquillity and habitual state of the earth⁴ were announced to the ark through the same token.

It was not customary for the Egyptian soldier to wear arms except on service, when on garrison duty, or in attendance upon the king; nor did the private citizen at any time carry offensive weapons about his person, either in the house or in the street; and this circumstance, as I have already observed, goes far to prove the advanced state of civilization in that country, at a time when the rest of the world was immersed in barbarism.

The captives, being brought to Egypt, were employed in the service of the monarch, in building temples,⁵ cutting canals, raising dykes and embankments, and other public works; and some who were purchased by the grandees, were employed in the same capacity as the Memlooks of the present day. Women

¹ Garlands from Thebes have been seen, apparently of bay leaves; but though cultivated there, the tree is not indigenous to Egypt.

² By Mr. Banks.

³ Virg. Æn. viii. 116.

⁴ The Arabs have an amusing legend respecting the dove, or pigeon. The first time, it returned with the olive branch, but without any indication of the state of the earth itself; but on its second visit to the ark, the red appearance of its feet proved that the red mud on which it had walked was already freed from the waters; and to record the event, Noah prayed that

the feet of those birds might forever continue of that color, which marks them to the present day. The similarity of the Hebrew words *adoom*, red, *adneh*, earth, and *Adm*, Adam, is remarkable. A 'man' is still called *A'dam* in Turkish. [The dove was the ancient banner of Assyria. — G. W.]

⁵ Herodotus and Diodorus state that the prisoners of Sesostris were condemned to perform all the laborious part of the works he undertook on his return to Egypt. (Herod. ii. 108. Diod. i. 56.) Diodorus here mentions some Babylonian captives.

slaves were also engaged in the service of families, like the Greeks and Circassians in modern Egypt, and other parts of the Turkish empire; and from finding them represented in the sculptures of Thebes, accompanying men of their own nation, who



No. 87.

Woman of the Rut-en-nu sent to Egypt.

Thebes.

bear tribute to the Egyptian monarch, we may conclude that a certain number were annually sent to Egypt from the conquered provinces of the north and east, as well as from Ethiopia. It



No. 88.

Black slaves, with their women and children.

Thebes.

is evident that both white and black slaves were employed as servants: they attended on the guests when invited to the house of their master: and from their being in the families of priests, as well as of the military chiefs, we may infer that they were

purchased with money, and that the right of possessing slaves was not confined to those who had taken them in war. The traffic in slaves was tolerated by the Egyptians; and it is reasonable to suppose that many persons were engaged, as until recent times, in bringing them to Egypt for public sale, independent of those who were sent as part of the tribute, and who were probably at first the property of the monarch: nor did any difficulty occur to the Ishmaelites¹ in the purchase of Joseph from his brethren, nor in his subsequent sale to Potiphar on arriving in Egypt.

According to Diodorus, the Egyptians were not actuated in the administration of punishments by any spirit of vengeance, but solely by the hope of reclaiming an offender, and of preventing for the future the commission of a similar crime. Impressed with this feeling, they were averse to making desertion and insubordination capital offences; the soldier was degraded, and condemned publicly to wear some conspicuous mark of ignominy, which rendered him an object of reproach to his comrades; and without fixing any time for his release, he was doomed to bear it, till his contrition and subsequent good conduct had retrieved his character, and obtained for him the forgiveness of his superiors. 'For,' says the historian,² 'by rendering the stigma a more odious disgrace than death itself, the legislator hoped to make it the most severe of punishments, at the same time that it had a great advantage in not depriving the State of the services of the offender; and deeming it natural to every one who had been degraded from his post to desire to regain the station and character he had lost, they cherished the hope that he might eventually reform, and become a worthy member of the society to which he belonged.' For minor offences, it may be presumed, they inflicted the bastinado, which was commonly employed for punishing servants and other people; but the soldier who treacherously held communication with the enemy was sentenced to the excision of his tongue.³

[Although the Egyptians placed many soldiers in the field, it may be doubted if they were ever a very warlike race. This seems proved by the constant employment in their armies at the earliest period of negroes raised in the south, and transferred under Egyptian officers to the north and east. Later the

¹ Gen. xxxvii. 28. Conf. also Gen. xlv. 9.

² Diodor. i. 78.

³ The ancient practice of punishing the offending member.

Shai-retana, either the Sardinians or a generic name for the Italians and Greeks, were enrolled in their service, and with the Libyans also enlisted, led the van, and sustained, under Egyptian leaders, the brunt of the campaigns. Finally the Greeks passed into the ranks of the armies of Egypt and were of the greatest importance. These troops were probably under a discipline of their own, suited to the national habits and character, while the command of the armies was vested in the royal family. The Egyptian army appears to have been raised by a kind of conscription, from which not even the hierodules of the temple were altogether exempt, except by special favor or edict of the sovereign. The adventures of an officer or hero at the time of the 19th Dynasty and his exploits in Palestine have been detailed in a literary composition,¹ and give a graphic account of the life of a military officer, his quarters, wounds, marches and sufferings, campaigns in Syria, and exploits; the hardship of his life being unfavorably contrasted with the more quiet and intellectual life of a scribe, and showing that the Egyptian did not regard with any great favor a military career, or the profession of arms.²—S. B.]

The sailors of the 'king's ships,' or royal navy, were part of the military class, a certain number of whom were specially trained for the sea; though all the soldiers were capable of handling galleys, from their constant practice at the oar on the Nile. The Egyptian troops were therefore employed on board ship by Xerxes, in his war against Greece, 'being,' as Herodotus says, 'all sailors.' And as ships of war then depended on the skill of their crews in the use of the oar, the employment of the Egyptian soldiers in a sea-fight is not so extraordinary. Many, too, of the Nile boats were built purposely for war, and were used in the expeditions of the Pharaohs into Ethiopia; officers who commanded them are often mentioned on the monuments; and chief, or captain, of the king's ships is not an uncommon title.

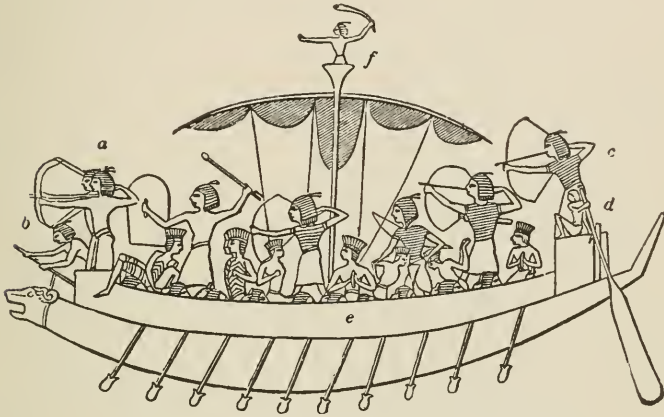
Herodotus and Diodorus both mention the fleet of long vessels,³ or ships of war, fitted out by Sesostris on the Arabian Gulf. They were four hundred in number; and there is every reason to believe that the trade, and the means of protecting it by ships of war, existed there at least as early as the 12th Dynasty, about two thousand years before our era.

¹ Chabas, 'Voyage d'un Égyptien,' 4to; Paris, 1866.

² Maspero, 'Genre épistolaire,' pp. 41-43.

³ Called *ua*, 'long' ships. Transports were called *usch*, broad. The word for galley is *mensh*. — S. B.

The galleys, or ships of war, used in their wars out of Egypt differed from those of the Nile. They were less raised at the head and stern; and on each side, throughout the whole length of the vessel, a wooden bulwark, rising considerably above the gunwale, sheltered the rowers, who sat behind it, from the missiles of the enemy; the handles of the oars passing through an aperture at the lower part.



No. 89. War galley; the sail being pulled up during the action.

Thebes.

a. Raised forecastle, in which the archers were posted. *c.* Another post for the archers, and the pilot, *d.* *e.* A bulwark, to protect the rowers. *f.* Slinger, in the top.

The ships in the sea-fight represented at Thebes fully confirm the statement of Herodotus that the Egyptian soldiers were employed on board them, as their arms and dress are exactly the same as those of the heavy infantry and archers of the army; and the quilted helmet of the rowers shows they also were part of the same corps. Besides the archers in the raised poop and fore-castle, a body of slingers was stationed in the tops, where they could with more facility manage that weapon, and employ it with effect on the enemy.

On advancing to engage a hostile fleet, the sail was used till they came within a certain distance, when the signal or order having been given to clear for action, it was reefed by means of ropes running in pulleys, or loops, upon the yard. The ends of these ropes, which were usually four in number, dividing the sail as it rose into five folds, descended and were attached to the lower part of the mast, so as to be readily worked, when the sail required to be pulled up at a moment's notice, either in a squall

of wind or any other occasion: and in this respect, and in the absence of a lower yard, the sail of the war galley greatly differed from that of the boats on the Nile. Having prepared for the attack, the rowers, whose strength had been hitherto reserved, plied their oars; the head was directed towards an enemy's vessel, and showers of missiles were thrown from the forecastle and tops as they advanced. It was of great importance to strike their opponent on the side; and when the steersman, by a skilful manœuvre could succeed in this, the shock was so great that they sank it, or obtained a considerable advantage by crippling the oars.

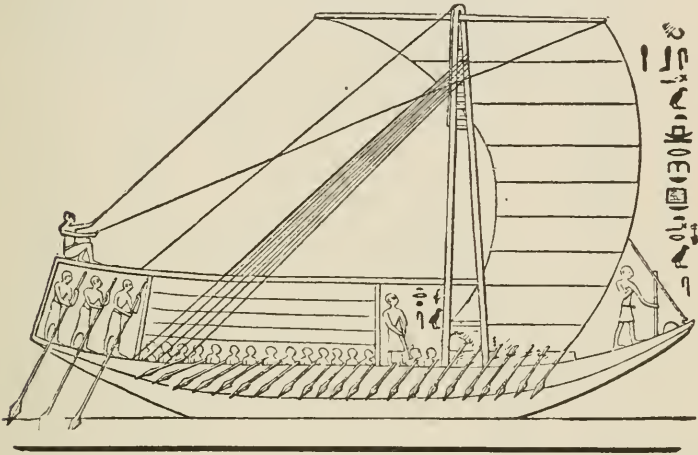
The small Egyptian galleys do not appear to have been furnished with a beak, like those of the Romans, which being of bronze, sharply pointed, and sometimes below the water's surface, often sank a vessel at once; but a lion's head fixed to the prow supplied its place, and being probably covered with metal, was capable of doing great execution, when the galley was impelled by the force of sixteen or twenty oars. This head occasionally varied in form, and perhaps served to indicate the rank of the commander, the name of the vessel, or the deity under whose protection they sailed; unless indeed the lion was always chosen for their war galleys, and the ram, orix, and others, confined to the boats connected with the service of religion.

Some of the war galleys on the Nile were furnished with forty-four oars, twenty-two being represented on one side; which, allowing for the steerage and prow, would require their total length to be about 120 feet. They were furnished, like all the others, with one large square sail; but the mast, instead of being single, was made of two limbs of equal length, sufficiently open at the top to admit the yard between them, and secured by several strong stays, one of which extended to the prow, and others to the steerage of the boat. Over the top of the mast a light rope was passed, probably intended for furling the sail, which last, from the horizontal lines represented upon it, appears to have been like those of the Chinese, and is a curious instance of a sail apparently made of the papyrus.

This double mast was common of old, during the 4th and other early dynasties: but it afterwards gave place entirely to the single one, with bars, or rollers, at the upper part, serving for pulleys, over which the ropes passed; and sometimes rings were fixed to it, in which the halliards worked.

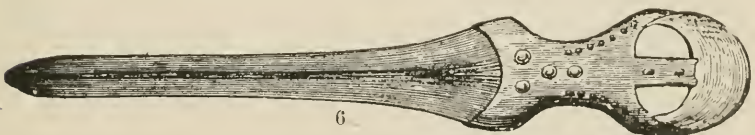
In this, as in other Egyptian boats, the braces were fixed to

the end of the yard; which being held by a man seated in the steerage, or upon the cabin, served to turn the sail to the right and left. They were common to all boats; and at the lower end of the sail (which in these boats had no yard) were the sheets, which were secured within the gunwale. The mode of steering is different from that usually described in the Egyptian paintings; and instead of a rudder in the centre of the stern, or at either side, it is furnished with three on the same side: a peculiarity



No. 90. Large boat with sail apparently made of the papyrus, a double mast, and many rowers.
In a tomb at Kom Ahmah, above Minieh.

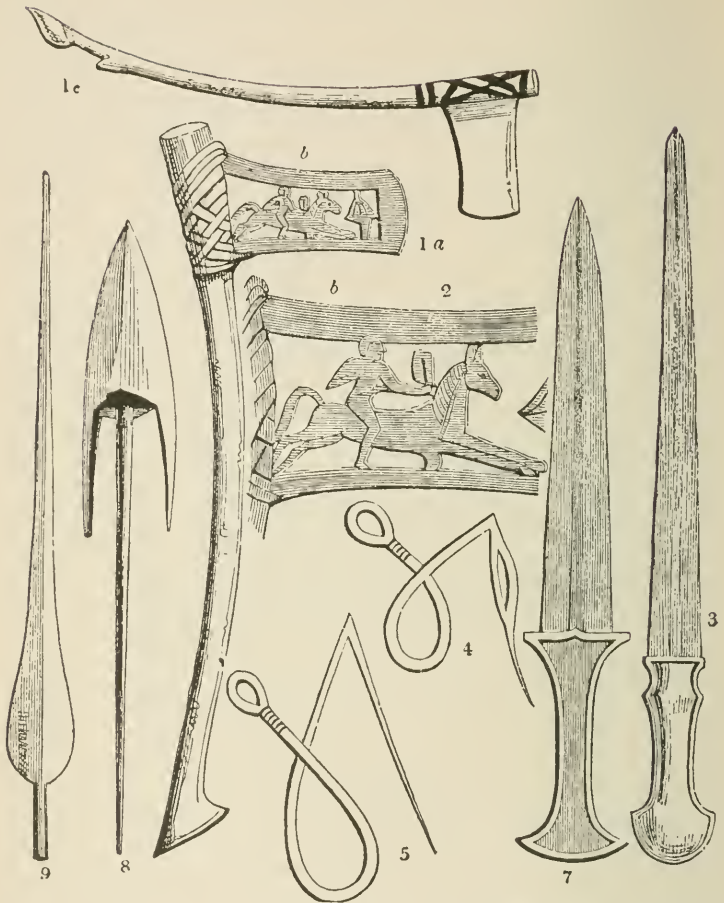
which, like the double mast and the folding sail, was afterwards abandoned as cumbrous and imperfect. This boat shows satisfactorily their mode of arranging the oars while not required during a favorable wind: they were drawn up through the ring or band in which they turned, and they were probably held in that position by a thong or loop passing over the handle. The ordinary boats of the Nile were of a different construction: which will be mentioned in describing the boat-builders, one of the members of the fourth class of the Egyptian community.



No. 91.

Egyptian dagger, length 11½ inches.

British Museum.



No. 92.

Egyptian arms.

British Museum; and from Thebes.

Fig. 1a. Hatchet, 1 foot 5 inches in length.

Fig. 3. Dagger, 15½ inches long.

Figs. 4 and 5. Slings, from the sculptures.

Fig. 6 is transferred to woodcut No. 91.

Fig. 7. Dagger, 10½ inches long.

Fig. 8. Head of dart, 3 inches.

Fig. 9. Javelin head, 14 inches long.



VIGNETTE D. — Modern shadoof, or pole and bucket, used for raising water, in Upper and Lower Egypt.

CHAPTER IV.

The other members of the Castes — The Peasants, Huntsmen, and Boatmen — The Lands farmed — Irrigation — Tradesmen, Artificers, Public Weighers, and Notaries — Money — Writing — Pastors, Fishermen, and common People — Legislative Rights of the King — Judges — Laws — Passports — The Bastinado — Punishment — Marriages — Civil Government — Greek and Roman Administration.

HAVING concluded the foregoing chapter with an account of the military order, which, as it holds a rank so far above all the other subdivisions of the second caste, I may be excused for treating almost as if distinct from it, I now proceed to notice the other members of this caste; the principal subdivisions of which consisted of the military just mentioned, the farmers, husbandmen, gardeners, huntsmen, and boatmen.

The statement of Diodorus, who says the husbandmen were hired to till the estates of the kings, priests, and soldiers, is so strongly confirmed by the scriptural account of the cession of all the landed property to the government on the occasion of Joseph's famine, that we are reduced to the necessity of concluding the husbandmen had no rights in the soil, the richer peasants farming the land from the proprietor, while the poor were hired as laborers for the cultivation of the ground. The wages paid them were trifling,¹ and it may be inferred that the farmer received the land on very moderate terms. The cattle,

¹ Diodor. i. 74.

flocks, or herds, which were tethered in the clover, appear also to have belonged to the landowner; but those employed in the plough, and for other agricultural purposes, were usually the property of the farmer. In extensive domains, the peasants frequently acted as superintendents of the herdsmen, and were obliged to give account to the steward of the number and condition of the cattle on the estate, the direct care of them being the office of an inferior class of people: the clover was also let, as at the present day, to any person who had cattle, which were tethered in the meadows about the close of autumn; and, at other seasons of the year, particularly during the period of the inundation, were fed in the villages and farmyards on hay, which had been dried and preserved for the purpose.¹

If the farmer had no right in the soil, it is still reasonable to suppose that the choice of the crop depended chiefly on his decision, care being taken, as is still the custom in Egypt, as well as in other countries, that the land should not be injured by an imprudent repetition of similar crops:² and, indeed, from what Diodorus says, it is evident the farmers were not only permitted to choose the grain they intended to cultivate, but were justly deemed the only persons of sufficient experience to form a judicious opinion on the subject: and so skilful were they, says the historian, about these matters, in the study of which they were brought up from their youth, that they far excelled the agriculturists of every other nation. They carefully considered the nature of the soil, the proper succession of crops, and the mode of tilling and irrigating the fields: and by a constant habit of observation, and by the lessons received from their parents, they were acquainted with the exact season for sowing and reaping, and with all the peculiarities of each species of produce.

The gardeners were employed by the rich in cultivating trees and flowers in the parterres attached to their houses; and the vineyard, orchard, and tanks which served for ornament as well as for the purposes of irrigation, were under their superintendance and direction. In Egypt, the garden and the fields were both watered by the *shadoof*,³ or by buckets carried on a yoke

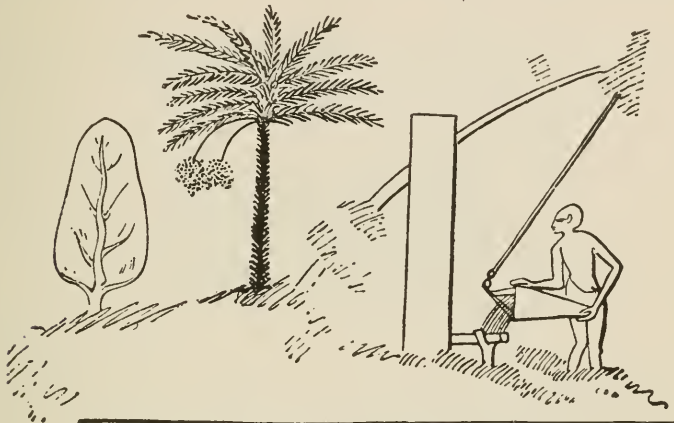
¹ Diodor. i. 36. Like the *drees*, dried clover of modern Egypt.

² M. Macaire has shown the reason of this, and proved by experiments that the noxious matter thrown out by roots of vegetables unfits the soil for the growth of

the same plant, though it may be beneficial to another kind.

³ The pole and bucket still used in Egypt. This is the Arabic name. (*Vide* Vignette D.)

across the shoulders; but there is no appearance of their having used any hydraulic machine similar to the Persian wheel, now so common in the East; nor do the sculptures represent the foot

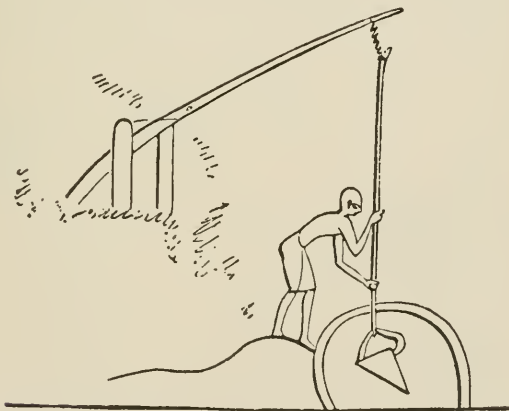


No. 93.

Shadoof, or pole and bucket, for watering the garden.

Thebes.

machine mentioned by Philo, which is supposed to be referred to in the sacred writings.¹ It is, however, not a little remarkable



No. 94.

Shadoof for watering the lands.

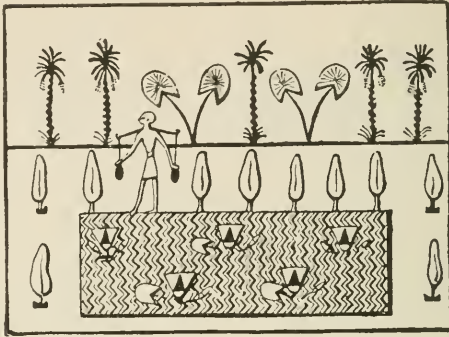
Thebes.

that an Arab tradition still records the use of the shadoof in the time of the Pharaohs: and I have found a part of one in an

¹ Deut. xi. 10. It is more probable that this alludes to the mode of stopping the small watercourses with mud by the foot,

and turning off the water into another channel, still adopted in their gardens and fields.

ancient tomb at Thebes, consisting of an angular piece of wood, on which the pole turned, and the rope that secured it to the cross bar.

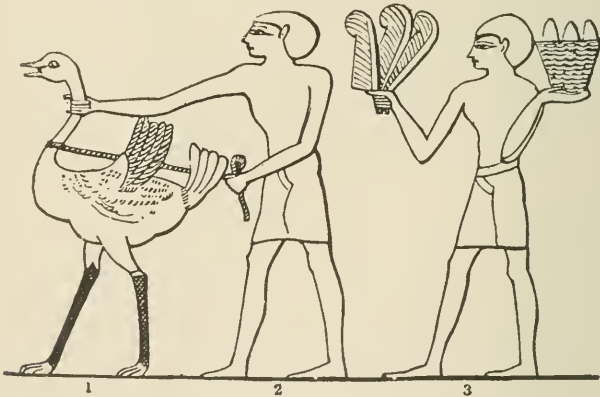


No. 95.

Water buckets carried by a yoke on the shoulders.

Thebes.

The huntsmen constituted another subdivision of this caste, many of whom were employed to attend and assist the chiefs during their excursions in pursuit of the wild animals of the country; the scenes of which amusements were principally in the deserts of Upper Egypt. They conducted the dogs to the field, they had the management of them in loosing them for the chase, and they secured and brought home the game, having generally contributed with their own skill to increase the sport of the chasseur. That also followed this occupation on their own



No. 96.

Ostrich, with the feathers and eggs.

Thebes.

account, and secured for themselves considerable profit, by catching those animals that were prized for the table, by the rewards given for destroying the hyena and other noxious animals, and by the lucrative chase of the ostrich, which was

highly valued for its plumes and eggs,¹ and was sold to the wealthier Egyptians.

The boatmen, like others who composed the subdivisions of each caste, were of different grades: some belonged to the private sailing or pleasure boats of the grandees; others to those of burden; and the rank of each depended on the station he held. The office of steersman seems to have been the most important, and to have ranked above all the other grades; but it is reasonable to suppose that when the Egyptians undertook naval expeditions, the more warlike occupation of the sailor raised that class of people in the estimation of their countrymen, and the pilots of ships of war bore the highest station in the class of boatmen. The officers of their fleet were probably selected from the army,² and the marines, or fighting men, who served on board, were all of the military order.³

The third caste consisted of artificers, tradesmen, or shopkeepers, musicians, builders, masons, carpenters, cabinet-makers, potters, public weighers, and an inferior class of notaries.

Among the artificers may be reckoned braziers and smiths of all kinds,—in short, all who pursued any handicraft occupation not included among those which I have distinctly mentioned; and the leather-cutters, many of whom are said to have lived at Thebes in the quarter of the Memnonia,⁴ were doubtless a branch of the same class. Their skill in stamping leather was very remarkable; and many specimens of unusual thinness and delicacy, presenting figures and other devices, show how well they understood the art of tanning, and of turning it to an ornamental purpose.

The workers in linen, and other manufactures, were comprehended under the same general head; but each class had its peculiar branch, and no one presumed to interfere with the occupation of another. Indeed it is probable that certain portions of the city in which they dwelt were set apart for, and exclusively belonged to, each of the different trades (as is still the case in a great degree at Cairo⁵): and this may be inferred from the mention of 'the leather-cutters of the Memnonia.'

¹ That ostrich eggs were also highly prized, is evident from their forming part of the tributes brought to the kings.

² The officer Aahmes-Pennishem, in the reign of the kings of the 17th and 18th Dynasties, served in both capacities.—S. B.

³ Sculptures at Medecnet Haboo.

⁴ In the papyrus of Mr. Grey. (Dr. Young on Egyptian Lit. p. 65.)

⁵ As the Seroogëch, or saddlers; the Harrateen, turners; the Warakeen, paper-sellers, and others, which are the names of the streets of Cairo where they have their shops.

alluded to before, who appear to have been a body of workmen living in a particular part of Thebes.

All trades, says Diodorus,¹ vied with each other in improving their own peculiar branch, no pains being spared to bring it to perfection; and to promote this object more effectually, it was enacted that no artisan should follow any other trade or employment but that which had been handed down to him from his parents,² and defined by law. Nor was any one permitted to meddle with political affairs, or to hold any civil office in the State, lest his thoughts should be distracted by the inconsistency of his pursuits, or by the jealousy and displeasure of the master in whose business he was employed. They foresaw that without such a law constant interruptions would take place, in consequence of the necessity, or the desire, of becoming conspicuous in a public station; that their proper occupations would be neglected, and that many would be led by vanity and self-sufficiency to interfere in matters which were out of their sphere. Moreover, they considered that to follow more than one occupation would be detrimental to their own interests, and to those of the community at large; and that when men, from a motive of avarice, are induced to engage in numerous branches of art, the result generally is that they are unable to excel in any. Such, adds Diodorus, is the case in some countries where artists occupy themselves in agricultural pursuits, or in commercial speculation, and frequently in two or three different arts at once. Many, again, in those communities, which are governed according to democratical principles, are in the habit of frequenting popular assemblies, and, dreaming only of their own interests, receive bribes from the leaders of parties, and do incredible mischief to the State. But with the Egyptians, if any artisan meddled with political affairs or engaged in any other employment than the one to which he had been brought up, a severe punishment was instantly inflicted upon him, and it was with this view that the regulations respecting their public and private occupations were instituted by the early legislators of Egypt.

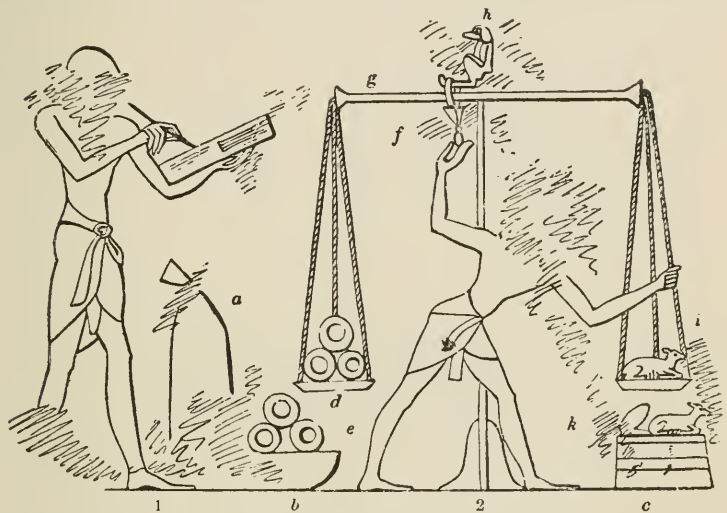
It is unnecessary to enter into any detail of the peculiar employments of the various members of the class of artificers and tradesmen, as mention will be made of them in noticing the manufactures of the country: I therefore confine myself to a few

¹ Diodor. i. 74.

² Like many other things, this is plausible in theory, but bad in practice

[and, it may be added, doubtful if carried into practice in earlier times. — S. B.]

remarks on the office of the public weighers or notaries. The business of the former was to ascertain the exact weight of every object presented to them in the public street, or market,¹ where they temporarily erected their scales, and to adjust the sale of each commodity with the strictest regard to justice, without favoring either the buyer or seller. All things sold by weight were submitted to this test;² and even the value of the money



No. 97.

Public weighers and notaries.

Thebes.

paid for them was settled by the same unquestionable criterion. It was owing to this custom that the money paid by the sons of Jacob for the corn they purchased, and which had been returned into their sacks, was said to be found of 'full weight';³ and it is highly probable that the purity of gold and silver was subjected to the trial of fire.⁴

¹ 'The *superintendence* of weights and measures' belonged to the priests, until the Romans took away that privilege. [The weigher was called *mer masha*, superintendent of the weight; the scribe or notary *an hebs*, scribe of the account. — S. B.]

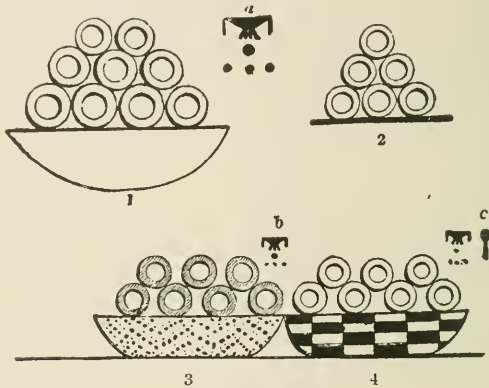
² Small objects were, no doubt, weighed at the shop by the seller; but if any question arose, it was decided by the public scales; larger goods being always weighed by the *masha* or balance, the Arabic *qab-bāneh*, as in modern Egypt.

³ Gen. xliii. 21. The Jews also weighed their money. Their weights were of stone; and the word weight, in Hebrew, מִשְׁכָּל also

means a stone. (Deut. xxv. 13, 15.) They had certain standard weights, as the shekel of the sanctuary. Roman money was also weighed in ancient times. (Liv. iv. 60.) The Egyptian mode of weighing and of noting down the account frequently occurs in the sculptures.

⁴ As with the modern Ethiopians. Conf. Zech. xiii. 9, and 1 Pet. i. 7. [The gold was divided into *nub nefer*, 'good' or 'fine gold'; *nub her tu f*, native gold; *nub sep snau*, gold of the second quality; and *nub hut*, white gold. (Cf. the papyrus of Rameses III., now in the British Museum. Fol. Lond. 1876.) — S. B.]

Their money, as I shall have occasion to observe, was in rings of gold and silver; and it is remarkable that the same currency is to this day employed in Sennár and the neighboring countries. But whether those rings had any government stamp to denote their purity, or to serve as a test of their value, I have not been able to determine; and it is singular that none have yet been discovered in the ruins or tombs of Thebes, though so frequently represented in the sculptures.



No. 98.

Rings of gold and silver.

Thebes.

A scribe or notary marked down the amount of the weight, whatever the commodity might be: and this document, being given or shown to the parties, completely sanctioned the bargain, and served as a pledge that justice had been done them. The same custom is still retained by the modern Egyptians, the scales of the public *qabbáneh* in the large towns being a criterion to which no one can object; and the weight of meat, vegetables, honey, butter, cheese, wood, charcoal, and other objects, having been ascertained, is returned in writing on the application of the parties. The scribes or notaries were probably public writers, like the Arab *kátebs* of the present day, or the *scrivani* of Italy, who, for a small trifle, compose and pen a petition to government, settle accounts, and write letters, or other documents, for those who are untaught, or for those who are too idle to do so for themselves. These persons, however, must not be confounded with the royal and priestly scribes, who were of a very different grade, and who ranked among the principal people of the country: though it is sometimes difficult to distinguish them

from an inferior class of scribes, of the sacerdotal order.¹ Most of the shopkeepers, and of the master tradesmen, learned to write:² but the workmen were contented to occupy their time in acquiring from their parents or friends that art to which they were brought up; and the common people, as might be supposed, were entirely ignorant of the art of writing.

The characters used by the Egyptians consisted of three different kinds,—the hieroglyphic,³ the hieratic,⁴ and enchorial or demotic; the first and last known to all who received a good education; the hieratic confined more particularly to the priests. There is reason to believe the enchorial did not exist at a very remote period.⁵ Indeed, the appearance of the letters proves them to have been derived from the hieratic, which is itself directly taken from the hieroglyphic; and it is probable that this last was the sole mode of writing known to the Egyptians in the earliest periods of their history, though the hieratic, a much earlier invention than the enchorial, dates from a very remote era.

Clement of Alexandria⁶ says, those who are educated among the Egyptians learn three different modes of writing, one of which is the epistolary (enchorial), the other the sacerdotal (hieratic), and the third the hieroglyphic; and though Porphyry, in his *Life of Pythagoras*, gives to the hieratic the name of symbolic, it is evident he alludes to the same modes of writing, when he says that the philosopher, during his stay in Egypt, learned the three different kinds of letters,—the epistolary, the hieroglyphic, and the symbolic. Herodotus⁷ mentions two,—the sacred and demotic; but as he speaks of their writing from right to left, it is possible that he only here alludes to the two cursory characters, the hieratic and enchorial, without comprehending the hieroglyphics under the head of writing.⁸

The great confidence reposed in the public weighers rendered

¹ The scribes were, like the clerks of the government, accountants, registrars, and civil officers of the hierarchy and law; they were also attached to the troops, and formed the bureaucracy of Ancient Egypt. Besides which, they were the literati of the country, and recorded all the events of Egypt, law, annals and history. The authors of all known compositions are stated to be scribes.—S. B.

² Diodor. i. 81.

³ The hieroglyphic has been called the monumental, but it is also used in papyrus, and for all the purposes for which the other two are employed. It is as old as the 2d Dynasty.—S. B.

⁴ As old as the 5th Dynasty. It was the writing or cursive hand of Egypt till the accession of the 25th Dynasty, and was used for religious purposes till the 2d century A.D.—S. B.

⁵ The first appearance of this modified cursive writing is B.C. 691, in the reign of Taharak or Tirhakab. (Devéria, *Cat. p. 206.*)—S. B.

⁶ Stromat. lib. v.

⁷ Herodot. ii. 36.

⁸ [The libraries of Egypt were always famous, and they, as well as its literature, were dedicated to the gods.—G. W.]

it necessary to enact suitable laws in order to bind them to their duty; and considering how much public property was at their mercy, and how easily bribes might be taken from a dishonest tradesman, the Egyptians inflicted a severe punishment as well on the weighers as on the shopkeepers who were found to have false weights and measures, or to have defrauded the purchaser in any other way. Scribes who kept false accounts, made erasures from public documents, forged a signature, or altered any agreements without the consent of the parties, were punished, like the preceding offenders, with the loss of both their hands; on the principle, says Diodorus, that the offending member should suffer,¹ and, while the culprit expiated the crime with a most signal punishment, that the severity of the example might deter others from the commission of a similar offence.

The fourth caste was composed of pastors, poulterers, fowlers, fishermen, laborers, servants,² and common people.

The pastors, who were divided into different classes, consisted of oxherds, shepherds, goatherds, swineherds, and others, whose occupation was to tend the herds of the rich in the pastures, during the grazing season, and to prepare the provender required for them, when the waters of the Nile covered the irrigated lands. They were looked upon by the rest of the Egyptians as a degraded class, who followed a disgraceful employment; and it is not surprising that Pharaoh should have treated the Jews with that contempt which it was customary for every Egyptian to feel towards shepherds. Nor can we wonder at Joseph's warning his brethren, on their arrival, of this aversion of the Egyptians, who, he assured them, considered 'every shepherd an abomination;'³ and from his recommending them to request they might dwell in the land of Goshen, we may conclude it was with a view to avoid as much as possible those who were not shepherds like themselves, or to obtain a settlement in the land peculiarly adapted for pasture;⁴ and it is probable that much of Pharaoh's cattle was also kept there, since the monarch gave orders that if any of the Jews were remarkable for skill in the management of herds they should be selected to overlook his own cattle,⁵ after they were settled in the land of Goshen. The hatred borne against

¹ Diodor. i. 78. Deut. xix. 21.

² Gen. xii. 16. Exod. ii. 5.

³ Gen. xlvi. 34. According to Herodotus, ii. 46, goatherds were much honored in the Mendesian nome.

⁴ The Delta and those lands lying to the east of the Damietta branch of the Nile are still preferred for grazing cattle.

⁵ Gen. xvii. 6.

shepherds by the Egyptians, was not owing solely to their contempt for that occupation: this feeling originated in another and a far more powerful cause, — the previous occupation of their country by a pastor race, who had committed great cruelties during their possession of the country; and the already existing prejudice against shepherds, when the Hebrews arrived, plainly shows their invasion to have happened previous to that event. As if to prove how much they despised every order of pastors, the artists, both of Upper and Lower Egypt, delighted on all occasions in representing them as dirty and unshaven; and at Beni-Hassan and the tombs near the Pyramids of Gizeh, we find them caricatured as a deformed and unseemly race. The swineherds were the most ignoble, and of all the Egyptians the only persons who are said not to have been permitted to enter a temple;¹ and even if this statement is exaggerated, it tends to show with what contempt they were looked upon by the individuals from whom Herodotus received his information, and how far they ranked beneath any others of the whole order of pastors. Like the other classes, their office descended from father to son, and the same occupation was followed by successive generations.

The skill of these people in rearing animals of different kinds was the result, says Diodorus,² of the experience they had inherited from their parents, and subsequently increased by their own observation; and the spirit of emulation which is natural to all men constantly adding to their stock of knowledge, they introduced many improvements unknown to other people. Their sheep were twice shorn, and twice brought forth lambs, in the course of one year;³ and though the climate was the chief cause of these phenomena, the skill and attention of the shepherd were also necessary; nor, if the animals were neglected, would unaided nature alone suffice for their continuance.

But of all the discoveries to which any class of Egyptians attained, the one, says the historian, which is most worthy of admiration, is their mode of rearing fowls⁴ and geese; and by a

¹ Herodot. ii. 47.

² Diodor. i. 74.

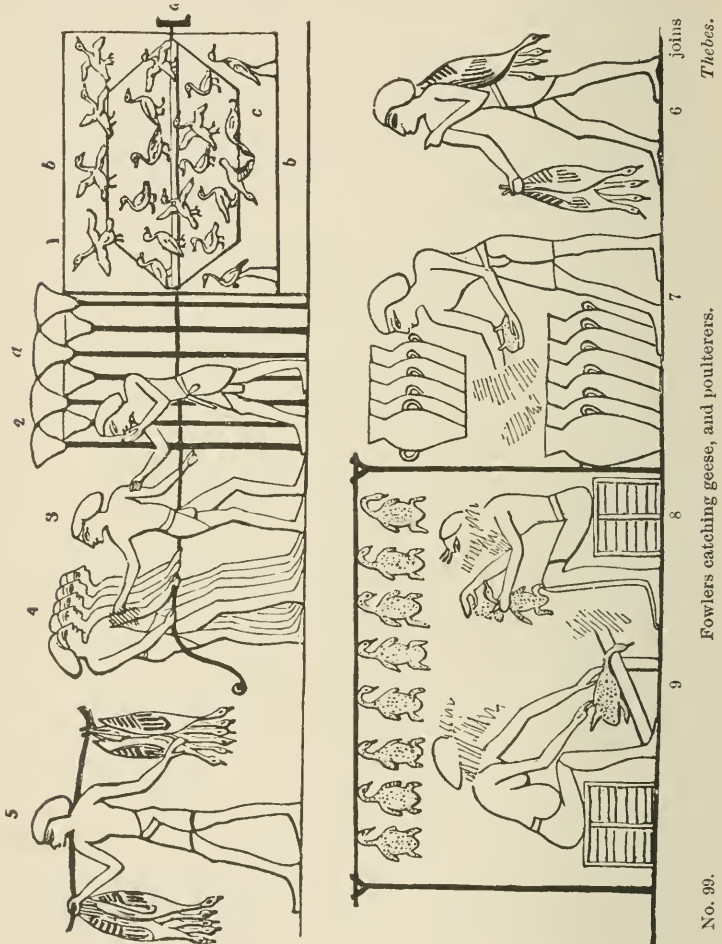
³ *Ibid.* i. 36. This happens now, but not unless the sheep are properly fed and attended to.

⁴ The modern Egyptians, particularly the Copts, have borrowed this custom from their predecessors, and eggs are annually hatched in the towns of Upper and Lower

Egypt. [There were no domestic fowls or chickens in ancient Egypt. The great papyrus of Rameses III. mentions geese of various kinds, waterfowl, fowls of the air, pigeons, and doves, as offered for the purposes of food to the temples. At an earlier period herons and cranes are mentioned as viands, but domestic fowls never. — S. B.]

process their ingenuity has devised, they hatch the eggs, and thereby secure an abundance of poultry, without the necessity of waiting for the incubation of the hens.

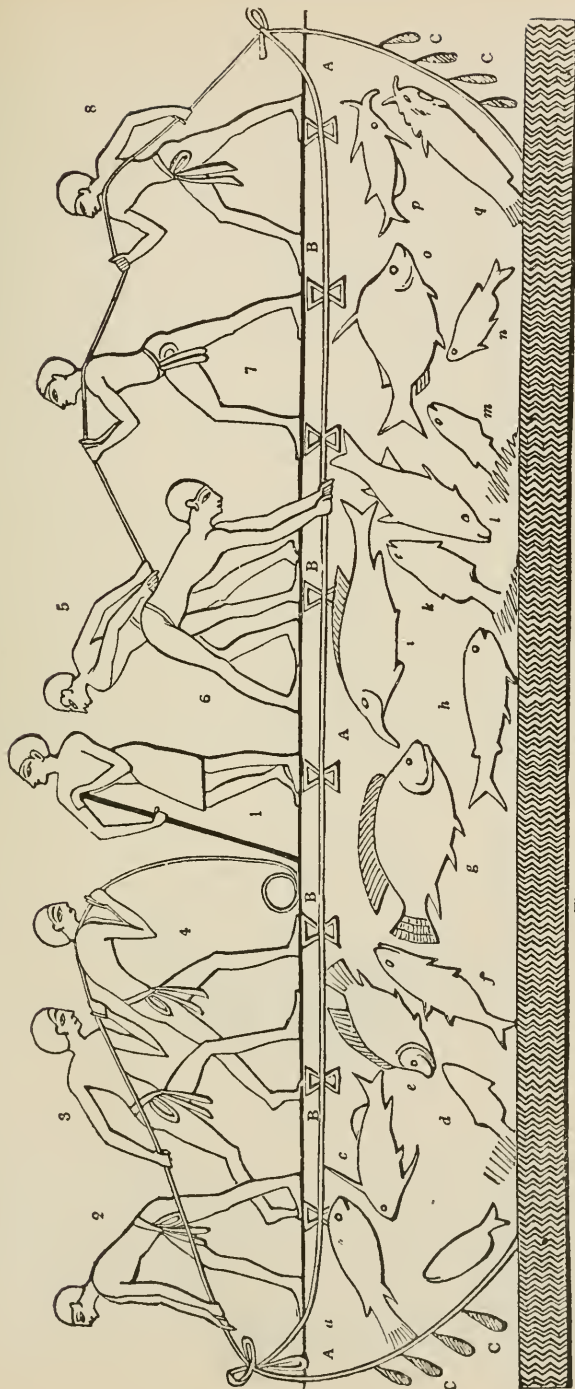
The poulterers may be divided into two classes,—the rearers, and those who sold poultry in the market; the former living in the country and villages, and the latter in the market towns.



They fed them for the table; and independent of the number required for private consumption, a great many were exclusively fattened for the service of the temple, as well as for the sacred animals,¹ and for the daily rations² of the priests and soldiers,

¹ Diodor. i. 84.

² Herodot. ii. 37. Gen. xlvii. 22.



A A The net.

B B The floats.

C C The leads.

Fishing with a drag-net.

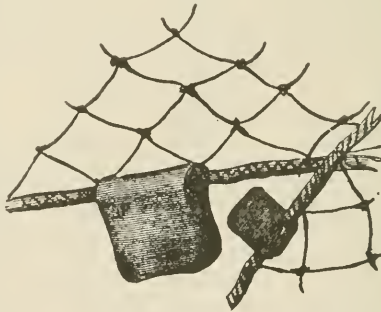
No. 100.

Tomb near the Pyramids.

or others who lived at the government expense, and for the king himself.¹

Their geese were the *vulpanser* of the Nile, and others of the same genus still common on its banks, many of which were tamed and fed like ordinary poultry. Those in a wild state were caught in large clap nets, and being brought to the poulterers, were salted and potted in earthenware vases. Others were put up in the shop for immediate sale; and whenever eggs could be procured they carefully collected them, and submitted them to the management of the rearers, who thereby increased the more valuable stock of tame fowl. The same care was taken to preserve the young of gazelles, and other wild animals of the desert, whose meat was reckoned among the dainties of the table; and by paying proper attention to their habits, they were enabled to collect many head of antelopes, which frequently formed part of the herds of the Egyptian nobles. And in order to give an idea of the pains they took in rearing these timid animals, and to show the great value of the possessions of the deceased, they are introduced with the cattle, in the sculptures of the tombs.

The fishermen mostly used the net: it was of a long form, like the common drag-net, with wooden floats on the upper, and leads on the lower side; but though it was sometimes let down



No. 101.

Leads, with part of a net.

Berlin Museum.

from a boat, those who pulled it generally stood on the shore, and landed the fish on a shelving bank. The leads were occasionally of an elongated shape, hanging from the outer cord or border of the net, but they were more usually flat, and, being

¹ Diodor. i. 70.

folded round the cord, the opposite sides were beaten together ; a satisfactory instance of which is seen in the ancient net preserved in the Berlin Museum, and this method still continues to be adopted by the modern Egyptians.¹

In a country where fish will not admit of being kept, the same persons who caught them were the sole vendors, and the fishermen may be considered an undivided body.² The class of laborers, on the contrary, consisted of several different subdivisions, according to their occupation ; among whom we may, perhaps, include the workers in mud and straw, and brickmakers,³ as well as those who performed various drudgeries in the field and in the town :⁴ but as I shall have occasion to speak of them hereafter, I now content myself with these general remarks, and pass on to the consideration of the government and laws of the country.

The king had the right of enacting laws,⁵ and of managing all the affairs of religion and of the State ; and so intimate was the connection of these two, that the maintenance of the one was considered essential for the very existence of the other. This notion has, indeed, always been cherished in the East ; and we find Khandemir and other Moslem writers give it as a received opinion, that the State cannot exist without religion, and that 'it is of minor consequence if the former perishes, provided the latter survives, since it is impossible that the State can survive if religion is subverted.'

We are acquainted with few of the laws of the ancient Egyptians ; but the superiority of their legislature has always been acknowledged as the cause of the duration of an empire which lasted with a very uniform succession of hereditary sovereigns, and with the same form of government, for a much longer period than the generality of ancient states. Indeed, the wisdom of that people was proverbial, and was held in such consideration by other nations, that we find it taken by the Jews as the

¹ There is a large net (a seine) in the British Museum, No. 5507a. — S. B.

² Fish was not eaten by all classes, although Rameses III. gave some kinds to the temples. The Ethiopian conqueror Pianchi would not admit to his presence the princes who ate fish. — S. B.

³ Many of those who made bricks and worked in the field were foreign slaves, as I have already observed ; and on them, no doubt, fell the most arduous portion of these laborious tasks. But it was not

only the Jews who were so treated : other captives were similarly employed, as we see in the sculptures at Thebes, where the Jews never lived, and where people of other conquered nations are mentioned.

⁴ The hard life of these various conditions is described in the 2d Sallier papyrus, in a composition supposed to have been written during the 12th Dynasty. (Maspero, 'Le Genre épistolaire,' Paris, 1872, pp. 48 and foll.) — S. B.

⁵ Herodot. ii. 136, 177. Diodor. i. 79.

standard to which superior learning¹ in their own country was willingly compared; and Moses had prepared himself for the duties of a legislator by becoming versed 'in all the wisdom of the Egyptians.'²

Besides their right of enacting laws, the kings administered justice to their subjects on those questions which came under their immediate cognizance,³ and they were assisted in the management of state affairs by the advice of the most able and distinguished members of the priestly order.⁴ With them the monarch consulted upon all questions of importance, relating to the internal administration of the country; and previous to the admission of Joseph to the confidence of Pharaoh, the opinion of his ministers was asked, as to the expediency and propriety of the measure.⁵

Their edicts appear to have been issued in the form of a *firmán*,⁶ or written order, as in all Oriental countries; and from the expression used by Pharaoh in granting power to Joseph, we may infer that the people who received that order adopted the usual Eastern mode⁷ of acknowledging their obedience and respect for the sovereign. Nor can there be any doubt that, besides the custom of *kissing* the signature attached to those documents, they were expected to 'bow the knee'⁸ in the presence of the monarch and chiefs of the country, and even to prostrate themselves to the earth before them.⁹

Causes of ordinary occurrence were decided by those who held the office of judges;¹⁰ and the care with which persons were elected to this office is a strong proof of their regard for the welfare of the community, and of their earnest endeavors to promote the ends of justice. None were admitted to it but the most upright and learned individuals; and, in order to make the

¹ Of Solomon. 1 Kings iv. 30.

² Acts vii. 22.

³ Diodor. i. 71. Herodot. ii. 173.

⁴ Diodor. i. 73.

⁵ Gen. xli. 38. And Isaiah xix. 11.

⁶ Like the *Khot e Shereef*, 'handwriting of the Shereef,' or order of the sultans of Constantinople.

⁷ The expression in the Hebrew is, 'according unto thy word shall all my people *kiss* (be ruled),' alluding evidently to the custom of kissing a *firmán*. (Gen. xli. 40.)

⁸ Gen. xli. 43. The word *abrek* אַבְרֵק is very remarkable, as it is used to the present day by the Arabs when requiring a camel

to kneel and receive its load.

⁹ Gen. xliii. 26, 28. These prostrations are frequently represented in the sculptures.

¹⁰ The judges were called *satem en as en kat en ma*, 'auditors of complaints of the tribunal of Truth;' scribes, keepers of the books or writings, and other officers were attached to it. At the time of the Romans the judges went the circuit. (Böckh, 'Corpus Ins. Græc.' iii. p. 321.) Besides the judges were the magistrate, *tá* or *ten*; the *tai seri en sem*, bearer of the flabellum, who administered justice, the fountain of which was the sovereign; and royal commissioners, appointed to try specific or extraordinary cases, especially treason.—S. B.

office more select, and more readily to obtain persons of known character, ten only were chosen from each of the three cities, Thebes, Memphis, and Heliopolis; a body of men, says Diodorus, by no means inferior either to the Areopagites of Athens, or to the senate of Lacedæmon.

These thirty individuals¹ constituted the bench of judges; and at their first meeting they elected the most distinguished among them to be president, with the title of Arch-judge. His salary was much greater than that of the other judges, as his office was more important; and the city to which he belonged enjoyed the privilege of returning another judge, to complete the number of the thirty from whom he had been chosen. They all received ample allowances from the king; in order that, possessing a sufficiency for their maintenance and other necessary expenses, they might be above the reach of temptation, and be inaccessible to bribes: for it was considered of primary importance that all judicial proceedings should be regulated with the most scrupulous exactitude, sentences pronounced by authorized tribunals² always having a decided influence, either salutary or prejudicial, on the affairs of common life. They felt that precedents were thereby established, and that numerous abuses frequently resulted from an early error which had been sanctioned by the decision of some influential person, and for this reason they weighed the talents as well as the character of the judge.

The first principle was that offenders should be discovered and punished, and that those who had been wronged should be benefited by the interposition of the laws; and since the least compensation which can be made to the oppressed, and the most effectual preventive of crime, are the speedy discovery and exposure of the offender. On the other hand, if the terror which hangs over the guilty in the hour of trial could be averted by bribery or favor, nothing short of distrust and confusion would pervade all ranks of society; and the spirit of the Egyptian laws was not merely to hold out the distant prospect of rewards and punishments, or merely threaten the future vengeance of the gods,³ but to apply the more persuasive stimulus of present retribution. Besides the care taken by them that justice should be administered according to the real merits of the case, and that before their tribunals no favor or respect of persons should be

¹ A council of thirty, apparently a kind of privy council, accompanied the king on military expeditions. — S. B.

² Diodor i. 75.

³ Ibid., i. 93.

permitted, another very important regulation was adopted, that justice should be gratuitously administered; and it was consequently accessible to the poor as well as to the rich. The very spirit of their laws was to give protection and assistance to the oppressed,¹ and everything that tended to promote an unbiased judgment was peculiarly commended by the Egyptian sages.²

When a case was brought for trial, it was customary for the arch-judge to put a golden chain round his neck, to which was suspended a small figure of Truth, ornamented with precious stones.³ This was, in fact, a representation of the goddess who was worshipped under the double character of Truth and Justice,



No. 102.

The goddess of Truth and Justice.

Thebes.

and whose name, Ma,⁴ appears to have been the origin of the Hebrew Thummin;⁵ a word, according to the Septuagint translation, implying truth,⁶ and bearing a further analogy⁷ in its plural termination. And what makes it more remarkable is, that the chief priest of the Jews, who before the election of a king was also the judge of the nation, was alone entitled to wear this honorary badge; and the Thummin, like the Egyptian figure,

¹ Diodor. *loc. cit.*

² Herodot. ii. 160. Diodor. i. 95.

³ Figures of this goddess, made of lapis lazuli, are not uncommon, and may have been suspended to the necks of the judges. — S. B.

⁴ Thmei, the Egyptian or Coptic name of justice or truth.

⁵ Lord Prudhoe has very ingeniously

suggested that the Urim is derived from the two asps or basilisks, *uræi*, which were the emblems of royalty in Egypt. *Ouro* is the Coptic word implying a king.

⁶ Exod. xxxiii. 30.

⁷ The goddess frequently occurs in the sculptures in this double capacity, represented by two figures exactly similar.

was studded with precious stones of various colors. The goddess was represented 'having her eyes closed' ¹ purporting that the duty of a judge was to weigh the question according to the evidence he had heard, and to trust rather to his mind than to



No. 103.

The goddess of Truth, 'with her eyes closed.'

Thebes.

what he saw; and was intended to warn him of that virtue which the deity peculiarly enjoined: an emblematic idea, very similar to 'those statues at Thebes of judges without hands, with their chief or president at their head having his eyes turned downwards' signifying, as Plutarch observes, 'that justice ought neither to be accessible to bribes, nor guided by favor and affection.'²

It is not to be supposed that the president and the thirty judges above mentioned were the only house of judicature in the country; each city or capital of a nome had no doubt its own court, for the trial of minor and local offences; and it is probable that the assembly returned by the three chief cities resided wherever the royal court was held, and performed many of the same duties as the senates of ancient times. And that this was really the case, appears from the account of Diodorus,³ who mentions the thirty judges and their president, represented at Thebes in the sculptures of the tomb of Osymandyas.

The president or arch-judge having put on the emblem of truth, the trial commenced, and the eight volumes, which contained the laws of the Egyptians were placed close to him,⁴ in

¹ Diodor. i. 48.² Plut. de Isid. s. x.³ Diodor. i. 48. Probably a mistake forthe forty-two *daimons* or assessors of the dead. — S. B.⁴ Diodor. i. 48, 75.

order to guide his decision, or to enable him to solve a difficult question, by reference to that code, to former precedents, or to the opinion of some learned predecessor. The complainant stated his case. This was done in writing; and every particular that bore upon the subject, the mode in which the alleged offence was committed, and an estimate of the damage or the extent of the injury sustained, were inserted.

The defendant then, taking up the deposition of the opposite party, wrote his answer to each of the plaintiff's statements, either denying the charge, or endeavoring to prove that the offence was not of a serious nature, or if obliged to admit his guilt, suggesting that the damages were too high, and incompatible with the nature of the crime. The complainant replied in writing; and the accused having brought forward all he had to say in his defence, the papers were given to the judges; and if no witnesses could be produced on either side,¹ they decided upon the question according to the deposition of the parties. Their opinion only required to be ratified by the president, who then proceeded, in virtue of his office, to pronounce judgment on the case; and this was done by touching the party who had gained the cause with the figure of truth. They considered that this mode of proceeding was more likely to forward the ends of justice than when the judges listened to the statements of pleaders; eloquence having frequently the effect of fascinating the mind, and tending to throw a veil over guilt and to pervert truth. The persuasive arguments of oratory, or those artifices which move the passions and excite the sympathy of the judges, were avoided, and thus neither did an appeal to their feelings, nor the tears and dissimulation of an offender, soften the just rigor of the laws.² And while ample time was afforded to each party to proffer or to disprove an accusation, no opportunity was given to the offender to take advantage of his opponent, but poor and rich, ignorant and learned, honest and dishonest, were placed on an equal footing; and it was the case, rather than the persons, upon which the judgment was passed.

The laws of the Egyptians were handed down from the earliest times, and looked upon with the greatest reverence. They had the credit of having been dictated by the gods themselves, and Thoth³ was said to have framed them for the benefit of mankind.

¹ Diodor. i. 77, 92.

² *Ibid.*, i. 76.

³ Hermes or Mercury.

The names of many of the early monarchs and sages who had contributed to the completion of their code were recorded and venerated by them; and whoever at successive periods made additions to it was mentioned with gratitude as the benefactor of his country.¹

Truth or justice was thought to be the main cardinal virtue among the Egyptians, inasmuch as it relates more particularly to others; prudence, temperance, and fortitude being relative qualities, and tending only to the immediate benefit of the individual who possesses them. It was, therefore, with great earnestness that they inculcated the necessity of fully appreciating it; and falsehood was not only considered disgraceful, but when it entailed an injury on any other person, was punishable by law. A calumniator of the dead was condemned to a severe punishment;² and a false accuser was doomed to the same sentence which would have been awarded to the accused, if the offence had been proved against him;³ but to maintain a falsehood by an oath was deemed the blackest crime, and one which, from its complicated nature, could be punished by nothing short of death. For they considered that it involved two distinct crimes,—a contempt for the gods, and a violation of faith towards man; the former the direct promoter of every sin, the latter destructive of all those ties which are most essential for the welfare of society.

In order more effectually to protect the virtuous and detect the wicked, it was enacted⁴ that every one should at certain times present himself before the magistrates or provincial governors, and give his name, his place of abode, his profession or employment, and, in short the mode in which he gained his livelihood; the particulars being duly registered by the official scribes. The time of attendance was fixed, and they proceeded in bodies to the appointed office, accompanied with their respective banners; each member of the body being introduced singly to the registering clerks. In approaching these functionaries, it was required that the individual should make a profound bow, which was similar to that described by Herodotus,⁵ the hand falling down to the knee; and this mark of deference was expected from every one, as a token of respect to the court, on all occasions,

¹ Diodor. i. 94.

² *Ibid.*, i. 92.

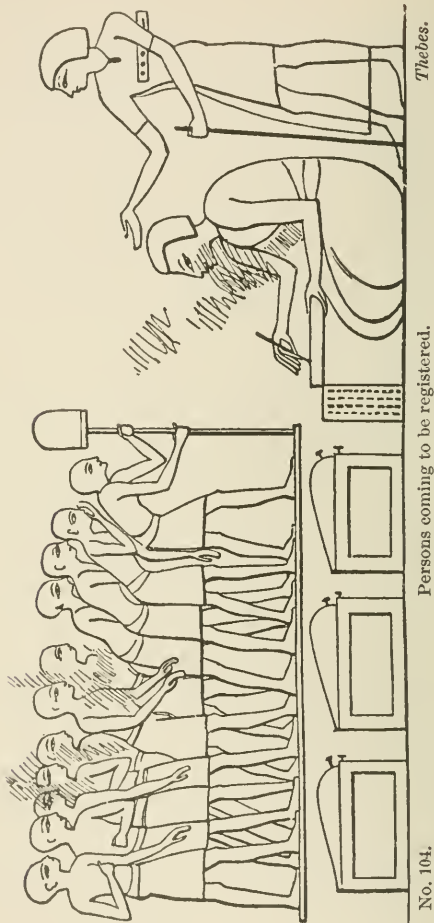
³ Conf. Deut. xix. 19.

⁴ Herodotus, ii. 177, attributes it to

Amasis. Diodorus, i. 77, mentions it merely as an Egyptian law

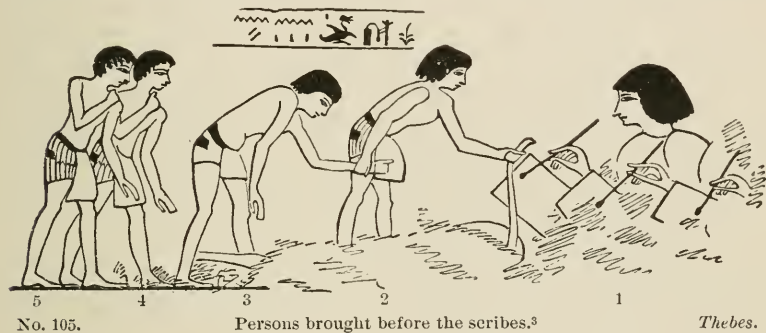
⁵ Herodot. ii. 80.

both when accused before a magistrate, and when attending at the police office to prefer a complaint, or to vindicate his character from an unjust imputation.



Whether they received a passport from the magistrates, or merely enrolled their names and the other particulars required of them, does not appear, nor can we come to any conclusion on this head, either from the sculptures, the accounts of ancient writers, or even from the mode of describing persons who were parties to the sale of estates, and other private or public contracts: but the formula much resembles that adopted in the passport offices of modern Europe.

In a deed of the time of Cleopatra Cocce and Ptolemy Alexander I., written in Greek, and relating to the sale of a piece of land at Thebes, the parties are thus described: ¹—‘Pamonthes, aged about forty-five,² of middle size, dark complexion, and handsome figure, bald, round-faced and straight-nosed; Snachomneus, aged about twenty, of middle size, sallow complexion, round-faced and straight-nosed; Semmuthis Persineï, aged about twenty-two, of middle size, sallow complexion, round-faced, flat-nosed, and of quiet demeanor; and Tathlyt Persineï, aged about thirty, of middle size, sallow complexion, round face, and straight nose. — the four being children of Petepsais, of the leather-cutters of the Memmonia; and Nechutes the less, the son



of Asos, aged about forty, of middle size, sallow complexion, cheerful countenance, long face and straight nose, with a scar upon the middle of his forehead.’ Even if the mode of registering the names, which is noticed by Diodorus and the sculptures of Thebes, does not in reality refer to passports, it is at least very similar in spirit and intent, and may be considered the earliest indication of a custom so notoriously unpleasant to modern travellers.

During their examination, if any excesses were found to have been committed by them, in consequence of an irregular mode of life, they were sentenced to the bastinado; but a false statement,⁴ or the proof of being engaged in unlawful pursuits, entailed upon them the punishment of a capital crime.

¹ Papyrus Anastasi. (*Vide* Dr. Young on Hieroglyphical Literature, p. 65.)

² It is remarkable that, in the East, no one knows his exact age; nor do they keep

any registers of births or deaths. [*V.* Strabo, ii, p. 69, edit. Siebel. — G. W.]

³ The hieroglyphic inscription reads, ‘the royal scribe, Tanani.’ — S. B.

⁴ Diodor. i. 77.

The wilful murder of a freeman, or even of a slave, was punished with death, from the conviction that men ought to be restrained from the commission of sin, not on account of any distinction of station in life, but from the light in which they viewed the crime itself; while at the same time it had the effect of showing, that if the murder of a slave was deemed an offence deserving of so severe a punishment, they ought still more to shudder at the murder of one who was a compatriot and a free-born citizen.

In this law we observe a scrupulous regard for justice and humanity, and have an unquestionable proof of the great advancement made by the Egyptians in the most essential points of civilization, affording a pleasing comment on their character; and it is a striking fact that neither Greece¹ nor Rome,² proud as they both were of their superiority and of their skill in jurisprudence, had the good sense to adopt or imitate this wise regulation.³ Indeed, the Egyptians considered it so heinous a crime to deprive a man of life, that to be the accidental witness of an attempt to murder, without endeavoring to prevent it, was a capital offence, which could only be palliated by bringing proofs of inability to act. With the same spirit they decided, that to be present when any one inflicted a personal injury on another, without interfering, was tantamount to being a party, and was punishable according to the extent of the assault; and every one who witnessed a robbery was bound either to arrest, or, if that was out of his power, to lay an information, and to prosecute the offenders: and any neglect on this score being proved against him, the delinquent was condemned to receive a stated number of stripes, and to be kept without food for three whole days.

Although, in the case of murder the Egyptian law was inexorable and severe, the royal prerogative might be exerted in favor of a culprit, and the punishment was sometimes commuted by a mandate from the king. Sabaco, indeed, during the fifty

¹ I must do the Greeks the justice to say they acknowledged the superior wisdom and equity of the Egyptians, and were in the habit of consulting them, and of visiting Egypt to study their institutions.

² Masters had an absolute power of life and death over their slaves, and they generally crucified them, when convicted

of a capital offence. (Juv. Sat. vi. 219.) Constantine abolished this punishment.

³ The Athenian lawgiver did, however, according to Demosthenes, institute a very proper custom, that the funerals of slaves should be properly solemnized by the magistrates (demarchs). And slaves received much better treatment at Athens than at Sparta.

years of his reign, 'made it a rule not to punish his subjects with death,' whether guilty of murder or any other capital offence, but, 'according to the magnitude of their crimes, he condemned the culprits to raise the ground about the town to which they belonged. By these means the situation of the different cities became greatly elevated above the reach of the inundation, even more than in the time of Sesostris;' ¹ and either on account of a greater proportion of criminals, or from some other cause, the mounds of Bubastis ² were raised considerably higher than those of any other city.

But far from adopting so barbarous a custom as the exposure of infants, or allowing a father any right over the life of his offspring, the Egyptians deemed the murder of a child an odious crime, that called upon the direct interposition of the laws. They did not, however, punish it as a capital offence, since it appeared inconsistent to take away life from one who had given it to the child, ³ but preferred inflicting such a punishment as would induce grief and repentance. With this view they ordained that the corpse of the deceased should be fastened to the neck of its parent, and that he should be obliged to pass three whole days and nights in its embrace, under the surveillance of a public guard. Parricide was visited with the most cruel of chastisements; and conceiving, as they did, that the murder of a parent was the most unnatural of crimes, they endeavored to prevent its occurrence by the marked severity with which it was avenged. The criminal was therefore sentenced to be lacerated with sharpened reeds, and after being thrown on thorns he was burnt to death.

When a woman was guilty of a capital offence, and judgment had been passed upon her, they were particularly careful to ascertain if the condemned was in a state of pregnancy; in which case her punishment was deferred till after the birth of her child, in order that the innocent might not suffer with the guilty, ⁴ and thus the father be deprived of that child to which he had at least an equal right. ⁵

But some of their laws regarding the female sex were cruel

¹ Herodot. ii. 137.

² The mounds of Bubastis, Tel Basta, are of very great height, and are seen from a considerable distance.

³ Diodor. i. 77.

⁴ A law adopted also by the Athenians.

⁵ It appears from the Judicial Papyrus of Turin (cf. p. 304, note ¹), that they were punished in the same manner as men. Under certain circumstances self-destruction seems to have been allowed. — S. B.

and unjustifiable; and even if, which is highly improbable, they succeeded, by their severity, in enforcing chastity and in putting an effectual stop to adultery, yet the punishment rather reminds us of the laws of a barbarous people than of a wise and civilized state. A woman who had committed adultery was sentenced to lose her nose,¹ upon the principle that being the most conspicuous feature, and the chief, or at least an indispensable, ornament of the face, its loss would be most severely felt, and be the greatest detriment to her personal charms; and the man was condemned to receive a bastinado of one thousand blows. But if it was proved that force had been used against a free woman, he was doomed to a cruel and inhuman punishment.²

The object of the Egyptian laws was to preserve life and to reclaim an offender. Death took away every chance of repentance, it deprived the country of his services, and he was hurried out of the world when least prepared to meet the ordeal of a future state. They, therefore, preferred severe punishments, and, except in the case of murder and some crimes which appeared highly injurious to the community, it was deemed unnecessary to sacrifice the life of an offender.

Some of the laws and punishments of the Egyptian army I have already noticed: and in military as well as civil cases, minor offences were generally punished with the stick;³ a mode of chastisement still greatly in vogue among the modern inhabitants of the valley of the Nile, and held in such esteem by them, that convinced of (or perhaps by) its efficacy, they relate 'its descent from heaven as a blessing to mankind.'⁴

If an Egyptian of the present day has a government debt or tax to pay, he stoutly persists in his inability to obtain the money, till he has withstood a certain number of blows, and considers himself compelled to produce it; and the ancient inhabitants, if not under the rule of their native princes, at least in the time of the Roman emperors, gloried equally in the obstinacy they evinced, and the difficulty the governors of the country experienced in extorting from them what they were bound to pay; whence Ammianus Marcellius tells us, 'An Egyptian blushes if

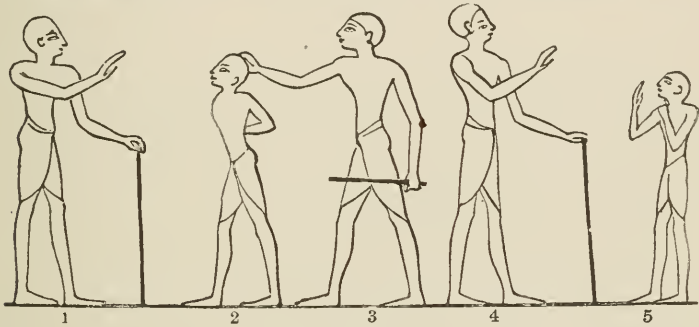
¹ Cutting off the nose and ears was one of the punishments for treason against Rameses III. (Devéria, 'Le Papyrus judiciaire de Turin,' Paris, 1868, p. 119.) — S. B.

² Diod. i. 77. With the Jews it was punished by death. (Deut. xxii. 22.)

³ The stick was called *batana*; it was applied to extort confession. (Chabas, *Mélanges*;' Paris.) — S. B.

⁴ The Moslems say, 'Nézel min e'semma e'neboot, bāraka min Allah.' 'The stick came down from heaven, a blessing from God.'

he cannot show numerous marks on his body that evince his endeavors to evade the duties.’¹



No. 106.

The bastinado.

Beni-Hassan.

The bastinado was inflicted on both sexes,² as with the Jews.³ Men and boys were laid prostrate on the ground,⁴ and frequently held by the hands and feet while the chastisement was administered;⁵ but women, as they sat, received the stripes on their back, which were also inflicted by the hand of a man. Nor was it unusual for the superintendents to stimulate laborers to their work by the persuasive powers of the stick, whether engaged in the field or in handicraft employments: and boys were sometimes



No. 107. Woman bastinadoed. Beni-Hassan.

¹ Amm. Marcel. Life of Julian. Ælian, Var. Hist. vii. 18.

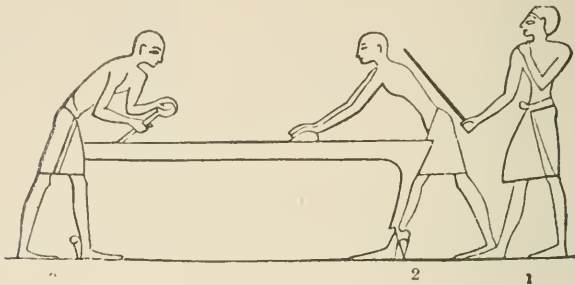
² Sculptures at Beni-Hassan.

³ Exodus xxi. 20.

⁴ As with the Jews: Dent. xxv. 2.

⁵ The inscription on woodcut No. 106 reads, *ta su er ta en hat*, 'given to the region of the heart.'—S. B.

beaten without the ceremony of prostration, the hands being tied behind their back, while the punishment was applied.



No. 108.

Workman beaten.

Tomb at the Pyramids.

It does not however appear to have been from any respect to the person that this less usual method was adopted.

Having noticed the pertinacity of the modern Egyptians in resisting the payment of their taxes, I shall introduce the following story as remarkably illustrative of this fact. In the year 1822, a Copt Christian, residing at Cairo, was arrested by the Turkish authorities for the non-payment of his taxes, and taken before the Kehia, or deputy of the Pasha. 'Why,' inquired the angry Turk, 'have you not paid your taxes?' 'Because,' replied the Copt, with a pitiable expression, perfectly according with his tattered appearance, 'I have not the means.' He was instantly ordered to be thrown upon the floor, and bastinadoed. He prayed to be released, but in vain: the stick continued without intermission, and he was scarcely able to bear the increasing pain. Again and again he pleaded his inability to pay, and prayed for mercy: the Turk was inexorable; and the torments he felt at length overcame his resolution; they were no longer to be borne. 'Release me,' he cried, 'and I will pay directly.' 'Ah, you Giower! go.' He was released and taken home, accompanied by a soldier; and the money being paid, he imparted to his wife the sad tidings. 'You coward, you fool!' she exclaimed; 'what, give them the money on the very first demand! I suppose after five or six blows you cried, "I will pay, only release me." Next year our taxes will be doubled through your weakness; shame!' 'No, my dear,' interrupted the suffering man, 'I assure you I resisted as long as it was possible: look at the state I am in. before you upbraid me. I paid the money, but they had trouble enough for it; for I obliged them

to give me at least a hundred blows before they could get it.' ¹ She was pacified; and the pity and commendation of his wife, added to his own satisfaction in having shown so much obstinacy and courage, consoled him for the pain, and, perhaps in some measure, for the money thus forced from him.

Hanging ² was the customary mode of punishment for many capital crimes, and the criminals were kept 'bound' in prison ³ till their fate was decided, whether it depended on the will of the sovereign, or the decision of the judges; and these places of confinement were under the immediate superintendence, and within the house, of the chief of the police. ⁴ [No representation of hanging, or indeed of any capital punishment, occurs in the Egyptian sculptures. In the scenes of the Kar-neter, or Hades, decapitation and strangling are represented, and appear to have been practised, as in some places decapitated mummies have been discovered, and there are evidences of such a mode of execution. It also appears that the conspirators and offenders mentioned in the account of the papyrus at Turin, referring to events in the reign of Rameses III., either committed suicide or were allowed to put themselves to death. — S. B.]

The character of some of the Egyptian laws was quite consonant with the notions of a primitive age. In those cases punishment was directed more particularly against the offending member; and adulterators of money, falsifiers of weights and measures, forgers of seals or signatures, and scribes who altered any signed document by erasures or additions without the authority of the parties, were condemned to lose both their hands. But their laws did not seem to have sanctioned the gibbet, ⁵ or the exposure of the body of an offender; since the conduct of Rhampsinitus, in the case of the robbery of his treasure, is mentioned by Herodotus ⁶ as a singular mode of discovering an accomplice, and not as an ordinary punishment.

Thefts, breach of trust, and petty frauds were punished with the bastinado: but robbery and housebreaking were sometimes considered capital crimes, and deserving of death; as is evident

¹ [Cf. Ælian, 'Var. Hist.,' vii. 18, who says, 'The Egyptians behave bravely under torments, and an Egyptian when put to torture will die rather than confess the truth. The Indian women also resolutely go into the same fire with their dead husbands.' — G. W.]

² Gen. xl. 22.

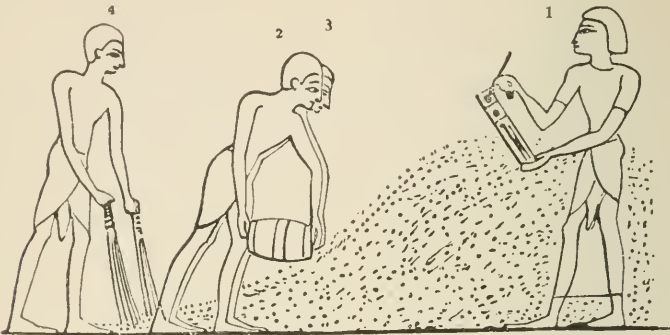
³ Gen. xxxix. 20.

⁴ Gen. xxxix. 1; xl. 3.

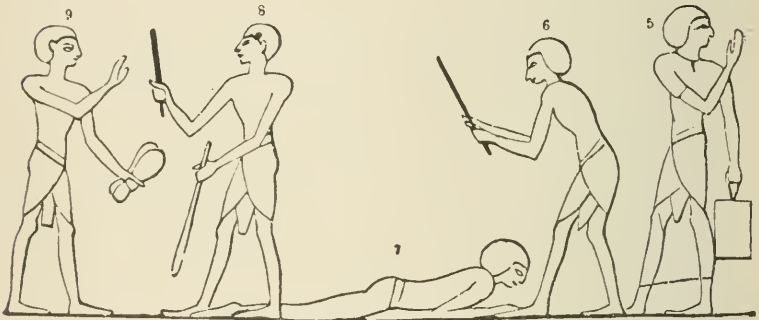
⁵ Amenophis II. slung the dead bodies of slain foreign chiefs before his galley, and hung them up after death on the walls of an Ethiopian fortress. — S. B.

⁶ Herodot. ii. 121.

from the conduct of the thief when caught by the trap in the treasury of Rhampsinitus, and from what Diodorus¹ states respecting Actisanes. This monarch, instead of putting robbers



joins



No. 109.

Bastinado for petty theft.

Thebes. joins

1. Scribe registering corn. 2, 3. Measurers of corn. 4. Sweeper. 5. Person holding bag. 6. Administering bastinado. 7. Man bastinadoed. 8. Officer with *batana* stick and other stick. 9. Man with sandals.

to death² instituted a novel mode of punishing them, by cutting off their noses, and banishing them to the confines of the desert, where a town was built, called, according to Pliny, Rhinocolura, or Rhinocorum, from the peculiar nature of their punishment:³ and thus, by removing the bad and preventing their corrupting the good, he benefited society, without depriving the criminals of life; at the same time that he punished them severely for their crimes, by obliging them to live by their industry in a barren and inhospitable region.

¹ Diodor. i. 60.

² Implying that other monarchs did.

³ From what he afterwards says, we may conclude that the king punished great

and petty cases in the same manner; his object being to prevent the contamination of bad example.

The Egyptians had a singular custom respecting theft and burglary. Those who followed the *profession* of thief gave in their names to the chief of the robbers;¹ and agreed that he should be informed of everything they might thenceforward steal, the moment it was in their possession. In consequence of this the owner of the lost goods always applied by letter to the chief for their recovery; and having stated their quality and quantity, the day and hour when they were stolen, and other requisite particulars, the goods were identified, and, on payment of one-quarter of their value, they were restored to the applicant, in the same state as when taken from his house.

Being fully persuaded of the impracticability of putting an entire check to robbery, either by the dread of punishment, or by any method that could be adopted by the most vigilant police, they considered it more for the advantage of the community that a certain sacrifice should be made in order to secure the restitution of the remainder, than that the law, by taking on itself to protect the citizen and discover the offender, should be the indirect cause of greater loss; and that the Egyptians, like the Indians, and I may say the modern² inhabitants of the Nile, were very expert in the art of thieving, we have abundant testimony from ancient authors.³ It may be asked, what redress could be obtained, when goods were stolen by those who failed to enter their names in the books of the chief; but, as it is evident that these private speculations would interfere with the interests of all the *profession*, the detection of such persons would inevitably follow, as the natural consequence of their avarice; and thus all others were effectually prevented from robbing, save those of the privileged class. The salary of the chief was not merely derived from his own demands upon the goods stolen, or from any voluntary contribution of the robbers themselves, but was probably a fixed remuneration granted by the government, as one of the chiefs of the police; nor is it to be imagined that he was any other than a respectable citizen,⁴ and a man of the greatest integrity and honor.

¹ The same as the Sheikh el Haramécéh, or Sheikh of the robbers in modern Egypt, and at Constantinople. (Diodor. i. 80.)

² The excellent police of Mohammed Ali put a stop to this propensity of the Egyptian peasantry: few instances, therefore, now occur. Some of the robberies in the time of the Memlooks proved their great talent in this department; and the

well-known Indian feat of carrying off a horse in the open day, from the midst of a numerous party of English, was performed in nearly the same manner by an Egyptian from a Memlook camp.

³ Conf. Theocrit. Idyl. xv. 48.

⁴ As the Sheikh of the robbers in Cairo at the present day.

As in other countries, their laws respecting debt and usury underwent some changes, according as society advanced, and as pecuniary transactions became more complicated. Bocchoris, who reigned in Egypt about the year 812 B.C., and who, from his learning, obtained the surname of Wise, finding that in cases of debt many causes of dispute had arisen, and instances of great oppression were of frequent occurrence, enacted¹ that no agreement should be binding unless it was acknowledged by a written contract;² and if any one took oath that the money had not been lent to him, no debt should be recognized, and the claims of the suing party should immediately cease. This was done that great regard might always be had for the name and nature of an oath, at the same time that, by substituting the unquestionable proof of a written document, they avoided the necessity of having frequent recourse to an oath, and its sanctity was not diminished by constant repetition.

Usury³ was in all cases condemned by the Egyptian legislature; and when money was borrowed, even with a written agreement, it was forbidden to allow the interest to increase to more than double the original sum.⁴ Nor could the creditors seize the debtor's person:⁵ their claims and right were confined to the goods in his possession, and such as were really his own; which were comprehended under the produce of his labor, or what he had received from another individual to whom they lawfully belonged. For the person of every citizen was looked upon as the property of the State, and might be required for some public service, connected either with war or peace; and, independent of the injustice of subjecting any one to the momentary caprice of his creditor, the safety of the country might be endangered through the avarice of a few interested individuals.

This law, which was borrowed by Solon from the Egyptian code, existed also at Athens: and was, as Diodorus observes, much more consistent with justice and common sense than that which allowed the creditor to seize the person, while it forbade him to take the ploughs and other implements of husbandry: for if, continues the historian, it is unjust thus to deprive men of the means of obtaining subsistence, and of providing for their families,

¹ Diodor. i. 79.

² The number of witnesses in Egyptian contracts is very remarkable. (Dr. Young on Hieroglyph. Lit. p. 71.)

³ As with the Moslems and the Jews;

Psalm xv. 5; Ezek. xviii. 8, 17; and Levit. xxv. 36, 37.

⁴ This was also a law at Rome.

⁵ [This was also enacted by Bocchoris: Diodor. i. 79. — G. W.]

how much more unreasonable must it be to imprison those by whom the implements were used?

To prevent the accumulation of debt, and protect the interests of the creditor, another remarkable law was enacted,¹ which, while it shows how greatly they endeavored to check the increasing evil, proves the high respect paid by the Egyptians to the memory of their parents, and to the sanctity of their religious ceremonies. By this it was pronounced illegal for any one to borrow money without giving in pledge the body of his father, or of his nearest relative;² and, if he failed to redeem so sacred a deposit,³ he was considered infamous, and at his death the celebration of the accustomed funeral obsequies was denied him, and he could not enjoy the right of burial either in the tomb of his ancestors, or in any other place of sepulture;⁴ nor could he inter his children, or any of his family, as long as the debt was unpaid, the creditor being put in actual possession of his family tomb.⁵

In the large cities of Egypt, a fondness for display, and the usual allurements of luxury, were rapidly introduced; and considerable sums were expended in furnishing houses, and in many artificial caprices. Rich jewels and costly works of art were in great request, as well among the inhabitants of the provincial capitals as at Thebes and Memphis: they delighted in splendid equipages, elegant and commodious boats, numerous attendants, horses, dogs, and other requisites for the chase; and, besides, their houses, their villas, and their gardens were laid out with no ordinary expense. But while the funds arising from extensive farms, and the abundant produce of a fertile soil, enabled the rich to indulge extravagant habits, many of the less wealthy envied the enjoyment of those luxuries which fortune had denied to them; and, prompted by vanity, and a desire of imitation, so common in civilized communities, and so generally followed by

¹ Herodot. ii. 136. Diodor. i. 93. [By Asychis of the 5th Dynasty. — S. B.]

² Herodotus only says, his father. We must suppose that some fathers did not die conveniently for their mummies to stand security for their surviving sons. I have, therefore, suggested a relative. [Lucian says, a father or mother. — G. W.]

³ That is, if the debt was not paid within a certain time, the mummy could be removed from the tomb. It is not to be supposed that this alludes to mummies kept in the houses, which only remained

there for a certain time; since it was honorable to be buried, and a disgrace to be refused that right, as in the case of malefactors. We may conclude the body itself was seldom given up, since possession of the tomb was sufficient, and much less inconvenient to the creditor than to have a stranger's mummy in his sitting-room.

⁴ Herodot. ii. 136. Diodor. i. 92, 93.

⁵ [‘The author of such laws,’ says Diodorus, ‘every one must admire,’ &c.: Diod. i. 93. — G. W.]

fatal results, they pursued a career which speedily led to an accumulation of debt,¹ and demanded the interference of the legislature; and it is probable that a law so severe as this must have appeared to the Egyptians, was only adopted as a measure of absolute necessity, in order to put a check to the increasing evil.

The necessary expenses of the Egyptians were remarkably small, less indeed than of any people, and the food of the poorer classes was of the cheapest and most simple kind. Owing to the warmth of the climate, they required few clothes, and young children were in the habit of going without shoes, and with little or no covering to their bodies; and so trifling was the expense of bringing up a child, that, as Diodorus affirms,² it never need cost a parent more than twenty drachms,³ until arrived at man's estate. It was therefore luxury, and the increasing wants of an artificial kind, which corrupted the manners of the Egyptians, and rendered such a law necessary for their restraint; and we may conclude that it was mainly directed against those who contracted debts for the gratification of pleasure, or with the premeditated intent of defrauding an unsuspecting creditor.

[No ancient deeds have been handed down prior to Taharqa or Tirhakah of the 25th Dynasty, or about the 7th century B.C., which confirms the statement of Diodorus that they may have been introduced by Bocchoris. If any such existed, they were probably in the form of letters, mentioning that land or other objects had been given: but at a later time great formalities attended the transfer of real property. None, however, are known later than the Greek rule in Egypt, and they disappear at the conquest of Egypt, and under the Roman empire. They were written in demotic or cursive Egyptian, the third kind of writing, or Greek, and at the time of the Ptolemies duplicates were extant in both languages. — S. B.]

In the mode of executing deeds, conveyances, and other civil contracts, the Egyptians were peculiarly circumstantial and minute; and the great number of witnesses is a singular feature in those documents. In the time of the Ptolemies, sales of property commenced with a preamble, containing the date of the

¹ In the time of Sesostris (Rameses II.) a very great number of persons were in prison for debt, for whose release he thought it necessary to interfere. (Diodor. i. 54.)

² Diodor. i. 80.

³ Thirteen shillings English; but the value of money was more than three times that of the present day. — S. B.

king in whose reign they were executed; the name of the president of the court, and of the clerk by whom they were written, being also specified. The body of the contract then followed. It stated the name of the individual who sold the land, the description of his person, an account of his parentage, profession, and place of abode; the extent and nature of the land, its situation and boundaries; and concluded with the name of the purchaser, whose parentage and description were also added, and the sum for which it was bought. The seller then vouched for his undisturbed possession of it; and, becoming security against any attempt to dispute his title, the name of the other party was inserted as having accepted it, and acknowledged the purchase. The names of witnesses were then affixed; and, the president of the court having added his signature, the deed was valid. Sometimes the seller formally recognized the sale in the following manner:— All these things have I sold thee: they are thine, I have received their price from thee, and make no demand upon thee for them from this day; and if any person disturb thee in the possession of them, I will withstand the attempt; and, if I do not otherwise repel it, I will use compulsory means,' or 'I will indemnify thee.'¹ But, in order to give a more accurate notion of the form of these contracts, I shall introduce a copy of the whole of one of them, as given by Dr. Young,² and refer the reader to others occurring in the same work. 'Translation of the enchorial papyrus of Paris, containing the original deed relating to the mummies:— "This writing, dated in the year 36, Athyr 20, in the reign of our sovereigns Ptolemy and Cleopatra his sister, the children of Ptolemy and Cleopatra the divine, the gods Illustrious: and the priest of Alexander, and of the Saviour gods, of the Brother gods, of the (Beneficent gods), of the Father-loving gods, of the Illustrious gods, of the Paternal god, and of the Mother-loving gods, being (as by law appointed): and the prize-bearer of Berenice the Beneficent, and the basket-bearer of Arsinoë the Brother-loving, and the priestess of Arsinoë the Father-loving, being as appointed in the metropolis of (Alexandria); and in (Ptolemais) the royal city of the Thebaïd? the guardian priest for the year? of Ptolemy Sotër, and the priest of king Ptolemy the Father-loving, and the priest of Ptolemy the Brother-loving, and the priest of Ptolemy the Beneficent, and the priest of Ptolemy the Mother-loving; and the priestess

¹ Young, Hieroglyph. Literature, pp. 70, 74.

² *Ibid.*, p. 72.

of queen Cleopatra, and the priestess of the princess Cleopatra, and the priestess of Cleopatra, the (queen) mother, deceased, the Illustrious; and the basket-bearer of Arsinoë the Brother-loving (being as appointed): declares: The Dresser in the temple of the Goddess, Omphris, the son of Horus, and of Senpoeris, daughter of Spotus? aged about forty, lively, tall, of a sallow complexion, hollow-eyed, and bald; in the temple of the goddess to (Horus) his brother the son of Horus and of Senpoeris, has sold, for a price in money, half of one-third of the collections for the dead 'priests of Osiris,' lying in Thynabunun . . . in the Libyan suburb of Thebes, in the Memnonia . . . likewise half of one-third of the liturgies: their names being, Muthes, the son of Spotus, with his children and his household; Chapocrates, the son of Nechthmonthes, with his children and his household; Arsiesis, the son of Nechthmonthes, with his children and his household; Petemestus, the son of Nechthmonthes; Arsiesis, the son of Zminis, with his children and his household; Osoroeris, the son of Horus, with his children and his household; Spotus, the son of Chapochonsis, surnamed? Zoglyphus (the sculptor), with his children and his household: while there belonged also to Asos, the son of Horus and of Senpoeris, daughter of Spotus? in the same manner one-half of a third of the collections for the dead, and of the fruits and so forth . . . he sold it on the 20th of Athyr, in the reign of the king ever-living, to (complete) the third part: likewise the half of one-third of the collections relating to Peteutemis, with his household, and . . . likewise the half of one-third? of the collections and fruits for Petechonsis, the bearer of milk, and of the . . . place on the Asian side called Phrecages, and . . . the dead bodies in it: there having belonged to Asos the son of Horus one-half of the same: he has sold to him in the month of . . . the half of one-third of the collections for the priests of Osiris lying in Thynabunun, with their children and their households: likewise the half of one-third of the collections for Peteutemis, and also for Petechonsis, the bearer of milk, in the place Phrecages on the Asian side: I have received for them their price in silver . . . and gold; and I make no further demand on thee for them from the present day . . . before the authorities . . . (and if any one shall disturb thee in the possession of them, I will resist him; and, if I do not succeed, I will indemnify thee?) . . . Executed and confirmed. Written by Horus, the son of Phabis, clerk to the chief priests of Amonrasonther, and of the contemplar? gods, of

the Beneficent gods, of the Father-loving god, of the Paternal god, and of the Mother-loving gods. Amen.

“ Names of the witnesses present : —

ERIEUS, the son of Phanres Erius.
 PETEARTRES, the son of Peteutemis.
 PETEARPOCRATES, the son of Horus.
 SNACHOMNEUS, the son of Peteuris.
 SNACHOMES, the son of Psenchonsis.
 TOTOES, the son of Phibis.
 PORTIS, the son of Apollonius.
 ZMINIS, the son of Petemestus.
 PETEUTEMIS, the son of Arsiesis.
 AMONORYTIUS, the son of Pacemis.
 HORUS, the son of Chinnaraus.
 ARMENIS (rather Arbais), the son of Zthenaetis.
 MAESIS, the son of Mirsis.
 ANTIMACHIUS, the son of Antigenes.
 PETOPHOIS, the son of Phibis.
 PANAS, the son of Petosiris.”

In this, as in many other documents, the testimony required is very remarkable, sixteen witnesses being thought necessary for the sale of a moiety of the sums collected on account of a few tombs, and for services performed to the dead, the total value of which was only 400 pieces of brass; and the name of each person is introduced, in the true Oriental style, with that of his father. Nor is it unreasonable to suppose, that the same precautions and minute formulæ were observed in similar transactions during the reigns of the Pharaonic kings; however great may have been the change introduced by the Ptolemies¹ and Romans into the laws and local government of Egypt.

Of the marriage-contracts of the Egyptians we are entirely ignorant, nor do we even find the ceremony² represented in the paintings of their tombs. We may, however, conclude that they were regulated by the customs usual among civilized nations;³ and, if the authority of Diodorus can be credited, women were indulged with greater privileges in Egypt than in any other country. He even affirms that part of the agreement entered into at the time of marriage was, that the wife should have control over her husband, and that no objection should be made

¹ Diodcr. i. 95.

² With the Jews, it was frequently very simple: Job vii. 13. The wedding feast continued seven days: Gen. xxix. 27; Judges xiv. 12; Job xi. 19; — sometimes fourteen: Job viii. 19.

³ Although there is no representation of a marriage, two are mentioned in the inscriptions of Rameses II. with a daughter of the king of the Klita on the tablet of Aboosimbel (Rosellini, *M. St. tav. lxxxii.*);

and that of Rameses X. on the tablet from the temple of Chons at Karnak (*De Rougé, 'Stèle Égyptienne,' Paris, 1858, p. 53.*) The phrase for marriage is *help*. The recent researches of M. Revillout have discovered several marriage settlements of the Ptolemaic period in the demotic character. The conditions were that if the husband took a second wife, he should pay a fine to the first, whose eldest son was to be heir to the property. — S. B.

to her *commands* whatever they might be; ¹ but though we have sufficient to convince us of the superior treatment of women among the Egyptians, as well from ancient authors as from the sculptures that remain, it may fairly be doubted if those indulgencies were carried to the extent mentioned by the historian, or that command extended beyond the management of the house and the regulation of domestic affairs.

It is, however, remarkable that the royal authority and supreme direction of affairs were intrusted without reserve to women, as in those states of modern Europe where the Salic law has not been introduced; and we not only find examples in Egyptian history of queens succeeding to the throne, but Manetho informs us that the law according this important privilege to the other sex dated as early as the reign of Binotheris, the third monarch of the 2d Dynasty.

In primitive ages, the duties of women were very different from those of a later and more civilized period, and varied of course according to the habits of each people. Among pastoral tribes they drew water,² kept the sheep, and superintended the herds as well as flocks.³ As with the Arabs of the present day, they prepared both the furniture and the woollen stuffs of which the tents themselves were made; and, like the Greek women, they were generally employed in weaving, spinning, and other sedentary occupations within doors. Needlework and embroidery were a favorite amusement of the Grecian women, in which it is highly probable the Egyptian ladies also occupied much of their time;⁴ and we have positive evidence, from the sculptures, of numerous females being employed in weaving and in the use of the spindle. But Egyptian women were not kept in the same secluded manner as those of ancient Greece; who, besides being confined⁵ to certain parts of the house, called the *gynæconitis*, or women's apartments, most remote from the hall of entrance, and generally in the uppermost part of the building, were not even allowed to go out of doors without a veil,⁶ as in many

¹ Diodor. i. 27.

² Gen. xxiv. 15. Exod. ii. 16. As at the present day.

³ Gen. xxiv. 20, and xxix. 6, 9. Rachel, and also Zipporah and her six sisters, kept their father's sheep. Andromache fed the horses of Hector: Il. 6, 187.

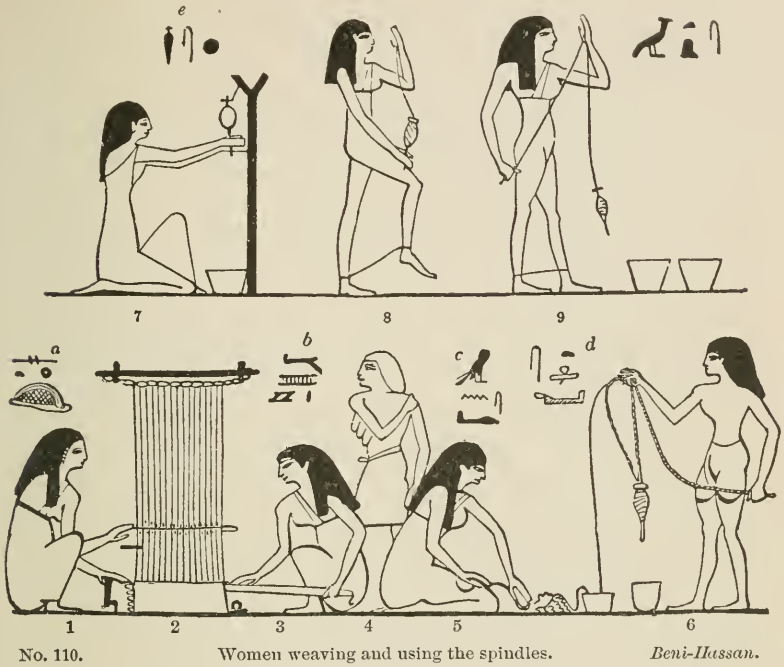
⁴ It appears from the 'Romance of the Two Brothers,' that they prepared the food,

brought the wash-bowl, gave out supplies, and got the lamps or lights ready. ('Records of the Past,' ii. p. 139.) — S. B.

⁵ Euripides' Phœniss. v. 88. This could not have been the case in Egypt, as we find from Potiphar's wife so constantly meeting Joseph, and from her having 'called the men of her house.' (Gen. xxxix. 11 and 14.)

⁶ Their faces were covered, but the veil

Oriental countries at the present day. Newly-married women were almost as strictly kept as virgins; and, by the law of



Solon, no lady could go out at night without a lighted torch before her chariot. They were very carefully guarded in the house and abroad by nurses, and sometimes by old men and eunuchs; and the secluded life they led was very similar to that imposed upon females among the modern Moslems. Clemens of Alexandria¹ says that women should always be covered except at home, and speaks highly of the modesty of the wife of Æneas, who, though much alarmed at the taking of Troy, would not appear unveiled. But the Egyptians treated their women very differently, and in a manner much more worthy of a civilized people; and if the accounts of ancient authors are sometimes unsatisfactory, and even contradictory, on this head, the sculptures assist us to form our conclusions, and to decide in their

was thin enough to be seen through. It was not, therefore, like the *hoorko* of modern Egypt, which has two holes exposing the eyes, but rather like that of the Wahabees, which covers the whole head

and face. The Jewish women also wore a veil; and in Solomon's Song one complains that her veil had been taken from her. (Cant. v. 7. Conf. Gen. xxiv. 65.)

¹ Pædagog. lib. iii. c. 11.

favor. At some of the public festivals women were expected to attend, — not alone, like the Moslem women at a mosque, but in company with their husbands or relations: and the wives of priests, as well as the queen, joined in performing the ceremonies of the temple: these two classes of women were eligible for the offices of serving the gods. Josephus¹ states, that on an occasion of this kind, ‘when it was the custom for women to go to the public solemnity, the wife of Potiphar, having pleaded ill health, in order to be allowed to stay at home, was excused from attending,’ and availed herself of the absence of her husband to talk with Joseph.

Diodorus informs us the Egyptians were not restricted to any number of wives, but that every one married as many as he chose, with the exception of the priesthood, who were by law confined to one consort. It does not, however, appear that they generally took advantage of this privilege; and Herodotus² affirms that throughout Egypt it was customary to marry only one wife. It is easy to reconcile these statements, by supposing that Diodorus speaks of a law which permitted polygamy, and Herodotus of the usual custom of the people; and if the Egyptians were allowed to take more than one wife, we may conclude, from the numerous scenes illustrative of their domestic life, that it was an event of rare occurrence.⁴

Polygamy is permitted to the Moslem, but it is neither reputable to have more than one wife, nor to divorce her without very cogent reasons; and though no objection can be made when there is no family, it is required, even in this ease, that her wishes, and those of her parents, should be consulted: and many marriage-contracts stipulate that the wife shall have no partner in the harem. With much more reason, then, we may conclude that among the higher classes of Egyptians a similar custom prevailed, which will account for no instance of two consorts being given in the sculptures.

But a very objectionable law, which is not only noticed by Diodorus,⁵ but is fully authenticated by the sculptures both of

¹ Joseph. Ant. ii. 4, 3.

² The Jewish chief priest was allowed but one wife, and he could only marry a virgin. (Levit. xxi. 13.) Every Copt priest, at the present day, is forbidden to marry again on the demise of his wife. (*Vide* Gibbon, ii. c. xv. p. 318, on the opinions of the early Fathers respecting second nuptials.)

³ Herodot. ii. 92.

⁴ The tablets and inscriptions rarely, if ever, show more than one wife at a time, except in the case of the Pharaohs, who certainly practised polygamy. Persons of position and rank, however, had harems, and that as late as the Ptolemies. — S. B.

⁵ Diodor. i. 27.

Upper and Lower Egypt, was in force among them from the earliest times, the origin and policy of which it is not easy to explain. Diodorus supposes that the custom — the marriage of brother and sister — was owing to, and sanctioned by, that of Isis and Osiris; but as this was purely an allegorical fable,¹ and these ideal personages never lived on earth, his conjecture is of little weight; nor, indeed, would such a circumstance be sufficient to account for so strange a law.²

In the time of the patriarchs, as in the case of Abraham and Sarah,³ and among the Athenians, an Egyptian colony, it was lawful to marry a sister by the father's side, not, however, if born of the same mother; but that this restriction was not observed in Egypt, we have sufficient evidence from the marriages of several of the Ptolemies.

Though the Egyptians generally confined themselves to one wife,⁴ they, like the Jews and other Eastern nations, both of ancient and modern times, scrupled not to admit other inmates to their *hareem*, most of whom appear to have been foreigners, either taken in war, or brought to Egypt to be sold as slaves. They became members of the family, like those in a similar situation at the present day, and not only ranked next to the wives and children of their lord, but probably enjoyed a share of the property at his demise.⁵ These women were white or black slaves according to the countries from which they were brought; but, generally speaking, the latter were employed merely as domestics, who were required to wait upon their mistress and her female friends. The former, likewise, officiated as servants, though they of course held a rank above the black slaves; and it is very probable that the women represented at Medeenet Haboo, attending upon Rameses, were of this class of persons, and, at all events, not the wives of the monarch.⁶

¹ The same occurs in the Greek mythology. Jupiter and Juno were brother and sister. (Virg. *Æn.* i. 50. *Vide* Hor. *Od.* iii. 3, 64, and Homer *Il.* xvi. 432.)

² Amongst the Ethiopians descent and inheritance passed by the female, as the surer line than the male branch, which might be corrupted. In the case of the king, it insured the legitimate and divine descent of the royal family. — S. B.

³ Gen. xx. 12.

⁴ The Jews were generally contented with one wife, though a plurality was permitted also by their laws (1 Kings xi. 3).

Like other Oriental people, the Egyptians buried their wives in the same tomb with their husbands (Job iv. 4).

⁵ This Eastern custom I suppose also to have been adopted by the ancient as well as the modern Egyptians. According to Moslem law, the birth of a child gives the mother a claim, and, indeed, properly a right, to enfranchisement.

⁶ Rather allegorical representations of Upper and Lower Egypt playing at draughts and in dalliance with the monarch Rameses III. — S. B.

The same custom prevailed among the Egyptians regarding children as with the Moslems and other Eastern people; no distinction being made between their offspring by a wife or any other woman, and all equally enjoying the rights of inheritance: for since they considered a child indebted to the father for its existence,¹ and the mother to be 'little more than a nurse,'² it seemed unjust to deny equal rights to all their progeny. And indeed, if Diodorus is correct,³ they carried this principle so far, that, in diœcious plants, those which bore fruit were denominated males, as being the cause of production and of the continuation of the species.

Of the laws respecting the duties of children, one only is recorded by Herodotus, which appears singular and unjust: that if a son was unwilling to maintain his parents, he was at liberty to refuse; but that a daughter, on the contrary, was compelled to assist them, and, on refusal, was amenable to law. We may, however, question the truth of this statement of the historian; and, drawing an inference from the marked severity⁴ of filial duties among the Egyptians, some of which we find distinctly alluded to in the sculptures of Thebes, we may conclude that in Egypt much more was expected from a son than in any civilized nation of the present day, and that this was not confined to the lower orders, but extended to those of the highest ranks of society. And if the office of fan-bearer was an honorable post, and the sons of the monarch were preferred to fulfil it, no ordinary show of humility was required on their part; and they walked on foot behind his chariot, bearing certain insignia over their father, during the triumphal processions which took place in commemoration of his victories, and in the religious ceremonies over which he presided.

It was equally a custom in the early times of European history, that a son should pay a marked deference to his parent: and no prince was allowed to sit at table with his father, unless through his valor, having been invested with arms by a foreign

¹ Diodor. i. 86. Conf. the Latin *genitor*, a father.

² This does not agree with Diodorus's account of the superiority of the wife. (Diodor. i. 80 and 27.) [The ancients attribute to Egyptian women an exceeding profiency. (Aulus Gellius, lib. x. c. 2; and Pliny.) Strabo more modestly says, on the authority of Columella, that they usually have twins. — G. W.]

³ This may be doubted.

⁴ I have already observed, that among the modern Egyptians it is considered highly indecorous for a son to sit down in the presence of his father without permission, still less would he think of smoking before him; and an Arab of the desert deems it disrespectful to sit and talk in the company even of his father-in-law.

sovereign, he had obtained that privilege, as was the case with Alboin, before he succeeded his father on the throne of the Lombards. The European nations were not long in altering their early habits, and this custom soon became disregarded; but a respect for ancient institutions, and those ideas, so prevalent in the East, which reject all love of change, prevented the Egyptians from discarding the usages of their ancestors; and we find this and many other primitive customs retained, even at the period when they were most highly civilized.

In the education of youth they were particularly strict; and 'they knew,' says Plato,¹ 'that children ought to be early accustomed to such gestures, looks, and motions as are decent and proper; and not to be suffered either to hear or learn any verses and songs than those which are calculated to inspire them with virtue; and they consequently took care that every dance and ode introduced at their feasts or sacrifices should be subject to certain regulations.' They particularly inculcated respect for old age; and the fact of this being required towards strangers, necessarily argues a great regard for the person of a parent; for we are informed² that, like the Lacedæmonians, they required every young man to give place to his superiors in years, and even, if seated, to rise on their approach:³ and surely, if they were expected to reverence age alone, how much more must have been considered due to their parents, to whom they were so deeply indebted?

Nor were these honors limited to their lifetime: the memory of parents and ancestors was revered through succeeding generations: their tombs were maintained with the greatest respect, liturgies were performed by their children,⁴ or by priests at their expense, and we have previously seen what advantage was taken of this feeling, in the laws concerning debt.

Guided by the same principle, the Egyptians paid the most marked respect to their monarch, as the father of his people.⁵ He was obeyed with courteous submission, his will was tantamount to a law, and such implicit confidence did they place in his judgment that he was thought incapable of error.⁶ He

¹ Plato, Second Book of Laws.

² Herodot. ii. 80.

³ As the Jews: 'Thou shalt rise up before the hoary head, and honor the face of the old man.' (Levit. xix. 32.)

⁴ If they were priests.

⁵ They were not allowed at an early

period to enter the royal presence with their sandals on, except as a mark of special favor, such as was conceded at the time of the 5th Dynasty to a highly meritorious officer: even queens stood in their presence.

— S. B.

⁶ As in other countries where the

was the representative of the Divinity¹ on earth: the gods were supposed to communicate through him their choicest benefits to man; and they believed that the sovereign power had been delegated to him by the will of the deities themselves.² They entertained a strong feeling of gratitude for the services done by him to the State; and the memory of a monarch who had benefited his subjects, was celebrated after death with the most unbounded honors. 'For of all people,' says Diodorus,³ 'the Egyptians retain the highest sense of a favor conferred upon them, and deem it the greatest charm of life to make a suitable return for benefits they have received.' Through this impulse, they were induced to solemnize the funeral obsequies of their kings⁴ with unparalleled magnificence; and to this the historian also attributes the unexampled duration of the Egyptian monarchy.⁵ Considering the high estimation in which the feeling of gratitude was held among them, we cannot deny that the Egyptians were fully capable of appreciating the advantages of civilized habits, and that they cherished one of the noblest ornaments of social life: 'and honor,' adds the historian,⁶ 'done to one who cannot possibly know it, in return for a past benefit, carries along with it a testimony of sincerity so totally devoid of the least color of dissimulation, that every one must admire the sentiments which dictate its performance.' Nor did it consist in mere outward show: the mourning continued for seventy-two days, during which time every one abstained from the comforts as well as the luxuries of life. Meat, wheat, bread, wine, and all delicacies were voluntarily renounced; and they neither anointed themselves, nor indulged in the bath, nor in any kind of pleasure.

Another remarkable feature in the character of the Egyptians, and one which was creditable to them as a nation, was their love for their native country. They looked upon it as the abode of their gods, and therefore as under their especial protection, and as

ministers are responsible. But the conduct of the king was also subject to animadversion; and at the time of his death, that of the monarch, and of every Egyptian, underwent a severe scrutiny, and the usual funeral honors were sometimes denied them. (Diodor. i. 92 and 72.)

¹ Supposed to be the actual descendant of the gods, as Ra and Amen, and of the same substance with them. — S. B.

² Diodor. i. 90.

³ Diodor. *loc. cit.*

⁴ And priests or flamens were attached to their worship. Their titles expressed their divine origin, as having dominion like the sun over the south and north, or that he was a Haremakhu, or Harmachis, the rising sun. (Pierret, 'Dict. d'Arch. Égypt,' p. 484.) — S. B.

⁵ Diodor. i. 71.

⁶ *Ibid.*, *loc. cit.*

chosen by them in preference to all other countries; this feeling added to the sanctity with which old edicts were upheld. They were closely interwoven with the religion of the country,¹ and said to be derived from the gods themselves; whence it was considered both useless and impious to alter such sacred institutions. Few innovations were introduced by their monarchs, unless loudly called for by circumstances; and we neither read of any attempts on the part of the people to alter or resist the laws, nor on that of their rulers to introduce a more arbitrary mode of government.²

As society advances, it must, however, necessarily happen that some alterations are requisite, either in the reformation of an existing code, or in the introduction of additional laws; and among the different legislators of the Egyptians are particularly noticed the names of Mnevis, Sasyches, Sesostris, Bocchoris, Asychis, Amasis, and even the Persian Darins. The great merit of the first of these seems to have consisted in inducing the people to conform to those institutions which he pretended to have received from Hermes, the Egyptian Mercury;³ ‘an idea,’ says Diodorus, ‘which has been adopted with success by many other ancient lawgivers, who have inculcated a respect for their institutions through the awe that is naturally felt for the majesty of the gods.’ The additions made by Sasyches chiefly related to matters of religious worship; and Sesostris, in addition to numerous regulations of a military nature, is said to have introduced some changes into the agricultural system; and having divided all the land of Egypt, with the exception of that which belonged to the priests and soldiers, into squares⁴ of equal area,⁵ he assigned to each peasant his peculiar portion,⁶ or a certain number of these *arouras*,⁷ for which he annually paid a fixed rent; and having instituted a yearly survey of the lands, any deficiency, resulting from a fall of the bank during the

¹ As the Jewish and Moslem laws.

² Herodotus’ account of the tyranny of Cheops in building the pyramid cannot be received with any degree of credit.

³ Diodor. i. 94. The writings attributed to Thoth were supposed to have been inspired by the gods. — S. B.

⁴ It appears from the geometrical papyrus in the British Museum, that fields were in the shape of rectangles, squares, and trapezoids. — S. B.

⁵ Herodot. ii. 109. In this instance, Sesostris could not be Rameses II.; and, in-

deed, the division of land is evidently of older date than the arrival of Joseph or the reign of Usertesien I. Perhaps, as I have observed elsewhere, this refers to the crown lands.

⁶ The land may still have belonged to the king.

⁷ The *aroura* was a square of 100 cubits, containing, therefore, 10,000 cubits. The Egyptian *ar*, or *art*, ‘ploughing,’ or ‘tillage;’ the Latin *aratrum*, ‘a plough,’ and *arum*, ‘a field;’ and the Arabic *harat*, ‘ploughing,’ are related to it.

inundation, or other accidental causes, was stated in the returns, and deducted for in the government demands. Of the laws of Bocchoris and Asychis respecting debt I have already spoken; and the former is said to have introduced many others relating to the kings, as well as to civil contracts and commerce,¹ and to have established several important precedents in Egyptian jurisprudence.

Anasis was particularly eminent for his wisdom, and for the many salutary additions he made to the laws of his country. He remodelled the system of provincial government, and defined the duties of the monarchs with peculiar precision; and, though not of royal extraction,² his conduct in the management of affairs was so highly approved by the people, that their respect for him was scarcely inferior to that shown to his most glorious predecessors. Nor was Darius, though a Persian, and of a nation justly abhorred by the Egyptians, denied that eulogium which the mildness of his government, and the introduction of laws tending to benefit the country, claimed for him; and they even granted him the title of *Divus*, making him partaker of the same honors which were bestowed on their native princes.³ But the Ptolemies in after-times abrogated some of the favorite laws of the country; and though much was done by them in repairing the temples and in executing very grand and useful works, and though several of these sovereigns pretended to court the good-will of the Egyptians, yet their names became odious, and Macrobius has stigmatized their sway with the title of tyranny.⁴

After the king and council,⁵ the judges or magistrates of the capital held the most distinguished post;⁶ and next

¹ Diodor. i. 79.

² Herodotus says he was of plebeian origin; but Diodorus, while he allows him not to have been of royal extraction, affirms that he was a person of rank, which is much more consonant, as I have already observed, with the fact of his being of the military caste, and with the evidence of the hieroglyphics, in which he is stated to have married the daughter of a king. (Herodot. ii. 172. Diodor. i. 68.)

³ Diodor. i. 95. This is confirmed by the mode of writing his name in hieroglyphics, which is preceded by the title *Divus bonus*, and is enclosed in two ovals, as that of the native Egyptian kings.

⁴ Macrobi. Sat. i. c. 4.

⁵ Isaiah xiv. 11. Diod. i. 73.

⁶ The principal officers of the court or administration appear to have been at the earliest period the relatives; *suten rex*, the councillors; *sabu mer*, or *smer*, or *sakhmer ua*, 'intimate' or 'sole friend,' probably a kind of prime minister; the *her shta*, 'over the secrets,' or privy councillor; and the royal scribes, who attended to the civil government of the empire. (Brugsch, 'Histoire d'Égypte,' p. 36.) At a later period the sovereign seems to have relied for counsel on the *suten sḫai* or *an*, the royal scribe, and the *rex-ḫet*, or 'magi,' the learned in law, medicine, and astronomy. The *suten tai seri ter serni*, or flabellifer, at the right hand, exercised judicial function.

to them may be considered the nomarchs, or governors, of districts.¹

The whole of Egypt was divided into nomes,² or districts, the total of which, in the time of Sesostris,³ amounted to thirty-six, but which afterwards was increased to the number, according to D'Anville, of fifty-three.⁴

The limits of Egypt⁵ were the Mediterranean⁶ to the north, and Syene,⁷ or the Cataracts, to the south; and the cultivated land east and west of the Nile, contained within this space, or between latitude 31° 37' and 24° 3', was all that constituted the original territory of the Pharaohs: though the Mareotis, the Oases, and Nitriotis were attached to their dominion, and were considered as part of the country.⁸

The main divisions of Egypt were, as has been already shown, 'the Upper and Lower regions;' and this distinction, which had been maintained from the earliest times, was also indicated by a difference in the dialects of the language.⁹ Thebes and Memphis enjoyed equal rank as capitals of Egypt; and every monarch at his coronation assumed the title of 'lord of the two regions,'¹⁰ or 'the two worlds.'¹¹ But a change afterwards took place in the division of the country, and the northern portion was subdivided into two provinces of Heptanomis

There was also the already-mentioned council of the thirty who attended the king. — S. B.

¹ The *ha* or nomarchs were hereditary, *erpa*, nobility, and besides them were the *mer tama* or *mer bak*, governors of cities, and the *ta* or *ten*, magistrates who administered local justice. Foreign lands were also governed by *mer*, or superintendents. — S. B.

² Called *Hesep*.

³ Diodor. i. 54.

⁴ The monumental lists hitherto found give only 44 nomes. Their Egyptian names were the Southern nomes — *Ta-kens*, Nubia; *Tes hor*, Apollonopolites; *Ten*, Latopolites; *Tsam*, Phathyrites; *Horti*, Coptites; *Em-suh*, Tentyrites; *Sess*, Diospolites; *Abut*, Thinites; *Sechem*, Panopolites; *Tel*, Aphrodopolites; *Shes-hetep*, Antaopolites; *Tuf*, Hypselites; *Chesf chent*, Lycopolites anterior; *Chesf pehu*, Lycopolites posterior; *Un*, Hermopolites southern; *Sah*, Hermopolites northern; *Anup*, Cynopolites; *Sep*, Oxyrhynchites; *Teht*, Aphroditopolites; *Neha chent*, Arsinoites upper; *Neha pehu*, Arsinoites lower; *Seft*, Heracleopolites. The Northern nomes were — *Sebt-het*, Memphis; *Aa*, Letopolis; *Ament*, Libya; *Sai res*, Saïtes

southern; *Sai meh*, Saïtes north; *Ka*, Athrihites; *Uasemi*, Ua west, *Ua abt*, Ua east; *Ati*, *Ament*, *Kakhem*, *Kahebs*, *Ka se*, *Haq*; *Chun Abid*, Eastern Khent; *Taaut*; *Kheb*, *Sam-hut*, *Chrut chen*, *Chrut pehu*, *Sapt Har*; *Men*. (Brugsch, 'Geographische Inschriften,' i. pp. 149, 150.) — S. B.

⁵ The oracle of Ammon pronounced all those who lived to the north of Elephantine, and drank the waters of the Nile, to be Egyptians (Herodot. ii. 18.)

⁶ The Egyptian *uat ur*. — S. B.

⁷ *Neshem* or *Neneb*. This only at a later period. — S. B.

⁸ Libya was probably attached to Egypt at one period of its history, as Ammianus Marcellinus (lib. xxxii.) directly states, but without forming part of Egypt Proper.

⁹ According to Herodotus (ii. 18), the people of Marea and Apis, on the Libyan side of the lake Mareotis, spoke a different language from the Egyptians.

¹⁰ The similarity of this and the *roh el alemayn*, 'lord of the two worlds,' in the Fât-ha of the Qorân, is singular.

¹¹ Or *suten-kheb*, king of Southern and Northern Egypt. It was a title of Ra or the sun, and the king was considered as that luminary. — S. B.

and Lower Egypt. The latter extended from the sea to the head of the Delta; and advancing to the natural boundary of the lowlands, which is so strongly marked by the abrupt ridge of the modern Mokuttum, it included the city of Heliopolis within its limits.

Heptanomis, or Middle Egypt, extended thence to the Theban castle which marked the frontier a few miles above Tanis, and which appears to have occupied the site of the present town of Dahroot;¹ and its name, Heptanomis, was derived from the seven nomes, or districts, it contained, which were those of Memphis, Aphroditopolis, Crocodilopolis or Arsinoë, Heracleopolis, Oxyrhynchus, Cynopolis, and Hermopolis.

The limits of the Thebaid remained the same, and extended to the cataracts of Syene; but it appears that the Oases were all attached to the province of Heptanomis.² The chief towns of the three provinces were Thebes,³ Memphis, and Heliopolis; and from these three, as already observed, the bench of judges was elected.

According to Diodorus,⁴ the celebrated Sesostris was the first who divided the country into nomes;⁵ but it is more reasonable to suppose, that long before his time, or at least before that of Rameses the Great, all necessary arrangements for the organization of the provinces had already been made, and that this was one of the first plans suggested for the government of the country.

The office of nomarch was at all times of the highest importance, and to his charge were committed the management of the lands, and all matters relating to the internal administration of the district.⁶ He regulated the assessment and levying

¹ Or Dahroot e'Shercéf, which stands near the mouth of the Bahr Yoósef. (*Vide* 'Egypt and Thebes,' p. 386, where is shown the probability of its being the Thebaïca Phylace.)

² Ptolemy (lib. iv. c. 5) says, the two Oases were attached to the Antinoïte nome, though it did not exist under this name in the time of the Pharaohs. The Oasis of Ammon was not, of course, in Egypt. By the 'two Oases' he probably means those of El Khargeh and e'Taklileh, the great and the western Oasis, rather than the former and the little Oasis.

³ Thebes and the land around it composed two nomes, one on the east and the other on the west bank: the former called

'Thebarum nomus,' the latter 'Pathyrites,' which probably derived its name from Athyr, who is so frequently said in the sculptures to be the president of that side of the river.

⁴ This, as usual, involves the question concerning Rameses the Great; and it is difficult to decide whether we ought to attribute the actions recorded of Sesostris to this monarch of the 19th, or to another of a previous dynasty.

⁵ The fact that the name *Onsaptais* of the 1st Dynasty is written in hieroglyphs by the word *Hesep*, 'nome,' points to a much earlier tradition of this fact. — S. B.

⁶ The Turkish system of ruling Egypt was by twenty-four beys, 'beks,' or

of the taxes, the surveying of the lands, the opening of the canals, and all other agricultural interests of the country, which were under the immediate superintendence of certain members of the priestly order: and, as his residence was in the chief town of the nome,¹ all causes respecting landed property, and other accidental disputes, were referred to him, and adjusted before his tribunal. The division of the country into thirty-six parts, or nomes, continued to be maintained till a late period, since in Strabo's time² the number was still the same; ten, says the geographer, being assigned to the Thebaïd, ten to the Delta, and sixteen³ to the intermediate province: though some changes were afterwards introduced both in the nomes and provinces of Egypt. The nomes, he adds, were subdivided into toparchiæ, or local governments, and these again into minor jurisdictions; and we may conclude that the three offices of nomarchs, toparchs, and the third or lowest grade, answered to those of bey, kashef, and qýmaqám of the present day. The distinctive appellation of each nome, in later times at least, was derived from the chief town, where the governor resided, and the rank of each nomarch depended on the extent of his jurisdiction. [Under the Ptolemies the constitution of the kingdom was military, and the local administration placed under præfects, *strategoï* and *epi-strategoï*, under whom were the *epistatai*, or prætors, who exercised judicial authority at the head of a council or committee of assessors; the royal scribe, *basilikos grammateus*, attended to the collection of the revenue, under whom were the village scribes, *komogrammateis*, and local scribes, *topogrammateis*, who acted as collectors and registrars. Under the Roman Empire the country was governed by a præfect called in the Greek inscriptions *eparchos*, *hegemon* or *archon*, always chosen from the equestrian order, and a Roman, having under him a large army of three legions, nine cohorts, and three regiments of cavalry, commanded by a legate, *stratarchos*. This continued till the time of Diocletian.⁴—S. B.] But of the state of Egypt in the early period of its history we have little or no information; owing to the

governors of districts, under whom were the kashefs and qýmaqáms. The number of beys is now no longer twenty-four, as in the time of the Memlooks.

¹ This agrees with the definition of a nome given by St. Cyril of Alexandria: 'A nome, according to the Egyptians, includes a city, its suburbs, and the

villages within the district.' (Cellar. ii. lib. iv. 6, 7.)

² Strabo, lib. xvii.

³ These were the sixteen præfectures which, according to Pliny, assembled in the Labyrinth. (Lib. xxxvi.)

⁴ Böckh, 'Corpus Inscr. Græc.,' tom. iii. pp. 281 and foll. — S. B.

uncivilized condition of neighboring states, to the indifference of those Greeks who visited it, or to the loss of their writings, and above all to the jealousy of the Egyptians towards foreigners,¹ to whom little or no information was imparted respecting the institutions and state of the country.

Like the Chinese, they prevented all strangers from penetrating into the interior; and if any Greek was desirous of becoming acquainted with the philosophy of their schools, he was tolerated, rather than welcomed, in Egypt; and those who traded with them were confined to the town of Naucratis.² And when, after the time of Amasis and the Persian conquest, foreigners became better acquainted with the country, its ancient institutions had begun to lose their interest, and the Egyptians mourned under a victorious and cruel despot. Herodotus, it is true, had ample opportunity of examining the state of Egypt during his visit to the country; but he has failed to give us much insight into its laws and institutions; and little can be gleaned from any author, except Diodorus, who at least deserves the credit of having collected, under far less favorable circumstances, much curious information upon this interesting subject.

Strabo mentions some of the offices which existed in Egypt in his time; but, though he asserts that many of them were the same as under the Ptolemies, we are by no means certain that they answer to those of an earlier period. 'Under the eparch,' says the geographer, 'who holds the rank of a king, is the dicæodotes, that is, the lawgiver or chancellor, and another officer, who is called the privy-purse, or private accountant, whose business it is to take charge of everything that is left without an owner,³ and which falls of right to the Emperor. These two are also attended by freedmen and stewards of Cæsar, who are intrusted with affairs of greater or less magnitude. . . . But of the natives who are employed in the government of the different cities, the principal is the exegètes, or expounder, who is dressed in purple, and is honored according to the usages of

¹ Strabo, lib. xvii.

² The Egyptians, pretending to grant a *privilege* to this town, *obliged* all Greek traders to repair to it. (Herodot. ii. 179.) The Turks *confined* European ambassadors in the Seven Towers for their *protection*. The Ionian and Carian troops of Psammatichus had a place assigned to them a

little below Bubastis, called 'the camp,' and were afterwards removed by Amasis to Memphis. Herodotus (ii. 154) says they were the first foreigners who were allowed to settle in the country.

³ The Bayt el' mal, or 'the property office,' of the present day.

the country, and takes care of what is necessary for the welfare of the city; the registrar, or writer of commentaries; the archidicastes, or chief judge; and, fourthly, the captain of the night.¹

From all that can be collected on this subject, we may conclude that in early times, after the king, the senate, and others connected with the court, the principal persons employed in the management of affairs were the judges of different grades, the rulers of provinces and districts, the government accountants, the chief of the police, and those officers immediately connected with the administration of justice, the levying of taxes, and other similar employments; and that the principal part of them were chosen either from the sacerdotal or the military class.

During the reigns of the later Ptolemies, considerable abuses crept into the administrative system: intrigues, arising out of party spirit and conflicting interests, corrupted men's minds; integrity ceased to be esteemed; every patriotic feeling became extinguished; the interests of the community were sacrificed to the ambition of a successful candidate for a disputed throne; and the hope of present advantage blinded men to future consequences. New regulations were adopted to suppress the turbulent spirit of the times: the government, no longer content with the mild office of protector, assumed the character of chastiser of the people; and Egypt was ruled by a military force, rendered doubly odious, from being in a great measure composed of foreign mercenaries. The caste of soldiers had lost its consequence, its privileges were abolished, and the harmony once existing between that order and the people was entirely destroyed. Respect for the wisdom of the sacerdotal order, and the ancient institutions of Egypt, began to decline: and the influence once possessed by the priests over the public mind could only be traced in the superstitious reverence shown by fanatics to the rites of a religion now much corrupted and degraded by fanciful doctrines; and if they retained a portion of their former privileges, by having the education of youth intrusted to them, as well as the care of the national records, the superintendence of weights and measures, the surveying of the lands, and the equal distribution of the annual payments, they lost their most important offices — the tutelege and direction of the

¹ Strabo, lib. xvii. This officer answers to the Bash-agma of modern Egypt, who goes the rounds of the town at night, and is the chief of the police.

councils of government, and the right of presiding at the courts of justice.

The provincial divisions of Egypt varied at different times, particularly after the Roman conquest. The country, as already stated, consisted originally of two parts, Upper and Lower Egypt: afterwards of three, the Thebaid; Heptanomis, or Middle Egypt; and the Delta, or Lower Egypt: but Heptanomis, in the time of Arcadius, the son of Theodosius the Great, received the name of Arcadia; and the eastern portion of the Delta, about the end of the fourth century, was formed into a separate province called Augustamnica,¹ itself divided into two parts. The Thebaid was also made to consist of Upper and Lower, the line of separation passing between Panopolis and Ptolemais Hermii.²

Under the Romans Egypt was governed by a præfect, or eparch, aided by three officers, who superintended the departments of justice, revenue, and police, throughout the country, the inferior charges being chiefly filled by natives. Over each of the provinces a military governor was appointed, who was 'subordinate to the præfect in all civil affairs,³ though frequently intruding on his jurisdiction, when it was necessary to use military coercion in the collection of the taxes. This charge, together with the superintendence of the tribunals and the duty of denouncing unjust judges (but more particularly the collection, and transmission to Constantinople, of that part of the taxes which was paid in grain), were still vested in the præfect.⁴

Thus far it does not appear that there were any very serious defects in the organization of the government of Egypt: but the same authority whence these facts are chiefly drawn (the Theodosian code) furnishes us with still more ample details on the nature of the subordinate institutions, both at Alexandria and in the rest of the country. And here the whole system seems to have been founded in error, and persevered in with a blind obstinacy, which preferred the accumulation of many bad and unjust laws to the repeal of a few which were imperfect.

The decurions of Alexandria soon found that the honor

¹ It seems also to have encroached upon Heptanomis.

² *Vide* D'Anville's 'Mémoires sur l'Égypte,' p. 32.

³ For the following observations I am

indebted to Mr. Hamilton's valuable work, 'Ægyptiaca,' p. 231, to which I refer the reader.

⁴ Böckh, 'Corpus Inscr. Græc.' tom. iii. p. 324.

bestowed upon them was to be paid for at the highest rate. In return for their nominal and titular privileges, and in addition to the charge of supplying the inhabitants with provisions, of keeping the records, and preserving the police of the city, they were subjected to continual expenses for the public games and shows; presents for honorary seats were arbitrarily demanded of them, and the office was converted from a benefit to a burden. Some were reduced to poverty by these means; the expenses they were no longer able to bear were attached to the succeeding proprietor of their estates: others assumed dishonorable employments, or became the slaves of persons in power; and laws were no sooner enacted to obviate these elusive steps, than all contrivances were invented on the part of the sufferers to facilitate them.

‘In the public distress, private gifts and loans had been solicited by government; these were soon converted into forced contributions; and the charge of levying them added to the burdens of the decurions. Immunities against such contributions were purchased at one time, and repealed by public orders when the money had been paid.

‘That the municipal administrations of the different towns were not better protected against the abuses of a corrupt government, is evident from two laws preserved in the same code, one of which was enacted to recall the decurions who had quitted the duties of their office, and, among these, all who had taken refuge amongst the anchorites of the desert. By the other law, the right of reclaiming their property was denied to all who had abandoned it for the purpose of avoiding the duties to which it was liable.

‘Throughout the villages, and the farms surrounding them, the triple division of the produce among the priests, the military, and the cultivators had ceased with the Greek conquest. To this had succeeded a regular establishment of officers, who had severally the charge of collecting the tribute due from each proprietor, that of preserving the peace of the village, and that of superintending the maintenance of the dykes and canals, so important a part of the rural economy of Egypt. A fixed sum of money had been, from the first, set apart for this object; and a regular system had been long established, and strictly adhered to, for the mode in which repairs were to be made, the time or state of the inundation, at which the principal embankments were to be opened, and for carrying into execution

other precautionary measures of irrigating and of draining, which the physical organization of the country had rendered necessary.

In the edicts of Justinian are to be traced some important alterations, introduced by that emperor into the civil government of the country. The province of Augustamnica appears to have been united to that of Egypt and Alexandria; and from this last, the two districts of Mareotis and Menelas were detached and added to Libya, for the avowed and singular reason, that, without them, this latter province would be unable to defray the expenses of its government.

The civil and military powers were again united in the same person, both in Egypt and the Thebaïd, as they had been before the reign of Constantine; and the magistrates of the provinces or nomes, now called patriarchs, and those of the villages, or the pagarchs, were placed under their authority. The functions of these magistrates, when they were once named to the office, might be suspended by the præfects, but they could not be definitively removed without orders from Constantinople.

The main, and almost the sole, object that appears to have dictated these edicts of Justinian, was the more punctual transmission of grain to the capital of the empire. Whether it was owing to the increasing poverty of the country, the connivance of the different agents employed in the service, or the corruptions of those in the higher offices of State, perpetual difficulties seem to have occurred. But what argues on the part of the Roman government a conviction of the necessity of conciliating, by a mild treatment, the native Egyptians, all the menaces held out against the disobedience of the imperial orders are directed against the præfects, who alone are held responsible, in their persons and their effects, for the strict execution of them. In some instances a denunciation is published against the higher orders of the clergy, who, by unauthorized acts of protection, shall have pretended to release any individuals from the payments to which they were subject.

The state of property in Egypt continued, under the Romans, very similar to what it had been in the earliest time. The proprietor of a district, or of a certain part of it, had a kind of feudal claim over his vassals, from whose gratuitous labor he exacted all that was not absolutely necessary for their existence. While Egypt retained its independence it was fully sufficient to supply its own wants; but, as a province, it suffered all the evils of a

corrupt and vicious administration; and it never received any returns, in money or kind, for its annual supply of grain to the capital. As this supply did not diminish, but rather increased in an inverse proportion to the means which were to furnish it, the proprietors, when obliged to add to their demands upon the peasants, found them in a situation to afford less. Industry was at a stand; and the distressed serfs had no other method of evading such claims, than either by abandoning their farm for others more favorably situated, or by seeking the protection of some powerful individual, whose patronage they purchased. This abuse had been the natural consequence of the system of honors established by Constantine; and in Egypt it was productive of the most prejudicial effects. The evil grew rapidly: what was first dictated by necessity was soon resorted to by choice; and, when necessity could not be pleaded in excuse, temptations were not wanting on the part of the protectors, who soon found the means of converting their powers of granting privileges into a pecuniary speculation; and the next step was that the proprietors, being abandoned by their vassals, and consequently reduced to poverty, were obliged to yield up their estates to those who had succeeded in seducing them. This iniquitous traffic particularly prevailed among the military; and for some years the new possessors were able to disguise from the government the truth of their situation, by paying no taxes from the estates they had thus procured, and by returning as defaulters the names of those whom they had ejected.

‘Various laws, from the time of Constantine to Theodosius the Second and Justinian, were enacted against these grievances; they successively increased in severity; and nothing but the extremest rigor, and the attachment of responsibility on the person of the præfects themselves, could succeed in putting an end to them. At first, the peasants who remained behind were to make up for what the fugitives ought to have paid. Afterwards, an ignominious punishment was denounced against such fugitives, and the protectors sentenced to a fine:—this fine was gradually augmented to a sum equal to the whole fortune of the delinquent. Theodosius the Second finally established all such usurpations of property as had taken place in this manner, prior to the consulate of Cæsarius and Atticus, and ordered the immediate restitution of all that had taken place since that period, subjecting, at the same time, the new proprietors to all the ancient charges and contributions attached to their estates,

including those that would have fallen on the fugitive as well as the other vassals.

‘The peculiar nature of the soil and locality of Egypt had fixed, at a very early period, the system of agriculture the most congenial to them. No innovations appear to have been introduced on this head; and, as laws have only been made where changes were thought necessary, we are left without any other materials, whence we might form our judgment relative to the employment of the soil in ancient times, beyond those customs which have been handed down to the present age.

‘Agriculture was always the principal object to which the government of Egypt was directed; and when the king, the priests, and the military, had each an equal share in the produce of the soil, the common interest would effectually prevent any abuses in the management of it. But, under a foreign yoke, these interests were too divided; and the defects of administration were to be supplied by the rigor of the laws. The destroyer of a dyke was, at one time, to be condemned to the public works and to the mines: at another, to be branded, and transported to the Oasis,—punishments more severe than are ever thought of even under the present Mahometan government.

‘Some laws were made for the encouragement of the growth of timber trees in Egypt, but the same misguided policy, which had failed in so many other laws, preferred the menaces of a punishment for the sale or the use of the sycamore and *napka*,¹ rather than the offer of a reward for extending plantations of them. Here may be traced the same hand which, instead of ameliorating the situation of the oppressed peasantry, was contented with accumulating upon the fugitives useless punishments, or bringing them to their homes by an armed force.

‘With respect to the amount of the public revenues of Egypt, Diodorus Siculus states them to have been, in his time, equal to six thousand talents, or about one million two hundred thousand pounds: and, notwithstanding the much higher amount stated by Strabo, we may conclude that in no future period they exceeded this sum. The disorders to which the people were subjected under its last kings would have tended rather to diminish its means of contribution; and, under the Roman government, its wealth and resources must have proceeded in an inverse ratio to the demands from the capital. Augustus, indeed, relieved Egypt

Rhamnus Nabeca: in Arabic, *nebg* or *sidr*. (*Vide* ‘Egypt and Thebes,’ p. 211.)

from one cause of oppression, whereby Sicily and Sardinia had successively been ruined, — the presence and controlling authority of powerful Romans.

‘The levying of the taxes, both in money and in kind, appears to have been left to the immediate care of the natives, whereof one or more presided over each district and village; these, however, were successively placed under the superintendence of the præfects of Egypt, the governors of the Thebaïd, and the military force; and the responsibility, which at first rested with the superior officers, was afterwards extended to the soldiers themselves.

‘The tributes, in whatever form they were paid, were received at Alexandria by Roman agents commissioned for the purpose. After the time of Constantine, it appears that the transport of the grain was at the expense of a collective body of the principal inhabitants of that city. This burden was, at a later period, commuted for an annual payment; but the object was still subject to many delays, till the edict of Justinian directed the charge to be borne by the chief custom-house officer at Alexandria.

‘Other expenses were also payable by individuals, in addition to the regular taxes of the country. The freight of the corn vessels down the Nile, the baking of the bread for the military where they happened to be quartered, and the clothing of the troops, became so many occasions of extortion.

‘It is difficult to fix the precise portion of the entire taxes of Egypt which was paid, whether in grain or in money, anterior to the reign of Justinian. When this emperor framed an edict expressly for the purpose of regulating the transmission of the grain to the capital, and of facilitating the levying of the rest of the taxes, the quantity of corn then furnished by Egypt to Constantinople was eight hundred thousand *artabæ*, which, if calculated as equal to the *ardeb* of the present day,¹ amount to four hundred and fifty thousand quarters; and as, by the same law, a fine of three *solidi* for every three *artabæ* was to attach to all who, by neglect of their duty, should occasion any delay in the collection, the value of each *artaba* may be taken at one-third of this sum, or about seven shillings; consequently, that of the corn annually sent to Constantinople would have been nearly three thousand pounds sterling; and, perhaps, a quantity not much inferior to this was detained in the country for the supply of the

¹ In the year 1800.

præfect's palace, the maintenance of the troops, and the gratuitous distributions of corn granted to Alexandria by Diocletian, and confirmed and augmented by other emperors.

• There would still, however, remain a large portion of the public revenues to be paid in money.

• One chief source of misunderstanding among the governors and the governed throughout Egypt, and of the occasional oppression of the latter, was, that the system of regulating the taxes of each province of the empire, once for each successive term of fifteen years, was unwisely extended to Egypt. This indication, which was introduced by Constantine in lieu of the *lustrum*, or term of five years, however convenient it might be for other countries, was ill-adapted to one wherein the produce of each year must so essentially depend on the extent of the inundation. One consequence of this was, that frequently the præfects were obliged to return different estates as totally deficient, which opened a door to endless acts of corruption and connivance.

• The obligations imposed on the præfect for the punctual supply of grain, were much more rigorous than those which related to the payments to be made in specie to the imperial treasury; so that he was enabled, from time to time, to desist from his pecuniary demands upon the people, the better to enable them to bring in the stated quantity of corn; but this pretext likewise led the way to infinite abuses. Although the payments in money ought to have equalled two-thirds of that in kind, Justinian complains, in his edict, that they were frequently reduced to nothing, wholly absorbed in pretended expenses, and pillaged by the secret understanding of the Egyptian tax-gatherers and the public agents. It is scarcely possible to conceive the moral weakness of a government which knew not how to put a stop to evils of this nature, with all the military means of the empire at their disposal, and no ostensible resistance to their operations but the bare principle of corruption. These deductions from the tax demanded by the government, which nearly equalled their amount, appear the more extraordinary, as we find in the same edict of Justinian, that, throughout every village and district, the inhabitants were liable to other calls for the maintenance of the canals and dykes, public buildings, and the salaries of subaltern agents.

• The author¹ of the essay from which the greater part of

¹ Regnier, 'L'Égypte sous les Romains,' 1807.

these observations are taken, is induced to suggest, whether the public accountants of those times may not have acted on the system now pursued under the Turkish establishment; who make an annual charge of near thirty thousand livres for the transport of the dirt and rubbish of Cairo to the seacoast, while it is notorious that not a single boat is employed upon this service.¹

‘The duties of export and import in Egypt, which must have formed a considerable part of the revenue, particularly as long as it continued the emporium of goods between Europe and India, appear to have been farmed to Greeks and Romans, contrary to the system adopted with regard to the tax on land. These duties were payable on the coast of the Red Sea, at Canopus, and at Alexandria. At this latter place, the persons by whom they were farmed had so many opportunities of granting a temporary relief to the necessitous, in advancing money for them, that the vexations they could afterwards practise upon their debtors form the subject of one of the heads of Justinian’s edict; and it was in consideration of the profits enjoyed by the same persons, that they were liable to the expenses of the transport of grain from their port to the capital.

‘The corporation of Alexandria were released by the same emperor from the repairs of the canal which brought them water from the Nile; and they were allowed four hundred solidi out of a fund called *Dinumium Vectigal*, which, by the explanation which follows, appears to refer to the duties levied upon the ships frequenting the harbor; and it was natural that those should pay a full portion of the expenses which procured them this necessary supply. Besides taxes upon the industry, the trades, and houses of its inhabitants, Alexandria was, from time to time, subjected to a contribution under the name of coronation money. This abuse had arisen out of the custom, once so laudable and useful, of presenting, in the name of the provinces, crowns of gold to proconsuls, or other commanders, who had acted honorably and liberally during their governments. This gradually became

¹ The direct taxes raised in Egypt under the Ptolemies and Romans were the land tax, amounting to one-fifth of the produce, *prosodos sitiké* or *argyriké*; the poll-tax, *laographia*; the tax on workmen, *cheironaxion*; the conservancy of the river, *potamophylakia*. These later taxes are mentioned by Josephus, and acquittances for them are found written in cursive Greek characters on potsherds

found at Elephantine, beginning in the reign of Caligula, A.D. 38-39. The indirect taxes, the *encyclia telé* of the Greeks, were a kind of stamp, 1-20 or 1-10 of the value of all articles sold, whether of home or foreign manufacture, especially natron, *nitriké*, duties levied on goods passing up or down the Nile, legacy duty, *aparché*, and fines. (Böckh, ‘Corp. Inscr.’ *loc. cit.*) — S. B.

so general, that those who were not thus honored considered themselves as insulted; and, under the emperors, it was soon converted from an honor into a means of raising money. And in addition to the amount demanded from each, grievous in itself to a suffering people, it became much more so by the irregularity and sudden manner in which it was imposed.¹

¹ For many other interesting remarks on the state of Egypt about this period, *vide* 'Egyptiaca,' p. 243.



No. 111.

Captives secured by handcuffs.

Thebes.



VIGNETTE E. — Part of Cairo, showing the *Mulqfs* on the houses of modern Egypt.

CHAPTER V.

Houses — Brickmakers — Villas — Granaries — Gardens — Vineyards — Wine-presses —
Wines — Beer.

THOUGH the Egyptians are said¹ to have paid less attention to the splendor of their houses than to the decoration of their tombs, the plans of many that remain, and the extent of their villas represented in the sculptures, plainly show that no precepts of philosophy can oblige man to renounce the luxuries of life. The priests may have taught them that their stay in this world was of short duration; that their present abodes were only inns at which they reposed during their earthly pilgrimage;² and that their tombs alone could be considered as everlasting habitations,³ which it was a religious duty to adorn. It was their interest to inculcate similar notions: the persons employed in making and decorating the tombs were of the sacerdotal order; and the splendor of funeral obsequies tended to their emolument. They induced them to expend considerable sums on the celebration of those rites; and many, who had barely sufficient to obtain the necessaries of life, were anxious to save something for the expenses of their death. For besides the embalming process, which sometimes cost a talent of silver,⁴ or about two hundred and fifty

¹ Diodor. i. 51.

² Gen. xlvii. 9.

³ Diodor. *loc. cit.*

⁴ *Ibid.*, i. 91. This was the most

costly; the poor classes paid very little; and every one in proportion to his means or inclination.

pounds English money, the tomb itself was purchased at an immense sum; and numerous demands were afterwards made upon the estate of the deceased, for the celebration of prayers, and other services for the soul. We cannot, however, suppose that temporary gratification was denied to the rich of any class, or was deemed unworthy the wisdom of the priesthood; for they evidently enjoyed all the comforts and luxuries which their means could so well provide. Though the priests may have kept up an external appearance of self-denial, and avoided all unnecessary display of wealth, it is natural that they should welcome the blessings of this life, provided they did not interfere with the practice of virtue. And if they taught others to avoid ostentation, if they themselves submitted, on some occasions, to severe abstinence, and encouraged morality by their own example, we must allow that they were deserving of esteem; and little cause for censure can be found, except in that exclusiveness which degraded the lower classes of their countrymen, and in the disproportionate extent of their possessions compared with those of the other Egyptians.

The houses in the towns varied of course in size as well as plan: but, judging from the ruins that remain, the streets were laid out very regularly; nor does there appear to have been the constant mixture of large houses and low hovels, so frequently met with in Eastern towns. As is usually the case in hot climates, many of the streets were narrow; and few, except the principal ones, were large enough to allow the passage of a chariot. In Thebes, however, it is probable they were on a somewhat larger scale, and proportionate with the increased size of the houses, some of which, even in the early age of its founder, are said to have been four or five stories in height.¹

In towns built at the mouths of mountain ravines, the main street was, at the same time, the bed of the torrent: several instances of which may be seen in Spain and Italy: and, as storms of rain seldom last long in the arid climate of Egypt, the communication by it was rarely impeded, or its surface materially impaired. Indeed, if much rain had fallen in that country, it would have been necessary to have constructed houses of materials more capable of resisting its effects than mere crude brick; and, from the narrowness of some of the ravines, their foundations would

¹ Diodor. i. 45. The greater number I believe to have been confined to one or two stories. At Rome they had three. Augustus confined the height of houses to 70 feet.

Fig. 1.

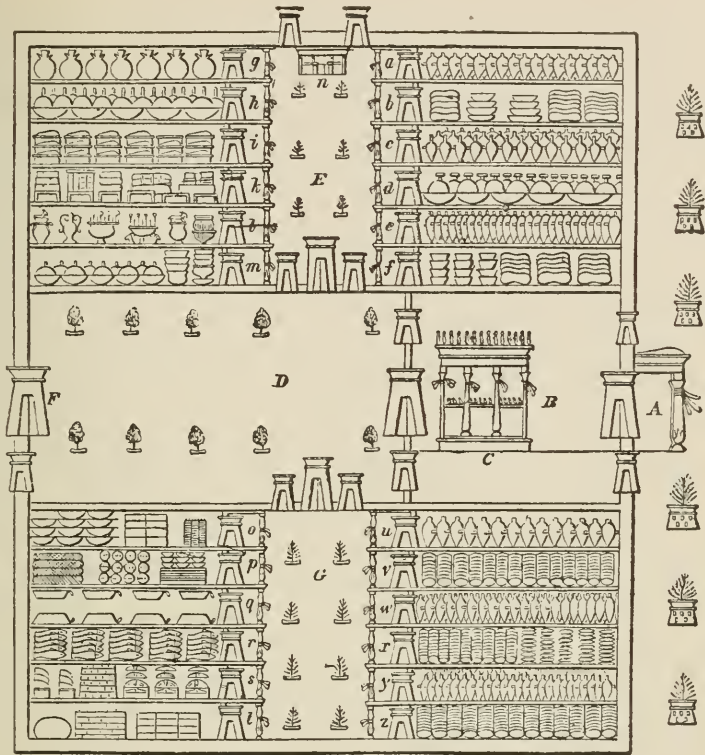


Fig. 2.

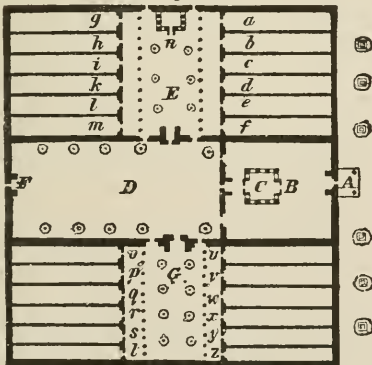


Fig. 1. Elevation of an Egyptian house. From the sculptures.
 2. The supposed ground-plan of the same.

have been in danger, as well as the lives of the inhabitants. But heavy rain was a rare phenomenon in Upper Egypt; and though much fell about the sea-coast of the Delta, and during winter in the interior of the eastern desert, a violent storm at Thebes was looked upon to presage an approaching calamity.¹

The use of crude brick, baked in the sun, was universal in Upper and Lower Egypt, both for public and private buildings; and the brick-field gave abundant occupation to numerous laborers throughout the country. These simple materials were found to be peculiarly suited to the climate; and the ease, rapidity, and cheapness with which they were made, offered additional recommendations. Enclosures of gardens or granaries, sacred circuits encompassing the courts of temples, walls of fortifications and towns, dwelling-houses and tombs, in short, all but the temples² themselves, were of crude brick, either with or without straw; and so great was the demand that the Egyptian government, observing the profit which would accrue to the revenue from a monopoly of them, undertook to supply the public at a moderate price, thus preventing all unauthorized persons from engaging in their manufacture; and, in order more effectually to obtain their end, the seal of the king, or of some privileged person, was stamped upon the bricks at the time they were made. This fact, though not positively mentioned by any ancient author, is inferred from finding bricks so marked, both in public and private buildings; some having the ovals of a king, and some the name and titles of a priest, or other influential person; and it is probable that those which bear no characters belong to individuals who had obtained a permission or license from government to fabricate them for their own consumption.

The employment of numerous captives, who worked as slaves, enabled the government to sell the bricks at a lower price than those who had recourse solely to free labor; so that, without the necessity of a prohibition, they speedily became an exclusive manufacture; and we find that, independent of native laborers, a great many foreigners were constantly engaged in the brick-

¹ Herodotus says, 'Rain *never* falls at Thebes; but before the Persian invasion it rained violently' (lib. iii. 10). The historian is not, however, borne out by fact, as we see from the appearance of the water-courses there, which were formed long before his time, and from the pains taken by the ancient Egyptians to protect

their tombs and other monuments from rain. A continued storm of heavy rain during a whole day and night would be a rare occurrence; but showers fall about five or six times in the course of a year at Thebes.

² Some small temples in the villages were of crude brick.

fields at Thebes, and other parts of Egypt. The Jews, of course, were not excluded from this drudgery; and, like the captives detained in the Thebaid, they were condemned to the same labor in Lower Egypt. They erected granaries, treasure cities, and other public buildings for the Egyptian monarch: the materials used in their construction were the work of their hands; and the constant employment of brickmakers may be accounted for by the extensive supply required, and kept by the government for public sale.¹

To meet with Hebrews in the sculptures cannot reasonably be expected, since the remains in that part of Egypt where they lived have not been preserved; but it is curious to discover other foreign captives occupied in the same manner, overlooked by similar 'taskmasters,'² and performing the very same labors as the Israelites described in the Bible; and no one can look at the paintings of Thebes, representing brickmakers, without a feeling of the highest interest. That the scene in the accompanying woodcut³ is at the capital of Upper Egypt is shown by the hieroglyphics,⁴ which expressly state that the 'bricks,' *tôbi*, are made for a 'building at Thebes;' and this occurrence of the word implying bricks, similar both in modern Arabic⁵ and ancient Coptic, gives an additional value to the picture.

It is scarcely fair to argue, in defiance of logic, that because the Jews made bricks, and the persons here introduced are so engaged, these must necessarily be Jews, since the Egyptians and their captives were constantly required to perform the same task; and the great quantity made at all times may be inferred from the number of buildings which still remain, constructed of those materials. But it is worthy of remark, that more bricks bearing the name of Thothmes III., whom I suppose to have been king of Egypt at the time of the Exodus,⁶ have been discovered than of any other period, owing to the many prisoners of Asiatic nations employed by him independent of his Hebrew captives.

¹ An endorsement of Papyrus Anastasi No. 3 mentions for a building, twelve of these men moulding bricks in their places of clay, and brought for the work of the house: 'Let there be no relaxation that they should make their number of bricks daily in the new house in the same manner, to obey the messages sent by my lord.' This is about the period of the Exodus. (Chabas, 'Mélanges,' série 1, 1864, pp. 121 and foll.) — S. B.

² *Figs. 3 and 6* in the woodcut No. 112.

³ Woodcut No. 112.

⁴ At *e* in the woodcut No. 112, over *fig. 9*.

⁵ *Tob* or *toob*, in Arabic, 'a brick:' in Coptic, *tôbi*.

⁶ The Exodus is generally considered to have taken place in the reign of Menephtah, as more consonant to the political condition of this later monarch, Thothmes III. being master of Palestine during his long reign. — S. B.

With regard to the features of foreigners frequently resembling the Jews, it is only necessary to observe that the Egyptians adopted the same character for all the inhabitants of Syria,¹ as

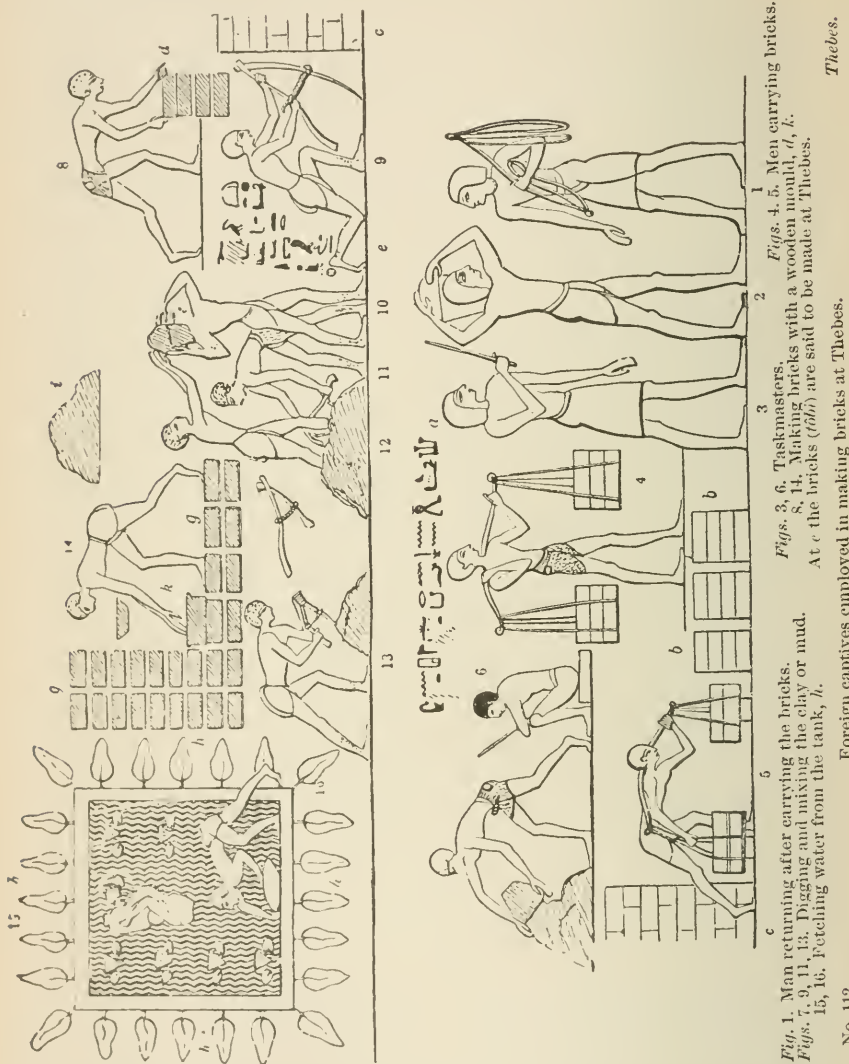


Fig. 1. Man returning after carrying the bricks.

Figs. 7, 9, 11, 13. Digging and mixing the clay or mud.

15, 16. Fetching water from the tank, *h*.

Figs. 4, 5. Men carrying bricks.

Figs. 6, 14. Making bricks with a wooden mould, *d*, *k*.

At *c* the bricks (*titb*) are said to be made at Thebes.

Foreign captives employed in making bricks at Thebes.

No. 112.

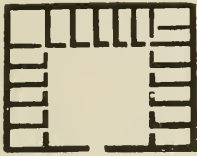
Thebes.

may be seen in the sculptures of Karnak and other places where those people occur, or in one of the sets of figures in Belzoni's

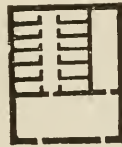
¹ Herodotus (ii. 159) also calls the Jews Syrians.

tomb; and the brickmakers, far from having the very Jewish expression found in many of those figures, have not even the beard, so marked in the people of Syria and the prisoners of Sheshonk: and from the names of the captives throughout the tomb where they are found, it is evident they belong to a nation living far to the north of Judæa.

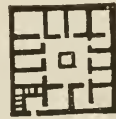
Houses of a small size were usually connected together, and formed the continuous sides of streets; they rarely exceeded two stories, and many of them consisted only of a ground-floor and an upper set of rooms. Nor, indeed, judging from the sculptures, do the Egyptians appear to have preferred lofty houses; and, as in modern Egyptian towns, the largest seldom had more than three stories. Those of the rich citizens frequently covered considerable space,¹ and presented to the street either the sides of the house itself, or the walls of the court attached to it. Their plans were regular, the rooms being usually arranged



3



2



1

No. 113.

Plans of houses.

Alabastron.

round an open area,² or on either side of a long passage to which an entrance court led from the street.³ The court was an empty space, considerably larger than the Roman *impluvium*, probably paved with stone, or containing a few trees, a small tank,⁴ or a fountain in its centre;⁵ and sometimes, though rarely, a flight of steps led to the main entrance from without.⁶ A court was frequently common to several houses; and again, some of the large mansions stood detached, and had the advantage of several doors of entrance, on two or three different sides. They had a portico, or porch, before the front door, *janua*, supported on two

¹ At Thebes, the largest houses seem to have been on the Libyan side and in that part of Diospolis between Karnak and Luqsor; but those in the immediate vicinity of the great temple stood in a more dense mass. Houses built in this manner present, of course, greater mounds of ruins than the larger ones which had open courts,

and which covered a greater space.

² Woodcut No. 113, *figs.* 1 and 3.

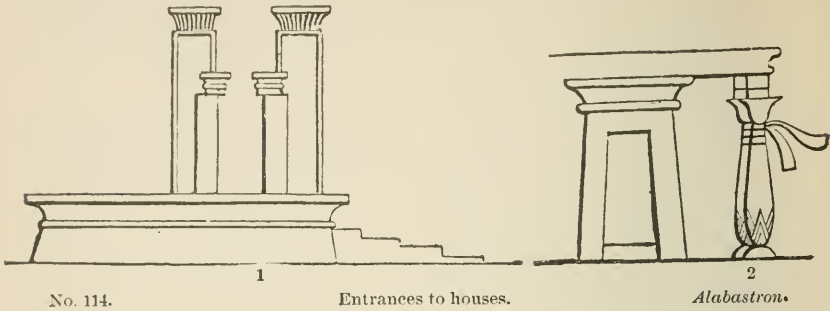
³ Woodcut No. 113, *fig.* 2.

⁴ Perhaps sometimes a well, as in modern Egyptian houses, and in the houses mentioned in 2 Sam. xvii. 18.

⁵ Woodcut No. 113, *fig.* 1.

⁶ Woodcut No. 114, *fig.* 1.

columns, below whose capitals were attached ribbons or banners:¹ the name of the person who lived there being occasionally

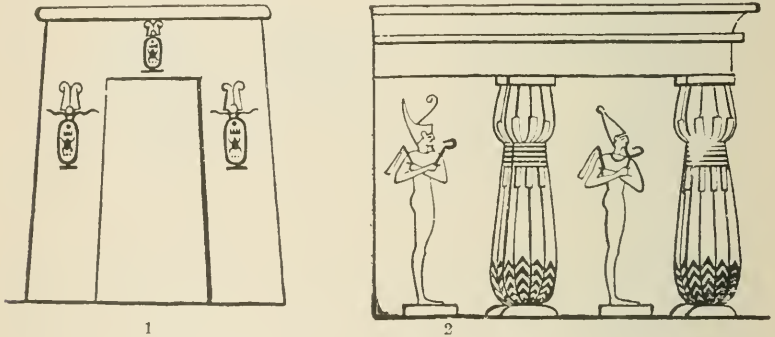


No. 114.

Entrances to houses.

Alabastron.

painted within, on the lintel or imposts of the door;² and sometimes the portico consisted of a double row of columns, between which stood colossal statues of the king.³



No. 115. Fig. 1 Doorway, with name upon it. Fig. 2. Porch. Thebes and Alabastron.

A line of trees ran parallel with the front of the house; and to prevent injuries from cattle or from any accident, the stems were surrounded by a low wall,⁴ pierced with square holes to admit the air. Nor were the Egyptians singular in the custom of planting trees about their town houses, as we find the same mentioned by Latin authors at Rome itself.⁵

The height of the portico was about twelve or fifteen feet, just exceeding that of the cornice of the door, which was only

¹ Probably, as at Rome, only on certain occasions. Woodcut No. 114, fig. 2.

² Woodcut No. 115, fig. 1.

³ Woodcut No. 115, fig. 2.

⁴ Woodcut No. 116, fig. 2, at *c c*, between *a* and *b*.

⁵ Hor. Epod. i. 10, 22. Tibull. iii. 3, 15

raised by its threshold above the level of the ground.¹ On either side of the main entrance was a smaller door, which stood at an equal distance between it and the side wall, and was probably intended for the servants, and those who came on business. On entering² by the porch, you passed into an open court, *aula*, or hall of the Romans, containing a *mandara*,³ or receiving-room for visitors. This building, supported by columns, decorated with banners, was closed only at the lower part by intercolumnar panels, over which a stream of cool air was admitted, and protection from the rays of the sun was secured by an awning that covered it.⁴ On the opposite side of the court was another door, the approach to the *mandara* from the interior; and the master of the house, on the announcement of a stranger, came in that way to receive him.⁵ Three doors led from this court to another of larger dimensions,⁶ which was ornamented with avenues of trees, and communicated on the right and left with the interior of the house; and this, like most of the large courts, had a back entrance, the Roman *posticum*, through a central⁷ and lateral gateway. The arrangement of the interior was much the same on either side of the court: six or more chambers,⁸ whose doors faced those of the opposite set, opening on a corridor supported by columns on the right and left of an area, which was shaded by a double row of trees.

At the upper end of one of these areas was a sitting-room, which faced the door leading to the great court; and over this and the other chambers were the apartments of the upper story.⁹ Here were also two small gateways looking upon the street.

Another plan consisted of a court, with the usual avenue of trees,¹⁰ on one side of which were several sets of chambers opening on corridors or passages, but without any colonnade before the doors.¹¹ The receiving-room (A)¹² looked upon the court, and

¹ *Vide* woodcut No. 114, *fig.* 2; and Plate VI. *fig.* 2, A.

² *Vide* the plan in Plate VI. *fig.* 2, B.

³ I use the Arabic name for the same sort of room used for the same purpose. With the Romans, it seems to have been the place of the nuptial couch. (Hor. Ep. i. 1, 87.) Plate VI. *fig.* 2, C.

⁴ In the plans, we cannot, of course, see the awning, but we must give them credit for so simple an invention.

⁵ This is the opinion I have formed from the different plans of their houses, the custom of the modern Egyptians, and the habits of the East in general.


⁶ Plate VI.

⁷ Plate VI. *fig.* 2, F.

⁸ Plate VI. *fig.* 2, a to z.

⁹ They could not be represented in the elevation plan, which is only intended to refer to the ground-floors.

¹⁰ This is called *amma* or *amm*.

 (Maspero, 'Genre épistolaire,' pp. 60, 61.) Translated sometimes 'orchard,' but rather the avenue in front of the house. — S. B.

¹¹ Woodcut No. 116, *fig.* 1.

¹² *Ibid.*

from it a row of columns led to the private sitting apartment, which stood isolated in one of the passages, near to a door com-

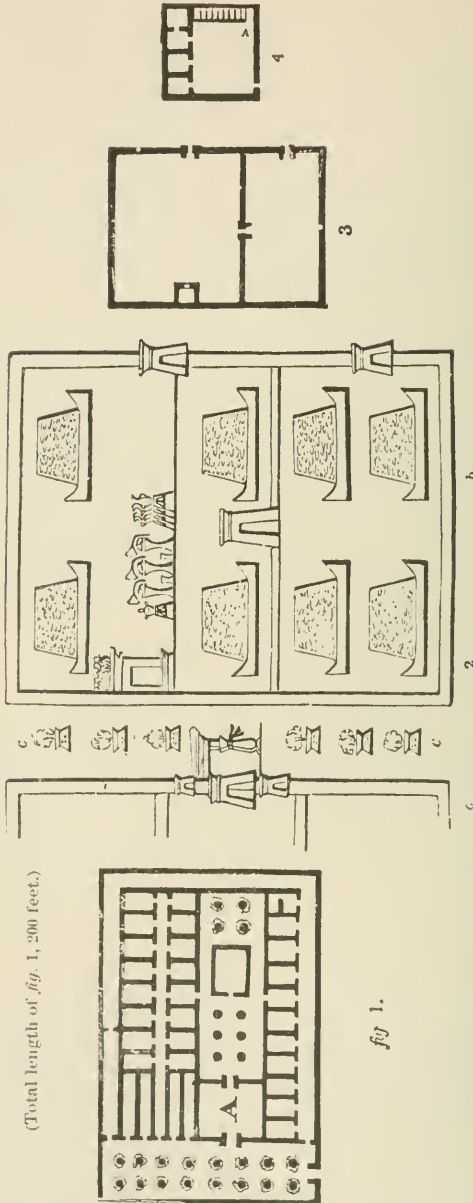


Fig. 2 shows the relative position of the house, *a*: and the granary, *b*, *c c*. Trees surrounded by low walls (vide p. 346).
 Plaas of houses and a granary.
 Alabastron.

No. 116.

municating with the side chambers; and in its position, with a

corridor or porch in front, it bears a striking resemblance to the 'summer parlor' of Eglon, king of Moab,¹ 'which he had for himself alone,' and where he received Ehud, the Israelite stranger. And the flight of Ehud 'through the porch,' after he had shut and locked the door of the parlor, shows its situation to have been very similar to some of these isolated apartments, in the houses and villas of the ancient Egyptians. The side chambers were frequently arranged on either side of a corridor, others faced towards the court, and others were only separated from the outer wall by a long passage.

In the distribution of the apartments, numerous and different modes were adopted, according to circumstances; in general, however, the large mansions seem to have consisted of a court and corridors, with a set of rooms on either side, not unlike many of those now built in Oriental and tropical countries: but, in order to give a better notion of the general arrangement of the houses and streets in an Egyptian town, I shall introduce the plan of an ancient city near Tel-el-Amarna, which I believed to have been Alabastron;² a place erroneously transferred by geographers from the valley of the Nile to the eastern desert. The houses are in many places quite destroyed, leaving few traces of their plans, or even of their sites; and the position of the town itself differs much from that of most Egyptian cities, being of very inconsiderable breadth, and of disproportionate length, extending upwards of two miles and a quarter, though less than two-thirds of a mile broad.

Their granaries were also laid out in a very regular manner, and varied of course in plan as much as the houses, to which there is reason to believe they were frequently attached, even in the towns; and, judging from one represented in the sculptures of Psinaula, they were sometimes only separated from the house by an avenue of trees.³ In this instance, the building opposite the upper doorway is a sitting-room for the master or the inspector of the granary, who superintended the arrangement of whatever was deposited there; and the whole is divided into two parts.⁴

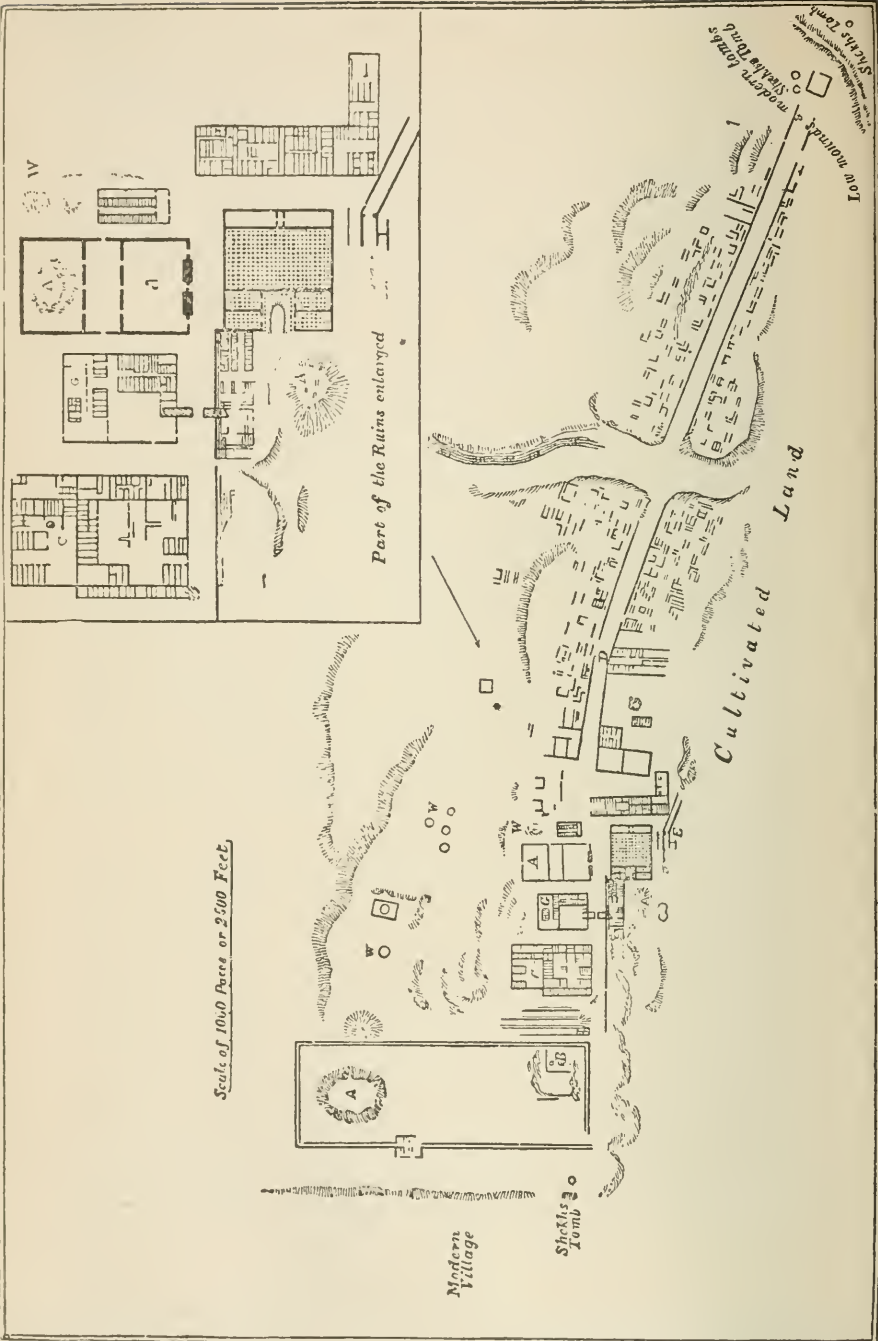
Some small houses consisted merely of a court, and three or four store-rooms on the ground-floor, with a single chamber above, to which a flight of steps led from the court; but they

¹ Judges iii. 20.

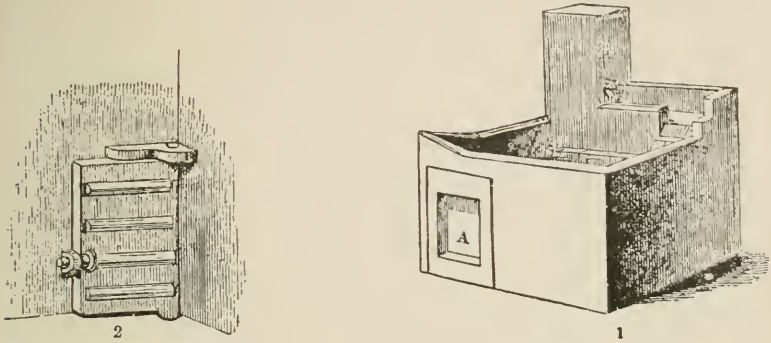
² *Vide* Plate VII, p. 350. [But which is now considered to be Psinaula. — G. W.]

³ Woodcut No. 116, *fig.* 2.

⁴ *Vide* ground-plan of the same, *fig.* 3.



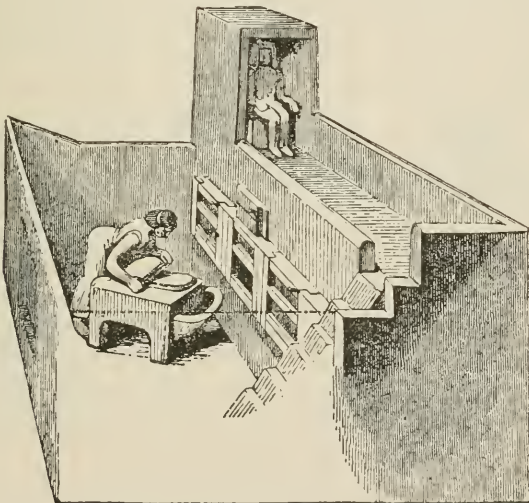
were probably only met with in the country, and resembled some still found in the *felláh* villages of modern Egypt.¹ Very similar to these was the model of a house now in the British Museum,²



No. 117.

Fig. 1. Model of a small house in the British Museum.
2. Shows how the door was opened and secured.

which consisted solely of a courtyard and three small store-rooms on the ground-floor, with a staircase leading to a room belonging to the storekeeper, which was furnished with a narrow window



No. 118. Showing the interior of the court, and upper chamber in the same.

or aperture opposite the door, rather intended for the purposes of ventilation than to admit the light. In the court a woman was represented, making bread, as is sometimes done at the present

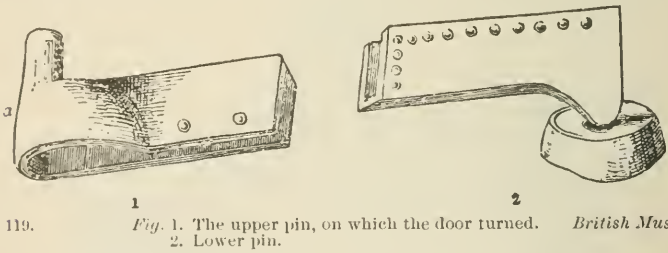
¹ Vide woodcut No. 116, fig. 4.

² Vide woodcut No. 117.

day in Egypt, in the open air; and the store-rooms were not only full of grain¹ when the model was found, but would still have preserved their contents uninjured had they escaped the notice of a rat in the lazaretto of Leghorn, which in one night destroyed what ages had respected. How readily would an Arab exclaim, on learning the fate which awaited them, 'Everything is written!'

The chamber at the top of the house appears, from its dimensions, to be little calculated for comfort, either in the heat of summer or the cold of winter; but it may only have been intended as a shelter from the sun during the day, while the inmate attended to the business of the servants, or the peasants. It cannot, however, fail to call to mind the memorable proverb, 'It is better to dwell in the corner of the house-top, than with a brawling woman in a wide house;' ² though that character does not apply to the quiet and industrious female in the court below.

The chambers on the ground-floor of an Egyptian house were chiefly used for stores, furniture, and goods of different kinds; and amphoræ of wine and oil³ were arranged as in the *apothecæ*⁴ of a Roman mansion. The rooms, and indeed all parts of



No. 119.

Fig. 1. The upper pin, on which the door turned.

British Museum.

2. Lower pin.

the house, were stuccoed within and without, and ornamented with various devices painted on the walls; and the doors were frequently stained to imitate foreign and rare woods.⁵ They were either of one or two valves,⁶ turning on pins of metal, and

¹ A few grains and husks of the barley remain.—S. B.

² Prov. xxi. 9.

³ The same custom of putting oil and honey and different comesibles into earthenware jars was common to the Romans as well as to the ancient and modern Egyptians. Some of these vases were not, properly speaking, amphoræ, having but one or no handle; but I use the name generally for *testæ*, or earthen casks, *cadi*.

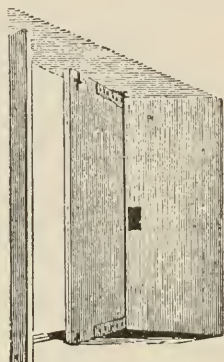
⁴ Vitruv. vi. c. 1. [These contained

oil, wine, honey, and other liquids, and they were placed in rows, the innermost resting against the wall. Some of these chambers were without any window, receiving light and air only from the door. Some had a small aperture in the wall, on the side of the court, on which they opened.—G. W.]

⁵ This was even the case with their coffins.

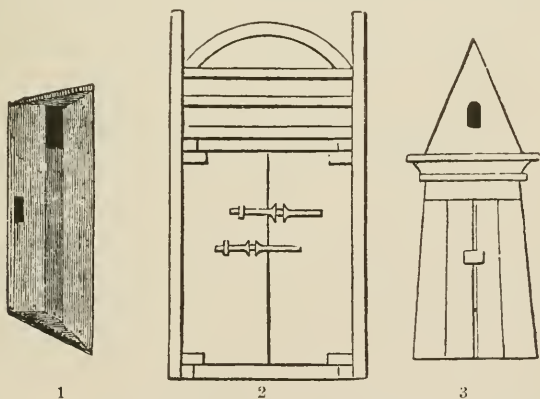
⁶ Woodcuts Nos. 120 and 121, *fig. 1*.

were secured within by a bar or bolts. Some of these bronze pins have been discovered in the tombs of Thebes. They were fastened to the wood with nails of the same metal, whose round head served also as an ornament, and the upper one had a projection at the back, in order to prevent the door striking against the wall.¹ We also find in the stone lintels and floor, behind the thresholds of the tombs and temples, the holes in which they turned, as well as those of the bolts and bars, and the recess for receiving the opened valves. The folding-doors had bolts in the centre, sometimes above as well as below. A bar was placed across from one wall to the other; and in many instances wooden locks² secured them by passing over the centre, at the junction of the two folds. It is difficult to say if these last were



No. 120. A folding-door.

opened by a key, or merely slid backwards and forwards like a bolt; but if they were really locks, it is probable they were upon the principle of those now used in Egypt, which are of wood, and are opened by a key furnished with several fixed pins,



No. 121.

Showing how the doors were fastened.

Tombs at Thebes.

answering to a similar number that fall down into the hollow movable tongue, into which the key is introduced, when they fasten or open the lock. For greater security, they are occasionally

¹ Woodcut No. 119, *fig.* 1, at *a*.

² Woodcut No. 121, *fig.* 2. I suppose wooden from their color.

sealed with a mass of clay :¹ and that this was also customary among the ancient Egyptians, we have satisfactory evidence from some tombs found closed at Thebes, as well as from the sculptures,² and the account given by Herodotus of Rhampsinitus's treasury.³ According to the scholiast of Aratus, 'the keys of Egyptian temples bore the figure of a lion, from which chains were suspended having a heart attached to them ;' alluding, as he supposes, to the beneficial effects of the inundation, and the period of its commencement, when the sun was in the sign Leo : not only were keys so ornamented, but the extremity of the stone spouts which conveyed the water from the roofs of the temples, projecting bosses upon the sides or handles of vases,⁴ the prows of boats, funeral stands or biers, chairs, and numerous other objects of furniture were decorated with the same favorite emblem. Every deity, figure, and symbol were formerly pronounced by the speculations of antiquaries to be connected with the sun ; and all capricorns, bulls, and scorpions were, with innocent simplicity, referred to their first parents in the zodiac : but we may venture to believe the choice of the Egyptians was directed to an ornament common and popular in every country and at all ages, without being under any obligation to the accidental form of a constellation.

At a later period, when iron came into general use, keys were made of that metal, and consisted of a long straight shank, about



No. 122.

Iron key.⁵

Museum of Harrow School.

five inches in length, and a bar at right angles with it, on which were three or more projecting teeth ; and the ring at the upper extremity was intended for the same purpose as that of our

¹ No keys have been found in Egypt older than the time of the Romans, nor any representation of keyholes or other contrivances of fastening doors except bolts. When extra security was required, the doors were sealed. Thus the Ethiopian conqueror Pianchi sealed the doors of the Temple of Ra at Heliopolis, after he had drawn the bolts ; and there is no mention of locks : 'Records of the Past,' ii. p. 98. A word supposed to be 'key' appears

to mean 'boat.' (*Zeitschrift f. ägypt. Spr.*, 1867.) — S. B.

² Woodcut No. 121, *fig.* 3, where the door of the tomb is so closed.

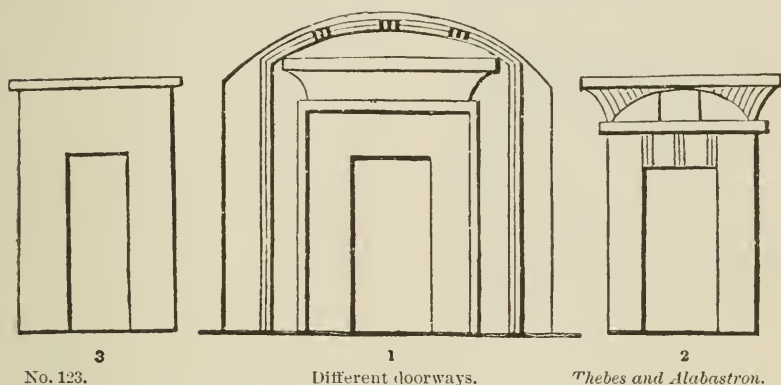
³ Herodot. ii. 121.

⁴ I have a very elegant glass head of a lion in relief, probably from a vase (now in the Museum at Harrow School).

⁵ Formerly in possession of Sir Gardner Wilkinson, and presented by him to the Museum of Harrow School, which he founded. — S. B.

modern keys: but we are ignorant of the exact time when they were brought into use,¹ and the first invention of locks, distinct from bolts, is equally uncertain; nor do I know of any positive mention of a key which, like our own, could be taken out of the lock, previous to the year 1336 before our era: and this is stated to have been used to fasten the door of the summer parlor of Eglon, the King of Moab.²

Egyptian doorways were generally surmounted by the usual cornice,³ but many were decorated according to the taste of the person of the house. In some the cornice was divided by a



curved line,⁴ others were simple,⁵ and many of those in the tombs were charged with a profusion of ornament, and richly painted.⁶ The doors opened inwards, as well those of the rooms as the *janua* or street-door, contrary to the custom of the Greeks, who were consequently obliged to strike on the inside before they opened it, in order to warn persons passing by to keep at a distance. The Romans resembled the Egyptians in this respect, and they were forbidden to open a street-door outwards without a special permission.⁷

Sometimes the door of an Egyptian house was in the centre, at others on the side of the court or of the house itself; but I have found few instances of a flight of steps before the entrance, nor,

¹ Their earliest appearance is attached to a strap round the necks of jackals on coffins of Soter, Archon of Thebes, of the Roman period, in the reign of Trajan, A.D. 90. British Museum, No. 6705. One is engraved: Caillaud, 'Voyage à Meroë;' pl. lxxvi. — S. B.

² Judges iii. 23, 25.

³ The niche at Persepolis, given in Sir

R. Ker Porter's work, pl. li., calls to mind the Egyptian door. *Vide* woodcut No. 123, *fig.* 1.

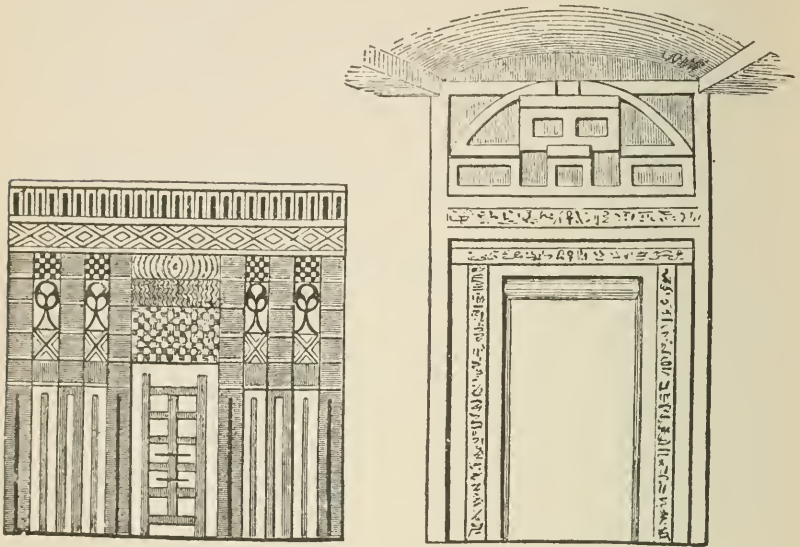
⁴ Woodcut No. 123, *fig.* 2

⁵ Woodcut No. 123, *fig.* 3.

⁶ Woodcut No. 124, *figs.* 1, 2.

⁷ As in the case of P. Valerius Poplicola and his brother. (Plin. xxxvi. 15.)

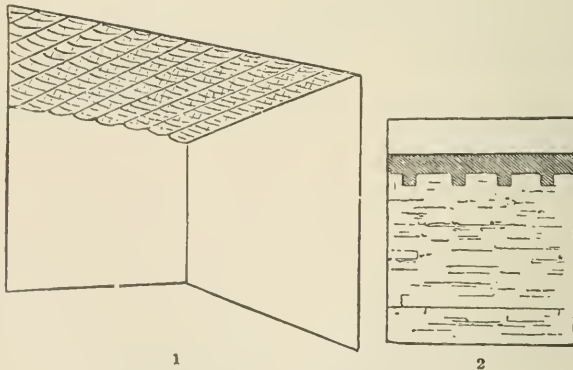
indeed, is it usual in the towns of modern Egypt. The columns of the porch and corridors were colored, and, when of wood, they



No. 124. 1 Ornamented doorways in the interior of tombs.

Thebes.

were stained to represent stone; and this fondness for imitating more costly materials, as hard stone and rare woods, proves their love of show, and argues a great advancement in the arts of civilized life.



No. 125. 1 Different modes of roofing chambers.

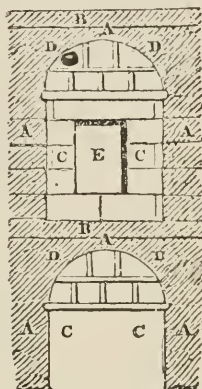
Tombs near the Pyramids, and at Thebes.

The floors were sometimes of stone, or a composition made of lime and other materials, and the roofs of the rooms were sup-

ported by rafters of the date-tree, arranged close together,¹ or, more generally, at intervals,² with transverse layers of palm branches, or planks. Many roofs were vaulted, and built, like the rest of the house, of crude brick; and there is reason to believe that some of the chambers in the pavilion of Rameses III. at Medenet Haboo were arched with stone, since the devices on the upper part of their walls show that the fallen roofs had this form.³ At Saqqára a stone arch still exists of the time of the second Psammaticus, and consequently erected 600 years before our era; nor can any one who sees the style of its construction for one moment doubt that the Egyptians had been long accustomed to the erection of stone vaults.⁴

It is highly probable that the small quantity of wood in Egypt, and the consequent expense of this kind of roofing, led to the invention of the arch; it was evidently used in their tombs as early as the commencement of the 18th Dynasty,⁵ or about the year 1540 B.C.; and, judging from some of the drawings at Beni Hassan, it seems to have been known in the time of the first Usertesén, whom I suppose to have been contemporary with Joseph. So little timber, indeed, was there in the valley of the Nile, that they were obliged to import cedar and deal from Syria; and we therefore find those woods, as well as sycamore, mimosa, and others of native growth, in the tombs of Thebes. Rare woods were also part of the tribute imposed on foreign nations conquered by the Egyptians; and the sculptures inform us that they supplied them with ebony, and various other kinds which were required for useful or ornamental purposes.

On the ground-floor of some houses, besides the store-rooms,



- A. The part against which the other walls stood.
- B. The level of the flooring of the rooms.
- C. Inside walls of the rooms.
- D. Indications of the rooms having been vaulted.
- E. Window.

No. 126. Traces of arched rooms. *Thebes.*

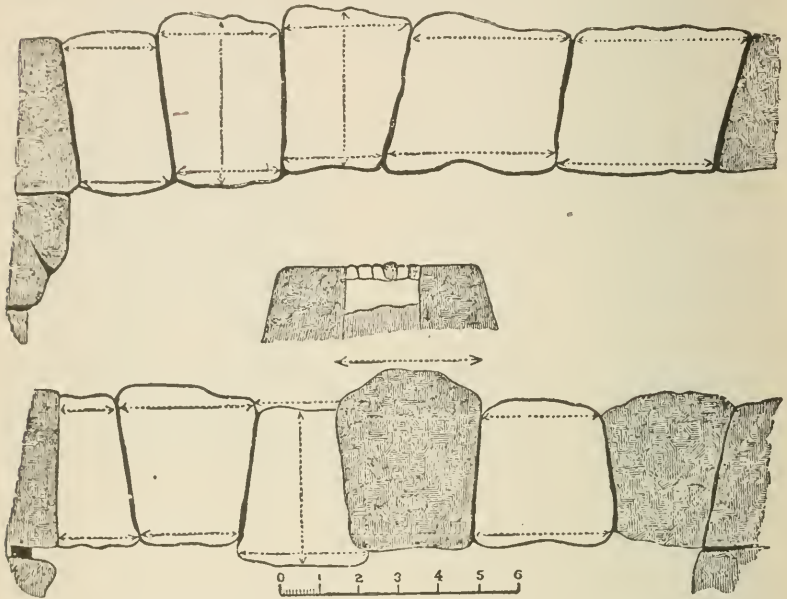
¹ I have only met with one representation of it in a tomb behind the Great Pyramid. *Vide* woodcut No. 125, *fig.* 1.

² In the walls that remain, we sometimes find the places of the beams, at others the signs of vaulted roofs. Woodcut No. 125, *fig.* 2. ³ Woodcut No. 126, at *D D*.

⁴ The stone vault has been found as early as the 6th Dynasty. — S. B.

⁵ In a tomb I found at Thebes, bearing the name of Amenophis I. Another has been discovered there of the time of Thothmes III. [*Vide* Hoskins' 'Ethiopia,' pl. v. p. 2. — G. W.]

were receiving and sitting apartments: and the upper part of the building contained those for entertaining guests,¹ for sleeping, and, generally speaking, the family chambers. Though in the plans of their houses there is no indication of the mill, it is



No. 127. Primitive arched roof of the time of the 5th Dynasty.² *Tomb near Pyramids.*

reasonable to conclude it was either in one of the rooms on the ground-floor, or in a court connected with the house, as is usual at the present day in Cairo and other towns of Egypt; and we have authority for believing that, like the early Romans,³ their bread was made at home; the wealthy having a baker⁴ in the house, and women performing that office in establishments of a smaller scale and among the poorer classes. It was not in Egypt alone that women were so employed: the custom was prevalent also in Greece, in the days of Homer,⁵ and even among the Romans, as it still is in the valley of the Nile and in other Eastern countries; and the Bible history distinctly states it to have been the duty of a maid-servant to grind corn in the houses of the Egyptians.⁶

¹ Conf. Mark xiv. 15.

² Discovered and published by Prof. T. H. Lewis; Papers of the Roy. Inst. Brit. Archit. 1875-6, pp. 33, 34.

³ Pliny says, 'The Romans made their

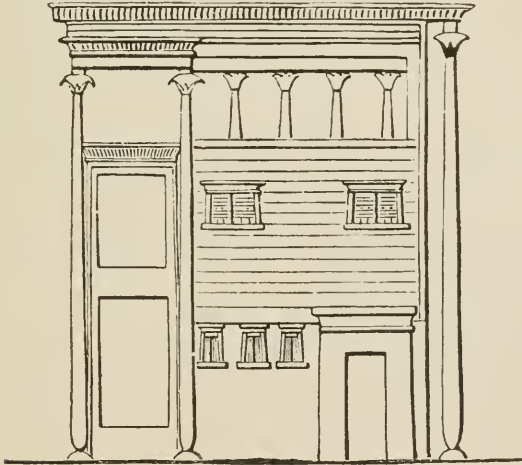
bread at home; and this was among the occupations of women, as it still is in many countries' (xviii. 11).

⁴ Gen. xl. 2, 5.

⁵ Hom. Od. vii. 104.

⁶ Exod. xi. 5.

Their mills were of simple and rude construction. They consisted of two circular stones, nearly flat, the lower one fixed, while the other turned on a pivot, or shaft, rising from the centre of that beneath it; and the grain, descending through an aperture in the upper stone, immediately above the pivot, gradually underwent the process of grinding as it passed. It was turned by a woman, seated, and holding a handle, fixed perpendicularly near the edge; and the hand-mill adopted by the modern Egyptian peasants is probably borrowed from, and similar to,¹ that of their predecessors.² They had also a large mill on a very similar principle; but the stones were of far greater power and dimensions; and this could only have been turned by cattle or asses, like those of the ancient Romans and of the modern Cairenes. The stone of which the hand-mills were made was usually a hard grit; and there is evidence, from an inspection of the site of Heliopolis, that the beds from which it is still taken, lying behind the mountains of the Mokattum, near Cairo, were quarried by the inhabitants of that city for the same purpose; and many of the larger mill-stones, which were usually of granite, have been found amidst the crumbled ruins of ancient towns.



No. 128.

Terrace of a house.

Thebes.

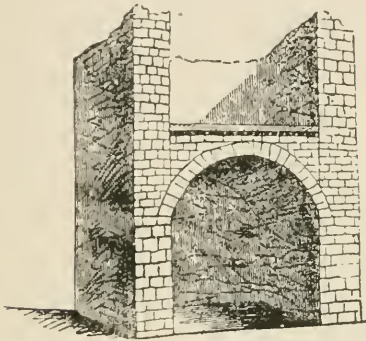
On the top of the house was a terrace, which served as well for

¹ I judge from fragments of the old stones which have been found.

² There is no representation of grinding corn, or any kind of quern, in the

sculptures; it was probably pounded by a pestle and mortar, and so bruised or reduced to a coarse flour. — S. B.

a place of repose as for exercise during the heat; since, being covered with a roof supported by columns, the sun was excluded and a refreshing stream of air passed through it. It was here, too, that they slept at night in the summer season, like the modern inhabitants of the country; and, according to Herodotus, they protected themselves from the gnats by a mosquito net, or trusted to the current of wind passing over this elevated space to prevent the visits of those troublesome insects.¹ The floors of



No. 129. Flooring over an arched room. *Thebes.*

the rooms were flat on the upper side, whether the roofs beneath were vaulted or supported on rafters; and instead of the covered terrace above mentioned the upper chambers and passages were frequently surmounted by the wooden *mulquf*,² or wind conductor, still so common in Eastern towns. It was open to the wind, and a constant stream passed down its slope; nor

does there appear to have been any other difference in its form from those of the present day than that it was double and faced in two opposite directions, the *mulqufs* of modern Egypt being directed only towards the prevailing northwest wind.³ These last consist of strong framework, to which several planks of wood are nailed, according to the breadth and length proposed; and if required of cheaper materials, the place of planks is supplied by reeds or mats, covered with stucco, protected and supported by wooden rafters; and it is probable that those of former times were of a similar construction.

Sometimes a part of the house exceeded the rest in height, and stood above the terrace like a tower;⁴ and this was ornamented

¹ Herodotus says, that those who live in the low lands use the *same* net with which they fish in the day; and the people of the upper part of the country sleep on a lofty tower, which the gnats are prevented by the wind from reaching. I have taken the liberty of suggesting a mosquito net instead of the one he mentions, which would have been a poor protection from insects so cruelly resolute as to bite through

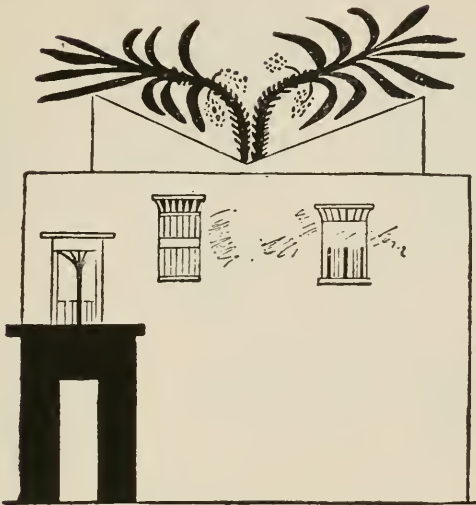
the sleeper's clothes, as the historian affirms (ii. 95).

² I use the Arabic name. *Vide vignette E* at the head of this chapter, which shows them on the houses of Cairo.

³ In the sepulchral inscription one of the blessings recorded is to breathe the air of the north wind, the cooling and refreshing draughts of which were considered delicious or sweet. — S. B.

⁴ Woodcut No. 131.

with columns, or with square panels, in the manner of false windows.

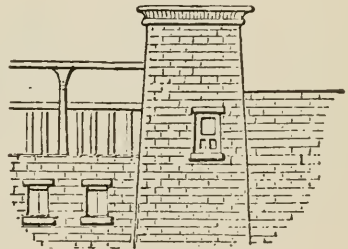


No. 130.

The mulquf for catching the wind.

Thebes.

Other houses had merely a parapet wall, which surrounded the terrace, and was surmounted, in some instances, with a row of battlements; and though a similar style of building belonged more particularly to fortified castles, or to the palace of the king, they adopted it, like many Europeans of the present day, as an ornamental finish to a more peaceful habitation. The Egyptian battlements were an imitation of shields, which, doubtless, suggested the first idea of this mode of protecting the besieged, while they annoyed the assailants with missiles from the parapet; and the corners of the building always presenting a half-shield, probably gave rise to that ornament so commonly used on Greek and Roman tombs; unless it was borrowed from a rude imitation of the body itself, like the lid of an Egyptian mummy-case, which was a representation of the person it contained.

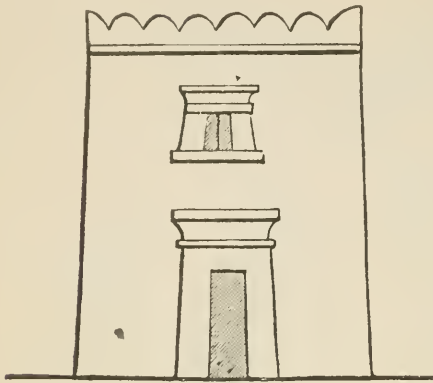


No. 131. Tower rising above the terrace.

Thebes.

Besides the owner's name, they sometimes wrote a lucky sentence over the entrance of the house, for a favorable omen,

as 'the good abode,' the *múnzel mobárák* of the modern Arabs, or something similar: and the lintels and imposts of the



No. 132. House with battlements. Thebes.

No. 133.

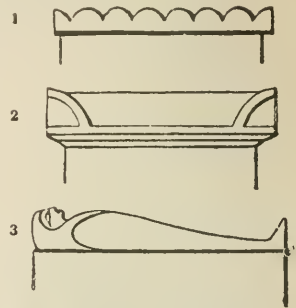
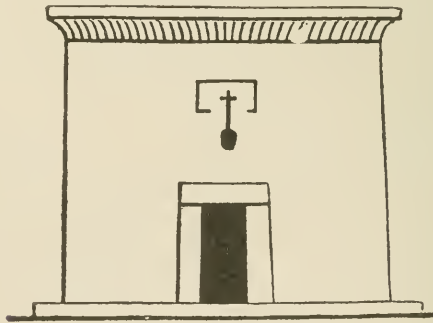


Fig. 1. Egyptian battlements.
2. Top of a Greek or Roman sarcophagus.
3. Top of a mummy-case.

doors, in the royal mansions,¹ were frequently covered with hieroglyphics, containing the ovals and titles of the monarch.

It was, perhaps, at the dedication of the house, that these



No. 134.

Sentence affixed to the house.

Thebes.

sentences were affixed;² and we may infer, from the early mention of this custom among the Jews,³ that it was derived from Egypt, — a conjecture greatly strengthened by the circumstance of our finding even the store-rooms, vineyards, and gardens

¹ Besides their apartments in the temples, the kings, as well as the priests, had houses and villas.

² The modern Moslems write sentences

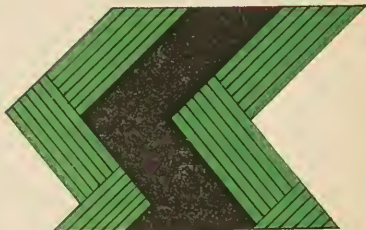
from the Korán, or commemorate the performance of the pilgrimage to Mekkeh by the owner of the house.

³ Deut. xx. 5.



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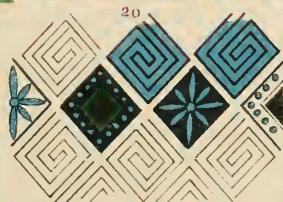
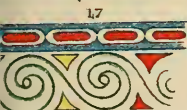
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of the Egyptians placed under the protection of a tutelary deity.¹

Like the doors, the windows or (properly speaking) the shutters were closed with folding valves, secured in a similar manner with a bolt or bar, and ornamented with carved panels or colored devices. The openings of the windows were small, upon the principle that where little light is admitted little heat penetrates; and this custom has always been prevalent in the East, and even in the more temperate latitude of Italy. They were surmounted by cornices, resembling those of the doorways; and when on the passage or landing-place, over the street door, they had occasionally a sort of balcony, or at least a row of bars,² with a column in the centre.

The walls and ceilings were richly painted,³ and frequently with admirable taste; but of their effect we can only judge from those of the tombs, where they are preserved far more perfectly than in the houses, few of which retain any vestiges of the stucco or of the colored devices that once adorned them. The ceilings were laid out in compartments, each having a pattern with an appropriate border; in many instances reminding us so strongly of Greek taste that we should feel surprised to find them on monuments of the early periods of the 18th and preceding dynasties, if there was not authority for believing that the Greeks borrowed numerous devices from Egypt; and we may ascribe to the same origin the scarab, the harpy, and several of the ornamental emblems on Greek and Etruscan vases. The favorite forms were the lotus, the square, the diamond, the circle, and, above all, the succession of scrolls and square within square, usually called the Tuscan border, both of which are of ordinary occurrence on Greek and Etruscan as well as Egyptian vases; and those given in the accompanying plate,⁴ from a tomb at E'Sioot, painted upon a black or dark bronze ground, though of an age prior to the year 1600 before our era, are perhaps the most elegant, and, which is very remarkable, bear the nearest resemblance to a Greek style. Similar designs were adopted by the Romans, some of which, having been found in the baths of Titus, gave Raphael the idea of his celebrated and *novel*

¹ It is worthy of remark, that this is retained by the modern Egyptians in the protecting genius supposed to preside over the different quarters of Cairo. Woodcut

No. 162.

² As in woodcut No. 130.

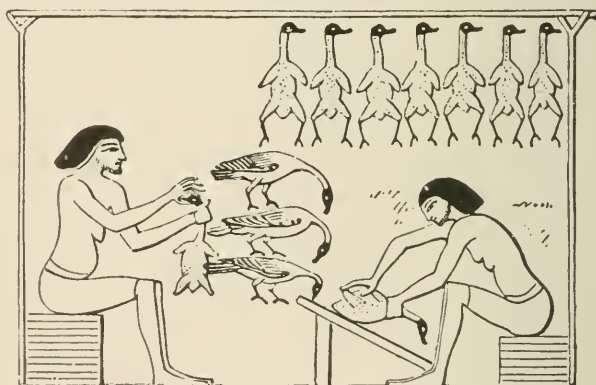
³ Conf. Jer. xxii. 14.

⁴ Pl. VIII. *figs.* 4, 7, and 20.

arabesques; and the paintings of Pompeii make us acquainted with a still greater variety.

That the Greeks and Romans far surpassed the Egyptians in taste, and in the numerous combinations they used to adorn their rooms, is evident; a natural result of the encouragement given to invention, which Egypt, fettered by regulations and prejudices, preventing the development of taste and cramping the genius of her artists, never enjoyed: but however the *laqueata tecta* of the Romans surpassed in richness and beauty of effect the ceilings of an Egyptian house, divided as they were into numerous compartments, presenting cornices, mouldings, and embossed fretwork, painted, gilt, and even inlaid with ivory,¹ still in the general mode of decoration, they, like the stuccoed walls, bore a striking analogy to those in the mansions of Thebes and other cities on the Nile.

The form and character of the shops depended on the will, or peculiar trade, of the person to whom they belonged; and many, no doubt, sat and sold in the streets, as at the present day. Poulterers suspended geese and other birds from a pole in front



No. 135.

A poulterer's shop.

Thebes.

of the shop, which at the same time supported an awning to shade them from the sun; and many of the shops rather resembled our stalls, being open in front, with the goods exposed on shelves, or hanging from the inner wall, as is still the custom

¹ Plin. xxxiii. 3, and xxxv. 40. Virg. *Æn.* i. 726. The ceilings of Turkish palaces, executed by Greek artists, are frequently very handsome, and display great

elegance and taste. Their painted walls, adorned with columns and various designs, are an imitation of the ancient style, but very inferior.

in the bazaars of Eastern towns. But these belong more properly to a description of the trades.

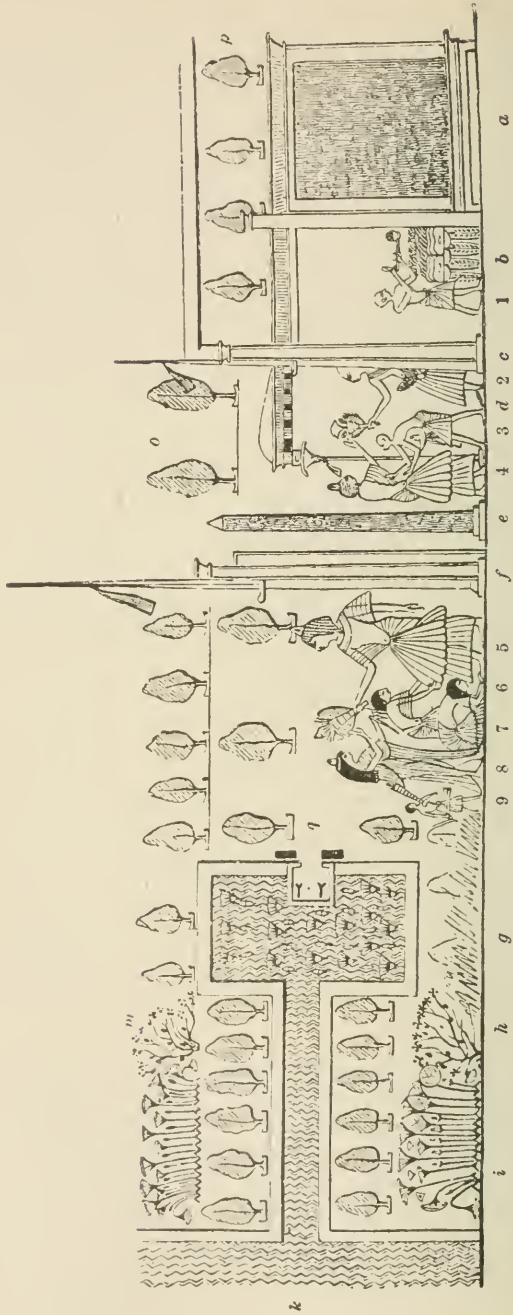
Besides the town houses, the Egyptians had extensive villas, which, with a very commodious mansion, contained spacious gardens, watered by canals communicating with the Nile. They had also tanks of water in different parts of the garden, which served for ornament as well as for irrigation, when the Nile was low; and on these the master of the house occasionally amused himself and friends, by an excursion in a pleasure-boat kept for the purpose. But, like the Orientals of the present day, or like people of the continent of Europe who are incapable of understanding how the English can row for their amusement, the Egyptians were contented to sit or stand in the boat, while their servants towed it round the lake; and protected from the sun by a canopy, they felt additional pleasure in the contrast of their own ease with the labor of their menials. They also amused themselves by angling, and spearing fish in the ponds within their grounds; and on these occasions they were generally accompanied by a friend, or one or more members of their family. The mode of laying out the house and grounds varied according to circumstances. Some villas were of considerable extent, and, besides the arable land belonging to them, the gardens occupied a very large space, as did the offices and other buildings attached to the house.

Some large mansions appear to have been ornamented with propylæa and obelisks, like the temples themselves; it is even possible that part of the building may have been consecrated to religious purposes, as the chapels of other countries, since we find a priest engaged in presenting offerings at the door of the inner chambers; and, indeed, but from the presence of women, the form of the garden, and the style of the porch, we should feel disposed to consider it a temple rather than a place of abode.¹

The entrances of large villas were generally through folding gates, standing between lofty towers, as in the propylæa of temples,² with a small door at each side; and others had merely folding gates with imposts surmounted by a cornice. A wall of circuit extended round the premises; but the courts of the house, the garden, the offices, and all the other parts of the villa, had

¹ Woodcut No. 136.

² For the elevation and plan of villas, see Plate IX.

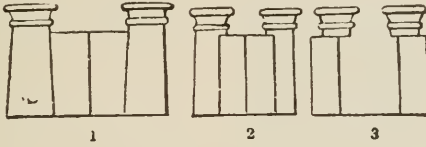


No. 136.

Villa, with obelisks and towers, like a temple.

Thebes.

each their separate enclosure. The walls were usually built of crude brick; and in damp places, or when within reach of the inundations, the lower part was strengthened by a basement of stone. They were sometimes ornamented with panels and grooved

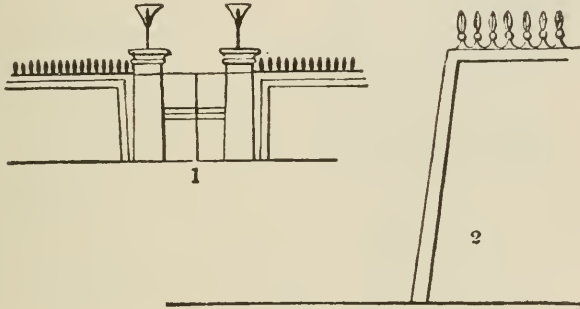


No. 137.

Small entrances to villas.

Alabastron.

lines,¹ generally stuccoed; and the summit was crowned either with Egyptian battlements, the usual cornice, a row of spikes in imitation of spear-heads, or with some fancy ornament.



No. 138.

Walls crowned with spikes.

Alabastron and Thebes.

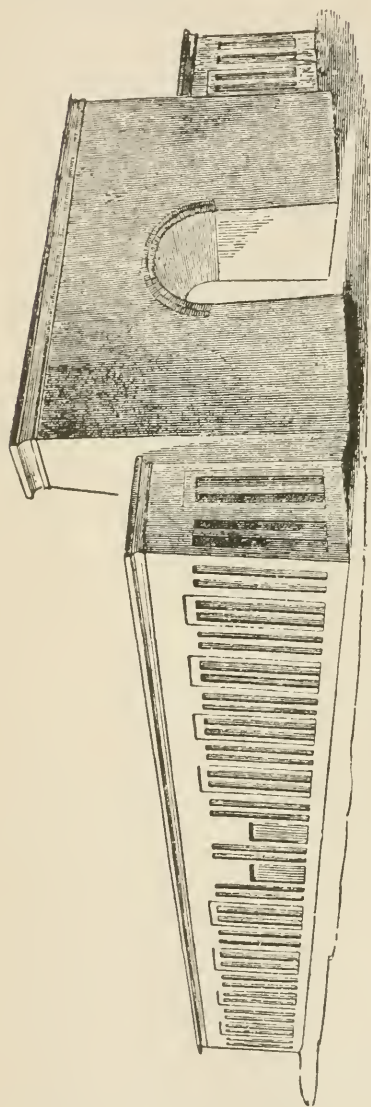
Those villas or castles belonging to the kings which stood on the high road, where they were accustomed to pass either in their hunting or military expeditions, were small and simple, being only intended for their reception during the short stay of a few days; but those erected in an enemy's country may rather be looked upon as forts than as simple mansions. Many, however, in provinces at a distance from Egypt, were of very large dimensions, and had probably all the conveniences of spacious villas; like those erected in later times by the Ptolemies on the confines of Abyssinia.

In order to give an idea of the extent of some of their villas, it will be necessary to describe the plan and arrangement of the different parts.² About the centre of the wall of circuit was the

¹ Woodcut No. 139.

² Plate IX.

main entrance, and two side gates, leading to an open walk, shaded by rows of trees. Here were spacious tanks of water, which faced the door of the right and left wing of the house, and



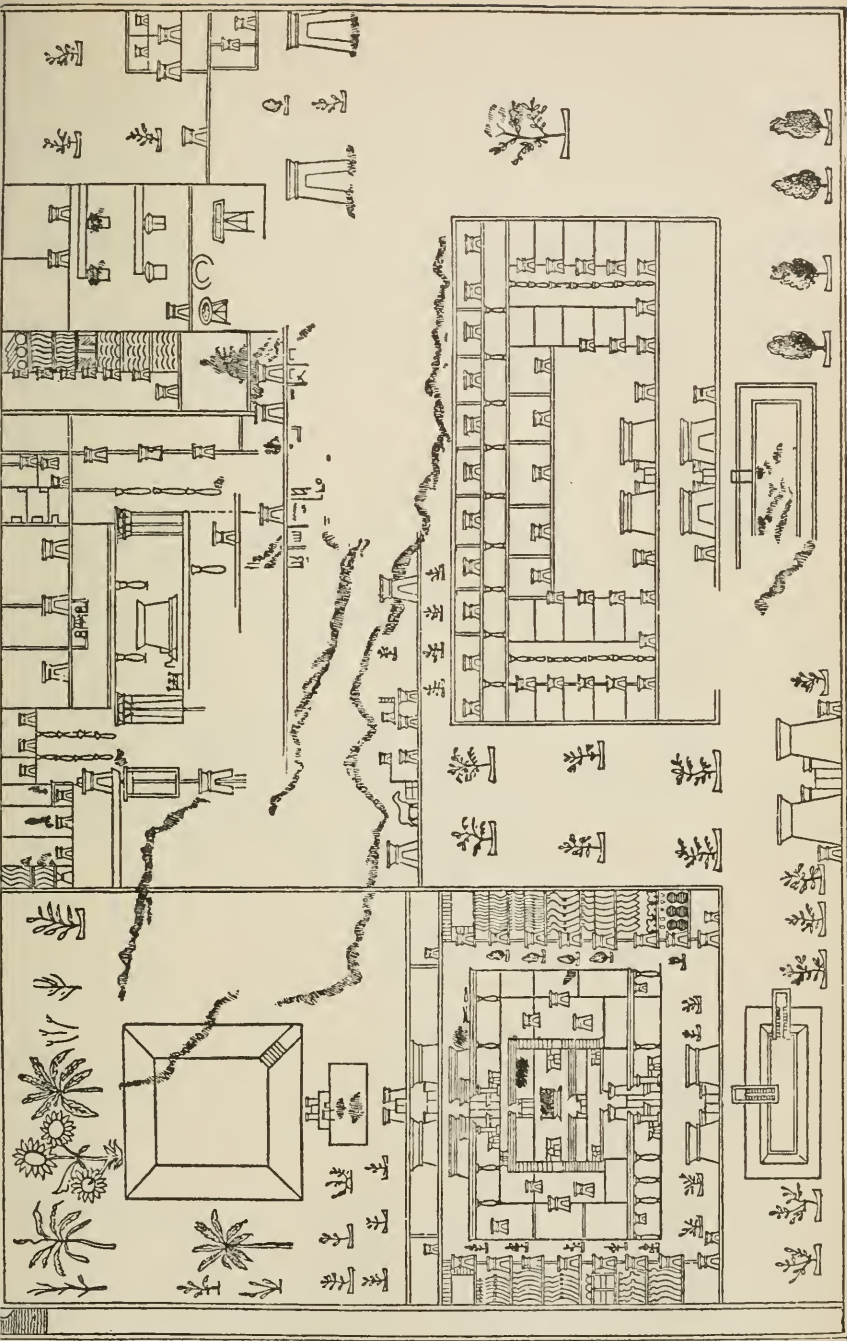
Thebes.

Paneled walls of an Egyptian building.

No. 139.

between them an avenue led from the main entrance to the stables, and to what may be called the centre of the mansion. After passing the outer door of the right wing, you entered an open court with trees extending quite round a nucleus of inner apartments, and having a back entrance communicating with the garden. On the right and left of this court were six or more store-rooms, a small receiving or waiting room at two of the corners, and at the other end the staircases which led to the upper story. Both of the inner façades were furnished with a corridor, supported on columns, with similar towers and gateways. The interior of this wing consisted of twelve rooms, two outer and one centre court, communicating by folding gates; and on either side of this last was the main entrance to the rooms on the ground-floor, and to the staircases leading to the upper story. At the back were three long rooms, and a gateway opening to the garden, which contained a variety of fruit trees, a small summer-house, and a tank of water.

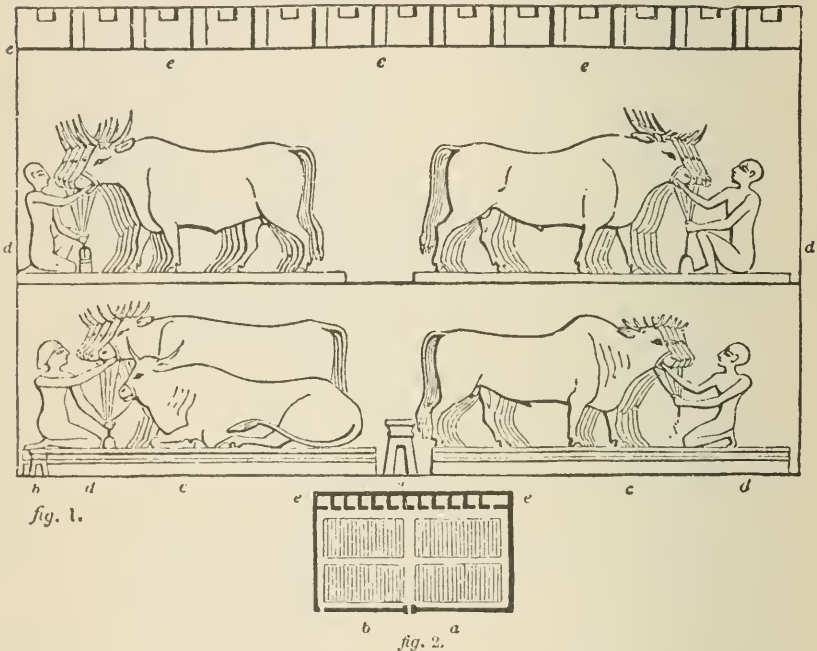
The arrangement of the left wing was different. The front gate led to an open court, extending the whole breadth of the façade of the building, and backed by the wall of the inner part.



Egyptian villa, from the sculptures at Alabastron.

Central and lateral doors thence communicated with another court, surrounded on three sides by a set of rooms, and behind it was a corridor, upon which several other chambers opened.

This wing had no back entrance, and, standing isolated, the outer court extended entirely round it: and a succession of doorways communicated from the court with different sections of the centre of the house, where the rooms, disposed, like those already described, around passages and corridors, served partly as sitting apartments and partly as store-rooms.



No. 140.

Fig. 1. Egyptian mode of representing a farm-yard.
2. The supposed ground-plan of the same.

Alabastron.

The stables for the horses, and the coach-houses for the travelling¹ chariots² and *plaustra*,³ were in the centre or inner part

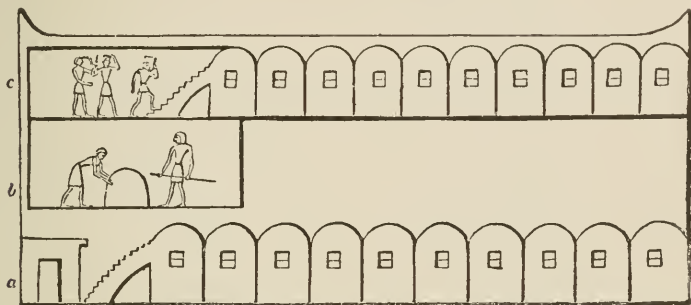
¹ The chariot called *urry* had only two horses till the Ptolemies, when four were introduced. The pair of horses were called *hwar*. Chariots are not represented till the time of Amenophis I. On the side of a tomb in the British Museum, No. 769, a chariot is drawn by a pair of white mules. — S. B.

² Gen. xlv. 29. The difference be-

tween the *plaustra* and these chariots, or carriages, was that the latter were drawn by horses, the former by oxen.

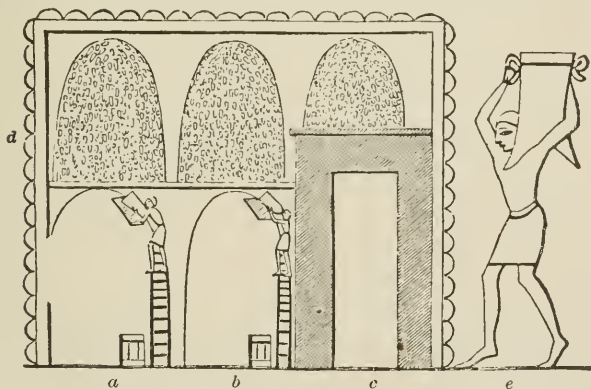
³ The wagons were called in Egyptian *āakaruta*, the Coptic *asjolti*; none are represented in the sculptures, although mentioned. As a rule, men, boats, and asses were employed for the purpose of carrying goods. — S. B.

of the building;¹ but the farmyard, where the cattle were kept, stood at some distance from the house, and corresponded to the department known by the Romans under the name of *rustica*. Though enclosed separately, it was within the general wall of circuit, which surrounded the land attached to the villa; and a



No. 141. Rooms for housing the grain, apparently vaulted. Beni-Hassan.

canal, bringing water from the river, skirted it, and extended along the back of the grounds. It consisted of two parts; the sheds for housing the cattle, which stood at the upper end, and



No. 142. Granary, showing how the grain was put in, and that the doors *a b* were intended for taking it out. Thebes.

the yard where rows of rings were fixed, in order to tie them while feeding in the daytime: and men always attended, and frequently fed them with the hand.

¹ Vitruvius says (lib. vi. c. 9): 'The stable, especially in the villa, should be in the warmest place, and not with an aspect towards the fire, for if horses are stalled

near a fire their coats soon become rough; hence those stalls are excellent which are away from the kitchen, in the open space towards the east.'

The granaries¹ were also apart from the house,² and were enclosed within a separate wall, like the *fructuaria* of the Romans; and some of the rooms in which they housed the grain appear, as I have already observed, to have had vaulted roofs. These were filled through an aperture near the top, to which the men ascended by steps, and the grain, when wanted, was taken out from a door at the base.³

The superintendence of the houses and grounds was intrusted to stewards,⁴ who regulated the tillage of the land, received whatever was derived from the sale of the produce, overlooked the returns of the quantity of cattle and stock upon the estate, settled all the accounts, and condemned the delinquent peasants to the bastinado, or any punishment they might deserve.⁵ To one were intrusted the affairs of the house,⁶ another overlooked the culture of the fields; and the extent of their duties, or the number of those employed, depended on the quantity of land or the will of its owner.



No. 143

Steward (*fig. 1*) overlooking the tillage of the lands.

Thebes.

The mode of laying out their gardens was as varied as that of the houses; but in all cases they appear to have taken particular care to command a plentiful supply of water⁷ by means of reservoirs and canals. Indeed, in no country is artificial irrigation more required than in the valley of the Nile; and, from the circumstance of the water of the inundation not being admitted into the gardens, they depend throughout the year on the supply obtained from wells and tanks, or the vicinity of a canal.

The mode of irrigation adopted by the ancient Egyptians was exceedingly simple, being merely the *shadoof*, or pole and bucket of the present day;⁸ and, in many instances, men were employed

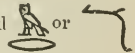
¹ Called *snî*. Sometimes inscribed with the quantity of their contents. — S. E.

² Vitruvius, in like manner, recommends 'the barn, hay-room, meal-room, and mill to be without the boundaries of the villa, being thereby rendered more secure from fire' (lib. vi. 9).

³ Woodcut No. 142.

⁴ The *villicus* of the Romans.

⁵ These officers were called



or

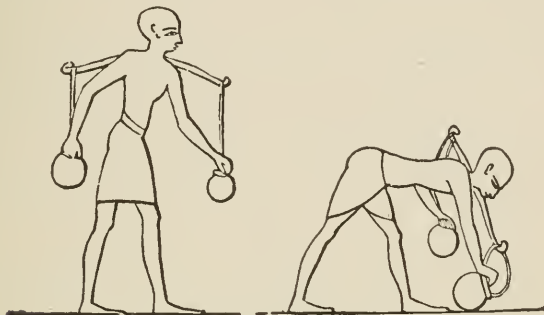
which was equivalent in general to the word 'superintendent.' — S. B.

⁶ Gen. xxxix. 5; xliii. 16, 19; and xlv. 1.

⁷ Conf. Isaiah's comparison of 'a garden that hath no water.'

⁸ See Vignette D.

to water the beds¹ with pails, suspended by a wooden yoke they bore upon their shoulders. The same yoke was employed for carrying other things, as boxes, baskets containing game and poultry, or whatever was taken to market; and every trade seems to have used it for this purpose, from the potter and the brickmaker,² to the carpenter and the shipwright.

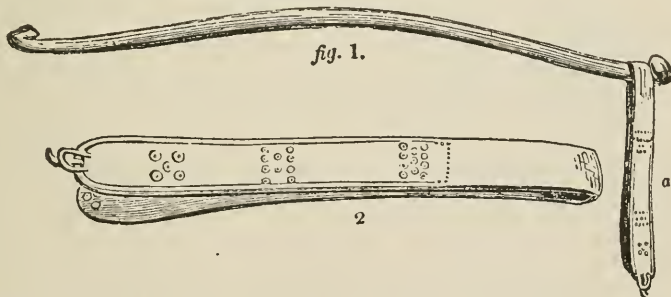


No. 144.

Men watering the ground with pots of water.

Beni-Hassan.

One of them, which was found at Thebes, has been brought to England by Mr. Burton. The wooden bar or yoke is about three feet seven inches in length; and the straps, which are double, and fastened together at the lower as well as at the upper extremity, are of leather, and between fifteen and sixteen inches long. The small thong at the bottom not only served to connect



No. 145.

Fig. 1. Wooden yoke and strap found at Thebes by Mr. Burton.

2. Is the strap *a*, on a larger scale.

In the British Museum.

the ends, but was probably intended to fasten a hook, or an additional strap, if required, to attach the burden; and though most of these yokes had two, some were furnished with four or eight

¹ Deut. xi. 10.

² Woodcut No. 112.

straps; and the form, number, or arrangement of them varied according to the purposes for which they were intended.

They do not appear to have used the water-wheel, so universally employed in Egypt at the present day; and it is singular that they had devised no substitute for mere manual labor, if we except the hydraulic screw, which is said to have been a late introduction, and, according to Diodorus,¹ invented and first employed in Egypt by Archimedes. Indeed, if the foot machine mentioned by Philo was really a wheel turned by the foot, it cannot have been a very great relief to the laborer, and we must attach considerable blame to the priests for their indifference to the comforts of the people, when we contemplate the grandeur of their public buildings, and consider the great mechanical skill necessary for their erection.

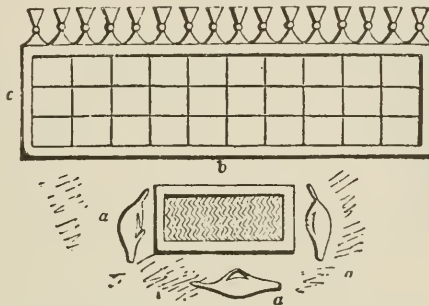
The Egyptians were not singular in this neglect of useful improvements, or in their disregard for the waste of time and labor resulting from the use of such imperfect means: the same may be observed among the Greeks and Romans; and those enlightened people, who bestowed the greatest attention upon ornamental objects, and who had arrived at a high degree of excellence in the manufacture of jewelry and several articles of household furniture, were contented to remain on the level of barbarous communities in the imperfect style of many ordinary implements. To workmen who devised some novelty for adding to the splendor of a house, or the decoration of the person, great inducements were held out, by the certainty of immediate patronage; and their ingenuity, confident of reward, was naturally directed to such inventions. These suited the caprices of a luxurious and wealthy people, but they felt no disposition to repay the laudable endeavors of an artist who suggested a method for diminishing the toil of the lower classes; and time and labor were deemed of far less value than in modern days. All that was intended for external show, or was exposed to view,² was exquisitely finished; but the keys and locks of that door whose panels, handles, and other external parts evinced no ordinary skill, were rude and imperfect: the latter, if they simply answered the purpose, satisfied; the former failed to please unless they promised to flatter the pride of their possessor,

¹ Diod. i. 34, and lib. v., in treating of Spain. Strabo, xvii.

² This does not apply to Greek temples,

where the parts concealed from the spectator were wrought with the same care as the most exposed features.

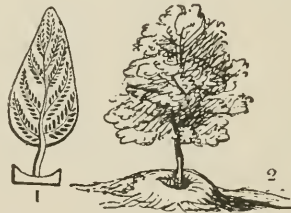
by commanding admiration. The same remark applies to the coarse and primitive construction of the Roman mills; and these may justly be compared to the rude hydraulic mechanism of the ancient Egyptians. Nor are these cases without a parallel at the present day; and every one who visits the continent of Europe must be struck with a similar disregard for many improvements which, though long since known and evidently tending to comfort and a decrease of labor, still continue to be looked upon with indifference, while inventions contributing to display and luxury are adopted on their first appearance.



a a a. Water-skins suspended close to the tank, *b.*
c. Beds of a garden, laid out as at the present day in Egypt, very like our salt pans. *Thebes.*
 No. 146.

Water-skins¹ were also used for irrigation by the Egyptians, as well as for sprinkling the ground before the rooms or seats of the grandees,² and they were frequently kept ready filled at the tank for that purpose.

Part of the garden³ was laid out in walks shaded with trees, usually planted in rows, and surrounded, at the base of the stem, with a circular ridge of earth, which, being lower at the centre than at the circumference, retained the water, and directed it more immediately towards the roots. It is difficult to say if they were trimmed into any particular shape, or if

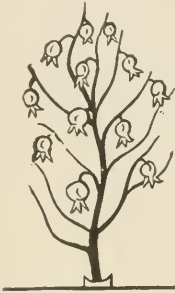


1. Tree with earth raised round the roots.
 2. The same according to our mode of representing it.
 No. 147.

¹ They were called *s'el*, and used for the same purpose as the Greek *askos* and Latin *uter*, or the modern skin for holding water, wine, and other liquids. — S. B.
² A common custom in the East.
³ The garden was called *qami*, and is often mentioned. The gardener was also

called *qami*; one of his offices was to supply crowns of flowers, *meh*, for his master. In the papyrus translated by M. Maspero ('Genre épistolaire,' p. 56), he is described as employed during the morning on vegetables, and in the evening on the vines. — S. B

their formal appearance in the sculpture is merely owing to a conventional mode of representing them: but since the pomegranate, and some other fruit trees, are drawn with spreading and irregular branches, we might suppose that sycamores and others, which presented large masses of foliage, were really trained in that formal manner: though from the hieroglyphic signifying 'tree' having the same shape, it may only be a general character for all trees.



No. 148. Pomegranate. Thebes.



No. 149. Figurative hieroglyphic signifying 'tree.'

Among the Romans, this mode of cutting trees was confined to certain kinds, as the myrtle, laurel, box, and others; and the office of trimming them into different shapes was delegated to slaves, instructed in the art, or *opus topiarium*,¹ from which they receive the name of *topiarii*.

The palms in the Egyptian sculptures are well designed, and the *dôms*² may be easily recognized; but most of the other trees and plants would perplex the most expert botanist, and few, except the lotus, can be determined with certainty.

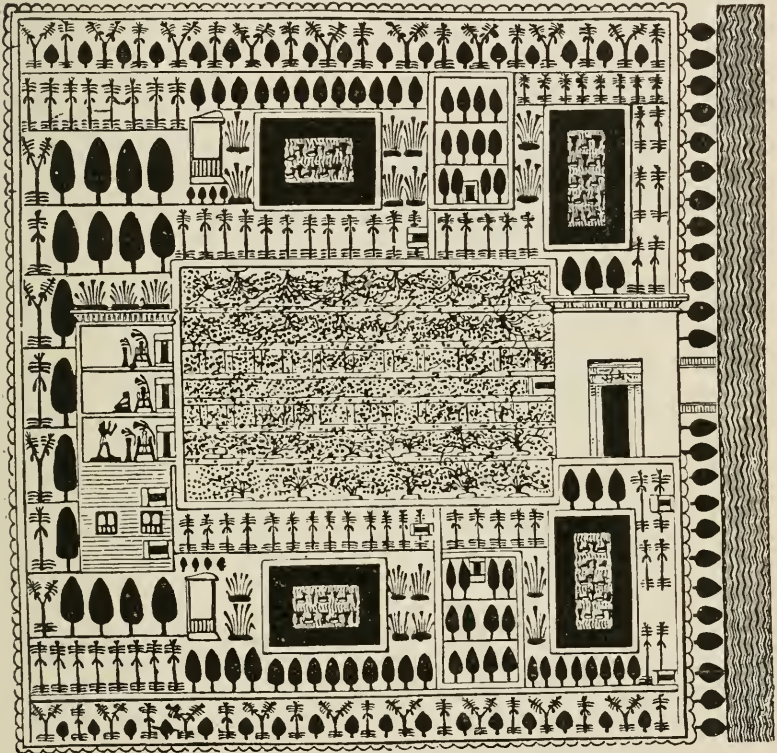
The large gardens were usually divided into different parts; the principal sections being appropriated to the date and sycamore trees, and to the vineyard. The former might be looked upon as the orchard, but similar enclosures being also allotted to other trees, they equally lay claim to this name; we cannot therefore apply a fixed appellation to any part but the vineyard itself.

Gardens are frequently represented in the tombs of Thebes and other parts of Egypt, many of which are remarkable for their extent. The one here introduced is shown to have been

¹ Plin. ('Nat. His.' xv. 30) on the laurel.

² The *Cucifera thebaica*, or Theban palm.

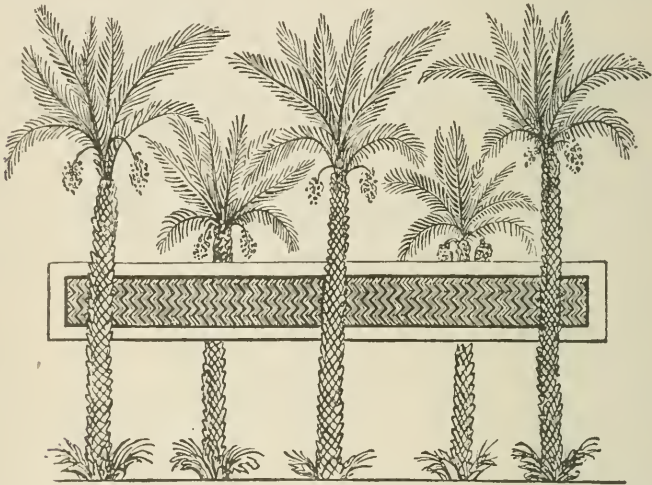
surrounded by an embattled wall, with a canal of water passing in front of it, connected with the river. Between the canal and the wall, and parallel to them both, was a shady avenue of various trees; and about the centre was the entrance, through a lofty door, whose lintel and imposts were decorated with hieroglyphic inscriptions, containing the name of the owner of the grounds, who in this instance was the king himself. In the



No. 150. A large garden, with the vineyard and other separate enclosures, tanks of water, and a small house. *From the Work of Prof. Rosellini.*

gateway were rooms for the porter and other persons employed about the garden, and probably the receiving-room for visitors, whose abrupt admission might be unwelcome; and at the back, a gate opened into the vineyard. The vines were trained on a trellis-work, supported by transverse rafters resting on pillars; and a wall, extending round it, separated this part from the rest of the garden. At the upper end were suites of rooms, on three different stories; and the windows looking upon green trees, and

inviting a draught of air, made it a pleasant retirement in the heat of summer. On the outside of the vineyard wall were planted rows of palm-trees, which occurred again with the *dōms* along the whole length of the exterior wall; four tanks of water, bordered by a grass-plot, where geese were kept and the delicate flower of the lotus was encouraged to grow, served for the irrigation of the grounds; and small *kiosks*, or summer-houses, shaded with trees stood near the water, and overlooked beds of flowers. The spaces containing the tanks, and the adjoining portions of the garden, were each enclosed by their respective



No. 151. Egyptian mode of representing a tank of water with a row of palms on either side. Thebes.

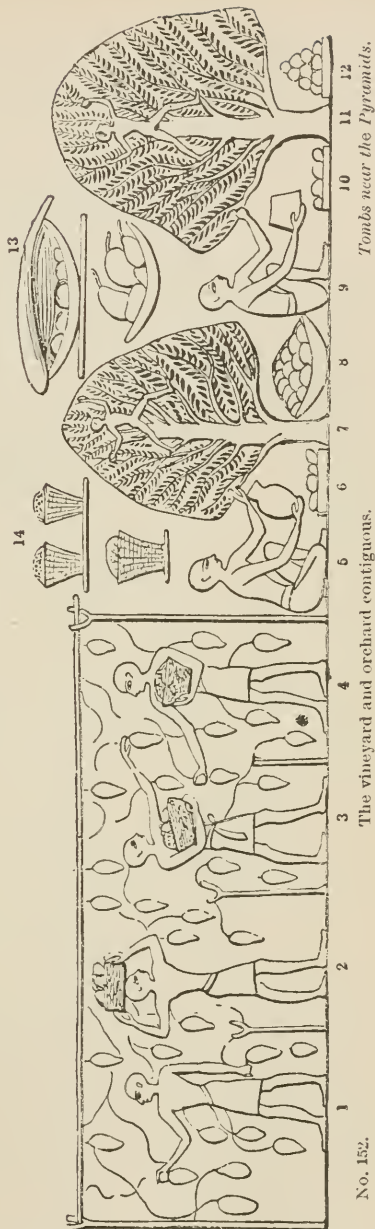
separate walls; and a small subdivision on either side, between the large and small tanks, seem to have been reserved for the growth of particular trees, which either required peculiar care, or bore a fruit of superior quality.¹

¹ An officer named Anna, of the reign of Thothmes I., has left behind in his tomb a list of his trees. They were as follows: sycamores, *neha* (*Ficus Sycomorus*), 90; persea trees, *suabu* (*Balanites ægyptiaca*), 31; date palms, *bener* (*Phoenix dactylifera*), 170; dōm palms, *mama* (*Hyphane cucifera*), 120; fig sycamore trees, *neha en teb* (*Ficus carica*), 5; acacia, or *sont xet en sēn* (*Mimosa nilotica*), 3; quinces, *baq* (*Malum cydonium*); vines, *areru*, 12; anhamen trees, 5; *keseb* trees, 8; *netem* or *sas* trees, 16; fig trees, *nebs* (*Sycamimus*), 5; thorns, *θun*, 5; another kind of dōm, *mama en xanent* (*Hyphane argun*), 1; *xet sef* trees, 2; *asht* trees (wanting); *ah*

trees, *amam* (poplars), 3; willows, *tert*, 8; tamarisks, *aser* (*Tamariscus africana*), 10. Total, 493 + x trees. (Brugseh, 'Recueil de Monuments Égyptiens,' ptie i., 4to; Leipzig, 1862; pl. xxxvi. p. 49.) In the letter of Amenenan, that writer mentions 'the great dōm palm, *mama*, of 60 cubits high, with its fruit, *qaqau*. and the stones, *xanana*, within the fruit, and the water in the stones.' (Select Papyri, pl. viii. l. 4.) The young fruit of the dōm has water in the stones; some have supposed the coconut is here intended, but there is no trace of that tree or fruit on the monuments of Egypt. — S. B.

In all cases, whether the orchard stood apart from or was united with the rest of the garden, it was supplied, like the other portions of it, with abundance of water, preserved in spacious reservoirs, on either side of which stood a row of palms, or an avenue of shady sycamores. Sometimes the orchard and vineyard were not separated by any wall, and figs¹ and other trees were planted within the same limits as the vines. But if not connected with it, the vineyard was close to the orchard,² and they displayed much taste in the mode of training the vines.³ Rows of columns, supporting wooden rafters, divided the vineyard into numerous avenues, which afforded great facility for communication from one end to the other, and retained a certain degree of moisture at the roots by intercepting the rays of the sun.

The columns were frequently colored, and were ornamental as well as useful; but many were simple wooden pillars, supporting, with their forked summits, the poles that lay over them. Some vines were allowed to grow as standing bushes,⁴ and, being kept low, did not require any support;



Tombs near the Pyramids.

The vineyard and orchard contiguous.

No. 152.

¹ Luke xiii. 6. 1 Kings iv. 25.
² Woodcut No. 152.
³ An inscription of the time of the 4th Dynasty, probably of the age of Cheops, mentions a vineyard granted by the

monarch, containing two *sta* or *arouras*, (Lepsius, *Denkm.* ii. taf. vii. 6. Bunsen, 'Egypt's Place,' v. p. 723.)
⁴ Woodcut No. 159, and Pl. VI. *fig.* 1.

others were formed into a series of bowers; and from the form of the hieroglyphic signifying 'vineyard,'¹ we may conclude that the most usual method of training them was in bowers, or in avenues formed by rafters and columns. But they do not ap-



No. 153. Plucking grapes in a vineyard; the vines trained in bowers. *Thebes.*
The inscription above is, 'The gardener Neternekht.'

pear to have attached them to other trees, like the Romans² and the modern Italians;³ nor have the Egyptians of the present day adopted this European custom.

When the vineyard was enclosed within its own wall of circuit, it frequently had a reservoir of water attached to it, as well as the building which contained the wine-press;⁴ but the various modes of arranging the vineyard, as well as the other parts of the garden, depended, of course, on the taste of each individual, or the nature of the ground. Great care was taken

to preserve the clusters from the intrusion of birds; and boys were constantly employed, about the season of the vintage, to frighten them with a sling and the sound of the voice.⁵

When the grapes were gathered, the bunches were carefully put into deep wicker baskets,⁶ which men carried either on their head or shoulders, or slung upon a yoke, to the wine-press; but when intended for eating, they were put, like other fruits, into



No. 154. Figurative hieroglyphic signifying 'vineyard.'

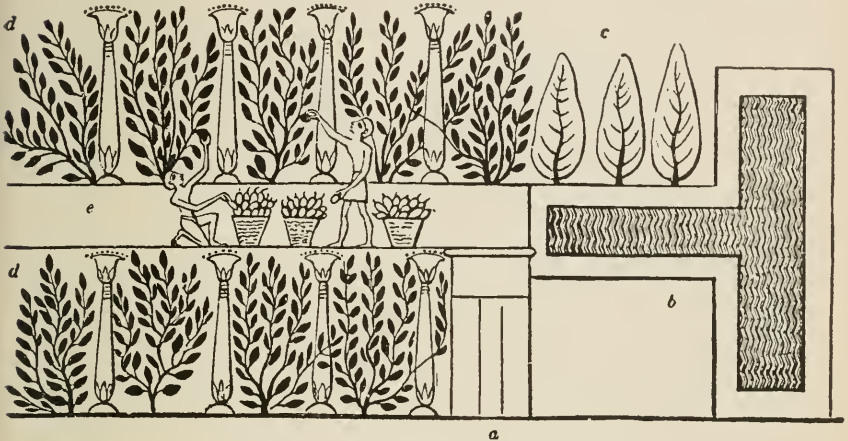
¹ Woodcut No. 154.
² Hor. Epod. ii. 10. Elms and poplars were generally used by the Romans. (Georg. ii. 22.) The Romans also supported vines on reeds and poles. (Plin. xvii. 22.)
³ They generally prefer the white mulberry-tree.

⁴ Isaiah v. 1, 2, and Matt. xxi. 33; Pl. IX.

⁵ Like the modern Egyptians, who strike large earthenware pots instead of bells for the same purpose. They also use the sling.

⁶ Virg. Georg. ii. 241.

flat open baskets, and generally covered with leaves of the palm, vine, or other trees.¹ These flat baskets were of wicker-work, and similar, no doubt, to those of the present day, used at Cairo for the same purpose, which are made of osiers or common twigs.



No. 155.

Orchard or vineyard, with a large tank of water, b.

Thebes.

Monkeys appear to have been trained to assist in gathering the fruit, and the Egyptians represent them in the sculptures handing down figs from the sycamore-trees to the gardeners below: but, as might be expected, these animals amply repaid themselves



No. 156.

Frightening away the birds with a sling.

Thebes.

The inscriptions read : a, 'the auditor priest of Mut Men;' b, 'the auditor Shesnefer.'

for the trouble imposed upon them, and the artist has not failed to show how much more they consulted their own wishes than those of their employers.

Many animals were tamed in Egypt for various purposes, as the lion, leopard, gazelle, baboon, crocodile, and others; and in

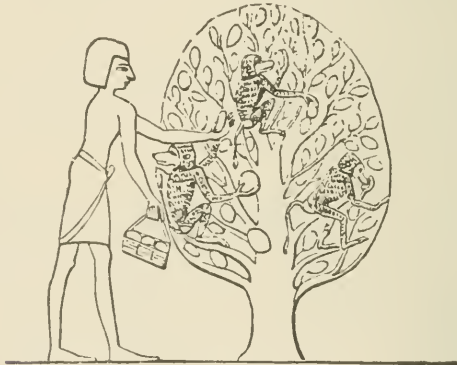
Vide woodcuts Nos. 157 and 152, figs. 8 and 13.

the Jimma country, which lies to the south of Abyssinia, monkeys are still taught several useful accomplishments. Among them is that of officiating as torch-bearers at a supper-party; and seated in a row, on a raised bench, they hold the lights until the departure of the guests, and patiently await their own



No. 157. *Fig 1. Basket containing grapes covered with leaves. From the sculptures.*
2. Modern basket used for the same purpose.

repast as a reward for their services. Sometimes a refractory subject fails in his accustomed duty, and the harmony of the party is for a moment disturbed, particularly if an unruly monkey throws his lighted torch into the midst of the unsuspecting guests: but the stick and privation of food is the punishment of the offender; and it is by these persuasive arguments



No. 158.

Monkeys assisting in gathering fruit.

Beni-Hassan.

alone that they are prevailed upon to perform their duty in so delicate an office.

After the vintage was over they allowed the kids¹ to browse upon the vines which grew as standing bushes; and the season of the year when the grapes ripened in Egypt was the month Epiphi,² towards the end of June or the commencement of July.

¹ The kids so fed were considered more delicate for the table; though Horace did not esteem them as always so (*Sat. ii. 4, 43*):—

² *Vinea summittit capreas non semper edules.*

² Epiphi, or Epep, pronounced Ebib by the Copts. It began on the 25th of June.

Some have pretended to doubt that the vine was commonly cultivated, or even grown in Egypt; but the frequent notice of it, and of Egyptian wine, in the sculptures, and the authority of ancient writers,¹ sufficiently answer those objections; and the regrets of the Israelites on leaving the vines of Egypt prove them to have been very abundant, since even people in the condition of slaves could procure the fruit.²



No. 159.

Kids allowed to browse upon the vines.

Beni-Hassan.

The winepress was of different kinds. The most simple consisted merely of a bag, in which the grapes were put, and squeezed by means of two poles turning in contrary directions, a vase being placed below to receive the falling juice. The mode of



No. 160.

Winepress.

Beni-Hassan.

representing it in Egyptian sculpture is not very intelligible, or in accordance with our notions of perspective: though we may easily understand that the man at the top of the picture is in the act of pushing the poles apart, in order to stretch the bag,³ as a *finale* to the process, the poles being at that time in a

¹ Athenæus, on the authority of Hellenicus, says that the vine was first cultivated about Plinthine, a town of Egypt; to which circumstance Dion attributes the love of wine among the Egyptians (lib. i. 25). According to Strabo, it was grown in great abundance in the Marcotis and the Arsinoïte nome (lib. xvii.).

² Numb. xx. 5. Conf. also the butler of Pharaoh pressing the grapes into the king's cup. (Gen. xl. 11.)

³ It would be more reasonable to suppose that he pushed with his hands and one leg, while the other rested on the ground to support him.

horizontal position, and opposite to each other. Another press, nearly on the same principle, consisted of a bag supported in a frame, having two upright sides, connected by beams at their summit. In this the bag was retained in a horizontal position, one end fixed, the other passing through a hole in the opposite side, and was twisted by means of a rod turned with the hand; the juice, as in the former, being received into a vase beneath; and within the frame stood the superintendent, who regulated the quantity of pressure, and gave the signal to stop.

Sometimes a liquid was heated on the fire, and, having been well stirred, was poured into the sack containing the grapes, during the process of pressure; but whether this was solely with a view of obtaining a greater quantity of juice by moistening the husks, or was applied for any other purpose, it is difficult to determine: the fact, however, of its being stirred while on the fire suffices to show it was not simple water; and the trituration of the fruit, while it was poured upon it, may suggest its use in extracting the coloring matter for red wine.

The name *torcular*, by which the Romans designated their press, would not be inapplicable to such a mode of twisting or squeezing out the juice; but it appears that in this machine the grapes were crushed beneath a wooden beam, *prelum*,¹ so that the process and principle were somewhat different; and we learn from Vitruvius that the Roman torcular was of two kinds, one turned by a screw, and the other by levers.

The two Egyptian handpresses were used in all parts of the country, but principally in Lower Egypt, the grapes in the Thebaid being generally pressed by the feet. The footpress was also used in the lower country; and we even find the two methods of pressing the grapes represented in the same sculptures:² it is not therefore impossible that, after having been subjected to the foot, they may have undergone a second pressure in the twisted bag. This does not appear to have been the case in the Thebaid, where the footpress³ is always represented alone; and the juice was allowed to run off by a pipe directly to an open tank.

Some of the large presses were highly ornamented,⁴ and

¹ Virg. Georg. ii. 242. Hor. Od. i. 9.

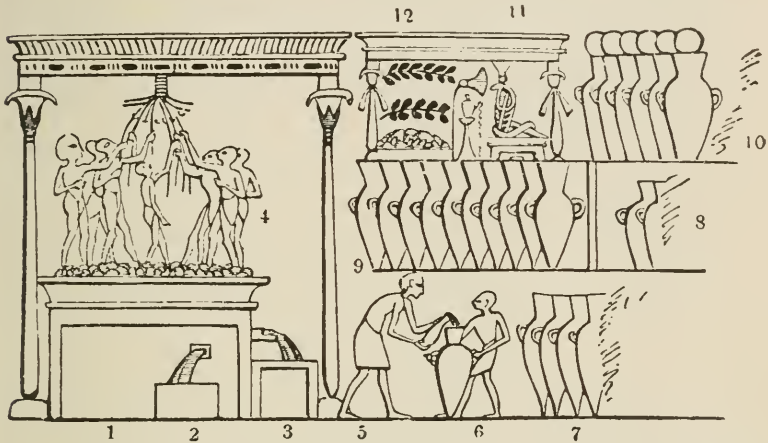
² Or one of these may represent the pressing of grapes, the other of some other fruits.

³ This sort of press was also used by the

Jews. (Judges ix. 27; Isaiah lxiii. 3; Nehem. xiii. 15.) Virgil also notices the same custom. (Georg. ii. 7.)

⁴ Woodcut No. 161.

consisted of at least two distinct parts, the lower portion of vat, *lucus*, and the trough, where the men, with naked feet, trod the fruit, supporting themselves by ropes suspended from the roof, though, from their great height, some might be supposed to have an intermediate reservoir, which received the juice in its passage to the pipe, answering to the strainer, or *colum*, of the Romans.



Large foot-press; the amphoræ; and the protecting deity of the store-room, *fig. 11.*
No. 161. *Thebes.*

A comparison of ancient customs is always a subject of great interest, particularly when the same scenes are treated in the paintings of an early age; I shall therefore introduce the representation of a Roman wine-press, from the mosaics of a supposed Temple of Bacchus¹ at Rome, which not only serves to illustrate the description of Latin authors, but to show its resemblance to the foot-press of the ancient Egyptians.²

After the fermentation was over, the juice was taken out in small vases, with a long spout, and poured into earthenware jars, which corresponded to the *cadi*, or amphoræ, of the Romans:³ but whether anything was added to it after or previous to the fermentation, it is difficult to determine; though, from our finding men represented in the sculptures pouring some liquid from a small cup into the lower reservoir, we may conclude that this was

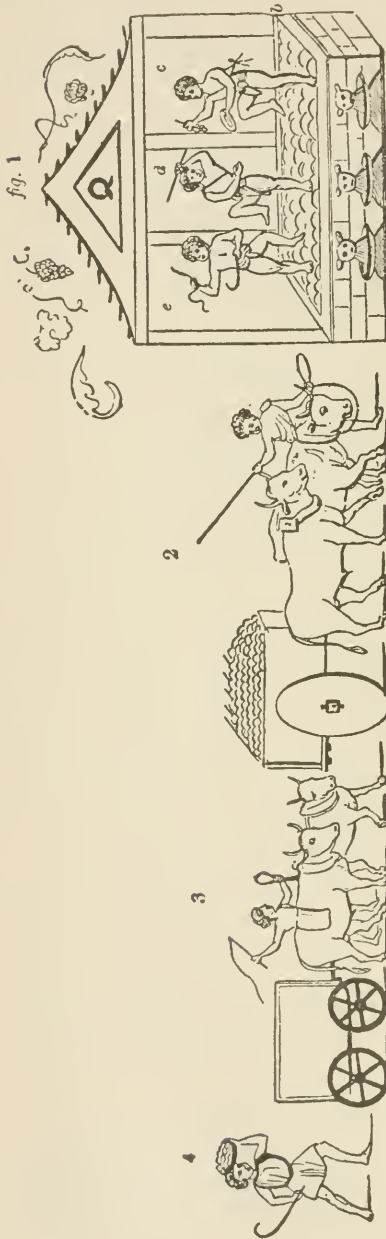
¹ By some supposed to be of the time of Constantia. *Vide* a remark on the adoption of the vine by the early Christians, in Hope's Architecture, p. 180.

² Woodcut No. 162.

³ Amphoræ had properly two handles; they were very common in Egypt with and

without them. Being of earthenware, the Romans also called them *testæ*. (Conf. Hor. Od. i. 17, ?.) The name amphora was likewise, and very properly, applied to a two-handled vase in which the wine was brought to table. (Petron. Satyric. c. xxxiv.)

sometimes the case.¹ When the *must* was considered in a proper state, the amphoræ were closed with a lid, resembling an inverted saucer, covered with liquid clay, pitch, gypsum, mortar, or some composition, which was stamped with a seal: they were then removed from the wine-house, and placed upright in the cellar.



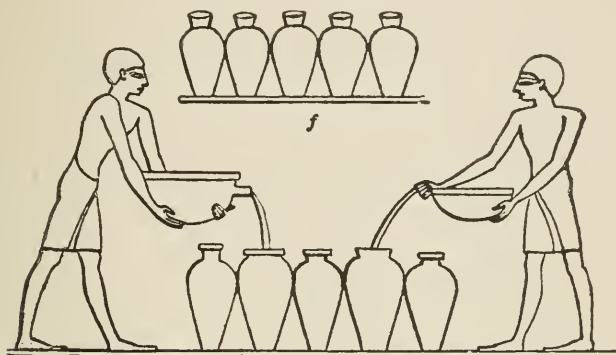
The press, *b*, is very similar to that of woodcut No. 161. In the original, *figs.* 3 and 4 are detached from this part of the picture. Mosaics on the ceiling of a supposed Temple of Bacchus at Rome. No. 162.

They generally put a certain quantity of resin or of bitumen at the bottom of the amphora, previous to pouring in the wine, which was intended to preserve it, and was even supposed to improve its flavor; a notion, or rather an acquired taste, owing probably to their having at first used skins² instead of jars; and the flavor imparted by the resin, which was necessary to preserve the skins, having become, from long habit, a favorite peculiarity of the wine, it was afterwards added from choice. And this custom, formerly so general in Egypt, Italy, and Greece, is still

¹ The Greeks put water into their wines (Plin. xiv. 19), and even sea-water (Plin. xiv. 20).

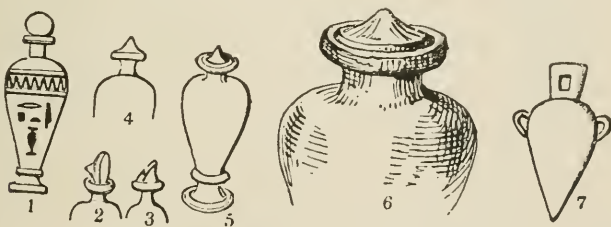
² According to Herodotus, wine was also carried in skins in the time of Rhampsinitus (lib. ii. 121).

preserved throughout the islands of the Archipelago. In Egypt, a resinous or a bituminous substance is always found at the bottom of amphoræ which have served for holding wine; the Romans, according to Pliny,¹ employed the Bruttian pitch, or resin of the



No. 163. *fig. 1.* *a b c d e* Pouring wine into jars. *fig. 2.* Tombs at the Pyramids.

picea pine, in preference to all others, for this purpose: and if, 'in Spain, they used that of the pinaster, it was little esteemed, on account of its bitterness and oppressive smell.' In the East, the terebinthus was considered to afford the best resin, superior even to the mastic of the lentiscus; and the resins of Judæa and Syria only yielded in quality to that of Cyprus. This



No. 164. Vases closed with a lid or stopper, and sealed. *Thebes.*

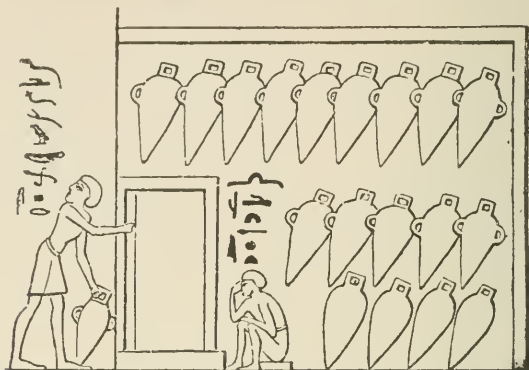
resinous coating for the interior of amphoræ was very generally used by the Romans, and was one of the numerous means² they had for preserving and improving the flavor³ of wine: and, besides smoking it, they sometimes boiled down a certain portion, which gave it a greater body, and insured its keeping.

¹ Plin. xiv. 20.

² Honey was also used. Pliny (xiv. 4) mentions some wine nearly 200 years old.

³ Plin. *loc. cit.*: 'Ut odor vino contingat, et saporis quædam acumina.'

The mode of arranging amphoræ¹ in an Egyptian cellar was similar to that adopted by the Greeks and Romans. They stood upright in successive rows, the innermost set resting against the



No. 165. Servants employed in storing new wine; one is overcome by its fumes.

The inscription outside is, 'He says I take care of the wine;' that inside, 'Incomparable stuff.'

wall;² sometimes when a jar was removed to another place, it was secured by means of a stone ring, fitting round its pointed base, or was raised on a wooden stand; and, from the position they are occasionally shown to have occupied,³ we may conclude that many were placed in upper rooms, as the amphoræ in a Roman *apotheca*.⁴



No. 166. Vase supported by a stone ring.

The Egyptians had several different kinds of wine,⁵ some of which have been commended by ancient authors for their excellent qualities. That of Mareotis was the most esteemed,⁶ and in the greatest quantity.⁷ Its superiority over other Egyptian wines may readily be accounted for, when we consider the nature of the soil in that district; being principally composed of

¹ In the tributes the wine was reckoned by amphoræ, *mena*, and many such amphoræ or two-handled vases, used instead of casks, have come down since from the palace of Seti I. (British Museum, No. 4946.) They held less than the Roman amphora. — S. B.

² Homer, *Od.* ii. 340. The innermost row, being the last used, was the oldest wine; and this accounts for the expression of Horace (*Od.* ii. 3, 8), 'interiore notâ Falerni,' each amphora being marked with the date of its wine. (Hor. *passim*.)

³ Woodcut No. 161.

⁴ It was thought to ripen the wine; and hence Horace tells his amphora to come down (*Od.* iii. 15, 7).

⁵ The name of the wine was *arp* or *arep*, and the word appears in use as early as the 4th Dynasty, when four kinds of wine at least were known. (Lepsius, *Abth.* ii., Bl. 19, 25, 38.) — S. B.

⁶ Pliny, xiv. 3. Horace, *Od.* i. 31, 14. Athenæus says that of Anthylla.

⁷ Strabo, lib. xvii. Athen. 'Deipnos.' i. 25. The wine of the Mareotis, a site called in the Egyptian inscriptions *Ut*, is well known, and often mentioned. — S. B.

gravel, which, lying beyond the reach of the alluvial deposit, was free from the rich and tenacious mud usually met with in the valley of the Nile, so little suited for the culture of delicate vines; and from the extensive remains of vineyards still found on the western borders of the Arsinoïte nome,¹ or Fyoóm, we may conclude that the ancient Egyptians were fully aware of the advantages of land situated beyond the limits of the inundation, and that they generally preferred similar localities for planting the vine. According to Athenæus, 'the Mareotic grape was remarkable for its sweetness,' and the wine is thus described by him: 'Its color is white, its quality excellent, and it is sweet and light, with a fragrant *bouquet*; it is by no means astringent, nor does it affect the head.'² But it was not for its flavor alone that this wine was esteemed, and Strabo ascribes to it the additional merit of keeping to a great age.³ 'Still, however,' says Athenæus, 'it is inferior to the Teniotic, a wine which receives its name from a place called Tenia, where it is produced. Its color is pale and white, and there is such a degree of richness in it, that when mixed with water it seems gradually to be diluted, much in the same way as Attic honey when a liquid is poured into it: and besides the agreeable flavor of the wine, its fragrance is so delightful as to render it perfectly aromatic, and it has the property of being slightly astringent. There are many other vineyards in the valley of the Nile, whose wines are in great repute, and these differ both in color and taste; but that which is produced about Anthylla is preferred to all the rest.' Anthylla was situated in a stony tract.⁴ Some of the wine made in the Thebaïd was particularly light, especially about Coptos, and 'so wholesome,' says the same author, 'that invalids might take it without inconvenience, even during a fever.' The Sebennytic⁵ was likewise one of the choice Egyptian wines; but from the position of that town and nome, we may infer that it differed greatly in quality from those just mentioned, and that it was inferior in body as well as flavor. Pliny, however, cites it among the best of foreign wines, and says it was

¹ Near the Qasr Kharóon. Strabo mentions the abundance of vines in this province (lib. xvii.).

² Virg. Georg. ii. 91.

³ Strabo, xvii.

⁴ Herodotus says, that on going to Naucratis by the plain, during the inunda-

tion, you pass by Anthylla (ii. 97.) According to Athenæus, the revenues derived from that city were bestowed on the queens of Egypt, both under the Persians and the native princes (lib. i. 25).

⁵ Plin. xiv. 7.

made of three different grapes — a sort of Thasian, the *cethalos*, and *peuce*. The Thasian grape he afterwards describes¹ as excelling all others in Egypt in sweetness, and as being remarkable for its medicinal effects. [Another wine of Lower Egypt was the Mendesian, called from the nome of that name, where it was produced, which seems, from the words of Clemens² of Alexandria, to have had a sweet flavor. — G. W.]

Another singular wine, called by Pliny *ebolada*,³ was also the produce of Egypt; but, from its peculiar powers, we may suppose that men alone drank it, or at least that it was forbidden to newly-married brides. And, considering how prevalent the custom was amongst the ancients of altering the qualities of wines by drugs and divers processes,⁴ we may readily conceive the possibility of the effects ascribed to them; and thus it happened that opposite properties were frequently attributed to the same kind.

Wines were much used by them for medicinal purposes, and many were held in such repute as to be considered specifics in certain complaints. But the medical men of the day were prudent in their mode of prescribing them; and as imagination has on many occasions effected the cure, and given celebrity to a medicine, those least known were wisely preferred, and each extolled the virtues of some foreign wine. In the earliest times, Egypt was renowned for drugs,⁵ and foreigners had recourse to that country for wines as well as herbs; yet Apollodorus, the physician, in a treatise on wines, addressed to Ptolemy, king of Egypt, recommended those of Pontus as more beneficial than any of his own country and particularly praised the Peparthian,⁶ produced in an island of the Ægean Sea; but he was disposed to consider it less valuable as a medicine, when its good qualities could not be discovered in six years.⁷

In offerings to the Egyptian deities, wine frequently occurs, and several different kinds are noticed in the sacred sculptures;

¹ Plin. xiv. 18.

² [Pedagog. ii. c. 2. — G. W.]

³ Plin. xiv. 18.

⁴ Ibid. xiv. 20. It was also mixed or perfumed with myrrh and other ingredients. (Plin. xiv. 13. Mark xv. 23. Diodor. iii. 61. Hor. Sat. i. 4, 24. J. Poll. Onom. vi. 2; and Martial, Epig. xiv. 113.)

⁵ Hom. Od. Δ. 229. Jer. xlvi. 11.

⁶ Plin. xiv. 7. Some read Preparentium Peparethos was one of the Cyclades,

famous for its vines and olives. (Ovid, Met. vii. 470.) Athenæus, 'Deipnos.' i. 52, quotes it from Aristophanes. Jul. Poll. Onom. vi. 2.

⁷ The different kinds of wine mentioned in the tables of food of the 4th and subsequent Dynasties are: white wine, *arp hut*; wine of Northern or Lower Egypt, *arp meh* or *xeb*; Southern wine, *arp ras*; fishing or fisherman's wine, *arp hem*. (Lepsius, Abth. ii., Bl. 47, 58-67. Rosellini.

but it is probable that many of the Egyptian wines are not introduced in those subjects, and that, as with the Romans¹ and other people, all were not admitted at their sacrifices. It was in the temple of Heliopolis² alone that wine was totally forbidden in libations; ³ and when used by the priests in other places for this purpose, says Plutarch, 'they poured it on the altars of the gods, as the blood of those enemies who had formerly fought against them.' According to Herodotus,⁴ their sacrifices commenced with this ceremony,⁵ and some was also sprinkled on the ground where the victim lay: yet at Heliopolis, if Plutarch may be credited, it was forbidden to take it into the temple,⁶ and the priests of the god worshipped in that city were required to abstain from its use. 'Those of other deities,' adds the same author, 'were less scrupulous in these matters,' but still they used wine very sparingly, and the quantity allowed them for their daily consumption was regulated by law: nor could they indulge in it at all times, and the use of it was strictly prohibited during their more solemn purifications, and in times of abstinence. The same writer also affirms, on the authority of Eudoxus, that it was wholly forbidden to the kings of Egypt previous to the reign of Psammaticus; and, though we may feel disposed to question the truth of this assertion,⁷ there is every probability that they were on the same footing in this respect as the priests, and that a certain quantity was allowed them, in accordance,⁸ as Hecataeus states, with the regulations of the sacred books.⁹ The number of wines mentioned in the lists of offerings presented to the deities in the tombs or temples varies in different places.

Mon. civ. t. i. pp. 377-380.) One cellar of Seti II. had 1600 amphoræ. (Select Papyri, lxxxviii.) Of foreign growth are the Syrian wines. The Rut-en-nu in the tomb of Rekhmara are represented giving wine as tribute; and the wine of Kharu or Northern Palestine is also mentioned. (Select Papyri, xvii. l. i.) At the time of the 12th Dynasty, a region called Aaa in Tenu is stated to have had more wine than water. (Chabas, 'Études,' p. 107.) Thothmes III. in the Statistical Tablet describes the wine in the presses of Tsaha or Northern Phœnicia to have been like waves. (De Rougé, 'Rev. Arch.' 1860, p. 297.)—S. B.

¹ Plin. xiv. 12, 19.

² Herodot. ii. 63.

³ Plut. de Isid. s. 6. Romulus performed libations with milk. Plin. xiv. 12.

⁴ Herodot. ii. 39.

⁵ Conf. the Jewish custom, wine for a drink offering. (Exod. xxix. 40.)

⁶ I am inclined to believe that they did perform libations in the temple of Heliopolis as in other parts of Egypt; and Herodotus (ii. 39) says the custom was common *throughout* the country. It may be supposed that Plutarch intends to say the priests of Heliopolis were forbidden to drink it *in the temple*.

⁷ Herodot. ii. 133; the last six years of king Mycerinus's life.

⁸ See the above note of the 1600 amphoræ in the cellar of Seti II., and the vases of the same shape which belonged to the cellar of Seti I.—S. B.

⁹ In spite of these regulations, the kings probably committed excesses on some occasions, like Mycerinus and Amasis. (Herodot. ii. 133, 173.)

Each appears with its peculiar name attached to it; but they seldom exceed three or four kinds, and among them I have observed, at Thebes, that of the 'northern country,'¹ which was, perhaps, from Mareotis, Anthylla, or the nome of Sebennytus.

Private individuals were under no particular restrictions with regard to its use, and women were not forbidden it, whether married or single. In this they differed widely from the Romans: for in early times no female at Rome enjoyed the privilege, and it was unlawful for women, or indeed for young men below the age of thirty, to drink wine except at sacrifices.² And so scrupulous were they on this point, in the time of Romulus,³ that Egnatius Mecennius caused his wife to be put to death for infringing this law, as if guilty of a crime. Such was the custom at the earliest periods of Roman history; and even at a later time prejudice pronounced it disgraceful for a woman to drink wine; and they sometimes saluted a female relation⁴ whom they suspected, in order to discover if she had secretly indulged in its use. It was afterwards allowed them on the plea of health, and no better method could have been devised for removing the restriction



No. 167.

A servant called to support her mistress.

Thebes.

The Egyptian women, as I have already observed, appear to have enjoyed greater privileges, and to have been treated with more courtesy on all occasions, than in any other ancient communities: and if they sometimes sat apart from the men, on another side of the same room, equal attentions were shown to

¹ Not a foreign production.² Plin. xiv. 13.³ *Ibid. loc. cit.*⁴ *Ibid.*

them as to the other guests. That they were not restricted in the use of wine,¹ and in the enjoyment of other luxuries, is evident from the frescoes which represent their feasts; and the painters, in illustrating this fact, have sometimes sacrificed their gallantry to a love of caricature. Some call the servants to support them as they sit, others with difficulty prevent themselves from falling on those behind them; a basin is brought too late by a reluctant servant, and the faded flower, which is ready to drop from their heated hands, is intended to be characteristic of their own sensations.



No. 168.

A party of Egyptian ladies.

Thebes.

In Greece, women enjoyed the same privileges regarding wine as in Egypt; and thus we find² Nausicaë and her companions scrupled not to indulge in it; but the Greek custom of allowing virgins, as well as matrons, so much freedom in its use was looked upon by many as highly indecorous.³

That the consumption of wine in Egypt was very great is evident from the sculptures, and from the accounts of ancient authors, some of whom have censured the Egyptians for an immoderate love of excess; and so much did the quantity used exceed that made in the country, that, in the time of Herodotus, twice every year a large importation was received from Phœnicia⁴ and Greece. It was brought in earthen jars, and these, when emptied, were applied to another and very different purpose, being collected and sent to Memphis from every part of Egypt, and forwarded, full of water, to the confines of Syria.⁵

¹ The Moslems include all wine under the same name, *khumr*, fermented drink, and thereby forbid whatever has undergone the process of fermentation. It is prohibited to both sexes in the Korán.

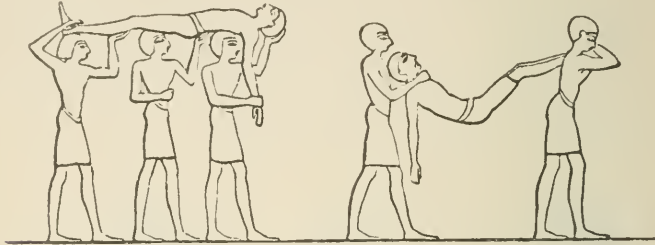
² Homer, *Od. Z*, vv. 77 and 99.

³ Athenæus, 'Deipnos,' lib. x.

⁴ From the ancient Kharu and Tsaha.

⁵ Herodot. iii. 6.

Notwithstanding all the injunctions or exhortations of the priests in favor of temperance, the Egyptians of both sexes appear from the sculptures to have committed occasional excesses, and men were sometimes unable to walk from a feast, and were carried home by servants.¹ These scenes, however, do not appear



No. 169.

Men carried home from a drinking party.

Beni-Hassan.

to refer to members of the higher, but of the lower classes, some of whom indulged in extravagant buffoonery, dancing in a ludicrous manner, standing on their heads, and frequently in amusements which terminated in serious disputes.



Man standing on his head.
No. 170. *Beni-Hassan*

At the tables of the rich, stimulants² were sometimes introduced, to excite the palate before drinking, and Athenæus mentions cabbages as one of the vegetables used by the Egyptians for this purpose; from which, and from the authority of Dion, he concludes they were a people systematically addicted to intemperance.³

The Romans frequently mulled their wines,⁴ and some were mixed with spice and various aromatics: but it is difficult to say if these compounds were in use among the Egyptians,⁵ though highly probable, from being so much esteemed by the Jews,⁶ who adopted numerous customs from that people.

¹ Juvenal, Sat. xv. 45.

² The Romans, like the modern Italians, used stimulants to excite the appetite before dinner (Hor. Sat. ii. 2, 44), as well as before wine.

³ Athenæus, i. c. 25. Josephus says they were a people addicted to pleasures. (Antiq. ii. 9.)

⁴ The Greeks and Romans mixed water with their wine. (Hom. Od. Δ, ex. 209. Athen. ii. 2. Jul. Poll. vi. 2.)

⁵ It appears to have been so. A spiced wine is mentioned in the tale of the 'Garden of Flowers' (Chabas, 'Records of the Past,' vi. p. 156) as 'the perfumed drink of Egypt.' Another preparation of wine was the *s'et*, supposed to be spirits of wine or must. (Chabas, 'Mélanges,' iii. 2.)—S. B.

⁶ Solomon's Song, viii. 2. 'Mixed wine is frequently mentioned.'

Throughout the upper and lower country, wine was the favorite beverage of the wealthy: they had also very excellent beer, called *zythus*, which Diodorus,¹ though wholly unaccustomed to it, and a native of a wine country, affirms was scarcely inferior to the juice of the grape. And that it was superior to the beer made in other countries may be readily inferred from the eulogiums passed upon it by the historian, contrasted with the contempt in which this beverage was held by the Greeks.² Strabo and other ancient authors have likewise mentioned it under the name of *zythus*; and though Herodotus pretends that it was merely used as a substitute for wine in the lowlands, where corn was principally cultivated,³ it is more reasonable to conclude it was drunk by the peasants⁴ in all parts of Egypt, though less in those districts where vines were abundant. Indeed, he would lead us to suppose that in the corn country, as he terms it,⁵ the use of wine was totally unknown, because the vine was not grown there; but, as wealth can always procure a luxury of this kind, we may be allowed to confine his remark to the poorer classes, and to conclude that the rich throughout Egypt supplied themselves with it, whether the growth of their own neighborhood, or brought from another part of the country. The historian would probably have made a similar observation, if he had travelled in these days in England; but it is generally allowed that, though the English excel in the quality of their beer, the annual consumption of wine is not inconsiderable, and that there is no difficulty in procuring it from a far greater distance. In Egypt, native wines of a choice kind, whether made in the vicinity or brought from another province, were confined to the rich; and we learn from Strabo⁶ that this was the case even at Alexandria, where wine could be obtained in greater quantity than in any other part of Egypt, owing to the proximity of the Mareotic district,⁷ and the common people were there content with beer and the poor wine of the coast of Libya.

The Egyptian beer was made from barley;⁸ but, as hops were unknown, they were obliged to have recourse to other plants, in order to give it a grateful flavor; and the lupin, the skirret,⁹

¹ Diodor. i. 34.

² Conf. Æschyl. in the 'Suppliants,' v. 960.

³ He means in the extensive level tract of the Delta. Corn was cultivated throughout Upper and Lower Egypt.

⁴ As in some parts of France.

⁵ Herodot. ii. 77.

⁶ Strabo, lib. xvii.

⁷ From the lake. Athenæus, 'Deipnos.' i. c. 25.

⁸ Herod. ii. 77. Diod. i. 34. Strabo, xvii. Plin. xvii. 25. Athen. 10.

⁹ Siser; the *Sium sisarum* of Linn. Theophr. de Caus. Plant. vi. 10.

and the root of an Assyrian plant, were used by them for that purpose.¹

The vicinity of Pelusium appears to have been the most noted for its beer, and the Pelusiæc zythus is mentioned by more than one author. The account given by Athenæus of Egyptian beer is that it was very strong, and had so exhilarating an effect that they danced, and sang, and committed the same excesses as those who were intoxicated with the strongest wines: an observation confirmed by the authority of Aristotle, whose opinion on the subject has at least the merit of being amusing. For we must smile at the philosopher's method of distinguishing persons suffering under the influence of wine and beer, however disposed he would have been to accuse us of ignorance, in not having yet discovered how invariably the former in that state 'lie upon their face, and the latter on their backs.'²


Though beer was common to many countries, that of Egypt was of a peculiar kind, and, as Strabo³ observes, different methods of preparing it were adopted by different people. Nor can we doubt that it varied as much in quality as at the present day; in the same manner that English and Dutch beer is a very different beverage from that of France, or from the *booza* of modern Egypt. In this last, indeed, it is impossible to recognize any resemblance, and no attempt is made to give it the flavor common to beer, or to obtain for it any other recommendation than its intoxicating properties. The secret of preparing it from barley has remained from old times, but indolence having banished the trouble of adding other ingredients, they are contented with the results of simple fermentation: and bread, and all similar substances which are found to undergo that process, are now employed by the Egyptians, almost indifferently, for making *booza*.⁴

Besides beer, the Egyptians had what Pliny calls factitious, or artificial, wine,⁵ extracted from various fruits, each sort no doubt, known by some peculiar name, which pointed out its nature and

¹ Columella, x. 114.

² Athen. *loc. cit.*, quoting Aristotle.

³ Strabo x. vii.

⁴ The ancient beer called  *heqa*


is as old as the 4th Dynasty; it was made of red barley or malt, *bet tes'er*. The foreign beer came from Kati, a country to the east of Egypt, celebrated for its pro-

duction, and there were two kinds, alcoholic and mild, employed in medicine. (Chabas, 'Mélanges,' i. p. 15.) The Egyptians indulged in beer, and the description of a person overcome by intoxication is given in the papyri of the time of Seti I. (Goodwin's 'Cambridge Essays,' 1868, p. 253.)—S. B.

⁵ Plin. xiv. 16.

quality.¹ The Greeks and Latins comprehended every kind of beverage made by the process of fermentation under the same general name, and beer was designated as *barley-wine*; but, by the use of the name *zythos*, they show that the Egyptians distinguished it by a totally different appellation. It is equally probable that those made from other fruits were, in like manner, known by their respective denominations, as distinctly specified as the perry and cider of the present day; and, indeed, we may expect to find them mentioned in the hieroglyphic legends accompanying the offerings in the tombs and temples of Egypt, where the contents of each vase are evidently indicated, and where, as I have already observed, several wines of the country are distinctly pointed out. Palm wine, says Pliny, was common throughout the East, and one sort is noticed by Herodotus as having been used by the Egyptians in the process of embalming;² but it is uncertain whether this last was made in the manner described by Pliny,³ which required a *modius*, or peck and a half, of the ripe fruit to be macerated and squeezed into three *congi*, or about twenty-two pints, of water.

The palm wine made at the present day is simply from an incision in the heart of the tree,⁴ immediately below the base of the upper branches, and a jar is attached to the part to catch the juice which exudes from it. But a palm thus tapped is rendered perfectly useless as a fruit-bearing tree, and generally dies in consequence;⁵ and it is reasonable to suppose that so great a sacrifice is seldom made except when date-trees are to be felled, or when they grow in great abundance, as in the Oases and some other districts. The modern name of this beverage in Egypt is *lowbgeh*: in flavor it resembles a very new light wine, and may be drunk in great quantity when taken from the tree; but as soon as the fermentation has commenced, its intoxicating qualities have a powerful and speedy effect. It is not confined to Egypt and the Oases: the inhabitants of other parts of Africa⁶ and

 1 The principal other wine was the *baqa* supposed to be made from dates or figs; it was also divided into two kinds, and came from Palestine. — S. B.

² Herodot. ii. 86.

³ Plin. xiv. 16.

⁴ Called by Pliny the 'medulla,' or 'cerebrum,' and in Arabic *qalb*, the heart, or *jummâr*. It is sold at Cairo, and con-

sidered as a delicacy; in taste, it resembles a sweet turnip.

⁵ Conf. Athen. 'Deipnos.' lib. ii. *ad fin.*, and Xenoph. 'Exped. Cyr.' ii.

⁶ The blacks are particularly fond of intoxicating drinks. In the valley of the Nile the propensity may be said to augment in proportion to the intensity of color, and the Nubians surpass the Egyptians in their love of *booza* and other fermented liquors in about the same ratio as the increased darkness of their hue.

many palm-bearing countries are in the habit of making it in the same manner; nor do scruples of religion prevent the Moslems from indulging in its use. In Nubia a wine is extracted from the dates themselves; but this is now less common than the more potent brandy, which they distil from the same fruit, and which is a great favorite in the valley of the Nile.

In former times, figs, pomegranates, *myxas*,¹ and other fruits, were also used in Egypt for making artificial wines, and herbs of different kinds were applied to the same purpose; many of which, it may be presumed, were selected for their medicinal properties.²

Among the various fruit-trees cultivated by the ancient Egyptians, palms, of course, held the first rank, as well from their abundance as from their great utility. The fruit constituted a principal part of their food, both in the month of August, when it was gathered fresh from the trees, and at other seasons of the year, when it was used in a preserved state. They had two different modes of keeping the dates; one was by the simple process of drying them, the other was by making them into a conserve, like the *agweh*³ of the present day: and of this, which was eaten either cooked or as a simple sweetmeat, I have found some cakes,⁴ as well as the dried dates, in the sepulchres of Thebes.⁵ For though Pliny affirms that the dates of Egypt, Ethiopia, and Arabia were, from the heat and dryness of the soil,⁶ incapable of being preserved, modern experience, and the knowledge we have of the ancient customs of Egypt, prove the reverse of what is stated by that author. Yet he⁷ speaks of dates of the Thebaïd kept in vases, which he supposes to be necessary for their preservation; and it would appear that he alluded to the *agweh*, did he not also suggest the necessity of drying them in an oven.

The same author makes a just remark respecting the localities where the palm prospers, and the constant irrigation it requires; and though every one in the East acknowledges this fact, and knows that the tree will not grow except where water is abun-


¹ Plin. xiii. 5. The *Cordia myxa* of Linnaeus; Arabice, *Mokhayt*.

² Rue, hellebore, absinthium, and numerous others. Wines were also imbued or flavored with the juice of those herbs. (Plin. xiv. 16.)

³ *Agweh*, or *adweh*, is a mass of dates pressed and preserved in baskets, which

are commonly sold in all the markets of modern Egypt.

⁴ One of these is in the British Museum.

⁵ The palm is supposed to be 

the *bener*. (Brugsch, 'Recueil,' pl. xxxvi. p. 49.)

⁶ Plin. xiii. 4.

⁷ *Ibid*.

dant, we still read of 'palm-trees of the desert,' as though it delighted in or was peculiar to an arid district. Wherever it is found, it is a sure indication of water: there are therefore no palms in the desert, except at the Oases, and those spots where springs lie near the surface; and if it may be said to flourish in a sandy soil, this is only in situations where its roots can obtain a certain quantity of moisture. The cultivated tree is reared from offsets, those grown from the stone producing an inferior fruit; and the offsets, which are taken at about seven years' growth, bear dates in other five or six years, the tree living sixty or seventy, and even upwards,¹ according to circumstances connected with the soil or the mode of its culture.

Dates were also given to camels and other animals,² as is still the custom in the East; and this alone would suffice to prove their great abundance,³ and the utility of the palm as a valuable and productive fruit-tree.⁴ But the numerous purposes to which its branches and other parts might be applied tended still more to render its cultivation a matter of primary importance: for no portion of this tree is without its peculiar use. The trunk serves for beams, either entire or split in half; of the *geréet*, or branches, are made wicker-baskets, bedsteads, coops, and ceilings of rooms, answering every purpose for which laths or any thin woodwork are required; the leaves are converted into mats, brooms, and baskets;⁵ of the fibrous tegument, at the base of the branches, strong ropes are made; and even the bases of the *geréet* are beaten flat and formed into brooms. Nor are the stalks of the bunches without their use; and their fibres, separated by the mallet, serve for making ropes, and for the *leaf* which is so serviceable in the bath. Besides the brandy, the *lowbgeh*, and the date wine, a vinegar is also extracted from the fruit: and the large proportion

¹ Conf. Plin. xiii. 4. Strabo (lib. xvii. p. 563) says, the palm either bore no fruit or a bad kind, in Lower Egypt, but the dates of the Thebaid were excellent.

² Plin. xiii. 4. In going to the Oasis, my camels were always fed with them when beans failed.

³ For the different kinds of dates now known in Egypt, *vide* 'Egypt and Thebes,' p. 266.

⁴ A tree can produce as much as four qantars of dates, or 440 lbs troy, on about eight bunches, but generally it bears much less. I found the bunch of a wild tree at the water of Wadec el Enned, in the east-

ern desert, which was composed of 125 fruit-stalks, each containing from 30 to 60 dates, so that, on an average of 45, the bunch bore 6625 dates; and every tree had from 5 to 15 bunches, and one of them as many as 22. The above-mentioned bunch was of unusual size, which made me count the dates, but the fruit was small and bad, as of all the wild trees, and probably some of the dates did not come to maturity. In the valley of the Nile, a feddan (1½ acre) is sometimes planted with 400 trees.

⁵ [These were also made of rushes, *scälfeh*, grass, papyrus, dóm leaves, osiers, &c. — G. W.]

of saccharine matter contained in dates might, if required, be applied to useful purposes.

In Upper Egypt, another tree, which has been called the Theban palm,¹ was also much cultivated; and its wood, more solid and compact than the date-tree, is found to answer as well for rafts and other purposes connected with water, as for beams and rafters.² The general character of its growth differs essentially from that of the date-tree, having always bifurcated limbs,³ and this peculiarity enables us to recognize it when represented in the sculptures. The fruit is a large rounded nut, with a fibrous exterior envelope, which has a sweet flavor, very similar to our gingerbread. The nut itself, when gathered unripe, is also eaten, and then presents a substance resembling cartilage or horn; but as soon as it is ripe it becomes exceedingly hard, and is not unlike, though much smaller than, the cocoanut. It was employed by the Egyptians for the hollow socket of their drills;

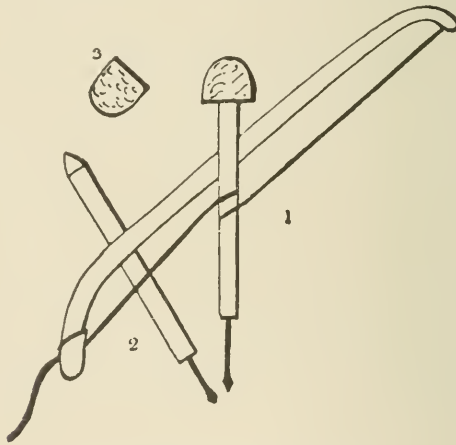


Fig. 1. Drill and the bow for turning it.

2. The drill alone.


3. The socket, of the dôm nut, in which it turned.

No. 171.

British Museum and Thebes.

and being found peculiarly adapted for this purpose, from its great durability, it still continues to be used by carpenters and cabinet-makers in Egypt. That the mode of applying it among

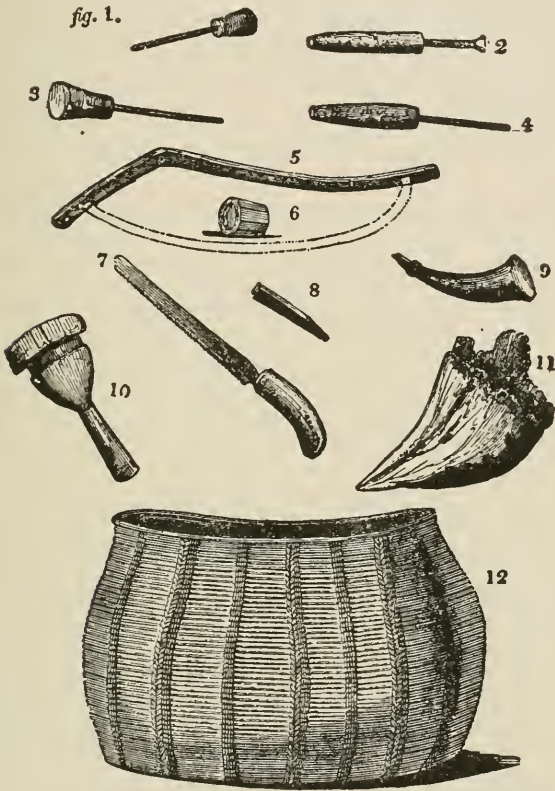
¹ The *Cucifera thebaica*. (Vide Plin. xiii. 4 and 9.)

² The  *mama* or dôm palm, the *Hyphæne cucifera*. (Brugsch, *loc. cit.*)

³ About five feet (sometimes more,

sometimes less) from the ground it divides into two branches, each of which again separates into two others, and these again into two other pairs, always by two, the uppermost sets being crowned by the leaves and fruit.

the ancients was precisely similar to that adopted at the present day, we have ample testimony from the sculptures at Thebes, where it occurs apart from, and affixed to,¹ the instrument itself in the hands of the workmen.² But it was not exclusively used, and we find they frequently substituted some hard wood; a speci-



No. 172.

Carpenter's tools.

British Museum.

Figs. 1, 2, 3, 4. Chisels and drills.
 5. Part of drill.
 6. Nut of wood belonging to it.
 7, 8. Saws.

Fig. 9. Horn of oil.
 10. Mallet.
 11. Bag for nails.
 12. Basket which held them.

men of which³ may be seen in the highly interesting collection of tools found at Thebes, in the British Museum: this, with the drills, and their bow, chisels, a saw, mallet, and a bag of skin, perhaps for holding nails, having been put into a basket, together

¹ Woodcut No. 171, *figs. 1 and 3.*

² Woodcut No. 171.

³ Woodcut No. 172, *fig. 6.*

with a horn of oil and the hone for sharpening the chisels, and buried in the tomb of a deceased workman.¹

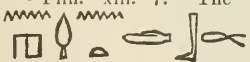
Of the dôm-nut were made beads, which, from their hardness, were capable of taking a high polish, as we observe in those now used in Egypt for the *sibhas*, or rosaries of the Moslems;² and both the manufactured parts of the nut and many specimens of the fruit have been found, perfectly preserved, in the sepulchres of Thebes. The leaves of the tree served for baskets, sacks, mats, and other similar interlaced works,³ or indeed for all the purposes to which those of the date-tree were applied; and among these we may mention fans, fly-flaps, brushes, and sometimes parts of sandals.

Besides the date and dôm trees were the sycamore,⁴ fig, pomegranate,⁵ olive,⁶ peach,⁷ almond,⁸ persea,⁹ *nebg* or *sidr*,¹⁰ *mokhayt* or *myxa*,¹¹ *kharoob*¹² or locust-tree, and some others; and among those which bore no fruit the most remarkable were the tamarisk¹³ and *âthul*,¹⁴ cassia fistula and senna, the palma christi or castor-oil tree,¹⁵ myrtle,¹⁶ the *sont* or acanthus,¹⁷ the *sayal*,¹⁸ *fitneh*,¹⁹ *tulh*,²⁰ *lebbekh*,²¹ and several other acacias,²² besides many trees,²³ now only known in the desert, or in the more southerly region of


¹ Woodcut No. 172.

² These *sibhas* are sold in the bazaars of all the country towns.

³ Strabo, lib. xvii. Objects of these materials are found in the tombs.

⁴ Plin. xiii. 7. The *neha en teb*
 of the monuments. — S. B.

⁵ *Ermen* or *remen* of the monuments. — S. B.

⁶ The *t'et*
 often mentioned in the inscriptions. M. Chabas thinks that *teb* means the fruit of the olive. See note ⁴ *suprà*. — S. B.

⁷ Plin. xv. 13. He denies the improbable story of the Persians having introduced it into Egypt as a poisonous fruit.

⁸ Plin. xv. 28. The cherry, he says, could never be reared in Egypt (xv. 25). It is not now grown there. — The *s'uab* of ancient Egypt. — S. B.

⁹ Perhaps the *as't*. — S. B.

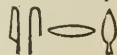
¹⁰ *Rhamnus nabeka*, Forsk.

¹¹ *Cordia myxa*, Linn.

¹² *Ceratonia siliqua*, Linn. *Ceravnia siliqua* of Pliny (xiii. 8), which he says did not grow in Egypt.

¹³ *Tamarix gallica*, Linn. Arabic, *Târfa*.

¹⁴ *Tamarix orientalis*, Forsk. Perhaps

the *africana* of Desf. The  Egyptian *aser*. — S. B.

¹⁵ Plin. xv. 7.

¹⁶ Ibid. xv. 29, and xxi. 11. It is not now a native of Egypt.

¹⁷ *Mimosa*, or *Acacia nilotica*. *Spina Ægypti*, Plin. xiii. 9. Athen xv. 7, etc. [Strabo, xvii. 556-559. — G. W.]


¹⁸ *Acacia sayal*.

¹⁹ *Acacia farnesiana*.

²⁰ *Acacia gummifera*.

²¹ *Acacia lebbek*. *Mimosa lebbek*, Linn.

²² One of these is supposed to be the

 *âs'*, supposed by others to be the cedar.

²³ Amongst these may be the *bak* or *gab*, supposed to be the quince, and the *nebs*, conjectured by Brugsch, *loc. cit.*, to be the mulberry sycaminius, *loc. cit.*, but there was a *ta en nebs*, bread or conserve, made of it; the *meri* or sycamore, the *kal*, the *taseps*, which had a red fruit, or bark, the *âm* or *âmâm*, poplar, the *âaru*, and other unknown species. — S. B.

Ethiopia. But I confine myself for the present to the produce of the garden, in connection with their festivities and domestic wants.

So fond were the Egyptians of trees and flowers, and of gracing their gardens with all the profusion and variety which cultivation could obtain, that they even exacted a contribution of rare productions from the nations which were tributary to them, and foreigners from distant countries are represented bringing plants among the presents to the Egyptian king. [And such attention, says Athenæus, did they give to their gardens, that through the care bestowed upon the culture of their plants, and the benign temperature of their climate, flowers which were only sparingly produced in other places (and at stated periods of the year) in Egypt flowered in profusion at all seasons, so that neither roses nor violets were absent even in the depths of winter.—G. W.] They carried this love for them still farther, and not only painted the lotus and other favorite flowers among the fancy devices on their walls, on the furniture of their houses, on their dresses, chairs, and boxes, on their boats, and, in short, whatever they wished to ornament, but they appear from Pliny¹ to have composed artificial flowers, which received the name ‘Ægyptiæ;’ if indeed we may be allowed to consider these similar to the ‘hybernæ’ he afterwards describes. And it is not improbable that they, like the Romans in their town-houses, had representations of gardens, or the rich blossoms of favorite flowers, painted on the stuccoed walls. Wreaths and chaplets were likewise in common use among the Egyptians at a very early period; and though the lotus was principally preferred for these purposes, many other flowers and leaves were employed; as of the chrysanthemum,² acinon,³ acacia,⁴ strychnus, persoluta, anemone, convolvulus, olive, myrtle, amaricus,⁵ xeranthemum, bay-tree,⁶ and others: and Plutarch tells us,⁷ that when Agesilaus visited Egypt he was so delighted with the chaplets of papyrus sent him by the king that he took some home when he returned to Sparta.

The deity whom they considered more immediately to preside

¹ Plin. xxi. 2. This is confirmed by discoveries in the tombs.

² Plin. xxi. 25.

³ Ibid. xxvii.

⁴ Ibid. xiii. 9. Athen. ‘Deipnos.’ xv. 7.

⁵ Athen. xv. 6.

⁶ I have already observed that some of

those found in the tombs appear to be of bay-leaves; and though not an indigenous production of Egypt, the plant may have been cultivated there. That called Alexandrian was probably Greek. (Plin. xv. 30 and xxiii. 8.)

⁷ Also Athen. xv. 6.

over the garden was Khem,¹ the generative principle, who was supposed to answer to the Grecian Pan. It was also under the special protection of Ranno, a goddess frequently represented in the form of an asp, or with a human body and the head of that serpent; and thus we find the emblematic figure of an asp attached to the sculptured representations of a wine-press, a vineyard, or other parts of a villa;² and the same deity appears in the capacity of protecting genius to a king, or the nurse of a young prince. Indeed the connection between the goddess Ranno, or the asp, and royalty is very remarkable; and the name *uræus*, which was applied to that snake,³ has, with good reason, been derived by the ingenious Champollion from *ouro*, the Coptic word signifying 'king,' as its appellation of basilisk originated in the *basiliscos*⁴ of the Greeks.



No. 173.

The table carried behind the statue of the god Khem.

Thebes.

Khem, or Pan, from his character as god of generation, was naturally looked upon as the deity to whose influence everything was indebted for its procreation, and for the continuation of its species; and we therefore frequently find, in the sacred sculptures

¹ Or Am.

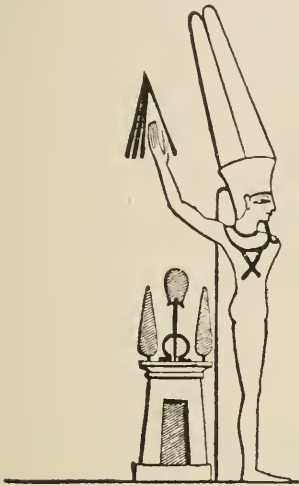
² Woodcut No. 161.

³ It resembles the cobra da capello, the *Coluber naja* of Linnæus, in everything except the spectacles on the head, which are wanting. It has now received the name of

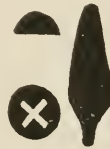
naja haye, which is certainly a misnomer, *haye* being the Arabic name for the cerastes, *Vipera cerastes*, or horned snake.

⁴ 'Royal' [or for snakes in general. — G. W.].

of Egyptian temples, the emblematic representation of a king breaking up the soil with a hoe, in the presence of this god, as if to prepare it for his beneficent influence.¹ And this allegorical mode of worship was offered him, as well in his character of Khem as when under the name of Amunra Generator, which was one of the forms of the Theban Jupiter. On the altar or table carried behind his statue in sacred processions, or placed near it in his sanctuary, were two or more trees, together with his peculiar emblems;² and the hieroglyphics implying 'Egypt,' which occur



No. 174. Emblems of the god Khem.



No. 175. Hieroglyphical group, containing a tree and the sign of land, meaning 'Egypt.' *Rosetta Stone.*

on the Rosetta Stone as well as on other Egyptian monuments, and have been supposed to read 'the land of trees,' bear an evident relation to the deity, whose name Khem³ is so similar to the word Chemi, by which Egypt was known in Coptic, and in the ancient language of the country. In the form of the god of generation originated, no doubt, the Greek and Roman custom of placing their gardens under the protection of Priapus,⁴ though, instead of an abstract notion⁵ of the generative influence, they,

¹ *Materia Hieroglyphica*, pl. vi. of the Pantheon.

² Woodcuts Nos. 174, 175.

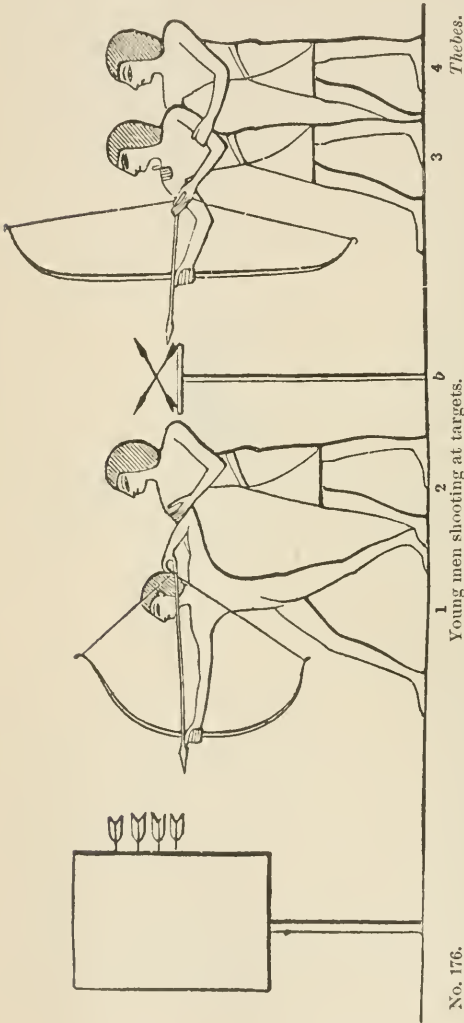
³ Panopolis was also called Chemmis, from the Egyptian name, which can still be traced in its modern appellation, E'Khmin.

⁴ *Hor. Sat.* i. 8, 1.

⁵ It is remarkable that the Greeks and Romans continually took abstract and metaphysical notions literally, and that the Egyptians, on the other hand, converted the physical into metaphysical.

as in many other instances, merely attached to it an idea according with the grossness of their imaginations.

It is reasonable to suppose that the Egyptians spent much time in the cool and shady retirement of their gardens, where,



like the Romans, they entertained their friends during the summer season; and from the size of some of the *kiosks* which occur in the paintings of the tombs, we may conclude they were rather intended for this purpose, than for the sole use of the master of the villa. That the gardens were originally laid out with a view to utility, and were chiefly stocked with vegetables for the consumption of the family, is more than probable; but as riches and luxury increased, to the simple beds of herbs were added avenues of shady trees, and the usual variety of aromatic plants and ornamental flowers. It then became divided into different parts, distinguished by a peculiar name, according to the purpose for which they were intended; and the vineyard, or-

chard, kitchen and flower garden, had each its own fixed limits, whose dimensions depended on the means or the caprice of its owner. Some of the richer individuals extended still further the range of their villas; and a park, *paradeisos*, was

added,¹ which, independent of its fish-ponds² and preserves for game, contained many different sections, as the *gallinarium* for keeping fowls, the *chenoboscium* for geese, the stalls for fattening cattle, and for keeping the wild goats and other animals originally from the desert, whose meat was reckoned among the dainties of the table. It was in these extensive preserves that the rich amused themselves with the pleasures of the chase; and they also enclosed a considerable space in the desert with net fences, into which the animals were driven for the purpose of being hunted, though the usual custom in those districts was to course in view over the open plains. Many occupied their leisure in fowling and fishing; and there many a youth, and sometimes even a damsel, were wont to practise shooting at a target.³ [Nor were the poorer classes without shady retreats from the heat of the sun; and a shed was erected in the field, under which they guarded their produce from intrusion; and this 'lodge in a garden of cucumbers' is still common throughout the country, where similar precautions are required by the modern peasants. — G. W.]

¹ Conf. the Greek text of the Rosetta Stone, line 15.

² Isaiah xix. 10.

³ Woodcuts Nos. 1 and 176.





VIGNETTE F. — The Nóreg, a machine used by the modern Egyptians for threshing corn.

CHAPTER VI.

Furniture of Egyptian Rooms — Chairs, Stools, Ottomans, Mats, Couches, Tables — Mode of sitting — Headstools — Bedsteads — Palanquins — Washing and anointing — Bouquets — Bands of Music — Cymbals, Trumpets, Drums, Harps, Guitars, Lyres, Flutes, Pipes, Sistra, Sacred Instruments — Dancing — The Pirouette and Figure Dances.

THE apartments appropriated to the reception of their friends were sometimes on the ground-floor, at others on the first story; and the party usually sat on handsome chairs and fauteuils, each, like the *thronos* of the Greeks, containing one person.¹ They occasionally used stools and low seats, raised very little above the ground, and some sat cross-legged, or on one knee, upon mats or carpets; but men and women were generally apart, though apparently in the same room. While conversing, they did not recline upon *diváns*, like Eastern people at the present day, nor did they, like the Romans, lie in a recumbent position, supported by the left elbow² on a triclinium, or a couch, during meals: though couches and ottomans formed part of the furniture of an Egyptian saloon.

Besides the *thronos*, or single chair, was what the Greeks termed the *diphros*,³ from its holding two persons; which was sometimes kept as a family seat, and occupied by the master

¹ Woodcut No 178, *fig.* 1.

² Conf. Hor. Od. i. 22, 8.

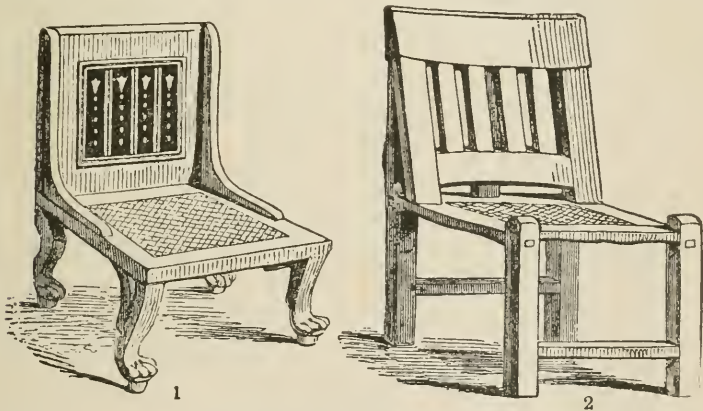
³ *Diphros* was also applied to a single chair, as in Theocr. Id. xv. 2.

and mistress of the house.¹ This kind of chair was not, however, always reserved exclusively for them, nor did custom require



No. 178. 2 The double and single chair. 1 Thebes.

them to occupy the same seat, since we frequently find that they sat, like the guests, on separate chairs; and a *diphros*² was occasionally offered to visitors, both men and women.



No. 179. 1 Chairs of an ordinary description. 2 British Museum.
The seat of *fig. 1* is 8 inches high, and the back 1 foot 4 inches. The seat of *fig. 2* is 14 inches, and total height 2 feet 6 inches.

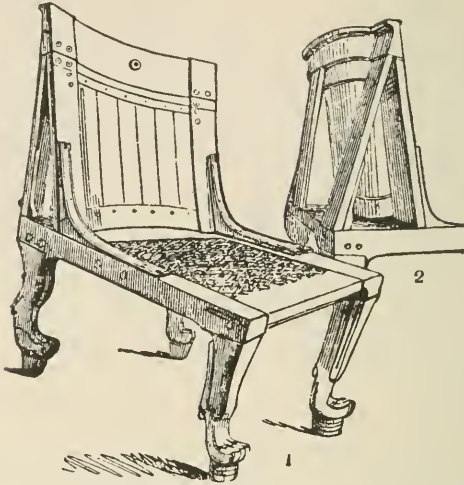
Many of the fauteuils were of the most elegant form, and were made of ebony and other rare woods, inlaid with ivory,³

¹ Woodcut No 178, *fig. 2*.
² Called in the hieroglyphs *qana*.



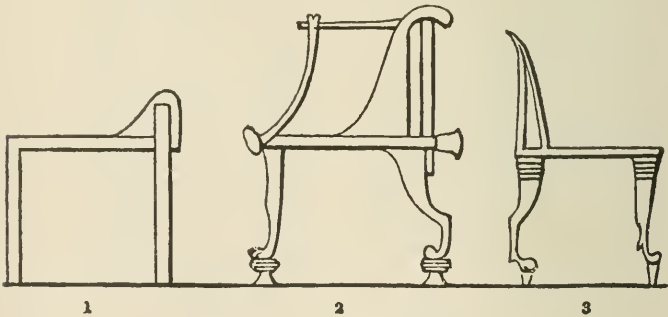
³ Many made of ebony inlaid with ivory were brought as tributes from *Kus'* or Ethiopia, which, it appears, excelled in

covered with rich stuffs, and very similar to some now used in Europe,¹ to which, indeed, they have frequently served as models. None of these have yet been found in the tombs of



No. 180. Chair in the Leyden Museum; the seat 13 inches high, and the back 17 inches.

Thebes; but chairs of more ordinary quality are occasionally met with, some of which are in the British Museum and in the Leyden Collection. They are much smaller than the fauteuils



No. 181. Chairs, from various sculptures.

of the sculptures, the seat being only from eight to fourteen inches high, and are deficient both in elegance of form and

the manufacture of this kind of furniture. They appear to be called in the inscriptions

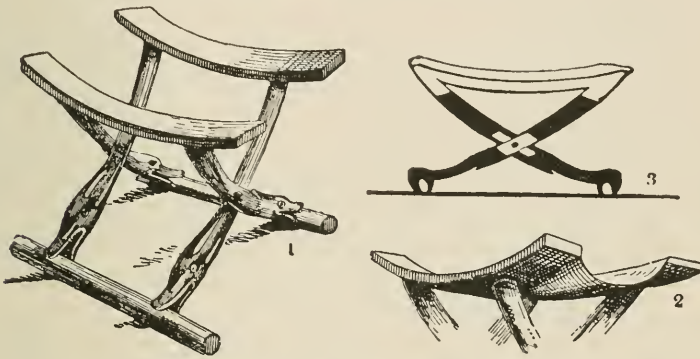
 *maut*, or as some read the

word *mafut*, and are depicted at Beitoualli in the tributes offered by the Black races to Rameses II. or Sesostris. — S. B.

¹ Vide Pl. X.

in the general style of their construction: in some the seat is of wood, in others of interlaced string or leathern thongs, in appearance as well as in rank not very unlike our own rush-bottomed chairs; and they probably belonged to persons of inferior station, or to those rooms which were set apart for casual visitors.

Various are the forms of chairs which occur in the sculptures, representing scenes of domestic life and sacred subjects.¹ Some were on the principle of our camp-stools, furnished with a cushion, or covered with the skin of a leopard or other animal,² which could be easily removed when the chair was folded up;



No. 182. *Fig. 1.* A stool in the British Museum, on the principle of our camp stools.
2. Shows the manner in which the leather seat was fastened.
3. A similar one from the sculptures, with its cushion.

and it was not unusual to make other seats, and wooden head-stools or pillows, in the same manner; one of which was found by me at Thebes, and is now in the British Museum.³ They were adorned in various ways, being bound with metal plates, or inlaid with ivory and foreign woods; and even in some ordinary chairs, sycamore, or other native wood, was painted to imitate that of a more rare and valuable quality.

The seat was frequently of leather, painted with flowers or fancy devices; and the figure of a captive, or a conquered foe was frequently represented at the side or among the ornaments of the chair. Sometimes the seat was formed of interlaced

¹ The Chinese have chairs of similar form.

² Pl. X. *fig. 3.* The skin was of the leopard or panther, the



of the hieroglyphic texts. — S. B.

³ Woodcut No. 197, *fig. 2.* They are the Greek *okladias*.

work of string, carefully and neatly arranged, which, like our Indian cane chairs, appear to have been particularly adapted for a hot climate; but over this even they occasionally placed a leathern cushion,¹ painted in the manner already mentioned.²

Most of the chairs and stools were about the ordinary height of those now used in Europe, the seat nearly in a line with the bend of the knee; but some were very low, and others offered that variety of position which we seek in the kangaroo chairs³ in our own drawing-room. The ordinary fashion of the legs was in imitation of those of some wild animal, as the lion, or the goat, but more usually the former, the foot raised and supported

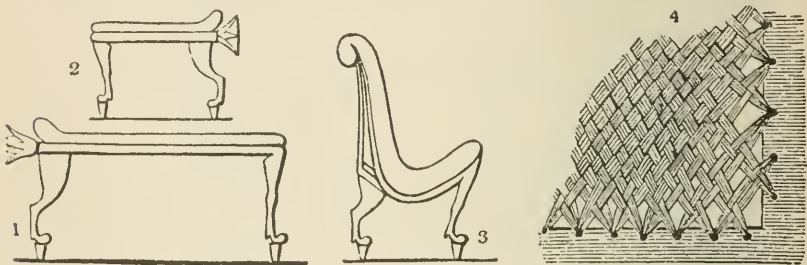


Fig. 1. A *diphros* or double chair, without a back.
2. A single chair, of similar construction.
3. A kangaroo chair.
4. The seat, formed of interlaced string.

No. 183

Thebes, Alabastron, and Mr. Salt's Collection.

on a short pin; and, what is remarkable, the skill of their cabinet-makers, even in the early era of Joseph, had already done away with the necessity of uniting the legs with bars. Stools, however, and more rarely chairs, were occasionally made with these strengthening members, as is still the case in our own country: but the form of the drawing-room fauteuil and of the couch was not degraded by so unseemly and so unskilful a support. The back of the chair was equally light and strong. It was occasionally concave, like some Roman chairs,⁴ or the throne of Solomon,⁵ and in many of the large fauteuils a lion⁶

¹ Theocrit. Idyl. xv. lib. iii.

² Part of the leg of one of these chairs, terminating in the head of a goose, the beak open, has inscribed upon it in hieroglyphs: 'The hereditary nomarch, great councillor of the lord of the world (Pharaoh), the royal scribe, chamberlain of the great house (palace), Amenhetp justified.' This was cut on the leg after his

death, to indicate the chair was destined for his sepulchre, and is of the period of the 18th Dynasty. It is in the Museum of Leyden. (Leeman's 'Mon. Egypt. du Musée de Leyde,' ii. pl. lxxiii.)—S. B.

³ Woodcut No. 183, fig. 3.

⁴ Woodcut No. 180.

⁵ 1 Kings, x. 19.

⁶ As the throne of Solomon. *Vide* Pl. X.

formed an arm at either side; but the back usually consisted of a single set of upright and cross bars, or of a frame receding gradually and terminating at its summit in a graceful curve, supported from without by perpendicular bars;¹ and over this was thrown a handsome pillow of colored cotton, painted

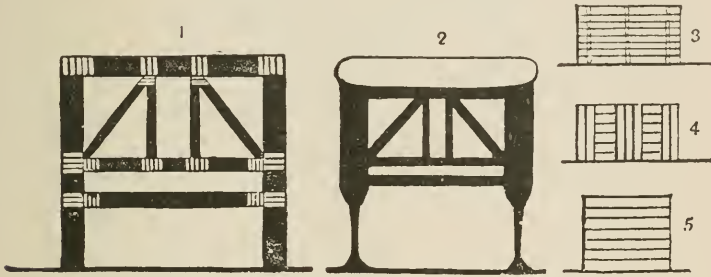
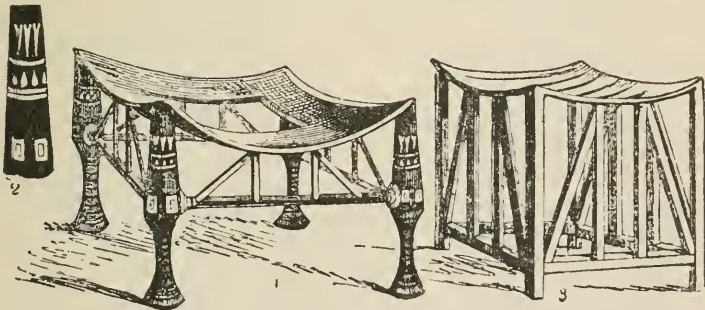


Fig. 1. Stools.
2. With a cushion,
3, 4, 5. With solid sides.

No 184.

Thebes.

leather, or gold and silver tissue, like the beds at the feast of Ahasuerus, mentioned in Esther;² or like the feather cushions covered with stuffs and embroidered with silk threads of gold, in the palace of Scarus.



No. 185. Fig. 1. Stool in the British Museum, of ebony inlaid with ivory.
2. Shows the inlaid part of the legs.
3. Of ordinary construction, in the same collection.

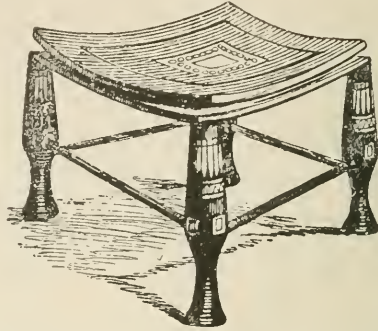
The stools used in the saloons were of the same style and elegance as the chairs, and frequently only differed from them in the absence of a back; those of more delicate workmanship were made of ebony, and inlaid, as I have already stated, with ivory or rare woods; and many, as already observed, folded up, on the principle of our camp stools.³ Some of an ordinary kind

¹ Woodcut No. 187.

² Esther i. 6.

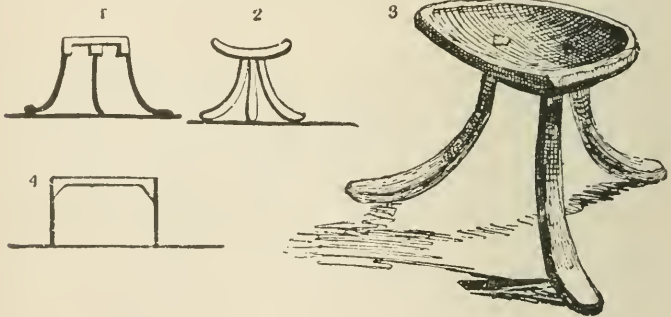
³ Woodcut No. 182.

had solid sides, and were generally very low; and others, with three legs, not unlike those used by the peasants of England, belonged to persons of inferior rank.



No. 186. A stool with leathern cushion, in Mr. Salt's Collection.

The ottomans were simple square sofas, without backs, raised from the ground nearly to the same level as the chairs. The upper part was of leather, or a cotton stuff, richly colored, like the cushions of the fauteuils; and the base was of wood, painted with various devices, and ornamented with the figures of captives, who were supposed to be degraded by holding so



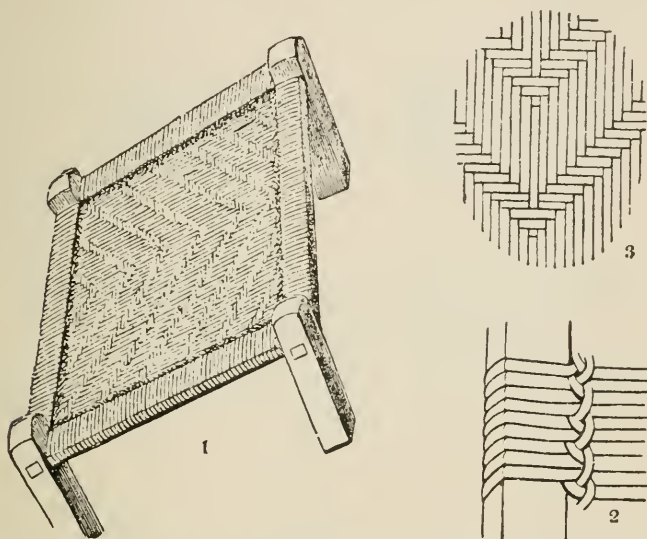
No. 187. Figs. 1, 2. Three-legged stools, from the sculptures.
3. Wooden stool, in Mr. Salt's Collection.
4 and 1 are probably of metal.

humiliating a position. And the same idea gave them a place on the soles of sandals, on the footstools of a royal throne, and on the walls of the palace at Medeenet Haboo, in Thebes, where their heads support some of the ornamental details of the building.

Footstools¹ also constituted part of the furniture of the

¹ Answering to the *thrēnus* and *scabellum* of the Greeks and Romans.

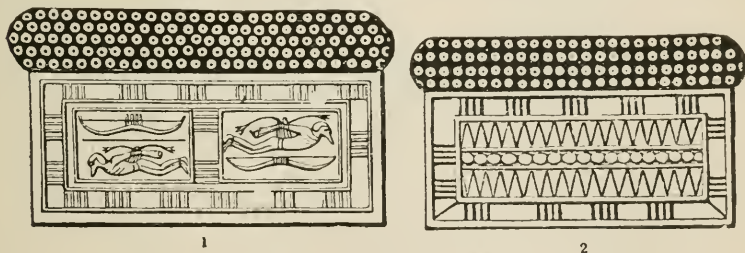
sitting-room; they were made with solid or open sides,¹ covered at the top with leather or interlaced string, and varied in height according to circumstances, some being of the usual size now



No. 188.

Fig. 1. Low stool in the Berlin Museum.
2, 3. Mode of fastening, and the pattern of the seat.

adopted by us, others of inconsiderable thickness, and rather resembling a small rug. These last, indeed, and some of the low seats above alluded to, might be supposed to represent



No. 189.

Ottomans, from the tomb of Rameses III.

Thebes.

carpets, which have been mentioned by Homer² and Diodorus³ as a very early invention, since we find instances of several

¹ Called *hunn* in the Statistical Tablet of Thothmes III.

² Hom. Od. iv. 124.

³ The *stromnai polutelestatai*, mentioned

by Diodorus as spread for the sacred animals of Egypt, are supposed to have been carpets. (Lib. i. 34.)

persons sitting upon them: though we may, with equal reason, imagine, from the mode of representing them, that some were of wood, and that they closed or folded in the centre.¹ Mats were commonly used in their sitting-rooms, as at the present day;



No. 190.

Fig. 1. A low seat, perhaps a carpet.
2. Either similar to *fig. 1.*, or of wood.
3. A mat.

and we not only see them represented in the sculptures,² but remnants of them have been found in the Theban tombs.

Their couches evinced no less taste than the fauteuils. They

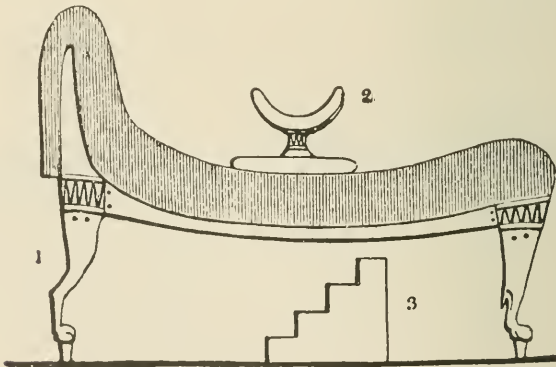


Fig. 1. A couch.
2. Pillow or head-stool.
3. Steps for ascending a lofty couch.
Tomb of Rameses III. at Thebes.

No. 191.

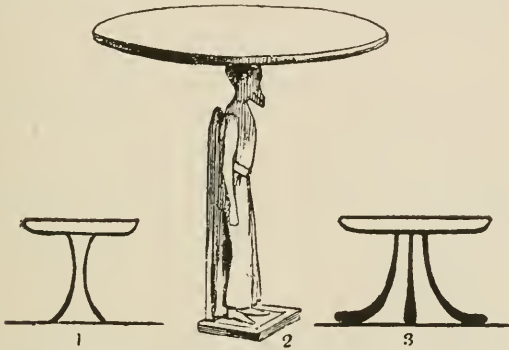
were of wood, with one end raised, and receding in a graceful curve; and the feet, as in many of the chairs already described,

¹ As in woodcut No. 190, *fig. 2.*

² Woodcut No. 190, *fig. 3.*

were fashioned to resemble those of some wild animal.¹ But, though the Egyptains had couches, they do not appear to have reclined upon them more frequently than modern Europeans, in whose houses they are equally common; and, indeed, we have authority, both from the sculptures and from sacred history, for believing that the Egyptians, like the *early* Greeks and Romans,² were accustomed to sit at meals; for, as Philo justly observes, when Joseph entertained his brethren, he ordered them to *sit* according to their ages, the custom of reclining at meals not having yet been introduced.³

The couches⁴ appear also to have been intended as bedsteads; and it is not impossible that they were used to sleep upon at night, and in the daytime, a rich covering⁵ being substituted for



No. 192. Fig. 1. Table, probably of stone or wood, from the sculptures.
 2. Stone table, supported by the figure of a captive.
 3. Probably of metal, from the sculptures.

the bedding, they were readily transformed into an ornamental piece of furniture; and the presence of the head-pillow placed upon it, and the steps at the side for ascending it, argue strongly in favor of this supposition; nor is the custom unusual in the East at the present day.

The Egyptian tables were round,⁶ square, or oblong; the for-

¹ The Greeks ornamented the legs of their tables and other furniture in the same manner.

² The custom of reclining is said to have been introduced from Carthage, after the Punic wars.

³ Philo, lib. de Joseph., p. 555, ed. Franc. [The Chinese and the Egyptians were the only people of the East who used chairs, tables, and bedsteads, though Og, king of Bashan, had one of the last.—G.W.]

⁴ Called *nemma*. They were used for the same purposes as couches at the present

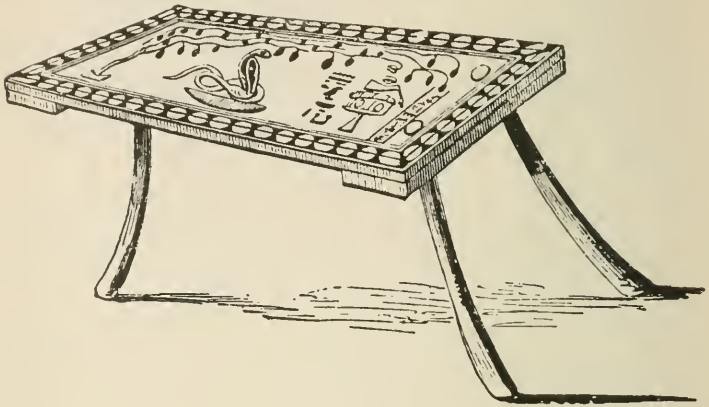
day; there is, however, no representation of sleeping on the monuments.—S. B.

⁵ Called *taft*, square piece.

The mattresses and cushions seem to have been padded with feathers of the water-fowl.—S. B.

⁶ Called *tahetp* at the time of the 12th Dynasty.—S. B.

mer were generally used during their repasts, and consisted of a circular, flat summit, supported, like the *monopodium* of the Romans, on a single shaft or leg in the centre, or by the figure of a man, intended to represent a captive.¹ Large tables had

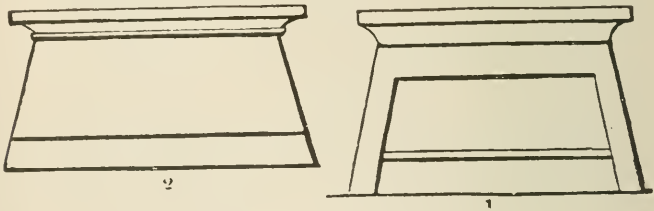


No. 193.

Wooden table, in the British Museum.²

Thebes.

usually three or four legs, but some were made with solid sides; and though generally of wood, many were of metal or stone; and they varied in size, according to the purposes for which they were intended.³



No. 194.

Fig. 1. Table, from the sculptures at Thebes.
2. With solid sides.

Common people either sat cross-legged, as the modern Asiatics, or crouched, on the ground; in which last position many Egyptian statues and painted figures are represented; and no one who has seen the peasants of Egypt can fail to recognize

¹ Woodcut No. 192, *fig.* 2.

² The upper part is ornamented with a figure of the goddess *Rannu*, or goddess of the harvest and vintages, represented as a coiled up uræus, having before her an altar of viands, and her name above, and

placed under a vine. The line of hieroglyphs near the border is a sepulchral dedication to Osiris for a deceased Paperpa, the person for whom the table was made. — S. B.

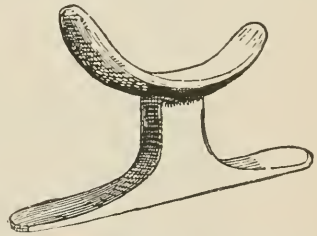
³ Woodcuts Nos. 192, 193, 194.

a position equally common to the modern inhabitants of the country, as to other Oriental people. When bearing sacred emblems before the shrine of a deity, or desirous of showing respect to a superior, they generally sat upon their heels;¹ and it is remarkable that this attitude continues to be adopted by persons of inferior rank in Moslem society.



No. 195. Positions when seated on the ground.

Of the furniture of their bedrooms we know little or nothing: but that they universally employed the wooden pillow above alluded to is evident, though Porphyry would lead us to suppose its use was confined to the priests, when, in noticing their mode of life, he mentions a half cylinder of well-polished wood sufficing to support their head,² as an instance of their simplicity and self-denial.³ For the rich, they were made of Oriental alabaster, with an elegant grooved or fluted shaft, ornamented with hieroglyphics, carved in intaglio, and painted of a blue color; others were of rare wood;⁴ and those of a more ordinary kind were of sycamore, tamarisk, and other woods of the country, the poorer classes being contented with a cheaper sort, of pottery or stone. Porphyry mentions a kind of wicker bedstead of palm branches



No. 196. Wooden pillow or head-stool, found at Thebes.

¹ As *figs.* 4 and 5 in woodcut No. 195.

² Porph. de Abst. lib. iv. s. 7.

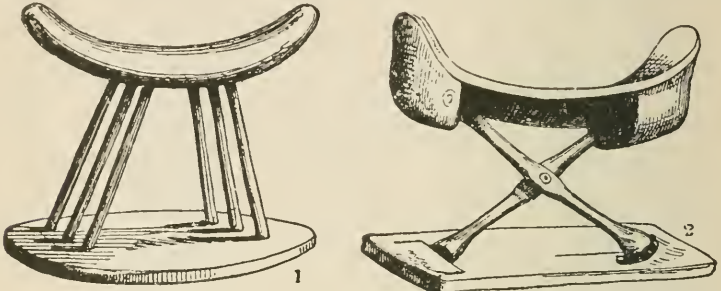
³ Woodcuts Nos. 196, 197.

⁴ They were called *urs*,

like the Coptic *ouols*, are very common, and are of various forms and sizes in the stem. For comfort they must have been made to fit the head exactly, as they otherwise would have caused great pain.

The sides of the base or foot are often ornamented with the figures of the god Bes or Bessa, sometimes accompanied by his female companion, Taur or Thoueris. (Leeman's 'Mon. Egypt. du Musée de Leyde,' ii. pl. lxxiv. 546.) Some have the sides of the lune beneath. (Guide to Egyptian Room, Brit. Mus. No. 2556c. p. 23.) They always appear in the coffins of the earlier dynasties. (Lepsius, 'Aelteste Texte,' pl. vi. 20, 35.) — S. B.

called *baïs*,¹ which, he says, was used by the priests; but it is reasonable to conclude they were also met with in the houses of other individuals, at least among the middle and lower classes; and it is remarkable that the same species of framework is still

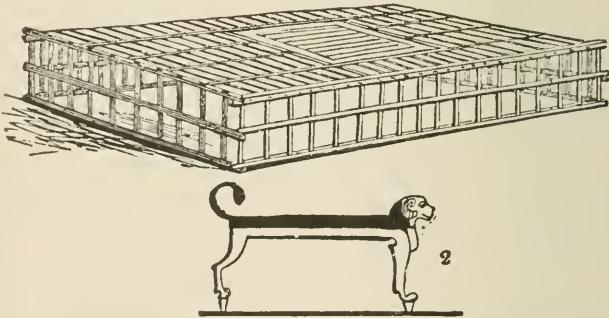


No. 197.

Fig. 1. Wooden pillow of unusual form.

2. Another found at Thebes, and now in the British Museum. The base was lost.

employed by the modern Egyptians, as a support to the *diváns* of sitting-rooms, and to their beds. In size they vary according to the dimensions of the room and other circumstances; but they are invariably made of the *geréet*, or sticks of the palm branch, and are known by the general name of *kaffass*.² Each side consists of a number of upright bars, which pass through three rods



No. 198.

Fig. 1. Kaffass bedstead of palm sticks used by the modern Egyptians.

2. Ancient bier on which the bodies were placed after death.

at right angles with them, the upper and lower one forming the edge of the framework. The summit on which the bed is placed is constructed in the same manner with transverse *geréets*, and in the centre is a small mass of them in closer order, intended more

¹ *Bai* is the Coptic for palm branch.

² Hencoops, and all other wicker work made of the *geréet*, have the same name.

for ornament than for use; and the usual dimensions of these bedsteads are about seven feet by three and a half, and from one foot to two feet in height. Wooden, and perhaps also bronze bedsteads,¹ may have been used by the wealthier classes of the ancient Egyptians; and it is at least probable that the couches they slept upon were as elegant as those on which their bodies reposed after death; and the more so, as these last, in their general style, are very similar to the furniture of the sitting-room.²

In their entertainments the Egyptians appear to have omitted nothing which could promote festivity and the amusement of the guests. Music,³ songs, dancing,⁴ buffoonery, feats of agility, or



No. 199. Military chief carried in a sort of palanquin, an attendant bearing a buckler behind him. *Beni-Hassan.*

games of chance, were generally introduced; and in token of welcome, all the luxuries were offered which the cellar and the table could afford. The party, when invited to dinner, met about midday,⁵ and they arrived successively in their chariots, in palanquins⁶ borne by their servants, or on foot. Sometimes their

¹ We read of a bedstead of *iron* belonging to Og, king of Bashan. (Deut. iii. 11.)

² Fig. 2 of woodcut No. 198.

³ Isaiah v. 12.

⁴ Conf. the feast given on the arrival of the prodigal son: 'Bring hither the fatted

calf, and kill it; and let us eat, and be merry;' and his brother, when he drew nigh to the house, 'heard music and dancing.' (Luke xv. 23, 25.)

⁵ Gen. xliii. 16.

⁶ Woodcut No. 199.

attendants carried a sort of parasol to shade them from the sun, as represented in the woodcut below, which in the present instance appears to have been of leather, stretched over a light frame;¹ but those which were borne behind, and belonged exclusively to the king, were composed of feathers, and were not very unlike the flabella carried on state occasions behind the Pope, in modern Rome. The same custom prevailed in Persia and other Eastern countries; and in the sculptures of Persepolis we have a



No. 200.

Persian sculptures.

Figs. 1, 2, 3. Attendants bearing a parasol and fly-flab over a Persian chief, in some sculptures of Persepolis, which have a very Egyptian character.

Fig. 4 is evidently borrowed from the winged globe.

satisfactory instance of the use of a parasol or umbrella, which bears a greater resemblance to those of the present day, and conveys a better idea of its form than an Egyptian artist would have given: though, from their general character, presenting so strong an analogy to those of Egypt, that we may suppose many

¹ From the man having a battle-axe in the other hand, I was inclined to suppose it a shield; but from his being in the act of raising it aloft, we may conclude it was

for the purpose of a parasol. [It is the buckler, *agam*, of the military officer, and used for the purpose. — S. B.]

of these sculptures were executed by captives taken from Thebes at the Persian conquest.

When a visitor came in his car, he was attended by a number of servants, some of whom carried a stool, to enable him to alight, and others his writing tablet, or whatever he might want during his stay at the house. In the accompanying woodcut¹ the guests are assembled in a sitting-room within, and are entertained with music during the melancholy interval preceding the announcement of dinner; for, like the Greeks, they considered it a want of good breeding to sit down to table immediately on arriving, and perhaps as Bdelycleon, in Aristophanes,² recommended his father Philocleon to do, they admired the beauty of the rooms, and commended the furniture, taking care to bestow unqualified praise on those objects which were intended for their approbation. As usual in all countries, some of the party arrived earlier than others; and the consequence, or affectation of fashion in the person who now drives up in his curricule, is shown by his coming some time after the rest of the company. One of his footmen runs forward to knock at the door; others, close behind the chariot, are ready to take the reins, and to perform their accustomed duties; and the one holding his sandals in his hand, that he may run with greater ease, illustrates a custom, still common in Egypt, among the Arabs and peasants of the country, who find the power of the foot greater when freed from the incumbrance of a shoe.

To those who arrive from a journey, or who desired it, water was brought for their feet,³ previous to entering the festive chamber; and it was either now, or immediately before dinner, that the guests washed their hands,⁴ the water being brought in the same manner as at the present day; and ewers not unlike those used by the modern Egyptians are represented, with the basins belonging to them, in the paintings of a Theban tomb. It is certain that basins were kept for the purpose of washing the hands and feet of the guests, and that in the houses of the rich they were of gold,⁵ or other costly materials; but those who lived near their host were probably expected to perform their ablutions

¹ Woodcut No. 201.

² Aristoph. *Vesp.* line 1209. Noticed by Athenæus, lib. iv. c. 27.

³ Joseph ordered his servants to fetch water for his brethren, that they might wash their feet before they ate (*Gen.* xliii. 24. Conf. also xviii. 4 and xxiv. 32; 1 *Sam.* xxv. 46). It was always a custom of the East, as with the Greeks and Romans;

and they considered it a great want of hospitality to neglect to offer water for this purpose. (Conf. *Luke* vii. 44, 46.)

⁴ Conf. *Petron. Satyric.* c. xxxi.

⁵ Herodotus mentions a gold basin, or *podanipter*, belonging to Amasis, which he and the guests who dined with him used for washing their feet.

before they left home; and hence, I conceive, we may account for not finding any representation of this preliminary ceremony

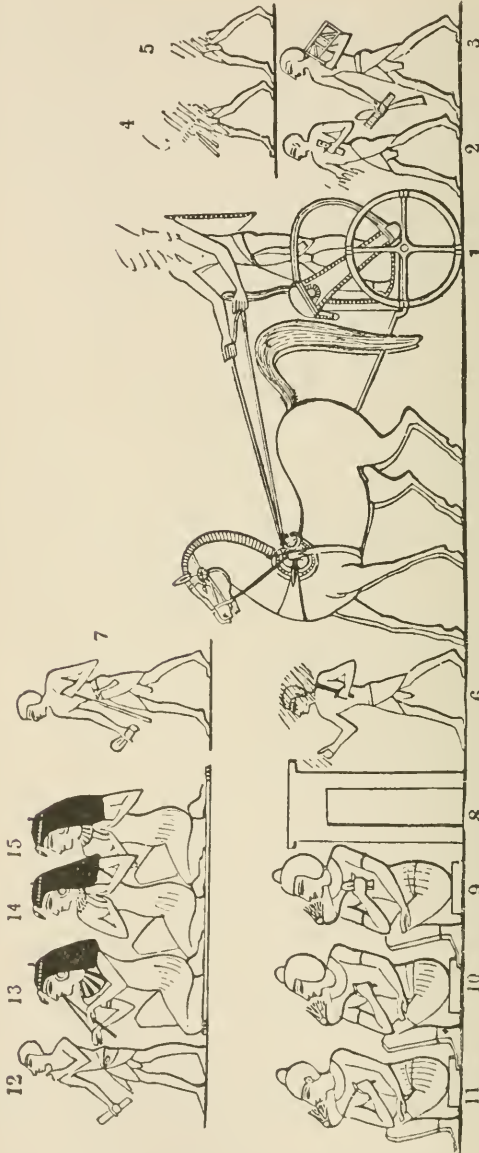


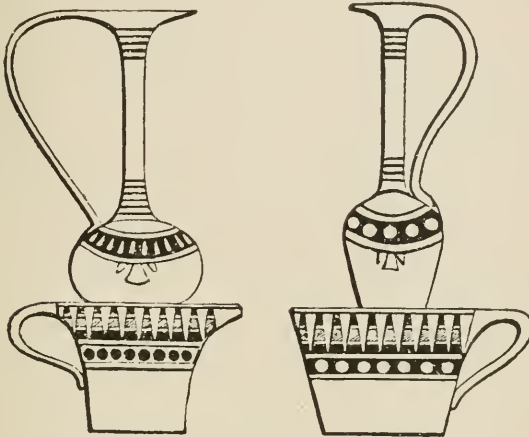
Fig. 1. An Egyptian gentleman driving up in his curriole to his house.
Figs. 2, 3, 4, 5, 6, and 7 are his footmen.
Figs. 8, 9, 10, 11. The guests assembled within.
Figs. 12, 13, 14, 15. The musicians.

No. 201.

in the paintings at Thebes. Athenæus¹ seems to apply the same

¹ Athen. iv. 27.

remark to the Greeks; and 'it was deemed indecent,' says that author, 'for any one to go to a feast without having previously cleansed himself; though persons arriving from a journey not only washed, but were even clothed, at the mansion of their



No. 202.

Golden ewers and basins in the tomb of Rameses III.

Thebes.

host.' However, with the Greeks, as well as other people of antiquity, the usual custom was to bring water to the guests, numerous instances of which we find in Homer;¹ as when Telemachus and the son of Nestor were received at the house of Menelaus,² and when Asphalion poured it upon the hands of his master and the same guests on another occasion;³ and Virgil describes the servants bringing water for this purpose, when Æneas was entertained by Dido.⁴ Nor was the ceremony thought superfluous, and declined, even though they had previously bathed and been anointed with oil.⁵

It is also probable that, like the Greeks, the Egyptians anointed themselves before they left home; but still it was customary for a servant to attend every guest, as he seated himself, and to anoint his head; and this was one of the principal tokens of welcome.⁷ The ointment was sweet-scented, and, unlike the

¹ Homer, *Od.* iv. 50.

² *Ibid.* xv. 135.

³ *Ibid.* iv. 216.

⁴ Virg. *Æn.* i. 705: 'Dant famuli manibus lymphas.'

⁵ Hom. *Od.* iv. 49 and 53. This is the case with the Moslems of the present day, who also require the water to be poured upon the hands. (*Conf.* 2 Kings iii. 11.)

⁶ The Egyptians were shaved, and wore wigs. (*Herodot.* ii. 36, and the sculptures.) The Greeks, Jews, and other ancient people were very fond of ointment and perfume. (*Prov.* xxvii. 9; *Psaln.* xxiii. 5; and *Horace*, *Od.* xii. 4.)

⁷ *Athenaus*, xv. 13.

Lacedæmonians, who banished those who sold perfumed ointments from their country, the Egyptians were particularly partial to this species of luxury.¹ It was contained, sometimes in an alabaster,² sometimes in an elegant porcelain vase; and so strong



No. 203. A servant anointing a guest.
Thebes.

was the odor, and so perfectly were the different component substances amalgamated, that it has been known to retain its scent for several hundred years.³ Servants took the sandals of the guests as they arrived, and either put them by in a convenient place in the house, or held them on their arm while they waited upon them.⁴

After the ceremony of anointing was over, and, in some cases, at the time of entering the saloon, a lotus flower was presented to each guest,

who held it in his hand during the entertainment.⁵ Servants then brought necklaces⁶ of flowers, composed chiefly of the lotus; a garland was also put round the head, and a single lotus bud, or a full-blown flower, was so attached as to hang over the forehead.⁷ Many of them, made up into wreaths and other devices, were suspended upon stands placed in the room, to be in readiness for immediate use, and servants were constantly employed to bring other fresh flowers from the garden,⁸ in order to supply the guests as their bouquets faded;⁹ and, to prevent their withering, they were generally put close to jars of water, into which the stalks were probably immersed.

¹ It was called *api* or *tepi*, 'head oil' or 'pomatum,' and is often mentioned in the texts, or *qami*. ('Records of the Past,' vi. 51.) — S. B.

² Mary, when she washed Jesus' feet, brought an alabaster box of ointment. (Matt. xxvi. 7; Luke vii. 37.)

³ One of the alabaster vases in the museum at Alnwick Castle contains some of this ancient ointment, between two and three thousand years old, and yet its odor remains.

⁴ [It is mentioned as a high and unusual honor accorded to a subject, that he was

allowed to enter into the presence of his sovereign with his sandals on, as in the case of Una of the 6th Dynasty. (Birch, 'Egypt,' p. 53. — S. B.)

⁵ Plate XI.; and woodcut No. 190.

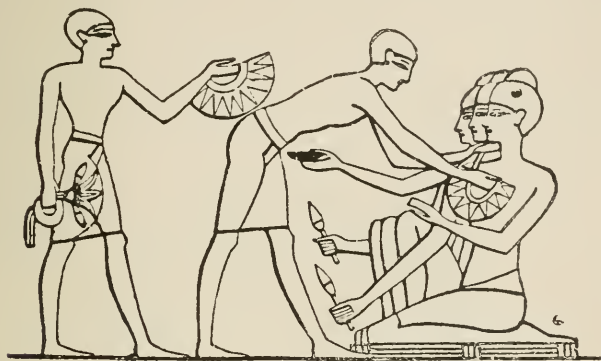
⁶ To put on a ring or a necklace was a token of respect and welcome. (Gen. xli. 42.) The ring was generally a seal, as it is at the present day in the East, whence it is called, in Arabic, *khâton*. Necklaces were also put upon the figures of the gods and kings of Egypt.

⁷ Plate XI. Athen. 'Deipnos.' xv. 4, 5, 9, 10.

⁸ Ibid.

⁹ This was the employment of the gardener. ('Records of the Past,' iv. p. 5.) These were flowers of the lotus, *s's'ni*. — S. B.

The stands that served for holding the flowers and garlands were similar to those of the amphoræ and vases,¹ some of which have been found in the tombs of Thebes, and the same kind of

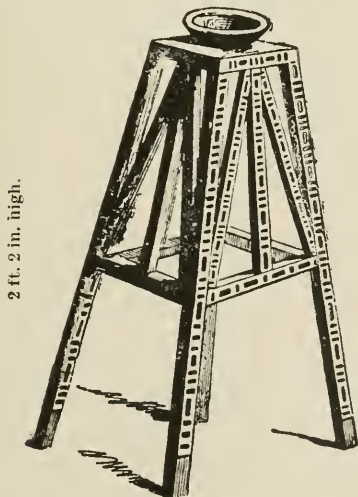


No. 204.

Servants bringing necklaces of flowers.

Thebes.

stand was introduced into a lady's dressing-room, or the bath, for the purpose of holding clothes and other articles of the toilet. They varied in size, according to circumstances, some being low



base, 1 foot 6 in. broad.

No. 205.

Wooden stand, 8 inches square at summit, for holding a small cup.

British Museum.

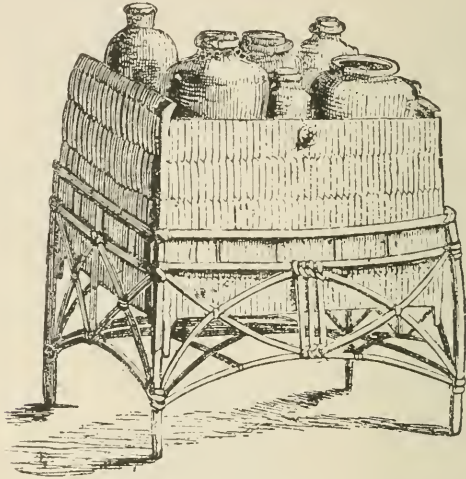
and broad at the top, others higher, with a small summit, merely large enough to contain a single cup,² or a small bottle, one of

¹ Plate XI.

² Similar stands are represented in the

mural paintings of a tomb. British Museum, No. 180. — S. B.

which, from Mr. Salt's Collection, may be seen in the British Museum; but those of a larger size were more generally used, and were more convenient for ordinary purposes. Others, though much smaller than the common stands, were broader in proportion to their height, and answered as small tables, or as the supports of cases containing bottles; and one of these last, preserved in the Berlin Museum, is supposed to have belonged to a medical man, or to the toilet of a Theban lady.



No. 206.

A case containing bottles, supported on a stand.

Berlin Museum.

Diodorus¹ informs us that when the Egyptians approached the place of divine worship, they held the flower of the *agrostis* in their hand, intimating that man proceeded from a well-watered or marshy land, and that he required a moist rather than a dry aliment; and it is not improbable that the reason of the great preference given to the lotus, on these occasions, was derived from the same notion. This did not, however, prevent their using many other kinds of flowers in the composition of bouquets, garlands, and chaplets; and artificial representations of them were employed by the Egyptians for the same purpose, as we may infer from an expression of Pliny² already noticed, and from the imitation of flowers and leaves in painted linen discovered in the tombs of Thebes. The Greeks and Romans had the same custom, and their guests were, in like manner, decked with flowers or garlands, which were brought in, according to Athenæus, at

¹ Diod. i. 43.² Plin. xxi. 2.

the beginning of their entertainments, or, according to some, before the second course; and in all cases they were provided by the master of the house. They not only adorned their *heads*,¹ *necks*,² and *breasts*,³ like the Egyptians, but often bestrewed the couches on which they lay, and all parts of the room, with flowers: though the head was chiefly regarded, as appears from Horace,⁴ Anacreon,⁵ Ovid,⁶ and other ancient authors. And this ceremony, like that of anointing the head with sweet-scented ointment,⁷ was probably derived by the Greeks from Egypt, or as some suppose, through the Ionians, from Asia. They also perfumed the apartment with myrrh, frankincense, and other choice odors, which they obtained from Syria;⁸ and if the sculptures do not give any direct representation of this practice among the Egyptians, we know it to have been adopted and deemed indispensable among them; and a striking instance is recorded by Plutarch, at the reception of Agesilaus by Tachos.⁹ A sumptuous dinner was prepared for the Spartan prince, consisting, as usual, of beef, goose, and other Egyptian dishes; he was crowned with garlands of papyrus, and received with every token of welcome; but when he refused 'the sweetmeats, confections, and perfumes,' the Egyptians held him in great contempt, as a person unaccustomed to, and unworthy of, the manners of civilized society.

The Greeks, and other ancient people, usually put on a particular garment at festive meetings,¹⁰ generally of a white color; ¹¹ but it does not appear to have been customary with the Egyptians to make any great alteration in their attire, though probability, as well as the sculptures, lead us to conclude that they abstained from dresses of a gloomy hue.

The guests being seated, and having received these tokens of welcome, wine was offered them by the servants. To the ladies it was generally brought in a small vase,¹² which, when emptied into the drinking-cup, was handed to an under servant, or slave, who followed; but to the men it was frequently presented in a one-handed goblet, without being poured into any cup, and

¹ Hor. Od. ii. 7, 7; Athen. xv. 4 and 9.

² Athen. xv. 5.

³ Ibid.

⁴ Hor. Od. i. 26 and 38; iv. 11, &c.

⁵ Anacreon, Od. iv.

⁶ Ovid, Fast. lib. v.

⁷ Hor. Od. ii. 7, 22: 'Funde capacibus unguenta de conchis.'

⁸ Athen. iii. 22.

⁹ Plut. in Agesil.

¹⁰ Conf. Matt. xxvii. 11.

¹¹ Cicero, in Vatinium, s. xii. xiii.

¹² Wine was not only indispensable at an Egyptian but also at a Greek feast; where wine, bread, meat, couches, and tables were considered absolutely necessary. (Plut. Sympos. ii.)

sometimes in a large or small vase of gold, silver, or other materials. Nor does it appear to have been the custom of the Egyptians to provide each guest with his own cup, as among the ancient Greeks,¹ though we have evidence of its having been the case in some instances, and one was kept exclusively for the use of the master of the house.²



No. 207.

Offering wine to a guest.

Thebes.

Herodotus and Hellanicus both say that they drank wine out of brass or bronze goblets; and, indeed, the former affirms that this was the only kind of drinking-cup known to the Egyptians;³ but he is not supported by fact, since we find that Joseph⁴ had one of silver, and the sculptures represent them of glass and porcelain,⁵ as well as bronze and the metals above mentioned. That those who could not afford the more costly kind should be satisfied with a cheaper quality is highly probable, and many were doubtless contented with cups of common earthenware; and though it may be said that the modern Egyptians have the custom of drinking water from earthen bottles, yet many of the richer classes have brass,⁶ or, occasionally, porcelain and silver cups; and if these are used by a far less civilized and opulent people, for so simple a beverage as water, how much more likely were they to have been adopted by the ancient Egyptians, a people who were possessed of great riches, fond of luxury and show, and known to have employed vases of glass, porcelain, and

¹ Homer, II. iv. 262.

² Conf. Gen. xlv. 5. 'Is not this it (the cup) in which my lord drinketh?'

³ Herodot. ii. 37.

⁴ Gen. xlv. 2, 5.

⁵ The imitations of the *pocula murrhina* of the Romans. (Plin. xxxiii. præm xxxv. 12, and xxxvii. 2.)

⁶ These are also used by the *subbalin*, who sell water in the streets of Cairo.



Egyptian Party, from a tomb at Thebes.

the precious metals, for numerous purposes, both in their houses and in the temples of the gods.

The practice of introducing wine at the commencement¹ of an entertainment, or before dinner had been served up, was not peculiar to this people; and the Chinese, to the present day, offer it at their parties to all the guests, as they arrive, in the same manner as the ancient Egyptians. We also find that they drank wine during the repast;² perhaps, also, to the health of one another, or of an absent friend, like the Romans;³ and if they had no *rex convivii*,⁴ or president, to encourage hilarity or to check excess, we may conclude that the master of the house recommended a choice wine, and pledged them to the cup.⁵ They sometimes crowned the bowl with wreaths of flowers,⁶ a custom prevalent also among the Greeks and Romans,⁷ and a vase filled with blossoms of the lotus was frequently placed on a stand before the master of the house, or presented to him by a servant.

While dinner was preparing,⁸ the party was enlivened by the sound of music; and a band, consisting of the harp, lyre, *guitar*, tambourine, double and single pipe, flute, and other instruments, played the favorite airs and songs of the country. Nor was it deemed unbecoming the gravity and dignity of a priest to admit musicians into his house, or to take pleasure in witnessing the dance; and, seated with their wives and family in the midst of their friends, the highest functionaries of the sacerdotal order enjoyed the lively scene. In the same manner, at a Greek entertainment, diversions of all kinds were introduced; and Xenophon and Plato inform us that Socrates, the wisest of men, amused his friends with music, jugglers, mimics, buffoons, and whatever could be desired for exciting cheerfulness and mirth.

Though impossible for us now to form any notion of the character or style of Egyptian music, we may be allowed to conjecture that it was studied on scientific principles; and, from

¹ The same was usual at banquets in Judæa and other parts of Syria: Amos vi. 6.

² Gen. xliiii. 34. The Hebrew is שִׂכְרָה, which is to be merry from strong drink. *Sikr*, שִׂכְרָה implies the same in Hebrew, and Arabic.

³ Pers. v. 1, 20. Hor. Od. i. 27, 9. Ovid. Fast. iii. 531.

⁴ *Arbiter bibendi*, or *symposiarchos*, chosen by lot. (Hor. Od. i. 4.)

⁵ Gen. xliiii. 34. Conf. Isaian xxii 13;

Luke xii. 19; the Wisdom of Solomon ii. 6; and 1 Cor. xv. 32.

⁶ Plate XI.

⁷ Virg. *Æn.* i. 747, and iii. 525.

⁸ In early times, as with the modern Arabs, the master of the house killed the sheep, or whatever was to be brought to table; as Achilles, at the reception of Priam. (Il. Ω . 621.) At the feast of the Eed, among the Moslems, the same custom continues, even in the cities.

the great attention paid to it by Pythagoras, many years of whose life were spent in learning 'the wisdom of the Egyptians,' there is every reason to believe that whatever defects existed in the skill of ordinary performers, who gained their livelihood by playing in public or for the entertainment of a private party, music was looked upon as an important science, and diligently studied by the priests themselves. According to Diodorus, it was not customary to make music part of their education, being deemed useless and even injurious, as tending to render the minds of men effeminate; but this remark can only apply to the custom of studying it as an amusement, which might lead to luxurious and dissolute habits: and Plato, who was well acquainted with the usages of the Egyptians, distinctly says that they considered music of the greatest consequence, from its beneficial effects upon the mind of youth. This is confirmed by the following assertion of Strabo, that the children of the Egyptians were taught letters, the songs appointed by law, and a certain kind of music, established by government, to the exclusion of every other; and Diodorus himself not only allows the invention of music to have been ascribed by the Egyptians to divine origin, but shows that the poets and musicians of Greece visited Egypt for the purpose of improvement.¹

The authority of Plato, who had spent thirteen years in the country, and had paid particular attention to the institutions of the Egyptians, is of the greatest weight on this question; and the whole passage connected with it is of so much interest, that I cannot refrain from introducing the dialogue in which it occurs.²

Athen. Guest.—The plan we have been laying down for the education of youth was known long ago to the Egyptians, that nothing but beautiful forms and fine music should be permitted to enter into the assemblies of young people. Having settled what those forms and what that music should be, they exhibited them in their temples; nor was it allowable for painters, or other imitative artists, to innovate or invent any forms different from what were established; nor lawful, either in painting, statuary, or any branches of music, to make any alteration: upon examination, therefore, you will find that the pictures and statues made ten thousand years ago are in no one particular better or worse than what they now make.

Clin.—What you say is wonderful.

¹ Diod. i. 96.

² Plato, Second Book of Laws.

‘*Athen.* — Yes, it is in the true spirit of legislation and policy: other things, practised among that people, may, perhaps, be of a trifling nature; but what they ordained about music is right, and it deserves consideration, that they were able to make laws about things of this kind, firmly establishing such melody as was fitted to rectify the perverseness of nature. This must have been the work of the Deity, or of some divine man: as in fact they say in Egypt, that the music which has been so long preserved was composed by Isis, and the poetry likewise: so that, as I said, if any one is able to apprehend the rectitude of them, he ought to have the courage to reduce them to law and order. For the search of pleasure and pain, which is always directed to the use of new music, perhaps possesses no great power of corrupting the consecrated choir by an accusation of its antiquity. It appears, therefore, that the choir of the Egyptians was by no means capable of being corrupted, but that the contrary was entirely the case.’

That the Egyptians were particularly fond of music, is abundantly proved by the paintings in their tombs of the earliest times; and we even find they introduced figures performing on the favorite instruments of the country, among the devices with which they adorned fancy boxes or trinkets. The representation of a woman playing the guitar, which forms part of an ornamental design on a wooden box, in the Berlin Museum, will serve to illustrate this fact, and to show how much grace is sometimes evinced in Egyptian designs. Of this I shall have occasion to speak hereafter.

That they paid great attention to the study of music, and had arrived at a very accurate knowledge of the art, is evident, when we consider the nature of the instruments they used, and the perfect acquaintance they must have had with the principles of harmony; and not only do the sculptures prove the fondness and, I may add, the skill of the Egyptians in the use of musical instruments, but the fact is confirmed by a statement of Athenæus,¹ who expressly tells us that both the Greeks and barbarians were taught by refugees from Egypt, and that the Alexandrians were the most scientific and skilful players on pipes and other instruments.

¹ Athen. iv. 25. He quotes Menecles of Barca and Andron in his annals of Alexandria; and these migrations appear to

have been most numerous at the period when the seventh Ptolemy, called Cacergetes, persecuted men of art and science.

In the infancy of music, as Dr. Burney has justly observed, ‘no other instruments were known than those of percussion, and it was, therefore, little more than metrical.’ Pipes of various kinds and the flute were afterwards invented; at the first very rude, and made of reeds which grew in the rivers and lakes. The flute,¹ says Horace,² was originally small and simple, with a few holes; and if it was introduced at the chorus of a play, its sound had only sufficient power to suit a theatre of a very limited size. But in process of time it was made larger, with more notes and a louder tone, and, bound with brass, it rivalled the tone of the trumpet. To discover, we can scarcely say to invent, such simple instruments, required a very slight effort, which observation afterwards improved; and music must have undergone a regular progression, through the early stages of infancy and youth, till it attained the age of maturity. But, ere it reached this stage of perfection, the powers of the human mind had been called forth to exalt its character; improvement followed improvement, and music became a noble and valuable science. To the alterations made in the simple instruments of early times, succeeded the invention of others of a far more complicated kind; and the many-stringed harp, lyre, and other instruments, added to the power and variety of musical sounds.

To contrive a method of obtaining perfect melody from a smaller number of strings, by shortening them on a finger-board during the performance, like our modern violin, was unquestionably a more difficult task than could be accomplished in the infancy of music, and great advances must have been already made in the science before this could be attained, or before the idea would suggest itself to the mind. With this principle, however, the Egyptians were well acquainted, and the sculptures unquestionably prove it, in the frequent use of the three-stringed guitar.

A harp or lyre, having a number of strings imitating various sounds and disposed in the order of notes, might be invented even in an early stage of the art; but a people who had not attentively studied the nature of musical sounds would necessarily remain ignorant of the method of procuring the same tones from a limited number of strings; nor are our means simplified till they become perfectly understood. It is then evident, not only

¹ *Tibia* was the flute; but it also signified a pipe, and the name *tibia dextra et sinistra* was applied to the double pipe.

Tibia obliqua, *πλαγίανλος*, was properly the flute.

² Hor. de Art. Poet. 202.

from the great fondness for music evinced by the early Egyptians, but from the nature of the very instruments they used, that the art was studied with great attention, and that they extended the same minute and serious investigation to this as to other sciences.

And though Diodorus¹ thinks that the Egyptians did not consider music a necessary part of an accomplished education, yet he attributes² the invention of it to the same deity who gave them laws and letters, who regulated the affairs of religion, and who taught them astronomy and all useful and ornamental arts.

This fabulous account of its origin evidently shows music to have been sanctioned and even cultivated by the priests themselves, who invariably pretended to have derived from the gods the knowledge of the sciences they encouraged, of which their body was the sole repository and source. Hermes or Mercury was, therefore, reputed to be the first discoverer of the harmony and principle of voices or sounds, and the inventor of the lyre.³

From his limiting the number of its strings to three, the historian evidently confounds the lyre with the Egyptian guitar; yet this traditional story, which he learnt during his visit to the country, serves to attest the remote antiquity of stringed instruments, and proves the great respect paid to music by the Egyptian priests, who thought it not unworthy of a deity to be its patron and inventor. In Greece, too, where music was particularly encouraged, its invention was attributed to the gods. Wind instruments were said to owe their origin to Minerva, as the lyre to Mercury; and Apollo was the patron of the science.

In noticing the harps of a tomb at Thebes,⁴ Bruce makes the following remark, that they 'overturn all the accounts hitherto given of the earliest state of music and musical instruments in the East; and are altogether, in their form, ornaments, and compass, an incontestable proof, stronger than a thousand Greek quotations, that geometry, drawing, mechanics and music were at the greatest perfection when this instrument was made, and that the period from which we date the invention of these arts was only the beginning of the era of their restoration.'⁵ But if his

¹ Diod. i. 1.

² Ibid. i. 16.

³ The same fable passed into Greece; but Apollo was said to have been the first who accompanied the lyre with his voice, and this was supposed to have given him a de-

cided superiority over the flute of Marsyas.

⁴ Of the time of Rameses III. B.C. 1235; consequently far from being the oldest harp represented in Egyptian sculpture.

⁵ Bruce's Travels, book i. c. 6.

remark applies to the harp, with much greater force does it to the three-stringed guitar above mentioned; and though we cannot fix the precise era of the invention of this or of any other Egyptian instrument, sufficient is known from the sculptures to prove that they were in common use¹ at the earliest periods of their known history.² The tomb in which the harps described by Bruce are painted is one of those called Bibán el Moloók, where the kings of Egypt were interred; the description of which I have given in a previous work,³ under the title of ‘Bruce’s, or the Harper’s, tomb.’

The name of Bruce ought not to be passed by without a tribute to the injured memory of one whose zeal was rewarded with reproach and disbelief.⁴ How easy is the part of a sceptic! What



No. 208. The harp and double pipe. Thebes.

a slight effort, yet what an air of superiority and appearance of learning attend the expression of a doubt! Bruce had been *provokingly* enterprising. Many of his readers were incredulous, because he had done what they, in the plenitude of their wisdom, conceived impossible; and many of those most violent in their censures had neither sufficient experience nor knowledge of the subject to hazard an opinion. Envy prompted some, and fashion

more, to speak of Bruce’s narrative as a tale of wonder, or a pure invention;⁵ and those who had never read his work fearlessly pronounced a censure to which others were known to assent. But it is gratifying to find that the

¹ The harp, or a sort of lyre, was a common instrument in Syria in the time of Jacob (Gen xxxi. 27); and this and the ‘organ,’ *kinóor* and *aogab*, were said to have been invented by Jubal, the sixth descendant of Cain (Gen. iv. 21).

² Those at the Pyramids are apparently of a date long previous to Usertesén, or the arrival of Joseph.

³ ‘Egypt and Thebes,’ p. 109.

⁴ This was particularly striking with regard to his visit to the emerald mines. (Bruce, book i. c. 11.)

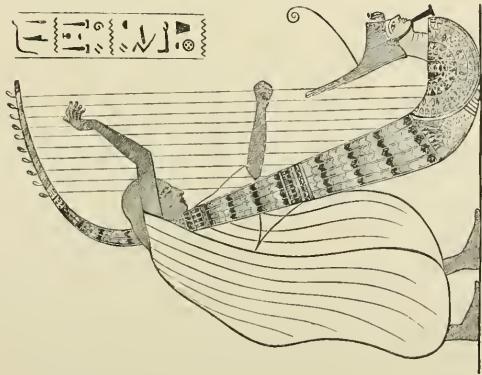
⁵ In the *Walpoliana* are this remark and anecdote. ‘Bruce’s overbearing manner

has raised enmity and prejudices; and he did wrong in retailing the most wonderful parts of his book in companies. A story may be credible when attended with circumstances, which seems false if detached. I was present in a large company at dinner where Bruce was talking away. Some one asked, “What musical instruments are used in Abyssinia?” Bruce hesitated, not being prepared for the question, and at last said, “I think I saw one *lyre* there.” George Selwyn whispered to his next man, “Yes; and there is one less since he left the country.”



THE HARPER'S TOMB.

THEBES.



HARPERS PAINTED IN THE TOMB OF RAMSESSE III.
(The originals)



KNOWN AS THUTMOSE, OR THE HARPER'S TOMB.
(The originals are now effaced.)

THUTMOSE.

more mature investigations of the present day have vindicated the character of this distinguished traveller; and it is to be



Harp, pipe, and flute, from an ancient tomb near the Pyramids.

No. 209.

1. Harp, with harp, *hes t*, of seven cords; over him is inscribed in hieroglyphs *sqa em bent* (*a*), 'player, (literally, 'scraper') on the harp,' 2. Singer, seated; above him, *hes t* (*b*), 'singer,' 3, 4. Similar harper and singer, and same inscriptions (*c*, *d*), 5, 6. Singer and player on the direct flute or pipe: before the former, *hes* (*h*), 'singer'; before the latter, *men t* (*g*), 'pipe,' 7, 8. Singer and player on the oblique flute, *seba* (*e*): before the former, *hes* (*f*) 'singer.'

hoped that his name will henceforward continue to be attached to the interesting monument above alluded to, as a memorial of his diligence under the most unfavorable circumstances, and as a token of his veracity. And so shall the name of Bruce be honored *in his tomb*.



No. 210.

The harp, guitar, and double pipe.

Thebes.

It is sufficiently evident, from the sculptures of the ancient Egyptians, that their hired musicians were acquainted with the



No. 211.

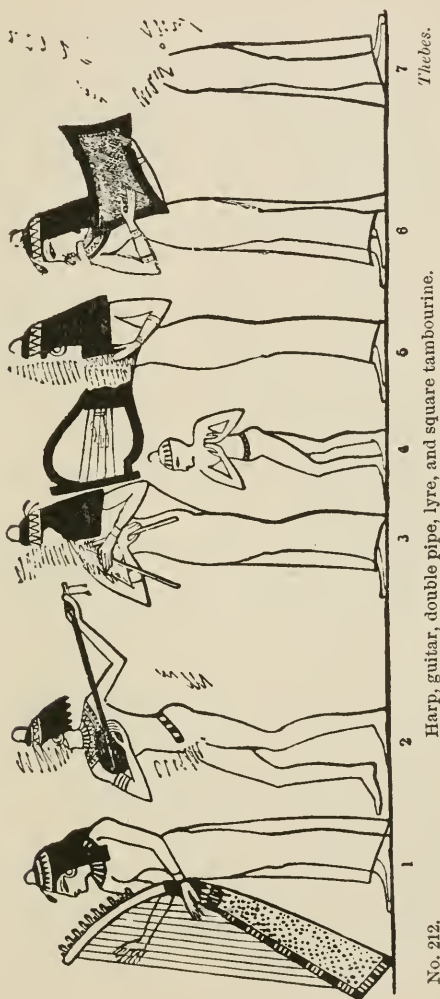
Harp, and a smaller one of four strings.

Thebes.

triple symphony; the harmony of instruments, of voices, and of voices and instruments.¹ Their band was variously composed,

¹ Woodcut No. 209, &c.

consisting either of two harps, with the single pipe¹ and flute; of the harp and double pipe, frequently with the addition of the guitar; of a fourteen-stringed harp, a guitar, lyre, double pipe, and tambourine; of two harps, sometimes of different sizes, one

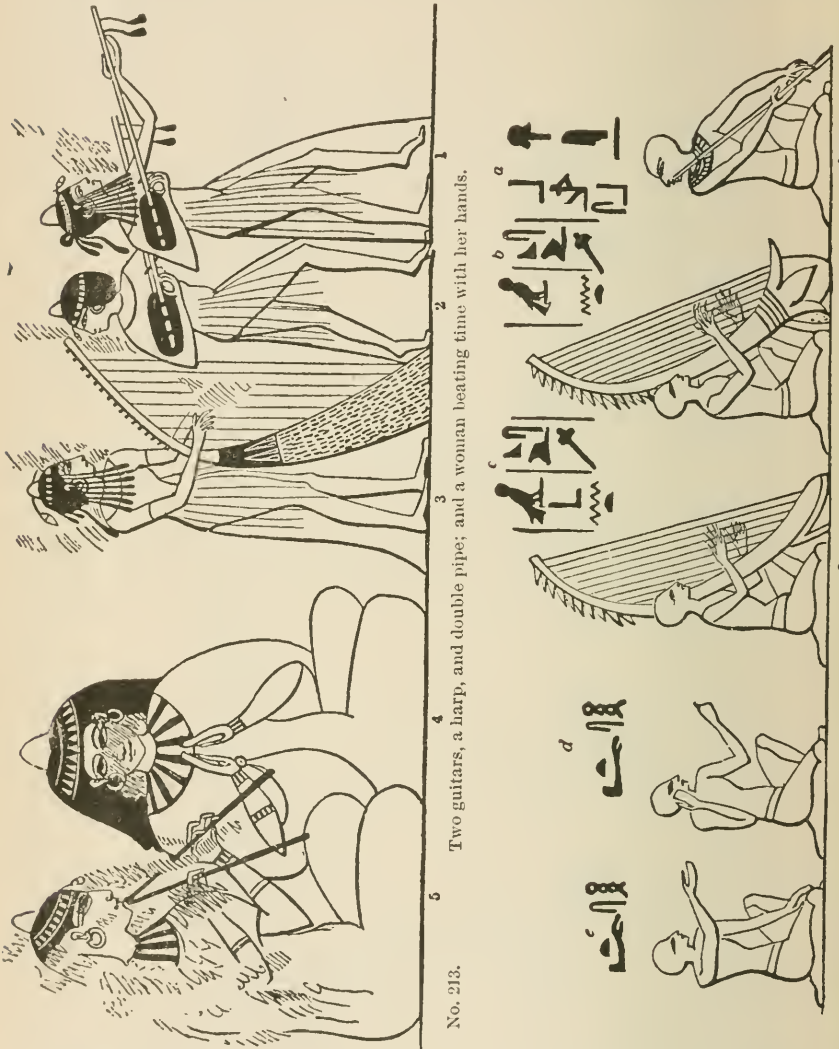


Harp, guitar, double pipe, lyre, and square tambourine.

of seven, the other of four strings; of two harps of eight strings, and a seven-stringed lyre: of the guitar, and the square or oblong tambourine; of the lyre, harp, guitar, double pipe, and a sort of

¹ It was played by the Greeks and Romans, to accompany the lyre and other instruments. (Horace, *Od. lib. iii. 19, l. 19.*)

harp, with four strings, which was held upon the shoulder;¹ of the harp, guitar, double pipe, lyre, and square tambourine;² of the harp, two guitars, and the double pipe;³ of the harp, two



No. 213. Two guitars, a harp, and double pipe; and a woman beating time with her hands.

No. 214. The flute, two harps, and men singing. The hieroglyphic inscriptions like those in No. 213.

flutes, and a guitar;⁴ of two harps and a flute; of a seventeen-stringed lyre, the double pipe, and a harp of fourteen strings; of

¹ Woodcut No. 234.
² Woodcut No. 212.

³ Woodcut No. 213.
⁴ Sacred music, woodcut No. 254.

the harp and two guitars; or of two seven-stringed harps and an instrument held in the hand, not unlike an Eastern fan,¹ to which were probably attached small bells, or pieces of metal that



No. 215. Men and women singing to the harp, lyre, and double pipe. Before Fig. 6 is *hes Ai*, 'the singer Ai.' *Thebes.*

emitted a jingling sound when shaken, like the crescent-crowned bells of our modern bands; besides many other combinations of these various instruments: and in the Bacchic festival of Ptolemy



No. 216. Harp and two guitars.

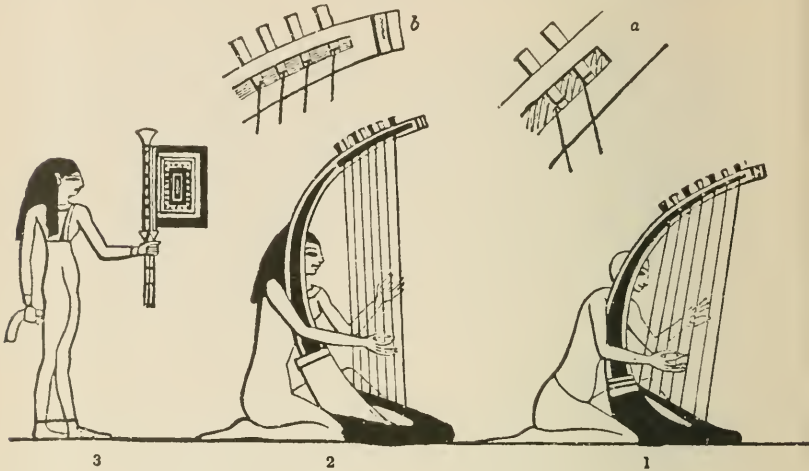
Thebes.

Philadelphus, described by Athenæus, more than 600 musicians were employed in the chorus, among whom were 300 performers on the *kithara*.²

¹ Woodcut No. 217, fig. 3.

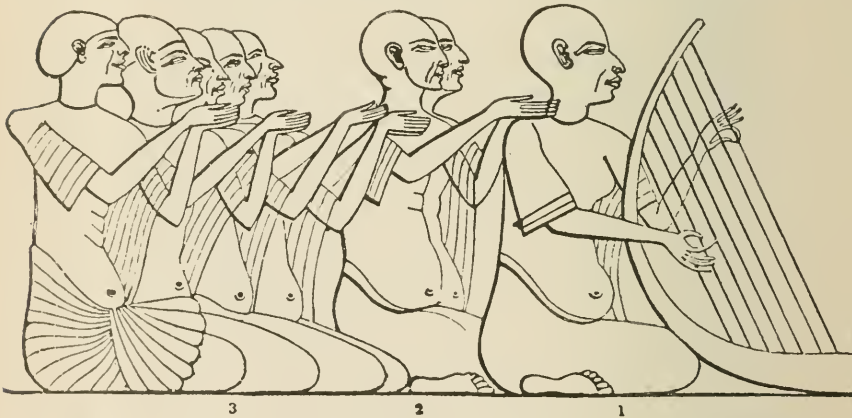
² Athen. lib. v

Sometimes the harp was played alone, or as an accompaniment to the voice; and a band of seven or more choristers frequently sang to it a favorite air, beating time with their hands between



No. 217. Two harps, and another instrument, which perhaps emitted a jingling sound. *a* and *b* show how the strings were wound round the pegs. *Beni-Hussan.*

each stanza. They also sang to other instruments,¹ as the lyre, guitar, or double pipe, or to several of them played together, as the flute and one or more harps, or to the last with a lyre or a



No. 218.

Blind harper and choristers.

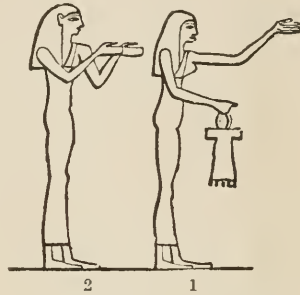
Alabastron.

guitar. It was not unusual for one man or one woman to perform a solo; and a chorus of many persons occasionally sang at a

¹ Woodcuts Nos. 213, 214, 215, and 216.

private assembly without any instrument, two or three beating time at intervals with the hand. Sometimes the band of choristers consisted of more than twenty persons, only two of whom responded by clapping their hands;¹ and in one instance I have seen a female represented holding what is, perhaps, a species of instrument, whose use and sound may have been similar to the one above mentioned.²

The custom of beating time by clapping the hands between the stanzas is still used in Egypt, though I conceive it to be no longer done in the same manner by the modern as by the ancient Egyptians, whose notions of music, as of every other subject, must have been very different from those of their uncivilized successors.



An unusual kind of instrument.
No. 219. Thebes.

On some occasions women beat the tambourine and *darabooka* drum,³ without the addition of any other instrument, dancing or singing to the sound; and, bearing palm branches or green



No. 220. Women beating tambourines and the *darabooka* drum (fig. 1). Thebes.

twigs in their hands, they proceeded to the tomb of a deceased friend, accompanied by this species of music; and the same

¹ Herodot. ii. 60, where they are said to play the flute and cymbals, and to clap their hands; and the sculptures *passim*.

² Woodcut No. 219, fig. 1.

³ The *darabooka* [*darabooka* is the

Arabic name; the Egyptian has not been found—S. B.] is a sort of drum still used in Egypt, where it bears this name. Woodcut No. 220.

custom may still be traced in the Friday visit to the cemetery, and in some other funeral ceremonies among the Moslem peasants of modern Egypt.

If it was not customary for the higher classes of Egyptians to learn music for the purpose of playing in society, and if few amateur performers could be found among persons of rank, still some general knowledge of the art must have been acquired by a people so alive to its charms; and the attention paid to it by the priests regulated the taste, and prevented the introduction of a vitiated style. Those who played at the houses of the rich, as well as the ambulant musicians of the streets, were of the lower classes, and made this employment the means of obtaining their livelihood; and in many instances both the minstrels and the choristers were blind.¹

From what has been said, it appears, first, that music was studied by the Egyptian priests with other views than that of affording pleasure and entertainment, the same science being borrowed by Pythagoras from Egypt. Secondly, that it was universally used at their private parties, where professional people were hired to perform. Thirdly, that we are to understand from the remark of Diodorus, of its not being customary for the Egyptians to learn music, that the higher orders did not study it as an amusement; and though the twelfth Ptolemy obtained the surname of Auletes from his skill in playing the flute, we cannot infer a general custom from the caprice of a Greek. Strabo, indeed, censures his taste; but this was rather owing to the feelings of a Roman,² than to the conviction that the conduct of the monarch was at variance with the customs of his people: for the Greeks³ had not the same prejudices against music and the dance as many of the Romans; and, so far from deeming it unworthy a person of rank to excel in them, no one was thought to have received a proper education who possessed not those accomplishments. Cicero observes,⁴ that they considered the arts of singing and playing upon musical instruments a very principal part of learning; whence it is related of Epaminondas, who, in my judgment, was the first of all the Greeks, that he played very well

¹ Woodcut No. 218.

² Strabo was born at Amasia, in Pontus, on the borders of Cappadocia, and had studied in Greece, but was educated as a Roman.

³ Polybius, lib. iv. 20, 21, commends the

Arcadians for their love of music and the dance. (Plato's *Crito*, s. xii.; *Phædo*, s. iv.; *Alcibiades*, s. vi.; and *Olympiodorus*, *Life of Plato*.)

⁴ *Cic. Tusc. Quæst. lib. i.*

upon the flute. And, some time before, Themistocles, upon refusing the harp at an entertainment, passed for an uninstructed and ill-bred person. Hence Greece became celebrated for skilful musicians; and as all persons there learned music, those who attained to no proficiency in it were thought uneducated and unaccomplished.' Cornelius Nepos, again, mentioning Epaminondas, observes that 'he played the harp and flute, and perfectly understood the art of dancing, with other liberal sciences;' 'though,' he adds, 'in the opinion of the Romans, these are trival things, and not worthy of notice, yet in Greece they were reckoned highly commendable.'

Nor was it regarded with any other feeling by the Israelites; and they not only considered it becoming to delight in music and the dance, but persons of rank deemed them a necessary part of their education. Like the Egyptians, with whom they had so long resided, and many of whose customs they adopted, the Jews carefully distinguished sacred from profane music. They introduced it at public and private rejoicings, at funerals, and in religious services; but the character of the airs, like the words of their songs, varied according to the occasion; and they had canticles of mirth, of praise, of thanksgiving, and of lamentation. Some were *epithalamia*, or songs composed to celebrate marriages: others to commemorate a victory, or the accession of a prince; to return thanks to the Deity, or to celebrate His praises; to lament a general calamity, or a private affliction: and others, again, were peculiar to their festive meetings. On these occasions they introduced the harp, lute, tabret,¹ and various instruments, together with songs and dancing, and the guests were entertained nearly in the same manner as at an Egyptian feast. In the Temple, and in the religious ceremonies, the Jews had female as well as male performers, who were generally daughters of the Levites, as the Pallacides of Thebes were either of the royal family or the daughters of priests; and these musicians were attached exclusively to the service of religion,² as I believe them also to have been in Egypt, whether men or women. David was not only remarkable for his taste and skill in music, but took a delight in introducing it on every occasion. 'And seeing that the Levites

¹ Conf. Luke xv. 25 and Gen. xxxi. 27. This last, however, in the Hebrew, is *kindor*, כִּנּוֹר, which is rather a lyre. It was known in the days of Seth (Gen. iv. 21) and of Job (xxi. 12).

² The function of the odists or bards is detailed in the decree of Canopus or Inscription of San. ('Records of the Past,' viii. p. 90.) There was a chief odist or musician over the rest. — S. B.

were numerous, and no longer employed as formerly in carrying the boards, veils, and vessels of the tabernacle, its abode being fixed at Jerusalem, he appointed a great part of them to sing and play on instruments at the religious festivals.' Solomon, again, at the dedication of the Temple, employed '120 priests to sound with trumpets;'¹ and Josephus pretends that no less than 200,000 musicians were present at that ceremony, besides the same number of singers, who were Levites.²

It has always been doubted whether the Jews studied music with the same systematic views as the Egyptians and Greeks; and as all airs, previous to the invention of notation, must have been traditional, and in some degree dependent on the taste and memory of the performers, many have questioned the possibility of their being either numerous or faithfully preserved.³

The early Greeks and Egyptians may not have had the means of handing down their compositions with the same fidelity as modern nations, yet this objection does not apply to the study of the science itself; their object being rather to touch the feeling than to delight the ear. It is impossible for us to determine whether the Egyptian priests, in later times, devised any method of preserving their melodies, or trusted entirely to oral tradition, as this secret would have been concealed by them with the same jealous care as the mysteries themselves; judging, however, from that adopted in Greece,⁴ which was by disposing the letters of the alphabet in different ways, we may conclude that if the Egyptians really had any, it was equally cumbrous and imperfect.

Respecting the origin of this invention among the Greeks there is a diversity of opinion; it is generally attributed to Terpander, a celebrated poet and musician,⁵ who flourished about six hundred and seventy years before our era; but the complication of sixteen hundred and twenty different notes must at all times have presented a considerable difficulty in reading and recollecting them.

¹ 2 Chron. v. 12.

² Joseph. Antiq. lib. viii. 3: 'Solomon made 200,000 trumpets, according to the command of Moses, and 200,000 garments of fine linen for the singers, who were Levites . . . and instruments for singing hymns, nablæ and cinyr, made of the finest brass, 40,000.'

³ The Hebrew music has been discussed by Carl Engel: 'The Music of the most Ancient Nations,' 8vo. Lond. 1864, p. 277

and foll. The scales are given, p. 394. He inclines to the use of the pentatonic scale. — S. B.

⁴ In one of the paintings from Herculaneum, a woman is seen playing on a lyre of eleven strings, and another sings from a paper which she holds in her hand, and which has either the notes, or the words of the song, written upon it.

⁵ Plut de Musicâ.

To inquire into the notions of Pythagoras, Plato,¹ and other Greek sages, who spent much time in Egypt, must be highly interesting, as it is almost the only means of obtaining any information respecting the character of Egyptian music, and their notions on the subject; and we have the authority of Plutarch² and other authors for believing that Plato and Pythagoras paid the greatest attention to this science.³ The latter considered one of the noblest purposes to which it could be applied was to soothe and calm the mind,⁴ and deemed it the duty of a philosopher to look upon it as an intellectual study rather than an amusement; for the gravity of Pythagoras censured the custom of judging music by the senses, and required that it should be submitted to the acumen of the mind, and examined by the rules of harmonic proportion.⁵ It was the idea of this philosopher 'that air was the vehicle of sound, and that the agitation of that element, occasioned by a similar action in the parts of the sounding body, was its cause. The vibrations of a string, or other sonorous body, being communicated to the air, affected the auditory nerves with the sensation of sound; and this sound,' he argued, 'was acute or grave in proportion as the vibrations were quick or slow.' Others were of a different opinion; and Aristoxenus held the ear to be the sole standard of musical proportions. He esteemed that sense sufficiently accurate for musical, though not for mathematical, purposes; and it was, in his opinion, absurd to aim at an artificial accuracy in gratifying the ear beyond its own power of distinction. He, therefore, rejected the velocities, vibrations, and proportions of Pythagoras, as foreign to the subject, in so far as they substituted abstract causes in the room of experience, and made music the object of intellect rather than of sense.⁶ Modern investigations, however, have confirmed the statements of Pythagoras, and absolute demonstration has placed them beyond the possibility of doubt.

An interesting question now suggests itself: Whence did Pythagoras derive his notions respecting the theory of sound?

¹ Plato and Eudoxus were thirteen years in Egypt, according to Strabo (lib. xvii.). In one of the tombs of the kings at Thebes is an inscription, written by a *daduchus* or torch-bearer of the Eleusinian mysteries, who says he examined those monuments many years 'after the divine Plato.'

² Plut. de Musicâ.

³ Mr. Chappell ('Hist. of Ancient Music,' 8vo. London, 1874, p. 71) thinks

Pythagoras imported the octave system from Babylon or Egypt. The story of the invention from the hammer and anvil is discredited by Ptolemy; but the invention of scales is generally attributed to Pythagoras.—S. B.

⁴ Plut. de Virtute morali. Strabo, lib. i. p. 11, ed. Cas. Jamblichus, de Vitâ Pythag. &c.

⁵ Plut. de Musicâ.

⁶ 'Encyclop. Brit.' art. Music.

Did he arrive at these conclusions from his own experience? or is it not more probable that he was indebted to those under whom he studied for this insight into a subject they had so long been examining? But the fact of Pythagoras being the sole teacher of this doctrine, goes far to prove that it did not originate in Greece, and that his opinions were founded on Egyptian data. For what that philosopher asserted respecting sound emitted by a long and short string of the same quality and thickness, 'that the shorter made the quicker vibrations and uttered the acuter sound,' had been already shown by the Egyptians; and we may fairly conclude that he derived his knowledge of this subject from the same source¹ as that of the solar system, which remained unknown in Europe from his time to the days of Copernicus, and with which Pythagoras, of all the Greeks, was alone acquainted.²

On the sacred music of Egypt I shall make a few remarks in another part of this work; I now return to their customs at private entertainments. When hired to attend a party, the musicians either stood in the centre or at one side of the festive chamber, and some sat cross-legged on the ground,³ like the Turks and other Eastern people of the present day. They were usually accompanied on these occasions by dancers, either men or women, sometimes both; whose art consisted in assuming all the graceful or ludicrous gestures which could obtain the applause, or tend to the amusement, of the assembled guests.

Music⁴ and dancing⁵ are also mentioned as having been considered essential at entertainments, among the Greeks, from the earliest times, and are pronounced by Homer⁵ to be diversions requisite at a feast; 'an opinion,' says Plutarch,⁶ 'confirmed by Aristoxenus, who observes that music is recommended in order to counteract the effect of inebriety; for as wine discomposes the body and mind, so music has the power of soothing them and

¹ Jamblichus informs us that Pythagoras derived his information upon different sciences from Egypt, and taught them to his disciples (*Vita Pythag.* lib. i. c. 29); that he learnt philosophy from the Egyptian priests (*Ibid.* i. c. 28); and that he employed music for curing diseases both of body and mind (*Ibid.* i. cc. 25, 29, and 31). He maintained 'that music greatly conduces to health . . . and that to temper and direct the morals and lives of men by means of music was most beneficial' (i. 25).

² Cicero, quoting Theophrastus, says that Ictas of Syracuse was of opinion that

the heavens, the sun, moon, stars, and all bodies above us stood still, and that the earth alone moved, having the same effect when turned on its axis as if all the others were in motion. (*Aead. Qu.* 54, 39.)

³ Woodcut No. 195, *fig.* 1; Nos. 210 and 218; and Plate XI.

⁴ The Nabathæans of Arabia Petraea always introduced music at their entertainments (*Strabo*, xvii.); and the custom appears to have been very general among the ancients.

⁵ Homer, *Od.* i. 152; quoted by Plutarch de Musica.

⁶ Plut. *loc. cit.*

of restoring their previous calmness and tranquillity.' Such, indeed, may have been the light in which the philosophic mind of Plutarch regarded the introduction of those diversions,¹ and such he attributed to the observation of the poet; but it may be questioned whether they always tended to the sobriety either of the Greeks or of the lively Egyptians.

Of the style and nature of Egyptian music we can glean but little from Herodotus, or any other writer who has mentioned the subject. The remark of the father of history, that some of their songs bore a plaintive character, is probably just; yet we cannot imagine it applicable to the generality of those introduced at the festive meetings of a cheerful people. That called *Maneros* he supposes to be the same as the *Linus* of the Greeks, 'which was known in Phœnicia, Cyprus, and other places:'² and he expresses his surprise that the same song should be met with on the banks of the Nile; 'I have been struck,' says the historian, 'with many things during my inquiries in Egypt, but with none more than this song, and I cannot conceive from whence it was borrowed; indeed, they seem to have had it from time immemorial, and to have known it by the name *Maneros*:'³ for they assured me it was so called from the son of their first monarch, who, being carried off by a premature death, was honored by the Egyptians with a funeral dirge. And this was the first and only song they used at that early period of their history.'

Though this account is highly improbable, yet we learn from it that one of the many songs of the Egyptians was similar to the *Linus* of Greece, which was of a plaintive character, peculiarly adapted to mournful occasions; but whether it was of Egyptian or of Phœnician origin, it is of little moment to inquire.

Plutarch, on the other hand, asserts that it was suited to festivities⁴ and the pleasures of the table, and that, 'amidst the diversions of a social party, the Egyptians made the room resound with the song of *Maneros*.'⁵ In order, therefore, to reconcile

¹ The ancients had very high notions of the effects of music; some founded on fact, others on fable and imagination. Of these last were the building of the walls of Thebes by the sound of Amphion's lyre, to which Pausanias gravely refuses to lend his authority (lib. ix.); and some of the stories related by Ælian of its effects upon wild animals. (Nat. His. xii. 46, &c.)

² Herodot. ii. 79.

³ Pausanias, Græc. lib. ix., says, 'The Egyptians call the song of *Linus* in their language *Manerôs*;' and mentions two persons named *Linus*. (Vide also Hor. Od. lib. i. 12, 7; lib. xxiv. 13; and lib. iii. 11, 2.)

⁴ I have sometimes doubted whether there may not have been also a musical instrument of this name.

⁵ Plut. de Isid. s. 17.

these conflicting statements, we are naturally led to the conclusion that the Egyptians had two songs, bearing a name resembling Maneros, which have been confounded together by Greek writers; and that one of these bore a lugubrious, the other a lively character.

Many conjectures have been offered respecting the nature and origin of the song of Maneros, and some doubt its having derived this name from a son of the first Egyptian monarch,¹ contending that it was so called from the person to whom music owed its invention;² both which opinions are noticed by Plutarch, who in another work³ states, on the authority of Heraclides, that Linus was a native of Eubœa.⁴ And from his adding that Linus was famed for making lugubrious poems, it is evident that the song mentioned under this name by Herodotus, and considered to be the Maneros of Egypt, had a similar origin with the fabulous Linus himself.

If, however, conjecture is permitted, we may presume the song of Maneros did not derive its name from any individual;⁵ and if this and the Greek Linus resembled each other, it was probably merely in their general character. The former idea is partly confirmed by another observation of Plutarch,⁶ 'that others say Maneros is not a name, but a complimentary manner of greeting made use of by the Egyptians to one another, at their solemn feasts and banquets, implying a wish "that what they were then engaged in might prove fortunate and successful;" for such is the true import of the word.' It is, indeed, reasonable to suppose that their songs were made to suit the occasions, either of rejoicing and festivity, of solemnity, or of lamentation; and all their agricultural and other occupations had undoubtedly, as at the present day, their appropriate songs.

¹ Herodotus, *loc. cit.* Plutarch says Maneros was the child who watched Isis as she mourned over the body of Osiris. (*Vide* Athenæus, lib. xiv. Plut. de Isid. s. 17.)

² Plut. de Isid. s. 17. J. Pollux calls him the inventor of agriculture, and says the song Maneros was sung by husbandmen. (*Onom.* iv. 7.)

³ Plut. de Musicâ.

⁴ But he does not confound the songs of Linus and Maneros, as Herodotus has done. Pausanias (*Græc.* lib. ii.) says Linus, the inventor of songs, was a son of Apollo; but refers to another part of his work (lib. ix.), where he mentions one Linus, the son of Amphimarus, the son of

Neptune and Urania, killed by Apollo; the other a son of Ismenius, killed by Hercules. Some suppose there were three of this name; but authors are not agreed upon the subject. Pausanias asserts positively, 'that neither of the two just mentioned composed any poems; or, at least, any that came down to posterity.' (*Lib.* ix.)

⁵ A festal dirge written by King Antef of the 11th Dynasty, supposed to be that alluded to by Herodotus (ii. 28), has been found on two papyri, one in the Berlin Museum, the other at Leyden. It has been translated by Mr. C. W. Goodwin. ('Records of the Past,' iv. pp. 115-118.)

⁶ Plut. de Isid. s. 17.

At the religious ceremonies and processions where music was introduced, there is reason to believe the attendance of ordinary performers was not permitted, but that musicians attached to the priestly order, and organized for this special purpose, were alone employed; who were considered to belong exclusively to the service of the temple, as each military band of their army to its respective corps.¹

When an individual died it was usual for the women to issue forth from the house, and, throwing dust and mud upon their heads,² to utter cries of lamentation as they wandered through the streets of the town, or amidst the cottages of the village. They sang a doleful dirge in token of their grief; they by turns expressed their regret for the loss of their relative or friend, and their praises of his virtues; and this was frequently done to the time and measure of a plaintive, though not inharmonious, air.³ Sometimes the tambourine was introduced, and the 'mournful song' was accompanied by its monotonous sound. On these occasions the services of hired performers were uncalled for; though during the period of seventy days, while the body was in the hands of the embalmers, mourners⁴ were employed, who sang the same plaintive dirge to the memory of the deceased; a custom prevalent also among the Jews, when preparing for a funeral.⁵

At their musical *soirées*, men or women played the harp, lyre, *guitar*, and the single or double pipe, but the flute appears to have been confined to men; and the tambourine and *darabooka* drum were generally appropriated to the other sex. The *darabooka* drum is rarely met with in the paintings of Thebes, and it is probable that it was only used on certain occasions, and chiefly, as at the present day, by the peasant women and the boatmen of the Nile. From the representation given of it, I conclude it to be the same as that of the present day, which is made of parchment, strained and glued over a funnel-shaped case of pottery, which is a hollow cylinder, with a truncated cone attached to it. It is beaten with the hand, and, if relaxed, the parchment is braced by exposing it a few moments to the sun, or the warmth of a fire. It is generally supported by a band

¹ This is confirmed by the inscription of the decree of Canopus. ('Records of the Past,' viii. p. 89.) — S. B.

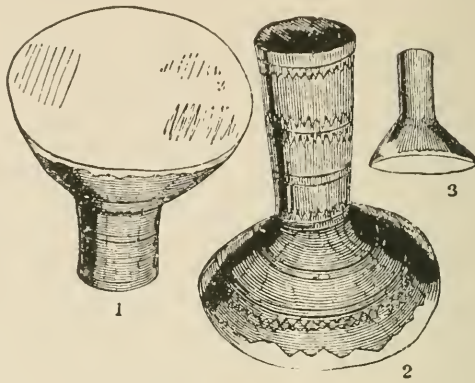
² Herodot. ii. 85. Diod. ii. 91, as in 2 Sam. i. 2.

³ Diod. ii. 72, 91.

⁴ Hired to mourn, as with the Romans and others. The Egyptians mourned for Jacob seventy days. (Exod. l. 3. Herodot. ii. 86.)

⁵ Jer. xvi. 5, 7. Matt. ix. 23.

round the neck of the performer, who with the fingers of the right hand plays the air, and with the left grasps the lower edge of the head, in order to beat the bass, as in the tambourine; which we

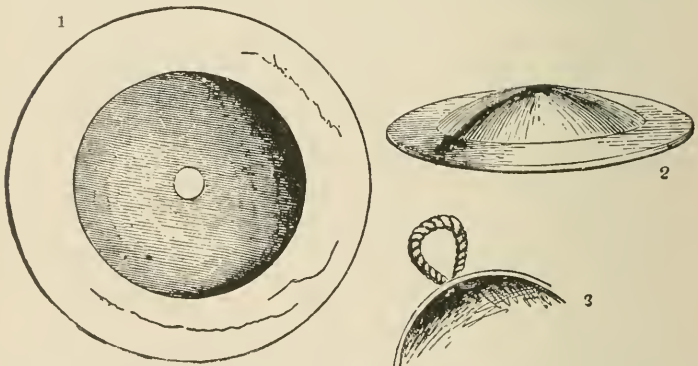


No. 221.

The darabooka of modern Egypt.

find from the sculptures was played in the same manner by the ancient Egyptians.¹

Besides these instruments, they had cymbals² and cylindrical



No. 222.

Egyptian cymbals, five inches and a half in diameter.

Salt's Collection.

maces, two of which were struck together, and probably emitted a sharp metallic sound. The cymbals were of mixed metal, apparently brass or a compound of brass and silver, and of a form exactly resembling those of modern times, though smaller, being only seven, or five inches and a half, in diameter. The handle I

¹ Woodcut No. 220.

² They have been found in the tombs of Thebes.

believe to have been also of brass, bound with leather, string, or any similar substance, and, being inserted in a small hole at the summit, was secured by bending back the two ends. The same kind of instrument is used by the modern inhabitants of the country; and from them have been borrowed those very small cymbals played with the finger and thumb,¹ which supply the place of castanets in the *almeh* dance. Indeed, there can be no doubt that these were the origin of the Spanish castanet, having been introduced into that country by the Moors, and afterwards altered in form, and made of chestnut (*castaña*) and other wood, instead of metal. Cymbals were also an old Arabic instrument, and Clemens says that the Arabs marched to battle by the sound of cymbals.²

The cymbals of modern Egypt are chiefly used by the attendants of sheikhs' tombs, who travel through the country at certain periods of the year, to collect the charitable donations of the credulous or the devout among the Moslems, who thus, indirectly and unconsciously, encourage the idleness of these pretenders, in the hope of obtaining some blessing from the indulgent saint. Drums and some other noisy instruments, which are used at marriages and on other occasions, accompany the cymbals, but these last are more peculiarly appropriated to the service of the sheikhs, and the external ceremonies of religion: and this is the more remarkable, as we find no instances in the paintings of Thebes of their having been used at the festive meetings of the ancient Egyptians; and a person whose coffin contained a pair of cymbals was described in the hieroglyphics of the exterior as the minstrel of a deity. We may, therefore, conclude that this instrument belonged, as with the modern Egyptians, to the service of religion, though probably not so exclusively³ as the sacred sistrum.

The cylindrical maces were also admitted among the instruments used on solemn occasions; though they more properly formed part of the military band, or regulated the dance. They varied slightly in form, but consisted generally of a straight handle, or cylinder, surmounted by a head, or some ornamental device, the whole being probably of brass, or other sonorous metal.

¹ The same manner of holding them is represented in the paintings of Hieroglino.

² Pædagog. lib. ii. p. 54.

³ I am not certain that the two figures represented in the woodcut No. 226 are

not playing cymbals, though from the injury done to those sculptures we are unable to discover what they hold in their hands. To judge, however, from their position, we may conclude they are playing this instrument. (Hor. Od. lib. i. 16, 8.)

Sometimes the handle was slightly curved, and double, with two heads at the upper extremity; but in all cases the performer held one in each hand; and the nature of the sound depended greatly on the force with which he struck them together. It is not improbable that their hollow head contained a loose metallic ball, which gave a jingling noise when shaken; and we find that the clang of such instruments was thought as essential for martial music three thousand years ago as at the present day. [The objects held in the hands of the attendant of Athor appear to



No. 223.

Man playing the cylindrical maces, and dancing figures.

Thebes.

The inscription reads: 'The attendant of Athor, lady of Heliopolis,' or Tentyris.

have been a kind of castanets used in the dance. Many similar objects supposed to be employed for the same purpose are in the different museums of Europe; they are made of ivory or wood, flat, pierced at one end for a cord to hold them together. Sometimes they are recurved, and always terminate in human heads, which formed the parts clapped together. The outside of the ivory ones are often ornamented with engraved figures of the deities Bes and Athor, who presided over dancing and various animals.¹—S. B.]

Similar to these maces² appear to have been the round-headed pegs, resembling large nails, seen in the hands of some dancing figures in the paintings of Herculaneum, and supposed to have

¹ Pierret, 'Dictionnaire d'Archéologie Égyptienne,' p. 119.

² Similar instruments of wood are used in the same manner by the Japanese.

been struck together, as an accompaniment to the lyre, which is played by another person, in the same picture: but I am not aware of their having been mentioned by any Greek or Latin writer.

We may conclude the Egyptians were not guilty of the same extravagance in music and other amusements as the Greeks and Romans, extraordinary instances of which are mentioned by ancient authors. The flute of Ismenias, a celebrated Theban musician, cost at Corinth three talents, or 581*l.* 5*s.* of our money; and if, says Xenophon, a bad flute-player would pass for a good one, he must, like those whose reputation is established, expend considerable sums on rich furniture, and appear in public with a large retinue of servants. Amœbæus, again, an Athenian harper of great repute, received an Attic talent, or 193*l.* 15*s.* a day for his performance: and the actors of the Roman stage were not only paid immense sums, Roscius making 500 sesteritia, or 4036*l.* 9*s.* 2*d.* per annum; but in later times they became such favorites that they established parties in the city, and had sufficient influence to induce the people to espouse their quarrels.

Though the Egyptians were fond of buffoonery and gesticulation, they do not seem to have had any public show which can be said to resemble a theatre; nor were their pantomimic exhibitions, which consisted chiefly in dancing and gesture,¹ accompanied with any scenic representation.² The stage is, indeed, allowed to have been purely a Greek invention; and to dramatic entertainments, which were originally of two kinds, comedy and tragedy, were added the Roman pantomime. Music formed a principal part of the old comedy; and a chorus was present, as in tragedy, to sing between the acts.³ And, indeed, when we consider the license of ancient comedy, and the frequent decrees which it was found necessary to make in order to suppress it, and sometimes even to prohibit dramatic performances or the erection of a theatre, we may be assured that similar representations would not have been tolerated by the severity of an Egyptian priesthood, whether the idea had originated in the country, or

¹ At Rome, after the time of Augustus, the *mimi*, or *pantomimi*, were confined to these, and did not speak.

² The Egyptians, however, intended to represent the passions and certain continued actions by special pantomimic gestures, which conveyed to the eye a sequence

of adventures. Although no speeches are recorded, it is not impossible they accompanied the actions. (Cf. Duemichen, 'Resultate,' Taf. viii.)—S. B.

³ Our orchestra performs this office of the chorus. The duties of the Greek chorus varied at different times.

had been accidentally introduced at a later period from the Greeks.¹

Some instruments of the military band differed from those of ordinary musicians; but it may be questioned whether the sculptures have recorded all the various kinds used in the Egyptian army. The principal ones appear to have been the trumpet and drum: the former used to marshal the troops, summon them to the charge, and direct them in their evolutions;² the latter to regulate and enliven their march.³



No. 224.

A military band.

Thebes.

Fig. 1. Trumpeter.
2. Drummer.
3, 4, 5. Men with eastanets.

The trumpet, like that of the Israelites, was about one foot and a half long, of very simple form, apparently of brass; and when sounded, it was held with both hands, and either used singly or as part of the military band, with the drum and other instruments. The musicians were not distinguished by any particular dress from the rest of the soldiers; whole regiments are represented attired in the same costume as their trumpeters; and if any difference can be perceived, it consists in their being without arms, either offensive or defensive. It is true that the other figures given in the above woodcut are clad in different dresses, which might be supposed to indicate a peculiar garb for the trum-

¹ There was a theatre at Antinôc, a city of Central Egypt, founded by Adrian, and one at Alexandria; but these were Greek or Roman towns, and no building of the kind is met with in any of ancient Egyptian date.

² In the battle-scenes at Medeenet Haboo, in Thebes.

³ The principal use of military music was to regulate the pace of the march, so that the different columns should not press on one another, or club, as it is called.

peters ; but some corps of archers are represented in another part of the picture wearing both these costumes ; and that all the privates of the same regiment had a similar uniform is still more satisfactorily shown in a procession of soldiers at Thebes, marching to celebrate a sacrifice, a small portion of which is given in a previous part of this work.¹ Though the drummers, trumpeters, and other musicians of the Egyptian army are represented in the sculptures without arms, we cannot suppose this really to have been the case ; and when equipped for war, and marching to the attack of an enemy, they were probably armed like the rest of the troops, at least with a sword and shield, or other requisite means of defence.



No. 225. The trumpeter.
Thebes.

The trumpet was particularly, though not exclusively, appropriated to martial purposes. It was straight, like the Roman *tuba*, or our common trumpet : but it is uncertain whether that used in the Egyptian cavalry was of another form, as in the Roman army, where the *lituus* or clarion, bent a little at the end like an augur's staff, supplied the place of the *tuba* of the infantry.

In Greece, various instruments were adopted for summoning troops to battle. The Lacedæmonians and Cretans advanced to the sound of flutes,² others to that of lutes ; and many preferred the lyre, which, according to Plutarch,³ was long employed by the Cretans for this purpose. The trumpet, indeed, does not appear to have been in very early use among the Greeks, and it is rarely mentioned by Homer at the siege of Troy, where the chief instruments were the flute, lyre, and pipe, or *surinx*. The trumpet or *salpinx* was, however, known in Greece before that event : it was reputed to have been the invention of Minerva, or of Tyrrhenus,⁴ a son of Hercules : and in later times it was generally adopted,⁵ both as a martial instrument and by the ambulant musicians of the streets.⁶ In some parts of Egypt a prejudice existed against the trumpet, and the people of Busiris and Lyeo-

¹ Woodcut No. 18.

² Polyb. lib. iv. 20 ; Plut. de Musicâ, and in Lycurgo.

³ Plut. de Musicâ.

⁴ According to Athenæus (iv. 25), the Tyrrhenians invented trumpets and horns.

⁵ Plut. de Musicâ.

⁶ Ibid. de Solertiâ Animalium, where he relates a curious anecdote of a magpie imitating the performances of a band of trumpeters.

polis abstained entirely from its use, conceiving, says Plutarch,¹ from the sound of this instrument resembling the braying of an ass, that it was Typhonian; or, at least, that it reminded them too forcibly of an animal emblematic of the evil genius.

The Israelites had trumpets for warlike² as well as sacred purposes,³ for festivals and rejoicings;⁴ and the office of sounding them was not only honorable, but was committed solely to the priests.⁵ They were of different kinds; some of silver,⁶ which were suited to all occasions, as I have already stated; others appear to have been of horns, like the original *cornu* of the Romans; and these are distinctly stated to have been employed at the siege of Jericho.⁷ The Greeks had six species of trumpets; the Romans four, in their army — the *tuba*, *cornuus*, *buccina*, and *lituus*; and in ancient times the *concha*, so called from having been originally made of a shell. They were the only instruments employed by them



Men dancing in the street to the sound of the drum.

No. 236.

¹ Plut. de Isid. et Osir. s. 30.

² Numb. x. 2, 5, 9, 10.

³ Exod. xix. 13; Levit. xxiii. 24; and Numb. x. 10.

⁴ Numb. x. 10 and 2 Chron. xv. 14.

⁵ Numb. x. 8; Josh. vi. 4.

⁶ Josephus says, they were nearly a cubit or $1\frac{1}{2}$ ft. long, with a tube of the thickness of a flute.

⁷ These were the *sôferôth*, cornets; the silver ones were the *khetztzrôth*, or *khetztzrôth*, trumpets. From the name, I should think the former had a shrill tone. Josh. vi. 4: 'Trumpets of rams' horns.'

for military purposes, and in this they differed from the Greeks and Egyptians.

The sculptures of Thebes fail to inform us if the long and short drum were both comprehended in Egypt under the head of martial music; it is, however, evident that the former was not only used in their army, but by the buffoons who danced to its sound.¹

The buffoons were sometimes foreigners; and in the woodcut on the previous page they appear to be blacks, who amused the spectators with their own national dance, or one which they had learned from the Egyptians. Among many ancient people it was customary to teach slaves to dance and sing, in order that they might divert their master, or entertain a party of guests; and the Romans even employed them in various trades and manufactures. Those, too, who gave proofs of ability and genius, were frequently instructed in literature and the liberal arts, and the masters profited by their industry, or sold them at a great price in consequence of their accomplishments. The Egyptians, indeed, pursued this system to a certain extent: slaves were employed in public works² and in domestic occupations; and there is evidence from the sculptures that many of the musicians and dancers, both men and women, were slaves, who had been taken captive in war from their Ethiopian and Asiatic enemies. Yet it is not probable they were instructed in the same manner as those above mentioned at Rome; though the very kind treatment of Joseph, the mode of his liberation, and his subsequent marriage³ with the daughter of a freeborn Egyptian, a high functionary of the sacerdotal order,⁴ are striking proofs of the humanity of the Egyptians,⁵ and of their indulgent conduct towards manumitted slaves.

The only drum represented in the sculptures is a long drum, very similar to one of the *tomtoms* of India. It was about two feet or two feet and a half in length, and was beaten with the hand, like the Roman *tympanum*. The case was of wood or copper, covered at either end with parchment or leather, braced by cords, extending diagonally over the exterior of the cylinder, which in this respect differed from our modern drums; and when played it was slung by a band round the neck of the drummer, who during

¹ Woodcut No. 226.

² Exod. i. 11, 14. Herodot. ii. 108.

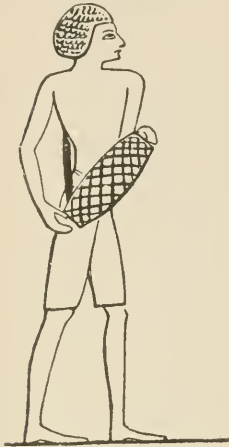
³ Gen. xli. 45. The case of Joseph was, no doubt, of an extraordinary nature.

⁴ 'Asenath, the daughter of Potipherah (in Hebrew, Poti-Phra; in Egyptian, Pet-

Phre or Pet-re, Heliodotus), priest of On,' the city of the Sun, or Heliopolis.

⁵ As was the lenient punishment of Joseph, when with his master Potiphar. (Gen. xxxix. 19, 20.)

the march carried it in a vertical position at his back. Like the trumpet, it was chiefly employed in the army; and the evidence of the sculptures is confirmed by the authority of Clement of Alexandria, who states that the drum was used by the Egyptians in going to war.¹ Both these instruments are found to have been common at the earliest period of which we have any account from the sculptures of Thebes, or about the sixteenth century before our era; and there is no reason to suppose them to have been then a recent invention.



No. 227. The drum. Thebes.

When a body of troops marched to the beat of drum, the drummer was often stationed in the centre or the rear, and sometimes immediately behind the standard bearers; the trumpeter's post being generally at the head of the regiment, except when summoning them to form or advance to the charge:² but the drummers were not always alone, or confined to the rear or centre; and when forming part of the band, they marched in the van, or, with the other musicians, were drawn up on one side while the troops defiled, as in our European armies.

Besides the long drum, the Egyptians had another, not very unlike our own, both in form and size, which was much broader in proportion to its length than the *tomtom* just mentioned, being two feet and a half high, and two feet broad. It was beaten with two wooden sticks; but as there is no representation of the mode of using it, we are unable to decide whether it was suspended horizontally and struck at both ends, as is usual with a drum of the same kind still used at Cairo, or at one end only, like our own; though, from the curve of the sticks, I am inclined to think it was



No. 228. Mode of slinging the drum behind, when on a march.

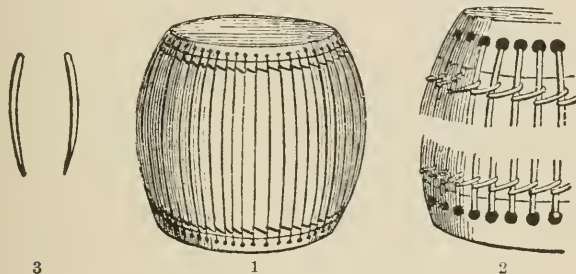
slung and beaten as the *tamboor* of modern Egypt. Sometimes the sticks were straight, and consisted of two parts, the handle and a

¹ Clemens Alex. Stromat. ii. 164.

² Joshua vi. 9.

thin round rod, at whose end a small knob projected, for the purpose of fastening the leather pad with which the drum was struck; they were about a foot in length, and, judging from the form of the handle of one in the Berlin Museum,¹ we may conclude they belonged, like those above mentioned, to a drum beaten at both ends. Each extremity of the drum was covered with red leather, braced with catgut strings passing through small holes in its broad margin, and extending in direct lines over the copper body, which, from its convexity, was similar in shape to a cask.²

In order to tighten the strings, and thereby to brace the drum, a piece of catgut extended round each end, near the edge of the leather; and crossing the strings at right angles, and being twisted round each separately, braced them all in proportion as it was drawn tight: but this was only done when the leather and the



No. 229.

Fig. 1. The drum.
2. Shows how the strings were braced.
3. The sticks.

Found at Thebes.

strings had become relaxed by constant use; and as this piece of catgut was applied to either end, they had the means of doubling the power of tension on every string. It is true that this kind of drum does not occur in any sculptures hitherto discovered; yet it is not less certain that it was among the instruments of the country, one of them having been found in the excavations made at Thebes by D'Athanasia, during Mr. Madox's stay at that place in 1823; to whom I am indebted for the original sketch of the accompanying woodcut.³

Besides the ordinary forms of Egyptian instruments, several

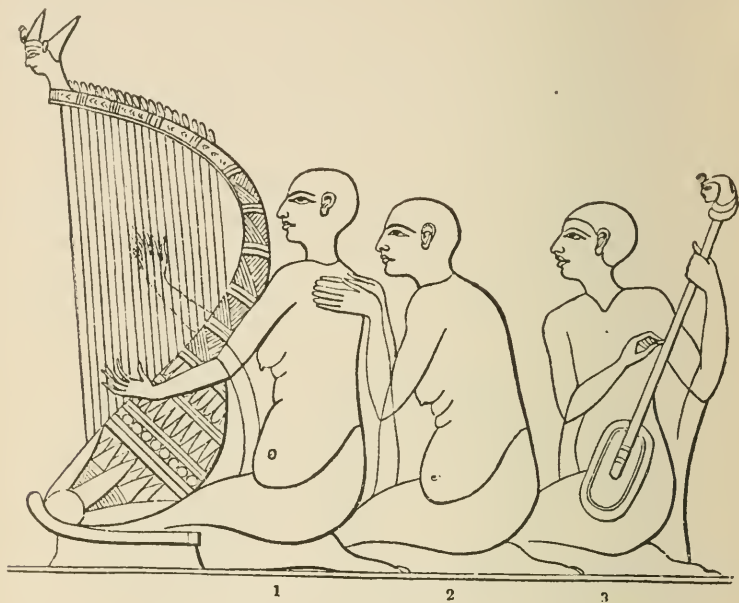
¹ Given in woodcut No. 40, *fig. 2*, p. 209.

² I believe it to be the same which is now in the Museum at Paris.

³ Woodcut No. 229. [There is, how-

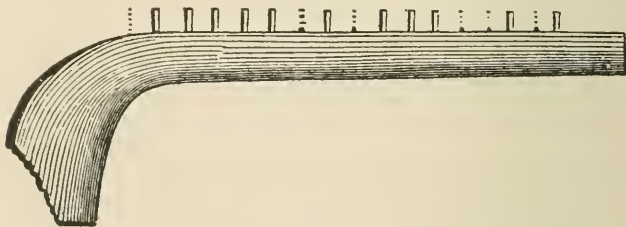
ever, a slight inaccuracy in Mr. Madox's representation of the strings of the drum, as I discovered on examining the original at Paris: they should be double.—G. W.]

were constructed according to a particular taste or accidental caprice. Some were of the most simple kind, others of very costly materials, and many were richly ornamented with brilliant colors and fancy figures; particularly the harps and lyres. The harps



No. 230. A richly-painted harp on a stand, a man beating time with his hands, and a player on the guitar.

varied greatly in form, size, and the number of their strings; they are represented in the ancient paintings with four, six, seven, eight, nine, ten, eleven, twelve, fourteen, seventeen, twenty, twenty-one, and twenty-two strings: That in the Paris Collection



No. 231. Head of a harp from Thebes, and now in the British Museum.

appears also to have had twenty-one; and the head of another, found by me at Thebes, was made for seventeen strings, as is shown by the number of its pegs. They were frequently

very large, even exceeding the height of a man, tastefully painted with the lotus and other flowers, or with fancy devices; and those of the royal¹ minstrels were fitted up in the most splendid manner, adorned with the head or bust of the monarch himself. The oldest harps found in the sculptures are in a tomb, near the Pyramids of Gizel, between three and four thousand years old. They are more rude in shape than those usually represented; and though it is impossible to ascertain the precise number of their strings,² they do not appear to have exceeded seven or eight, and are fastened in a different manner from ordinary Egyptian harps.

I have already noticed the great antiquity of the harp, and its early use in some Eastern or Asiatic countries,³ which is fully confirmed by the oldest Egyptian sculptures. It does not appear to have been known to the Greeks, but many stringed instruments, as the cithara, went from Asia to Greece; and this last, according to Plutarch, was originally styled Asiatic,⁴ having been introduced from Lesbos,⁵ where music was long cultivated with success. The same author observes that the cithara was employed upon sacred and festive occasions,⁶ and Heraclides of Lesbos supposed it to have been invented by Amphion;⁷ but a diversity of opinion always existed upon the subject of its introduction into Greece.

Terpander,⁸ who lived about two hundred years after Homer, was one of the first to attain any celebrity in its use, and he is reputed to have instituted laws for this instrument some time before they were arranged for the flute or pipe. Cepion, his disciple, who followed the Lesbian model, established its form; and few changes were introduced into it till Timotheus of Miletus,⁹ who flourished about the year 400 B.C., added four to the previous seven strings.

How far, then, do we find the Egyptians surpassed the Greeks at this early period, in the science of music? Indeed, long before

¹ Conf. the royal minstrels of David and Solomon. Asaph was chief master of music to David (1 Chron. xvi. 7, and xxv. 6).

² Woodcut No. 208.

³ Egypt was included in Asia by some ancient writers. *Vide* also Herodot. ii. 15, 16.

⁴ Plut. de Musicâ.

⁵ The Lesbians were famed for the lyre

and other instruments. Conf. Horace, Od. lib. i. 21, 11, 34.

⁶ Plut. Sympos. lib. vii.

⁷ Plut. de Musicâ.

⁸ He was a native of Lesbos, or of Antissa; and was said to have added three strings to the lyre, which had until then only four. Plutarch says it had seven strings till his time, and that he added many more tones.

⁹ Pausan. Græc. lib. iii.

the lyre was known in Greece, the Egyptians had attained the highest degree of perfection in the form of their stringed instruments; on which no improvement was found necessary, even at a time when their skill was so great that Greek sages visited Egypt to study music, among the other sciences, for which it was renowned. And harps of fourteen and lyres of seventeen strings are found to have been used by the ordinary Egyptian musicians, at the remote period of the reign of Amasis, the first king of the 18th Dynasty, who lived about 1570 B.C.,¹ nine hundred years before the time of Terpander.



No. 232

Harp raised on a stand or support.

Thebes.

The inscription says: 'The words of the temples—the bard Aahmes (Amasis),'

The strings of the Egyptian harp were of catgut; and some of those discovered at Thebes, in 1823, were so well preserved, that they emitted a sound on being touched, as I shall presently have occasion to observe. Some harps stood upon the ground, having an even, broad base; others were placed upon a stool,² or raised upon a stand or limb attached to the lower part;³ and from the appearance of that given in the above woodcut, we may

¹ Some harps of the time of Usertesén I. have seven strings.

² Instances of this are also found at Herculaneum. Woodcut No. 233.

³ Woodcut No. 232.

suppose they intended to show that the harp, like many Greek lyres, was occasionally made of tortoise-shell. In many instances

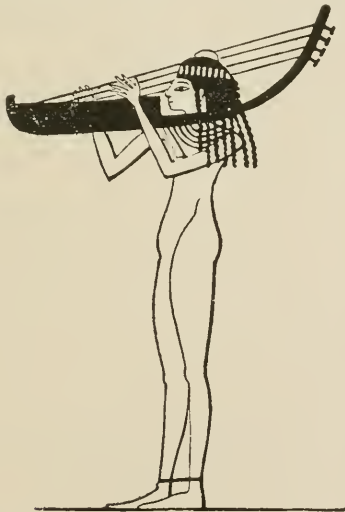


No. 233.

Minstrel standing, while playing the harp.

Dendera.

the minstrel stood to the instrument;¹ and it was customary for the harps they used in this manner to be flat at the base, like those represented in Bruce's tomb. But many which were squared



No. 534.

A light kind of instrument, borne on the shoulder.

Thebes.

for this purpose were inclined towards the performer, who supported the harp as she played;² for this kind of instrument

¹ Woodcut No. 233.

² Woodcut No 216; but not always.

seems to have been more generally appropriated to women than to men. Minstrels indeed were of both sexes; but we more frequently meet with representations of men seated to the harp, though instances occur of their kneeling and standing, and of women sitting, as they struck the cords.

A light species of four-stringed instrument, which I shall presently have occasion to mention, was supported upon the shoulder, and played with both hands; but this manner of holding it, and perhaps its use, may have been confined to women.¹ There was also a small four-stringed harp usually played by men, which stood upon the ground² like others of more ordinary form, and served as an accompaniment to one of larger dimensions.³ Many of the harps were covered with bulls' hides, or with leather which was sometimes of a green⁴ or of a red⁵ color, frequently painted with various devices, vestiges of which may be traced in that of the Paris Collection.⁶

It may be questioned whether the four-stringed instrument above mentioned ought to bear the name of harp; for certainly the difference in its form from that used as an accompaniment to the large harp⁷ suffices to show that these two are not the same, and this is further confirmed by the appearance of two of the very same portable instruments in the Paris and British Museums.⁸ It may also be observed, that though the small harp has only four strings, it has six pegs, which would indicate the occasional use of two more cords: and it is not impossible that the absence of those strings may be attributed to some neglect of the artist.⁹ The representation of the other instrument agrees exactly with those of the London and Paris collections, having four pegs and the same number of cords, fastened at the lower end to a bar extending down the centre of its concave body, which was covered with leather, strained over it, and perforated here and there with small holes to allow the sound to escape. It was always played with the hands, and never, like the guitar and some lyres, with a plectrum. Another of very similar form, and with the same number of cords, was found at Thebes; and from the copy I have seen of it, made by Mr. Madox, it appears to have

¹ Woodcut No. 234.

² Woodcut No. 211.

³ As that of woodcut No. 211.

⁴ One found at Thebes by Mr. Salt.

⁵ One seen by Mr. Madox at Thebes.

⁶ Woodcut No. 238.

⁷ Woodcut No. 211.

⁸ Woodcut No. 240, *figs.* 2 and 2a.

⁹ I have seen a harp with six strings and nine pegs, probably an oversight of the draughtsman; unless those additional pegs were used for some purpose. One of the lyres of Herculaneum has eleven strings and seven pegs.

been furnished with a peg at the lower end, whose use it is not easy to determine, but which probably served to secure the strings.

It does not appear that the Egyptians had any mode of shortening the strings during the performance, either in this instrument or the harp, or had invented any substitute for our modern pedals; nor is there any instance of a double set of cords, as in the old Welsh harp. They could, therefore, only play in one key, until they tuned it afresh, which was done by turning the pegs. There is, however, reason to believe that the want of pedals was partially supplied by the introduction of a second row of pegs, since we find that these are frequently double, or two to each string;¹ and a contrivance of this kind might have the effect of giving an additional half-note. In playing the harp, some minstrels sat cross-legged on the ground, like Asiatics of the present day, or upon one knee,² whether men or women;³ others preferred a low stool; and many stood, even while performing on ordinary occasions in the houses of private individuals.

[The question of the harp having been played to the pentatonic scale has been discussed by Dr. Engel in his 'Music of the Ancients';⁴ and the transition from the bow shape to the triangle, and the relation of the Egyptian to the Greek harp, has been described by Mr. Chappell in his 'History of Music.'⁵ It seems possible that the twang of the bowstring may have suggested the harp to the inventor of that instrument. A great harp made of or inlaid with silver and gold and precious stones is mentioned in the annals of Thothmes III. The harp was called *ben* or *ben.t*, or else *ta ben*, 'the harp.' — S. B.]

Before the images of the gods, and in religious ceremonies, it is natural to suppose that the sacred minstrels adopted this posture, out of respect to the deity in whose service they were engaged; and we have abundant evidence from the harpers in Bruce's tomb, who are officiating before Shu,⁷ and from several other instances, that this instrument was employed in their form of worship, and to celebrate the praises of the gods. So suitable, indeed, was the harp considered for this purpose, that they represented it in the hands of the deities themselves, as well as

¹ In the harp given in woodcut No. 213 are eight strings and sixteen pegs.

² Woodcut No. 232.

³ Woodcuts Nos. 210 and 218.

⁴ 8vo. Lond. 1864, p. 154.

⁵ 8vo. Lond. 1874, p. 310.

⁶ 'Records of the Past,' ii. p. 20.

⁷ One of the Egyptian deities.

the tambourine and the sacred sistrum. It was held in the same consideration by the Jews; and there is reason to believe that in this respect they followed the example of the Egyptians, from whom many of their customs were derived. Harps and psalteries appear from the Scriptures¹ to have obtained the first rank; and cymbals, trumpets, and cornets² were also designated as part of the sacred band, as in some of the religious ceremonies of Egypt.

The Jewish psaltery I am inclined to suppose the same as, or similar to, the four-strained instrument above described, though Josephus gives it 'twelve musical notes.'³ In Hebrew, it was called *psanterin*,⁴ and probably sometimes *nabl*, a name from which was borrowed the *nabla*⁵ of the Greeks; and this last is mentioned in Strabo as one of many instruments known by barbarous appellations.⁶

Athenæus considers the *nablum*, *pandura*, *sambuca*, *magadis*, and *trigon* not to be new instruments; but yet they may have been brought originally from foreign countries: and he afterwards states, on the authority of Aristoxenus, that the '*Phœnicica pœctis*, *magadis*, *trigon*, *clepsiangus*, *scindapsus*, and *enneachordon* (of nine strings) were foreign instruments.'⁷

Some light might be thrown on the names of the various harps, lyres, and other musical instruments of Egypt, if those mentioned in the Bible were more accurately defined; but much

¹ 1 Chron. xvi. 5.

² 1 Chron. xv. 28, &c.

³ Josephus, Antiq. vii. 12, 3, says, 'The viol was of ten strings, played with the bow (perhaps plectrum): the psaltery had twelve musical notes, and was played with the fingers; . . . the cymbals were broad and large instruments of brass.' Some of the instruments mentioned in Dan. iii. 15, 'cornet, flute, harp, sackbut, psaltery, and dulcimer,' are very uncertain; in the Hebrew they are *korna*, *mushrookitha*, *kitharus*, *sabka*, *psanterin* and *sumphonéeh*; the third and last of which are evidently Greek names. The Syriac version gives the *karno*, *mushrookitho*, *kihoro kinoro*, and *tziphunio*, the fourth being omitted; the Arabic has

والونج والمزمار والصفارة
ق والتاي والكبثارة 'trumpet,
flute, harp, lyre, psaltery and pipe;' and the Septuagint, 'σάλπιγξ, σφριγξ, κιθάρα,

σαμβύκη, ψαλτήριον, συμφωνία.' The trumpet was called in Hebrew שופר, *sofar*. (Job. xxxix. 24, and Numb. vii. 20). In Arabic, *siffer* is 'to whistle.'

⁴ *Psanterin* is for *psalterion*.

⁵ The *nabla* is supposed to be the *nefer* or guitar. (Mr. Chappell's 'History of Ancient Music,' pp. 61, 301.)

⁶ Strabo, lib. x.

⁷ Athen. iv. c. 25. The *pandura* he supposes to have been made from the laurel which grows by the Red Sea; probably Strabo's olive of that coast, the *shorai* or *Shora maritima* of the present day. J. Pollux calls it *pandoura*, and says it was a three-stringed instrument invented by the Assyrians (lib. iv. 9). The *magadis* of Anaercon he supposes to be the same as the *psithyra*, or *ascarum*, a stringed instrument of quadrangular form, apparently played like the Arab *qanóon*, but not resembling it in sound. [See on the *pandoura*; Chappell, 'Hist. of Music,' pp. 301-2.] — S. B.

confusion exists between the *cithara* or *kitarus*, the *āshūr*,¹ the *sambuc*, the *nabl*, and the *kinóor*; nor can the various kinds of drums, cymbals, or wind instruments of the Jews be more satisfactorily ascertained. The difficulty of identifying them is not surprising, when we observe how many names² the Greeks had for their stringed instruments, and how the harps and lyres represented in the Egyptian sculptures approach each other in principle and form; and we sometimes hesitate whether to ascribe to them a place among the former or the latter. One of these, with nine strings, was carried by the musician, and sometimes held by pressing it between the side and elbow, perhaps supported at the same time by a belt over the shoulder;³ and another, which



No. 235. Triangular instrument, or trigon. *Thebes*.



No. 236. Another, held under the arm and played by the god Bes. *Dakkeh*.

stood upon the ground, had eight strings, and was also played by the hand, the minstrel standing.⁴ The tassels on the lower limb of the former appear to be merely ornamental; though it is possible that, since there are no pegs, they were intended for tightening the cords, in order to alter the key; and in some instances, each cord of a large harp is accompanied by one of these tassels, which terminates a long string, wound round the upper limb of the instrument, as may be seen on that of the Paris Museum.⁵ This harp is of moderate dimensions, and had either twenty-one or twenty-two strings. It is highly interesting, as

¹ So called from having *ten* strings.

² Witness those given by J. Pollux, iv. 9.

³ Woodcuts Nos. 235, 236.

⁴ Psinaula.

⁵ Woodcut No. 238.

well from its preservation as from the insight it gives us into the form and principle of these instruments; and if it is far from

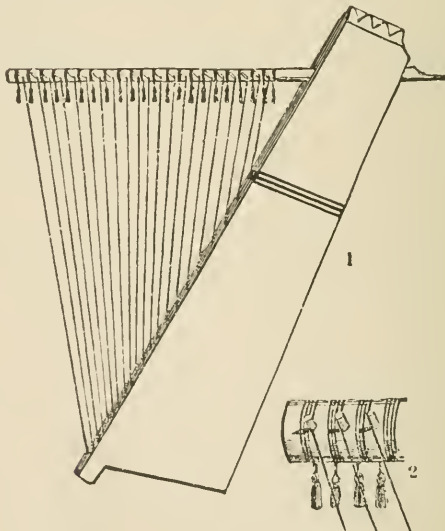


No. 237.

An unusual kind of instrument.

Alabastron.

being the first quality of harp, either in elegance or shape, or in the richness of its materials, yet, from the number of its strings,



No. 238.

The harp or trigon of the Paris Collection.
Fig. 2 shows how the cords were fastened.

it must have been one of the highest power in use among the

Egyptians, since they are seldom represented in the sculptures with more than two octaves.

All the Egyptian harps have a peculiarity for which it is not easy to account — the absence of a pole, and, consequently, of a support to the bar, or upper limb, in which the pegs were fixed; and it is difficult to conceive how without it, the cords could have been properly tightened, or the bar sufficiently strong to resist the effect of their tension, particularly in those of a triangular form.

Another instrument, of nearly the same capacity as the Paris harp, was found at Thebes in 1823, where it was seen by Mr. Madox, to whom I am indebted for the sketch I have given of it in a succeeding woodcut.¹ It had twenty cords of catgut, so well preserved that, as I have already observed, they still retained their sound, after having been buried in the tomb probably three thousand years; a length of time which would appear incredible, if we had not repeated instances of the perfect preservation of numerous perishable objects, even of an older date, in the sepulchres of Thebes. It is to the excessive dryness of the soil, and of the rock in which the pits are hewn, frequently to the depth of fifteen, thirty, and even seventy feet, and to the total exclusion of air, that this is to be attributed; and grains of corn and other seeds have been found which have remained entire, without undergoing any change, and without making any effort to strike root in the sand, or the vase in which they were deposited.

Experiments are said to have been tried with some grains of corn thus preserved, which sprouted when sown;² and though I cannot speak of this as a fact, yet I am inclined to believe that if seed thus discovered were immediately put into the earth, the results would be as stated; since experience shows that seeds buried at certain depths are unable to germinate till removed nearer the surface of the earth; and I have known them to remain for years on the plains of the Egyptian desert, awaiting that rain which has at length enabled them to take root in the previously parched soil.

The instrument just mentioned was of a form which might

¹ Woodcut No. 240, *fig.* 3.

² Several are now in the different collections of Europe. The experiments are said to have been made in France. [The possibility of corn germinating after so many years is strongly denied by some

botanists on account of the impossibility of the delicate and minute embryo, placed immediately below the surface, being preserved so long in life, close to the surface. — S. B.]

require it to hold an intermediate rank between the lyre and the harp, like the two previously noticed: nor would the number of twenty strings be any objection, since we meet with Egyptian lyres of nearly the same power, having eighteen cords. The frame was of wood, covered with red leather, on which could be traced a few hieroglyphics. The strings were fastened to the upper limb, and wound round a rod inserted into the lower part, which was probably turned in order to tighten them, and may be considered similar in principle to that on the summit of many ancient lyres, or of the *kisírka* used in modern Ethiopia. In the former, the rod itself was turned; in the latter, each string is fastened over a ring of some adhesive material, intervening between it and the rod, and the turn of this ring regulates the tension of the cord. Neither this nor the two above alluded to were provided with pegs, a peculiarity which may be considered a distinctive mark between this class of instruments and the harp.

There are still two others, which appear unconnected either with the harp or lyre, and yet differ from the two already described, having pegs to brace the strings. Of these, one has a flat broad body, covered with a sounding-board, in the centre of which is a rod securing the cords; and perpendicular to it is another rod at the upper end of the instrument, into which the pegs are inserted that supported and tightened its ten strings.¹

The other, which bears still less analogy to the Egyptian harp, appears to have had five strings, each secured by a peg, and passing over a hollow circular body covered probably with a thin piece of wood or leather.² It was seven inches in length, the neck about one foot three inches, and the five pegs were fixed in the lower side, in a direct line, one behind the other. At the opposite end of the circular part were two holes, for fastening the rod that secured the strings, as in the preceding instrument:³ which may be seen in one of the two found at Thebes by Mr. Salt, and now in the British Museum. They are not of the best quality, nor very perfectly preserved, and the one I have described has lost two of its rude pegs. The other has only four, and the lower part is much injured. They are both of sycamore wood, and exactly like that in the Berlin Collection,

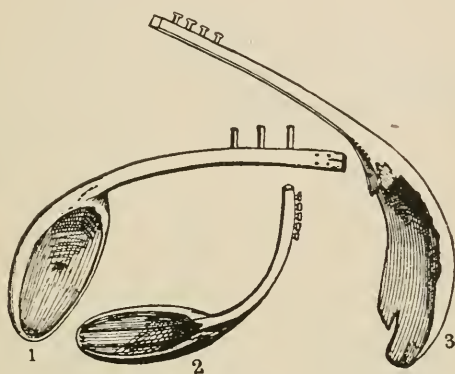
¹ Given in woodcut No. 240, *fig.* 5, from Prof. Rosellini's work.

² Woodcut No. 240, *fig.* 1, and woodcut No. 239.

³ Woodcut No. 238.

which has the five pegs entire, and has the body composed of three pieces of wood.

At first sight this instrument appears to resemble the Egyptian guitar, both in its form and the position of the strings; on restoring it, however, and introducing them, we find that the principle was totally different, and that the neck was not intended, as in the guitar, for shortening the cords, and consequently the instrument was of a very inferior kind, and of an exceedingly limited power.



No. 239.

Figs. 1, 3. Instruments in the British Museum.
2. In the Berlin Museum.

In addition, then, to the guitar, harp, and lyre, we may enumerate at least five, independent of the four-stringed harp previously mentioned,¹ which do not come under the denomination of any of the three; nor do I include in the five that represented in the sculptured tomb of Alabastron,² which may deserve the name of standing lyre; nor one occurring in the same tomb, and played as an accompaniment to the lyre. Unfortunately it is much damaged, and the appearance of several bars or cords can alone be traced, which the performer strikes with a stick.³

It is true that, of the five instruments here represented,⁴ *figs.* 1 and 2 are very similar in principle, as are 3 and 4, however different their tones and powers may have been; but still they must be considered distinct from the harp, lyre, and guitar; and they may, perhaps, bear some analogy to the *nabl*,⁵ the *sambuc*,

1 Woodcut No. 211.

2 Woodcut No. 237.

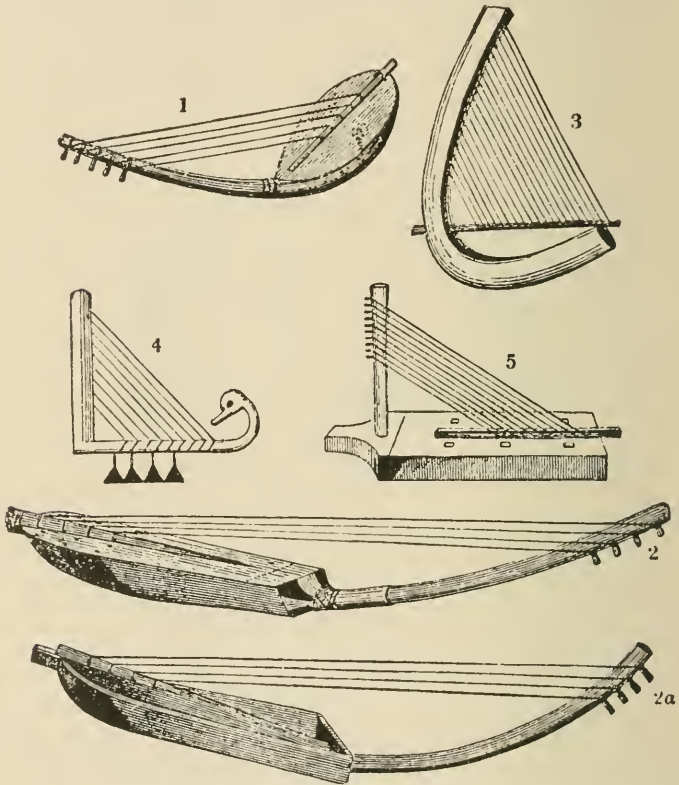
3 Woodcut No. 241.

4 Woodcut No. 240.

5 Amos vi. 5. The *nabl* may have been a sort of guitar.

and the ten-stringed *āshūr* of the Jews; though these were generally played with a sort of plectrum, and the former always with the hand.

Of the instrument *fig. 2*, the most curious and perfect specimen I have seen was brought by Mr. Burton from Thebes, and is now in the British Museum. It only wants the four strings: the exact form, the pegs, the bridge or rod to which the



No. 240. Five instruments differing from the harp, lyre, and guitar.

strings were attached, and even the parchment covering its wooden body, and serving instead of a sounding-board, still remain; and from its lightness as well as size, we may judge how portable it was, and how conveniently it might be used in the manner described in the sculptures, upon the shoulder of the performer.¹

The Egyptian lyre was not less varied in its form and the

¹ Woodcut No. 234.

number of its cords than the harp; and they ornamented it with numerous fancy devices their taste suggested. Diodorus limits the number of its cords to three; however, as his description does not apply to the Egyptian lyre, but to the guitar, it is unnecessary to introduce it till I mention that instrument.

A singular story of its supposed invention¹ is related by Apollodorus. 'The Nile,' says the Athenian mythologist, 'after having overflowed the whole country of Egypt, when it returned within its natural bounds, left on the shore a great number of animals of various kinds, and among the rest a tortoise,² the flesh of which being dried and wasted by the sun, nothing remained within the shell but nerves and cartilages, and these being braced and contracted by the drying heat became sonorous.³ Mercury, walking along the banks of the river, happened to strike his foot against this shell, and was so pleased with the sound produced, that the idea of a lyre presented itself to his imagination. He therefore constructed the instrument in the form of a tortoise,⁴ and strung it with the dried sinews of dead animals.'

Many of the lyres were of considerable power, having five, seven, ten, and eighteen strings. They were usually supported between the elbow and the side, and the mode of playing them was generally with the hand, and not, as in Greece and Rome, with a plectrum. This custom, however, was also adopted by the Egyptians; and as it occurs in sculptures of the earliest periods, it is evident they did not borrow it from Greece; nor was it unusual for the Greeks to play the lyre with the hand without a plectrum; and many instances of both methods occur in the paintings of Herculaneum. Sometimes the Egyptians touched the strings with the left hand, while they struck them with the plectrum; and the same appears in the frescoes of Herculaneum, where I have observed lyres of three, six, nine, and eleven strings,

¹ The invention of the Greek lyre is also attributed to Mercury. Pausanias states that Mercury having found a tortoise-shell on a mountain of Arcadia, called Chelydorea, near Mount Cyllene, formed it into a lyre. (Pausan. Græc. lib. viii. Arcad.) And he mentions (lib. ii.) a statue of Mercury, in the temple of Apollo at Argos, 'holding a tortoise-shell, of which he proposes to make a lyre.' (Hor. Od. lib. i. 10, 6.)

² Pausanias says the tortoise of Mount Parthenius, in Arcadia, was particularly

suitable for making lyres, as well as that of the Soron oak forest, which, for this purpose, rivalled the Indian species. (Lib. viii.)

³ In the collection of the British Museum, No. 6381a, is a sounding-board of a small lyre made of the shell of a tortoise. It came from the collection of the late A. C. Harris, of Alexandria. — S. B.

⁴ From having been made of a tortoise-shell, the lyre received the name *testudo*. (Hor. Od. lib. iii. 11, 3.)

played with the plectrum ; of four, five, six, seven, and ten, with the hands ; and of nine and eleven, with the plectrum and fingers at the same time.



No. 241. An instrument played as an accompaniment to the lyre.
Alabastron.

Some lyres were ornamented with the head of a favorite animal carved in wood, as the horse, ibex, or gazel ;¹ and others were of more simple shape. The strings were fastened at the upper end to a cross-bar connecting the two sides, and at the lower end they were attached to a raised ledge or hollow sounding-board, about the centre of the body, which was of wood, like the rest of the instrument. The Berlin and Leyden Museums possess lyres of this kind which, with the exception of the strings, are perfectly preserved. That in the former collection is ornamented with horses' heads,

and in form, principle, and the alternating length of its cords, resembles the one given in woodcut No. 244 ; though the board



No. 242.

2 Lyres played with and without the plectrum.

1

Thebes.

to which the strings are fastened is nearer the bottom of the

¹ As in woodcut No. 243.

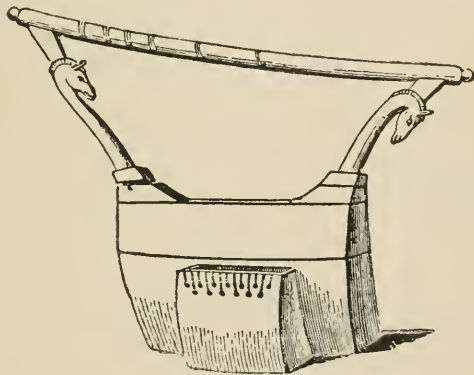
instrument, and the number of strings is thirteen instead of ten: and thus we have an opportunity of comparing real Egyptian lyres with the representations of them drawn by Theban artists, in the reign of Amenophis I., and other early monarchs, more than 3000 years ago.

The body of the Berlin lyre is about ten inches high and fourteen and a half broad, and the total height of the instrument is two feet.¹ That of Leyden² is smaller, and less ornamented, but it is equally well preserved, and highly interesting from a hieratic inscription written in ink upon the front. It has no extra sounding-board; its hollow body sufficiently answers this purpose; and the strings probably passed over a



No. 243. Lyre ornamented with the head of an animal. Thebes.

movable bridge, and were secured at the bottom by a small metal



No. 244.

Lyre in the Berlin Collection.

ring or staple. Both these lyres are entirely of wood, and one of the sides, as of many represented in the sculptures,³ is longer

¹ Woodcut No. 244.

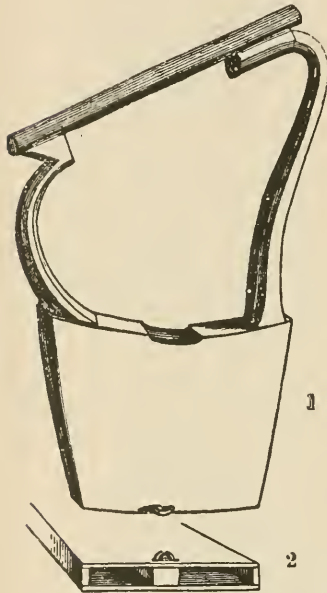
² In mentioning these harps, I feel it a pleasing duty to acknowledge the obliging assistance and free access I met with at both those museums, particularly at that of Leyden; and I take this opportunity of expressing my obligations to Baron A. von

Humboldt, Signor Passalacqua, Dr. Lee-mans, and M. Jansen. The two museums where the greatest facilities are given to strangers for copying the monuments they contain, appear to me to be the British Museum and the Museum of Leyden.

³ Woodcuts Nos. 242 and 243.

than the opposite one; so that they tuned the instrument by sliding the cords upwards, along the bar.

Similar to these were many of the Greek lyres, sometimes imitating the shape and position of the horns of a gazelle and other elegant forms, and the number of their strings was as varied as those of the Egyptians. In Greece, the instrument had at first only four cords, till an additional three were introduced by Amphion;¹ who, as Pausanias seems to hint, borrowed his knowl-



No. 245. Lyre of the Leyden Collection.
Fig. 2 shows the lower end.

edge of music from Lydia, and was reputed to have been taught the use of the lyre by Mercury; a fable which may be solved in the same manner as the legend respecting the invention of that instrument and of the Egyptian guitar, which I shall presently notice.

Seven continued to be the number of its strings, until the time of Terpander,² a poet and musician of Antissa near Lesbos (670 B.C.), who added several other notes; but many were still made with a limited number; and though lyres of great power had long been known, and were constantly used by them, still many Greeks and Romans⁴ contented themselves with, and perhaps preferred, those of a smaller compass. The lyres in the paintings of Herculaneum vary in the

number of their strings, as much as those in the Egyptian frescoes; and we there find them with three, four, five, six, seven, eight, nine, ten, and eleven cords.

There is no instance of a harp in those paintings; but a triangular instrument⁵ of eight strings, carried under the arm and

Pausan. lib. ix.

² Plut. de Musicâ.

³ Pliny's account differs from Plutarch, and he attributes the addition of the eighth string to Simonides, the ninth to Timotheus. (Lib. vii. 56, where he mentions the inventors of different instruments.) [Mr. Chappell, 'Hist. of Ancient Music,' 1874,

pp. 29-49, has discussed this point at full length. — S. B.]

⁴ Conf. Hor. *loc. cit.*

⁵ The two limbs supporting the strings form the two opposite sides, as the outer string the third, or base of the isosceles triangle.

played with both hands, bears some analogy to that previously described from Thebes, which, as I have observed, we doubt whether to class among the harps or lyres; ¹ and another of seven cords is played with the two hands in the manner of a harp, by a woman reclining on the ground. It is difficult to say whether any one of these comes under the denomination of *magadis*, which, according to Athenæus, 'was furnished with strings,² like the *cithara*, *lyra*, and *barbiton*;' but though little can be ascertained respecting the form of the numerous instruments alluded to by ancient authors,³ the triangular lyre above mentioned cannot fail, from its shape, to call to mind the *trigon*,⁴ or the *sambuca*, which is also described as being of a triangular form.⁵

The Jewish lyre, or *kinóor*, had sometimes six, sometimes nine strings, and was played with the hand, or with a plectrum; and if, when we become better acquainted with the interpretation of hieroglyphics, the 'strangers' at Beni-Hassan should prove to be the arrival of Jacob's family in Egypt, we may examine the Jewish lyre drawn by an Egyptian artist. That this event took place about the period when the inmate of the tomb lived, is highly probable; at least, if I am correct in considering User-tesen I. to be the Pharaoh the patron of Joseph; and it remains for us to decide whether the disagreement in the number of persons here introduced, thirty-seven being written over them in hieroglyphics, is a sufficient objection ⁶ to their identity.

It will not be foreign to the present subject to introduce those figures, which are curious, if only considered as illustrative of ancient customs at that early epoch, and which will be looked upon with unbounded interest should they ever be found to refer to

¹ Woodcut No. 235.

² The name *magadis* was also applied to a kind of pipe. (Athen. iv. 25.)

³ Aristotle (Repub. lib. viii. c. 6, de Musicâ) says, 'Many ancient instruments, as *pectides* and *barbiti*, and those which tend to delight the ear by their sound; *heptagona* (septangles), *trigona* (triangles), *sambuca*, and all that depend upon skilful execution in fingering the cords.' [The *magadis* had a bridge to divide the strings into two parts in the ratio of 2 to 1, so as to play in octaves on one string. The Egyptian *magadis* is the heptachord lyre. Woodcuts Nos. 242 and 245. Chappell, 'Hist. of Ancient Music,' pp. 14, 55, 255. — S. B.]

⁴ Athen. *loc. cit.*

⁵ Suidas gives this account of the *σαμβύκη*, 'ὄργανον μουσικῶν τρίγωνων.' It

was said to be made of strings of unequal length and thickness, answering to the appearance of the one above alluded to at Herculaneum. There is another of triangular form at Herculaneum, with ten strings, which is held over the shoulder while played with the two hands.

⁶ In 'Egypt and Thebes,' p. 26, I have expressed a fear that in consequence of this number, and of the expression 'captives,' we can only rank them among the ordinary prisoners taken by the Egyptians during their wars in Asia; but the contemptuous expressions common to the Egyptians in speaking of foreigners might account for the use of this word. Those presented by Joseph to Pharaoh were only five; and the person seated here is not the king. (Exod. xlvii. 2.)

the Jews.¹ The first figure is an Egyptian scribe, who presents an account of their arrival to a person seated, the owner of the tomb, and one of the principal officers of the reigning Pharaoh. The next, also an Egyptian, ushers them into his presence; and two advance, bringing presents, the wild goat or ibex and the gazelle, the productions of their country. Four men, carrying bows and clubs, follow, leading an ass on which two children are placed in panniers, accompanied by a boy and four women; and last of all, another ass laden, and two men, one holding a bow and club, the other a lyre, which he plays with the plectrum. All the men have beards, contrary to the custom of the Egyptians, but very general in the East at that period, and noticed as a peculiarity of foreign uncivilized nations throughout their sculptures. The men have sandals, the women a sort of boot reaching to the ankle,² both which were worn by many Asiatic people. The lyre is rude, and differs a little in form from those generally used in Egypt; but its presence here, and in others of the oldest sculptures, amply testifies its great antiquity, and claims for it a rank among the earliest stringed instruments.³

The Egyptian guitar has only three strings; and to it I believe Diodorus alludes, when he applies that number to the lyre, which he says corresponded to the three seasons of the year. Its invention he attributes to Hermes or Mercury,⁴ who taught men letters, astronomy, and the rites of religion, and who gave the instrument three tones — the treble, bass, and tenor; the first to accord with summer, the second with winter, and the third with spring.

That the Egyptian year was divided into three parts is abundantly proved by numerous hieroglyphic inscriptions, as well as by the authority of Greek writers; and each season consisted of four months of thirty days each, making a total of three hundred and sixty days in the year. To these were added five more at the

¹ Plate XII.

² Similar high shoes, or boots, were also worn by Greek and Etruscan, and even by Egyptian women, being found in the tombs of Thebes.

³ The scene represented is the bringing of the cosmetic or *kohl* for the eyes by a tribe of the *Aamu* or Semitic people by the royal scribe Neferhetep. The inscription over the scene reads, 'The arrival to offer the *collyrium mestem*, which the thirty-seven *Aamu* bring to him.' The scribe Neferhetep unrolls a papyrus on which is inscribed, 'The year six of the reign of

his majesty the King of Upper and Lower Egypt, Rakhakheper (or Useratesen II.), the number of the *Aamu* brought to the nomarch Chnumhetep was living Mestem, the *Aamu* of the *Sbu*. The number was thirty-seven.' A second officer, the major-domo or usher, named Khrrati, accompanies the royal scribe; and the name of the Heqa or Hyk, the ruler of the land, was Ab-sha, or Abshen. (Brugsch, 'Histoire d'Égypte,' 4to, Leipzig, 1859, p. 63. Rosellini, 'Monumenti Reali,' xxxvi. xxxvii.) — S. B.

⁴ Diod. i. 16.

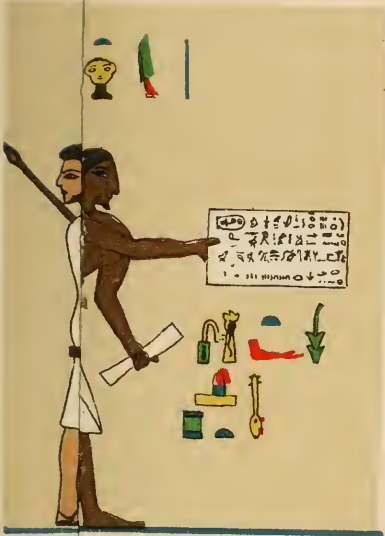


Fig 1 & 2 are Egyptians



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Fig. 18, 2 are Egyptians



ARRIVAL OF SOME FOREIGNERS IN EGYPT FROM BENI HASSAN

Fig. 18, 2 are Egyptians

end of the twelfth month; and every fourth or leap year, another intercalary day increased this number to six, and thereby regulated the calendar, in the same manner as at the present day.¹

That Diodorus confounds the guitar with the lyre is probable, from his attributing its origin to Mercury, who was always the supposed inventor of the latter; though there is reason to believe that the same fable was told him by the Egyptians in connection with the other three-stringed instruments, and that it led to his mistake respecting the lyre.

It was no doubt from a conviction of the great talent required for the invention of an instrument having only three cords, and yet equalling the power of one with numerous strings, that the Egyptians were induced to consider it worthy of the deity who was the patron of the arts; and the fable² of his intervention, on this and similar occasions, is merely an allegorical mode of expressing the intellectual gifts communicated from the Divinity, through his intermediate agency.

The Egyptian guitar consisted of two parts, — a long flat neck or handle, and a hollow oval body, either wholly of wood or covered with leather, whose upper surface was perforated with several holes, to allow the sound to escape. Over this body, and the whole length of the handle, extended three strings, — no doubt, as usual, of catgut — secured at the upper extremity, either by the same number of pegs, or by some other means peculiar to the instrument. It does not appear to have had any bridge; but the cords were fastened at the lower end to a triangular piece of wood or ivory, which raised them to a sufficient height; and in some of those represented in the sculptures, we find they were elevated at the upper extremity of the handle by means of a small cross-bar, immediately below each of



Female playing the guitar.
No. 246. *Thebes.*

¹ See appendix of 'Materia Hieroglyphica;' and Diodorus, i. 50, who mentions this quarter day, and who 'visited Egypt in the reign of Ptolemy Neos Dionysos' (i. 44).

² Of a similar nature is that mentioned by Diodorus concerning Osiris, who was reputed to have been the first to plant the vine, and to teach man the use of the grape. (Diod. i. 15.)

the apertures, where the strings were tightened. This answered the same purpose as the depressed end of our modern guitar; and, indeed, since the neck was straight, some contrivance of the kind was absolutely necessary.

It is true that the paintings do not indicate the existence of pegs in this instrument for securing and bracing the strings, but their common use in the harps and psalteries strongly argues their adoption in the guitar; and it is more probable that the artist may have omitted them than that the two or four tassels attached to that part of the handle should be the substitute for a more perfect method well known to them, and adopted in other instruments. In one instance, however, the strings appear to have been each passed through a separate aperture in the handle, and then bound round it and tied in a knot.¹

The length of the handle was sometimes twice, sometimes thrice, that of the body: and I suppose the whole instrument to have measured about four feet, the breadth of the body being equal to half its length. It was struck with the plectrum, which was attached by a string to the neck, close to its junction with the body; and the performers usually stood as they played. Both men and women² used the guitar. Some danced whilst they touched its strings, supporting it on the right arm; and I have met with one instance of it slung by a band round the neck,



Dancing while playing the guitar.
No. 247. Thebes.

like the modern Spanish guitar.³

It is, indeed, from an ancient instrument of this kind, sometimes called cithara, that the modern name guitar has been derived, though the cithara of the Greeks and Romans, in early times at least, was always a lyre.⁴ The Egyptian guitar may be called a lute; but I cannot suppose it to have been at all similar to the barbiton,⁵ so frequently mentioned by Horace and other

¹ Woodcut No. 210.

² Pl. XI., and woodcut No. 216.

³ Woodcut No. 248.

⁴ Pausan. Græc. lib. iii.

⁵ The barbitos of Strabo, who mentions it as an instrument of foreign origin. Its name was not derived from *βάρβαρος*.

authors ; though this last is believed by some to have had only three strings.¹ Athenæus,² on the contrary, describes it with many cords, and attributes its invention to Anacreon ; and Theocritus also applies to it the epithet *polychordon*. It was particularly consecrated to Polyhymnia ; and, like the cithara,³ appears to have been derived from Lesbos.⁴

An instrument of an oval form, with a circular or cylindrical handle, was found at Thebes, not altogether unlike the guitar ; but, owing to the imperfect state of its preservation, nothing could be ascertained respecting the pegs, or the mode of tightening the strings. The wooden body was faced with leather, the handle extending down it to the lower end, and part of the string remained which attached the plectrum.

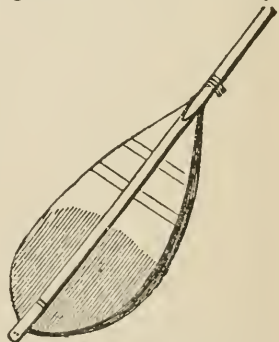
Three small holes indicated the place where the cords were secured, and two others, a short distance above, appear to have been intended for fastening some kind of bridge ; but this is merely conjecture, as I had not an opportunity of examining it, and am indebted to Mr. Madox for the accompanying sketch.

Wire strings were not used by the Egyptians in any of their instruments, nor, as far as we can learn from ancient authors, were they of any other quality than catgut ;⁵ and the employment of this last in the warlike bow is supposed to have led to its adoption in the peaceful lyre, owing to the accidental discovery of its musical sound.

We are not, therefore, surprised to find that the Arabs, a nation of hunters, should have



Guitar slung by a belt.
No. 248. Thebes.



No. 249. An instrument like the guitar found at Thebes.

¹ The Greeks had a lyre of three strings, which might have been the barbiton, if this really had only three cords ; but it is generally supposed to have been a large instrument

² Athen. iv.

³ The eyes upon a cithara in pl. xcii. of

Mr. Hope's 'Costumes' recall an Egyptian ornament.

⁴ Conf. Hor. Od. lib. i. l. 33.

⁵ Part of a catgut string was found with the harp discovered by Mr. Burton at Thebes, now in the British Museum, No. 6383. — S. B.

been the inventors of the *monochordium*,¹ an instrument of the most imperfect kind (especially when the skill of a Paganini is not employed to command its tones): but it is a remarkable fact that the same people still possess the instrument; and poor singers in the streets of Cairo accompany the voice with a one-stringed *raháb*.

This circumstance may also be adduced as a proof of its antiquity; for, being used by the reciters of poems,² it has evidently been the instrument of their early bards, who are the first musicians in every country. There is no instance of it in the sculptures of the ancient Egyptians, nor is it probable that, even if known to them, it would have been admitted in their musical entertainments; unless indeed it were used, as at present, for an accompaniment in recitative.

The flute was at first very simple, and, as Horace observes, 'with a few holes;' the number being limited to four, until Diodorus, of Thebes in Bœotia, added others; improving the instrument, at the same time, by making a lateral opening for the mouth.³ It was originally of reed; but in process of time it increased in size and in the number of its notes, and was made of better and more sonorous materials. It is impossible to say whether the Egyptians had one or several kinds of flutes, adapted, as with the Greeks,⁴ to different purposes — some to mournful, others to festive occasions, but it is evident that they employed the flute both at banquets and in religious processions.

Most of those used by the Greeks were borrowed, like their names, from Asia — as the Lydian, Phrygian, Carian, and Mysian flutes; and Olympus, the disciple of Marsyas, introduced the instrument from Phrygia⁵ into Greece, and was reputed by some⁶ to have brought the lyre from the same country. Clonas, who lived many years after Terpander, was said to have been the first to invent laws and suitable airs for the flute, though these were supposed to have been borrowed from the Mysians;⁷ and Pausanias ascribes⁸ the construction of the flute to Ardalus, the son of Vulcan.⁹

¹ J. Pollux, *Onom.* iv. 9.

² Hence called *raháb e shâer*, 'the poet's viol.' Mr. Lane has given a drawing and description of it in his accurate and minute work on 'The Modern Egyptians: Manners and Customs,' vol. ii. p. 74.

³ J. Pollux, *Onom.* iv. 10.

⁴ Pausanias (*lib.* ix.) mentions three as being different — the Doric, Lydian, and Phrygian.

⁵ Plut. de Musicâ.

⁶ Alexander on Phrygia, quoted by Plutarch, *loc. cit.*

⁷ Plut. de Musicâ.

⁸ Paus. Corinth. lib. ii.

⁹ Athenæus considers Marsyas the inventor of the *αὔλος*; the *κάλαμος*, or reed, having been used before his time. The *μονοκάλαμος*, according to Euphorion, was a reputed invention of Mercury. (*Athen.* iv. 25.)

Aristotle, in mentioning Minerva as its inventor, merely alludes to one of the many allegorical fables connected with that goddess, Apollo, and Mercury; the story of Minerva's throwing aside the flute, offended at the deformed appearance of her mouth during the performance, is supposed by him to refer to the dispute into which it fell, when its acquirement appeared to interfere with mental reflection. 'For,' he adds, 'the flute is not suited to improve morals, but is rather a bacchanalian instrument, and very properly forbidden to be used by young people and freemen. Nor was it till after the Persian war that the Greeks, inflated by the pride of victory, laid aside their previous discrimination, and introduced all kinds of instruction, without consulting propriety or the maintenance of morality; forgetting that music is good if it tends to guide and correct the mind of youth, but highly prejudicial when indulged in merely as a pleasure.'

To Pronomus, of Thebes in Bœotia,¹ they were indebted for an improvement in the instrument, by uniting the powers of three, the Doric, Lydian, and Phrygian, into one: but this may perhaps refer to the double pipe; and, as we have already observed in the harp and lyre, all the improvements, and the reputed invention of the instrument, date long subsequently to that era, when it had been already perfected among the Egyptians. Indeed, in the earliest sculptures, which are those in the tomb of an individual behind the Great Pyramid, between three and four thousand years old, is a concert of vocal and instrumental music, consisting of two harps, a pipe, a *flute*, and several voices:² and during the reigns of the Pharaohs of the 18th Dynasty many other combinations frequently occur.

The performers either stood, knelt,³ or sat upon the ground; in every instance I have met with they are men; and, what renders the introduction of the instrument more interesting, is the presence of the word *sébi*⁴ in the hieroglyphics, which is the Coptic name of the flute. It was held with both hands, was sometimes of extraordinary length, and the holes were placed so low that, when playing, the musician was obliged to extend his arms.

The pipe seems also to have belonged principally, if not

¹ Pausan. lib. ix.

² Woodcut No. 209.

³ Woodcut No. 214.

⁴ This name is very remarkable, and goes far to prove that flutes were made, as in Bœotia and in some countries of the

present day, of the leg-bones of animals. It has the same meaning as the Latin *tibia*, 'a flute,' or 'thigh-bone;' thus, CHBI-N-PAT, *sébi en-rat*, is the *tibia cruris*, or 'thigh-bone.'

exclusively, to male performers; but as it is very rarely introduced in the sculptures, I conclude it was not held in great estimation. The same remark applies to it in many other countries,



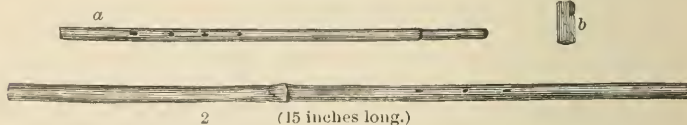
Flute-player. The flute is of great length. No. 250. Thebes.

where it was considered rather a pastoral instrument:¹ and in Greece it was at first peculiar to Arcadia. In form, the Egyptian pipe may have differed slightly from the Greek *μόραυλος*; and the Roman *fistula*,² though the *μόραυλος*, or single pipe of Greece, is allowed to have been introduced from Egypt.³ It was a straight tube, without any increase at the mouth; and, when played, was held with both hands. It was of moderate length, apparently not exceeding a foot and a half, and many have been found much smaller: but these may have belonged to the peasants, without

meriting a place among the instruments of the Egyptian band: indeed, I have seen one measuring only nine inches in length,⁴ and those in the museum of Leyden vary from seven to fifteen inches.

Some have three, others four holes, as is the case with fourteen of those at Leyden, which are made of common reeds; and some⁵ were furnished with a small mouthpiece of the same humble materials, or of a thick straw, inserted into the hollow of the pipe, the upper end so compressed as to leave a very small aperture for the admission of the breath.

(9 inches long.)



No. 251. Reed pipes, of Salt's Collection, now in the British Museum.

J. Pollux seems to attribute to this simple pipe a much more varied power than we should imagine, giving it, as he does, the title of 'many-toned.' 'It was made,' he adds, 'of the straw of

¹ Athenæus (iv. 25) says, some pipes were made of reeds, and called *tityrine* by the Dorians of Italy. The name *καλαμάβλος* was also applied to this sort of pipe, as well as *μονοκάλαμος*.

² Hor. Od. iii. 19, 19.

³ J. Pollux, Onom. iv. 10. Athenæus

says the same, and ascribes the invention of it and the phoinix to Osiris. (Deipnos. 4.)

⁴ It had probably been broken at the joint of the centre of the reed.

⁵ One of these is in the British Museum. Woodcut No. 251, fig. 1, *a* and *b*.

barley, and was the reputed invention of Osiris; ¹ but we are at a loss to know to what instrument he alludes, when he speaks of ‘the gylarus, a small sort of pipe used by the Egyptians,’ ² unless it be one of the reed pipes already mentioned.

Another kind, which is given in Professor Rosellini’s admirable work on Egyptian Antiquities, appears to have been made of separate pieces like our flutes, unless those divisions represent the joints of the reed; and the form of the upper end seems more complicated, though the number of holes is limited to five.

The following are the observations of Mr. William Chappell on the Egyptian flute:—

‘It was a custom of the Egyptians, in the early dynasties of the empire, to deposit a musical pipe by the side of the body of a deceased person, and, together with the pipe, a long straw of barley. The pipes were played upon by short pieces of barley-straw, which were cut partly through, to perhaps a fourth of the diameter, and then, by turning the blade of the knife flat, and passing it upwards towards the mouth end, a strip of an inch or more in length was raised, to serve as a beating reed, like the haut-boy reed, and thus to sound the pipe. The principle is the same as the old shepherds’ pipe, and as shepherds are no longer as musical as in former days, boys bred in the country have taken up the art. One of the pipes in the British Museum has still the cut piece of straw with which it had been played within it, and a similar piece is to be found within a pipe in the Museum of Egyptian Antiquities at Turin. Entire straws which were thus deposited are preserved in the Museum at Leyden, and in the Salt Collection at the British Museum. These straws give us a new insight into the Egyptian doctrine of the transmigration of souls. They seem to convey a high compliment to the deceased—that he had led so good a life that he would once more resume the human form, and triumph with his pipe, which would have been useless in the mouth of a bird or of a beast.

* The musical lesson is also extraordinary. We learn from these pipes that the early Egyptians understood the principle of the bagpipe drone, and that of the old English Recorder, alluded to by Shakespeare in “Hamlet” and in “A Midsummer Night’s Dream.” Also that they played music in the *pentaphonic* or Scotch scale, as well as in the diatonic scale. One of the pipes in the collection

¹ J. Pollux, *loc. cit.*

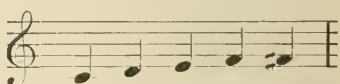
² *Ibid. loc. cit.*: Γύλαρος δὲ μικρὸς τις αὐλίσκος, Αἰγύπτιος, μονωδία πρόσφορος.

at Turin required the piece of straw to be sunk three inches within the pipe to elicit any sound. This is the principle of the bagpipe drone, and that pipe could not have been played at any time by the lips directly upon the straw. The Recorder pipe is in the collection of the British Museum. It is a treble pipe of $10\frac{3}{8}$ inches in length, and has four holes for musical notes, besides two round apertures, opposite to one another, and bored through the pipe, at within an inch of the mouth-end. If those had remained open, there could have been no sound produced; but, by analogy with the English Recorder, they were covered with the thinnest bladder, such as that of a small fish, the object being to produce a slightly tremulous tone by the vibration of the bladder, making it more like the human voice than the pure and steady quality of an English flute, such as was blown at the end, or of a diapason pipe in an organ. This pipe is also remarkable for being on the *pentaphonic* or Scotch scale, and that the pitch should be precisely that of a modern harmonium, and the notes to correspond with the black keys upon a pianoforte.



The first note of this scale is produced by the whole length of the pipe.

‘The next to be remarked upon is a tenor pipe in the British Museum of $8\frac{3}{4}$ inches in length, which has also four holes for notes.

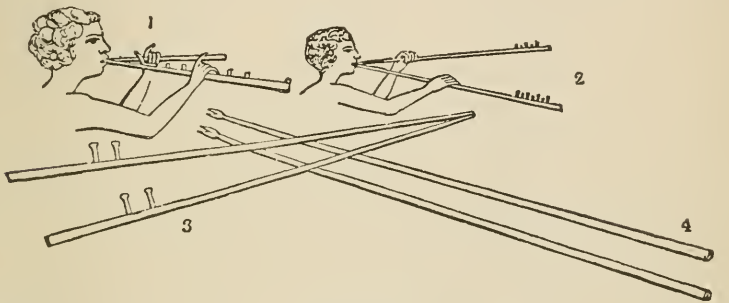
The scale at the present pitch is 

‘The last sharp is a puzzle. It may have been intended for G, but, if not, it was probably to give the leading note to a treble pipe. We find three pipers playing together with pipes so varied in length in the tomb of Tebhen of the 4th Dynasty of Egypt,¹ that they must have been playing treble, tenor, and bass. It is this which suggests the idea of the F sharp being a leading note to another pipe, and further, because one of those at Turin has the first four notes only a tone lower, without any fifth note. It is the one with the bagpipe drone, $23\frac{3}{8}$ inches in length, and has only three holes.’

¹ Lepsius, ‘Denkmäler,’ Abt. ii. Blatt. 36, from the Pyramids of Gizeh, Grab 93. — S. B.

The double pipe consisted of two pipes, perhaps occasionally united together by a common mouthpiece, and played each with the corresponding hand. It was common to the Greeks¹ and other people, and, from the mode of holding it, received the name of right and left pipe, the *tibia dextra* and *sinistra* of the Romans.² The latter had but few holes, and, emitting a deep sound, served as a bass. The other had more holes, and gave a sharp tone;³ and for this purpose they preferred the upper part of the reed (when made of that material) for the right-hand pipe, and the lower part, near the root, for the left tube.⁴ To them, also, the name of *auloi* was applied by the Greeks, as was that of *monaulos* to the single pipe.

In the paintings of Herculaneum, some of the double pipes are furnished with pegs, fixed into the upper side of each tube,



No. 252.

Double pipes.

Herculaneum.

towards the lower extremity; but it is difficult to ascertain the purpose for which they were intended. Some have two in each; others five in the left, and seven in the right-hand pipe; and others again five in the right, and none in the other, which is of much smaller dimensions, both in length and thickness.⁵

Nothing of the kind has yet been met with in the sculptures of the Egyptians; but as they may have had pipes of similar construction, and these tend to throw some light on the general

¹ The double pipe of the Greeks had sometimes two pegs at the lower end, or five on one and seven on the other pipe. Woodcut No. 252.

² The pipe called *magadis* and *palæomagadis* emits a deep and an acute sound, as Alexander states. (Athen. iv. 25.)

³ 'Biforem dat tibia cantum.' (Virg. Æn. ix. 618.)

⁴ Plin. xvi. 36. The reed of Orchomenus.

was called anætic, from being suited to the flute; another was named *syringia*, being more proper for making pipes.

⁵ This does not agree with the above statement of the *tibia dextra* emitting the sharper sound; but it is possible that they varied according to the pleasure of the performer, being separate. Woodcut No. 252, fig. 1.

appearance and use of the instrument, they are introduced in the woodcut on the previous page.

The double, like the single pipe, was at first of reed, and afterwards of box,¹ lotus-thorn,² and other sonorous wood; or of horn, ivory, bone,³ iron or silver. It was not only used on solemn occasions, but very generally at festive banquets,⁴ both among the Greeks and Egyptians. Men, but more frequently women, performed upon it, occasionally dancing as they played; and



No. 253.

Women dancing, while playing the double pipe.

Thebes.

from its repeated occurrence in the sculptures of Thebes we may suppose the Egyptians preferred it to the single pipe. Of its tone no very accurate notion can be formed; but it is easy to conceive the general effect of an instrument emitting a tenor and bass at the same time. The modern Egyptians have imitated it in their *zummára*, or double reed; but not, I imagine, with very great success, since it is both harsh and inharmonious, and of the rudest construction. Nor is it admitted, like the ancient double pipe, at festivals, where other instruments are introduced; nor allowed to hold rank in their bands of music, humble and imperfect as they now are; and its piping harshness and monotonous drone are chiefly used for the out-of-doors entertainments of the peasants, or as a congenial accompaniment to the tedious camel's pace.

Many of the instruments of the ancients, whether Greeks,

¹ Plin. *loc. cit.* Boxwood for the pipes used on solemn occasions, the lotus-thorn for the lively-toned instruments. (J. Pollux, *Onom.* iv. 9.)

² Athenæus tells us, the pipes made of the lotus-wood of Africa were called by the Alexandrians *photinges*.

³ Some were made at Thebes, in Bœotia,

of the thigh-bone of the fawn. (Athen.; and J. Pollux, iv. 10.) The latter writer mentions the bones of vultures and eagles used by the Scythians.

⁴ According to the same author, the name of boys' pipe, or *hemiosus*, was applied to one of those used at feasts.

⁵ Woodcuts Nos. 201, 253, &c.

Romans, or Jews, bore a noisy and inharmonious character; and Lucian relates an anecdote of a young flute-player named Harmonides, who, thinking to astonish and delight his audience at the Olympic games, blew with such violence into the instrument on which he was performing a solo, that, having completely exhausted himself, he died with the effort,¹ and may be said to have breathed his last into the flute. But that it was really a flute, seems highly improbable; and on this and many other occasions, ancient writers appear to have confounded the instrument with a species of clarionet, or bell-mouthed pipe, which, being different from the straight *fistula*, was comprehended under the more general name of *aulos* or *tibia*. Of the clarionet we have no instance in the sculptures of Egypt; and the modern inhabitants have probably derived their clamorous and harsh-toned instrument from some model introduced by the Romans, or other foreigners: who, after the reign of Amasis, visited or took possession of the country.

Nor do we meet with that combination of long and short reeds, now known by the name of pan-pipes,² in any of the musical scenes portrayed in the tombs; which, from its having been used by the Jews, we might expect to find in Egypt. It was called in Hebrew *āogab*,³ and is one of the oldest instruments mentioned in sacred history, its invention being said to date *before* the age of Noah.

The tambourine was a favorite instrument both on sacred and festive occasions. It was of three kinds, differing, no doubt, in sound as well as form. One was circular, another square or oblong, and the third consisted of two squares separated by a bar.⁴ They were all beaten by the hand, and used as an accompaniment to the harp and other instruments.

Men and women played the tambourine, but it was more generally appropriated to the latter, as with the Jews;⁵ and they frequently dance to its sound, without the addition of any other music. It was of very early use in Egypt, and seems to have been known to the Jews⁶ previous to their leaving Syria: being

¹ No doubt from the bursting of a blood-vessel. J. Pollux mentions a player on the trumpet, one Herodorus of Megara, whose instrument stunned every one. (Onom. iv. 11.)

² Some of those at Herculaneum have all the reeds of the same length, in others they decrease towards one end; as described by J. Pollux (iv. 9), who says they were bound together with waxed string.

³ Job xxi. 12, and Gen. iv. 21, translated 'organ.'

⁴ Woodcut No. 261, *fig. 3*.

⁵ Exod. xv. 20: 'And Miriam took a timbrel in her hand, and all the women went out after her with timbrels and with dances.' Judges xi. 34, Jephthah's daughter, and xxi. 21; 1 Sam. xviii. 6.

⁶ As was the harp, which I before mentioned. Gen. xxxi. 27: 'With tabret and with harp;' '*be taph oo be kinoor*.' The harp, tabret, and *āogab* were known in the days of Job. (Job. xxi. 12.)

among the instruments mentioned by Laban, under its Hebrew name *taph*, the *tar* of the modern Arabs.

From the imperfect representations of those in the tombs of Thebes, it is difficult to say whether the Egyptian tambourine had the same movable pieces of metal, let into its wooden frame, as in that of the present day; but their mode of playing it was similar, and from their holding it up after it had been struck, we may venture to conclude the adoption of the metal rings, for the free emission of whose sound that position was particularly suited. It is evident, from the paintings at Herculaneum, that the Greek tambourine was furnished with balls of metal, pendent from the front part, or from the centre, of its circular rim, to which each appears to have been attached by a short thong; and this instrument was mostly confined to women, as with the Egyptians, and chiefly used by the Greeks in festivals of Bacchus and Cybele.

With the name of tambourine that of Anacharasis will always be connected; and, however improbable the story, it has been very generally believed that he fell a sacrifice to the indignation of his countrymen, in consequence of having introduced the instrument into Scythia when he returned from Greece. Some, with more reason, suppose that an attempt to reform the laws of his country after the Athenian model was the cause of his death.

Among the instruments of sacred music¹ may be reckoned the harp, lyre, flute, double pipe, tambourine, cymbals, and even the guitar; but neither the trumpet, drum, nor *mace*, was excluded from the religious processions, in which the military were engaged. They do not, however, appear to have been admitted, like the former, among those whose introduction into the courts of the temple was sanctioned on ordinary occasions; and perhaps the peculiar title of 'the holy instrument' ought to be confined to the sistrum.

The harp, lyre, and tambourine were often admitted during the religious services of the temple;² and in a procession in honor of Athor, represented on a frieze at Dendera,³ two goddesses are observed to play the harp and tambourine;⁴ and this

¹ Woodcut No. 254.

² With the Jews, the harp, lute, and ten-stringed *ashûr* were employed in the praise of the Deity, as well as trumpets, cymbals, and other instruments. (Psalm xxxiii. 2; and again in Psalm lxxxi. 2, 'The tabret (timbrel), the merry harp, with the lute (psaltery),' and 'the trum-

pet;' 1 Chron. xxv. 1.) Asaph even played the cymbals (1 Chron. xvi. 5).

³ Formerly Tentyris, in Upper Egypt.

⁴ In a painting at Herculaneum, representing a sacrifice in the Temple of Isis, the tambourine is introduced, and a man blowing what appears to be the *cornu* or horn.

last again occurs in the hand of another deity at Hermonthis. The priests, bearing various sacred emblems, frequently advanced to the sound of the flute,¹ and entered the temple to celebrate their most important festivals: and with the exception of those of Osiris at Abydus,² the sacred rites of an Egyptian deity did not forbid the introduction of the harp, the flute, or the voice of singers.



No. 254.

Sacred musicians, and a priest offering incense.

Leyden Museum.

At the *fête* of Diana, or Bast, at Bubastis, music was permitted as on other similar occasions;³ and Herodotus⁴ mentions the flute and the *crotala*, which were played by the votaries of the goddess, on their way down the Nile to the town where her far-famed temple stood. In the processions during the festival of Bacchus, the same author⁵ says the flute-player goes first, and is followed by the choristers, who chant the praises of the deity; and we find the flute represented in the sculptures in the hands of a sacred musician attached to the service of Amun, who is in attendance, while the ceremonies are performed in honor of the god. And that cymbals were appropriated to the same purpose we have sufficient reason for inferring from their having been found buried with an individual whose coffin bears an inscription

¹ The flute is mentioned by Apuleius, in speaking of the mysteries of Isis. (Apuleius, *Metamorph.* lib. xi.) Herodot. ii. 48.

² Strabo, lib. xvii.

³ J. Pollux, *Onom.* iv. 11: 'The trum-

pet was used in some processions and religious services, by the Egyptians, Greeks, Tyrrheni, and Romans.'

⁴ Herodot. ii. 60.

⁵ *Ibid.* ii. 48.

purporting that she was the minstrel of Amun, the presiding deity of Thebes.

Crotala were properly a sort of castanets, made of hollow wooden shells: and cymbals bore the name of *crembala*; but in some instances, as in the passage of Herodotus, the name *crotala* appears to signify cymbals. They were occasionally like our clappers¹ for frightening birds: and that Pausanias had in view something of the kind is probable, from the use to which he supposes they were once applied requiring a much more powerful sound than that produced by castanets. 'The birds of Stymphalus,'² says that writer, 'which lived on human flesh, are commonly fabled to have been destroyed by the arrows of Hercules; but Pisander, of Camirus, affirms that they were frightened away by the noise of *crotala*.'³

That the harp was a favorite instrument in religious ceremonies is evident from the assertion of Strabo; from the frequent mention of minstrels of Amun and other gods, in the hieroglyphic legends placed over those who play that instrument; and from the two harpers in the presence of the god Ao, before mentioned.

The custom of approaching the holy place, and of singing the praises of the Deity, was not peculiar to the Egyptians. The Jews regarded music as an indispensable part of religion, and the harp held a conspicuous rank in the consecrated band.⁴ David was himself⁵ celebrated as the inventor of musical instruments, as well as for his skill with the harp; he frequently played it during the most solemn ceremonies: and we find that, in the earliest times, the Israelites used the timbrel, or tambourine, in celebrating the praises of the Deity; Miriam⁶ herself, a 'pro-

¹ Pausan. Arcad. lib. viii.

² Represented in the Etruscan tombs.

³ The *crotala* or castanets of the Egyptians were carved pieces of ivory or wood, sometimes terminating in a human head, at other times ending in a hand. They were flat and generally pierced at the end not so ornamented with a hole, and held together by a piece of palm-fibre cord. When struck together, they give a kind of dull clapping sound. The Greek *crotala*, as appears from the vase paintings, were of a shape quite different, flat and resembling a bell, and made of brass. They were without doubt more noisy than the Egyptian, and their sound suitable for scaring birds. None have been discovered. The Egyptian are figured in woodcut No.

224, p. 456, and were often ornamented on the exterior with figures in outline of the god Besa and various animals, and are often of a late period. In the vase paintings of the Greeks, *crotala* are often seen in the hands of Mænads or Bacchantes. — S. B.

⁴ 2 Sam. vi. 5: 'And David and all the house of Israel played before the Lord, on all manner of instruments, made of fir-wood, even on harps, and on psalteries, and on timbrels, and on cornets, and on cymbals.'

⁵ Amos vi 5: 'Invent unto themselves instruments of music, like David;' and 1 Chron. xxiii. 5: 'Praised the Lord with the instruments which I made (said David).'

⁶ Exod. xv. 20.

phetess, and the sister of Aaron,' having used it while chanting the overthrow of Pharaoh's host.

With most nations it has been considered right to introduce music in the service of religion; and if the Egyptian priesthood made it so principal a part of their earnest inquiries, and inculcated the necessity of applying to its study, not as an amusement, or in consequence of any feeling excited by the reminiscences accompanying a national air, but from a sincere admiration of the science, and of its effect upon the human mind, we can readily believe that it was sanctioned, and even deemed indispensable, in many of their religious rites. Hence the sacred musicians were of the order of priests, and appointed to the service, like the Levites¹ among the Jews; and the Egyptian sacred bands were probably divided and superintended, in the same manner as among that people.

[The priests, according to Diodorus,² did not learn music; but Strabo³ speaks of singers, flute-players, and harpers called *hieropsaltistæ*, or sacred harpers. Clemens mentions the psalmist, *hymnodos*, who learnt two books, the hymns to the gods, several of which, as those to Ptah, Amen Ra, Thoth, and the Nile, have been preserved; and Josephus⁴ states that they played the *buni*, and the *trigonon enharmonion*, or enharmonic trigon. In the hieroglyphs the *hes*, or bards, are often mentioned; but it does not appear that they belonged to the class of prophets. In the decree of Canopus, the *threne*, or dirge, in honor of the deceased child, Queen Berenike, was to be handed to the leader of the band, *ododidaskalos*, by the sacred scribes.⁵—S. B.]

At Jerusalem 'Asaph, Heman, and Jeduthun' were the three directors of the music of the tabernacle, under David, and of the temple, under Solomon. Asaph had four sons, Jeduthun six, and Heman fourteen.

These twenty-four Levites, sons of the three great masters of sacred music, were at the head of twenty-four bands of musicians, who served the temple in turns. Their number there was always great, especially at the grand solemnities. They were ranged in order about the altar of burnt sacrifices. Those of the family of Kohath were in the middle, those of Merari at the left, and those of Gershon on the right hand. The whole business of their life

¹ Chron. xv. 16.

² Diod. ii. 32.

³ Porphyry, de Abst. lib. iv. p. 374.

⁴ In Hypomnestrio, p. 330. F. T. Facii.

⁵ Lepsius, 'Die Dekret von Canopus,' fol., Berlin, 1866, p. 24.

was to learn and practise music; and being provided with an ample maintenance, nothing prevented their prosecuting their studies, and arriving at perfection in the art. Even in the temple, and in the ceremonies of religion, female musicians were admitted as well as men; and they were generally the daughters of Levites. Heman had three daughters, who were proficient in music; and the 9th Psalm is addressed to Benaiah, chief of the band of young women, who sang in the temple.

Ezra, in his enumeration of those he brought back from the captivity, reckons two hundred singing-men and singing-women; and Zechariah, Aziel, and Shemiramoth¹ are said to have presided over the seventh band of music, which was that of the young women.

In many other places mention is made of women who sang and played on instruments;³ and the fact of some of them being the daughters of priests and of the first families, is analogous to the custom of the Egyptians, who only admitted those of the priests and kings into the service of the temple. Herodotus states, indeed, that women were not allowed in Egypt to become priestesses of any god or goddess, the office being reserved exclusively for men;⁴ but though it is true that the higher functions of the priesthood belonged to these last, as far as regarded the slaying of victims, presenting offerings, and other duties connected with the sacrifices, yet it is equally certain that women were also employed in the service of the temple, and were even, according to the historian himself, so fully instructed in matters appertaining to religion, that two who had been carried away and sold into Libya and Greece were enabled to institute oracles in those countries. This statement of Herodotus⁵ appears to contradict the former one above mentioned, especially as he admits them to have had access to the altars of the god they served,⁶ the Theban Jupiter; but it is probable that he merely refers to the higher offices of the priesthood, without intending to exclude them altogether from those sacred employments.

It is difficult to decide as to the name, or the precise rank or office they bore; but the sculptures leave no room to doubt that they were admitted to a very important post, which neither the

¹ 1 Chron. xv. and xvi.

² Calmet.

³ Exod. xv. 20. Psalm lxxviii. 25: 'The singers go before, the minstrels follow after; in the midst are the damsels play-

ing with the timbrels.' And 2 Sam. xix. 35.

⁴ Herodot. ii. 35.

⁵ Ibid. ii. 54.

⁶ Ibid. ii. 56.

wives and daughters of priests, nor even of kings, were ashamed to accept. In the most solemn processions they advanced towards the altar with the priests, bearing the sacred sistrum; ¹ and a queen or a princess frequently accompanied the monarch, while he offered his praise or a sacrifice to the deity, holding one or two of those instruments in her hand. ²

[The offices in the hierarchy held by women have been already noticed at an early period under the 4th and 6th Dynasties; they held the post of *neter hent*, or prophetess, and such are found of the goddesses Neith and Athor, but after this period they appear to have been excluded from the priesthood proper. Queens, indeed, were styled *neter hemet*, 'divine wife,' or *neter tut*, 'divine handmaid,' of Amen, the *pallakis* of the Greek writers; but it is probable that the office was purely honorary. At a later period from the 18th Dynasty there were *aha*, sistrum players, determined by the hieroglyph of a draped female holding a sistrum, and singers, *gemā*, attached to the worship of the gods, especially of Amen Ra at Thebes, and a few offices of secular character were held by women. — S. B.]

By some the sistrum was supposed to have been intended to frighten away Typho, or the evil spirit; and Plutarch, who mentions this, ³ adds that 'on the convex surface is a cat with a human visage; on the lower part, under the moving cords, the face of Isis; and on the opposite side that of Nephthys.' The bars, to which he alludes, were generally three, rarely four; and each had three or four rings of metal, whereby the 'rattling noise made with the movable bars' was greatly increased.

The instrument was generally from about eight to sixteen or eighteen inches in length, and entirely of bronze or brass. It was sometimes inlaid with silver, gilt, or otherwise ornamented; and being held upright, was shaken, the rings moving to and fro upon the bars. These last were frequently made to imitate snakes, or simply bent at each end to secure them; and I have met with one

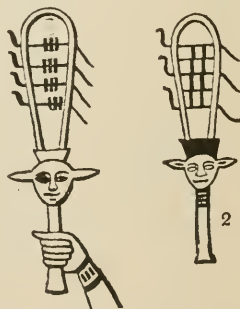


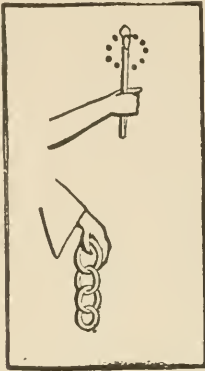
Fig. 1. The sistrum of four bars.
2. Of unusual form.
No. 255. Thebes.

¹ Conf. Claudian, de iv. cons. Honor. 570, and woodcut No. 8.

² Woodcut No. 8, fig. 5.

³ Plut de Isid. s. 63.

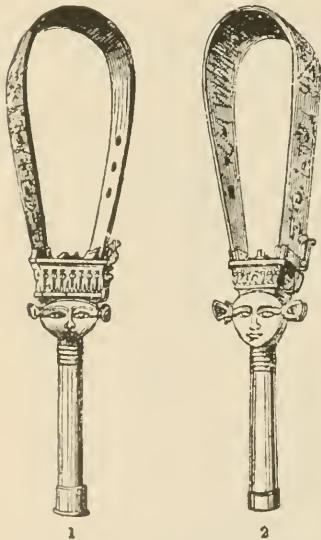
instance of their being connected with each other by cross-pieces, besides the unusual addition of two intermediate bars.¹



No. 256. Instrument and chain shaken by a person in a religious ceremony represented at Herculaneum.

In a sacrifice to Isis, represented at Herculaneum, in company with several sistra, is an instrument consisting of a rod and a set of movable balls, arranged in a circle, apparently shaken by the performer; who, in the other hand, holds four links of a chain, intended, no doubt, to emit a similar jingling sound; but as the paintings in which they occur are of a late date, and the rites only borrowed from those of Egypt, we have no direct evidence of their having been used by the Egyptians themselves.

The most interesting sistrum I have seen is one brought to England by Mr. Burton, and now in the British Museum. It was found at Thebes; and, being of a good style and of the most correct Egyptian form, appears to indicate great antiquity, and one of the best periods of art.



No. 257. Sistrum in Mr. Burton's Collection, now in the British Museum.

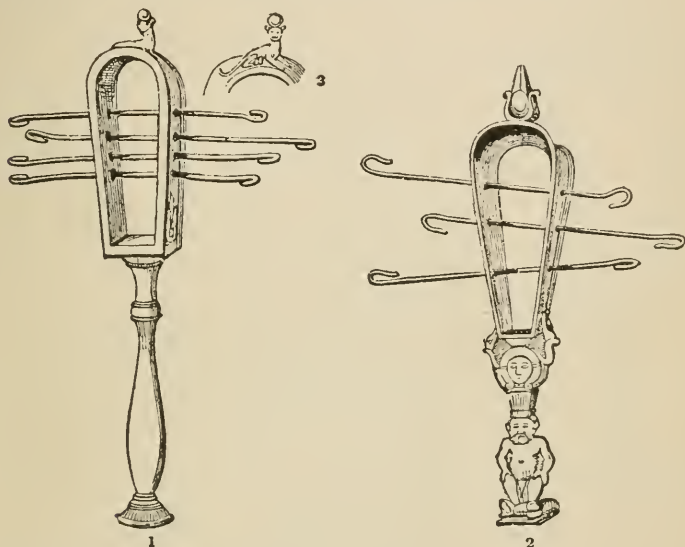
Two others in the British Museum are highly preserved, but are evidently of a late epoch; and another in the same collection is of very modern date. They have four bars, and are of very small size. Mr. Burton's sistrum is one foot four and a half inches high, and was furnished with three movable bars, which have been unfortunately lost. On the upper part are represented the goddess Bast, or Bubastis, the sacred vulture, and other emblems; and below is the figure of a female, holding in each hand one of these instruments.

The handle is cylindrical, and surmounted by the double face

¹ Woodcut No. 255, fig. 2.

of Athor,¹ wearing an 'asp-formed crown,' on whose summit appears to have been the cat, now scarcely traced in the remains of its feet. It is entirely of bronze; the handle, which is hollow, and closed by a movable cover of the same metal, is supposed to have held something appertaining to the sistrum; and the lead, still remaining within the head, is a portion of that used in soldering the interior.

One of the Berlin sistra is eight, the other nine inches in height: the former has four bars, and on the upper or circular part lies a cat,² crowned with the disc or sun. The other has three



Nos. 258, 259.

Sistra in the Berlin Museum.

bars; the handle is composed of a figure supposed to be of Typho, surmounted by the heads of Athor; and on the summit are the horns, globe, and feathers of the same goddess.³ They are

¹ Plutarch, de Isid. s. 63.

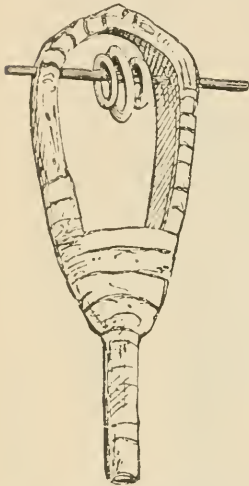
² Plutarch, *loc. cit.* He supposes the four bars corresponded to the four elements. These sistra are of the Roman period.

³ The upper part of the handle of the sistrum always at an early period was ornamented with a head of the cow-eared Athor, the Egyptian Aphroditè, or Venus, surmounted by a cornice, and often inlaid with gold or silver. Older sistra than that of Mr. Burton are found in museums. The sistrum was called *ses'*, which is evidently the origin of its name, although

seistron may have been assimilated or derived from a Hellenic root. The action of shaking the sistrum was called *art ses'*, and was a sign of joy. Besides the above wooden model, which probably formed part of a wooden figure, models of sistra made of blue or bluish-green porcelain have been found, and the handles of others show that they were often of large size. A small model in the British Museum is surmounted by a hawk and vulture, and the part for the base is in shape of a pylon. They sometimes have inscriptions having the name of the goddess *Sechet*, or Bast,

both destitute of rings; but the rude Egyptian model of another, in the same collection, has three rings upon its single bar, agreeing in this respect, if not in the number of the bars, with those represented in the sculptures.

Songs and the clapping of hands may likewise be considered connected with sacred music; and they are both noticed in the sculptures and by ancient authors. Those who attended at the festival of Bubastis are said by Herodotus to have celebrated the Deity in this manner, with the music of flutes and cymbals; and the Jews followed the same custom,¹ like the Moslem inhabitants of modern Egypt.



No. 260. Rude model of a sistrum in the Berlin Museum.

The *chnoue*, an instrument said by Eustathius to have been used by the Greeks at sacrifices to assemble the congregation, was reputed to have been of Egyptian origin; but I do not believe it has been met with in the sculptures. It was a species of trumpet, of a round shape, and was said to have been the invention of Osiris.

The dance consisted mostly of a succession of figures, in which the performers endeavored to exhibit a great variety of gesture; men and women danced at the same time, or in separate parties, but the latter were generally preferred, from their superior grace and elegance. Some danced to slow airs, adapted to the style of their movement: the attitudes they assumed frequently partook of a grace not unworthy of the Greeks: and some credit is due to the skill of the artist who represented the subject, which excites additional interest from its being in one of the oldest tombs of Thebes.² Others preferred a lively step, regulated by an appropriate tune; and men sometimes danced with great spirit, bounding from the ground,³ more in the manner of Europeans than of an Eastern people. On these occasions the music was not always composed of many

the Bubastis or Artemis of the Egyptians, and the names of monarchs of the 26th Dynasty and their immediate successors. It has been supposed that sistra were used in sepulchral ceremonies, but they are not

so represented. (Pierret, 'Dict. d'Archéologie Égyptienne,' p. 514.) — S. B.

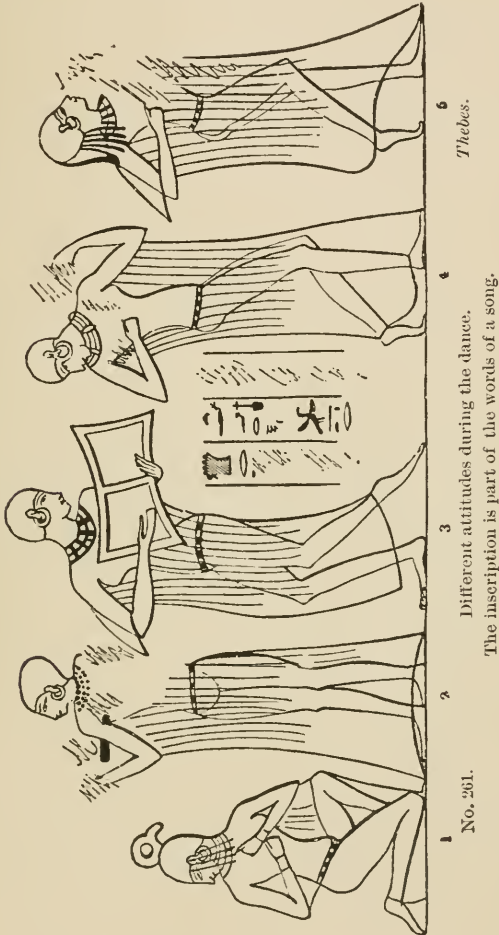
¹ Psalm xlvii. 1.

² Of the time of Amenophis II., B.C. 1450. Woodcut No. 261.

³ Woodcut No. 223.

instruments, and here we only find the cylindrical maces, and a woman snapping her fingers to the time¹ in lieu of cymbals or castanets.

Graceful attitudes and gesticulation were the general style of



their dance; but, as in all other countries, the taste of the performance varied according to the rank of the person by whom they were employed, or their own skill; and the dance at the house of a priest differed from that among the uncouth peasantry, or the lower classes of townsmen.

¹ The 'Lesbium servate pedem, *meique Pollicis ictum*' of Horace (Od. lib. iv. 6,

39), might refer to this mode of marking the time.

It was not customary for the upper orders of Egyptians to indulge in this amusement, either in public or private assemblies; and none appear to have practised it but the lower ranks of society, and those who gained their livelihood by attending festive meetings. With the Greeks, it was also customary at feasts to have women who professed music and dancing to entertain the guests; they even looked upon the dance as a recreation, in which all classes might indulge, and deemed it an accomplishment becoming a gentleman: it is therefore not surprising that, like music, it should have formed part of their education.

The Romans, on the contrary, were far from considering it worthy of a man of rank, or of a sensible person: and Cicero says,¹ 'No man who is sober dances, unless he is out of his mind, either *when alone*, or in any decent society; for dancing is the companion of wanton conviviality, dissoluteness, and luxury.'² Nor did the Greeks indulge in it to excess; and effeminate dances were deemed indecent in men of character and wisdom. Indeed, Herodotus informs us that Hippoclidés, the Athenian, who had been preferred before all the nobles of Greece as a husband for the daughter of Clisthenes, king of Argos, was rejected on account of his extravagant gestures in the dance.

Of all the Greeks, the Ionians were most noted for their fondness of this art, and, from the wanton and indecent tendency of their songs and gesticulations, dances of a voluptuous character, like those of the modern Alméhs³ of the East, were styled by the Romans 'Ionic movements.'⁴ Moderate dancing was even deemed worthy of the gods themselves. Jupiter, 'the father of gods and men,' is represented dancing in the midst of the other deities; and Apollo is not only introduced by Homer thus engaged, but received the title of *orchestes*, 'the dancer,' from his supposed excellence in the art. In early ages, before the introduction of luxury, it was an innocent recreation; and, as Athenæus⁵ observes, 'becoming of persons of honor and

¹ Cicero, Orat. pro Murenâ.

² Sallust (Bell. Catil.) says of Sempronius, 'psallere saltare elegantius quam probare necesse est,' which shows that even at that time the Roman ladies played and danced. — S. B.

³ Alméh, Eulmeh, or Ghowázee, women in Egypt and other countries who dance with the most indecent gestures to the sound of a violin and tambourine, singing and repeating verses. They were formerly

learned women, whence their name Eulmeh, who rehearsed poetry, and danced to amuse the inmates of a *harém*. Their general appellation at the present day, Ghowázeh, is derived from Ghoo (warriors), a title of the Memlooks, at whose festive meetings they used to dance, and through whom they have lost the consideration they formerly enjoyed.

⁴ Hor. Od. lib. iii. 6, 21.

⁵ Athen. i. 19.

wisdom ;' but extravagant gesture corrupted its original simplicity,¹ and 'no part of the art connected with music,' says Plutarch,² 'has in our time suffered so great a degradation as dancing.'

Fearing lest it should corrupt the manners of a people naturally lively and fond of gayety, and deeming it neither a necessary part of education nor becoming a person of sober habits, the Egyptians forbade those of the higher classes to learn it as an accomplishment, or even as an amusement; and, by permitting professional persons to be introduced into their assemblies, to entertain the guests, they sanctioned all the diversion of which it was supposed capable, without compromising their dignity.

They dreaded the excitement resulting from such an occupation, the excess of which ruffled and discomposed the mind; and it would have been difficult, having once conceded permission to indulge in it, to prevent those excesses which it did not require the example of Asiatic nations to teach them to foresee. If those who were hired to perform, either in public or in private, transgressed the bounds of moderation, or descended to buffoonery, it might excite the contempt of those it failed to please, yet the beholders were innocent of the fault; and any word or action offending against the rules of decency might be checked by the veto of their superiors.

In private, in particular, they were subject to the orders and censure of the persons by whom they were employed; and, consequently, avoided any gesture or expression which they knew to be unwelcome, or likely to give offence to the spectators; and thus no improper innovations were attempted, from the caprice of a performer. They consulted the taste of the party, and adapted the style of dance and of gesture to those whose approbation they courted: it is not, therefore, surprising that excesses were confined to the inferior class of performers, at the houses of the lower orders, whose congenial taste welcomed extravagant buffoonery and gesticulation.

Grace in posture and movement was the chief object of those employed at the assemblies of the rich; and the ridiculous gesture of the buffoon were permitted there, so long as they did not transgress the rules of decency and moderation. Music was

¹ Dancing was highly approved of by Socrates, as being conducive to health. (Plut. de Sanit.)

² Plut. Sympos. viii. 9, 18.

always indispensable, whether at the festive meetings of the rich or poor; and they danced to the sound of the harp, lyre, guitar, pipe,¹ tambourine, and other instruments, and, in the streets, even to the drum.

Many of their postures resemble those of the modern ballet; and the *pirouette* delighted an Egyptian party upwards of 3500 years ago.²

The dresses of the female dancers were light, and of the finest texture, showing, by their transparent quality, the forms and movement of the limbs: they generally consisted of a loose flowing robe, reaching to the ankles, occasionally fastened tight at the waist; and round the hips was a small narrow girdle, adorned with beads, or ornaments of various colors. Sometimes the dancing figures are represented without any indication of dress, and appear to have been perfectly naked; but it is difficult to say if this is intentional, or if the outline of the transparent robe³ has been effaced; and it is sometimes so faintly traced as scarcely to be perceived, even when the paintings are well preserved: for we can scarcely suppose that a highly-civilized people like the Egyptians were so depraved as to admit, or to allow their artists to record, a dance of naked women in the presence of men, or that the priesthood would permit such exhibitions.

Slaves were taught dancing as well as music; and in the houses of the rich, besides their other occupations, that of dancing to entertain the family, or a party of friends, was required of them: and that free Egyptians, who gained their livelihood by their performances, were also engaged at private parties, is evident from the paintings, where they are distinctly pointed out, by having the usual color of their compatriots.

Some danced by pairs, holding each other's hands; others went through a succession of steps alone,⁴ both men and women; and sometimes a man performed a solo to the sound of music or the clapping of hands.

Feats of agility and strength were frequently exhibited on these occasions, with or without the sound of music. Some held each other by the hand, and whirled round at arm's length, in opposite directions;⁵ some lifted each other off the ground in various difficult attitudes, and attempted every species of feat

¹ Matt. xi. 17: 'We have piped unto you, and ye have not danced.'

² Woodcut No. 262.

³ The Greeks also represented the con-

tour of the figure, as is seen through the dress.

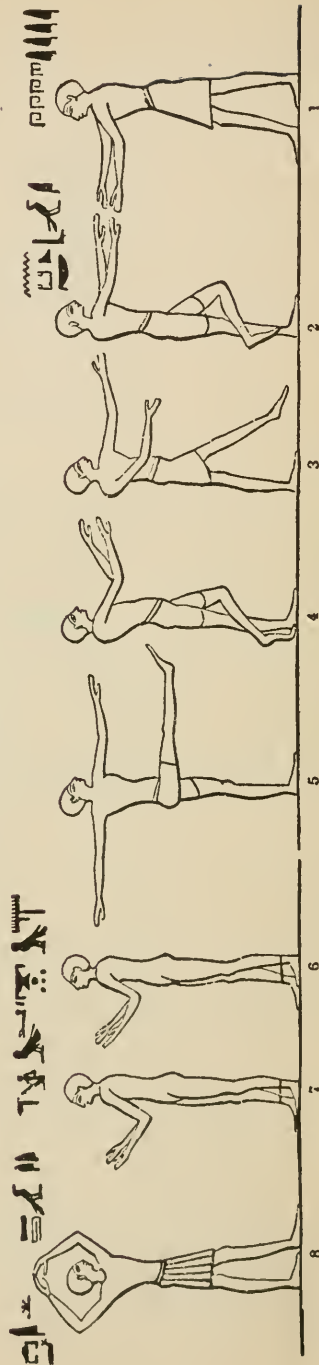
⁴ Woodcut No. 263.

⁵ Woodcut No. 264.

⁶ Woodcut No. 265.

which could be performed by agility or strength: but as these enter more properly under the denomination of games, I shall not introduce them here, but shall notice them in another place, with the gymnastic exercises of the Egyptians.

[Several scenes of dancing are represented in the tombs of the earlier dynasties, where the actions of private life form the principal decoration of the walls. In the dance the hands are often elevated above the head, and the right foot slightly raised from the ground, as in Lepsius.¹ Fourteen women are represented dancing before a table of offering in a tomb at Memphis, and the inscription reads, *hes àn xen em àm*, 'the song of the ladies of the harem.' As many as fifteen are seen dancing at one time in another tomb.² In the tomb of Anmut of the 6th Dynasty there are three male dancers, called *ab en zetf*, 'the dancers before;' and in another scene four *xen en am*, 'ladies of the harem,' dance.³ It is certain that they sometimes danced naked, as their successors, the Alméhs do, and then their waists have a girdle, the *kestos*, round them.⁴ The inscriptions over some of the figures are obscure or unintelligible, but others are clear. Thus in Rosellini (Mon. Civ. cl.) is *per em neter*, 'the mani-



Beni-Hassan.

The pironette, and other Egyptian steps, danced 3500 years ago.

No. 262.

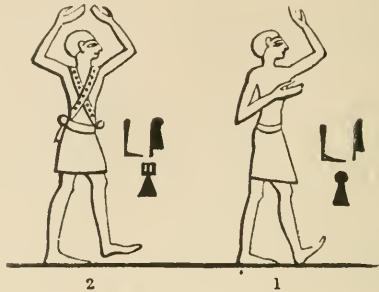
¹ Denkm. Abt. ii. Bl. 14.

² Ibid., Abt. ii. Bl. 35.

³ Ibid., Abt. ii. Bl. 14.

⁴ Rosellini, Mon. Civ. xviii.

festation of a god,' in which four professional dancers form a group imitating the well-known one of the goddess *Pet.*, or 'the heaven,' stretched over the god Seb, or 'the earth.' Another group in the same plate represents a *sat kar sak*, 'striking

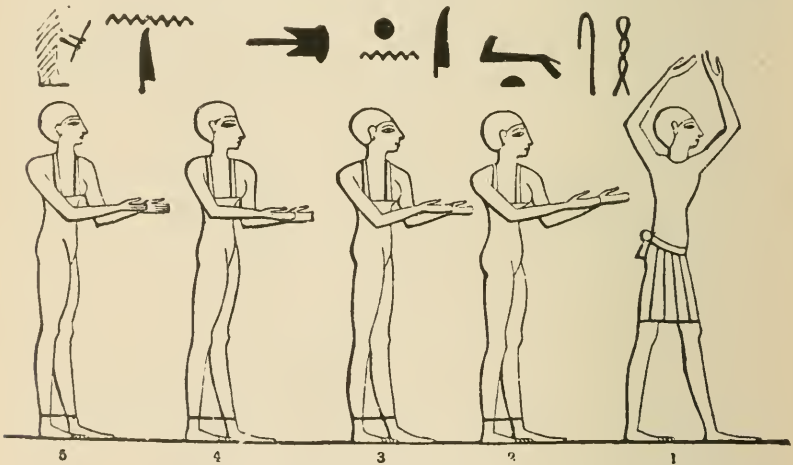


No. 263.

Men dancing alone.¹

Thebes.

down under the sandals,' and is an imitation of an Egyptian monarch seizing a female by the hair, and brandishing one hand over her head. In the tomb of Ptahetep of the 5th Dynasty



No. 264.

Man dancing a solo to the sound of the hand.²

Tomb near the Pyramids.

are a series of actions evidently dramatic and continuous, representing the adventures of youthful twins.³—S. B.]

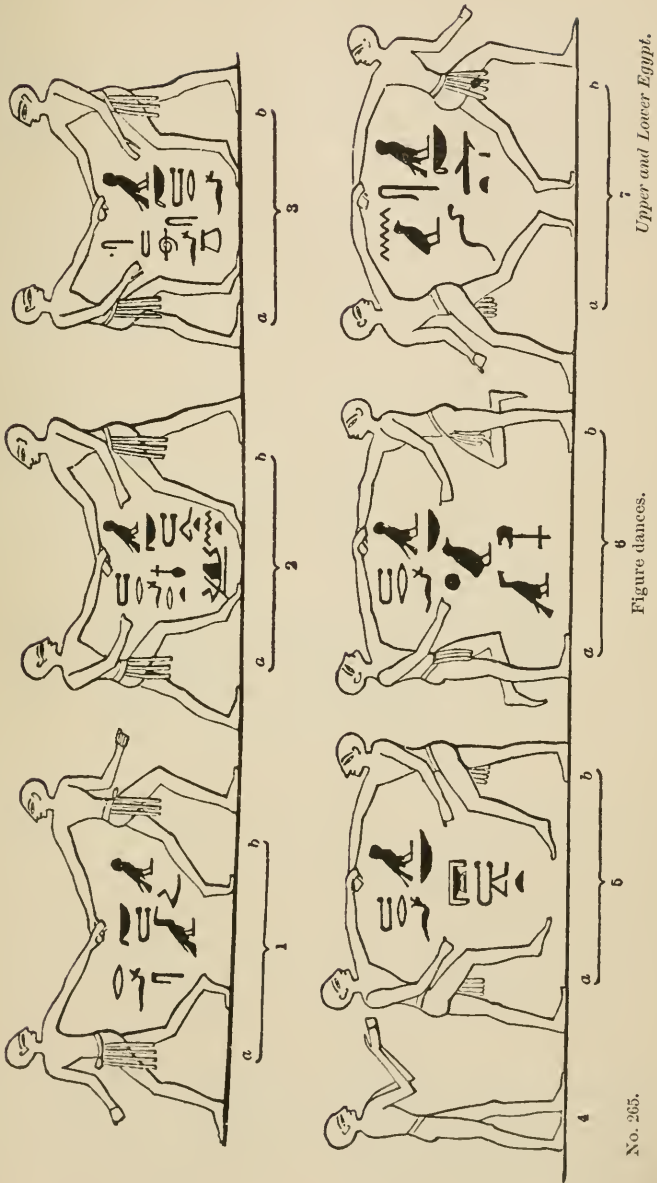
The dancers of the lower orders appear generally to have had

¹ The word dancing is here expressed by *ab*, 'to dance,' indicative of dancing in general.—S. B.

² Engraved by Rosellini, *Mon. Civ.* xiv. The inscription above the heads of the figures reads, *hes an xen en A*,

'the singing by the ladies of the harem of the'. The male figure is dancing to the song.—S. B.

³ Duemichen, 'Die Resultate,' fol., Berlin, 1869, pl. x.—S. B.



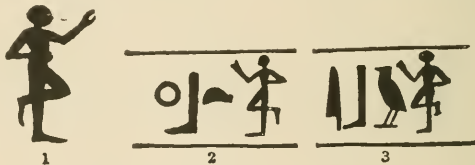
Upper and Lower Egypt.

Figure dances.

No. 265.

a tendency towards a species of pantomime; and we can readily conceive the rude peasantry to be more delighted with ludicrous and extravagant dexterity than with those gestures which displayed elegance and grace. There is no instance of the *tripuliatio*, or dance of armed men, unless some of the figures at Beni-Hassan, represented jumping with arms in their hands, were intended as an allusion to this exercise of the soldier; but they more probably refer to a supposed accidental impulse, indicative of military enthusiasm.¹

Besides the pirouette and the steps above mentioned, a favorite figure dance was universally adopted throughout the country; in which the two partners, who were usually men, advanced towards each other, or stood face to face upon one leg, and, having performed a series of movements, retired again in opposite directions, continuing to hold by one hand, and concluding by turning each other round; as represented in the preceding woodcut. And that the attitude of the two figures of the central couple,² represented above, was very common during their dances, is fully proved by its having been adopted in the hieroglyphics as the emblematic mode of describing the dance.



No. 266.

Hieroglyphic signifying the 'dance.'³

In another step they struck the ground with the heel,⁴ standing on one foot, changing, perhaps, alternately from the right to the left;⁵ which is not very unlike a dance I have seen at the present day.

To manage the hands skilfully and with grace was of paramount importance, not only with the Egyptians, but with

¹ The sets of two men each in woodcut No. 265 represent a series of different figures, like *poses plastiques*, or else the names of the ballet or dance. They read thus, No. 1, *mek terf mas*, 'making the figure of the calf;' No. 2, *mek terf ti nefer en ua*, 'making the figure of the successful taking of a boat;' No. 3, *mek terf sta sef k*, 'making the figure of leading along a *sef k* or animal;' No. 4, *mek terf nub ti*,

'making the figure of taking gold;' No. 5, *mek terf xa*, 'making the figure of a colonnade;' No. 6, *mek ua snut*, 'making a pirouette.' From 4 to 6 are engraved in Lepsius, Denkm. Abt. ii., Bl. 5, 2. — S. B.

² Woodcut No. 265, *fig. 6, a and b.*

³ The words *xeft* and *abu*.

⁴ Hor. Od. lib. iii. 18.

⁵ Woodcut No. 263.

other ancient people; and Plutarch mentions a person¹ who was commended for his superiority in this species of gesture. Nor would it be inconsistent to divide the art of dancing with the Egyptians as with the Greeks, into three distinct parts; and its connection with poetry and songs was probably exactly similar.²

The restrictions which forbade the higher ranks to indulge in the dance, do not appear to have extended to the lower orders; and, when excesses were committed by them in wine or any other intoxicating beverage, they gave way to license and wanton buffoonery, and frequently gratified a propensity for ribaldry, which is not unusual in Eastern countries. On these occasions they whirled each other round with rude dexterity; and some, with folded arms, stood upon their head, and performed the varied antics of expert tumblers.³

Like the Greeks, the Jews did not consider it unworthy of a person of rank to dance, either on solemn or festive occasions; and this is sufficiently shown by the remarkable instances of Miriam, David, and the daughter of Herodias.⁴

That they also danced at the temples, in honor of the gods, is evident from the representations of several sacred processions, where individuals performed certain gestures to the sound of suitable music, and danced as they approached the precincts of the sacred courts. In what this differed from that of ordinary festivities, it is impossible to decide; and, indeed, the appearance of the figures, in more than one instance, precisely the same as the usual hieroglyphic signifying dancing, may be supposed to indicate a great similarity between the ordinary dance and that of the temple.

Such a custom may at first sight appear inconsistent with the gravity of religion: but our surprise ceases, when we recollect with what feelings David himself danced⁵ before the ark; and the fact that the Jews considered it part of their religious duties to approach the Deity with the dance,⁶ with tabret, and with harp, suffices to remove any objection which might be offered to the probability of its introduction in the Egyptian ceremonies. And

¹ Plut. Sympos. viii. 15. He, perhaps, only refers to the palestra, and not to the dance, of which he is treating in this chapter; but he mentions the use of the hands in a subsequent part.

² Plut. *loc. cit.*

³ At the fête of Bubastis even the women did so, without the excuse of being heated with wine, and that, too, on the

occasion of a religious festival. (Herodot. ii. 60.)

⁴ Matt. xiv. 6.

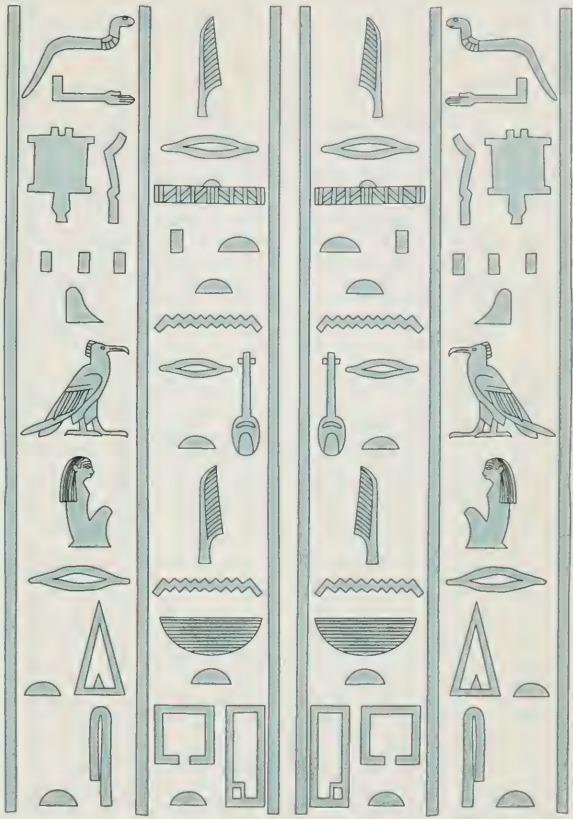
⁵ 1 Chron. xv. 29; 2 Sam. vi. 14.

⁶ Psalm clix. 3: 'Let them praise His name in the dance: let them sing praises unto Him with the timbrel and harp.' Conf. Exod. xv. 20.

if further proof were wanting, we have their mode of worshipping the golden calf,¹ immediately derived from the country they had left, which consisted principally of songs and dancing.

[There is reason to believe, as already mentioned, that pantomime representing a continuous action or argument of a story was attempted by the dance, but that such performances were of a private and not of a public nature, being executed either by the ladies and other persons attached to the harem or household of great persons, or else by hired performers. The ballet was not in use amongst the Egyptians, nor dancing on the tight or slack rope. Nor has any dramatical representation been found in the tombs, or mentioned in the different texts. There is, however, reason to suppose that certain animals were taught to perform tricks and dance, and in musical performances the singers sang either in solo or chorus to the harp and other instruments. The attitudes and sentiments intended to be expressed show a high degree of civilization, and that the æsthetic arts had obtained a considerable rank in ancient Egypt. Athor, the Egyptian Aphroditê, was supposed to preside over dancing and music, and the god Bes was also represented as performing on various musical instruments and dancing. The song and dance united are some of the oldest amusements known, are found at all periods and all places, and are extant amongst the most savage as well as the most civilized of mankind. — S. B.]

¹ Exod. xxxii. 18, 19.



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Fig 1

Fig 2.

BOATS WITH COLOURED SAILS, FROM THE TOMB OF REMESE III. AT THEBES.

THE
MANNERS AND CUSTOMS

OF

THE ANCIENT EGYPTIANS.

BY

SIR J. GARDNER WILKINSON, D.C.L., F.R.S., F.R.G.S.,

Vice-Pres. British Archaeological Association; Hon. Member of the Royal Institute of British Architects, Corresp. M. of the Entomological Soc.; M. of the Ethnological Soc. of London; Hon. Cor. M.R.S.L.; Hon. M. of the Egyptian Institute of Alexandria; Hon. M. of the Ethnological and Oriental Societies of America; Cor. M. of the Bombay Branch of the R. Asiatic Soc.; Hon. M. of the Egyptian Soc. of Cairo; V.-P. of the Cambrian Arch. Assoc.; Cor. M. of the Arch. Soc. of Edinburgh; V.-P. of the Lincoln Diocesan Soc.; Hon. M. of the Ethnol. and Orient. Soc. of New York; Hon. M. of the Archit. Soc. of Oxford; Hon. M. of the Orient. Soc. of Paris; M. of the Inst. of Arch. Cor. of Rome; Cor. M. R. Acad. of Turin; Cor. M. of the R. and I. Acad. of Vienna, etc.

A NEW EDITION, REVISED AND CORRECTED

BY SAMUEL BIRCH, LL.D., D.C.L.,

KEEPER OF THE EGYPTIAN AND ORIENTAL ANTIQUITIES IN THE BRITISH MUSEUM;
PRESIDENT OF THE SOCIETY OF BIBLICAL ARCHAEOLOGY, ETC.

IN THREE VOLUMES.—VOL. II.

WITH ILLUSTRATIONS.

NEW YORK
DODD, MEAD AND COMPANY
PUBLISHERS .

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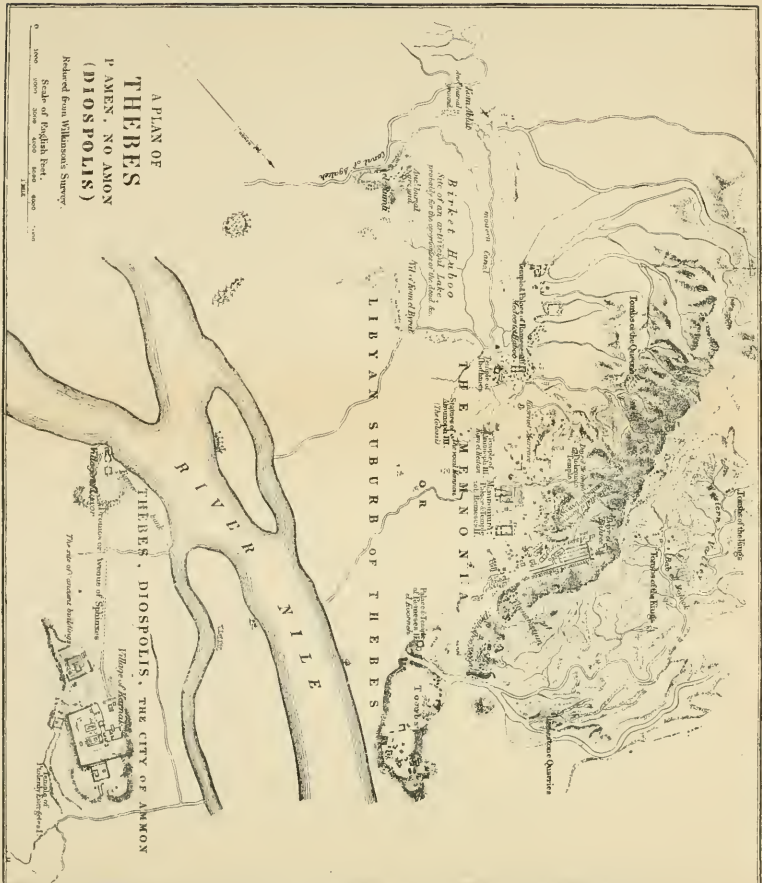
Seated figure of an officer.

British Museum.

A PLAN OF
THERES
THEBES. NO AMON
(DIOSPOLIS)

Reduced from Wilkinson's Survey.

Scale of English Feet.
 0 1000 2000 3000 4000 5000
 1 Mile



THE
ANCIENT EGYPTIANS.



No. 267.

The two colossi of Thebes.

CHAPTER VII.

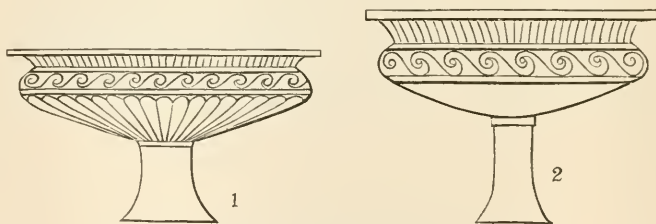
Vases of various Kinds—Boxes of the Toilet and others—Substitute for a Hinge—Parties and Conversation—Preparation for Dinner—Table brought in—Guests seated at Dinner—Figure of a dead Man brought in—Dancing and Entertainments—Game of Draughts—Various Games—Ball—Dwarfs—Wrestling—Fighting with Sticks.

HAVING concluded the preceding chapter with the arrival of a party, and the introductory custom of welcoming the guests with refreshments and music, I proceed to describe the vases placed in the apartments for the purpose of ornament, or used on those occasions; which, as I have already observed, were of hard stone, alabaster, glass, ivory, bone, porcelain, bronze, silver, or gold: the lower classes, contented with those of humbler materials, having an inferior kind of glazed pottery, or common earthenware.

Many of their ornamental vases, as well as those in common use, present the most elegant forms, which would do honor to the skill of a Greek artist, the Egyptians frequently displaying, in these objects of private luxury, the taste of a highly-refined people: and so strong a resemblance do they bear to the productions of the best epochs of ancient Greece, both in their

shape and in the fancy devices which adorn them, that some might even imagine them borrowed from Greek patterns. But they are purely Egyptian, and were universally adopted in the valley of the Nile long before the graceful forms we admire were known in Greece: a fact invariably acknowledged by those who are acquainted with the remote age of Egyptian monuments, and the period when the paintings representing them were executed in the tombs or temples of the Thebaïd.

Some, indeed, of the most elegant date in the early age of the third Thothmes, a monarch who appears to have lived about the year 1490 before our era, and whom I assume to be the Pharaoh of the Jewish Exodus: and we not only admire their forms, but the richness of the materials of which they were made, the colors and the hieroglyphics themselves showing them to



No. 268.

Gold vases of the time of Thothmes III. 1490 B.C.

Thebes.

have been of gold and silver, or of this last, inlaid with the more precious metal.¹

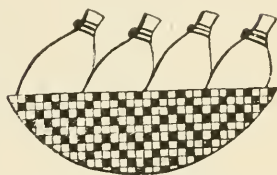
Those of bronze, alabaster, glass, porcelain, and even of ordinary pottery, were also deserving of admiration, from the beauty of their shapes, the designs which ornamented them, and the superior quality of their materials; and gold and silver cups were often beautifully engraved, and studded with precious stones. Among these we readily distinguish the green emerald, the purple amethyst, and other gems; and when an animal's head adorned their handles the eyes were frequently composed

¹ It will be seen from the tomb of Rekhmara that vases of this shape came from the Kefi, or Phœnicia, and the Rut-en-nu, or Syrians. They were probably the celebrated silver plate of Sidon. Amongst the shapes of the Phœnician vases may be recognized the elegant prototypes of the Greek *amphoreus*, *krater*, *œnochoë*, and *rhyta*, in shape of the heads of lions, bulls, calf, and eagle (mistaken for a cock, but exactly like the Assyrian

representation of the head of that bird on the sculptures from Nimroud). The Rut-en-nu bring also a vase in shape of a human hand, also a *rhyton*, which was formerly mistaken for a glove. Similar vases are mentioned in the Annals of Thothmes III., as also a 'silver jug of the make of the Kefan,' or the Phœnicians. ('Records of the Past,' ii. p. 27, pl. v.)—S. B.

of them, except when enamel, or some colored composition, was employed as a substitute.

That the Egyptians made great use of precious stones¹ for their vases, and for women's necklaces, rings, bracelets, and other ornamental purposes, is evident from the paintings at Thebes, and from the numerous articles of jewelry discovered in the tombs; they were among the presents brought by the conquered nations tributary to the Egyptians; and their value and nature are indicated by the hieroglyphics accompanying them, as well as by the care with which they are tied up in bags,² and secured with a seal.



No. 269. Bags, probably containing precious stones, tied up and sealed. *Thebes.*

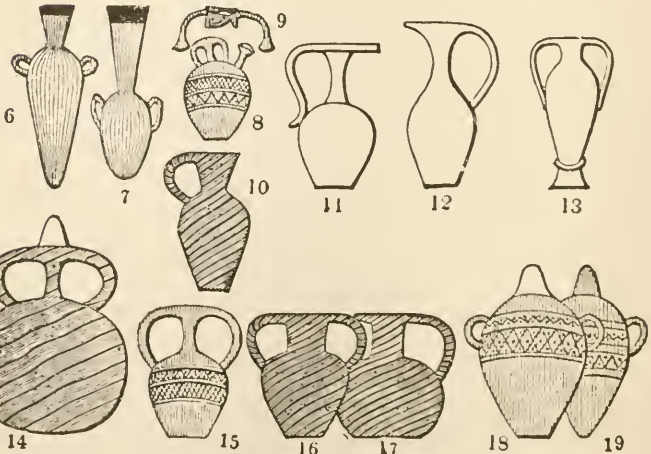
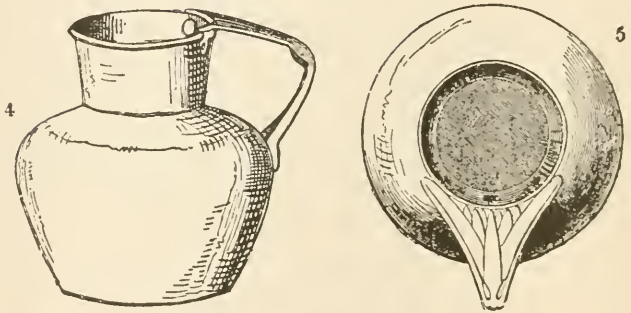
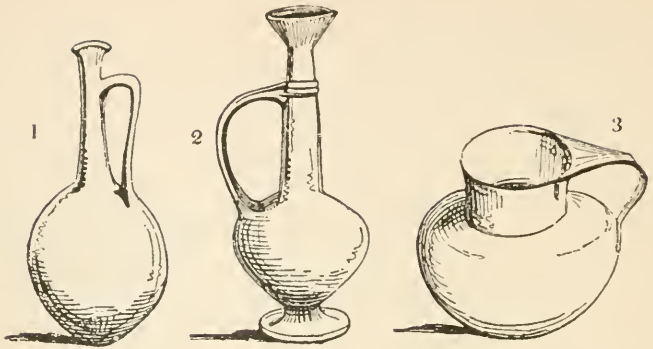
Many of the bronze vases found at Thebes and in other parts of Egypt are of a quality which cannot fail to excite admiration, and prove the skill possessed by the Egyptians in the art of working and compounding metals. We are surprised at the rich, sonorous tones they emit on being struck, the fine polish of which they are frequently susceptible, and the high finish given them by the workmen: nor are the knives and daggers made of the same materials less deserving of notice; the elastic spring they possessed, and even retain to the present day, being such as could only be looked for in a blade of steel. I believe the exact proportions of the copper and alloys, in the different specimens preserved in the museums of Europe, have not yet been ascertained; but it would be curious to know their composition, particularly that of the interesting dagger of the Berlin Collection, which is as remarkable for the elasticity of its blade as for the neatness and perfection of its finish.³ This part of the subject, however, properly relates to the working of metals, which I shall have occasion hereafter to notice; I therefore return to the Egyptian vases.

Some vases had one, others two handles; some were ornamented with the heads of wild animals, as the ibex, oryx, or

¹ Rather harder than precious stones: cornelian, lapis lazuli, Amazon stone, jasper, and their imitations, being principally employed, but no transparent precious stones.—S. B.

² These bags were called *arb*, and held gold dust rather than precious stones, which were usually piled up in baskets or trays.—S. B.

³ Vauquelin analyzed the bronze of a dagger in the Passalacqua Collection, now in the Berlin Museum. The quantity sent was so small that he could not detect any tin. That of a mirror contained copper 85, tin 14, iron 1. (Passalacqua, 'Catalogue raisonné,' 8vo. Berl. 1826, p. 238.)



No. 270.

Vases with one and two handles.

Figs. 1, 2. Earthenware vases found at Thebes.

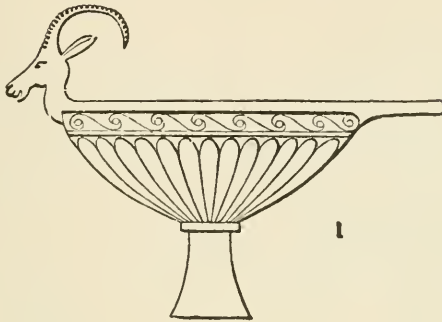
3. Bronze vase.

5. The same seen from above, showing the top of the handle in shape of a flower of the papyrus.

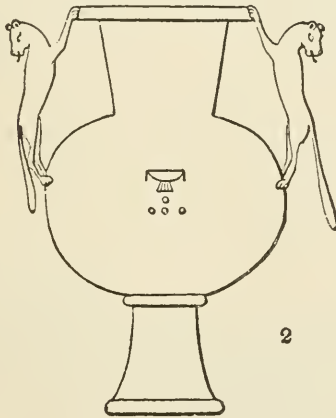
6 to 19. From the paintings of Thebes.

Fig. 4. Bronze vase.

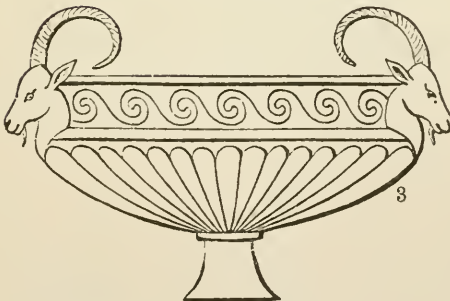
gazelle; others had a head on either side,—a fox, a cat, or something similar; and many were ornamented with horses' heads,



1



2



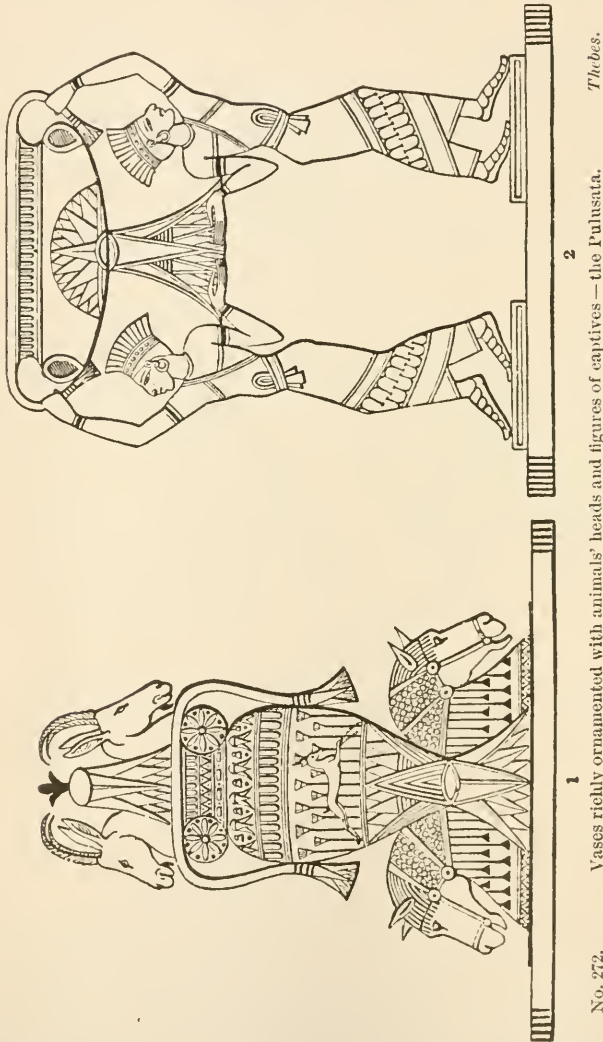
3

No. 271. Vases ornamented with one and two heads, or the whole animal. Thebes.

Fig. 2 has the the word 'gold' upon it.

a whole quadruped, a goose's head, figures of captives, or fancy devices. Many of these last were extraordinary and monstrous,

presenting nothing to admire, except the brilliancy of their colors, when made of porcelain, or the richness of their



Thibes.

the Pulusata.

No. 272.

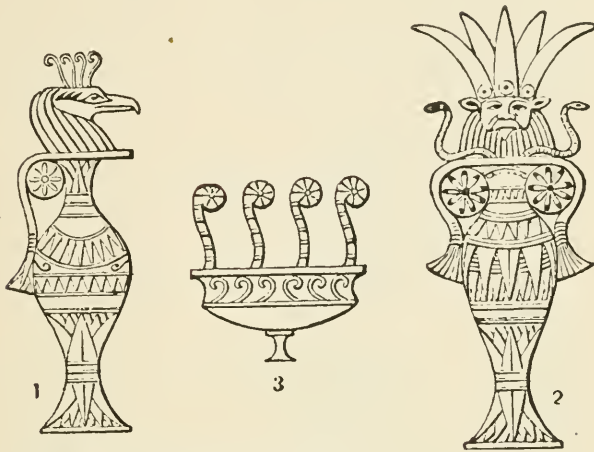
materials, when of gold, inlaid with stones; and the head of a Typhonian¹ figure² sometimes served for the cover of a vase, as

¹ It is remarkable that the name of Typhon, the evil deity, is retained in the Arabic word *Taphán*, 'the deluge.' [The actual representation is that of the god Bes, or Bessa, and two snakes: this deity

is supposed to have been of Asiatic origin. The head on No. 1. is rather that of a gryphon. — S. B.]

² Woodcut No. 273, *fig. 2.*

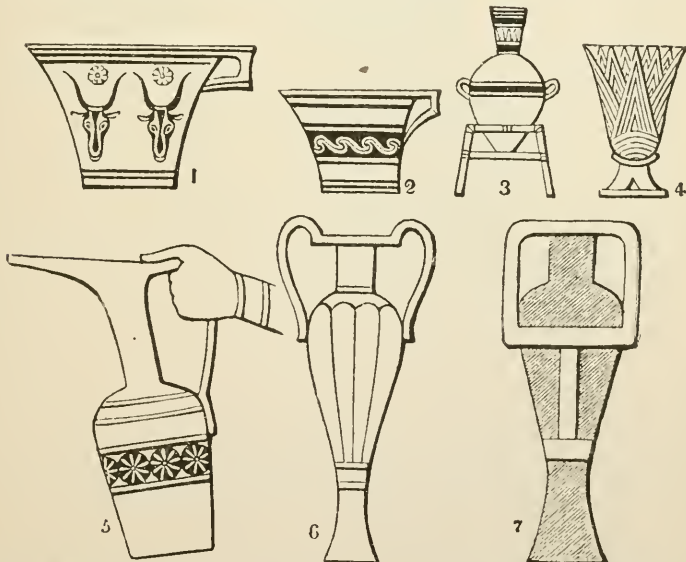
it often did for the support of a mirror, which daily displayed the beauty of an Egyptian lady. Many, too, of the ordinary forms



No. 273. *Fig. 1.* Vase, with head of a bird as a cover.
2. With head of a Typhonian monster.
3. A golden vase, without handles; the border with the Kumation moulding.

Thebes.

of their vases do not claim our admiration, either for neatness or symmetry, and they are occasionally as devoid of taste as



No. 274. *Figs. 1, 2.* Vases of an early period.
3. Vase on a stand.

Fig. 4. Drinking-cup of porcelain.

7. Bronze vase, bound with gold.

From the paintings of Thebes.

the wine bottles and flower-pots of an English cellar and conservatory.

Some had a single handle fixed to one side, and were in shape not unlike our cream jugs,¹ ornamented with the heads of oxen, or fancy devices: others were of bronze, bound with gold, having handles of the same metal; and many depended on



No. 275. *Fig. 1.* Bronze vase brought by me from Thebes, now in the British Museum.
2. Showing how the handle is fixed.
3. Alabaster vase from Thebes, of the time of Necho II., in the British Museum.
4. Vase at Berlin of cut glass.
5. Stone vase.
6 to 9. From the sculptures of Thebes.

accidental caprice. Several vases had simple handles or rings on either side: others were destitute of these, and of every exterior ornament: some again were furnished with a single ring, attached to a neat bar,² or with a small knob,³ projecting from

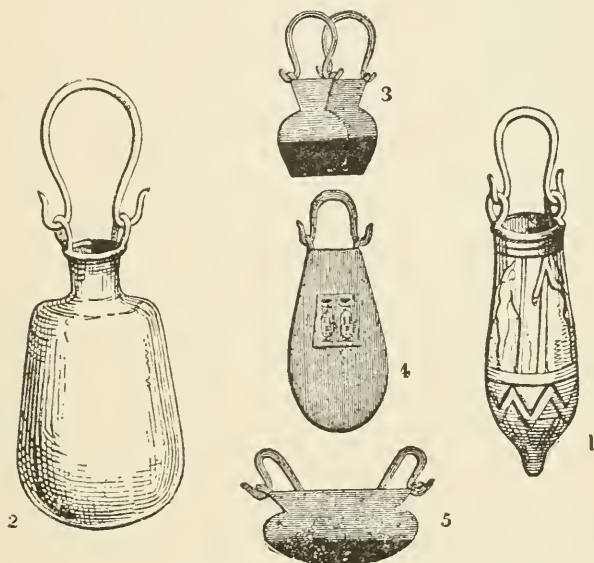
¹ Woodcut No. 274, *figs.* 1, 2.

² Woodcut No. 275, *figs.* 1, 2.

³ The vases in No. 274 are as follows:

1, 2, beakers or drinking vessels, like the Greek *kantharos*; 3, *amphoreus* or *diota* of painted earthenware on a wooden stand:

the side;¹ and many of those used in the service of the temple, highly ornamented with figures of deities in relief,² were attached to a movable curved handle, on the principle of, though more elegant in form than, their common culinary utensils.³ They were of bronze, and the style of the figures represented on them was as superior as the workmanship and quality of the materials;



No. 276. Fig. 1. Bronze vase $2\frac{3}{4}$ inches high, used in the temple, in my possession.
 2. A larger one, in the Berlin Museum.
 3, 4, 5. Culinary utensils in the sculptures at Thebes.

and while citing them, I cannot omit the notice of a vase of elongated form belonging to the late Mr. Salt,⁴ in the manufacture of which the skill of no ordinary artisan is displayed; and its cover, fitting with so much nicety that it resembles the effect of a spring, vies with the excellent composition of the metal in claiming our admiration.⁵

4, goblet in shape of a papyrus flower; 5, jug very like the early Greek *dénochôe*; 6 resembles a kind of *amphoreus*; 7 is probably of some precious material, and is of a shape more Egyptian. — S. B.

¹ Woodcut No. 275, figs. 3, 4, 5.

² Woodcut No. 276, fig. 1.

³ Woodcut No. 276, fig. 3.

⁴ Woodcut No. 277.

⁵ In the woodcut No. 276, No. 1 is a

stilus or situla of bronze, with figures in bas-relief. They are generally Amen-Ra in his character of Khem, Horus, Thoth, Sekhet, Nefer Tum, Athor, Isis, Nephthys, and Harpocrates. Sometimes the boat of Ra or the Sun, adored by cynocephali, is round the neck. They are always of small size, and were either votive or held in the hands of figures. Two of large size in the British Museum,

Another of much larger dimensions, and of a different form, was found by me at Thebes, and is now in the British Museum.¹ It is entirely of bronze, with two large handles fastened on with pins; and though it resembles some of the caldrons introduced in



No. 277. Bronze vase in the British Museum.

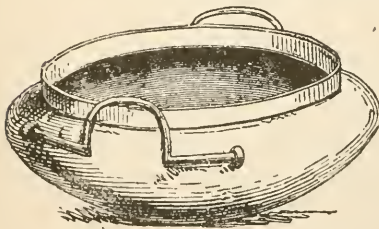
the paintings representing the Egyptian kitchen, we may doubt from its lightness whether it was used there, or intended as a basin or for a similar purpose.

Vases surmounted with a human head, forming the cover, appear to have been frequently used for keeping gold and other precious objects, representations of which are met with in the small side chambers of Medeenet Haboo, the supposed treasury of King Rameses; and it is not improbable that their being applied to this purpose in early times obtained for them a name derived from the Coptic $\pi\alpha\tau\delta$, 'gold,' afterwards confounded with Canopus; though this last, when applied to the town, is compounded of $\kappa\alpha\gamma\iota \pi\alpha\tau\delta$ (*kahi noub*),

'the golden land,' or $\chi\gamma\acute{\upsilon}\sigma\epsilon\upsilon\nu \epsilon\delta\upsilon\alpha\phi\omicron\varsigma$. Similar vases, with human as well as other heads, were also used in the ceremonies of the dead.

If Rameses III. were really the same as the wealthy Rhampsinitus of Herodotus, these

chambers may have been the very treasury he mentions, where the thieves displayed so much dexterity; for though his account might lead us to infer that it was at Memphis, we are not obliged to confine the seat of government, and consequently the scene of the



No. 278. Large bronze vase brought from Thebes, now in the British Museum.

story, to the capital of Lower Egypt, even during the reign of his Rhampsinitus; and the historian, who lived almost solely

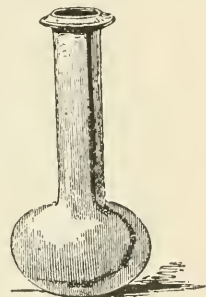
Nos. 5202, 5203, are engraved in outlines, with scenes of adoration to Osiris, Isis, and Nephthys, and dedicatory for Petamen nebkatta, a priest and scribe, holding

amongst other offices that of prophet of the cynocephali of the god Khous at Thebes.—S. B.

¹ Woodcut No. 278.

in the vicinity of Memphis and Heliopolis, during his short stay in the country, appears to speak of those cities as if Thebes had always been a place of little consequence, and scarcely worthy of notice. Indeed, it may fairly be doubted if Herodotus ever visited Thebes; though I cannot go so far as some, who question his having been in Egypt, and supposed he derived his information from the works of older writers.

Bottles, small vases, and pots, used for holding ointment, or other purposes connected with the toilet, were of alabaster,¹ glass,² porcelain,³ and hard stone, as granite basalt, porphyry, serpentine, or breccia;⁴ some were of earthenware,⁵ ivory, bone, and other materials, according to the choice or means of individuals; but in a work of so limited a nature as the present it is impossible to introduce specimens of the numerous forms they present, or to illustrate the various styles of their workmanship. I have therefore only selected those which relate more immediately to the present subject, and, if required, shall, at some



(Glass bottle.
No. 279. Thebes.

¹ The principal shapes of the alabaster vases are the calathus, or mortar-shaped vase; its name appears to have been *bast*; the olla or jar, *nams.t*; the beaker, *hut keken*; a globoid bottle, *hemen*; the bottle or *ônochoë*, and the alabastos, *χεν*; and other shapes are also found. But the most elegant shape in this material is a kind of unguent vase with wide mouth and pyriform body. The alabaster or rather arragonite vases belong to two periods, those of a uniform color and fine material, in use from the earlier dynasties till the 26th, when the vases are of a zoned arragonite of alternate white and yellow layers. — S. B.

² The vases in glass are principally small perfume bottles for the toilet, and were probably of Phœnician as well as Egyptian origin; they are divided into two classes, those of opaque or semi-opaque blue glass, with wavy lines in white, or yellow and red. The oldest known, now in the British Museum, bears the name of Thothmes III. The latter bottles of transparent green or colored glass, and of the shape in No 279, are from the time of the 26th Dynasty, or the seventh century B.C. — S. B.

³ The vases of porcelain are principally bowl- and goblets, and those of the earlier

period are of a dark blue color. A bowl in the British Museum, No. 4796, is inscribed with the name of Rameses I. At the time of the 26th Dynasty, a pale apple-green ware appears, principally used for circular flasks like pilgrims' bottles, having inscriptions on the bands of the edge, with invocations to deities for a happy year to its possessor, and sometimes the name of a king appears. — S. B.

⁴ Vases in these materials are rarer than those in alabaster, and all the elegant forms of the alabaster vases are not reproduced in them. Amongst those in them are the calathus, or mortar-shaped vase, the jars, pateræ or circular plates or bowls, and globular vases with short necks, to hold in the hand and offer milk or wine; amphoræ and jugs of small size occasionally occur. — S. B.

⁵ Conf. Athen. Deipnos. ii. c. 3: 'Earthenware vases, which we highly esteem, brought from Coptos.' [The shapes and sizes of earthenware vases are too numerous to detail, the largest and the smallest of various varieties being found; they are also of various classes of earthenware, plain, polished, and perhaps slightly glazed; elegant forms even for the toilet are found in this material. — S. B.]

future period, examine the vases of the Egyptians in the minute



No. 280.

Fig. 1. Alabaster vase in the British Museum, from Thebes.
2. Porcelain vase in Mr. Salt's Collection.

and detailed manner which the interesting variety, found in the tombs or painted on the monuments, deserves.



No. 281.

Fig. 1. Alabaster vase, containing sweet-scented ointment, in the Museum of Alnwick Castle.
2. Hieroglyphics on the vase, presenting the name of the queen Hasheps, of the 18th Dynasty.
3. The stopper. *Figs. 4 and 9.* Porcelain vases, from the paintings of Thebes.
5. Porcelain cup, in my possession, from Thebes.
6. Vase of ivory, in my possession, containing a dark-colored ointment; from Thebes.
7. Alabaster vase for holding kohl or stibium, with its lid (*8*); in the Museum of Alnwick Castle.

Small boxes, made of wood or ivory, were also numerous, offering, like the vases, a multiplicity of forms; and some which contained cosmetics of divers kinds served to deck the dressing-table, or a lady's boudoir. They were carved in various ways, and loaded with ornamental devices in relief: sometimes representing the favorite lotus flower, with its buds and stalks, a goose, gazelle, fox, or other animal.¹ Many were of considerable length, terminating in a hollow shell, not unlike a spoon in shape and depth, covered with a lid turning on a pin: and to this, which may properly be styled the box, the remaining part was merely an accessory, intended for ornament, or serving as a handle.

One of these has been already noticed for the elegance of its execution, and the grace of a female playing the guitar carved upon it; and, though on so small a scale it is difficult to do justice to the original, the reader may form some idea of the attitude of the figure from the accompanying woodcut.² They were generally of sycamore wood, sometimes of tamarisk³ or sont,⁴ and occasionally the more costly ivory or inlaid work was substituted for wood. To many, a handle of less disproportionate length was attached, representing the usual lotus flower, a figure, a Typhonian monster,⁵ an animal, a bird, a fish, or a reptile: and the box itself, whether covered with a lid or open, was in character with the remaining



No. 282. Box with figure of the god Bes.
British Museum.

¹ Several charming spoons or boxes of this kind exist in different European collections. One of ivory, in the Brit. Museum, No. 5946, represents a swimming duck holding a fish in its beak, which it conveys to the ducklings, who fly to catch it. Other examples which have been figured, represent Egyptian women swimming across the Nile, girdled round the loins and holding a vase, as in woodcut No. 286, or ducks. Those with a bouquet of flowers are more common, both in wood and ivory. Others are in the shape of cartouches, and one of these has at the bottom engraved in outline a pond surrounded by papyrus plants, and in the pond three fishes swimming, biting the leaves and stems of the

plants. (Prisse, 'Mon. Égypt.' pl. xviii.) A few are carved spoons, the bowl in shape of the shell *Indina nilotica*, and the long cylindrical handle recurved at the end, and terminating in the head of a water-bird. — S. B.

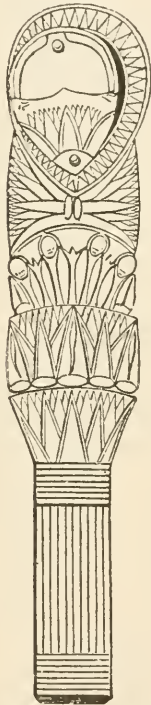
² Woodcut No. 284; see also woodcut No. 177, vol. i. p. 407.

³ *Tamarix orientalis*; Arab. *Athul*.

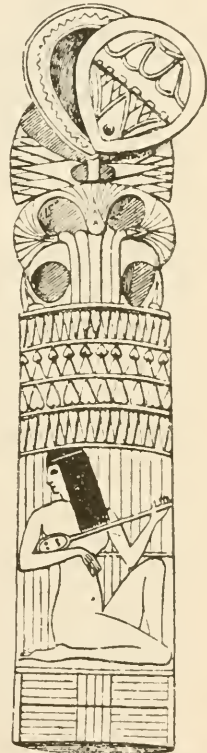
⁴ *Acacia* (or *Mimosa*) *nilotica*.

⁵ The Asiatic god *Bes* and Egyptian *Bessa*, who appears at the time of the 22d Dynasty. He is distinct from Set or Typhon, and often appears on objects of the toilet. One of these boxes with two spoons contained lumps of white wax. — S. B.

part. Some of these shallow boxes were probably intended to contain small portions of ointment, taken from a large vase at the time it was wanted, or for other purposes connected with the toilet, where greater depth was not required; and in many instances they so nearly resemble spoons that it is difficult to decide to which of the two they ought to be referred.



No. 283. Box with a long handle, ornamented with papyrus flowers.
British Museum.



No. 284. Box in the Berlin Museum, female playing on the guitar, and papyrus flowers; showing the lid open.

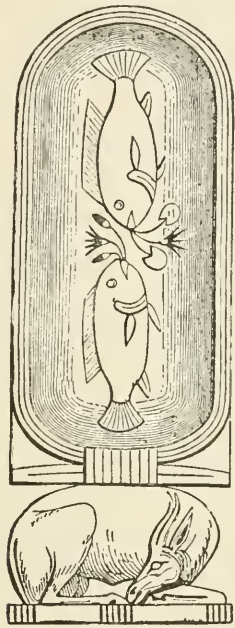
Many are made in the form of a royal oval, with and without a handle;¹ and the body of a wooden fish is scooped out, and closed with a cover imitating the scales, to deceive the eye by the appearance of a solid mass. Sometimes a goose was represented, ready for table,² or swimming on the water³ and pluming itself; whose head constitutes the handle of a box formed of its hollow

¹ Woodcut No. 286.

² Woodcut No. 288.

³ Woodcut No. 289, *fig. 2.*

body: some consist of an open part, or cup, attached to a covered box; ¹ others of different shapes offer the usual variety of fancy devices, and some without covers may come under the denomi-



No. 285.

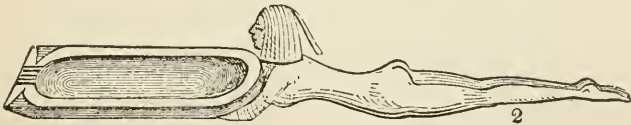
Wooden box or saucer without cover.

British Museum.

nation of saucers. Others bear the precise form and character of a box, being deeper and more capacious, probably used for



1



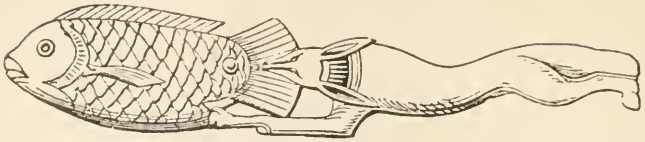
2

No. 286. Other open boxes, whose form is taken from the oval of a king's name.

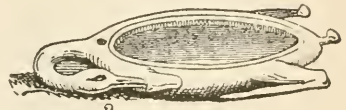
Atwick Castle and Leyden Museum.

holding trinkets, or occasionally as repositories for the small pots of ointment or scented oils, and bottles containing the collyrium

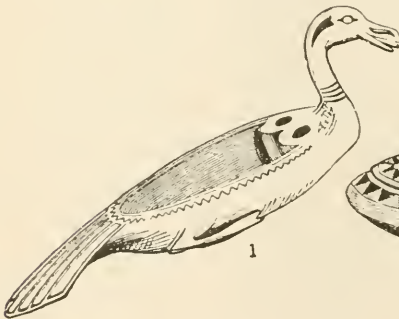
¹ Woodcut No. 290.



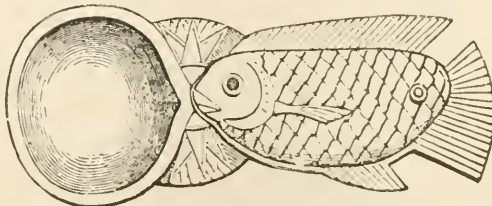
No. 287. Box in the form of a fish, with turning lid. *Mr. Salt's Collection.*



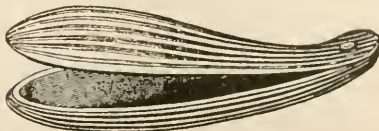
No. 288. Box with and without its cover. *Museum of Alnwick Castle.*



No. 289. Boxes in form of geese. *British Museum and Leyden Museum.*



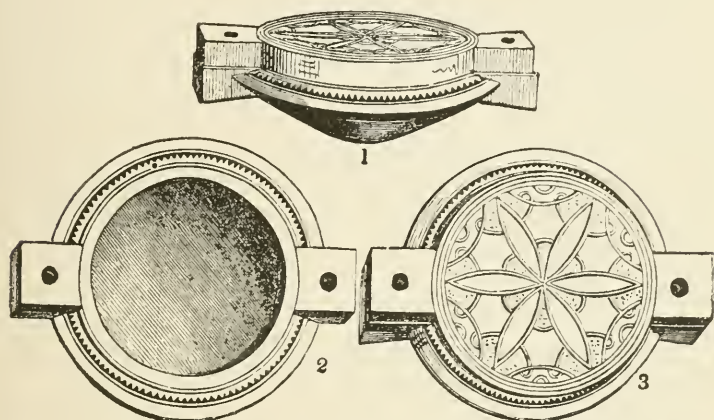
No. 290. Box in shape of a fish, one part open, and one covered. *British Museum.*



No. 291. Box in shape of a gourd, with the lid turning, as usual, on a pin. *British Museum.*

applied to the eyes, which I shall have occasion to notice with the toilet of the ladies.

Some were divided into separate compartments, covered by a common lid, either sliding in a groove,¹ or turning on a pin at



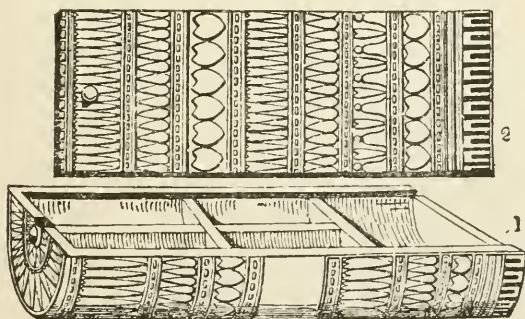
No. 292.

A box, with and without its lid.

British Museum.

one end; and many of still larger dimensions sufficed to contain a mirror, combs, and perhaps even some articles of dress.

These boxes were frequently of costly materials, veneered



No. 293.

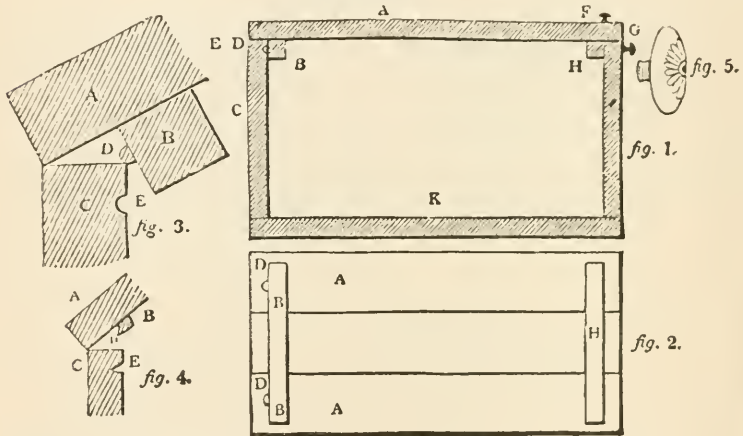
Fig. 1. A box with devices carved in relief, divided into cells.
2. The lid, which slides into a groove.

British Museum.

with rare woods, or made of ebony, inlaid with ivory, painted with various devices, or stained to imitate materials of a valuable nature; and the mode of fastening some of them, and the curious

¹ Woodcut No. 293.

substitute for a hinge, show the lid was entirely removed, and that the box remained open while used. The principle of this will be better understood by reference to the woodcut No. 294, where *fig. 1* represents a side section of the box, and *fig. 2* the inside of the lid. At the upper part of the back *C*, *fig. 3*, a small hole *E* is cut, which, when the box is closed, receives the nut *D*, projecting from the cross-bar *B*, on the inside of the lid; and the two knobs *F* and *G*, one on the lid, the other on the



No. 294. *Fig. 1.* Section of the box. *A*, the lid. *K*, the bottom, *C*, the side.
2. The inside of the lid. *B*, *H*, cross-bars nailed inside the lid.

Found at Thebes.

front of the box itself, served not only for ornament but for fastening it, a band being wound round them, and secured with a seal. These knobs, which were of ebony or other hard wood,¹ were frequently turned with great care, and inlaid with ivory and silver, an instance of which is given in *fig. 5*.

Some boxes were made with a pointed summit, divided into two parts, one of which only opened, turning on small pivots at the base, and the two ends of the box resembled in form the gable ends, as the top the shelving roof, of a house.² The sides

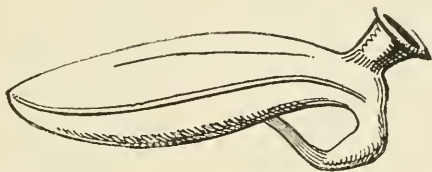
¹ Fragments of boxes of ebony of the time of Amenophis III. and his queen Tai are in the British Museum, No. 5899a, and other fragments of boxes have been found at the Biban ul Molook. (Mariette-Bey, 'Monuments divers,' pl. 36a.) They are engraved with the name and titles of the monarch, and apparently came from his sepulchre. — S. B.

² Besides the boxes in ebony inlaid with stained ivory and porcelain, many of painted sycamore, with painted inscriptions, apparently sepulchral, some as early as Pepi of the 6th Dynasty (British Museum, No. 5910) are found. One cylindrical unpainted box is filled with flour (British Mus., No. 5923); another of square shape, standing on four legs, is

were, as usual, secured by glue and nails, generally of wood, and dovetailed, a method of joining adopted in Egypt at the most remote period ; but the description of these belongs more properly to cabinet work, as those employed for holding the combs, and similar objects, to the toilet.

Some vases have been found in boxes, made of wicker-work, closed with stoppers of wood, reed, or other materials, supposed to belong either to a lady's toilet or to a medical man ; one of which, now preserved in the Berlin Museum, has been already noticed. The vases are six in number, varying slightly in form and size : five of alabaster, and the remaining one of serpentine, each standing in its own cell or compartment.

Bottles of terra-cotta are also met with, in very great abundance, of the most varied forms and dimensions, made for every kind of purpose of which they were susceptible ; and I have met with one which appears to have belonged to a painter,



No. 295. Terra-cotta bottle, perhaps used by painters for holding water, and carried on the thumb. *British Museum.*

and to have been intended for holding water to moisten the colors ; the form and position of the handle suggesting that it was held on the thumb of the left hand, while the person wrote or painted with his right.

Besides vases and bottles of stone, and of the materials above mentioned, the Egyptians sometimes had them of leather or prepared skin ; and though it does not appear to what purpose they were generally applied, we may conclude, from the fact of their being imported into Egypt from foreign countries, that they were required for a particular use, or preferred on account of some peculiar quality in the leather itself. The Egyptians, we are informed by Herodotus, like the Greeks and Romans, occasionally employed skins for holding wine as well as water, especially when removing it from one place to another ; and the

made of papyrus (No. 5918) ; and one little wooden box (British Museum, No. 5906) has hinges like a modern snuff-box. — S. B.

fact that the robber of Rhampsinitus's¹ treasury adopted the same method of carrying his wine in skins, at a time when any unusual custom would necessarily have been avoided, shows it to have been one of common occurrence. It is, however, doubtful if leathern bottles were applied to the same purpose; and as we do not find them introduced at parties, it may be inferred that they were neither intended for drawing wine from the amphoræ, nor for handing it at table.

Bottles and narrow-mouthed vases, placed in the sitting-room and holding water, were frequently closed with some light substance,² through which the warm air could pass, as it rose, during the cooling process, being submitted to a current of air to increase the evaporation: leaves were often employed for this purpose, as at the present day, those of a fragrant kind being probably selected; and the same prejudice against leaving a vase uncovered may have existed among the ancient as among the modern inhabitants of Egypt.

While the guests were entertained with music and the dance, dinner was prepared; but, as it consisted of a considerable number of dishes, and the meat was killed for the occasion, as at the present day in Eastern and tropical climates, some time elapsed before it was put upon the table. During this interval, conversation was not neglected; and the chit-chat of the day, public affairs, and questions of business or amusement, occupied the attention of the men. Sometimes an accident occurring at the house afforded an additional subject for remark: and, as at the feast of the rich Nasidienus, the fall of a dusty curtain, or some ill-secured piece of furniture, induced many to offer condolences to the host, while others indulged in the criticisms of a sarcastic *Balatro*.³

A circumstance of this kind is represented in a tomb at Thebes. A party assembled at the house of a friend are regaled with the sound of music, and the customary introduction of refreshments; and no attention which the host could show his visitors appears to be neglected on the occasion. The wine has circulated freely, and as they are indulging in amusing converse,

¹ Herod. ii. 121. The  set

or water-skin was used, as at the present day, for carrying water across the desert

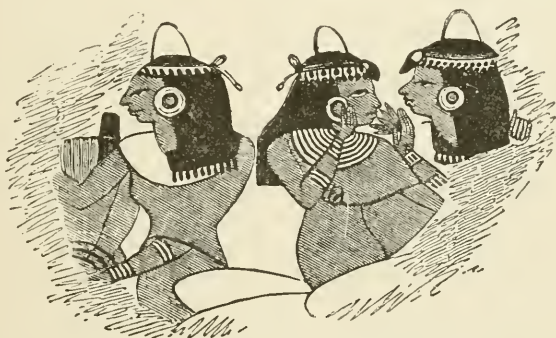
on the backs of asses. It is mentioned in the inscription of Seti I. at Rhedesiéh. ('Records of the Past,' viii. p. 77.) — S. B.

² Woodcut No. 303.

³ Hor. Sat. ii. 8, 64.

a young man, perhaps from inadvertence, perhaps from the effect of intemperance, reclining with his whole weight against a column in the centre of the apartment, throws it down upon the assembled guests, who are seen, with uplifted hands, endeavoring to protect themselves and escape from its fall.

Many similar instances of a talent for caricature are observable in the compositions of Egyptian artists, who executed the paintings of the tombs; and the ladies are not spared. We are led to infer that they were not deficient in the talent of conversation: and the numerous subjects they proposed are shown to have been examined with great animation. Among these, the question of dress was not forgotten, and the patterns or the value of trinkets were discussed with proportionate



No. 296.

Ladies at a party, talking about their earrings.

Thebes.

interest. The maker of an earring, or the shop where it was purchased, was anxiously inquired; each compared the workmanship, the style, and the materials of those she wore, coveted her neighbor's, or preferred her own; and women of every class vied with each other in the display of 'jewels of silver, and jewels of gold,'¹ in the texture of their raiment, the neatness of their sandals, and the arrangement or beauty of their plaited hair.²

Agreeable conversation was considered the principal charm of accomplished society: for, as Athenæus says of the ancient

¹ Exod. xii. 35. [These scenes of symposia or banquets are found in the tombs of the 18th and 19th Dynasties. At an earlier period they were not represented, the favorite subjects being the chase and the farm. — S. B.]

² The Egyptian women appear to have been very proud of their hair, and locks of it, when very long, were sometimes cut off and wrapped up separately, to be buried in their tomb after death. Conf. 1 Cor. xi 15, and 1 Pet. iii. 5.

Greeks.¹ It was more requisite and becoming to gratify the company by pleasing conversation than with variety of dishes; and affairs of great moment were probably discussed at the festive meeting, as in the heroic ages described by Homer.²

In the meantime, the kitchen presented an animated scene; and the cook, with many assistants, was engaged in making ready for dinner: an ox, kid,³ wild goat, gazelle, or oryx, and a quantity of geese, ducks, widgeons, quails, or other birds, were obtained for the occasion. Mutton, it is supposed, was unlawful food to the inhabitants of the Thebaid; and Plutarch affirms⁴ that no Egyptians, except the Lycopolites, eat the flesh of sheep; while Strabo confines the sacrifice of this animal to the nome of Nitriotis.⁵ But though we do not find from the sculptures that sheep were killed for the altar or the table, it is evident they abounded in Egypt, and even at Thebes, being frequently represented in the tombs; and large flocks are shown to have been kept, especially in the vicinity of Memphis, if only for the sake of their wool. Sometimes they amounted to more than 2000; and in a tomb below the Pyramids, 974 rams are brought to be registered by the scribes, as part of the stock of the deceased; implying an equal number of ewes, independent of lambs, which in the benign climate of Egypt were twice produced within the space of one year.⁶

Beef and goose constituted the principal part of the animal food throughout Egypt;⁷ and by a prudent foresight, in a country possessing neither extensive pasture lands, nor great abundance of cattle, the cow was held sacred, and consequently forbidden to be eaten.⁸ And thus the risk of exhausting, or at least greatly lessening their stock, was effectually prevented, and a constant supply maintained for the consumption of the people.

That a considerable quantity of meat was served up at those

¹ Athen. x. 5.

² Hom. Il. i. 70.

³ Except in the Mendesian nome. Herodot. ii. 46.

⁴ Plut. de Isid. s. 72. He also says (s. 5), 'The priests abstain from mutton and swine's flesh.'

⁵ Strabo, xvii.

⁶ This is still the case if well fed. (Diodorus, lib. i. 36 and 87.)

⁷ In the lists of the 4th and following Dynasties (Lepsius, Denkm. Abth. ii. 25) the following animals are mentioned as eaten: the *hivena*, *het.t*; goat, *kahs*; the

leucoryx, *mahut*; *v2al*, *mast*; bull, *uckau*; and cow beef, *au*; and amongst birds the dove or pigeon, *mennu t*; the goose, *semen*; another kind, *sa* and *set*, one the vulpanser goose; the heron, *t'a*. Another list (Lepsius, Denkm. ii. 28) has other ducks called *ru* and *terp*. — S. B.

⁸ Plutarch (s. 31) says, red oxen were lawful for sacrifice, but not so if they had a single white hair. Conf. Numb. xiv. 2; 'Bring thee a red heifer without spot.' Vide Herodot. ii. 38, 41. For the table the Egyptians killed oxen with black or red spots.

repasts to which strangers were invited, is evident from the sculptures, and agreeable with the customs of Eastern nations whose *azooma*, or feast, prides itself in the quantity and variety of dishes, in the unsparing profusion of viands, and, whenever wine is permitted, in the freedom of the bowl. An endless succession of vegetables was also required on all occasions, and, when dining in private, dishes of that kind were in greater request than joints, even at the tables of the rich: we are therefore not surprised to find the Israelites, who by their long residence there had acquired similar habits, regretting them equally with the meat and fish,¹ which they 'did eat in Egypt freely;' and the advantages of a leguminous diet are still acknowledged by the inhabitants of modern Egypt. This, in a hot climate, is far more conducive to health than the constant introduction of meat, which is principally used to flavor the vegetables cooked with it; and if at an Eastern feast a greater quantity of meat is introduced, the object is rather to do honor to the guests who in most countries and all ages have been welcomed by an encouragement of excess, and a display of such things as show a desire on the part of the host to spare no expense in their entertainment.

The same custom prevailed with the ancient Egyptians; and their mode of eating was very similar to that now adopted in Cairo and throughout the East, each person sitting round a table, and dipping his bread into a dish placed in the centre, removed on a sign made by the host, and succeeded by others, whose rotation depends on established rule, and whose number is predetermined according to the size of the party or quality of the guests.

Among the lower orders, vegetables constituted a very great part of their ordinary food, and they gladly availed themselves of the variety and abundance of esculent roots growing spontaneously in the lands irrigated by the rising Nile, as soon as its

¹ Numb. xi. 4, 5. Fish does not appear in the lists of food of the earlier dynasties, although represented in the tombs as caught, sliced, salted, and prepared for food. It was, however, probably not eaten at the period by the richer classes or the sacerdotal order. At the time of the 19th Dynasty many varieties of fish are mentioned: as the *utu*; the *baran* of the river Haru (Halys) or Haruma; the *barai* and *baka*, fish from the Puharta, the Phrat or

Euphrates; fish called *atu* from some other river; and *hanata* fish. Many of these were foreign, and introduced as luxuries into Egypt. ('Records of the Past,' vi. p. 14.) The hierarchy appears to have had some prejudice against fish, for the Ethiopian conqueror Pianchi, apparently a religious fanatic, would only admit into his presence, Nimrud, king of Hermopolis, because he did not eat fish, and excluded the other princes. — S. B.

waters had subsided; some of which were eaten in a crude state, and others roasted in the ashes, boiled, or stewed: their chief aliment, and that of their children consisting of milk and cheese.¹ roots,² leguminous, cucurbitaceous, and other plants, and ordinary fruits of the country. Herodotus describes the food of the workmen who built the Pyramids to have been the *rapphanus* or *figl*,³ onions, and garlic: yet, if these were among the number they used, and perhaps the sole provisions supplied at the government expense, we are not to suppose they were limited to them: and it is probable that lentils, of which it is inferred from Strabo they had an abundance on this occasion, may be reckoned as part, or even the chief article of their food.

The nummulite rock in the vicinity of those monuments frequently presents a conglomerate of testacea imbedded in it, which in some positions resemble small seeds: and the geographer, imagining them to be the petrified residue of the lentils brought there by the workmen, was led to this observation on the nature of their provisions. That he is correct in supposing lentils to have been a great article of diet among the laboring classes, and all the lower orders of Egyptians, is evident from their repeated mention in ancient authors: and so much attention was bestowed on the culture of this useful pulse that certain varieties became remarkable for their excellence, and the lentils of Pelusium were esteemed both in Egypt and in foreign countries.⁴ Two species of the plant are noticed by Pliny,⁵ who shows it to have been extensively cultivated; and this, as well as the constant use of lentils among the peasants at the present day, fully justify the opinion that they constituted a great, and even the principal, part of the aliment of the lower orders at all times.

In few countries were vegetables more numerous than in Egypt; and the authority of ancient writers, the sculptures, and the number of persons employed in selling them at Alexandria, sufficiently attest this fact. Pliny⁶ observes that the valley of the Nile 'surpassed every other country in the abundance and spontaneous growth of those herbs which most people are in the

¹ Diod. i. 87. [Milk, called *arut.t*, was evidently an extensive article of food; cheese, *t'ser*, is also mentioned in the lists. — S. B.]

² Diod. i. 80.

³ Herodot. ii. 125. So called by the modern Egyptians, the *Rapphanus sativus*,

var. *A. edulis* of Linnæus, mistaken by the learned Larcher for horse-radish, which is not an Egyptian plant. Onions, *hut*, also appear in the lists as eaten. — S. B.

⁴ Virg. Georg. i. 228.

⁵ Plin. xviii. 12.

⁶ Nat. Hist. xxi. 15.

habit of using as food, especially the Egyptians;’ and at the time of the Arab invasion, when Alexandria was taken by Amer, the lieutenant of the Caliph Omer, no less than 4000 persons were engaged in selling vegetables in that city.

The lotus, the papyrus, and other similar productions of the land, during and after the inundation, were, for the poor, one of the greatest blessings Nature ever provided for any people; and, like the acorn¹ in Northern climates, constituted perhaps the sole aliment of the peasantry at the early period when Egypt was first colonized. The fertility of the soil, however, soon afforded a more valuable produce to the inhabitants: and long before they had made any great advances in civilization, corn and leguminous plants were, doubtless, grown to a great extent throughout the country. The palm was another important gift bestowed upon them: it flourished spontaneously in the valley of the Nile, and if it was unable to grow in the sands of the arid desert, yet wherever water sufficed for its nourishment, this useful tree produced an abundance of dates, a wholesome and nutritious fruit, which might be regarded as a universal benefit, being within the reach of all classes of people, and neither requiring expense in the cultivation, nor interfering with the time demanded for other agricultural occupations.

Among the vegetables above mentioned is one which requires some observations. Juvenal says they were forbidden to eat the onion,² and it is reported to have been excluded from an Egyptian table. The prohibition, however, seems only to have extended to the priests, who, according to Plutarch,³ ‘abstained from most kinds of pulse;’ and the abhorrence felt for onions, according to the same author,⁴ was confined to the members of the sacerdotal order.

That onions were cultivated in Egypt is proved from the authority of many writers, as well as from the sculptures; their quality was renowned in ancient as well as modern times; and the Israelites, when they left the country, regretted ‘the onions,’ as well as the cucumbers, the melons, the leeks, the garlic, and the meat⁵ they ‘did eat’ in Egypt. Among the offerings presented to the gods, both in the tombs and temples, onions

¹ Conf. Hor. Serm. I. iii. 100. And J. Pollux, Onom. lib. i. 12, who quotes Xenophon, Anab. 5.

² Juv. xiv. 9: ‘Porrum et cepe nefas violare et frangere morsu.’

³ Plut. de Isid. s. 5 and 8.

⁴ Ibid. s. 8.

⁵ Numb. xi. 5; and Exod. xvi. 3, ‘In the land of Egypt, when we sat by the flesh-pots, and when we did eat bread to the full.’

are introduced, and a priest is frequently seen holding them in his hand, or covering an altar with a bundle of their leaves and roots.¹ Nor is it less certain that they were introduced at private as well as public festivals, and brought to table with gourds, cucumbers,² and other vegetables; and if there is any truth in the notion of their being forbidden, we may conclude it was entirely confined to the priestly order.

The onions of Egypt were mild and of an excellent flavor, and were eaten crude as well as cooked, by persons both of the higher and the lower classes; but it is difficult to say if they introduced them at table like the cabbage, as a *hors d'œuvre*, to stimulate the appetite, which Socrates recommends in the Banquet of Xenophon. On this occasion some curious reasons for their use are brought forward by different members of the party. Nicerates observes that onions relish well with wine, and cites Homer in support of his remarks: Callias affirms that they inspire courage in the hour of battle: and Charmides suggests their utility 'in deceiving a jealous wife, who, finding her husband return with his breath smelling of onions, would be induced to believe he had not saluted any one while from home.'

In slaughtering for the table, it was customary to take the ox, or whatever animal had been chosen for the occasion, into a



No. 297. A butcher killing and cutting up an ibex or wild goat; the other two sharpening their knives on a steel. The cut in the throat has, however, been omitted in this woodcut. *Thebes.*

courtyard near the house; to tie its four legs together, and then to throw it upon the ground; in which position it was held by one or more persons, while the butcher, sharpening his broad knife upon a steel attached to his apron, proceeded to cut the throat as nearly as possible from one ear to the other, sometimes con-

¹ Vol. i. p. 181, woodcut No. 9.

² Called *tenruka*, and said to be as sweet

as honey. ('Records of the Past,' vi. p. 16.) — S. B.

tinuing the opening downwards along the throat.¹ The blood was frequently received into a vase or basin for the purposes of cookery,² which was frequently forbidden to the Israelites by the Mosaic law;³ and the reason of the explicit manner of the prohibition is readily explained from the necessity of preventing their adopting a custom they had so constantly witnessed in Egypt. Nor is it less strictly denounced by the Mohammedan religion; and all Moslems look upon this ancient Egyptian and modern European custom with unqualified horror and disgust.

The head was then taken off, and they proceeded to skin the animal,⁴ beginning with the leg and neck. The first joint removed was the right foreleg or shoulder, the other parts following in succession, according to custom or convenience: and the same rotation was observed in cutting up the victims offered in sacrifice to the gods.⁵ Servants carried the joints to the kitchen on wooden trays;⁶ and the cook having selected the parts suited for boiling, roasting, and other modes of dressing, prepared them for fire by washing, and any other preliminary process he thought necessary. In large kitchens, the *chef*, or head cook, had several persons under him, who were required to make ready and boil the water of the caldron, to put the joints on spits or skewers,⁷ to cut up or mince the meat, to prepare the vegetables, and to fulfil various other duties assigned to them.

The very peculiar mode of cutting up the meat frequently prevents our ascertaining the exact part they intend to represent in the sculptures; the chief joints, however, appear to be the head,⁸ shoulder, and leg, with the ribs, tail, or rump, the heart.

¹ The Israelites sometimes cut off the head at once: Deut. xvi. 4-6. A scene of slaughtering animals is represented in the tomb of Ptahhetep, at Memphis (Dœmichen, 'Resultate,' fol. 1809, taf. xi.), with the accompanying hieroglyphic speeches of the butchers. The shoulder, it appears, was first cut off, and was the *satp* or select portion reserved for the priest. The heart was also cut out of the flank, and the butcher who holds it says, 'Take care of this heart,' as if it were an important part. The blood was collected in a jar with a long spout. — S. B.

² Woodcut No. 300.

³ Deut. xv. 23: 'Only thou shalt not eat the blood thereof: thou shalt pour it upon the ground as water.' And xii. 16, 23: 'Be sure that thou eat not the blood: for the blood is the life.' Gen. ix. 4; Levit. xvii. 10, 11, 14, &c.

⁴ Herodot. ii. 39.

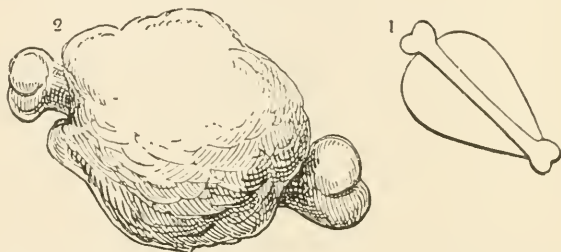
⁵ Levit. vii. 32, 34: 'The right shoulder shall ye give unto the priest for an heave-offering of the sacrifices of your peace-offerings. . . . For the wave-breast and the heave shoulder had I taken . . . from off the sacrifices . . . and have given them unto Aaron the priest.'

⁶ Plate XI. vol. i.

⁷ Virg. Æn. i. 215.

⁸ The joints recorded in the lists are the haunch or shoulder, *χeps*, called also *satp*, 'the select' or the choice portion; the leg without the knuckle, *ua*; the rib, *sper*; the flank, *speh en sper*; the half leg, *sut*; the heart, *kat* or *ab*; and some other portions not determined, called *neshem*, kidney, and *mast*. Flesh generally was called *af*, and kibobs or slices *as'er*. — S. B.

and kidneys; and they occur in the same manner on the altars of the temple, and the tables of a private house. One is remarkable not only for being totally unlike any of our European joints, but from its exact resemblance to that commonly seen at table in modern Egypt: it is part of the leg, consisting of the flesh covering the tibia, whose two extremities project slightly beyond it: and the accompanying drawing from the sculptures, and a sketch of the same joint taken at a modern table in Upper Egypt, show how the mode of cutting it has been preserved by traditional custom to the present day.¹




No. 298. Peculiar joint of meat at an ancient (1) and modern (2) Egyptian table.

The head was left with the skin and horns, and was sometimes given away to a poor person as a reward for holding the walking-sticks of those guests who came on foot;² in later times, when the Greeks were settled in the country, it was sold to them, or to other foreigners: but it was frequently taken to the kitchen with the other joints; and, notwithstanding the positive assertion of Herodotus, we find that even in the temples themselves it was admitted at a sacrifice, and placed with other offerings on the altars of the gods.³

The historian would lead us to suppose that a strict religious scruple prevented the Egyptians of all classes from eating this part, as he affirms 'that no Egyptian will taste the head of any species of animal,'⁴ in consequence of certain imprecations having been uttered upon it at the time it was sacrificed: but as he is speaking of heifers slaughtered for the service of the gods, we

¹ It frequently appears in the lists of viands mentioned in the tombs of the 4th Dynasty, and was then called *sut*.

 — S. B.

² Plate XI., fig. 10.

³ The head is of a calf, represented on

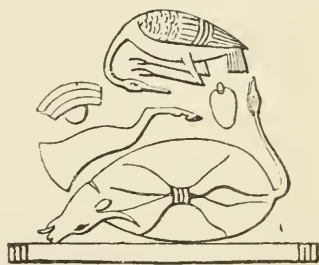
the altar of viands placed before Osiris, along with the haunch, ribs, and other parts; it does not, however, appear amongst the joints in the bills of fare from the 4th to the 12th Dynasties, and by inference, therefore, it was not eaten. — S. B.

⁴ Herod. ii. 39.

may conclude that the prohibition did not extend to those killed for table, nor even to all those offered for sacrifice in the temple; and as with the scapegoat of the Jews, that important ceremony was perhaps confined to certain occasions and to chosen animals, without extending to every victim which was slain.

The formula of the imprecation was probably very similar with the Jews and Egyptians. Herodotus says the latter pray the gods, 'that if any misfortune was about to happen to those who offered, or to the other inhabitants of Egypt, it might fall upon that head;' and with the former it was customary for the priest to take two goats and cast lots upon them, 'one lot for the Lord and the other lot for the scapegoat,' which was presented alive 'to make atonement' for the people. The priest was then required to 'lay both his hands upon the head of the live goat, and confess over him all the iniquities of the children of Israel, and all their transgressions in all their sins, putting them upon the head of the goat, and send him away by the hand of a fit man into the wilderness.'¹ The remark of Herodotus should then be confined to the head, on which their imprecation was pronounced, and, being looked upon by every Egyptian as an abomination, it may have been taken to the market and sold to foreigners, or if no foreigners happened to be there, it may have been given² to the crocodiles.³

The same mode of slaughtering, and of preparing the joints, extended to all the large animals; but geese⁴ and other wild and tame fowl were served up entire, or, at least, only deprived of their feet and pinion joints: fish were also brought to table whole, whether boiled or fried, the tails and fins being removed. For the service of religion, they were generally prepared in the same manner as for private feasts; sometimes, however, an ox was brought entire to the altar, and



No. 299. An ox and a bird placed entire on the altar.

¹ Levit. xvi. 8, 21.

² Herodotus's words are, 'thrown into the river.' This could only have been in places where crocodiles abounded: it would otherwise have polluted the stream they so highly esteemed. Plutarch says, 'A solemn curse having been pronounced upon the head, it was thrown into the river; this was in former times, but now it is sold to foreigners.' (De Isid. s. 31.)

³ Ælian observes, 'that the Ombites do not eat the head of any animal they have offered in sacrifices; they throw it to the crocodiles.' (De Nat. Anim. lib. x. c. 21.)

⁴ They were sometimes decapitated, but are often, as above represented, entire, the whole animal being offered in sacrifice.—S. B.

birds were often placed among the offerings without even having the feathers taken off.

The favorite meats were beef and goose; ¹ the ibex, gazelle, and oryx were also in great request; but we are surprised, in a country where mutton is unquestionably lighter and more wholesome, that they should prefer the first two, and even exclude this last from the table.² In Abyssinia it is a sin to eat geese or ducks; and modern experience teaches that, in Egypt and similar climates, beef and goose are not eligible food, except in the depth of winter. In Lower Egypt, or, as Herodotus styles it, the corn country, they were in the habit of drying and salting birds of various kinds, as quails, ducks, and others, a process to which I believe the sculptures themselves refer; ³ and fish were prepared by them in the same manner both in Upper and Lower Egypt.⁴

Some joints were boiled, others roasted: two modes of dressing their food to which Herodotus appears to confine the Egyptians, at least in the lower country; but though there is no positive evidence from the sculptures that they adopted a very artificial kind of cookery, it is highly probable that they had made some advances in this as in the other habits of a civilized, I may say luxurious, people, and had at a very remote period passed that state when men are contented with simplicity and primitive habits.⁵ And we shall at least feel disposed to allow the Egyptians as much skill in the culinary art as was displayed by Rebekah in the savory meats she prepared for Isaac, where the disguise was sufficient to prevent his distinguishing the meat of kids from the promised vension.⁶

It is true, that in the infancy of society the diet is exceedingly plain and simple, consisting principally, if not entirely, of roast meats: and, as Athenæus observes, the heroes of Homer seldom 'boil their meat or dress it with sauces;' the few instances even of the former, which occur in the *Iliad*,⁷ plainly showing how unusual the custom was at the period he describes.

That the Egyptians were in early times immoderately fond of delicate living, or indeed at any period committed those excesses of which the Romans are known to have been guilty, is highly

¹ Conf. Herodot. ii. 37.

² In one of the lists of the 4th Dynasty, *ab*, either 'the kid' or 'lamb' is mentioned (Lepsius, Denkm. ii. 21). In Coptic the *ab* is 'the lamb,' not 'the kid;' so that if this is the lamb, mutton was occasionally eaten. — S. B.

³ Woodcut No. 99.

⁴ Herodot. ii. 77, and the sculptures.

⁵ Bocchoris complained that Menes had taught the Egyptians a luxurious mode of living, even in regard to diet.

⁶ Gen. xxvii. 3, 9.

⁷ *Iliad* φ, 362.

improbable, especially as the example of the priesthood, who constituted a very great portion of the higher classes, tended so much to induce moderation, but even before the close of the 16th Dynasty, or about 1600 B.C., they had already begun to indulge in nearly the same habits as in the later Pharaonic ages; and it appears from Diodorus and Plutarch that their original simplicity gave place to luxury as early as the reign of their first king Menes.¹ Excesses they no doubt committed, especially in the use of wine, both on private² and public occasions,³ which is not concealed in the sculptures of Thebes: and in later times, after the conquest of Egypt by the Persians, and the accession of the Ptolemies, habits of intemperance increased to such an extent, and luxury became so general among all ranks of society, that writers who mention the Egyptians at that period,⁴ describe them as a profligate and luxurious people, given to an immoderate love of the table, and addicted to every excess in drinking. They even used excitants for this purpose, and *hors-d'œuvres* were provided to stimulate the appetite, crude cabbage provoking the desire for wine, and promoting the continuation of excess.⁵

Beyond the usual joints which are seen on the altars and in the hands of the servants, it is impossible to ascertain in what form the meat appeared upon table,⁶ or what made-dishes and artificial viands the skill of their cooks succeeded in devising, but as a portion of the kitchen is occasionally represented in the tombs, and some details of Egyptian cookery are there given, I shall avail myself of whatever has been preserved, and introduce the most interesting part of those sculptures in the accompanying woodcuts.

The first process, as previously described, was slaughtering the ox, and cutting up the joints, the blood being sometimes caught in a vase for the purpose of cookery;⁷ and joints selected for the purpose were boiled in a large caldron, placed over the fire on a metal stand or tripod. One servant regulated the heat of the fire, raising it with a poker or blowing it with bellows, worked by the feet;⁸ another superintended the cooking of the

¹ Diod. i. 45. Plut. de Isid. s. 8.

² Athenæus quotes Dion on this subject. (Deipnos. lib. i. 25.)

³ Herodot. ii. 60.

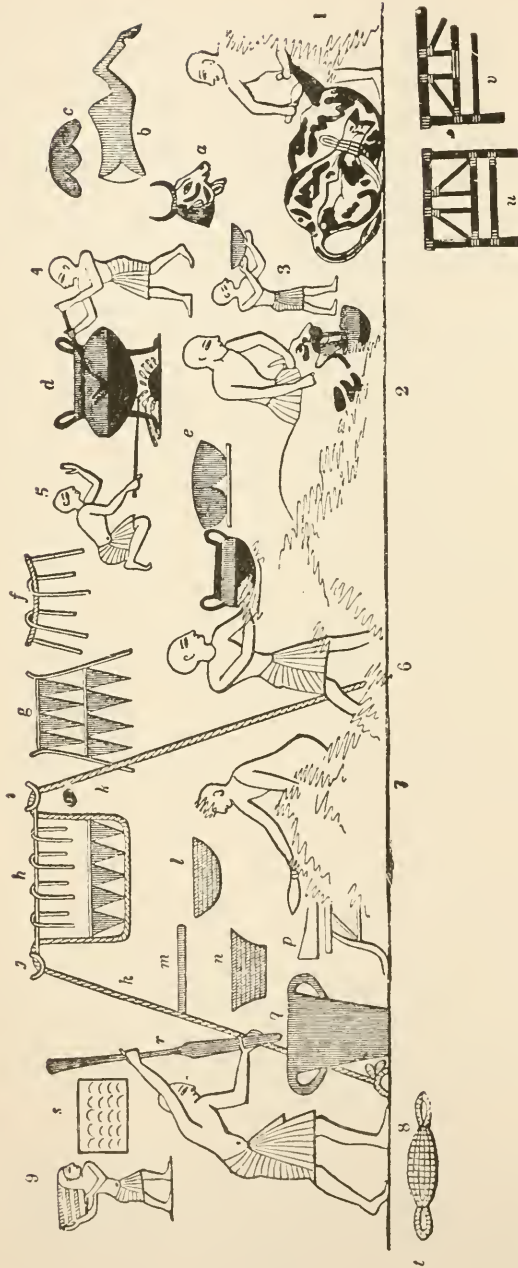
⁴ Josephus says the Egyptians (in his time) were abandoned to pleasures. (Antiq. ii. 9.)

⁵ Athen. Deipnos. lib. i. 25.

⁶ Bread and cakes had several fancy forms, as the pyramid, ring, circular biscuit. A cake in the British Museum, No. 5362, is in shape of the head of a crocodile. — S. B.

⁷ Woodcut No. 300, fig. 2.

⁸ I shall have occasion to notice these hereafter.



No. 300.

An Egyptian kitchen, from the tomb of Rameses III., at Thebes.

- Fig. 1. Killing and preparing the joints, which are placed at *a*, *b*, *c*.
 2. Catching the blood for the purposes of cookery, which is removed in a bowl by *fig. 3*.
 4 and 5. Employed in boiling meat and stirring the fire.
 7. Preparing the meat for the cauldron, which *fig. 6* is taking to the fire.
 8. Pounding some ingredients for the cook.
f, *h*. Apparently siphons.
i, *j*. Ropes passing through rings and supporting different things, as a sort of sate.
s. Probably plates.
u, *v*. Tables.

meat, skimming the water with a spoon, or stirring it with a large fork,¹ while a third pounded salt, pepper, or other ingredients in a large mortar, which were added from time to time during this process. Liquids of various kinds also stood ready for use. They were sometimes drawn off by means of siphons,² and these appear to be represented upon a rope,³ supporting the tray which contained the things they wished to raise beyond the reach of rats or other intruders, and which answered the purposes of a safe.

Other servants took charge of the pastry, which the bakers or confectioners had made for the dinner-table; and this department, which may be considered as attached to the kitchen, appears even more varied than that of the cook. Some sifted and mixed the flour,⁴ others kneaded the paste with their hands,⁵ and formed it into rolls, which were then prepared for baking, and, being placed on a long tray or board, were carried on a man's head⁶ to the oven.⁷ Certain seeds were previously sprinkled upon the upper surface of each roll,⁸ and judging from those still used in Egypt for the same purpose, they were chiefly the *Nigella sativa*, or *kamdon aswed*, the *simsim*,⁹ and the caraway.

Sometimes they kneaded the paste with their feet,¹⁰ having placed it in a large wooden bowl upon the ground: it was then in a more liquid state than when mixed by the hand, and was carried in vases to the pastry-cook, who formed it into a sort of macaroni, upon a flattened metal pan over the fire. Two persons were engaged in this process; one stirred it with a wooden spatula, and the other taking it off when cooked with two pointed sticks,¹¹ arranged it in a proper place, where the rest of the pastry was kept. This last was of various kinds, apparently made up with fruit, or other ingredients, with which the dough, spread out with the hand, was sometimes mixed, and it assumed the

¹ Woodcut No. 300, *figs.* 4 and 5.

² This part of the picture is very much damaged, but sufficient remains to show them using the siphons, which occur again, perfectly preserved, in a tomb at Thebes. They are introduced among the inventions of the Egyptians.

³ At *h* and *f*.

⁴ Woodcut No. 301, *figs.* 13 and 14.

⁵ *Ibid.*, *fig.* 15.

⁶ As at the present day. Conf. Pharaoh's chief baker, with 'three white baskets on his head' (Gen. xl. 16); and Herodot. ii. 35, 'Men carry loads on their heads, women on their shoulders.' But it was not the general custom. A bronze figure in the British Museum, No. 2281,

represents a man kneeling, carrying a basket on his head, in which are four circular loaves of bread quite exposed to the air.—S. B.

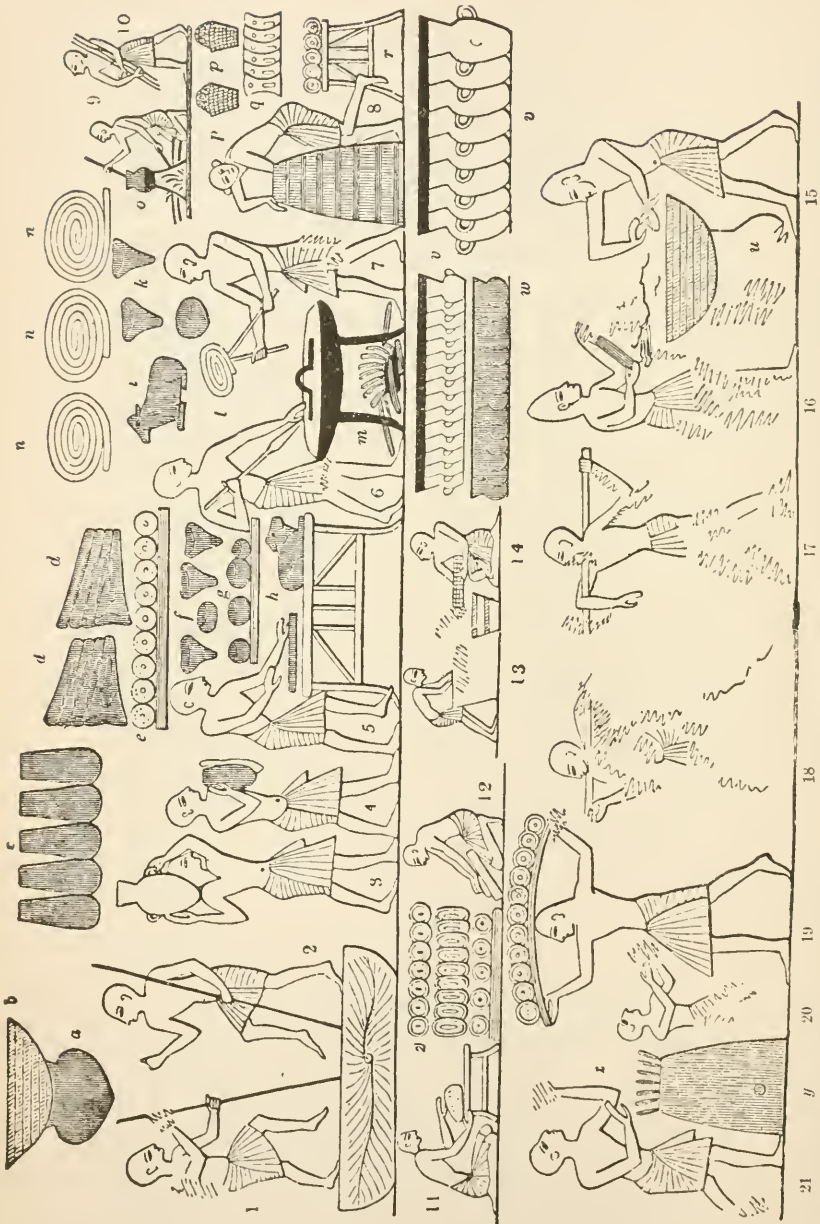
⁷ Woodcut No. 301, *figs.* 19 and *x*.

⁸ *Ibid.*, *figs.* 11 and *z*, called *oik* by the Egyptians.

⁹ *Sesamum orientale*, Linn. [There were many varieties of bread, which was usually made of barley; a circular biscuit, *paut*, with the impression of four fingers on one side; another kind, *pes*; the loaf, *tep*; *ta*, bread in general.—S. B.]

¹⁰ Conf. Herodot. ii. 36, and woodcut No. 301, *figs.* 1 and 2.

¹¹ Woodcut No. 301, *figs.* 6 and 7, and *l*.



No. 301.

Figs. 1, 2. Kneading the dough with their feet, cakes of various forms, *d, e, f, g, h*.
9. Cooking lentils, which are in the baskets, *p, q*.

Cooks and confectioners.

3, 4. Carrying it to the confectioner (*5*), who rolls out the paste, which is afterwards made into cakes of various forms, *u, v, w, x, y, z*, on a pan over the fire, *m*.
8. Preparing the oven.
15, 16. Kneading bread with the hands.

In the tomb of Ramesses III. at Thebes.

shape of a three-cornered cake, a recumbent ox, or other form,¹ according to the fancy of the confectioner. That his department was connected with the kitchen² is again shown, by the presence of a man in the corner of the picture engaged in cooking lentils for a soup or porridge;³ his companion⁴ brings a bundle of fagots for the fire, and the lentils themselves are seen standing near him in wicker baskets.⁵

The caldrons containing the joints of boiled meat, which were often of very great size, stood over a fire upon the hearth, supported on stones,⁶ having been taken from the dresser,⁷ where



No. 302. Cooking geese and different joints of meat. Tomb near the Pyramids.

Figs. *a a*. Joints in caldrons, on the dresser, *b*. *c*. A table.
 1. Preparing a goose for the cook (2), who puts them into the boiler, *d*.
 3. Roasting a goose over a fire (*e*) of peculiar construction.
 4. Cutting up the meat. *f*. Joints on a table.
g. Stewed meat over a pan of fire, or *magoor*.

they were placed for the convenience of putting in the joints; some of smaller dimensions, probably containing the stewed meat, stood over a pan⁸ containing charcoal, precisely similar to the *magoor*, used in modern Egypt;⁹ and geese, or joints of meat, were roasted over a fire of a peculiar construction, intended solely for this purpose;¹⁰ the cook passing over them a fan¹¹ which served for bellows. In heating water, or boiling meat, fagots

¹ Woodcut No. 301, *figs. d, f, g, h, i, k. f and g* appear to have the fruit apart from the pastry. I found some cakes of the form of *f* in a tomb at Thebes, but without any fruit or other addition. Many of different shapes have been found there.

² The chief baker of Pharaoh carried in the uppermost basket 'all manner of bake-

meats,' not only 'bread,' but 'all kinds of food.' (Gen. xl. 17.) Anciently, the cook and baker were the same, with the Romans.

³ *Fig. 9.*

⁴ *Fig. 10.*

⁵ At *p.*

⁶ Woodcut No. 302, at *d.*

⁷ At *b.*

⁸ At *e.*

⁹ At *g.*

¹⁰ At *e.*

¹¹ At *f.*

of wood were principally employed, but for the roast meat charcoal, as in the modern kitchens of Cairo; and the sculptures represent servants bringing this last in mats of the same form as those of the present day. They sometimes used round balls for cooking, probably a composition of charcoal and other ingredients, which a servant is represented taking out of a basket, and putting on the stove, while another blows the fire with a fan.¹

At an Egyptian party the men and women were frequently entertained separately, in a different part of the same room, at the upper end of which the master and mistress of the house sat close together on two chairs, or on a large fauteuil; each guest, as he arrived, presented himself to receive their congratulatory welcome,² and the musicians and dancers, hired for the occasion, did obeisance before them, previous to the performance of their part. To the leg of the fauteuil a favorite monkey, a dog, gazelle, or some other pet animal³ was tied, and a young child was permitted to sit on the ground at the side of its mother, or on its father's knee. In some instances we find men and women sitting together, both strangers,⁴ as well as members of the same family;⁵ a privilege not conceded to females among the Greeks, except with their relations: and this not only argues a very great advancement in civilization, especially in an Eastern nation, but proves, like many other Egyptian customs, how far this people excelled the Greeks in the habits of social life. With the Romans it was customary for women to mix in society, and their notions on this head are contrasted by Cornelius Nepos,⁶ with the scruples of the Greeks, in these words: 'Which of us Romans is ashamed to bring his wife to an entertainment? and what mistress of a family can be shown who does not inhabit the chief and most frequented part of the house? whereas in Greece she never appears at any entertainments except those to which relations are alone invited, and constantly lives in the uppermost part of the house, called *gynæconitis*,⁷ the women's apartments, into which no man has admission, unless he be a near relation.'

¹ The same kind of fan was used by the Greeks and Romans. It is represented in the paintings of Herculaneum.

² Plate XI.

³ *Ibid.* The cat and cynocephalic apes are sometimes represented; the monkey, with its name *qaf*, is as old as the 4th Dynasty, and its name, found in the Latin *ceb-us*, shows that the appellation found in

the account of the produce brought by the ships of Solomon, was not of Arvan derivation. Birds do not appear to have been pets or favorites. — S. B.

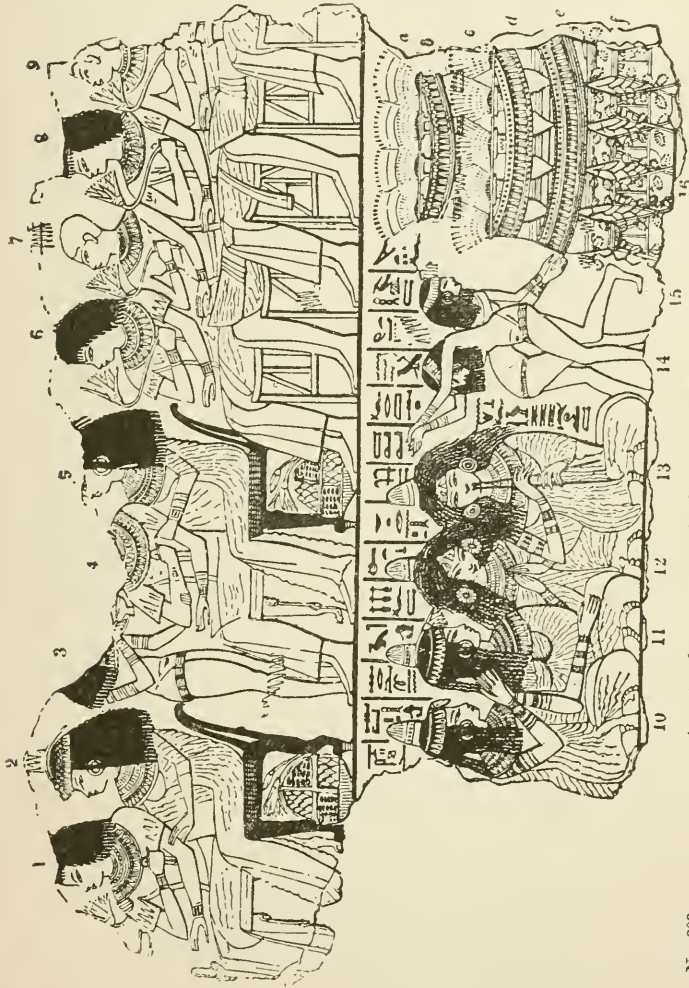
⁴ They may be married couples.

⁵ Woodcut No. 303.

⁶ Cornel. Nepos. Prefat. in Vit. Imperatorum, *ad fin.*

⁷ Answering to the *harém* of the East.

Wine, as I have already observed, was presented both to matrons and maidens at an Egyptian feast: and they were waited upon by handmaids and female slaves, as the men were attended by footmen and men slaves. An upper maid-servant, or a white



No. 303.

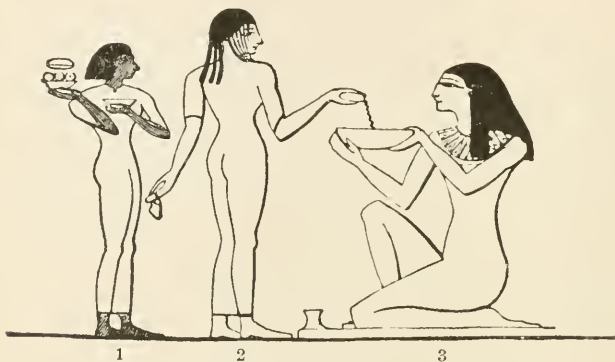
A party of guests entertained with music and the dance.

From Thebes, and now in the British Museum.

Figs. 1 and 2, 4 and 5, 6 and 7, 8 and 9. Men and women seated together at the feast. 3. A servant offering a cup of wine. 10, 11, 12. Women singing and clapping their hands to the sound of the double pipe. 13. Vases on stands, stoppered with heads of wheat, and decked with garlands. 14, 15. Dancing women.

slave, had the office of handing the wine, or whatever refreshment was offered them, and a black woman followed her, in an inferior capacity, to receive an empty cup when the wine had been poured from it into the goblet, or to bring and take away what it was the privilege of the other to present. The same

black slaves brought the dishes as they were sent from the kitchen; and the peculiar mode of holding a plate with the hand reversed, so generally adopted by women from the interior of Africa, is characteristically portrayed in the paintings of a tomb at Thebes, given in the accompanying woodcut. To each person,



No. 304.

A black and a white slave waiting upon a lady at a party.

Thebes.

after drinking, a napkin was presented for wiping the mouth, answering to the *máhrama* of the modern Egyptians and other Eastern people; and the servant who held it on his arm while the person was drinking probably uttered a complimentary wish as he proffered it, and received the goblet;¹ for the custom of saying, 'May it benefit you,' or some similar phrase, being so general throughout the East, we cannot but suppose that it was adopted by the ancient Egyptians, and that the mode of welcoming a stranger with salt, the emblem of hospitality, was common to them, as to the Romans and other people of antiquity.

That dinner was served up at mid-day may be inferred from the invitation given by Joseph to his brethren,² but it is probable that, like the Romans, they also ate supper in the evening, as is still the custom in the East. The table was very similar to that of the present day in Egypt, which is a small stool, supporting a round tray, on which the dishes are placed, and it only differed from this in being raised upon a single leg, like many of those used for bearing offerings in the sacred festivals of their temples.

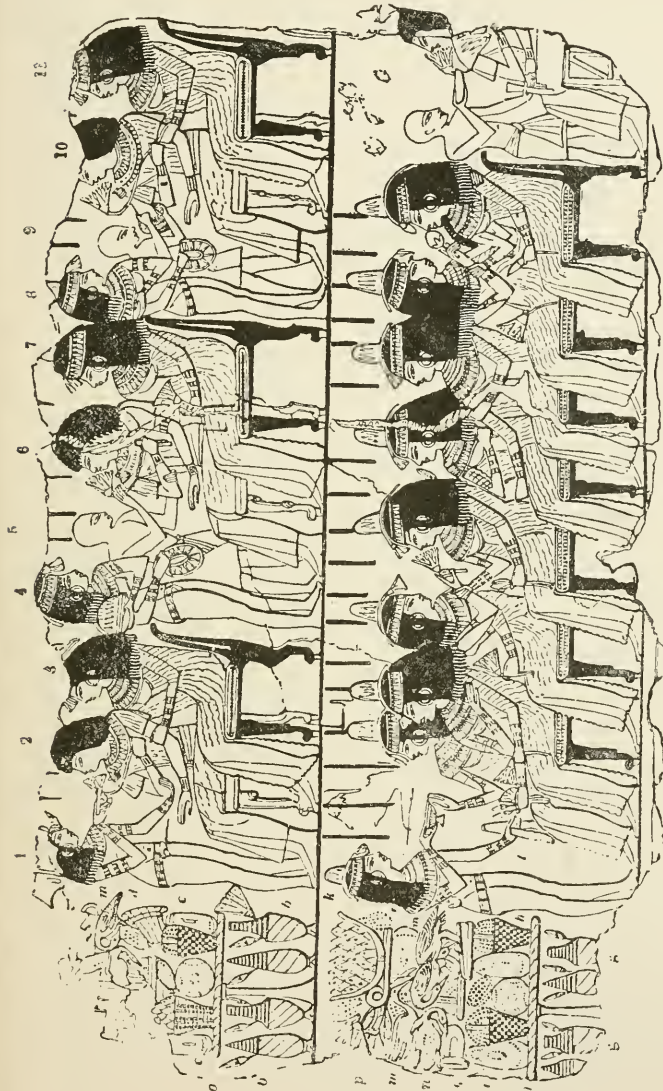
In early times the Greeks as well as Romans had similar

¹ Woodcut No. 305, *fig.* 12.

² Gen. xliii. 16: 'Bring these men home, and slay, and make ready; for these men shall dine with me at noon.' The

Hebrew expression 'slay,' שָׁחַ שָׁחַ, is the same as the Arabic *edbah dabe'eh*, 'kill a killing.'

round tables,¹ in imitation, as some imagine, of the spherical shape of the world;² and, occasionally, each guest had a table to him-



No. 305. A party of guests, to whom wine, ointment, and garlands are brought. From Thebes, and now in the British Museum.
Fig. 1 A maid-servant, presenting a cup of wine to a gentleman and lady, seated on chairs with cushions, probably of leather.
2 Another holding a vase of ointment and a garland.
3 presents a lotus-flower; and *4* a necklace or garland, which he is going to tie round the neck of the guest, *10*.
5, A female attendant offering wine to a guest; in her left hand is a napkin. *6* for wiping the mouth after drinking.
12. The tables *a, f* have cakes of bread, *e, i*, meat, *d, g*, geese *u*, and other birds, *m*, figs, *c, k*; grapes in baskets, *h, l*, flowers, *p*; and other things prepared for the feast; and beneath them are glass bottles of wine, *b, g*.

self;³ but from the mention of persons sitting in rows, according to rank, it has been supposed that they were of a long figure,

¹ Whence called *orbes* by the Romans. (Juv Sat. i. 137. Plin. xiii. 15.)

² Myricæus in Athen. lib. xi. c. 12.
³ Athen. i. 8

which may sometimes have been the case in Egypt, even during the Pharaonic ages, since the brethren of Joseph 'sat before him, the first-born according to his birthright, and the youngest according to his youth,'¹ Joseph himself eating alone at another table.² It is not, however, certain that the table in this instance was long, or in any way different from their usual round table, since persons might, even then, be seated according to their rank and the modern Egyptian table is not without its post of honor, and a fixed gradation of place. No tray was used on the Egyptian table, nor was it covered by any linen;³ like that of the Greeks, it was probably wiped with a sponge⁴ or napkin after the dishes were removed, and polished by the servants⁵ when the company had retired.

There has long been a question respecting the custom of reclining at meals, and its first introduction among the Greeks and Romans. Some have supposed that it came directly to Greece from Asia, and to Rome after the conquest of Carthage and Asia Minor; but it appears rather to have been gradually introduced than borrowed at any particular time from a foreign people. With great reason, however, we may believe that the custom originated in Asia;⁶ and the only notice of it among the Greeks in early times is found in sacred subjects, where the deities are represented reclining on couches,⁷ evidently with a view to distinguish their habits from those of ordinary mortals. But when luxury increased, and men, 'inflated,' as Aristotle observes, 'with the pride of victory, laid aside their previous discrimination,' new modes of indulgence were devised, their former simplicity was abandoned, and customs were introduced which their ancestor considered suited to the gods alone.

That they derived their ideas respecting the use of couches from a positive custom is certain, since all notions about the habits of the deities could only be borrowed from human analogies; we may therefore safely ascribe to it a foreign origin, though not introduced at once, or merely adopted in imitation of an Eastern custom. The principal person at a festival is often described as having reclined, while the others sat on chairs or on

¹ Gen. xliii. 5..

² Gen. xliii. 32: 'And they set on for him by himself.'

³ Table-cloths were unknown in Rome until the time of the Emperors (Mart. xii. 9, 12).

⁴ Homer, Od. A, 112.

⁵ Whether of stone or wood. Polished wood is frequently found in the tombs of Thebes.

⁶ Æneas and the Trojans reclined. (Virg. Æn. i. 700.)

⁷ The *lectisternia* of the Romans.

the ground. At the Roman *fête* of the *Epulum Jovis*, Jupiter reposed on a couch, while the other deities were seated; and, in Macedonia, no one could recline at meals till he had killed a boar, without the help of nets. It was therefore, originally, a mark of honor and distinction, and sometimes confined to men; but in process of time it became general, and was afterwards adopted by all ranks. For we have evidence from many ancient authorities that in early times neither the Greeks nor Romans reclined at meals. Homer's heroes¹ sat on the ground, or on chairs; Virgil,² Tacitus, Ovid,³ Philo, and others mention the same primeval custom; and Suetonius⁴ says that even the grandchildren of Augustus 'always *sat* at the end of the couch when they supped with him.'⁵

The ordinary Egyptian round table was similar to the *monopodium* of the Romans,⁶ and, instead of the movable tray used by the modern Egyptians, its circular summit was fixed to the leg on which it stood; which, as I have before observed, frequently presented the figure of a man, generally a captive, who supported the slab upon his head, the whole being either of stone or some hard wood. On this the dishes were placed, together with loaves of bread,⁷ some of which were apparently not unlike those of the present day, flat and round,⁸ as our crumpets, and others in the form of rolls or cakes, sprinkled with the seeds before noticed.

In the houses of the rich, bread was made of wheat, the poorer classes being contented with barley and flour of the *sorghum*;⁹ for Herodotus, as I have had occasion to observe in a former work,¹⁰ has been guilty of an error in stating¹¹ that it was considered among the Egyptians 'the greatest disgrace' to live on wheat and barley, and that 'they therefore made their bread of

¹ Homer, Od. A, 108, &c.

² Virg. Æn. i. 176: 'Soliti patres considerere mensis.'

³ Ovid. Fast. vi. 305.

⁴ Suet. Aug. c. 64: 'Neque cœnavit unâ nisi in imo lecto *adsiderent*.'

⁵ The married woman amongst the Assyrians and Greeks sat on a chair at the foot of the couch on which the husband reclined, even in the late period of the Roman Empire, it being immodest to lie on a couch with a man, although the Roman ladies did so, as alluded to by Ovid. The Egyptians are never represented reposing on couches, and the Greek custom was probably derived from some of

the other nations, perhaps Semitic, and of Asia Minor. — S. B.

⁶ Juv. Sat. xi. 122.

⁷ 'To set on bread' was the expression used, as at present, in Egypt, for bringing dinner (Gen. xliii. 31). It is singular that *lahm* should signify, in Hebrew, 'bread;' and, in Arabic, 'meat.'

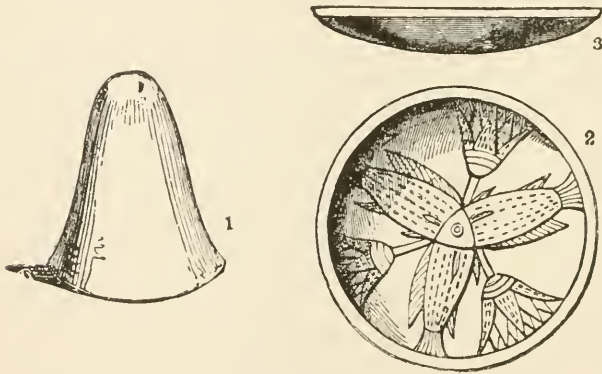
⁸ These retain the form of the old 'cakes' baked 'upon the hearth' (Gen. xviii. 6), which are so generally used at this day by the Arabs of the desert, without leaven. The bread of Upper Egypt is more like the ancient Egyptian cake.

⁹ *Holcus sorghum*. Linn.

¹⁰ 'Egypt and Thebes,' p. 213.

¹¹ Herod. ii. 36.

the *olyra*,¹ which some called *zea*.² It is doubtful whether the historian had in view the *Triticum zea*, which is now no longer grown in Egypt, or the sorghum,³ the *doura* of the present day; but it is probable that he gives the name of *olyra* to this last; and that it was grown in ancient times in Upper and Lower Egypt, particularly about the Thebaïd, is evident from the sculptures, though not in the same quantity as wheat. So far, however, were the Egyptians from holding wheat and barley in abhorrence, that they cultivated them abundantly throughout the whole valley of the Nile,⁴ offered them to the gods, and derived from them a great part of their sustenance, in common with whatever other corn the soil produced; and I fear that this, and his asser-



No. 306.

Drinking-cups.

Fig. 1. An alabaster beaker, inverted, in the Museum of Alnwick Castle.
2. A saucer or cup of blue glazed pottery, in the Berlin Collection.
3. Side view of the same.

tion respecting the exclusive use of brazen drinking-cups,⁵ prove Herodotus not to have lived in the best society during his stay in Egypt.⁶

¹ Pliny (xviii. 7) says, 'Far in Ægypto ex *olyra* conficitur;' but not to the exclusion of any other grain; and we find in the same author, 'Ægyptus . . . c. tritico suo.' He also observes, that the *olyra* had been supposed the same as rice, '*olyram et oryzam eandem esse existimant;*' and afterwards (c. 8) distinguishes it from the *zea*, with which Herodotus has confounded it. Homer feeds horses on the *olyra*, as well as wheat and barley; which last is now given them in the East. (Homer, II. E. 196.)

² Bearing no relation to the *Zea mays*, or Indian corn.

³ The Assyrian wheat and barley, he

affirms, had 'leaves four fingers in breadth,' from which it has been conjectured that he there (lib. i. 193) alludes to the sorghum; but the expression 'wheat and barley' renders this very questionable.

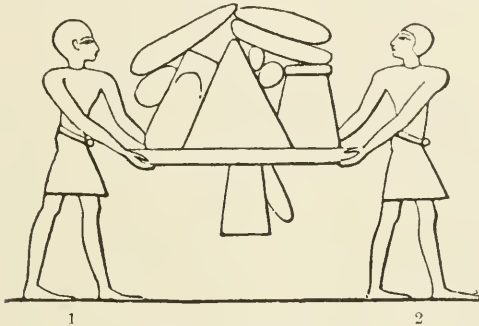
⁴ Witness the sculptures, and Exod. ix. 31, 32: 'The barley was smitten . . . the wheat and the rye were not smitten; for they were not grown up.' Wheat in Egypt is about a month later than barley.

⁵ Herodot. ii. 37.

⁶ If Herodotus had travelled, a few years ago, in the north of our island, he might, perhaps, have made a similar remark about the English and oat cakes.

The drinking-cups of the Egyptians, as I have already observed, were of gold, silver, glass, porcelain, alabaster, bronze, and earthenware.

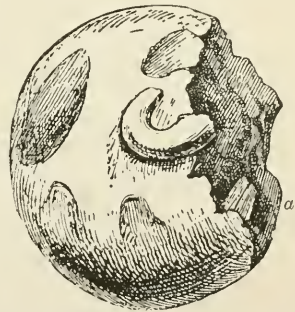
They varied greatly in their forms: some were plain and unornamented; others, though of small dimensions, were made after the models of larger vases, many were like our own cups without handles; and others may come under the denomination of beakers and saucers. Of these the former were frequently made of alabaster, with a round base, so that they could not



No. 307. The table brought in with dishes upon it. Tombs near the Pyramids.

stand when filled, and were held in the hand, or, when empty, were turned downwards upon their rim: and the latter, which were of glazed pottery, had sometimes lotus or fish represented on their concave surface, which, when water was poured into the cups, appeared to float in their native element.¹

The tables, as at a Roman repast, were occasionally brought in and removed² with the dishes on them; sometimes each joint was served up separately, and the fruit, deposited in a plate or trencher, succeeded the meat at the close of dinner, and in less fashionable circles, particularly of the olden time, it was brought in baskets which stood beside the table. The dishes consisted of fish; meat boiled, roasted, and dressed in various ways; game, poultry, and a profusion of vege-

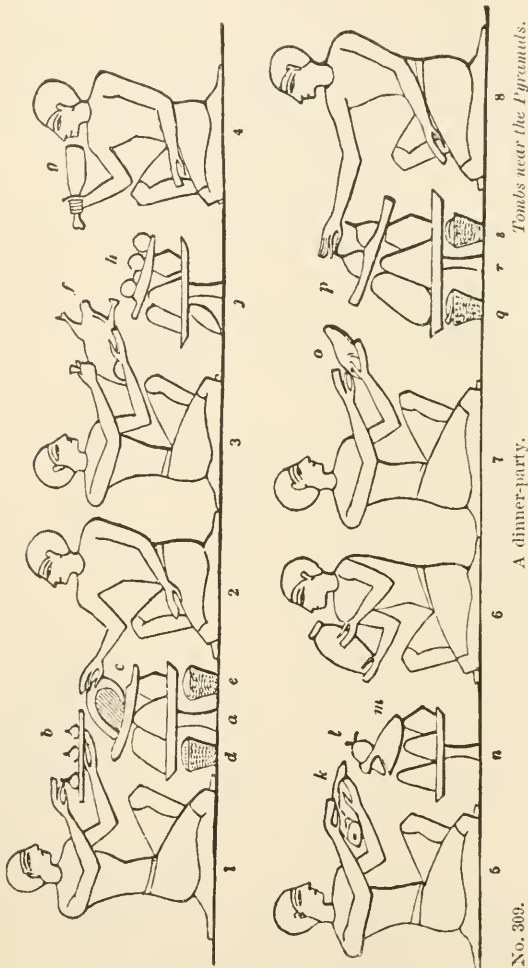


No. 308. A cake of preserved dates, found at Thebes. At a is a date stone.

¹ Woodcut No. 306, *fig. 2.* *Vide* also the spoon in woodcut No. 285.

² Woodcut No. 307. *Conf. Virg. Æn. i. 723.*

tables and fruit, particularly figs and grapes, during the season; and a soup, or pottage of lentils,¹ as with the modern Egyptians, was not an unusual dish. Of figs and grapes they were particularly fond, which is shown by their constant introduction



a, j, n, r. Tables with various dishes.

b, p. Figs.

d, e, q, s. Baskets of grapes.

Fig. 3 is taking a wing from a goose.

4 holds a joint of meat.

5 and *7* are eating fish.

6 is about to drink water from an earthen vessel.

l is the *figl*, or *raphanus*.

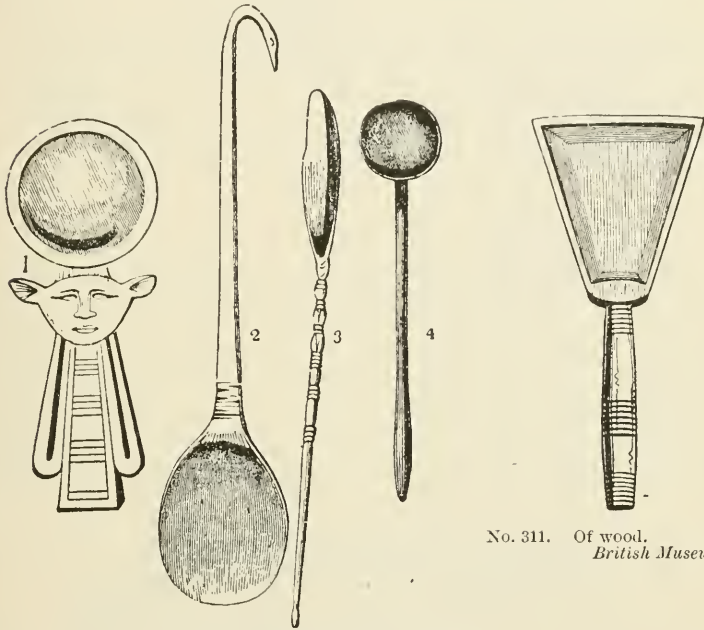
even among the choice offerings presented to the gods; and figs of the sycamore must have been highly esteemed, since they were selected as the heavenly fruit, given by the goddess Netpe² to those who were judged worthy of admission to the regions of

¹ Gen. xxv. 34: 'Jacob gave Esau bread and pottage of lentiles.'

² Or Nut, the goddess of the ether or firmament. — S. B.

eternal happiness. Fresh dates during the season, and in a dried state at other periods of the year, were also brought to table, as well as a preserve of the fruit, still so common in the country,¹ some of which I have found in a tomb at Thebes, made into a cake of the same form as the tamarinds now brought from the interior of Africa, and sold in the Cairo market.

The guests sat on the ground, or on stools and chairs; and having neither knives and forks, nor any substitute for them



No. 311. Of wood.
British Museum.

No. 310. *Fig. 1.* Ivory spoon, about 4 inches long, in the Berlin Museum, found with the vases of woodcut No. 206.

2. Bronze spoon, 8 inches in length.

3, 4. Bronze spoons found by Burton at Thebes.

answering to the chopsticks of the Chinese, they ate with their fingers, as the modern Asiatics, and invariably with the right hand.² Spoons were introduced at table when soup or other liquids required their use, and, perhaps, even a knife³ was

¹ The *ta nebs*, 'bread of dates,' of the lists. — S. B.

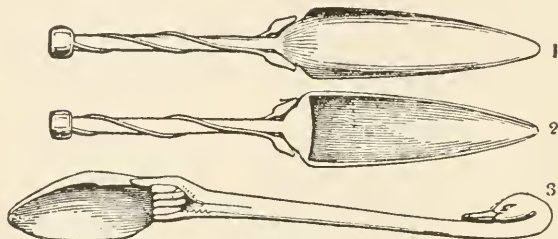
² And also the Romans and Jews, and most nations of antiquity. The fork, *ligula*, was introduced late under the Roman Empire; it had only two prongs. Several silver ones have been lately found

in Rome, and a bronze one at Kouyunjik. — S. B.

³ Knives were used by the Romans at table (*Juv. Sat. xi. 133*; though they ate with their fingers, whence 'manus unctæ' (*Hor. Ep. i. 16, 23*).

employed on some occasions, to facilitate the carving of a large joint, which is sometimes done in the East at the present day.

The Egyptian spoons were of various forms and sizes, according to the purposes for which they were intended. They were principally of ivory, bone, wood, or bronze, and other metals;

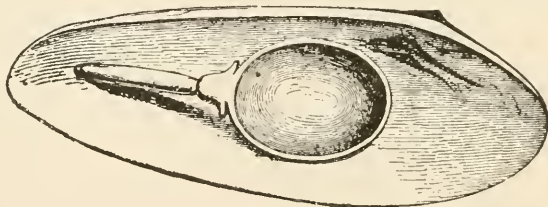


No. 312.

*Figs. 1, 2. Front and back of a wooden spoon.
3. Ivory spoon.*

British Museum.

and in some the handle terminated in a hook, by which, if required, they were suspended to a nail.¹ Many were ornamented with the lotus flower: the handles of others were made to represent an animal or a human figure; some were of a very arbitrary shape; and a smaller kind, of a round form, probably intended for taking ointment out of a vase and transferring it to a shell or cup for immediate use, are occasionally discovered in the tombs of Thebes. One in the Museum of Alnwick



No. 313.

Alabaster shell and spoon. Museum of Alnwick Castle.

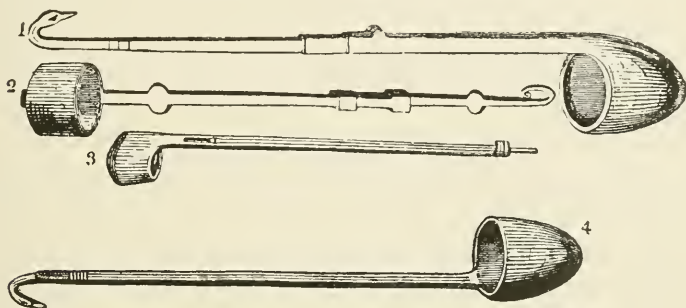
Castle is a perfect specimen of these spoons, and is rendered more interesting from having been found with the shell, its companion at the toilet table.²

Simpula or ladles were also common, and many have been found at Thebes. They were of bronze, frequently gilt, and the curved summit of the handle, terminating in a goose's head, a favorite Egyptian ornament, served to suspend them at the side

¹ Woodcut No. 310, *fig. 2.*

² Woodcut No. 313.

of a vessel after having been used for taking a liquid from it; and, judging from a painting on a vase in the Naples Museum, where a priest is represented pouring a libation from a vase with the *simpulum*, we may conclude this to have been the principal purpose to which they were applied. The gilding may either have been purely ornamental, or intended to prevent the noxious effect of wine, or other acid liquid, after being left in contact with it.¹ The length of the one in my possession is eighteen



No. 314.

Figs. 1, 2. Bronze *simpula*, in the Berlin Museum.

3. Of hard wood, in the same Museum.

4. Bronze *simpulum*, 1 foot 6 inches long. It has been gilt.

inches, and the lower part or ladle nearly three inches deep, and two and a half in diameter: but many were much smaller, and some were perhaps of a larger size.

Some *simpula* were made with a joint or hinge in the centre of the handle, so that the upper half either folded over the other;² or slid down behind it;³ the extremity of each being furnished with a bar which held them together, at the same time that it allowed the upper one to pass freely up and down. Two of these are preserved in the Berlin Museum, where they have also a ladle of hard wood⁴ found with the ease of bottles, which, as I have elsewhere observed, either belonged to a doctor, or to a lady's toilet table. It is very small; the lower part, which may be properly called the handle, being barely more than five inches long, of very delicate workmanship; and the sliding rod, which rises and falls in a groove extending down the centre of the handle, is about the thickness of a needle.

¹ They are the Greek *kuathos*, and were dipped into the *krater*. Their age is doubtful, as they are not represented at a later

period. The handle slid up and down.—S. B.

² Woodcut No. 314, *fig.* 1.

³ *Ibid.* *fig.* 2.

⁴ *Ibid.* *fig.* 3.

Small strainers or colanders of bronze have also been found at Thebes, but seldom more than five inches in diameter, one of which is in the British Museum, with several other utensils.¹

That they washed after as well as before dinner, we may be allowed to conclude from the invariable adoption of this custom throughout the East, and among most nations of antiquity, as the Greeks,² Romans,³ Hebrews,⁴ and others: nor can we for a moment suppose that a people peculiarly prepossessed in favor of repeated ablutions, would have neglected so important an act of cleanliness and comfort; and Herodotus⁵ speaks of a golden basin, belonging to Amasis, which was used by the Egyptian monarch, and 'the guests who were in the habit of eating at his table.'⁶

The heat of a climate like that of Egypt naturally pointed out the necessity of frequent ablutions, and inclined them to consider the use of water an agreeable indulgence: and we frequently find many of the modern natives, who are not obliged by a religious prejudice to observe the custom of washing at meals, as particular in this respect as the Moslems themselves.⁷

The Greeks, at a remote period of their history, were not so scrupulous in these matters, and were contented to wipe their fingers, after meals, on pieces of bread-crumbs (*apomagdaliai*), which they threw to the dogs;⁸ but it is probable that the refreshing habits of cleanliness always existed in Egypt, even when society was in its earliest stage. In later times the Greeks used an absorbent to scour the hands, for which purpose nitre and hyssop⁹ were employed; and though we have no evidence of its prevailing among the Egyptians, we may infer they had a

¹ It is a mere model or toy of a table, No. 5315, with various-shaped vases, all models or toys, and of small proportion. — S. B.

² Xenophon, *Symposium*: 'After they had done washing and anointing, as was the custom before meals.' Hom. (*Od.* Δ, v. 52) mentions the use of water before meals; and Aristophanes, in the 'Wasps,' speaks of the custom, after eating.

³ Virg. *Æn.* i. 701, *Georg.* iv. 377.

⁴ The Pharisee 'marvelled that he had not first washed before dinner.' (Luke xi. 38.)

⁵ Herod. ii. 172. He calls it a foot-basin, *ποδανιπτήριον*.

⁶ A gold patera given by Thothmes III.

to a royal scribe named Tahuti for his services, in the Museum of the Louvre, has been published in *Mémoires de la Société des Antiquaires de France*, t. xxiv. 8vo. Paris, 1858. — S. B.

⁷ I allude to the Copts of Cairo: I cannot, however, say that the monks of their convents are always so scrupulous or so cleanly, mistaken zeal leading them to construe the censure pronounced by Christ against the Pharisees, into a prohibition.

⁸ Whence they were called *κυνᾶς* by the Lacedæmonians.

⁹ Conf. *Psalms*. li. 7. The Jews only used it as a sprinkler (*Numb.* xix. 18).

similar custom, and, from lupins having been so long adopted in the country for the same purpose, t' at the *doqâq*¹ of modern Egypt is an old invention, handed down to and imitated by the present inhabitants.

Soap was not unknown to the ancients, and a small quantity has even been found at Pompeii. Pliny² mentions it as an invention of the Gauls, and says it was made of fat and ashes: and Aretæus, the physician of Cappadocia, tells us that the Greeks borrowed their knowledge of its medicinal properties from the Romans. But there is no evidence of soap having been used by the Egyptians; and if accident had discovered something of the kind while they were engaged with mixtures of natron or potash and other ingredients, it is probable that it was only an absorbent, without oil or grease, and on a par with steatite or the argillaceous earths, with which, no doubt, they were long acquainted.

We know that this scrupulously religious people were never remiss in evincing their gratitude for the blessings they enjoyed, and in returning thanks to the gods for that peculiar protection they were thought to extend to them and to their country, above all the nations of the earth. It cannot, therefore, be supposed that they would have omitted a similar acknowledgment previous to and after meals; ³ and even if the impulse of their own feelings had not dictated its propriety, the assiduous zeal of their spiritual pastors, who omitted nothing which could inspire the people with due respect for the Deity, would not have failed to impose upon them so important a duty. But on this point there is no need of conjecture: Josephus expressly states that the custom of saying grace before meals was practised by the Egyptians; and when the seventy-two elders were invited by Ptolemy Philadelphus to sup at the palace, Nicanor requested Eleazar to say grace for his countrymen, instead of those Egyptians to whom that duty was committed on other occasions.⁴ The Greeks, and other nations of antiquity, offered a part of what they were about to eat as *primitiæ*, or first fruits, to the

¹ Pounded lupins, purposely prepared for washing the hands after eating. *Termes* is the name of the lupin in Arabic, and the ancient Egyptian, or Coptic, word is *thâpous*.

² Pliny, xxviii. 12.

³ The Moslems, before eating, say 'Besmillah,' or 'Besm Allah  rahman  raheem,' 'In the name of the kind and

merciful God.' On rising from table, each repeats the 'El hamdoolillah,' 'Praised be God.' From this use of the word *besmillah*, they say, 'Besmillah mâna,' 'Will you in the name of God (*i. e.* eat) with us?'

⁴ Joseph. Antiq. xii. 2, 12.

⁵ Hom. Il. k, 219; Odyss. I, 231. Athen. iv. 27.

gods; and it is probable that, besides a thanksgiving, the religious Egyptians commenced their repasts with a similar ceremony.

We cannot suppose that this people were so addicted to the pleasures of the world¹ as to depreciate in their conviviality all moral and religious feelings, or to have been more disposed than the generality of men on similar occasions to forget futurity in the pleasures of the moment, though this has been frequently urged against the Egyptians: and because they were guilty of excesses² at the table, some have not scrupled to consider them immoral and depraved. But if they were fond of luxury, and all the mirth in which a lively people naturally indulge; if they banished religious thoughts during the hour of festivity, and allowed themselves to give way to occasional intemperance, it is unjust to throw the stigma of immorality upon the whole nation; and few civilized communities of modern Europe would desire to be judged with the same severity.

It was a custom of the Egyptians, during (or according to Herodotus after) their repasts, to introduce a wooden image of Osiris,³ from one foot and a half to three feet in height, in the form of a human mummy, standing erect, as Plutarch informs us, in a case, or lying on a bier, and to show it to each of the guests,⁴ warning him of his mortality, and of the transitory nature of human pleasures. He was reminded that some day he would be like that figure; that men ought to love one another, and avoid those evils which tend to make them consider life too long, when in reality it is too short; and while enjoying the blessings of this world, to bear in mind that their existence was precarious, and that death, which all ought to be prepared to meet, must eventually close their earthly career.⁵ Thus, while the guests

¹ Josephus says, 'The Egyptians are a peevish, lazy set of people, abandoned to their pleasures, and their very souls set upon profit, let it come which way it will.' (Antiq. ii. 9.) This was in the late age of Vespasian, when they were a very different people from the Egyptians of a Pharaonic period, and no longer a nation.

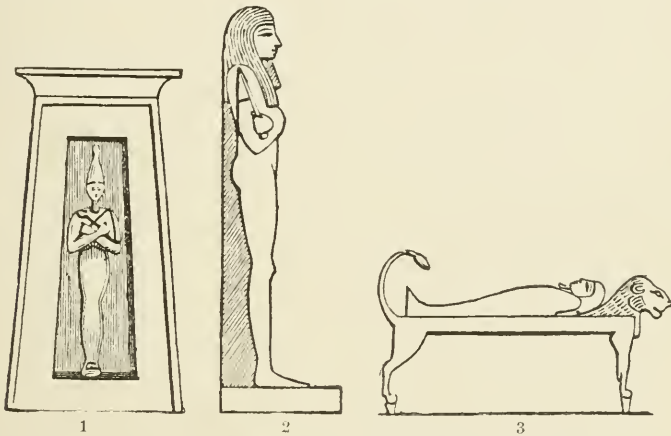
² The Romans, under the emperors, committed unheard-of excesses. Seneca says, 'Vomunt ut edant, edunt ut vomant.'

³ The Egyptians made their mummies in the form of Osiris, and the deceased, as soon as he had passed the ordeal of his final judgment, was admitted into the presence of the deity, whose name was then prefixed to his own.

⁴ Herodot. ii. 78. Plut. de Isid. s. 15; and Sept. Sapiens. Conv. p. 153. Dr. Young, Hier. Lit. p. 104.

⁵ Several small mummied figures of stone, clay, or wood, placed in model sarcophagi or coffins of the same material, have been supposed either to be these figures, or else embalmers' models. The figures or coffins have generally the 6th chapter of the Ritual or Book of the Dead inscribed upon them. Several are in the British Museum. ('Synopsis of the Contents of the Museum: First and Second Egyptian Rooms,' 8vo. Lond., 1874, p. 84.) — S. B.

P. 711. Moral admitted, and even exhorted to indulge in conviviality, doubt assures of the table, and the mirth so congenial to their disposition, the prudent solicitude of the priests did not fail to watch over their actions, and, by this salutary hint, to show them the propriety of putting a certain degree of restraint upon their conduct; and by avoiding any indiscreet prohibition of those amusements in which men will indulge, in spite of mistaken zeal (too often dictated by a mind devoid of experience, and frequently of sincerity), these guardians of morality obtained the object they had in view, without appearing to interfere.



No. 315. Figures of a mummy in form of Osiris, brought to an Egyptian table, and shown to the guests.

If, as was necessarily the case, all the guests were not impressed with the same feelings by the introduction of this moral sentiment, the custom was not thereby rendered in any degree objectionable, since a salutary lesson neglected loses not its merit; and however it may have been corrupted by others, who adopted the external form without the true feeling of the original, it must be confessed that the object was good and deserving of commendation. Perverted by the Greeks, this warning of the temporary pilgrimage of man served as an inducement to enjoy the pleasures of life while in this world, as if death closed the scene and no prospect was held out of a future existence; a notion directly at variance with the maxims of the Egyptians, and the constant mindfulness they were exhorted to cherish of an hereafter: and we find that the Greeks advocated the principle 'Live while you may' with unblushing earnestness. The beauties of

poetry¹ were summoned to assist in its recommendation. Every lover of excess welcomed and adopted it, with every evincing the same spirit as the exhortation of Trimalchio is thus given by Petronius Arbiter: 'To us, who were dining and admiring the splendor of the entertainment, a silver model of a man was brought by a servant, so contrived that its joints and movable vertebræ could be bent in any direction. After it had been produced upon the table two or three times, and had been made, by means of springs, to assume different attitudes, Trimalchio exclaimed, "Alas, unhappy lot, how truly man is nought! Similar to this shall we all be, when death has carried us away: therefore while we are allowed to live, let us live well."²

The same sentiments were used by the Jews in the time of Solomon, and 'the ungodly' of his time thus expressed themselves: 'Our life is short and tedious, and in the death of a man there is no remedy: neither was there any man known to have returned from the grave. For we are born at all adventure, and we shall be hereafter as though we had never been. . . . come on, therefore, let us enjoy the good things that are present, . . . let us fill ourselves with costly wine and ointments: and let no flower of the spring pass by us: let us crown ourselves with rosebuds, before they be withered: let none of us go without his part of our voluptuousness; let us leave tokens of our joyfulness in every place.'³

The intent, however, of this custom, with the Egyptians, was widely different; and even if from long habit and the increase of luxurious manners, the good warning it was intended to convey was disregarded, or failed in its effect, still the original intention was good, and cannot, in justice, be condemned as tending to immorality: and though Herodotus, who merely says that the guests were requested to 'observe that man, whom they would all resemble after death,' and were exhorted 'to drink and enjoy themselves,' omits to inform us if it was designed to inculcate a

¹ Anacreon, Od. 4. Her. Od. ii. 3, 13. With this may be compared the translation given of the tomb of Sardanapalus at Tarsus; and something of the same kind and tone is found on the tablet of Pasherient from Memphis, made in the reign of Cleopatra and Cæsarion. — S. B.

² Petron. Satyric. c. 34, *ad fin.* These neuro-pasts or marionettes are not uncommon. Several, supposed to be dolls made of painted terra-cotta, have been found in the sepulchres of Athens. Bronze neuro-

pasts are also in Egyptian collections, and the same may have suggested the silver model of Trimalchio. This idea of mingling sadness with mirth, the image of death with that of life, has prevailed at all times and periods. The image of death in more recent times has been the skull or the skeleton. — S. B.

³ Book of Wisdom ii. 1, *et seq.* Conf. Eccles. ii. 24; Isaiah xxii. 13, and lvi. 12; Luke xii. 19; and 1 Cor. xv. 32.

moral lesson. Plutarch expressly asserts this, and removes all doubt respecting the object they had in view. The idea of death among the ancients was less revolting than among Europeans and others at the present day; and so little did the Egyptians object to have it brought before them, that they even introduced the mummy of a deceased relative at their parties, and placed it at table as one of the guests—a fact which is recorded by Lucian¹ in his ‘Essay on Grief,’ and of which he declares himself to have been an eye-witness.

After dinner, music and singing were resumed; men and women performed feats of agility, swinging each other round by the hand, or throwing up and catching the ball; and the numerous tricks of jugglers, both in the house and out of doors, were introduced to amuse the company.

Part of a similar scene at a Greek entertainment is described in the ‘Banquet’ of Xenophon. A little boy, two dancing girls, and a jester named Philip, were present on that occasion, and one of the former began by displaying her skill in throwing up her cymbals and catching them, to the tune of a flute played by her companion. A hoop was then brought, round which a number of swords were fixed, and the same dancing girl jumped in and out of the hoop with perfect confidence, and, without receiving any injury, afforded infinite delight and satisfaction to the guests; and gave occasion to Socrates, who was present, to make some general remarks on the courage of women, and to observe that they ‘are capable of learning anything you will they should know.’ Then standing upright, she bent backwards, and touching her heels with her head, flung herself round swiftly three or four times, in imitation of a wheel; occasionally reading and writing at the same time that she was going through this rotatory movement. Every one expressed his delight at this exhibition of her agility; and Philip, pretending to imitate her by throwing himself in the same manner forwards, offered a striking contrast to the grace she had exhibited, and excited the ridicule of the party.

The singular feat here described is more interesting, as it bears some resemblance to one of those indicated in the paintings illustrating the customs of the Egyptians at an era far more remote, dating no less than 1300 years before the age of Socrates, where women are represented turning over backwards, either singly or in pairs. In the latter case, the head of one was placed

¹ And by Damascenus, Orat. i.

between the legs of the other, front to front, but in such a manner that when one was standing the head of the other was downwards, and the feet over the neck; and in this position they turned over, the feet of each alternately reaching the ground.¹

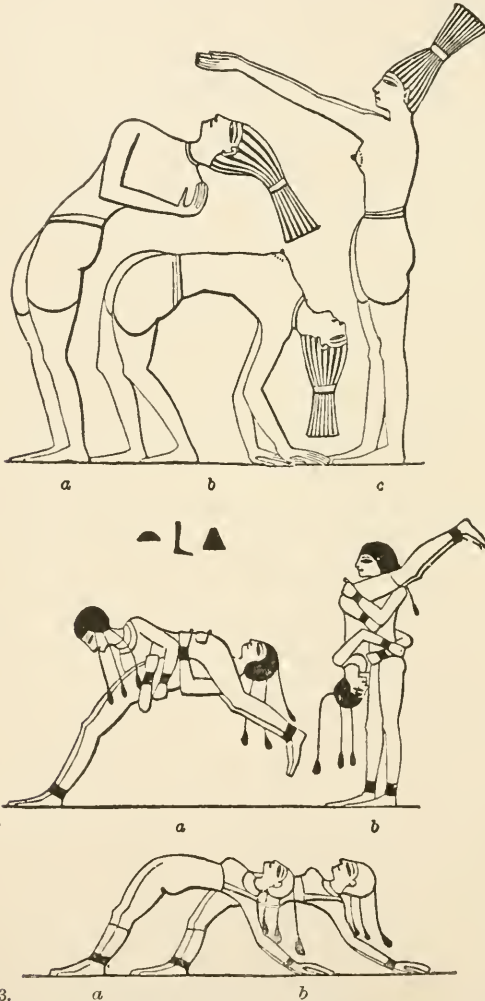


Fig. 3.

No. 316.

Women tumbling, and performing feats of agility.

Beni-Hassan.

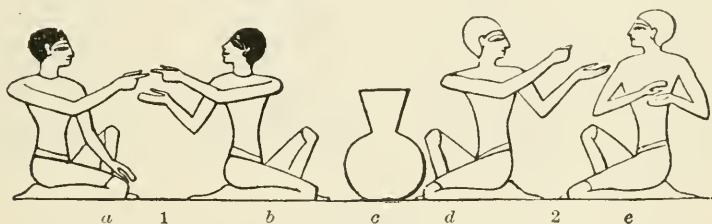
The most usual games within doors were odd and even, *mora*,² and draughts. The first of these was played also by the

¹ There is no appearance of the Cottabus, so fully described by Athenæus, which was

supposed to have passed from Sicily into Greece.

² Woodcut No. 317.

Romans, and called 'ludere par et impar,' but considered better suited to the levity of young persons¹ than to the gravity of a more advanced age; and Horace² looked upon it in the same light as the trifling amusements of building children's houses, yoking mice to carts, and riding on a stick.³ According to J. Pollux, they used bones, *astragali*, beans, nuts, almonds, or coins, in the game of odd and even, and any indefinite number was held between the hands.⁴



No. 317.

Fig. 1. Playing at *mora*.
2. At odd and even.

Thebes.

The second was common in ancient as well as modern Italy, and was played by two persons, who each simultaneously threw out the fingers of one hand, while one party guessed the sum of both. They were said in Latin, 'micare digitis,'⁵ and it is remarkable that a game, still so common among the lower orders of Italians, with whom it bears the name I have adopted, should be found to have existed in Egypt from the earliest periods of which their paintings remain, even in the reign of the first Usertesén.⁶

The same antiquity may be claimed for the game of draughts, or, as it has been erroneously called, chess. As in the two former, the players sat on the ground or on chairs,⁷ and the pieces or men being ranged in line at either end of the table, probably moved on a chequered board, as in our own chess and draughts; but the representations being always given in profile, it is impossible to ascertain the exact appearance or the number of squares it contained.⁸

¹ And to the lower orders.

² Hor. Sat. ii. 3, 247.

³ Agesilaus is mentioned by Plutarch as making 'a hobby-horse of a reed, and riding with his children.' (Plut. 'Life of Agesilaus.')

⁴ J. Pollux, Onom. ix. 7. He describes another game, which was throwing the same bones or coins within a ring, and also into a hole, well known in modern times: this last was called *τρόπα*.

⁵ Juv. Sat. Cicero, de Divin. lib. ii. says, 'Quid enim sors est? idem propmodum quod micare, quod talos jacere, quod tesseras.' Offic. iii. 23. Suet. Aug. 13. The 'sortiri digitis,' *ἐπαλλάττειν τοὺς δακτύλους*, was different.

⁶ Most of the games were as old as the 4th Dynasty.

⁷ Woodcuts Nos. 319 and 322.

⁸ They generally played with six pieces, and the set of each player was alike, but

The pieces were all of the same size and form, though they varied on different boards, some being small, others large with round summits; many were of lighter and neater shape, like



No. 318.

Draughtmen.


British Museum.

Fig. 1. From the sculptures of Rameses III.

2. Of wood.
3. Of porcelain, human-headed.
4. Of porcelain, inscribed with the name and titles of Neeho I.
5. Wooden draughtman.
6. Of porcelain, cat-headed.
7. Of porcelain, jackal-headed.

small nine-pins — probably the most fashionable kind, since they were used in the palace of king Rameses. These last seem to have been about one inch and a half high, standing on a circular

distinct from that of his opponent. The most ordinary form was the cone or conoid, either plain or else surmounted by a pointed or spherical head; but there were several varieties of shapes, as in woodcut No. 318. A very old type of porcelain in the British Museum, No. 6143a, is a human

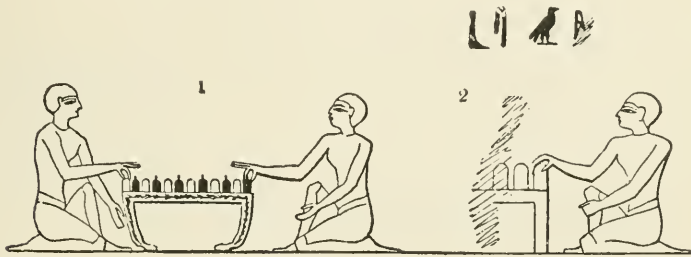
head, and no doubt represents  the *t'a*

or robber, the *latro* of the Roman draught-board, said to be made of glass, and supposed by some to have been a single piece; another type was cat- or possibly dog-headed (British Museum, No. 6144); and another, decidedly dog- or jackal-headed (No. 6144h), of black porcelain, probably represented the *kuon*, or dog, as the Greeks

called these pieces. The game was one of the delights of the Egyptian Elysium, and played in the future state, according to the 17th chapter of the Ritual, and boards and men, five of one kind and four of the other, are sometimes represented in the sarcophagi of the 11th Dynasty. (Lepsius, 'Die älteste Texte,' taf. 9.) The boards had 9 squares one way, and 17 the other; in all 153 squares. They were alternately colored red and black. To this I shall recur. The draughtmen were called *ab*. An account of the games is given by Birch, 'Rev. Arch.' 1864, p. 56; 'Zeitschrift für ägyptische Sprache,' 1866, p. 97; Trans. Roy. Soc. Lit., New Series, ix. p. 256. — S. B.

base of half an inch in diameter ; and one in my possession, which I brought from Thebes, of a nearly similar type, is one inch and a quarter in height, and little more than half an inch broad at the lower end. It is of hard wood, and was doubtless painted of some color, like those occurring on the Egyptian monuments.

They were all of equal size upon the same board, one set black, the other white or red, standing on opposite sides,¹ and each player raising it with the finger and thumb advanced his piece towards those of his opponent ; but though we are unable to say if this was done in a direct or a diagonal line, there is

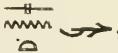
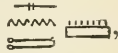


No. 319.

Game of draughts.

Beni-Hassan and Thebes.

reason to believe they could not take backwards, as in the Polish game of draughts, the men being mixed together on the board.²

[The board of the game was called , or , sent ; and a small box with draughtmen, *ab*, found at Thebes, was in the Abbott Collection, and is figured by M. Prisse d'Avennes.³ It was cut of a solid piece of wood, and was 28 in. long by 7 in. broad, the Latin *Mandra*, and had cut in on the sides the squares for the games. On one side it was divided into thirty squares ; three on the breadth, and ten down the length. On the opposite side, at one end, was a space of twelve squares, three along the breadth and four deep, and from the middle line eight other squares were continued to the other end of the board, the rest of which was plain. M. Prisse d'Avennes conjectures that

¹ Jul. Pollux, *Onom.* ix. 7, on a game of tessera, ψῆφοι, of this kind, where the men, or dogs, as they called them, on the two opposite sides, were of a different color. Another similar game, called διαγοαμιστῆς, is there mentioned. It is remarkable that the name *dox* (*kelb*) is applied also by the Arabs to their draughtmen. J. Pollux

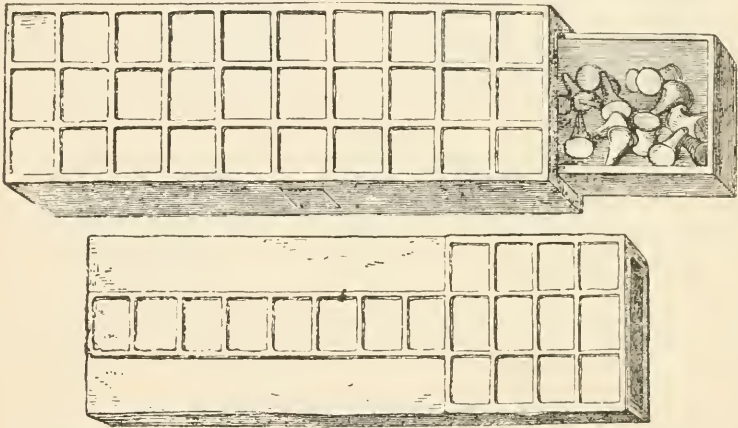
was a Greek writer who lived about the year 185 A.D. Some suppose the Roman game of *duodecim scripta* to have resembled draughts, but the moves were generally determined by throwing dice.

² As in woodcut No. 319, *fig.* 1.

³ 'Monuments Egyptiens,' pl. xlix. p. 9.

this was the *hieragramme*, or sacred line of the Greek game *petteia*. A small drawer, with a stud, drew out of the box, and held the pieces, some of which resembled reels. Besides the game of *petteia*, it was thought the square suggested the *diagrammismos* of the Greeks, and the *duodecim scripta* of the Romans, analogous to the game of draughts, the invention of which Plato¹ says was attributed to Thoth. — S. B.]

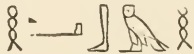
It was an amusement common in the houses of the lower classes and in the mansions of the rich; and king Rameses is himself portrayed on the walls of his palace at Thebes, engaged in the game of draughts with the favorites of his *harém*.



No. 320.

Wooden draught-boards.

Dr. Abbott's Collection.

The modern Egyptians have a game of draughts very similar, in the appearance of the men, to that of their ancestors, which they call *dameh*, and play much in the same manner as our own. [In the tomb of *Ra séps*, of the 5th Dynasty,² at Saqqarah, is represented another kind of game, called  *hāb em han*, the game of the vase. The board is circular, and has ten concentric bands, along which the pieces move to the centre, where the bands terminate in a kind of lunc. One player has seven flat circular pieces, like modern draughts, on the fast or innermost lines; the other has three pieces, one of which he is in the act of placing in the centre, and so winning the game. The vase is represented above the board, which was of large dimensions. An adjoining scene represents the usual draughts. — S. B.]

¹ Phædo, p. 274.

² Lepsius, Denkm. ii. Bl. 61a.

Analogous to the game of odd and even was one in which two of the players held a number of shells or dice in their closed hands, over a third person who knelt between them, with his face



Fig. 1. Rameses III, playing at draughts.
 2. Seated in a chair, on the principle of our camp-stools.
Thebes.

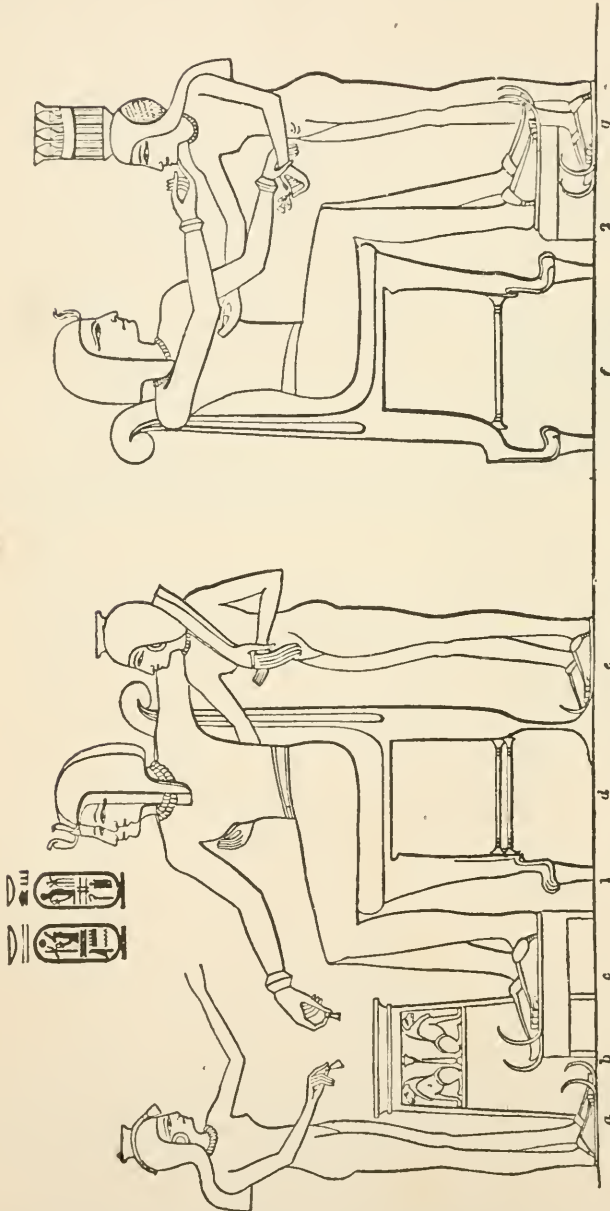
No. 321

towards the ground, and who was obliged to guess the combined number¹ ere he could be released from this position; unless indeed it be the *kollabismos* of the Greeks,² in which one person

¹ This I conjecture from the mode of representing it. *Vide* woodcut No. 323.

² Jul. Pollux, Onom. ix. 7. *Vide* woodcut No. 324.

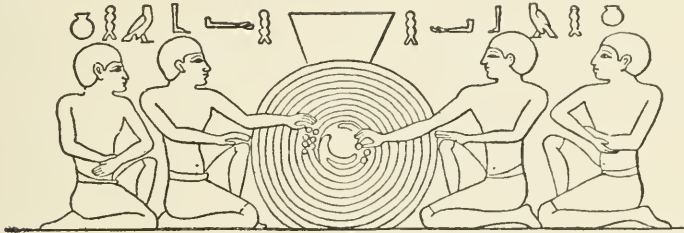
covered his eyes, and guessed which of the other players struck him.¹



No. 322. *Fig. 1.* Rameses III., playing at draughts. In this figure an alteration was made by the sculptor in the head and arm, afterwards covered with stucco, which has since fallen.
2. The same king, seated in the *harém*. I suppose these figures had long loose dresses, which, being only painted, and not sculptured, have been effaced by time.

¹ The inscription is difficult to explain: it reads *ha ua em ab qa*. It is doubtful if this is a game. — S. B.

Another game consisted in endeavoring to snatch from each other a small hoop, by means of hooked rods, probably of metal; and the success of a player seems to have depended on extricating his own from the adversary's rod, and then snatching up the hoop before he had time to stop it.¹



No. 323.

Playing at the game called *Vase*.

Saqqarah.

Some other games are represented in the paintings, but not in a manner to render them intelligible; and many which were doubtless common in Egypt, are omitted both in the tombs and in the writings of ancient authors. It is, however, evident that dice were already used by the Egyptians in the reign of Rhamp-



No. 324.

A game perhaps similar to the Greek *kollabismos*.

Beni-Hassan.

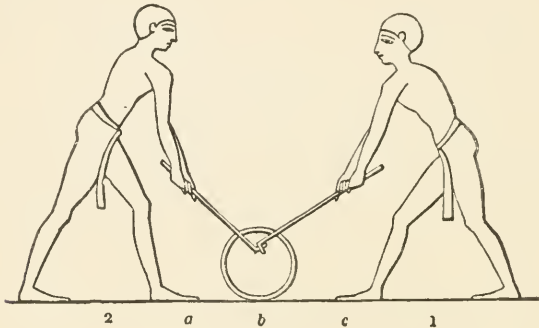
sinitus; that monarch, according to Herodotus, being reported to have played with the goddess Ceres;² for the allegorical meaning of the story in no way militates against the fact of such a game having been known at the period in question, and the Egyptians, his informants, were necessarily persuaded that it dated at least as early as his era.³

¹ Woodcut No. 325. It is taken from Prof. Rosellini's work. I suppose this to be their mood of playing with the hoop.

² Herod. ii. 122.

³ No dice have been found in Egypt older than the Roman period, nor have

I do not suppose that the dice discovered at Thebes and other places are of a very remote epoch; they may not even be of a Pharaonic period, but the simplicity of their form and mode of notation may lead us to suppose them similar to those of the earliest age, in which too the conventional number of six sides



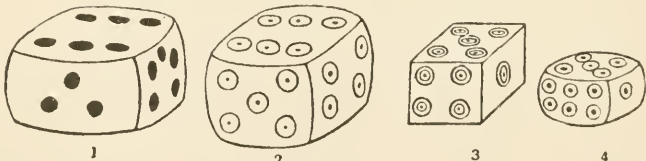
No. 325.

Game with hoop.

Beni-Hassan.

had probably always been adopted.¹ They were marked with small circles, representing units, generally with a dot in the centre; and those I have seen were of bone or ivory, varying slightly in size.

Plutarch would lead us to believe that dice were a very early invention in Egypt, and acknowledged to be so by the Egyptians



No. 326.

Dice found in Egypt.

Berlin Museum.

themselves, since they were introduced into one of their oldest mythological fables; Mercury being represented playing at dice with the moon² previous to the birth of Osiris, and winning from her the five days of the epact, which were added to complete the 365 days of the year.

The modern Egyptians have a game called in Arabic *mányala*,

they been recognized in the inscriptions or texts. Nor are there any representations of playing at dice in the earlier or older sepulchres.—S. B.

¹ J. Pollux, *Onom.* lib. ix. c. 7. The Romans and Greeks had another kind of

tali, or *ἀσπογάλοι*, with four sides only marked, the 2 and 5 being omitted. (J. Pollux, *ibid.*)

² Plut. de Is. s. 12: *παίζαντα περρεία πρὸς Σελήνην.*

which is traditionally reported to have been borrowed from their ancient predecessors; but as a full description of it has been given by Mr. Lane, in his curious and accurate account of the customs of modern Egypt,¹ it is unnecessary here to repeat it.

It is probable that several games of chance were known to the Egyptians besides dice and *mora*, and, as with the Romans, that many a doubtful mind sought relief in the promise of success, by having recourse to fortuitous combinations of various kinds; and the custom of drawing or casting lots, to decide a disputed question, was common at least as early as the period of the Hebrew Exodus.²

Among the various methods adopted by the Romans for ascertaining the probable accomplishment of a wish, one of the most singular was that of shooting up the fresh pips of an apple,³ by squeezing them between the finger and thumb, and endeavoring to strike the ceiling while seated at table; and the success or failure of the attempt augured in favor or against their good fortune, in obtaining the affections of a favorite, or whatever object they had in view. Such scenes cannot of course be looked for among the subjects of the Egyptian sculptures; but that they were superstitious observers of accidental occurrences, and inferred from them the chance of certain results, is proved to us by the testimony of those who visited the country: for 'whenever,' says Herodotus,⁴ 'anything extraordinary occurs, they note it down in writing, and pay particular attention to the events which follow it; and if at a subsequent period something of a similar kind happens to take place, they feel persuaded it will be attended with the same result.'

The games and amusements of children were such as tended to promote health by the exercise of the body, and to divert the mind by laughable entertainments. Throwing and catching the ball, running, leaping, and similar feats, were encouraged, as soon as their age enabled them to indulge in them; and a young child was amused with painted dolls, whose hands and legs, moving on pins, were made to assume various positions by means of strings.⁵ Some of these were of rude and uncertain form, with-

¹ Lane's 'Modern Egyptians,' vol. ii. p. 47.

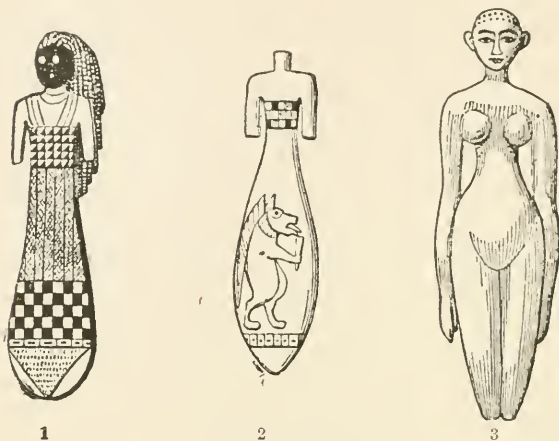
² Conf. Leviticus xvi. 8: 'And Aaron cast lots upon the two goats.' The Hebrew word is גֹּרֵל *gôrel*, as in Joshua xviii. 10.

³ Hor. Sat. ii. 3, 273; and J. Pollux, ix. c. 7.

⁴ Herod. ii. 82.

⁵ Conf. Herod. ii. 48, who mentions another kind of figure carried at 'the feast of Bacchus.'

out legs, or with an imperfect representation of a single arm on one side. Some had numerous beads, in imitation of hair, hanging from the doubtful place of the head; others exhibited a nearer

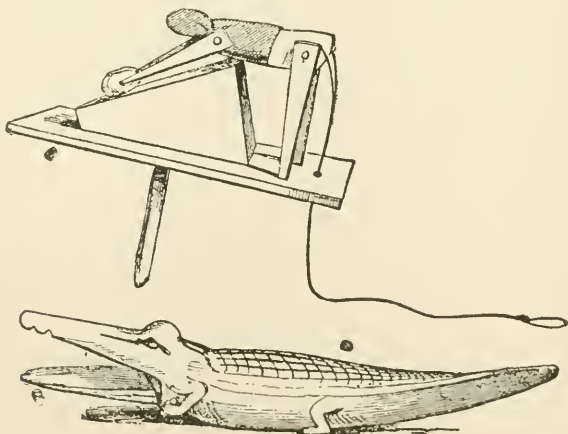


No. 327.

Wooden dolls.

*British Museum.**Fig. 1. Flat. 2. Ornamented with Taur. 3. Holes for hair on head.*

approach to the form of a man; and some, made with considerable attention to proportion, were small models of the human figure. They were colored according to fancy; the most shapeless had



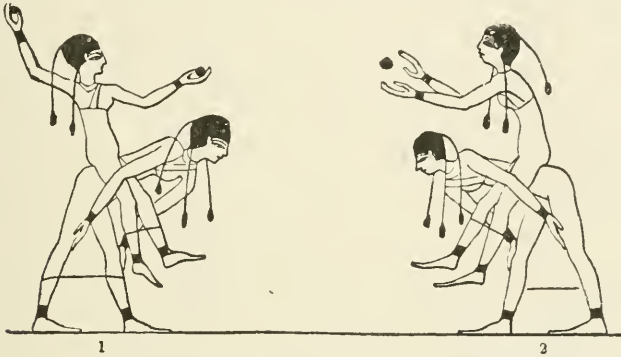
No. 328.

Children's toys.

Leyden Museum.

usually the most gaudy appearance, being intended to catch the eye of an infant; but a show of reality was deemed more suited

to the taste of an elder child; and the nearer their resemblance to known objects, the less they partook of artificial ornament. Sometimes a man was figured washing, or kneading dough, the necessary movement indicative of the operation being imitated by pulling a string; and a Typhonian monster, or a crocodile, amused a child by its grimaces, or the motion of its opening mouth; plainly showing that children, in all ages, delight in the



No. 329. Playing the game of ball mounted on each other's backs. Beni-Hassan.



No. 330. Throwing up and catching one, two, and three balls. Beni-Hassan.

frightful, and play with objects which, if real, they would shudder to behold. In the toy of the crocodile we have sufficient evidence that the erroneous notion of Herodotus, who states that this animal 'does not move the lower jaw, and is the only creature which brings the upper one down to the lower,'¹ did not originate with the Egyptians: but we are not surprised at this assertion when we recollect how easily the motion of the head of

¹ Herod. ii. 68.

the crocodile is mistaken for that of the upper jaw. Like other animals, it moves the lower jaw *only*; but when seizing its prey, the head being thrown up gives the appearance of motion in the upper jaw, and readily leads those who see it into this erroneous conclusion.¹

The game of ball was not confined to children, or to either sex, though the mere amusement of throwing and catching it appears to have been considered more particularly adapted to females.² They had different methods of playing.³ Sometimes a person unsuccessful in catching the ball was obliged to suffer another to ride on her back, who continued to enjoy this post until she also missed it: the ball being thrown by an opposite party, mounted in the same manner, and placed at a certain distance, according to the space previously fixed by the players; and, from the position and office of the person who had failed, it is not improbable that the same name was applied to her as to those in the Greek game, who

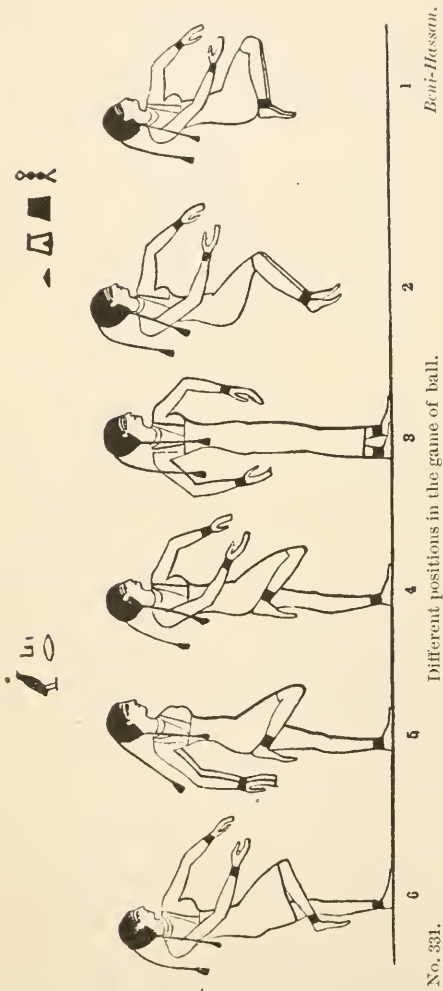
were called *ἄροι* or 'asses,' and were obliged to submit to the commands of the victor.⁴

¹ There is in the British Museum the wooden head of a bird, part of a toy. This head moved by a string. Also several porcelain or earthenware fruits, such as the date, almond, fig, &c., made for children, and used as toys. — S. B.

² Not so with the Romans.

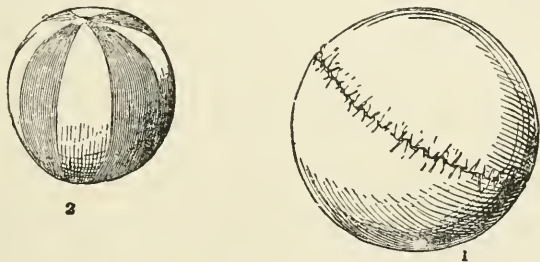
³ J. Pollux, *Onom.* ix. c. 7, describes various games of ball.

⁴ *Ibid.*, ix. c. 7. Woodcut No. 329. [From the appearance and especially the arrangement of the hair of these women,



Sometimes they showed their skill in catching three or more balls in succession, the hands occasionally crossed over the breast; and the more simple mode of throwing it up to a height, and catching it, known to the Greeks by the name of *oðqarta*,¹ was common in Egypt. They had also the game described by Homer to have been played by Halius and Laodamas, before Alcinoüs, in which one party threw the ball as high as he could, and the other, leaping up, caught it on its fall, before his feet again touched the ground.²

When mounted on the backs of the losing party, the Egyptian women sat sidewise. Their dress consisted merely of a short petticoat, without a body, the loose upper robe being laid aside



No. 332.

Fig. 1. Leather ball, three inches in diameter. *British Museum.*
2. Of dark and light blue painted earthenware.

on these occasions: it was bound at the waist with a girdle,³ and supported by a strap over the shoulder, and was nearly the same as the undress garb of mourners, worn during the funeral lamentation on the death of a friend.

There is no appearance of anything resembling rackets: nor is the Roman game of striking the ball with the hand⁴ represented in the Egyptian sculptures: but we can draw no inference from their absence; and, considering the remote antiquity of the paintings, it is singular that any should have

it is evident that they were professional dancers or jugglers. The action seems pantomimic, and an imitation of a charge or fight, the dancers hurling balls instead of javelins. — S. B.]

¹ From being thrown up *εις τὸν οὐρανόν*, 'to the sky.'

² Homer. *Od.* θ, 374. J. Pollux, ix. 7; and woodcut No. 331, *fig.* 1.

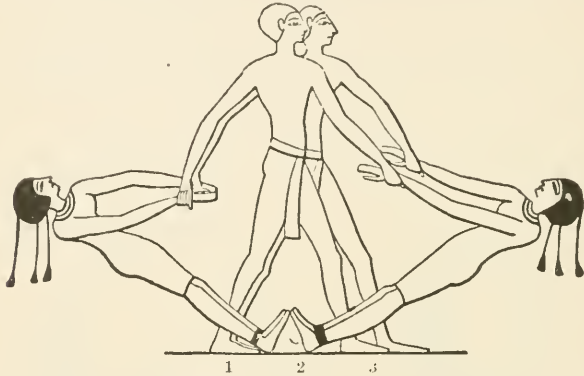
³ As the women in mourning. Herodot. ii. 85. [Exposing the breast, however, was not unusual; the women of highest rank being draped in the same manner.

Egyptian women had but one dress, a long tunic, called *basui*, reaching from the breast to the ankles, suspended by straps of linen, or braces, *αρχυ*, passing over the shoulders. — S. B.]

⁴ One of these was the *foliis*, inflated like our football, called also *pila* or *pila velox*, and struck with the arms; the other was smaller, and struck with the hand, on which they wore a sort of gauntlet; whence it was called *foliis pugillatorius*.

been preserved to this late period, to give us an insight into their customs and amusements.

The balls were made of leather or skin, sewed with string, crosswise, in the same manner as our own, and stuffed with bran or husks of corn; and those which have been found at Thebes are

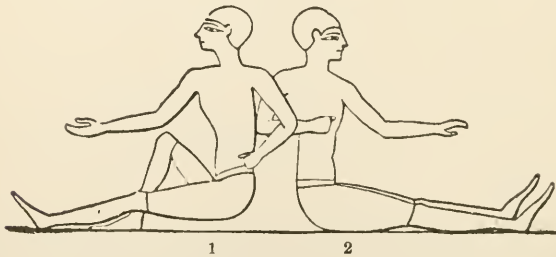
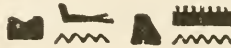


No. 333.

Men swinging women round by the arms.

Beni-Hassan.

about three inches in diameter. Others were made of the stalks of rushes, plaited together so as to form a circular mass, and are like the former, covered with leather; instances of both which occur in the British Museum. They appear also to have had a smaller kind of ball, probably of the same materials, and covered,



No. 334.

Rising from the ground as they held each other.

Beni-Hassan.

like many of our own, with slips of leather of a rhomboidal shape, sewed together longitudinally, and meeting in a common point at both ends,¹ each alternate slip being of a different color;²

¹ Woodcut No. 332, *fig.* 2.² Homer describes one of a purple color: *Od.* θ, 372.

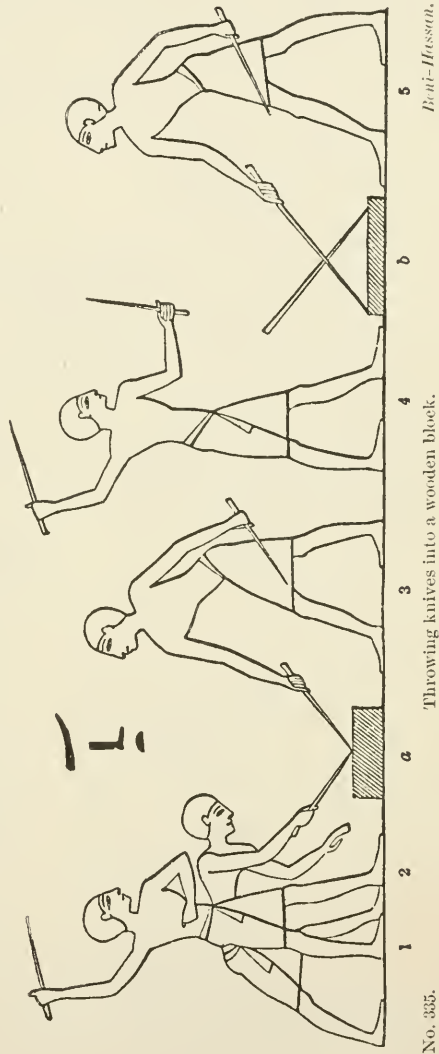
but, as these have only been met with in pottery, it is uncertain whether they were really imitations of leather balls, or solely made of those materials, and used for some other purpose connected with the toys of children.

Sometimes, in their performances of strength and dexterity, two men stood together side by side, and, placing one arm forward and the other behind them, held the hands of two women, who reclined backwards, in opposite directions, with their whole weight pressed against each other's feet, and in this position were whirled round; the hands of the men who held them being sometimes crossed, in order more effectually to guarantee the steadiness of the centre, on which they turned.

Sometimes two men,¹ seated back to back on the ground, and passing the elbows of the opposite arms within each other, endeavored to rise in that position, without touching the ground with the disengaged hand; each, probably, trying to rise before his companion, and striving to prevent his success,

in order to obtain the merit or the reward of superior dexterity.

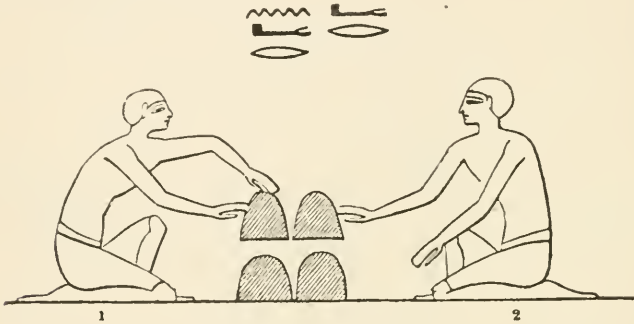
Another game consisted in throwing a knife, or pointed



¹ Woodcut No. 334. The inscription reads *menq an hu*, or *an tu*, but the sense

is not clear: the first word means 'reposing;' the two refer to the action. — S. B.

weapon, into a block of wood, in which each player was required to strike his adversary's, or more probably to fix his own in the centre of a ring painted on the wood; and his success depended on being able to ring his weapon most frequently, or approach most closely to the centre.¹

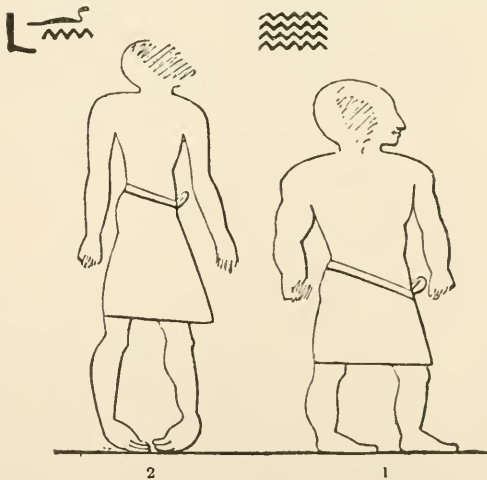


No. 336.

Conjurers, or thimble-rig.

From Rosellini.

Conjuring appears also to have been known to them, at least the game of cups, in which a ball was put, while the opposite party guessed under which of four it was concealed.²



No. 337. Dwarfs, and deformed persons in the service of the Egyptian grandees.

The stone is broken in that part where the hands should be. Beni-Massara.

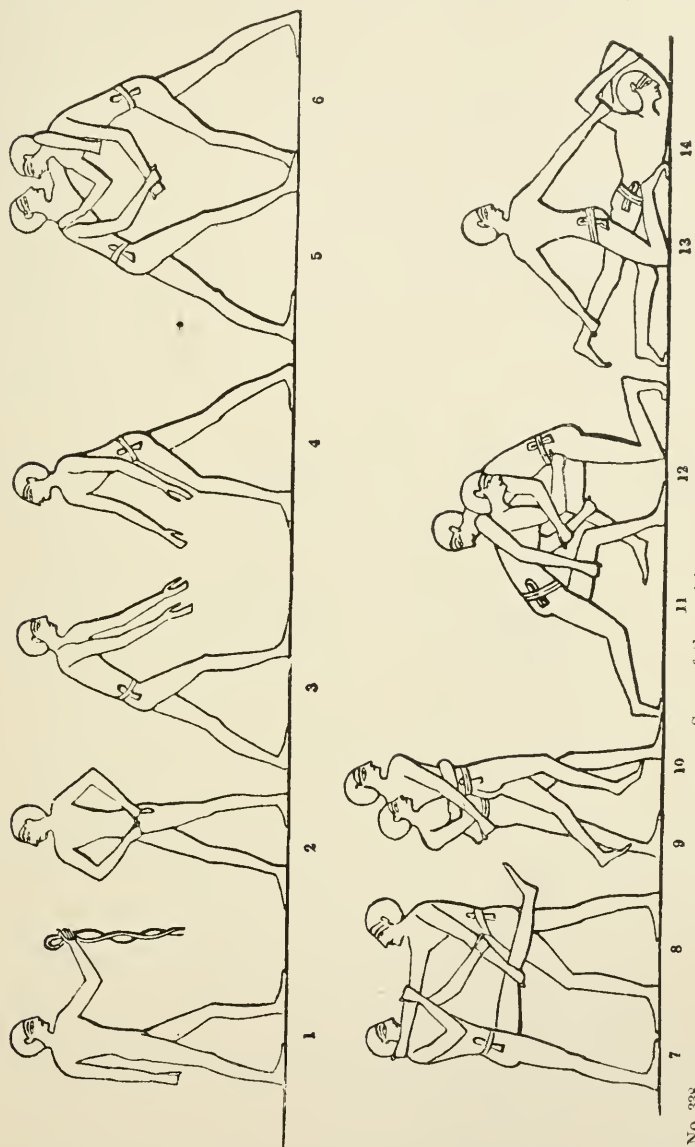
The Egyptian grandees frequently admitted dwarfs and deformed persons into their household, originally, perhaps, from a

¹ Called in the inscription *abt*, 'horn.'

² The inscription reads *ār en ār*, 'atop

of one another,' but it is doubtful how it was played. — S. B.

humane motive, or from some superstitious regard for men who bore the external character of one of their principal gods, Pthah-



Beni-Hassan.

Figs. 3, 4. Advancing to the attack.

13, 14. Continuing the attack on the ground.

Some of the positions of wrestlers.

Fig. 1. A man holding his girdle.

2. The other binding on his girdle.

No. 338.

Socharis-Osiris, the misshapen deity of Memphis;¹ but, whatever

¹ The inscription over No. 1 reads *na-mau*, 'dwarf' or 'pigmy,' and these appear

by no means uncommon in Africa, and figure extensively on the wall-paintings

may have given rise to the custom, it is a singular fact that, already as early as the age of Usertesén, more than 3500 years ago, the same fancy of attaching these persons to their suite existed among the Egyptians as at Rome, and even in modern Europe till a late period.

The games of the lower orders, and of those who sought to invigorate the body by active exercise, consisted of feats of agility and strength: wrestling was a favorite amusement; and the paintings of the grottoes at Beni-Hassan present all the varied attitudes and modes of attack and defence of which it is susceptible. And, in order to enable the spectator more readily to perceive the position of the limbs of each combatant, the artist has availed himself of a dark and light color, and even ventured to introduce alternately a black and red figure. It is not, however, necessary to give an instance of every position



No. 339.

Singlesticks.

From Rosellini.

indicated in those varied subjects: and a selection of the principal groups will suffice to convey some idea of their mode of representing the combatants, and of their general system of attack and defence.

It is probable that, like the Greeks, they anointed the body with oil, when preparing for these exercises, and they were entirely naked, with the exception of a girdle, apparently of leathern thongs.

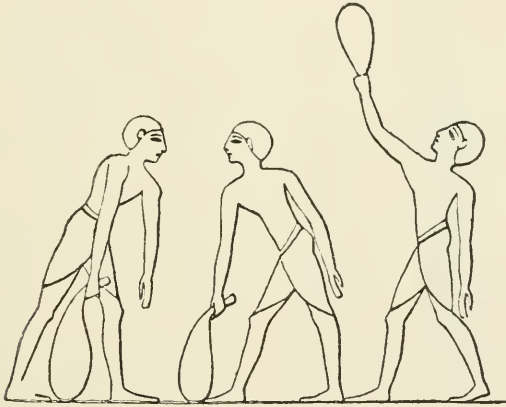
The two combatants generally approached each other, holding their arms in an inclined position before the body: and each endeavored to seize his adversary in the manner best suited to his mode of attack. It was allowable to take hold of any part of

of Pompeii. The inscription over No. 2 reads *Uen-b*, or rather *Uen rat*, 'handy-legged.' These deformities and dwarfs

were the Roman *moriones*, and much caressed as pages by the ladies of high rank. — S. B.

the body, the head, neck, or legs: and the struggle was frequently continued on the ground, after one or both had fallen; a mode of wrestling common also to the Greeks, by whom it was denominated *ἀνακλιοπάλη*. I do not find that they had the same sign of acknowledging their defeat in this game as the Greeks, which was by holding up a finger, in token of submission, and it was probably done by the Egyptians with a word.

They also fought with the singlestick, the hand being apparently protected by a basket, or guard projecting over the knuckles; and on the left arm they wore a straight piece of wood, bound on with straps, serving as a shield to ward off their adversary's blow. They do not, however, appear to have used



No. 340.

Raising weights.

From Rosellini.

the *cestus*, or to have known the art of boxing;¹ nor was throwing the *discus*, or quoit, an Egyptian game.

Among their feats of strength or dexterity may be mentioned that of lifting weights; and bags full of sand were raised with one hand from the ground, and carried with a straight arm over the head, and held in that position.

Mock fights² were also an amusement, particularly, I imagine, among those of the military class, who were trained to the fatigues of war by these manly recreations. One party attacked a temporary fort, and brought up the battering-ram,³ under

¹ In one group alone, at Beni-Hassan, the combatants appear to strike each other.

² The *Ludus Trojæ* of the Romans. (Virg. *Æn.* v. 560; Hor. *Ep.* i. 18, 61.)

³ The battering-ram (protected by the covering of the *testudo*, or *χελώνη*) is supposed by Pliny to have been first mentioned as the wooden horse of Troy; and the *aries*, or ram, is said by him to

cover of the testudo: another defended the walls and endeavored

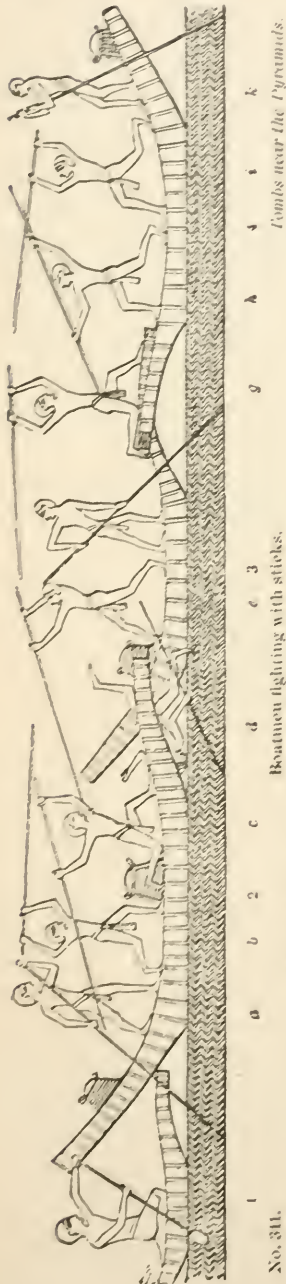


Fig. 1 is a small punt rowed with a paddle.
2, 3, 4. Boats made of rushes, the papyrus boats of ancient writers.
a, c, and k push on the boats with poles, while the others are engaged in fighting.
d has been thrown into the water by his opponent.

No. 311.

to repel the enemy; others, in two parties, of equal numbers, engaged in singlestick, or the more usual *nebbot*,¹ a pole wielded with both hands; and the pugnacious spirit of the people is frequently alluded to in the scenes portrayed by their artists.

The use of the *nebbot* seems to have been as common among the ancient as among the modern Egyptians; and the quarrels of villages were often decided or increased, as at present, by this efficient weapon. Crews of boats are sometimes represented attacking each other with the earnestness of real strife. Some are desperately wounded, and, being felled by their more skilful opponents, are thrown headlong into the water; and the truth of Herodotus's assertion, that the heads of the Egyptians² were harder than those of other people, seems fully justified by the scenes described by their own draughtsmen; and that this

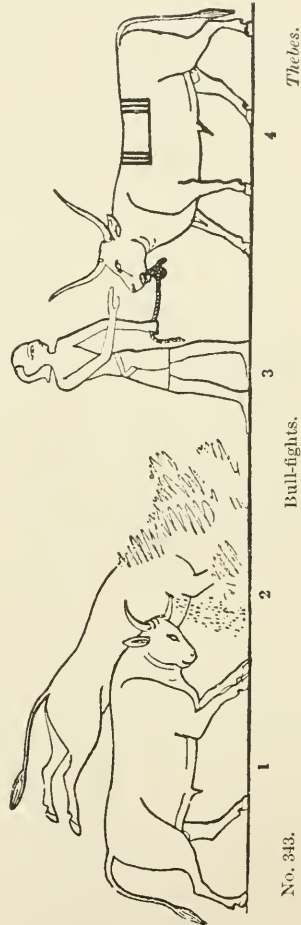
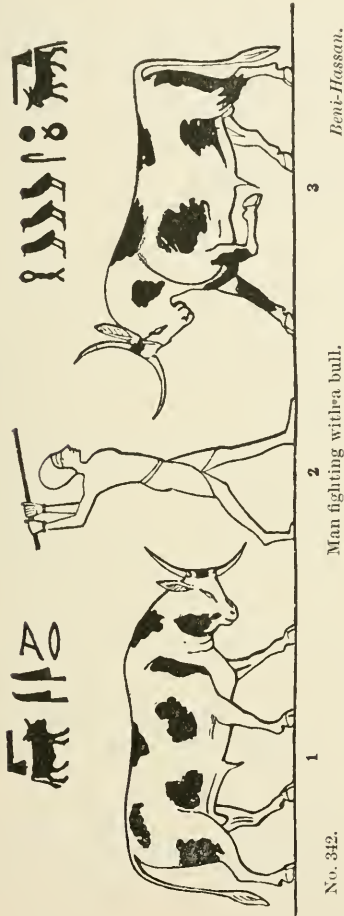
have been originally called 'a horse.' (Lib. vii. 56.) In early times it was merely a pike, *ροτανον*, or *terebra*. The *χελών* is the same as the testudo, and both may be applied exclusively to that part which covered the men. The *testudo arietaria* includes the covering and the pike or ram. (Vitruv. x. c. 19-22.)

¹ It was not a short club, but a pole of considerable length, longer than those now used in Egypt, which are about eight or nine feet. In mentioning the arms of the African enemies of Egypt, I omitted a remark of Pliny, that 'the Africans were the first people who used clubs, called *phalangas*, during their wars with the Egyptians' (Lib. vii. 56.)

² Herodot. iii. 12.

peculiarity has been inherited by their successors is abundantly proved by modern experience.

Many singular encounters with sticks are mentioned by ancient authors; among which may be noticed that described by Herodotus, at Papremis, the city of Mars.¹ When the vota-

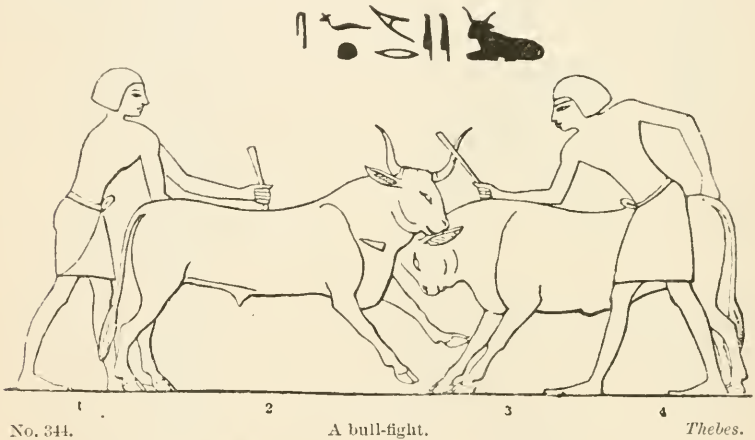


ries of the deity presented themselves at the gates of the temple, their entrance was obstructed by an opposing party; and all being armed with sticks, they commenced a rude combat, which ended, not merely in the infliction of a few severe wounds, but

¹ Herodot. ii. 63.

even, as the historian affirms, in the death of many persons on either side.¹

In buffoonery they also took great pleasure, and in witnessing the performances of those who danced in the streets to the sound of a drum,² decorated with whatever could add to the extravagance and ridicule of their appearance, as ribbons, long pendent tassels, or fools' caps; and, judging from a custom still common in Egypt, it is probable that these jesters passed impromptu remarks on the spectators, abounding either in the wit of satire or the flattery of praise. For, besides professional dancers and



musicians, who were hired at entertainments, many ambulant bands went from village to village to amuse the lower orders, gaining a livelihood by their occupation; and all the tricks and gestures were resorted to on those occasions which the ingenuity of a sprightly people could suggest, to excite the generosity of the bystanders and contribute to their amusement.

Bull-fights were also among their sports, and men appear occasionally to have courted the approbation of their friends, and displayed their courage and dexterity, in attacking a bull single-handed, and baffling his attacks.³

¹ Though, he adds, the Egyptians assured him the contrary. The modern Egyptians used to have the same kind of fatal encounters. ('Egypt and Thebes,' p. 237, note 4.)

² Woodcut No. 226.

³ Woodcut No. 342. The inscription in woodcut No. 342 reads over the bull to the right *hu usχ qa*, 'he strikes the broad bull,' or 'the collar,' *usχ*, 'of the

bull,' referring to the action of the man who strikes back the bull with a stick. That over the other bull reads *meri*, the 'loving,' or 'desirous,' or impetuous-of-fighting bull; and the same epigraph is applied to the bull in woodcut No. 344, where the inscription reads *sefχ meri*, 'restraining,' or drawing back, 'the desirous' or 'impetuous bull.' — S. B.

It does not, however, appear that the Egyptians condemned culprits, or captives taken in war, to combat with wild beasts, for the amusement of an unfeeling assembly, as in ancient Rome; nor did they compel them to fight as gladiators, to gratify a depraved taste, which delighted in exhibitions revolting to humanity; and, though we may feel disposed to blame them for compelling prisoners of war to labor at public works, it must be recollected that the usages of society, in those early ages, tolerated a custom which modern civilization has abandoned; and it is evident that neither the refined Greeks nor Romans can vie with the Egyptians in their manner of treating slaves: a remarkable proof of which is evinced in the behavior of Potiphar towards Joseph; for in few countries, even at the present day, would the crime of which he was supposed guilty have been visited with more lenient punishment.

Bull-fights appear sometimes to have been encouraged by the higher classes, and to have been held in the dromos, or avenue, leading to their large temples; as Strabo describes at Memphis,¹ before the temple of Vulcan; and prizes were awarded to the owner of the victorious combatant. Great care, he adds, was taken in their mode of training the animals for this purpose, as much as is usually bestowed on horses; and from their being customary in the metropolis of Lower Egypt, we may conclude that bull-fights were not a Greek or Roman introduction, but of early Egyptian date, particularly since we see them noticed, at the most remote period, at Thebes and Beni-Hassan.²

¹ Strabo, lib. xvii.

² The inscription of woodcut No. 345 reads over the bull to the right, *apt gau an ari xnum next*, 'The trial of the bulls by the keeper Chnumnekht,' who

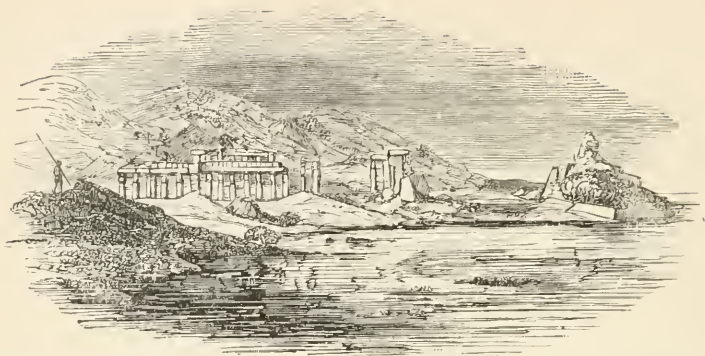
is represented backing the bull on the right. The inscription over the bull on the left reads, *ha su*, apparently 'impelling him.' — S. B.



No. 345.

Bull-fight.

Beni-Hassan.

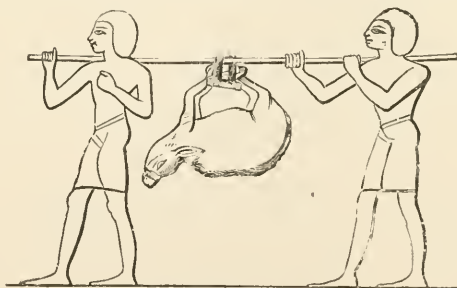


VIGNETTE G. — The palace-temple of Rameses the Great, generally called the Memnonium at Thebes, during the inundation.

CHAPTER VIII.

The Chase — Animals — Dogs — Fowlers — Fishermen — Hippopotamus — Crocodile — The Tentyrites.

ALL classes of the Egyptians delighted in the sports of the field, and the peasants deemed it a duty as well as an amusement to hunt and destroy the hyena, and those animals which were enemies of the fields or flocks, and they shot them with the bow, caught them in traps, or by whatever means their dexterity and ingenuity could suggest: for though the hyena is a carnivorous



No. 346.

Hyena caught in a trap.

Thebes.

animal, it is not less hostile to the crops than to the flocks, when pressed with hunger,¹ and the ravages they are known to commit in the fields among the Indian corn and other produce make the

¹ Already noticed in 'Egypt and Thebes,' p. 243, note.

peasants of modern Egypt as anxious as their predecessors to destroy them whenever they have an opportunity, or the courage to attack them.¹

Plato² reckons the huntsmen as one of the castes of the Egyptians; and though, as I have already observed, persons who followed this occupation may have constituted a particular body, or a minor subdivision of one of the castes, we are not to suppose that the sports of the field were confined to those who gained their livelihood by the chase; or that the wealthy classes of Egyptians were averse to an amusement so generally welcomed in all countries. Indeed, the sculptures of Thebes, Beni-Hassan, and other places assure us that they took particular delight in chasing the wild animals, kept in their preserves for this purpose, and even in the more laborious task of following them in the extensive tracts of the wide desert, which stretch to the east and west of the valley of the Nile. On these occasions they were attended by several huntsmen, whom they kept in their service to attend upon the hounds, to direct the hunt, to assist in catching the larger animals with a noose, to carry darts and hunting poles,³ to arrange the nets,⁴ and, in short, to manage all matters connected with the chase.

When the chasseur was a person of consequence, numerous attendants accompanied him, not merely in the capacity of beaters, to rouse and turn the game, or to carry it when killed, but for various purposes connected with his immediate wants or comforts while in the field: some brought with them a fresh supply of arrows, a spare bow, or other requisites for remedying accidents; and some carried a stock of provisions for his use. These were borne upon the usual yoke across the shoulders, and consisted of a skin of water, and jars placed in wicker baskets, probably containing bread, meats, or other provisions. The skins used for carrying water were precisely the same as those of the present day, being of a goat or a gazelle, stripped from the body by a longitudinal opening at the throat; the legs serving as handles, to which ropes for slinging them were attached; and

¹ The hyena was not particularly an object of the chase, for, as shown before, at the time of the 4th Dynasty they were tamed and even eaten. — S. B.

² Plato in *Timæo*, near the beginning.

³ The Roman *venabula* were of a thickness of a spear, armed with a sharp iron

point, of moderate length, and used as a defensive weapon against the attack of a wild beast, being held in a slanting direction to receive it. (J. Pollux, v. 4.)

⁴ Virg. *Æn.* iv. 131, and Hor. *Ep.* i. 6, 58. This person was called by the Greeks, *δικτηαγωγός*. (J. Pollux, v. 4.)

a soft pendent tube of leather sewed to the throat, in the place of the head, formed the mouth of the water-skin, which was secured by a thong fastened round it.¹

Sometimes a space of ground, of considerable extent, was enclosed with nets, into which the animals were driven by beaters; and as this is frequently shown by the sculptures to have been in a hilly country, it is evident that the scenes of those amusements were in the desert, where they probably extended nets across the narrow valleys, or torrent-beds which lie between the rocky hills, difficult of ascent to animals closely pressed by dogs. This is indeed the only way in which a person mounted on horseback² or in a chariot could follow, or get within reach of them with the bow; and that some animals, particularly antelopes, when closely pressed, fear to take a steep ascent is a fact well known to the Arabs; and I have myself, when following them with dromedaries in the same valleys, observed that gazelles preferred doubling, and swiftly passing between their pursuers, to the risk of slowly ascending the eminence to which they had been driven.

The spots thus enclosed were usually in the vicinity of the water-brooks,³ to which they were in the habit of repairing in the morning and evening; and having awaited the time when they went to drink, and ascertained it by their recent tracks on the accustomed path,⁴ the hunters disposed the nets, occupied proper positions for observing them unseen,⁵ and gradually closed in upon them. Such are the scenes partially portrayed in the Egyptian paintings, where long nets are represented surrounding the space, wherein the chasseur and his attendants pursue the game, either on foot or mounted in a chariot; and the presence of hyenas, jackals, and various wild beasts unconnected with the sport, is intended⁶ to show that they have been

¹ These skins have been already mentioned and were called *s'et*. Their principal use was for water, which was carried in them across the desert. — S. B.

² As in Virgil, *Æn.* iv. 151; but the Egyptians are never represented as hunting either in chariots or mounted on horseback; the hunter always went on foot, at all events at the earliest period when hunting scenes were represented. — S. B.

³ "As the hart panteth after the water brooks." (Ps. xlii. i.) The Hebrew name is אֵיל Ail, evidently the same as the

Egyptian **Ἐισαλ** and the Arabic **أيل** which I believe to be the oryx.

⁴ My long sojourn with the Arabs in the desert, and my frequent visits to the springs for the same purpose, have explained to me the methods adopted by the Egyptian chasseurs.

⁵ The person whose business it was to watch the nets was called by the Greeks *λεόντης*, ὁ τὴ ἐπιπλοῖτα ἀποσκοπούμενος. (J. Pollux, v. 4.)

⁶ In the tomb of Ptahhetp at Memphis, published by Duemichen, 'Resultate,' Th. i., 1869, Taf. viii., is seen one of these

accidentally enclosed within the line of nets, which, from embracing an extensive tract, necessarily included within its range the resort of these, as well as of the antelopes and other animals of which they were in quest.

The same custom of surrounding a spot which they intended to beat seems to have been adopted by the Romans: and Virgil¹ represents Æneas and Dido repairing to a wood at break of day, after the attendants had surrounded it with a temporary fence to enclose the game. This is further confirmed by the description given by Julius Pollux of the various contrivances employed in hunting; and he makes an evident distinction between the nets for enclosing a large space, and those for stopping gaps or openings and other purposes.

The long net, called *diktys*, was furnished with several ropes, and was supported on forked poles, varying in length, to correspond with the inequalities of the ground over which it extended, and this was so contrived as to enclose any space by crossing hills, valleys, or streams, and encircling woods, or whatever might present itself; a description fully applicable to those exhibited in the Egyptian paintings.² Smaller nets, called *enhodia*, for stopping gaps, are also described by the same author; and a circular snare, *podagra*, set round with wooden and iron nails, and attached by a rope to a log of wood, which was used for catching deer, so nearly resembles one still made by the Arabs, and supposed to be an old Egyptian invention,³ that we may conclude it was common to several ancient people.

In many instances the dresses of the attendants and huntsmen were, as Julius Pollux recommends, 'not white, nor of a brilliant hue, lest they should be seen at a distance by the animals,' but of a suppressed color, and reaching only a short way down the thigh;⁴ being shorter even than those he mentions, which extended to the knee; and the horses of the chariots were divested of the feathers and showy ornaments used on other occasions.

spots, and amongst the animals represented are lions and wild dogs. Many of the spots are mountainous.

¹ Virg. Æn. iv. 117.

² J. Pollux, Onom. v. 4.

³ Although nets are often represented for fishing and fowling, few if any representations of them are seen for taking animals of the chase, which were generally shot with arrows, and brought down by

different kinds of hounds, held by leashes round the neck till the moment of setting them on the animal; nor is any example known of conducting the chase in chariots: at the earlier period the hunters always went on foot.—S. B.

⁴ Woodcut No. 347. It was customary with the Egyptians, on ordinary occasions, to wear a kilt reaching to the knee.

Besides the portions of the open desert and the valleys above alluded to, which were enclosed by the Egyptians during their hunting excursions, the parks and preserves on their own domains in the valley of the Nile, though of comparatively limited dimensions, offered ample space and opportunity for indulging in the amusement of the chase; and there, as in the *theriotrophia* of the Romans, a quantity of game was kept, among which may be enumerated the wild goat, oryx, and gazelle. They had also fish-ponds, and spacious *vivaria*, set apart for keeping geese and other wild fowl, which they fattened for the table.

It was the duty of the huntsmen, or the gamekeepers they employed, to superintend the preserves; and, at proper periods of the year, when the young animals could be obtained, they sought them, and added to the stock, which continued also to



No. 347.

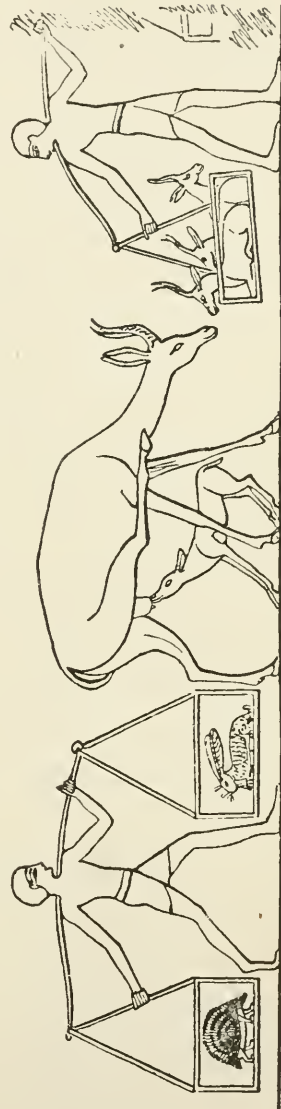
Bringing young animals to stock the preserves. *Tomb near the Pyramids.*

increase, independent of those occasional additions, through the care taken in encouraging their propagation, by a judicious regard to their habits. And this is confirmed by the numerous flocks of gazelles and other wild animals represented in the tombs among the possessions of the deceased, of which the scribes are seen writing an account, at the command of the steward, who waits to present it, with an annual census of his property, to the owner of the estate.

Being fed within pastures enclosed with fences, they were not marked in any particular way, like the cattle, which, being let loose in open meadows and frequently allowed to mix with the herds of the neighbors, required some distinguishing sign by which they might be recognized: and were, therefore, branded on the shoulder with a hot iron, probably engraved with the owner's name. This is distinctly shown in the paintings of

Thebes, where the cattle are represented lying on the ground with their feet tied, while one person heats an iron on the fire, and another applies it to the shoulder of the prostrate animal.

In primitive ages the chase was not an amusement, but a necessary occupation among those people who did not follow agricultural pursuits or lead a pastoral life, and who depended for their subsistence upon the sports of the field; and in some instances the shepherd was obliged to hunt and destroy the wild beasts, for the security of his flocks and herds, and sometimes even for his own safety.¹ In after-times, when population increased, and each community began to adopt the habits of civilized life, the injuries apprehended from them decreased; and the fear of man having compelled them to remove their haunts to a greater distance, their pursuit was no longer required: and those who hunted followed the occupation as an amusement, to supply the table, or in the employ of other persons, as among the Egyptians, Babylonians, Persians, and Medes.



^d Tomb near the Pyramids.

^c Gazelles and other animals belonging to the preserves.

^b No. 348.

¹ Whence in Exodus xxiii. 29: 'I will not drive them out from before thee in one year, lest the land become desolate, and the beasts of the field multiply against thee.' [The sculptures of Nimroud and Kouyunjik are full of the hunts of Assurnazirpal, Sennacherib, and Assurbanipal. (Layard, 'Nineveh and Babylon,' Svo. Lond. 1853.) Besides the ordinary chase, the Assyrians had battues of lions, which were brought in cages and let loose to be killed. The Egyptian monarchs were devoted to the chase. Antefaa, of the 11th Dynasty, had packs of hounds. Thothmes III. chased elephants in Ninii, or Nineveh. Amenophis III. has recorded on a scara-

bæus that he killed 102 lions in 10 years of his reign; and Thothmes IV. has recorded his dream and hunts in the neighborhood of the Great Sphinx. (Pierret, 'Dict. d'Archéologie,' p. 125.) — S. B.]

In the East, indeed, it was always looked upon as a manly exercise, requiring courage and dexterity, and tending to invigorate the body and instil into the mind a taste for active pursuits: it was held in such repute, that the founders of empires were represented in the character of renowned hunters. The

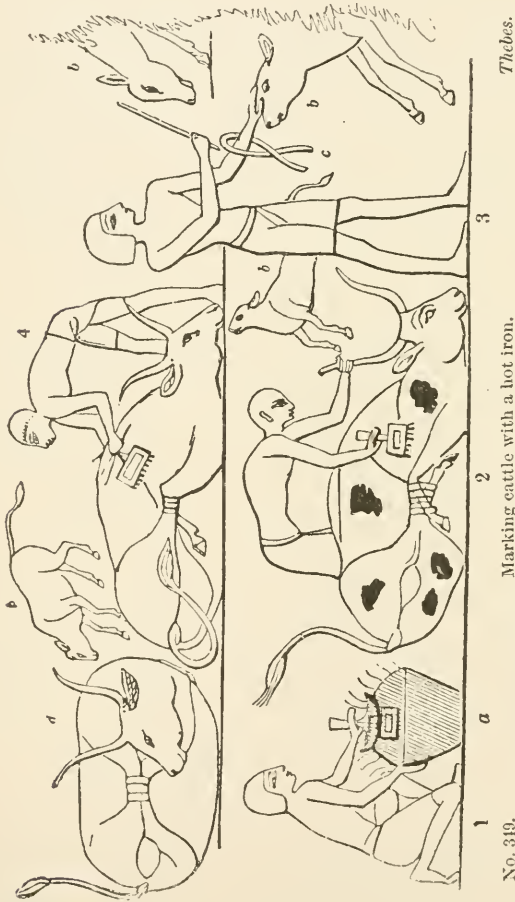


Fig. 1. Heating the iron on the fire, *a*.
2 and *4.* Employed in marking the cattle.
3. Holds a tethering-cord on his left arm, and keeps away the calves.

Babylonians were so fond of the chase, that the walls of their rooms presented a repetition of subjects connected with it;¹ and they even ornamented their dresses and the furniture of their houses with the animals they hunted.² The Medes and Persians

¹ Ammian. Marcell. lib. xxvi. c. 6.

² Athen. lib. xii. 8.

were equally noted for their love of field sports; and, like the Egyptians, they had spacious preserves¹ where the game was enclosed; the grounds of the royal palaces containing antelopes and other animals, pheasants, peacocks, and abundance of birds, as well as lions, tigers, and wild boars.²

The Egyptians frequently coursed with dogs in the open plains, the chasseur following in his chariot, and the huntsmen on foot. Sometimes he only drove to cover in his car, and, having alighted, shared in the toil of searching for the game, his attendants keeping the dogs in slips, ready to start them as soon as it appeared. The more usual custom, when the dogs threw off in a level plain of great extent, was for him to remain in his chariot, and, urging his horses to their full speed, endeavor to turn or intercept them as they doubled, discharging a well-directed arrow whenever they came within its range.

The dogs were taken to the ground by persons expressly employed for that purpose and for all the duties connected with the kennel, the *κυραγωγοί*³ of the Greeks, and were either started one by one or in pairs, in the narrow valleys or open plains: and when coursing on foot, the chasseur and his attendant huntsmen, acquainted with the direction and sinuosities of the torrent beds, shortened the road, as they followed across the intervening hills, and sought a favorable opportunity for using the bow; or marked with a watchful eye the progress of the course in the level space before them.⁴ For not only was the chasseur provided with a bow, but many of those also who accompanied him; and the number of head brought home was naturally looked upon as the criterion of a good day's sport.

Having with eager haste pursued on foot, and arrived at the spot where the dogs had caught their prey, the huntsman, if alone, took up the game, tied its legs together, and hanging it over his shoulders, once more led by his hand the coupled dogs, precisely in the same manner as the Arabs are wont to do at the present day: this, however, was generally the office of persons who followed expressly for the purpose, carrying cages and baskets on the usual wooden yoke, and who took charge of the game as soon as it was caught; the number of these substitutes for our game-cart depending of course on the proposed range of the chase, and

¹ Xenoph. Cyr. lib. i. : *ἐν παραδείσοις*.
Dio. Chrysost. in Orat. 3.

² Curtius, lib. vii. and viii. Xenoph. Cyrop. lib. i.

³ J. Pollux, iv. 5.

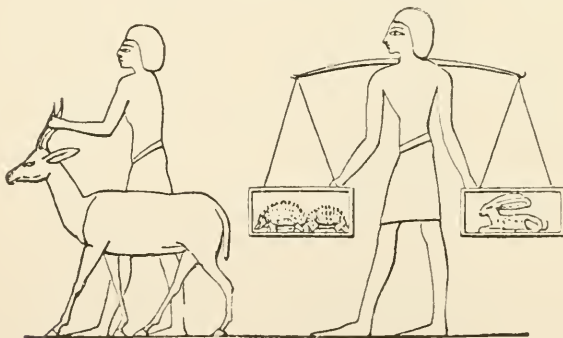
⁴ As the Arabs of the present day, in the same districts.

the abundance they expected to find. Sometimes an ibex,¹ oryx, or wild ox, being closely pressed by the hounds, and driven to an



No. 350. The huntsman carrying home the hobbled game, with his coupled dogs. *Thebes.*

eminence of difficult ascent, faced round and kept them at bay with its formidable horns:² and the spear of the huntsman, as he came up, was required to decide the success of the chase.



No. 351. Bringing home the game; a gazelle, porcupines, and a hare. *Beni-Hussan.*

It frequently happened, when the chasseur had many attendants, and the district to be hunted was extensive, that they

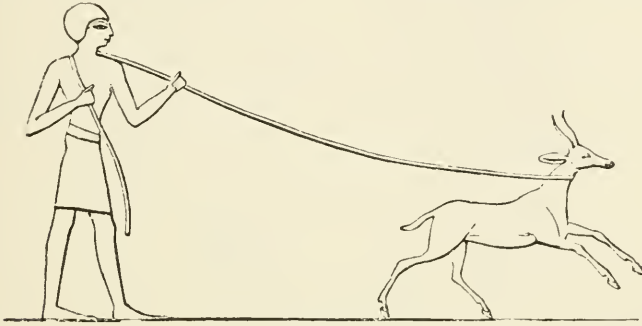
¹ The wild goat of the desert, the *beddan* or *táytal* of the Arabs, which are still common in the desert between the

Nile and Red Sea.

² I have occasionally witnessed instances of this in the desert.

divided into parties, each taking one or more dogs, and starting them on whatever animal broke cover; sometimes they went without hounds, merely having a small dog for searching the bushes, or lay in wait for the larger and more formidable animals, and attacked them with the lance.

The noose was also employed to catch the wild ox, the ante-

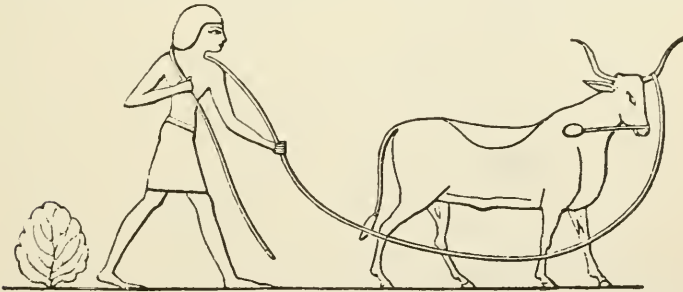


No. 352.

Catching a gazelle with the noose.

Beni-Hassan.

lope, and other animals; and as they are always represented on foot, when throwing it, we may suppose they lay in ambush for this purpose, and that it was principally adopted when they wished to secure them alive; since we find they frequently chased the same animals with dogs, and with the bow. The noose was very similar to the *lasso* of South America, but it does not appear



No. 353.

Catching a wild ox with the noose or lasso.

Beni-Hassan.

that the Egyptians had the custom of riding on horseback when they used it; and from the introduction of a bush immediately behind the man who has thrown it, we may suppose the artist intended to convey the notion of his previous concealment.

Besides the bow, the hounds, and the noose, they hunted with lions, which were trained expressly for the chase, like the

cheetah or hunting leopard of India: but there is no appearance of the leopard¹ or the panther having been employed for this purpose, and the lion was always the animal they preferred. - It was frequently brought up in a tame state,² and many Egyptian

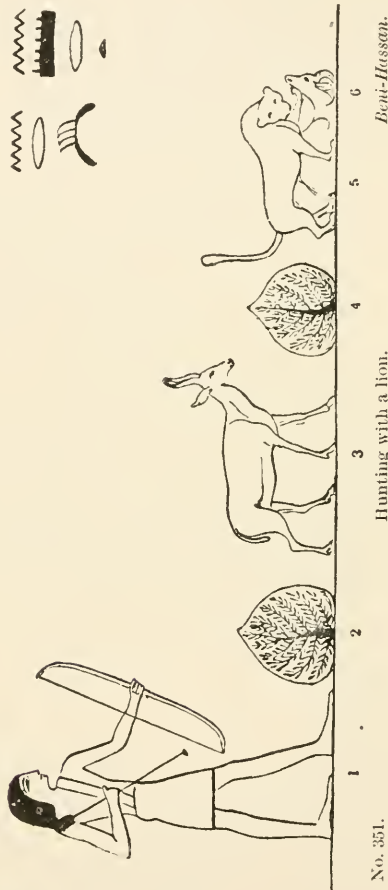


Fig. 5. The lion, which has seized an ibex.

The inscription reads, *Net'er nerai*, 'overthrowing the dorcas-goat.'

monarchs are said to have been accompanied in battle by a favorite lion, — as we learn from the sculptures of Thebes and other places, and from the authority of Diodorus.³

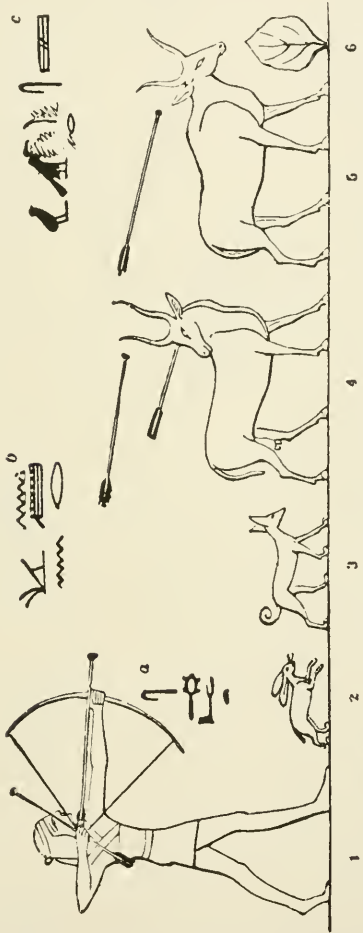
The bow used for the chase was very similar to that employed

¹ Bajazet I. (Byzaced) had 12,000 officers and servants of the chase. Besides hounds of various breeds, he had leopards, whose collars were set with jewels. (Gibbon, xi.)

² I have seen two or three tame lions in Cairo. Animals are more easily tamed in those climates than in Europe.

³ Diod. i. 48. And the sculptures of Dayr, Medeenet Haboo, Kalabshi, &c.

in war; the arrows were frequently the same, with metal heads, but some were tipped with stone, which are represented in the hunting scenes of Beni-Hassan, and in many of those at Thebes. The mode of drawing the bow was also the same, though, as I have already observed, the chasseurs sometimes pulled the

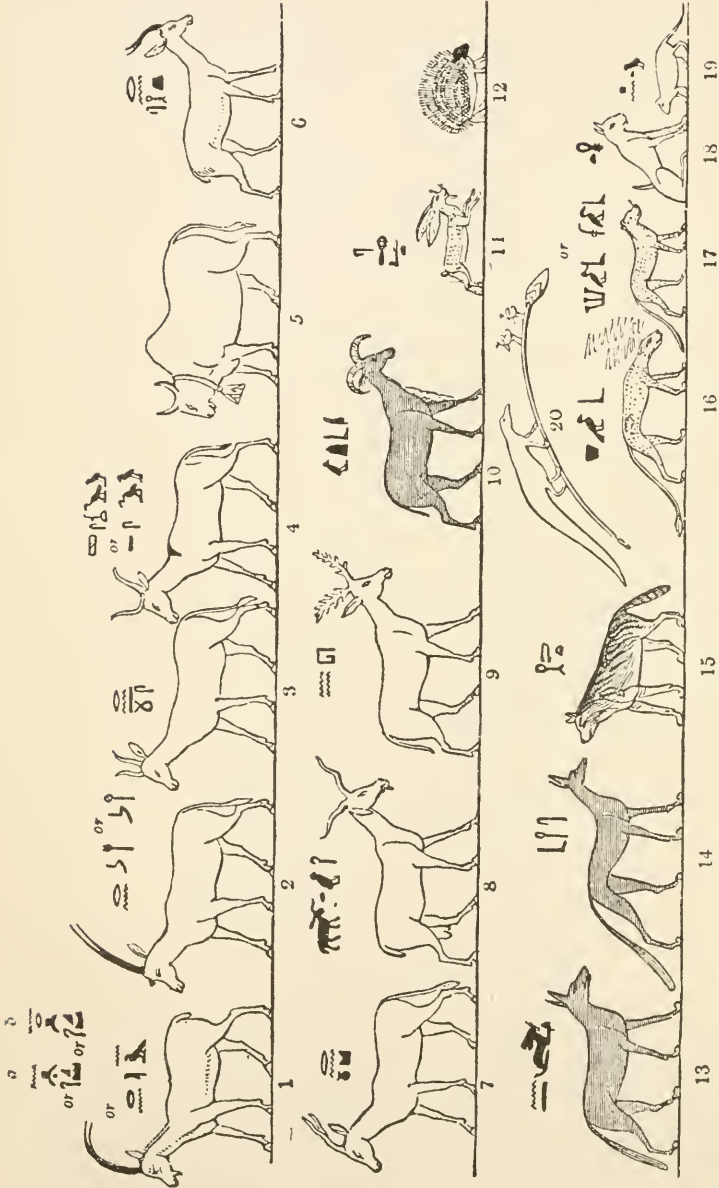


No. 355. A chasseur shooting at the wild oxen, accompanied by his dog, fig. 3. Beni-Hassan.
 a. S'et, hare.
 b. Net'er heben, supposed to be the name of the dog, but probably refers to the action as striking the heben or han.
 c. S'es ter mut u, name of the animal.

string only to the breast, instead of the more perfect and more usual method of raising it, and bringing the arrow to the ear; and occasionally one or more spare arrows were held in the hand,¹ to give greater facility in discharging them with rapidity on the swift antelopes and wild oxen.

¹ Woodcut No. 355; and No. 35, in vol. i.

The animals they chiefly hunted were the gazelle, wild goat



No. 356. Animals from the sculptures, 5, 15, 20. From *Thebes*: the rest from *Beni-Hassan*.
 1. The ibex, *nan-hag* (a) or *nevan-hag* (b) or *nan*. 2. The oryx, *ma-het*. 3, 4. Wild oxen, *s'otabas*, *s'etec mad*. 5. Humped or Indian ox. 6. Gazelle *kebas*. 7. Probably the Antelope *addax*, *ar*. 8. Goat *hep-t*. 9. Stag, *hann*. 10. The *kebsb*, *abou*. 11. Hare, *syat*. 12. Porcupine. 13. Wolf, *nos'*. 14. Fox, *sabou*. 15. Hyena, *het-t*. 16, 17. S. cetes of leopard, *ba* (16), *bakat* (17). 18. Cat, *nebu*. 19. Ibat, *penud*. 20. Felinemon, *hann*. 10 is colored red in the paintings; the *kebsb* is of a sandy color.

or *ibex*, the oryx, wild ox, stag,¹ *kebsb* or wild sheep, hare, and

¹ Probably the same as the *Cervus barbarus*.

porcupine;¹ the meat of all of which was highly esteemed among the delicacies of the table. Others, as the fox, jackal, wolf, hyena, and leopard, were chased as an amusement for the sake of their skins, or as enemies of the farm-yard; and the ostrich held out a great temptation to the hunter from the value of its plumes. These were in great request among the Egyptians for ornamental purposes; a religious veneration of them, as the symbol of truth, enhanced their value; and the members of the court on grand occasions failed not to deck themselves with the feathers of the ostrich. The labor endured during the chase of this swift-footed bird was amply repaid; even the eggs were required for some ornamental or religious use, and these, with the plumes, formed part of the tribute imposed by the Egyptians on the conquered countries where it abounded. The purposes to which the eggs were applied are unknown; but we may infer, from a religious prejudice in their favor among the Christians of Egypt, that some superstition was connected with them, and that they were suspended in the temples of the ancient Egyptians, as they still are in the churches of the Copts.²

The subjects of the chase in the sculptures are frequently represented with great spirit. The character of the animals is maintained with wonderful truth, and, though time and the hand of man have done much to injure them, sufficient remains to evince the skill of the Egyptian draughtsmen. Distance and locality are not so well defined, and the archer, like all Egyptian figures, offends against every rule of drawing and perspective: but the action of the dogs and of the flying antelopes is spirited, and shows how successfully the effect was given by simple outline.

It is singular that the wild boar is never represented among the animals of Egypt,³ since it is a native of the country, and is even eaten at the present day, in spite of the religious prejudices of the Moslems, by many of the inhabitants of the districts where it lives: — nor can I suggest any reason for this omission, except from its not frequenting those parts where the scenes of

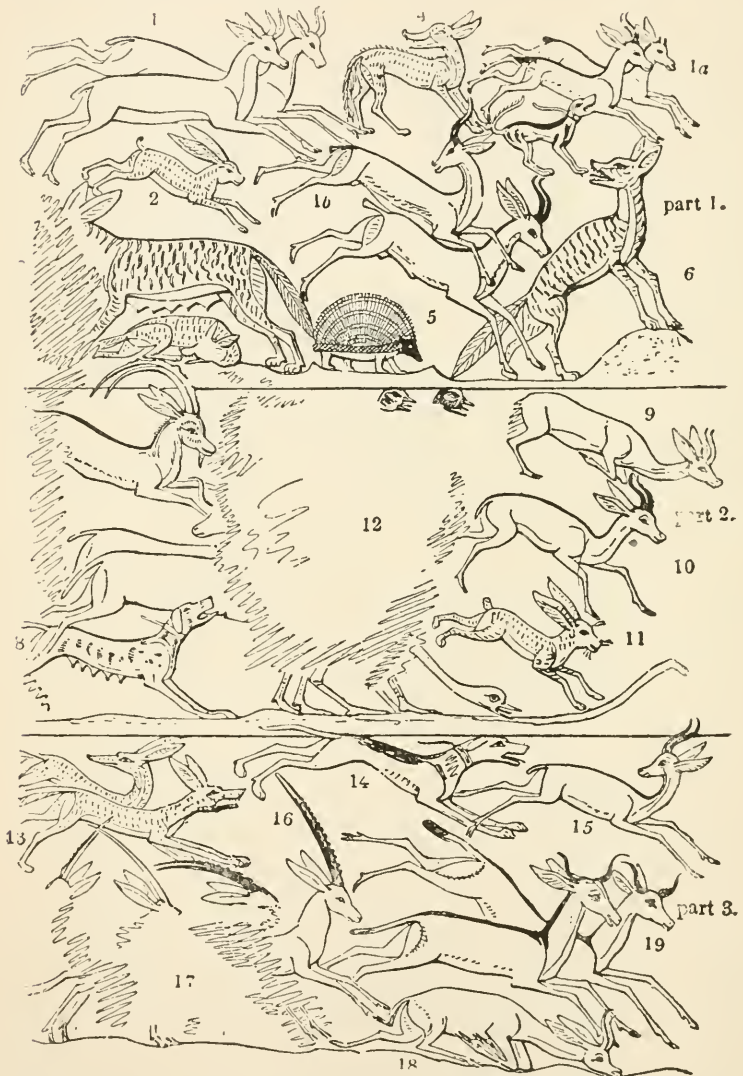
¹ I have not found this animal in Egypt. It is eaten in Italy, and sold in the markets of Rome and other places.

² They consider them the emblems of watchfulness. Sometimes they use them with a different view: the rope of their lamps is passed through an ostrich-egg shell in order to prevent rats coming down and

drinking the oil, as we were assured by the monks of Dayr Antonios.

³ The boar is mentioned in the tale of the Doomed Prince ('Records of the Past,' ii. p. 153 and foll.), but the scene is laid in Naharaina, or Mesopotamia. The wild sow and pigs are also seen in the bas-reliefs of the palace of Konyunjik, and were evidently hunted. — S. B.

the chase are laid, being confined to the low marshy spots about the north of the Delta, and the banks of the Lake Mæris. In



No. 357.

A chase in the desert of the Thebaïd.

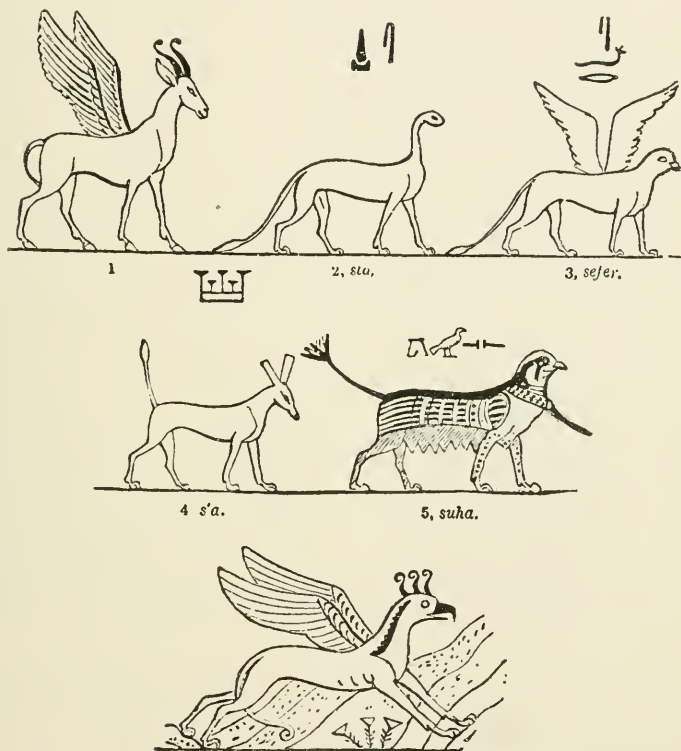
Thebes

To the left of A was the chasseur in his chariot, shooting with the bow, now defaced.
 Figs. 1, 9, 10, 15, 18, Gazelles. 2, 11, Hares. 3, Female hyena, with its young. 4, 13, Foxes.
 5, Porcupine. 6, Hyena arrived at the top of a hill and looking towards the chasseur.
 7, The ibex. 8, 14, Hounds. 12, Ostriches (defaced). 16, The oryx. 19, Wild oxen.

the Thebaïd it was unknown; the sculptures or paintings of Diospolis relate principally to the vicinity of Upper Egypt, and

the monuments of the Delta and the lower country are too few to enable us to say if it was omitted there. Nor is the wild ass met with in the paintings, either of Upper or Lower Egypt, though it is common in the deserts of the Thebaid.

Many other animals are introduced in the sculptures, besides those already noticed, some of which are purely the offspring of disordered imagination: and the winged quadrupeds, sphinxes,



No. 358.

Monsters in the paintings of Beui-Hassan and Thebes.

or lions, with the head of a hawk or of a snake, and some others equally fanciful and unnatural, can only be compared to the creations of heraldry,¹ or serve as companions to the monsters of Pliny.²

The Egyptian sphinx was usually an emblematic figure, representative of the king, and may be considered, when with the

¹ An Austrian nobleman asked an English ambassador at Vienna, whose arms presented a griffin and other monsters, 'In what forest they were met with?'

² 'In the same,' said the ambassador, 'where you find eagles with two heads.'

² Plin. viii. 21.

head of a man and the body of a lion, as the union of intellect and physical force: it is therefore scarcely necessary to observe that they are never female, as those of the Greeks. Besides the ordinary sphinx, compounded of a lion and a man, and denominated androsphinx, were the criosphinx, with the head of a ram, and the hieracosphinx, with the hawk's head and lion's body. — all which are representatives of the king: but the asp-headed and the hawk-headed sphinx with wings do not appear to have been adopted as the same symbol.

Those of the above-mentioned animals which are still found in Egypt, either in the Valley of the Nile, or in the desert, are the gazelle,¹ ibex, *kebsch*, fox, jackal, wolf, and hyæna.

The *oryx*² is a native of Ethiopia, as is the spotted hyæna³ or *marafeén*: which last is once represented in the Egyptian sculptures. The oryx has long annulated horns, tapering to a sharp point, and nearly straight, with a slight curve or inclination backwards. It frequently occurs in the sculptures, being among the animals tamed by the Egyptians, and kept in great numbers in the preserves of their villas.

The *beïsa*⁴ is very like the oryx, except in the black marks upon its face, and a few other points: and the *addax*, another antelope, inhabiting Upper Ethiopia, differs principally from the oryx in its horns, which have a waving or spiral form: but these do not appear in the sculptures, unless the Egyptian artists, by an imperfect representation of them, and an inattention to their distinguishing peculiarities, have confounded them⁶ with the oryx, or with the wild ox.

This last, which is also of the genus *antilope*,⁵ the *defassa* of modern zoologists, though not a native of Egypt, is found in the African desert, and, I believe, in Eastern Ethiopia: it is of a reddish sandy and gray color, with a black tuft terminating its tail, and stands about four feet high at the shoulder. Though made too much to resemble a common ox in some of the paintings, it is sufficiently evident that the Egyptians had in view the *defassa*, in their representations of this animal:⁵ and the Theban sculptors, who had a better opportunity of becoming acquainted

¹ Woodcut No. 356, *fig.* 6, and No. 357, *figs.* 1, 9, 10, 15, 18.

² The *Antilope leucoryx*: woodcut No. 356, *fig.* 2, and No. 357, *fig.* 16.

³ The *Canos crocutus*, which appears to be the *chaus* of Pliny, or, as some editions

have it, *chama*: 'effigie lupi, pardorum maculis' (lib. viii. 19).

⁴ *Antilope beïsa*.

⁵ *Antilope addax*.

⁶ *Fig.* 7 of woodcut No. 356 appears to be the *addax*.

⁷ *Antilope defassa*

⁸ Woodcut No. 357, *fig.* 19.

with it, have succeeded in giving its character far more satisfactorily than the painters of Beni-Hassan.¹

The stag with branching horns,² figured at Beni-Hassan, is also unknown in the Valley of the Nile; but I have been assured that it is still seen in the vicinity of the Natron Lakes, though it is not a native of the desert between the river and the Red Sea.

The *ibex*,³ which is common in the Eastern desert as far north as the range of the Qualalla and Gebel Aboo-Dúrrag, or latitude 29° 30', is very similar to the bouquetin of the Alps, and is called in Arabic *beddan* or *táytal*. The former appellation is exclusively applied to the male, which is readily distinguished by a beard and large knotted horns curving backwards over its body, the female having short erect horns, scarcely larger than those of the gazelle, and being of a much smaller and lighter structure.

The *kebsb*, or wild sheep, is found in the Eastern desert, principally in the ranges of primitive mountains, which, commencing about latitude 28° 40', at the back of the limestone hills of the Valley of the Nile, extend thence into Ethiopia and Abyssinia. The female *kebsb* is between two and three feet high at the shoulder, and its total length from the tail to the end of the nose is a little more than four feet: but the male is larger, and is provided with stronger horns, which are about five inches in diameter at the roots, and are curved down towards the neck. The whole body is covered with hair, like many of the Ethiopian sheep, and the throat and thighs of the fore-legs are furnished with a long pendant mane; a peculiarity not omitted in the sculptures, and which suffices to prove the identity of the *kebsb*,⁴ wherever its figure is represented.

The porcupine is not a native of Egypt; nor is the leopard met with on this side of Upper Ethiopia. Bears are altogether unknown, and if they occur twice in the paintings of the Theban tombs, the manner in which they are introduced sufficiently proves them not to have been among the animals of Egypt, since they are brought by foreigners, together with the productions of their country which were deemed rare and curious to the Egyptians. Herodotus is therefore in error respecting the bear⁵ as well as the otter;⁶ but the Greek name of this last is so

¹ Woodcut No. 355, *figs.* 4 and 5.

² Woodcut No. 356, *fig.* 9.

³ Woodcut No. 356, *fig.* 1.

⁴ Woodcut No. 356, *fig.* 10.

⁵ Herodot. ii. 67: 'Bears being rare.'

⁶ *Ibid.* ii. 72. May he mean the

'Waran of the river,' the large *Lacerta nilotica*? [He means that ichneumon which is called by Ammianus 'hydrus ichneumonis genus' (xxii. 14, p. 336). — G. W.]

ambiguous that it may apply to any 'animal inhabiting the water,' which is the signification of the word *enhydris* (ἐνυδρίς).

With regard to the Egyptian wolf — which, he says,¹ is small, and 'scarcely larger than a fox' — his statement is fully borne out by fact; and Pliny's remark,² that 'those of Egypt and Africa are small and inactive,' is equally just. But it is still more remarkable that in Egypt their habits differ, in one of the principal characteristics of the species, from those of other countries, being so little gregarious; for, though so often in pursuit of them, I never met with more than two together, and generally found them prowling singly over the plain.

M. Sonnini's conclusions respecting the existence of the wolf in Egypt are hasty and erroneous: and he has perverted the meaning of Herodotus, when he says that the sacred animal of Lycopolis 'was not the wolf, for there are none in Egypt, but the jackal, which seems clearly shown by Herodotus, when he says the wolves in that country are scarcely larger than foxes.' The tombs in the mountain above Lycopolis, the modern E'Sioot,³ contain the mummies of wolves, many of which I have examined, and ascertained to be of the sacred animals of the place: the ancient sculptures represent them as natives of the country in the earliest times; and the coins of the Lycopolite nome bear a wolf on their reverse, with the word *lycos*, signifying 'a wolf.' It is therefore evident that M. Sonnini is in error as to their not having been natives of Egypt in the time of Herodotus; and since we find them on both sides of the Nile, those now met with there are shown to be indigenous in the country, and not derived from any which may have accidentally strayed from the borders of Syria.

The Egyptian hare is a native of the Valley of the Nile as well as the two deserts. It is remarkable for the length of its ears, which the Egyptians have not failed to indicate in their sculptures; but it is much smaller than those of Europe.

The intelligent Denon has made a just remark on the comparative size of the animals common to Egypt and Europe, that the former are 'always smaller than our own species: and this is exemplified by none more strongly than the hare and wolf.

The *wabber*,⁴ or *hyrax*, though a native of the eastern desert of

¹ Herodot. ii. 67.

² Pliny, viii. 22. Aristot. Hist. An. viii. 28.

³ I have shown that Aboolfeda and

others were wrong in writing this name Osioot, in 'Egypt and Thebes,' p. 389.

⁴ By a singular inadvertency, this has been called a gazelle, in M. Léon Dela-

Egypt, is not represented in the sculptures; but this is probably owing to its habits, and to their hunting principally in the valleys of the secondary mountains; the wabber only venturing a short distance from its burrow in the evening, and living in the primitive ranges, where the *seüleh*¹ or acacia grows. It was probably the *saphan*² of the Bible, as Bruce has remarked, and that enterprising traveller is perfectly correct in placing it among ruminating animals.

In enumerating the wild beasts of the desert, it may not be irrelevant to observe that the hyena and wolf are seldom met with in unfrequented districts, or any great distance from the Nile, where they would suffer from want of food, and are therefore principally confined to the mountains lying at most a few miles from the edge of the cultivated land. Once only I have met with the wolf on the coast of the Red Sea; and few even of the watering-places of the interior of the desert are infested by it or the hyena.

The lion is now unknown to the north of Upper Ethiopia: there, however, it is common, as well as the leopard, the *aboomungár*,³ and other carnivorous beasts; and the abundance of sheep in those districts amply supplies them with food, and has the happy tendency of rendering them less dangerous to man. In ancient times, however, the lion inhabited the deserts of Egypt,⁴ and Athenæus mentions one killed by the Emperor Hadrian, while hunting near Alexandria.⁵ They are even said, in former times, to have been found in Syria⁶ and in Greece.

Among the animals confined to the Valley of the Nile and its immediate vicinity may be mentioned the ichneumon,⁷ which lives principally in Lower Egypt and the Fyoom, and which, from its enmity to serpents, was looked upon by the Egyptians with great respect. Its dexterity in attacking the snake is truly surprising. It seizes the enemy at the back of the neck, as soon as it perceives it rising to the attack, one firm bite sufficing to

borde's 'Petra.' (*Vide* the translation, pp. 106, 107.)

¹ The acacia, or *Mimosa seyal*.

² [Levit. xi. 5. It chewed the cud, which the 'coney,' or rabbit, does not, and coney, therefore, is a wrong translation. — G. W.]

³ The *aboomungár* is said to be in the Egyptian deserts as well as the *sheeb*. I have not been able to discover what these two animals really are: the former was described to me by the Arabs, as having a pointed nose, like a wolf, with the power

of springing like a leopard, or rather like a dog, and attacking cattle; the latter was said to have a round head and shaggy neck.

⁴ See previous note about the tomb of Ptahhetp, p. 80.

⁵ Athen. lib. xv. c. 6.

⁶ 1 Sam. xvii. 34; 2 Sam. xxiii. 20; 1 Kings, xiii. 24.

⁷ In Arabic, 'nims,' or 'got Pharaoon,' Pharaoh's eat. It is the *Viverra ichneumon*.

destroy it; and when wounded by the venomous fangs of its opponent, it is said by the Arabs to have recourse to some herb, which checks the effect of the deadly poison.

Of the truth, however, of this commonly credited assertion,¹ I can say nothing: an Arab assured me he had witnessed a fight between a large venomous snake and an ichneumon, which last, whenever it received a bite, ran to a small plant, of which it ate a part, rubbing the wound against the leaves, and then returned to renew the combat: and in order to ascertain the reality of its effect, he plucked up and removed the plant, and having waited to see the wounded animal return in vain to seek it, he became convinced, by its death, that the herb alone had previously saved its life. The Arabs, however, frequently consult their imagination more than their love of truth, and, like many authors of amusing tales, they tell their stories till they believe them true.

The ichneumon² is easily tamed, and is sometimes seen in the houses of Cairo, where in its hostility to rats it performs all the duties of a cat; but, from its indiscriminate fondness for eggs, poultry, and many other requisites for the kitchen, it is generally reckoned troublesome, and I have often found reason to complain of those I kept.

Eggs are its favorite food, and it is said to have been greatly venerated by those who held the crocodile in abhorrence, in consequence of its destroying the eggs of that hateful animal:³ but it is now rarely met with in places where the crocodile abounds; and we may conclude that at all periods its principal recommendation was its hostility to serpents. It is frequently seen in the paintings, where its habits are distinctly alluded to by the Egyptian artists, who represent it in search of eggs, among the bushes, and the usual resorts of the feathered tribe.

The wild cat, the *Felis chaus* of Linnæus, is common in the vicinity of the Pyramids and Heliopolis, but it does not occur among the pictured animals of ancient Egypt. Nor is the *jerboa*,⁴ so frequently met with both in the upper and lower country, represented in the sculptures.

The giraffe was not a native of Egypt, but of Ethiopia, and

¹ They have the same notion in India.

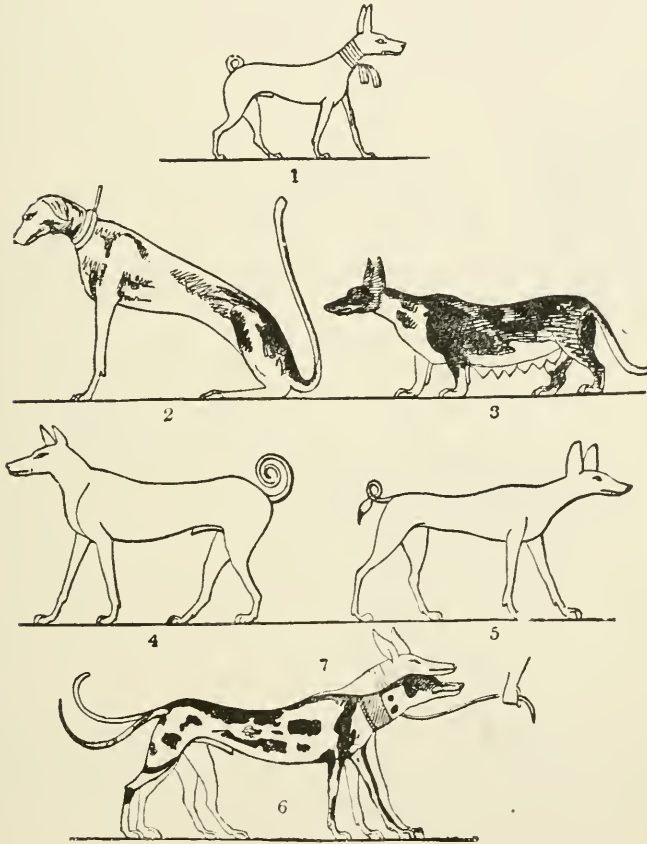
² It is often introduced in the sculptures. Woodcut No. 356, *fig.* 20; and in woodcut No. 365 it is represented carrying away a young bird from the nest.

³ Diod. i. 35.

⁴ *Dipus jaculus*. It is eaten by the Arabs of Africa. Bruce, with great reason, supposes it to be the mouse mentioned in Isaiah lxvi. 17.

is only introduced in subjects which relate to that country, where it is brought with apes, rare woods, and other native productions, as part of the tribute annually paid to the Pharaohs.

The Egyptians had several breeds of dogs, some solely used for the chase, others admitted into the parlor, or selected as the companions of their walks, and some, as at the present day, selected for their peculiar ugliness. All were looked upon with



No. 359.

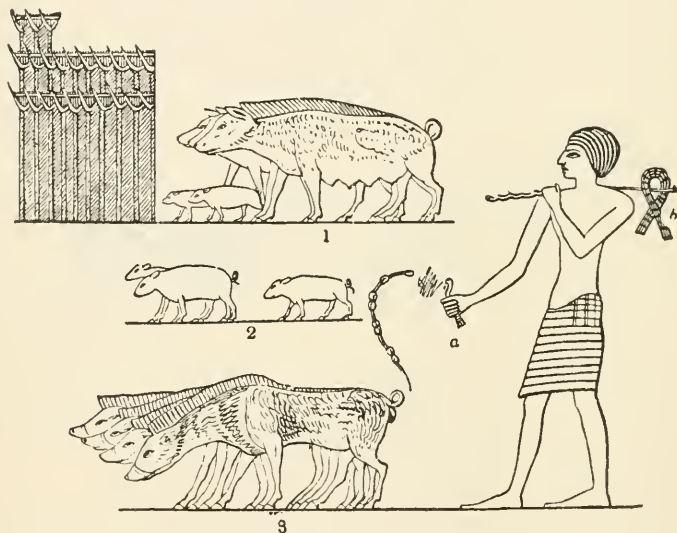
Various kinds of dogs, from the sculptures.

veneration, and the death of a dog was not only lamented as a misfortune, but was mourned by every member of the house in which it occurred.

The most common kinds were a sort of fox dog and a hound; they had also a short-legged dog, not unlike our turnspit, which was a great favorite in the house, especially, it appears, in the

time of Usertesen; and it is possible that, as in later days, the choice of a monarch led the taste or fashion of the time to fix upon a particular breed. Of the fox dog, I have found several mummies in Upper Egypt, and it is reasonable to conclude that this was the parent stock of the modern red wild dog of Egypt, which is so common at Cairo and other towns of the lower country.¹

Herds of cattle and flocks of sheep² and goats were numerous; and pigs, though unclean³ and an abomination to the Egyptians,



No. 360.

Pigs; rarely seen in the sculptures.

Thebes.

Fig. 1. Sows with young pigs. 2. Young pigs. 3. Boars.

a is a whip, knotted like some of our own. b, a gaid, or noose.

frequently formed part of the stock of the farm-yard, but they are more rarely represented in the sculptures than other animals. Their cattle were of different kinds, of which three principal dis-

¹ An account of the different kinds of dogs represented in the sculptures is given in the 'Transactions of the Society of Biblical Archaeology,' vol. iv. p. 172, and foll. Those on the tomb of Antefaa resemble a Dalmatian hound, a dog half wolf, like that found in Northern China, a mastiff, and a house-dog or pet. The hound was called *tasem*; the ordinary dog, *whar*; another kind was called *uns'*, either the wolf-dogs, or dogs so like wolves that they were indistinguishable; another kind

of dog was the *uau*, or *fuau*. In the hieratic papyri packs of 200 and 300 of these dogs are mentioned. A boar-hound appears to be mentioned in the tale of the 'Doomed Prince.'—S. B.

² I have already observed, on the authority of Diodorus, that sheep in Egypt were twice shorn, and twice brought forth lambs in the year; as at the present day. Homer says those of Libya had lambs thrice in a year (Od. Δ, 86).

³ Herodot. ii. 47.

tinctions are most deserving of notice, the short, the long-horned cattle, and the Indian or humped ox: and the last two, though no longer natives of Egypt, are common to this day in Abyssinia and Upper Ethiopia.¹

Horses² and asses were abundant in Egypt, and the latter were employed as beasts of burden, for treading out corn, particularly in Lower Egypt, and for many other purposes. Like those of the present day, it is probable that they were small, active, and capable of bearing great fatigue; and, considering the trifling expense at which these hardy animals were maintained, we are not surprised to find that they were kept in great numbers in the agricultural districts, or that one individual had as many as seven hundred and sixty employed in different parts of his estate.

Egyptian horses were greatly esteemed: they were even exported to neighboring countries, and Solomon bought them at a hundred and fifty shekels of silver,³ from the merchants who traded with Egypt by the Syrian desert.

It is remarkable that the camel, though known to have been used in and probably a native of Egypt as early at least as the time of Abraham (the Bible distinctly stating it to have been among the presents given by Pharaoh to the patriarch⁴), has never yet been met with in the paintings or hieroglyphics.⁵ We cannot however infer, from our finding no representation or notice of it,⁶ that it was rare in any part of the country, since the same would apply to poultry, which, it is scarcely necessary to observe, was always abundant in Egypt: for no instance occurs in the sculptures of fowls or pigeons, except as carriers in the coronation ceremonies among the stock of the farm-yard, though geese are repeatedly introduced, and numbered in the presence of the stewards.⁷

The mode of rearing poultry, and the artificial process of hatching the eggs of fowls and geese, I have already mentioned

¹ A hornless variety was also known. — S. B.

² Not till after the 18th Dynasty. — S. B.

³ 1 Kings x. 28, 29.

⁴ Gen. vii. 16. The name in Hebrew is the same by which the animal is known in Arabic, *gemel*, *gemelim*, גַּמְלִים. Vide also Exod. ix. 3.

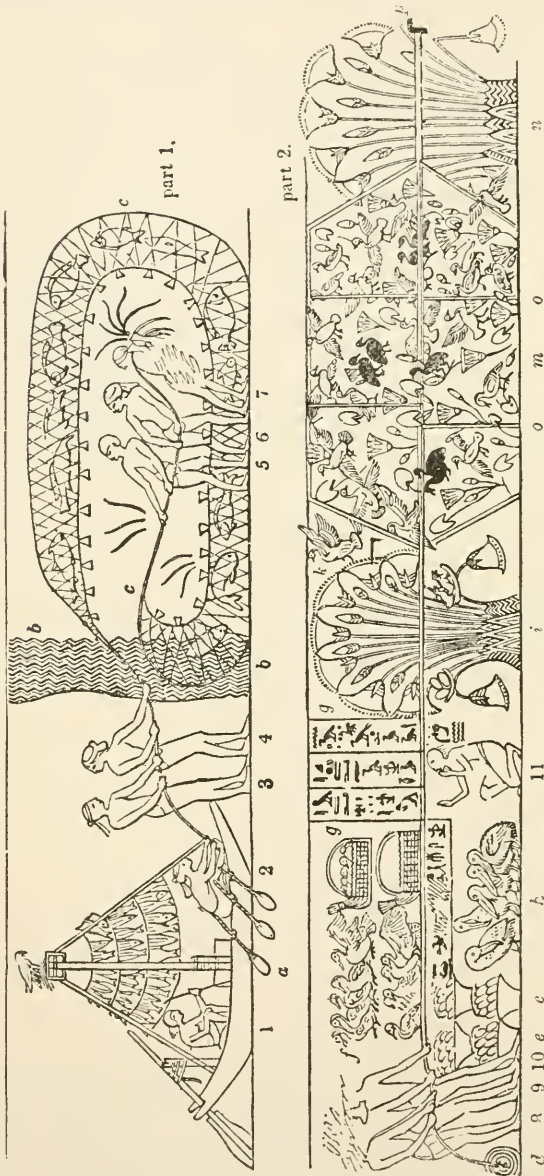
⁵ It is, however, mentioned in the hieratic papyri by its name *kamalu*

(Chabas, 'Voyage d'un Egyptien,' p. 220), and its flesh was eaten in Palestine, but it was not introduced into Egypt. — S. B.

⁶ I have a stone seal found in Nubia, on which two camels are rudely engraved, but it is of uncertain date.

⁷ An account of the animals represented in the early tombs is given by Dr. Hartmann in Duemichen's 'Resultate,' p. 28 and foll. — S. B.

in a former work,¹ where I have shown the method adopted by the Copts from their predecessors.²



No. 361. Fishing and fowling scenes. Thebes.

Part 1. *a*, The boat, with the fish hanging up to dry in the sun and wind; on the top of the mast sits a kite, The manner in which it shrieks, while waiting for the entrails of the fish, as they are thrown out, is very characteristically shown in the original painting. The boat is supposed to be close to the shelving bank to which they are dragging the net. The water is represented by zigzag lines at *b*, which, to prevent confusion, I have not continued over the net.

Part 2. *Figs.* 8, 9, 10, pull the rope that the net may collapse; 11 makes a sign with his hand to keep silence and pull: at *p* the rope is fixed: at *f*, *g*, *e*, are geese and baskets of their young and eggs: *h* are pelicans; *i* and *n*, plants, probably the papyrus.

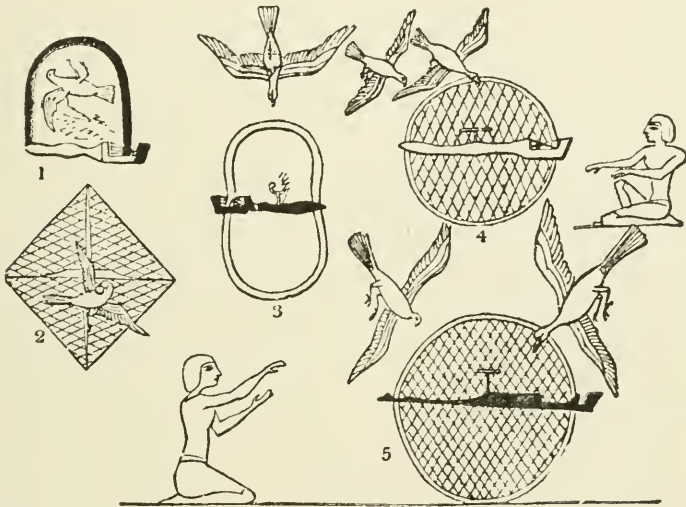
Many birds which frequented the interior and skirts of the

¹ 'Egypt and Thebes,' pp. 245, 246.

² Diod. i. 74. Pliny, x. 54.

desert, and were highly prized for the table, were caught in nets and traps by the fowlers, as the partridge, *gutta*,¹ bustard,² and quail;³ and water-fowl of different descriptions, which abounded in the valley of the Nile, afforded endless diversion to the sportsman, and profit to those who gained a livelihood by their sale.

Fowling was a favorite amusement of all classes; and the fowlers and fishermen, as I have already observed, were subdivisions of one of the castes. They either caught the birds in large clap-nets,⁴ or in traps: and they sometimes shot them with arrows, or felled them with a throw-stick, as they flew in the thickets.



No. 362.

Bird-traps.

Beni-Hassan.

Fig. 1. Trap closed and the bird caught in it; the network of it has been effaced, as also in fig. 3. The other traps are open.

The trap⁵ was generally made of network, strained over a frame. It consisted of two semicircular sides or flaps, of equal sizes, one or both moving on the common bar or axis upon which they rested. When the trap was set, the two flaps were kept open by means of strings, probably of catgut, which, the moment the bait that stood in the centre of the bar was touched, slipped aside, and allowed the two flaps to collapse, and thus secured the bird.

¹ The *Pterocles melanogaster*. (Vide 'Egypt and Thebes,' p. 245.)

² The *Otis hebara*.

³ Herodot. ii. 77; Diod. i. 60; and the sculptures.

⁴ Woodcut No. 361, part 2.

⁵ Woodcut No. 362.

Another kind, which was square, appears to have closed in the same manner; but its construction was different, the framework running across the centre, and not, as in the others, round the edges of the trap.

If their skill in making traps is not proved in those used by the fowlers, it may at least be inferred from that in which the robber was caught in the treasury of Rhampsinitus;¹ since the power of the spring, or the mechanism of the catch, was so great that his brother was unable to open it or release him.



No. 363.

A sportsman using the throw-stick.

Thebes.

Figs. 2 and 3. His sister and daughter. 4. Decoy bird. 5. 5. Birds struck with the stick.

They do not seem to have used the bow very generally to shoot birds, nor was the sling adopted, except by gardeners and peasants to frighten them from the vineyards² and fields. The use of the throw-stick³ was very general, every amateur chasseur

¹ Vol. i. p. 82.

² Woodcut No. 156, vol. i. p. 381.

³ The Irish frequently use it for the same purpose.

priding himself on the dexterity he displayed with this missile; and being made of heavy wood, flat, and offering little surface¹ to the air in the direction of its flight, the distance to which an expert arm could throw it was considerable; though they always endeavored to approach the birds as near as possible, under the cover of the bushes or reeds. It was from one foot and a quarter to two feet in length, and about one inch and a half in breadth, slightly curved at the upper end; and its general form may be inferred from one found at Thebes by Burton,² from those in the Berlin Museum, and from the sculptures.

On their fowling excursions, they usually proceeded with a party of friends and attendants, sometimes accompanied by the members of their family, and even their young children, to the jungles or thickets of the marsh-lands, or to the lakes of their own grounds, formed by the waters of the overflowing Nile, at the period of the inundation, when wild fowl was more abundant than at any other season of the year; and seated in punts made of the papyrus,³ or rushes of various kinds, they passed without disturbing the birds amidst the lofty reeds which grew in the water, and masked their approach. This sort of boat was either towed, pushed by a pole, or propelled by paddles; and a religious prejudice induced the Egyptians to believe that persons who used it were secure from the attacks of crocodiles:⁴ a story which can be more readily believed and explained, when we remember that they principally used these boats in the lakes and inland canals, where crocodiles were seldom seen.⁵

The attendants collected the game as it fell, and one of them was always ready to present a fresh stick to the chasseur, as soon as he had thrown. They frequently took with them a decoy bird, which was posted in a convenient place: and in order more

¹ [Like the boomerang of Australia. — G. W.]

² Now in the British Museum, No. 5463.

³ Conf. Lucan, iv. 136.

⁴ Plut. de Isid. s. 18: 'Isis . . . made use of a boat constructed of the reed papyrus, in order to pass more easily through the fenny parts of the country, whence, they say, the crocodile never touches any persons who go in this sort of vessel.'

⁵ In the hieratic papyrus relating to the praise of learning the following description

of the boatman and the fowler occurs: — 'The poulturer navigates to Athu' — the marsh-lands of the Delta — that he may 'get his price; he has gone beyond the power of his hands in going to kill geese and flamingoes.' ('Records of the Past,' viii. p. 153.) And again (Ibid. pp. 152, 153): 'The fowler of birds suffers very much; he does not see the birds should Num' — the god of the waters — 'pass to the upper heaven, where he says, Let the net refuse. The god wills not to show his forms; vain are his plans.' — S. B.

effectually to prevent its quitting the post assigned to it, a female was selected for the purpose, whose nest, containing eggs, was brought with it and deposited in the boat. [They also had an ingenious mode of carrying live birds, as will be seen by the annexed woodcut. The beak was strapped down to the neck, and the feet to the



Mode of carrying a live bird.
No. 364.

body, so that the bird could neither flutter nor escape. This appears only to have been used for a single bird: for when they were numerous, if not killed at once, they were put into square cages. — S. B.]

A favorite cat sometimes attended them on these occasions; and from the readiness with which it is represented to have seized the game, the artist has intended to show that those animals acted as retrievers, or were trained to catch the birds: being let out of the boat into the thickets which grew at the water's edge. Though making every allowance for the great skill attributed

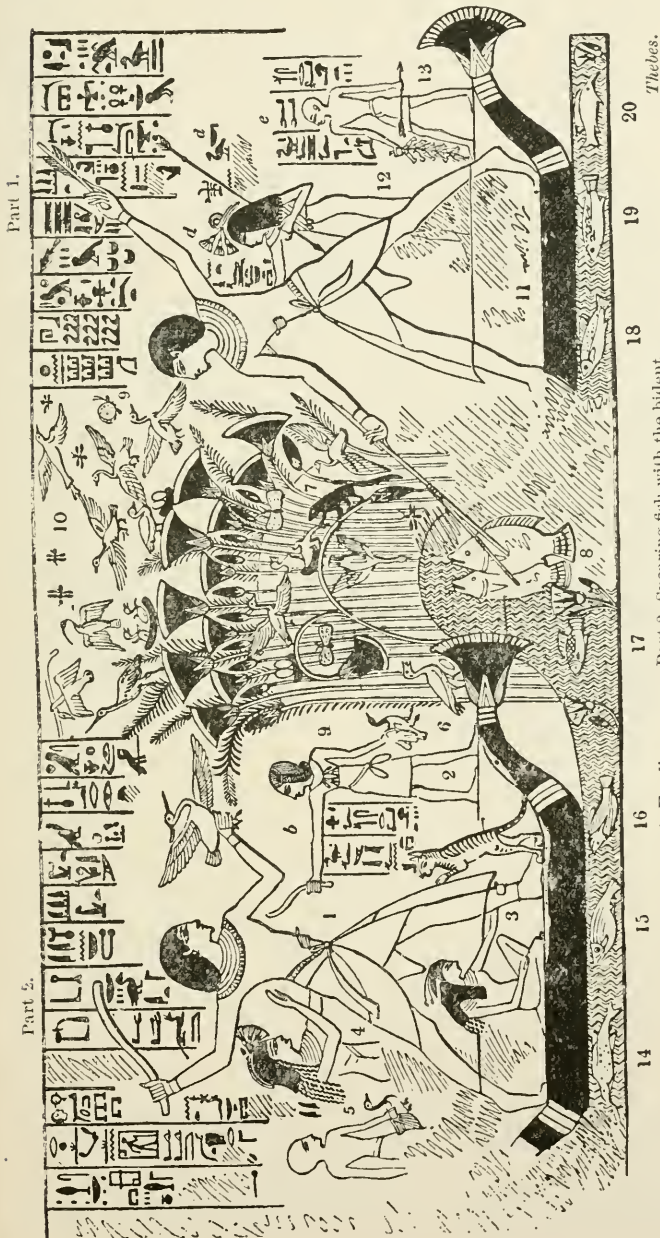
to the Egyptians in taming and training animals, it is difficult to persuade us that the cat could be induced, on any consideration, to take the water in quest of a fallen bird.

That cats, as well as dogs, were looked upon with great esteem by the Egyptians is evident from the care they took to preserve and embalm them, and from the express statements of ancient writers. Herodotus¹ mentions the concern they felt at their loss, and the general mourning that ensued in a house, even if they died a natural death; every inmate being obliged to shave his eyebrows, in token of sorrow, for the loss of a cat, and the head and whole body for the death of a dog. When ill, they watched and attended them with the greatest solicitude: and, if any person purposely, or even involuntarily,² killed one of these revered animals, it was deemed a capital offence; neither could all the influence of the magistrates, nor even the dread of the Roman name, prevent the people from sacrificing to their resentment an incautious Roman who had killed a cat, though it was evident that he had done it unintentionally.

¹ Herodot. ii 66.

² Dioid. i. 83.

‘So deeply rooted in their minds,’ says Diodorus, ‘was the superstitious regard for the sacred animals, and so strongly were



No. 365.

- 1. An amateur sportsman throwing the stick.
- 2. His son, holding a fresh stick ready, and carrying the game.
- 3. 4. His daughters or sisters. 5. Another son, carrying the game.
- 6. A decoy bird, with its nest in the boat.
- 7. An tekneumon, carrying away a young bird from a nest.

The same person is represented, and the hieroglyphic inscriptions record the action of fishing and fowling, and his name, Mutssa, the third priest of Amen, superintendent of the treasury, who is accompanied by his sister Bati, a virgin of Amen, and his son User-ha.

- 8. Two hulti fish speared with the bident of fig. 11.
- 9. 10. Butterflies and dragon-flies.
- 12. His sister, holding a spear.
- 13. His son, holding a spear, and carrying the fish strung upon a water-plant.

The cat appears as if begging to be let out of the boat into the thicket.

14 15 16 17 18 19 20
 Part 1. Fowling scene. Part 2. Spearing fish with the bident.
 Thebes.

the passions of every one bent upon their honor, that, even at this time, when Ptolemy had not yet been called a king by the Romans, and the people were using every possible effort to flatter the Italians who visited the country as strangers, and studiously avoided anything which could excite disputes or lead to war, on account of their dread of the consequences, they positively refused to restrain their anger, or to spare the offender.'



No. 366.

Sportsman using the throw-stick.

British Museum.

Fig. 2 keeps the boat steady by holding the stalks of a lotus. 4. A cat seizing the game in the thicket. 5. A decoy bird. 6. Water and fish.

Some remains of this prejudice in favor of the cat¹ may still be traced among the modern Egyptians, who even allow it to eat from the same dish,² and to be the constant companion of their children; though the reputed reason of their predilection for this animal is its utility in watching and destroying scorpions, and other reptiles, which infest the houses.³

¹ They are much more tractable and attached in Egypt than in Europe. The cat and dog are not there the emblems of discord.

² This is a general custom with the Moslems.

³ Cats are occasionally represented seated under the chairs of persons in sepul-

chral scenes, and petted like monkeys and dogs. The name of the cat was *mau*, and it was specially sacred to Bast, or Bubastis, the Egyptian Artemis, the beloved of Ptah, and the mother of Neferatum. It is strange that it was not known in Greece at an early period, considering the intimate relations between that country and

Dogs are not regarded by them with the same feelings; they are considered unclean, and are seldom admitted into the house, except by some persons of the Málakee sect, who do not, like the Shaffaees and Hanefees, consider themselves defiled by their touch. But though they draw this marked distinction between them, the character given to the two animals appears to be in favor of the dog; which they represent, in the true spirit of Oriental fable, when asked hereafter respecting the treatment it received from man, concealing all the numerous injuries it has received, and magnifying the few benefits, while the cat is supposed to deny the obligations conferred upon it, and to endeavor to detract from the merits of its benefactor.

Though the death of a cat is not attended with lamentations or funeral honors, it is looked upon by many of the modern Egyptians to be wrong to kill, or even to ill-treat them: and some have carried humanity so far as to bequeath by will a fund for their support, in compliance with which these animals are daily fed in Cairo at the Cadi's court, and the *bazár* of Khan Khaleel.

The clap-net was of different forms, though on the same general principle as the traps already mentioned. It consisted of two sides or frames, over which the network was strained: at one end was a short rope, which they fastened to a bush or a cluster of reeds, and at the other was one of considerable length, which, as soon as the birds were seen feeding in the area within the net, was pulled by the fowlers, causing the instantaneous collapse of the two sides.¹ The Egyptian nets were very similar to those used in Europe at the present day, but probably larger, and requiring a greater number of persons to manage them than our own: this, however, may be attributed to an imperfection in their contrivance for closing them.

As soon as they had selected a convenient spot for laying down the net, in a field or on the surface of a pond, the known resort of numerous wild fowl, they spread open the two sides or flaps, and secured them in such a manner that they remained flat upon the ground until pulled by the rope. A man, crouched behind some reeds growing at a convenient distance from the spot, from which he could observe the birds as they came down, watched the net,² and enjoining silence by placing his hand over

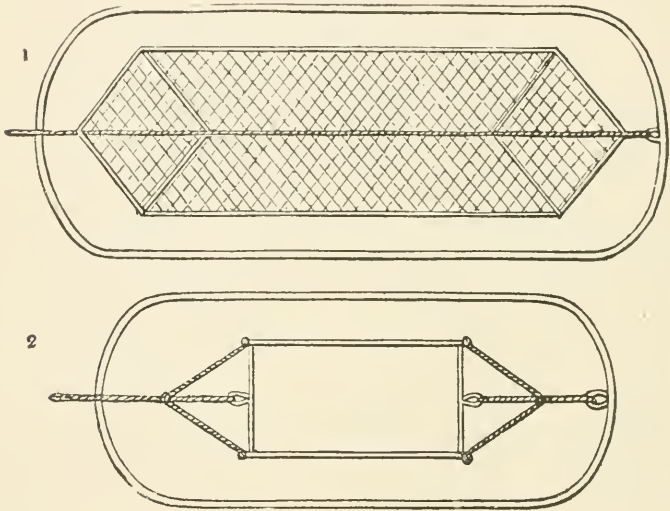
Egypt; but the weasel was employed in Greece for the same purpose as the cat in the valley of the Nile.—S. B.

¹ Woodcut No. 361, part 2.

² He was styled *λιόπτης* by the Greeks. (J. Pollux, Onom. v. 4.)

his mouth, beckoned to those holding the rope to keep themselves in readiness, till he saw them assembled in sufficient numbers, when a wave of his hand gave the signal for closing the net.¹

The sign adopted by the Egyptians to indicate silence is evidently shown from these scenes to have been given by placing the hand over the mouth;² not, as generally supposed,³ by



No. 367.

Clap-nets, from the sculptures.

approaching the forefinger to the lips; and the Greeks erroneously concluded that the youthful Harpocrates was the deity of silence, from his appearing in this attitude;⁴ which, however humiliating to the character of a deity, was only illustrative of his extreme youth, and of a habit common to children in every country, whether of ancient or modern times.

Some nets were of a single piece, stretched over a frame; others were furnished with additional sections of a diamond shape,⁵ and in some the interior portion was surrounded by an outer

¹ The net was called *aat* by the ancient Egyptians; it is often mentioned in the inscriptions and texts. — S. B.

² [Conf. Job xxix. 9: 'They laid their hand on their mouth,' &c. — G. W.]

³ And by Plutarch, de Isid. s. 68.

⁴ Harpocrates does *not* place his finger in his *mouth*. In the numerous bronze figures of this deity, the index or forefinger of his right hand is always put on

the *chin*, and not raised to the *mouth*; it may rather be considered that he points to the *mouth*, than that he places his finger in it — S. B.

⁵ This calls to mind the nets mentioned by J. Pollux (v. 4), of which a square part termed the *βόσχος* became *συβοτιδής*, of a rhomboidal figure, as soon as the net (*ἄκκις*) was stretched.

circuit of an oval form, to which the ring of the rope was attached.

It is probable that the ancient Egyptians adopted the same ingenious method of catching ducks, widgeons, and other waterfowl, as the modern inhabitants of Lower Egypt,¹ who, when the inundation covers the lands, creep unperceived to the water's edge, and placing a gourd upon their head, with two holes cut in front, through which they look, swim towards the unsuspecting birds, and taking them one after another by the legs, suddenly pull them under the water, and tie them to their girdle; thus, in a short space of time, securing great numbers without alarming the rest.

The birds taken in nets were principally geese, ducks, quails,² and some small kinds which they were in the habit of salting, especially in Lower Egypt, where Herodotus³ tells us they ate quails, ducks, and small birds undressed, having merely preserved them in salt, living at the same time on all sorts of birds and fish, not reckoned sacred, which were eaten either roasted or boiled. For though geese constituted a very great portion of the food of the Egyptians, both in the upper and lower country, and are more frequently represented in the sculptures than any bird, it is not to be supposed that they were preferred to the exclusion of others; and besides poultry and pigeons, which abounded in Egypt, many of the wading tribe, the curlew, the *ardea*, and several others were esteemed for the table, and even introduced among the choice offerings presented to the gods. The practice of salting birds, in a country like Egypt, may, perhaps, be considered singular; but confirmation of the statement of Herodotus is derived from the sculptures, where some poulterers appear to be in the act of preserving them in this manner, and depositing them in jars.⁴

Independent of the birds taken in nets and by other means, the Egyptian poulterers supplied the market with the eggs of those most in request; they also reared the young after the eggs were hatched (which was frequently done, as already observed, by an artificial process), and these were sold to supply the poultry-yards of the rich, whose stock of wild fowl was often numerous.

¹ The same is done in India.

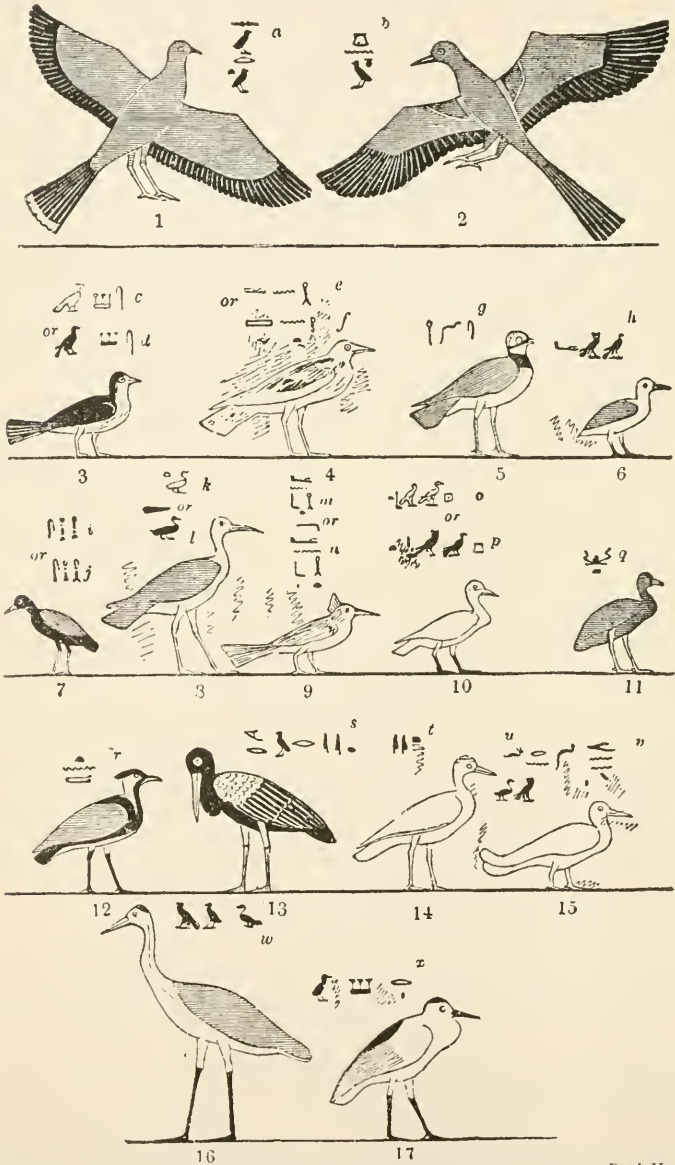
² [Quails were much prized when taken at Rhinocolura (Diodorus, i. 60). They were, as we know, esteemed by the Israelites. They are common in the

valley of the Nile, and in the desert. — G. W.]

³ Herodot. ii. 77.

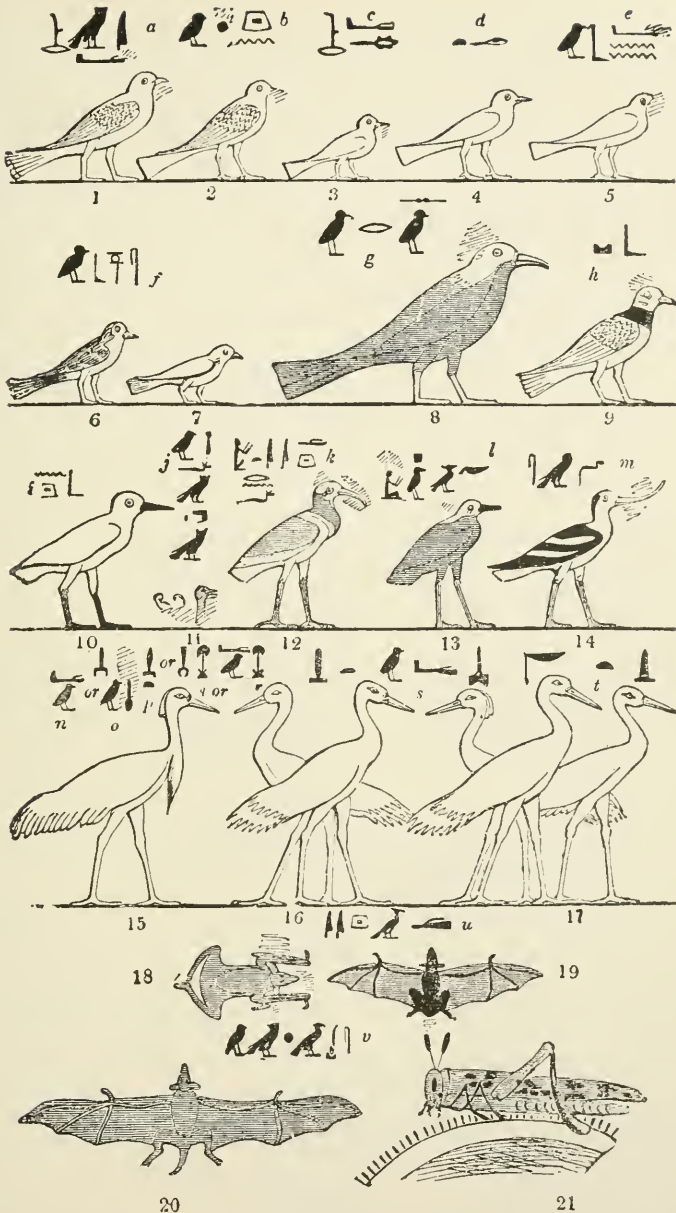
⁴ Woodcut No. 99. Smoked geese, dried and kept for the table, are in use at the present day.

The various birds represented in the Egyptian sculptures cannot always be recognized with certainty, in consequence of



No. 368. Some of the birds of Egypt. Beni-Hassan.
 1. surut. 2. hannu. 3. s's'a. 4. han. t. 5. st'ch. 6. amā. 7. sehch. 8. sa. t. 9. ānhch.
 10. kambet. 11. uut. 12. tent. 13. meruri. 14. i. 15. 'teuch t.' is its name. 16. musa. 17. rus'au.

the loss of the colors, or a want of skill in their artists, who,



No. 369. Some of the Fauna of Egypt. Beni-Hassan and the tombs near the Pyramids.

1. *ama*. 2. *kannu*. 3. *aya*. 4. *art*. 5. *anbu*. 6. *sabu*. 8. *suru*. 9. *bahu*. 10. *benka*. 11. *hutu em* . . . 12. 'tekai' is its name. 13. *kapu*. 14. *t'ams*. 15-17. *au(n) tu(o) t'au(p) utá(s)*. 19. *teká*. 20. *staemχenu*.

Figs. 18, 19, 20. Bats.

21. The locust.

From Thebes.

disregarding the intermediate hues, adopted certain fixed colors, in a conventional manner, as an approximation; and unless the character of the birds is so marked as to be readily distinguished by a simple outline, it is often difficult to identify them.

In some, however, there is sufficient to guide us without the necessity of conjecture, and these I shall notice in their proper order, without distinguishing between such as were forbidden or admitted at an Egyptian table.

BIRDS OCCURRING IN THE SCULPTURES.

1. Raptores.

Vultur Nubicus.	}	The large vulture of Egypt and Nubia, which occurs frequently on the ceilings and sculptures of the temples.
Vultur perenopterus.		The small white vulture, called also Pharaoh's hen.
Aquila.	}	The eagle.
Falco cinereo-ferrugineus. <i>Fors.</i>		The kite, or <i>Milvus</i> . <i>Falco ardea</i> of Savigny.
Falco — ?	}	The sacred hawk.
Falco-temniculoïdes.		The common brown hawk.
Bubo maximus.		Horned owl.
Strix flammea.		White owl.
Strix passerina.		Small owl.

2. Insessores.

Lanius excubitor ?	Great shrike, or butcher bird ?
Corvus corax.	The raven.
Corvus cornix.	The Royston crow.
Turdus viscivorus.	Missel thrush.
Alauda cristata.	Crested lark.
Alauda arenaria.	Sand-colored lark.
Upupa epops.	Hoopoe.
Hirundo rustica.	The swallow.
Alcedo hispida.	Common kingfisher.
Fringilla ; several species.	Finches.

3. Rasores, or Gallinaceous.

Columba turtur.	Turtle-dove.
Pterocles melanogaster.	The <i>Gutta</i> . ¹
Perdix coturnix.	The quail.
Otis Hebara ?	Ruffed bustard ?
Struthio camelus.	The ostrich.

4. Grallatores, wading birds.

Ardea garzetta.	}	Small white stork: the <i>A. Virgo</i> of Hasselquist.
Ardea cinerea.		Grey heron.
Ardea ciconia.		White stork.
Ardea nigra ; and some other species.		Black stork (woodcut No. 369, <i>fig.</i> 13).
Numenius, Ibis.	}	The ibis.
Platala.		Spoonbill.
Cheradrius armatus.		Spur-winged plover.
Scolopax gallinago.		Snipe.
Fulica atra.		The common coot.

¹ This name has been given it in Arabic from the noise it makes when alarmed and flying.

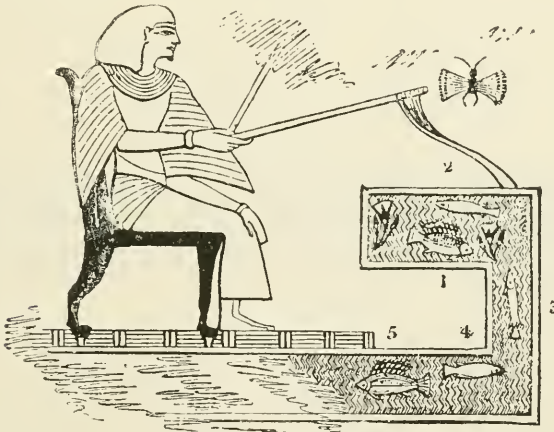
5. Natatores, swimming birds.

Anser Ægyptius ;
and other species.
Anas ; various species.
Anas creca.
Recurvirostra avosetta.
Pelicanus onocrotalus.

Egyptian goose.

Ducks.
Teal.
Avoset.
The pelican.

Many other birds are figured in the sculptures; but as it is difficult to determine the exact species to which they belong, I shall not hazard any conjecture upon their names, having noticed those which most commonly occur. In the tombs of Thebes and Beni-Hassan the Egyptians have not omitted to notice bats, and even some of the insects, which abound in the Valley of the Nile; and the well-known locust,¹ the butterfly² and the beetle are occasionally introduced in the fowling scenes and in sacred subjects.



No. 370.

An Egyptian gentleman fishing.

Thebes.

Fishing was an amusement in which the Egyptians particularly delighted: and not contented with the abundance afforded by the Nile, they constructed within their grounds spacious 'sluices and ponds for fish,'³ like the *vivaria*, of the Romans, where they fed them for the table, and where they amused themselves by angling⁴ and by the dexterous use of the bident.

These favorite occupations were not confined to young

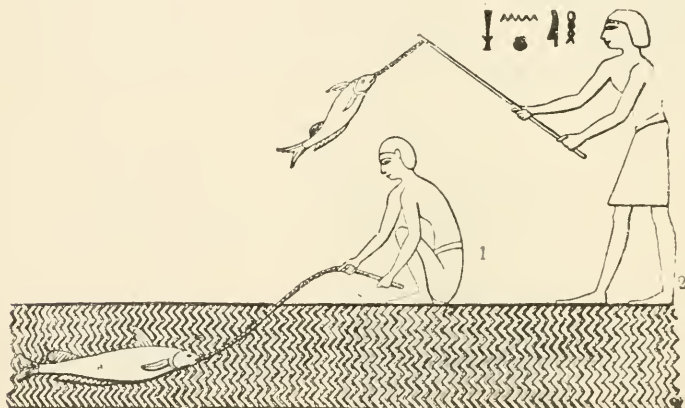
¹ Woodcut No. 369, *fig.* 21.

² Woodcuts Nos. 365, 366, and 370

³ Isaiah xix. 10.

⁴ Isaiah xix. 8.

persons, nor thought unworthy of men of serious habits; and an Egyptian of consequence is frequently represented in the sculptures, catching fish in a canal or lake with the line, or spearing them as they glided past the bank. Sometimes the angler posted himself in a shady spot at the water's edge, and, having ordered his servants to spread a mat upon the ground, he sat upon it as he threw the line; and some with higher notions of comfort used a chair for the same purpose. The rod was short, and apparently of one piece; the line usually single, though instances occur of a double line, each furnished with its own hook, which, judging from those I have found, was of bronze.



No. 371.

Fishing with ground-bait.

Beni-Hassan.

These fish are the *shilbeh* or rather the *arabrab*. The inscription reads *sémmu aha*, 'the brothers,' or 'the two anglings.'

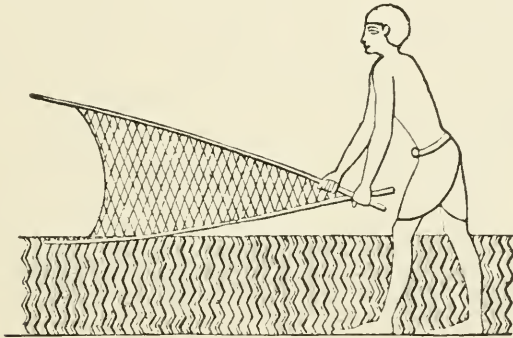
The fishermen — who, as I have observed, composed one of the subdivisions of the Egyptian castes, and who gained their livelihood by fishing — generally used the net in preference to the line, but on some occasions they employed the latter, seated or standing on the bank. It is, however, probable that these were people who could not afford the expense of nets: and the use of the line is generally confined, in like manner, at the present day, to the poorer classes,¹ who depend upon skill or good fortune for their subsistence.

In all cases they adopted a ground bait, as is still the custom in Egypt, without any float; and though several winged insects are represented in the paintings hovering over the water, it does

¹ Vignette D, at the head of chap. iv. vol. i.

not appear that they ever put them to the hook, and still less that they had devised any method similar to our artificial fly-fishing; which is still unknown to the Egyptians, though the fish of the Nile are occasionally seen to rise to insects on the water's surface. Ælian¹ mentions the *thrissa*, a fish of the Marea Lake, which was caught by singing to it, and the sound of crotala made of shells. The fish dancing up leapt into the nets spread for them, giving 'great and abundant sport.'

The ordinary Egyptian net has been already mentioned.² as well as the mode of dragging it to the shore; but it sometimes happened that they used a smaller kind for catching fish in shallow water, furnished with a pole on either side,³ to which it was attached; and the fisherman, holding one of the poles in



No. 372.

A sort of landing net.

Thebes.

either hand, thrust it below the surface of the water, and awaited the moment when a shoal of fish passed over it: the same being probably used for landing those which had been wounded with the spear, or entangled with the hook.⁴

When they employed the drag-net, and even when they pulled it to the shore, a boat sometimes attended, in which the fish were deposited as soon as they were caught; those intended for immediate use, to be eaten fresh, being sent off to market when the day's sport was finished; and the others being opened, salted, and hung up to dry in the sun.⁵

¹ Ælian, vi. 32.

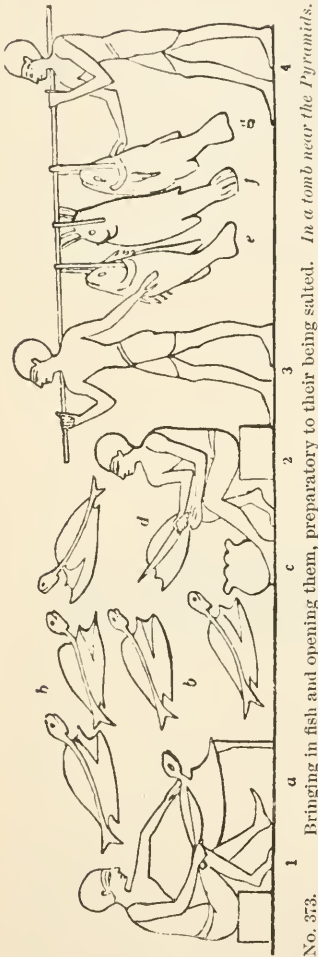
² It was called *aat*.

³ [A net of this form is used in India; and in Southern Spain one precisely similar is attached to the bowsprit of a boat, which is moored in tidal rivers, and the net is let down at the flow. — G. W.]

⁴ Woodcut No. 372.

⁵ In the 'Praise of Learning' the scribe says, 'I tell you the fisherman suffers more than any employment: consider, is he not toiling on the river? He is mixed up with the crocodiles: should the clumps of papyrus diminish, then he is crying out for help; if he has not been told a crocodil:

Some were cut in half, and suspended on ropes for this purpose, the passing current of air being found to accelerate the process: sometimes the body was simply laid open with a knife from the head to the tail, the two sides being divided as far as the backbone: and in many instances the process consisted solely in taking out the intestines, and removing the head and tip of the tail, and exposing them, when salted, to the sun.



No. 373. Bringing in fish and opening them, preparatory to their being salted. In a tomb near the Pyramids.

When caught, the small fish were generally put into baskets, but those of a larger kind were suspended to a pole, borne by two or more men over their shoulders; or were carried singly in the hand, slung at their back, or under the arm; all which methods I have seen adopted by the modern fishermen, at the Cataracts of E'Ssoan, and in other parts of Egypt.

Salted¹ as well as fresh fish were much eaten² in Egypt, both in the Thebaid and the lower country, as the sculptures and ancient authors inform us; and at a particular period of the year, on the ninth day of the first month (Thoth),³ every person was obliged, by a religious ordinance, to eat a fried fish before the door of his house, with the exception of the priests, who were contented to burn it on that occasion.⁴

Some fish⁵ were particularly prized for the table, and pre-

is there, terrors blind him.' And then one reading is, 'The father makes the net come out of the waters; his destiny is in the hands of God.' (Maspero, 'Le Genre épistolaire chez les anciens Égyptiens,' 1872, p. 48.)

¹ Salt or prepared fish were called *ukas*, and are often mentioned.

² Conf. Herod. ii. 92; Diod. i. 36. Perhaps the *ταύρικη Αίγληντια* of Julius Pollux, Onom. vi. 9.

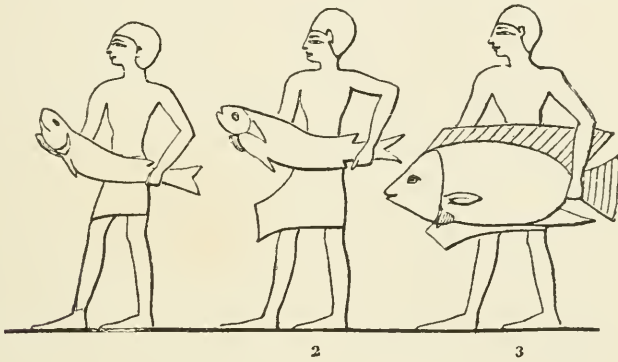
³ The first of Thoth corresponded with the 29th of August.

⁴ Plut. de Isid. s. 7.

⁵ The different names of fish have already been mentioned. The ordinary word

ferred as being more wholesome, as well as superior in flavor to others; among which we may mention the *bálti*,¹ the *gisher*,² the *benni*,³ the *shall* or *sheelàn*,⁴ the *shilbeh*⁵ and *arábrab*, the *byad*,⁶ the *garmoot*,⁷ and a few others: but it was unlawful to touch those which were sacred, as the oxyrhynchus, the phagrus, and the lepidotus: and the inhabitants of the city of Oxyrhynchus objected even to eat any fish caught by a hook, lest it should have been defiled by the blood of one they held so sacred.⁸

The oxyrhynchus, I have elsewhere observed,⁹ was probably the *mizdeh*, the mormyrus, remarkable among the fish of the Nile



No 374.

Another mode of carrying large fish. Tomb near the Pyramids.

for its pointed nose,¹⁰ as the word *oxyrhynchus* implies; and the resemblance of the Coptic name of that city, which was called Mge, to that of the fish, strongly favors that opinion.

The phagrus was the eel, and the reason of its sanctity, like that of the former, was probably owing to its unwholesome qualities; the most effectual method of forbidding its use being to assign it a place among the sacred animals of the country.

The lepidotus is still uncertain; its name proves it to have been a scaly fish, but the various conjectures of naturalists have led to nothing satisfactory respecting it. Linnæus believed it to be a carp, the *Cyprinus rubescens niloticus*; Sicard preferred

for fish in Egyptian was *remi*; another word, *but*, evidently meant a kind of fish, and was applied to whatever was abominable or detestable. — S. B.

¹ Or *booltee*, *Labrus niloticus*.

² *Perca nilotica*.

³ *Cyprinus benni*.

⁴ *Silurus shall*.

⁵ The *Silurus shilbe niloticus*.

⁶ *Silurus bajad*.

⁷ *Silurus carmuth*.

⁸ Plut. de Isid. s. 7. [A prejudice still prevents this fish being eaten by many of the inhabitants of Upper Egypt. — G. W.]

⁹ 'Egypt and Thebes,' p. 336.

¹⁰ Woodcut No. 100.

the *benni*, and others the *bálti*, or the *gisher*: but if I may be pardoned for venturing a conjecture, there appears to be more reason to suppose it the *kelb el bahr*,¹ called the dog-fish of the Nile; which, though a wholesome fish,² might, from its appearance, create a prejudice in the minds of a superstitious people, sufficient to forbid its introduction at table, and obtain for it a place among their sacred fish: nor do I know of an instance of its introduction in the Egyptian sculptures.

Like the sacred quadrupeds, they were not all regarded with the same reverence in different parts of the country: ³ Plutarch even states that these three fish were generally held in aversion by the Egyptians; ⁴ and the people of Cynopolis, according to the same author,⁵ were in the habit of eating the oxyrhynchus, which, he adds, 'was the origin of a civil war between the two cities, till both cities, after doing each other great mischief, were severely punished by the Romans.'

Of all fish the *bálti*⁶ was evidently preferred, and not, indeed, without reason, being still considered inferior to none produced in the Nile. Many others, not readily ascertained from the mode of representing them, occur in the sculptures of Upper and Lower Egypt, and we even find the eel and the *mizdeh* introduced among those at Beni-Hassan and other places, but the difficulty which this at first sight appears to present is readily explained by the observation I have already made, of their having been held sacred in some, and not in other cities or districts of Egypt. Plato ⁷ mentions the taming of fish in the Nile and the royal lakes: but it does not appear whether he alluded to those which were sacred.

The favorite mode of fishing, among those who took a pleasure in it and prided themselves on their skill, was with the bident spear. They sometimes stood on the bank of a canal, but generally used a punt, or boat made of papyrus,⁸ in which

¹ *Salmo dentex*, which has very large scales.

² The fish in Egypt are considered better after October than in the summer months: they think that fish with scales are the only kind wholesome even in winter.

³ Another fish, the *latus*, was worshipped at Latopolis in the Thebaïd.

⁴ Plut. de Isid. s. 18.

⁵ *Ibid.* s. 72.

⁶ It is represented in woodcuts No. 365,

fig. 8; No. 370, *figs.* 1 and 5; No. 373, *e* and *g*, &c.

⁷ Polit. 532.

⁸ The name of papyrus, or byblus, was applied to more than one plant of the genus *Cyperus*, as I shall have occasion to show. There were several names for the papyrus: as *t'ama*, for the book, roll, or manufactured article; and *pa apu*, 'the papyrus,' from which the word was derived. — S. B.

they glided smoothly over the lakes and canals within their own grounds, without disturbing the fish as they lay beneath the broad leaves of the lotus plant. The custom of angling for amusement, and spearing with the bident, may be considered peculiar to the higher orders; and while the poorer classes employed the net and hook, as already stated, the use of the spear was confined to the sportsman.

The bident was a spear with two barbed points, which was either thrust at the fish with one or both hands as they passed by, or was darted to a short distance, a long line fastened to it preventing its being lost, and serving to secure the fish when struck. It was occasionally furnished with feathers at the upper extremity, like an arrow, to assist in its distant flight, and sometimes a common spear was used for the purpose; but in most cases it was provided with a line, whose end was held by the left hand, or wound upon a reel. The same mode of fishing is still adopted by many people who live on the sea-coast; and the fish-spears of the South Sea islanders have two, three, and four points, and are used nearly in the same manner, and with the same dexterity, as the bident by the ancient Egyptians.

On these occasions they were usually accompanied by a friend, or some of their children, and by one or two attendants, who assisted in securing the fish, and who, taking them off the barbed point of the spear, passed the stalk of a rush through the gills, and thus attached them together, in order more conveniently to carry them home.¹

I have frequently had occasion to mention boats made of the byblus or papyrus. It is evident that this plant, from its great value and from its exclusive cultivation in certain districts, where it was a government monopoly, could not have been applied to the many purposes mentioned in ancient authors; we may therefore conclude that several plants of the genus *Cyperus* were comprehended under the head of byblus or papyrus. This is not only in accordance with probability, from their general resemblance, but is expressly stated by Strabo,² who says, that ‘much grows in the lower part of the Delta, where one kind is of an inferior, the other of a superior quality, and this last is known by the distinctive appellation of Hieratic Byblus. That the profits arising from its sale may be increased they have adopted the same plan which was devised in Judea regarding

¹ Woodcut No. 365, *fig.* 13.

² Strabo, lib. vii. p. 550, ed. Cas.

the date-tree and balsam, permitting it to grow only in certain places; so that, its rarity increasing its value, they benefit themselves at the expense of the community.' And that under the name 'papyrus' he includes other kinds of *Cyperus* produced spontaneously in the marshy lands, is evident from his observing that 'the papyrus does not grow in great quantity about Alexandria, because it is *not cultivated* there;' and Pliny,¹ and other writers, show that the plant to which they frequently applied this name was wild in many parts of Egypt.

There is therefore reason to believe that several species were comprehended under the general appellation of byblus or papyrus. The *Cyperus dives*, which grows to the height of five or six feet, is still cultivated in Egypt for many of the purposes to which the papyrus plant is said to have been applied; and I have no doubt that this was the species commonly employed in former times for making mats, baskets, parts of sandals, papyrus boats, and for other ordinary uses; the *Cyperus papyrus*, or *Papyrus (byblus) hieraticus* of Strabo, being confined to the manufacture of paper.

The great abundance of fish² produced in the Nile was an invaluable provision of nature in a country which had neither extensive pasture lands nor large herds of cattle, and where corn was the principal production. When the Nile inundated the country, and filled the lakes and canals with its overflowing waters, these precious gifts were extended to the most remote villages in the interior of the Valley, and the plentiful supply of fish they then obtained was an additional benefit conferred upon them at this season of the year. The quantity is said³ to have been immense, as indeed it is at the present day;⁴ and the shoals of small fish, which then appear in the canals and ponds, call to mind and confirm a remark of Herodotus respecting their numbers at the rising of the Nile. His explanation of the cause of their apparently sudden production is inadmissible and unnecessary, as the ponds were always filled by artificial or natural ducts; and the same species of young fry which are found

¹ Plin. xiii. 11. According to one reading Pliny says, 'All the paper is grown in the Sebennytic nome;' but another gives, 'nothing but paper is grown' there, which, however erroneous, is evidently the sense required — 'non nisi charta' for 'omnis charta' — as he afterwards mentions its being found in other parts of Egypt.

² Strabo, xvii. p. 566. Diod. i. 36, 43, and 52.

³ Herodot. ii. 93. Strabo, *loc. cit.* [Elian (*Hist. Anim.* x. 43) calls it the 'fish harvest,' ἀγρὸς ἰχθίων. — G. W.]

⁴ Michaud says that the lake Menzaleh now yields an annual revenue of 800 purses (5600*l.*). ('Corresp. de l'Orient,' tom. vi. let. 156.)

there appear at the same time in the river; nor are they of any particular kind,¹ but the young of the various fish inhabiting the Nile.²

Herodotus mentions a large sum annually produced by the fisheries of the lake Mœris. 'During six months,' says the historian,³ 'the water of the river flows into it, and during the remaining half of the year it returns from the lake into the Nile. At this time, while the water is retiring, the profits derived from the fisheries, and paid daily into the royal treasury, amount to a talent of silver,⁴ or about 193*l.* 15*s.* English;⁵ and during the other six months, when the water flows from the Nile into the lake, they do not exceed twenty minæ'⁶ (about 6*l.* 12*s.*). Diodorus says, that when Mœris, from whom the lake derived its name, and who was supposed to have made the canal, had arranged the sluices for the introduction of the water, and established everything connected with it, he assigned the sum annually derived from this source as a dowry to the queen, for the purchase of jewels, ointments, and other objects connected with the toilet. The provision was certainly very liberal, being a talent every day, or upwards of 70,700*l.* a year;⁷ and when this formed only a portion of the pin-money of the Egyptian queens, to whom the revenues of the city of Anthylla, famous for its wines, were given for their dress,⁸ it is certain they had no reason to complain of the allowance they enjoyed.

I have frequently had occasion⁹ to notice the error of Herodotus in confounding the lake Mœris with the canal, and have proved from Pliny,¹⁰ that the name was also applied to the canal which conducted the water from the Nile to what is now called the Birket el Qorn; and in order to show the impossibility of the return of the waters from the lake itself to the higher level of the Nile, and that Herodotus did not judge from his own

¹ De Sacy's *Abd-al-latif*, note 141, in lib. i. c. 4.

² I have caught a small net full of them, and on examination found them to be of the *Silurus shall* and other common species; and no one who has eaten them at table can have failed to observe that they are of different kinds, from the greater or less quantity of bones they contain.

³ Herodot. ii. 49.

⁴ Reckoning the talent at sixty minæ.

⁵ Some compute it to be 225*l.*

⁶ The mina was 3*l.* 4*s.* 7*d.*

⁷ Diodor. i. 52. From all the fisheries

of Egypt would have been less improbable. The lake Mœris is now farmed for thirty purses (210*l.*) annually. Of ninety piastres from the sale of the fish, ten are paid for the boat, forty to the fishermen, and forty to the farmers of the fish. There are only now six boats on the lake.

⁸ Herodotus (ii. 98) says, 'for their sandals;' Athenæus (*Deipn.* i. 25), 'for their dress;' a privilege continued to the queens of Persia, after Egypt was conquered by Cambyses.

⁹ *Egypt and Thebes*, p. 354.

¹⁰ *Plin.* xxxvi. 12.

observation, but mistook the facts detailed to him by his Egyptian informants, who had in view the canal alone, when speaking of the return of the water to the river, I shall repeat what I before remarked on this subject.¹

Herodotus's account of the water returning from the lake to the Nile, on the subsiding of the inundation, is totally inapplicable to the lake Mœris, the level of its surface being about 100 or 120 feet lower than the bank of the Nile at Benisoof; which, making every allowance for the rise of the bed of the river, and the proportionate elevation of its banks, could never have been on a level, even in Herodotus's time, with the lake Mœris; and consequently no return of the water could have taken place from the lake to the Nile. From the canal, however, it could, as at the present day; and the fish caught at the mouth of this and other canals, at that season, still afford a considerable revenue to the government, and are farmed by certain villages on the banks. That the level of the lake Mœris must be now about the same as formerly, is evident from our finding ruins of baths on its borders; and the accidental and temporary rise of its waters, which happened some years since, was merely owing to the bursting of the great dyke at Tomëéh. As to the Bathen of the great geographer D'Anville, it is quite Utopian.

The quantity of fish now caught in the lake Mœris itself, or Birket el Qorn, is very great, and supplies the markets of the Fyoom with abundance and variety of the finest kind — superior, certainly, in flavor to those of the Nile, though of the same species; but it is probable that the saline quality of the water may effect the slight change observable in the lake fish. I do not believe it offers any species, or even varieties, differing from those of the Nile, from whence, doubtless, it derived its original stock; and the twenty-two kinds it produced, according to the information of Diodorus,² do not appear to have been at any time considered different from those of the parent stream.

Like that of the canals, the lake fishing is farmed by the government to some rich inhabitants of the district,³ who are usually Copt Christians; and the fish, as in former times, are either taken fresh to the market, or are dried and salted, as Diodorus observes in his notice of the lake; though the number

¹ 'Egypt and Thebes,' p. 358.

² Diod. i. 52. Strabo, lib. xvii. p. 566, on the Nile fish.

³ The small village of Agalteh, at Thebes, pays annually 1500 piastres, about 21*l.*, to government for the fish of its canal.

of persons¹ engaged in this occupation bears a very small proportion to that of former times.

This custom of farming the fisheries was probably derived by the Arab government from their predecessors; it does not, however, seem to have been adopted by them at their first occupation of the country, but was introduced subsequently, since the Arab historian El Makrisi mentions it as a new idea. The method employed was doubtless similar to that of ancient times, which continues to the present day; and the passage is so curious that I shall introduce it from the translation given by the learned M. Silvestre de Saey.²

‘Quant à la pêche, c’est-à-dire, aux alimens que Dieu procure aux hommes par la pêche du fleuve, le premier administrateur qui en a fait un objet de revenu pour le fisc, c’est encore Ebn-Modabbir: il établit un bureau exprès pour cela; mais ne voulant pas donner à ce bureau la dénomination de bureau des pêches, qui lui paroissoit ignoble, il le nomma le bureau pour la plantation des pieux, et l’établissement des filets. Cette nouvelle invention fiscale se soutint. On députoit pour la recette de ce droit un inspecteur, des notaires, et un *cateb*, en divers cantons de l’Égypte, tels que le canal d’Alexandrie, le lac d’Alexandrie, celui de Nestarawa, Damiette, les cataractes d’Oswan, et plusieurs autres étangs et lacs. Ces commissaires partoient pour leur mission, au moment où le Nil commençoit à décroître, et les eaux à se retirer de-dessus les terres qu’elles avoient couvertes, pour rentrer dans le lit du fleuve. Antérieurement à cela, on avoit fermé les ouvertures pratiquées dans les chaussées, et les arches des ponts, au moment où le Nil avoit cessé de croître, afin d’empêcher les eaux de se retirer vers le fleuve, et de les forcer à s’accumuler du côté voisin des terres. Alors on plaçoit des filets, et on laissoit l’eau prendre son cours; le poisson, entraîné par le courant de l’eau, arrivoit aux filets, qui l’empêchoient d’aller plus loin, et de redescendre avec l’eau; il s’amassoit donc dans les filets. On le tiroit ensuite à terre, on le déposoit sur des tapis, on le saloit, et on le mettoit dans des vases; et, lorsqu’il étoit suffisamment fait, on le vendoit sous le nom de *salaisons* et de *sir*. On ne préparoit ainsi que le poisson qui étoit de la taille du doigt et au-dessous.

¹ Diod. *loc. cit.*: ‘They say that twenty-two kinds of fish are found in it (the lake Moeris), and so large a number is caught, that the numerous salters who are constantly employed there, can with difficulty

get through the work imposed upon them.’

² In his ‘*Rélation de l’Égypte*’ of Abdalatif, p. 283, note.

Cette même espèce, quand elle est fraîche, se nomme *absaria*; on la mange rôtie et frite.'

The great consumption of fish in ancient Egypt is not only attested by Herodotus and other writers, but by the sculptures of the upper and lower country; and the Bible makes allusion to the 'fishers' ¹ of the Nile, 'the sluices and ponds' ² where they were preserved, and the regret with which the Israelites remembered the fish they ate so 'freely' in Egypt. ³

The chase of the hippopotamus ⁴ was a favorite amusement of the sportsman in those parts of the upper country where it was found. It was probably always rare in Lower Egypt. ⁵ though Pliny ⁶ says it abounded in the Saïte nome: but in Upper Ethiopia this amphibious animal was common in the Nile, as at the present day. ⁷ Though not so hostile to man as the voracious crocodile, it was looked upon as an enemy which they willingly destroyed, since the ravages it committed at night in the fields occasioned heavy losses to the farmer; ⁸ and an additional inducement to kill it was the value attached to its hide, of which they made shields, whips, ⁹ javelins, ¹⁰ and helmets. ¹¹ To the two former purposes it is still applied; and, as Pliny observes, it retains its hardness perfectly, if preserved from moisture.

The whips are known by the name of *corbâg* (corbaj), and are in very general use in Egypt and Ethiopia for riding the dromedary, or for chastising a delinquent peasant; and it is probable that it was also applied to the latter purpose by the ancient Egyptians, since we find an attendant following the steward of an estate, with this implement of punishment in his hand. ¹²

¹ Isaiah xix. 8.

² Isaiah xix. 10.

³ Numb. xi. 5: 'We remember the fish which we did eat in Egypt freely.'

⁴ In Arabia it has the same name, *Faras el bahr*, 'river horse' (mare); and in the language of Ethiopia, *Yasint*.

⁵ It is not met with in Upper Egypt, or, indeed, on this side the Second Cataract, at the present day.

⁶ Pliny, xxviii. 8.

⁷ The hippopotamus appears at so early a period—the 4th and 5th Dynasty, in the tombs of Sakkarah and Gizeh—that it is difficult to believe that at that remote period it did not descend to the mouths of the Nile, and was chased in the neighboring Nile. The name of the animal was *khehem*, or *bechem*, and the female was called *teb*; and a lady on a Memphian tomb of the 4th Dynasty is called *Teb-t*, the female hippopotamus.—S. B.

⁸ Pliny and Diodorus are correct in saying 'it feeds on the cornfields;' but the modern hippopotamus has not retained the dexterity or the cunning of his ancestors, in walking backwards to deceive his pursuers, mentioned in Plin. viii. 25. In the correspondence of Amenem in the 1st Sallier papyrus, the miseries of agriculture are described. Amongst them it is mentioned that 'the caterpillar devours the herb-garden, the beasts devour the other things;' here the word for beast, *tebt*, is equally applicable to the hippopotamus. (Goodwin's 'Cambridge Essays,' 1858, p. 250.)—S. B.

⁹ Plin. viii. 25: 'Tergoris ad scuta galeasque impetetrabilis.'

¹⁰ Herod. ii. 71.

¹¹ Diod. i. 35.

¹² Woodcut No. 375.

The mode of attacking and securing the hippopotamus appears, from the sculptures of Thebes, to have been very similar to that now adopted about Sennaar; where, like the ancient Egyptians, they prefer chasing it in the river to an open attack on shore: and the modern Ethiopians are contented to frighten it from the corn-fields by the sound of drums and other noisy instruments.

I have already had occasion¹ to explain the method of taking this animal: it was entangled by a running noose, at the extremity of a long line wound upon a reel, at the same time that it was struck by the spear of the chasseur. 'This weapon consisted of a broad flat blade, furnished with a deep tooth or barb at the side, having a strong rope of considerable length attached to its upper end, and running over the notched summit of a wooden shaft, which was inserted into the head or blade, like a common javelin. It was thrown in the same manner, but on striking the shaft fell, and the iron head alone remained in the body of the animal, which, on receiving a wound, plunged into deep water, the rope having been immediately let out. When fatigued by exertion, the hippopotamus was dragged to the boat, from which it again plunged, and the same was repeated till it became perfectly exhausted; frequently receiving additional wounds, and being entangled by other nooses, which the attendants held in readiness, as it was brought within their reach.'



No. 375. Attendant carrying a whip or corbâg. Thebes.

Several representations of this subject have been found at Thebes, but the destructive thoughtlessness of the peasants, or the appropriating inclinations of travellers, have unfortunately destroyed them, and few vestiges now remain beyond the figure of the man, his spear, and a few minor details. I should, therefore have been unable to introduce a copy of this interesting subject, had not the kindness of Mr. Humphreys, who was fortunate enough to obtain a sketch of one of them, furnished me with it for the accompanying woodcut.²

The chasseur³ is here in the act of throwing the spear at the

¹ 'Egypt and Thebes,' p. 226.

² Woodcut No. 376.

³ The principal hunter is named Antef, a prevalent family name at the time of the

hippopotamus, which he has already wounded with three other blades, indicated by the ropes he holds in his left hand; and having pulled the animal towards the surface of the water, an attendant endeavors to throw a noose over its head, as he strikes it for the fourth time. Behind him is his son, holding a fresh spear in readiness: and in order that there should be no question



No. 376.

Spearing the hippopotamus.

about the ropes belonging to the blades, the fourth is seen to extend from his hand to the shaft of the spear he is throwing. The upupa, heron, and other birds are frightened from the rushes as the boat approaches; and the fish, with a young hippopotamus, seen at the bottom of the water, are intended to show the communication of the fenny lake with the Nile.

The mode of attacking the hippopotamus is thus described

11th Dynasty, to which period the tomb must be assigned; he is called *nem aa*, 'great repeater,' and the hereditary lord or duke and great ruler or governor in his nome or district, and 'is going to spear the

hippopotamus, delighting in the fields and in all the pursuits of fowling and fishing' 'The son who holds the javelins is a royal scribe. — S. B.

by Diodorus: ¹ 'It is chased,' says the historian, 'by many persons, each armed with iron javelins. As soon as it makes its appearance at the surface of the water they surround it with boats, and closing in on all sides they wound it with blades, furnished with iron barbs, and having hempen ropes fastened to



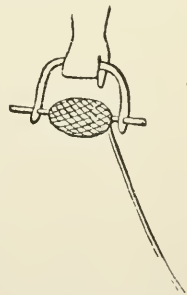
No. 377.

Spear used in the chase of the hippopotamus.

Thebes.

them, in order that when wounded it may be let out, until its strength fails it from loss of blood.'

The spear they used on these occasions was evidently of a different construction from that intended for ordinary purposes, and was furnished, as Diodorus observes, with a rope for letting out the wounded animal, in the same manner as practised by the modern Ethiopians: there was sometimes another line fastened to the shaft, and passing over a notch at its upper end: which was probably intended to give the weapon a greater impetus, as well as to retain the shaft when it left the blade. The rope attached to the blade was wound upon a reel, generally carried by some of the attendants. It was of very simple construction, consisting of a half ring of metal, by which it was held, and a bar turning in it, on which the line or string was wound.

No. 378. A reel held by an attendant. *Beni-Hassan.*¹ Diod. i. 35.

Besides the fish cured, or sent to market for the table, a very great quantity was set apart expressly for feeding the sacred animals and birds, — as the cats, crocodiles, ibises, and others; and it is probable that some of the large reservoirs attached to the temple were used as well for preserves or *piscinæ*, where the fish were kept, as to afford a supply of water for the necessary ablutions of the devout, and for various purposes connected with religion.

With regard to the number of fish in the river of Egypt, and the many species said to have been known there, it may be conjectured that some formerly common to the lower parts of the Nile are no longer met with to the north of the First and Second Cataracts: or varieties of the same species may have been enumerated in the twenty-two mentioned by Diodorus: and we even find that the Ethiopians sometimes brought fish, perhaps of a rare kind unknown in Egypt, as part of their tribute to the Egyptians.¹

That some animals, both aquatic and terrestrial, as well as several botanical productions, once common in Egypt, are now confined to the latitudes of Ethiopia, is well known: the crocodile, formerly an inhabitant of Lower Egypt and the Delta,² now limits the extent of its visits northward to the districts about Manfaloot; and the hippopotamus is no longer seen in Lower Ethiopia. And if one was known, some years ago, to wander downwards into Nubia, below the Second Cataract, and another even as far as Damietta, these were accidental occurrences, which occasioned as much astonishment to the people who witnessed their unexpected visit, as to the bewildered animals themselves.

As usual on such occasions, their unintentional intrusion, where they could not be objects of terror, was punished with a readiness which the same persons would not have displayed in places where they are really obnoxious; and every Turk or peasant who could procure a weapon was fired with the proud desire of destroying the intruder, and showed the same *chivalrous* feeling usually called forth against an imprudent porpoise, who has ventured to pass the bridges of the English capital.

But the hippopotamus once lived in Lower Egypt, and the

¹ The fish brought from Mesopotamia and elsewhere have been already mentioned. — S. B.

² Seneca (Nat. Quæst. iv. 2) says, 'At the Heracleotic mouth of the Nile, which

is the largest, a battle occurred between the dolphins of the sea and the crocodiles of the river, the former being victorious!' [This is also noticed by Strabo, xvii. p. 567, and Pliny, viii. 26. — G. W.]

city of Papremis, in the Delta, worshipped it as a sacred animal worthy of the Egyptian Mars.

Neither the hippopotamus nor the crocodile appears to have been eaten by the ancient Egyptians.¹ Pliny indeed mentions the medicinal properties of both of them:² and Plutarch affirms that the people of Apollinopolis used to eat the crocodile:³ this, however, was not a general custom, but merely upon a certain occasion connected with religious superstition, and intended to show their abhorrence of Typhon the evil genius, of whom it was an emblem. 'They have likewise,' he continues, 'a solemn hunt of this animal upon a particular day, set apart for the purpose, at which time they kill as many of them as they can, and afterwards throw their dead bodies before the temple of their god, assigning this reason for their practice, that it was in the shape of a crocodile Typhon eluded the pursuit of Orus.'⁴

This is one of the many instances of the different feelings with which the sacred animals were regarded in various parts of Egypt: and as Herodotus⁵ observes, 'Some of the Egyptians consider the crocodile sacred, while others make war upon it; and those who live about Thebes and the lake Mœris (in the Arsinoïte nome) hold it in great veneration.'

In some places it was treated with the most marked respect, and kept at considerable expense: it was fed and attended with the most scrupulous care; geese, fish, and various meats were dressed purposely for it; they ornamented its head with earrings, and its feet with bracelets and necklaces of gold or artificial stones;⁶ it was rendered perfectly tame by kind treatment; and after death the body was embalmed in a most sumptuous manner. This was particularly the case in the Theban, Ombite, and Arsinoïte nomes; and at a place now called Maabdeh, opposite the modern town of Manfaloot, are extensive grottoes, cut far into the limestone mountain, where numerous crocodile mummies have been found, perfectly preserved, and evidently embalmed with great care.

The people of Apollinopolis, Tentyris, Heracleopolis, and other places, on the contrary, held this animal in abhorrence, and lost no opportunity of destroying it; and the Tentyrites were so

¹ Some modern travellers have eaten occasionally steaks cut from the crocodile, the flesh of which is musky and disagreeable; that of the hippopotamus is more palatable.—S. B.

² Plin. xviii. 8.

³ Plut. de Isid. s. 50.

⁴ The crocodile was called by the Egyptians *ensuh*, 'out of an egg,' and many other special names according to its kind or qualities.—S. B.

⁵ Herod. ii. 69.

⁶ Ibid.

expert, from long habit, in catching, and even in engaging this powerful animal in its native element, that they were known to follow it into the Nile, and bring it by force to the shore. Pliny and other ancient authors mention the wonderful feats performed by them not only in their own country, but in the presence of the Roman people: and Strabo¹ says that on the occasion of some crocodiles being exhibited at Rome, the Tentyrites, who had followed them, fully confirmed the truth of the report of their power over those animals; for, having put them into a spacious tank of water, with a shelving bank artificially constructed at one side, the men boldly entered the water, and entangling them in a net dragged them to the bank, and back again into the water, in the presence of numerous spectators.

Pliny observes that, 'though the Tentyrites are small men, they have the greatest presence of mind in their encounters with the crocodile, which is an animal most dangerous to those who fear it, but timid when pursued. They even dare to follow it singly, and swimming after it in the river spring upon its back, and thrust a bar into its open mouth, which, being held at the two extremities, serves as a bit and enables them to force it to the shore.' Pliny even goes so far as to state that, frightening them with the voice alone, they compelled them to render the bodies they had devoured to the (disappointed) embalmers;² but as crocodiles show themselves much greater epicures in their mode of eating, and tear their food to pieces before they swallow it, we may take the liberty of suggesting the probability that, in these cases, the animal *abandoned the body* on their approach: its usual habit being to bring it to the shore, and there to tear it up, the clothes having been stripped off while in the water.

Seneca³ accounts for the power possessed by the Tentyrites over the crocodile from their intrepidity, and in accordance with Pliny, and with modern experience, he states it to be 'timid before the bold, and most ready to attack those who fear it: the Tentyrites excelling neither in their nature nor constitution, but in their fearless contempt of it; for they follow, and by means of a snare, stop it in its flight; nor are any killed except those who are wanting in presence of mind.'

'The crocodile is in fact,' as I have elsewhere remarked,⁴ 'a timid animal, flying on the approach of man, and, generally

¹ Strabo, xvii. p. 560, ed. Cas.

² Plin. viii. 25.

³ Seneca, Nat. Quæst. iv. 2.

⁴ 'Egypt and Thebes,' p. 409.

speaking, only venturing to attack its prey on a sudden; for which reason we seldom or never hear of persons devoured by it, unless incautiously standing at the brink of the river, where its approach is concealed by the water; and where, by the immense power of its tail, it is enabled to throw down and overcome the strongest man, who, being carried instantaneously to the bottom of the river, has neither the time nor the means to resist.

‘Pliny, like other authors,¹ has been led into a common error, that the sight of the crocodile is defective under water, which a moment’s consideration, without the necessity of *personal* experience, should have corrected; for it is at least reasonable to suppose that an animal living chiefly on fish, should, in order to secure its prey, be gifted with an equal power of sight; and that of fish cannot be considered defective: but Herodotus, the *father* of history and of errors, affirms² that it is totally “blind under water.”

‘Egypt produces two varieties of this animal,³ distinguished by the number and position of the scales on the neck. One has the front row composed of six scales, behind which is a cluster of four large central scales in two lines, with two smaller ones on each side of the uppermost of these lines; the other has in the front row four only, and the disposition of the other eight is thus: four central scales in two lines, with one smaller one on each side of the upper line, and two behind the second and lower line. The first row of the body consists of six scales, the former variety having only four. The other scales of the body are nearly alike in both. They do not exceed eighteen or nineteen feet, though travellers have mentioned some of stupendous size.’

Herodotus enters into a detail of the habits of the crocodile, and relates the frequently repeated story of the *trochilus* entering the animal’s mouth during its sleep on the banks of the Nile, and relieving it of the leeches which adhere to its throat.⁴ The truth of this assertion is seriously impugned, when we recollect that leeches do not abound in the Nile; and the polite understanding said to exist between the crocodile and the bird becomes more improbable, when we examine the manner in which the throat of the animal is formed; for having no tongue, nature has given it the means of closing it entirely, except when in the

¹ Aristot. Hist. An. ii. 10: ‘They see imperfectly in the water.’

² Herod. ii. 68.

³ ‘Egypt and Thebes,’ p. 225, note. Conf. Plin. xxviii. 8.

⁴ Herod. ii. 68. Plin. viii. 25.

act of swallowing: and during sleep the throat is constantly shut, though the mouth is open.

The hostile intrusion of the ichneumon, related by other writers,¹ is equally destitute of probability.

That birds living on flies frequently flit about the crocodile, while lying on the sand, we can readily believe; and this circumstance, as well as the presence of a small *running* bird, a species of *charadrius*,² which is often seen on the same bank, and which, loudly chirping on the approach of man, may be supposed to warn the crocodile of danger, very possibly led to the fable of those visits of the *trochilus*,³ and the friendly services it rendered the sleeping crocodile.

Its eggs, as Herodotus and Pliny observe, are small, considering the size which it afterwards attains, being the size of a large hen's egg, but longer in proportion to its width, and are deposited by the female in the sand, or in the light loose earth of the river side; and its constant desire to enjoy the fresh air, during the summer, is shown by its lying for a length of time asleep on the sandbanks, with its open mouth turned to the prevailing wind.

‘They had many different modes of catching it.’ says Herodotus;⁴ ‘that most worthy of notice is as follows: They fasten a piece of pork to a hook, and throw it into the middle of the stream, as a bait; then, standing near the water's edge, they beat a young pig, and the crocodile, being enticed to the spot by its cries, finds the bait on its way, and swallowing it, is caught by the hook. Then they pull it ashore, and the first step is to cover its eyes with mud, and thus being deprived of sight it is unable to offer an effectual resistance.’ We also find from the sculptures that they attack the crocodile with a spear, transfixing it as it passed beneath the boat in shallow water. In Ethiopia, at the present day, the crocodile is caught by tying a dog as bait on a log of wood, round the centre of which a rope is fastened. As soon as the crocodile has swallowed the dog, the cord being pulled, the wood turns across in his throat, and he is then pulled on shore.

The hatred borne by some of the Egyptians against the crocodile frequently gave rise to serious disputes, and the inhabitants of Tentyris, who had killed and eaten the sacred animal,

¹ Plin. viii. 25.

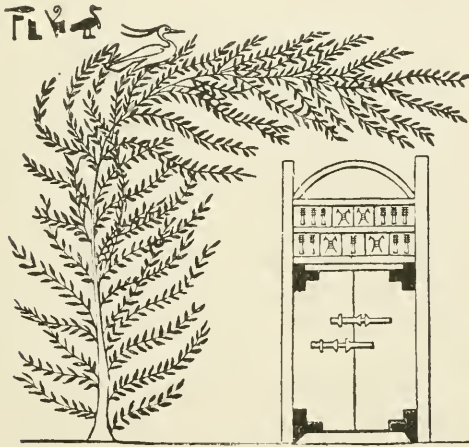
² Called *sicsac* in Arabic.

³ The name *trochilus* signifies ‘roller.’

⁴ Herod. ii. 70.

of Ombos, were attacked with all the fury of religious feud. On one occasion, after many had been wounded on both sides, and the Tentyrites were worsted and compelled to fly, the Ombites secured a prisoner of the opposing party, and, if we may believe Juvénal,¹ satiated their revenge by eating his body. The statement, however, is questionable, nor is it probable even in that depraved age, when Egypt had passed under the dominion of the Romans, that such a scene actually occurred; and great license is always allowed to poets, and still more is taken by the severity of satire.

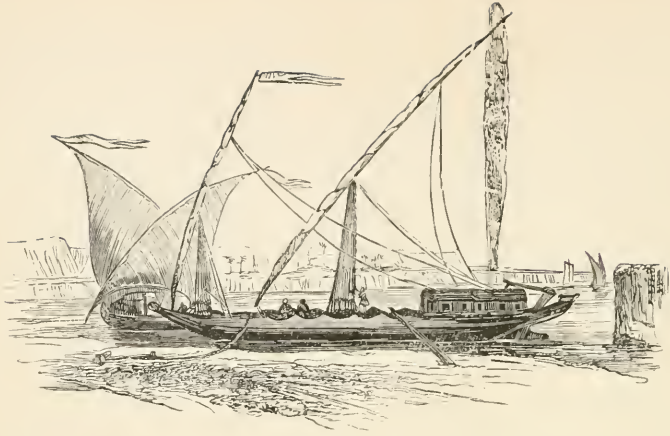
¹ Juv. Sat. xv. 33, 80.



No. 379.

Sacred tamarisk of Osiris. In the branches, the *Bennu* or Phœnix. 'The Soul of Osiris.'

How.



VIGNETTE H. — Modern boats of the Nile. On the opposite bank is a whirlwind of sand.

CHAPTER IX.

Arts and Manufactures — Glass — Linen — Dyeing — Rope-making — The Papyrus — Leather-cutters — Potters — Cabinet-makers and Carpenters — Makers of Chariots and Coffins — Coopers — Boats and War Galleys — Tin and other Metals — Gold Mines — Gold Working and Gilding.

OF the progress of the ancient Egyptians in many useful branches of art we have unquestionable proofs in the monuments that remain, and from the evidence of ancient writers. The sculptures inform us that many inventions were known to them at the early periods when most other nations were still in their infancy, which, though generally ascribed to a much later epoch, are, from the facility we now have of fixing the chronology of Egyptian monuments, ascertained to be coeval with the Exodus, or the bondage of the Israelites.

The scientific skill they possessed in architecture is always a matter of surprise to the traveller who beholds the stupendous monuments of Egypt: whose solid masonry would have defied the ravages of time, and have remained unimpaired to the present day, had not the destructive hand of man been employed against them. The invasion of Cambyses, and the subsequent wars with the Persians; the three years' siege of Thebes, by Ptolemy Lathyrus, which laid several of her buildings in ruins, and so completely reduced that ancient capital that it was no longer worthy to be considered an Egyptian city; the inveteracy of the Christians against their Pagan predecessors, and the abhorrence

of the Moslems for the monuments of the idolatrous infidels; and lastly, the position of the temples, which presented themselves to the mason as a convenient quarry, supplying, at little labor and expense, abundance of stones for the erection of new edifices, were the baneful causes of the downfall of Egyptian monuments: but though great portions of the finest buildings were destroyed, sufficient remains to attest their former grandeur, and to proclaim the wonderful skill and mechanical knowledge of their founders.

At the period of the Persian invasion, Egypt was looked upon as the great school of science, and the repository of all kinds of learning; but the arts had fallen from the degree of excellence to which they had attained under the Augustan age of the 18th Dynasty, and though luxury and private wealth increased, taste in sculpture and architecture had long since been on the decline, and minute and highly-finished details were substituted for the simple and dignified forms of an earlier period. The arts, however, continued to flourish under the succeeding dynasties, and in the reigns of Psammaticus and Amasis the encouragement given to architecture, sculpture, and painting seemed to promise an improvement, if not the revival, of taste, and arrested for a time their downfall: but an unexpected event was destined to bring about their sudden decadence, and the Persian conquest dealt a blow from which they vainly strove to recover in the succeeding reigns of the Macedonian dynasty: for not only were the finest monuments destroyed or mutilated, statues,¹ works of art, and all the wealth² of the country carried off to Persia, but the artists themselves were compelled to leave their homes, to follow the conquerors to their capital, and to commemorate the victories obtained over Egypt by the authors of their own captivity and misfortunes. Thus deprived of the finest models, humbled by the lengthened occupation of the country, and losing the only persons capable of directing taste or encouraging art, Egypt, already beginning to sink, vainly endeavored to struggle with the overwhelming current of events: and while Persia was benefited, Egyptian art received its death-blow from the invasion of Cambyses.

The Egyptians had long been renowned for mathematical

¹ Ptolemy Euergetes is said to have brought back 2500 statues, when he invaded the Persian dominions, which had been taken from Egypt by Cambyses.

² Conf. Diodor. i. 46, 'The silver and gold, the abundance of ivory and precious

stones, carried away by the Persians;' and i. 49. This is also alluded to in the Decree of Canopus, l. 10, 11. (Lepsius, 'Das bilingue Dekret von Kanopus,' fol. Berlin, 1866, p. 19.) — S. B.

science; but it was not till the power and wealth of the country were at their zenith that full scope was given for its display in the grand style of public monuments: a fact sufficiently indicated by their increase of scale and vastness of size at that period; the buildings of olden time being generally of much smaller dimensions than those of the advanced age of the 18th Dynasty. I particularly allude to the temples and to the colossal statues erected at the latter epoch, which far exceed in their scale, and the size of the blocks themselves, the ordinary monuments of an earlier era, as may be observed in the increased proportions of the grand hall of Karnak, added by Rameses the Great, and the dimensions of the sitting colossi of Amenophis, in the plain of Thebes; or that of Rameses at the Memnonium, which weighed about 886 tons, and was brought over land from the quarries at the cataracts of Syene, a distance of more than 120 miles.

Many obelisks, each of a single block of granite, had already been hewn and transported from the same quarries, as early at least as the reign of Usertesen I., whom I suppose to have been the contemporary of Joseph; and the same mechanical skill had already existed even before that period, as is shown from the construction of those wonderful monuments the Pyramids, near Memphis, which, in the size of the blocks and their style of building, evince a degree of architectural knowledge perhaps inferior to none possessed at a subsequent epoch. But it was not generally called forth in early times; they were then contented with monuments of an inferior scale, and their ordinary buildings were not of the same gigantic dimensions. A grand work was then seldom undertaken without an adequate motive, and the knowledge they possessed was reserved for particular and extraordinary occasions; but when riches and the love of show increased, they extended the size of their temples, and constant practice having made the means familiar to them, artisans and engineers vied with each other in hewing and transporting colossal statues, monoliths, and other ponderous monuments, which served for ornament and the display of their mechanical knowledge.

It was not in this branch of science alone that the Egyptians excelled; the wonderful skill they evinced in sculpturing or engraving hard stones is still more surprising; and we wonder at the means employed for cutting hieroglyphics, frequently to the depth of more than two inches, on basalt, on syenite, and other stones of the hardest quality. Nor were they deficient in

taste — a taste, too, not acquired by imitating approved models, but claiming for itself the praise of originality, and universally allowed to have been the parent of much that was afterwards perfected, with such wonderful success, by the most highly gifted of nations, the ancient Greeks; and no one can look upon the elegant forms of many of the Egyptian vases, the ornamental designs of their architecture, or the furniture of their rooms, without conceding to them due praise on this point, and admitting that, however whimsical some of the figures may be in sacred subjects, they often showed considerable taste, where the regulations of the priesthood and religious scruples ceased to interfere.

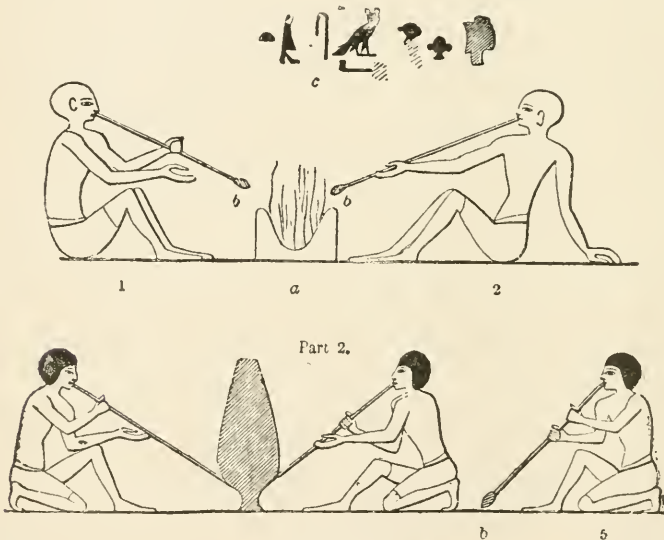
In their temples they were obliged to conform to rules established in the early infancy of art, which custom and prejudice had rendered sacred: the ancient style was always looked upon with the highest veneration, and it is probable that from the same feeling of respect the formulæ and diction of their books of law or religion continued the same as in early times: a custom prevalent among many people, whatever improvements language undergoes: for neither would the Turkish Moslem dare to translate the Arabic Qorán, nor the Cairene to alter it to his own dialect; and we might ourselves object to a Bible written in the style of Robertson or Hume.

Plato and Synesius both mention the stern regulations which forbade their artists to introduce innovations in religious subjects; and the more effectually to prevent this, 'the profession of artist was not allowed to be exercised by common or illiterate persons, lest they should attempt anything contrary to the laws established regarding the figures of the deities.'

In their household furniture, and the ornamental objects used in their dwelling-houses, they were not restricted by any established rules; here, as I have observed, much taste was displayed, and their vases frequently bear so strong a resemblance to those of Greece, that we might feel disposed to consider them borrowed from Greek models, did not their known antiquity forbid such a conclusion; and many have mistaken the ornamental devices attached to them and to other fancy works of Egyptian art, for the productions of Greek sculptors. Now that we are acquainted with the dates of Egyptian monuments, the square border and scrolls, so common on Athenian, Sicilian, Etruscan, and Græco-Italian vases, are shown to be, from the most remote time, among the ordinary devices on cups, and the ceilings of tombs, at Thebes and other places; and the graceful

curve of the Egyptian cornice, which, not confined to architecture, is repeated on vases and numerous articles of furniture, was evidently adopted, for the same ornamental purpose, by the Greeks.¹

One of the most remarkable inventions of a remote era, and one with which the Egyptians appear to have been acquainted at least as early as the reign of the first Usertesén, upwards of 3500 years ago, is that of glass-blowing. The process is represented in the paintings of Beni-Hassan, executed during the reign of that monarch and his immediate successors; and the same is again repeated, in other parts of Egypt, in tombs of various epochs.



No. 380.

Part 1. Glass-blowers.
2. The same.*Beni-Hassan.*
Thebes.

The glass at the end of the blow-pipe, *b b*, is colored green.
a is the fire. *d*, a glass bottle.

The form of the bottle and the use of the blow-pipe are unequivocally indicated in those subjects: and the green hue of the fused material, taken from the fire at the point of the pipe, cannot fail to show the intention of the artist. But if the sceptic should feel disposed to withhold his belief on the authority of a painted representation, and deny that the use of glass could be proved on such evidence, it may be well to remind him that images of glazed pottery were common at the same period, that

¹ Vases, woodcut No. 268; and doorways, woodcuts Nos 120, 121, and 123.

been used for holding wine, at least as early as the Exodus, 1490 years before our era. [The earliest dated example of glass is a small fragment of dark-blue glass impressed with the prenomen of Antef III., of the 11th Dynasty. There is also a bottle for the toilet, in shape like a Greek *oinochoë*, of a turquoise-blue color, and having ornaments and an inscription in yellow color on the neck and body. The glass is semi-opaque, and partly ornamented with waving lines. After the 18th, many fragments of vases of the period of the 19th Dynasty, and discovered amidst the *débris* of the Sarbet el Khadim, in the neighborhood of Mount Sinai, were found by the late Major Macdonald.—S. B.]



Bottle of light blue glass, inscribed with the name of Thothes III., of the 18th Dynasty. No. 382. *British Museum.*

Till within a few years, prejudice forbade the belief that the ancients were acquainted with the manufacture of glass, and many persons could not be persuaded that the Romans used it, though represented in the paintings of Pompeii with the most unquestionable truth, and a pane of glass and numerous fragments of broken bottles had been discovered in that excavated city. The fact, however, became established, and these doubts were silenced: still it was questioned whether the invention dated before the destruction of that city; the glass was much condemned as of inferior quality; and the authority of Pliny,¹ previously disbelieved, was now welcomed as an old friend, and called forth to prove that glass was a late discovery of some Phœnician mariners, who, having lighted a fire on the sea-shore, and supported their cooking utensils on blocks of nitre, were taught by the union of the fused substances the secret of this useful invention. The Roman naturalist had fixed no time for this event: and if he spoke of improvements in the art introduced in the reign of Tiberius, it was presumed that, though a vitrified substance was known, its qualities were not properly understood, and that its discovery only dated about the Augustan age. They even objected that under the first Emperors windows were made of a transparent stone, brought from Spain and other

¹ Plin. xxxvi. c. 26.

countries, called *Lapis specularis* : and they hence inferred the imperfect knowledge of glass.

This stone is now well known under the name of tale ; it was only used in the houses of the rich, in litters, or as an ornament to the best apartments ; other persons being content with linen, horn, or paper.

Such were the feeble arguments brought forward to disprove the use of glass for vases and for ornamental purposes among the Romans ; but with much less reason did they apply to its invention in other countries ; and though the Egyptians never knew the necessity, or rather the annoyance, of glass windows under a burning sun, they were well acquainted with vases of that material ; and the workmen of Thebes and Memphis, and subsequently Alexandria, were famed for the excellent qualities of glass ware they produced, with which Rome continued to be supplied long after Egypt became a province of the empire. Strabo was informed by a glassmaker of Alexandria¹ that a peculiar earth was found in Egypt, without which it was impossible to manufacture certain kinds of glass of a brilliant and valuable quality ; and some vases presented by an Egyptian priest to the Emperor Hadrian² were considered so curious and valuable that they were only used on grand occasions.

Such, too, was the skill of the Egyptians in the manufacture of glass, and in the mode of staining it of various hues, that they counterfeited with success the amethyst and other precious stones, and even arrived at an excellence in the art which their successors have been unable to retain, and which our European workmen, in spite of their improvements in other branches of this manufacture, are still unable to imitate ; for not only do the colors of some Egyptian opaque glass offer the most varied devices on the exterior, distributed with the regularity of a studied design, but the same hue and the same device pass in right lines directly through the substance ; so that in whatever part it is broken, or wherever a section may chance to be made of it, the same appearance, the same colors, and the same device present themselves, without being found ever to deviate from the direction of a straight line from the external surface to the interior.

This quality of glass, of which I have seen several specimens, has been already noticed by the learned Winkelmann, who is

¹ Strabo, lib. xvii.

² Vopiscus, in Vitâ Saturnini, c. 8.

decidedly of opinion that 'the ancients carried the art of glass-making to a higher degree of perfection than ourselves, though it may appear a paradox to those who have not seen their works in this material.'¹ He describes two pieces of glass, found at Rome a few years before he wrote, which were of the quality above mentioned.² 'One of them,' he says, 'though not quite an inch in length and a third of an inch in breadth, exhibits on a dark and variegated ground a bird resembling a duck, in very bright and varied colors, rather in the manner of a Chinese painting than a copy of nature. The outlines are bold and decided, the colors beautiful and pure, and the effect very pleasing, in consequence of the artist having alternately introduced an opaque and a transparent glass. The most delicate pencil of a miniature painter could not have traced with greater sharpness the circle of the eyeball, or the plumage of the neck and wings: at which part this specimen has been broken. But the most surprising thing is, that the reverse exhibits the same bird, in which it is impossible to discover any difference in the smallest details; whence it may be concluded that the figure of the bird continues through its entire thickness. The picture has a granular appearance on both sides, and seems to have been formed of single pieces, like mosaic work, united with so much skill, that the most powerful magnifying-glass is unable to discover their junction.

'From the condition of this fragment, it was at first difficult to form any idea of the process employed in its manufacture; and we should have remained entirely ignorant of it had not the fracture shown that filaments of the same colors as on the surface of the glass, and throughout its whole diameter, passed from one side to the other: whence it has been concluded that the picture was composed of different cylinders of colored glass, which being subjected to a proper degree of heat, united by (partial) fusion. I cannot suppose they would have taken so much trouble, and have been contented to make a picture only the sixth of an inch thick, while, by employing longer filaments, they might have produced one many inches in thickness, without occupying any additional time in the process; it is therefore probable this was cut from a larger or thicker piece, and the number of the pictures taken from the same depended on the length of the filaments, and the consequent thickness of the original mass.

¹ Winkelmann, 'Orig. de l'Art,' lib. i. 2, 19.

² Ibid.

‘The other specimen, also broken, and about the size of the preceding one, is made in the same manner. It exhibits ornaments of a green, yellow, and white color, on a blue ground, which consist of volutes, strings of beads, and flowers, ending in pyramidal points. All the details are perfectly distinct and unconfused, and yet so very minute, that the keenest eye is unable to follow the delicate lines in which the volutes terminate; the ornaments, however, are all continued, without interruption, through the entire thickness of the piece.’¹

Sometimes, when the specimens were very thin, they applied and cemented them to a small slab of stone of their own size, which served as a support at the back; and by this means they were enabled to cut them much thinner, and consequently to increase their number.

Two of the most curious specimens I have seen of this kind of glass have been brought to England. One is in the possession of Captain Henvey, R.N., to whose kindness I am indebted for the copy I have given of it, and of the bead before mentioned. The other was found in Egypt by Dr. Hogg.²

The quality and the distribution of the colors in Captain Henvey’s specimen are strikingly beautiful; the total size is about $1\frac{2}{10}$ inch square; and the ground is of an amethyst hue. In the centre is a device consisting of a yellow circle, surrounded by light blue with a bright red border, and on the four sides shoot forth light blue rays edged with white. Around this, which is isolated, runs a square ornament of bright yellow, divided into distinct parts, formed by openings in each of the sides; and at the four corners a beautiful device projects, like a leaf, formed of a succession of minute lines, green, red, and white, the last two encircling the green nucleus, which meet in a common point towards the base, and terminate in almost imperceptible tenuity. The delicacy of some of the lines is truly surprising, and not less the accuracy with which the patterns are executed; and the brilliancy of the colors is as remarkable as the harmony maintained in their disposition: an art then much

¹ The glass described by Winkelmann is of the later Ptolemaic, or Roman period, and was not made by the Egyptians at an older period. It was produced chiefly at Alexandria, and used for small objects, and similar specimens are not uncommonly found at Rome, which was supplied with glass from Egypt. This kind was made in cylindrical or square rods, the glass being

arranged in patterns vertically, and horizontal sections taken which had the pattern on each side. — S. B.

² Plate XIV., *figs.* 5, 6, 7. Now in the British Museum. It represents the side of a throne of a deity or king, with feathered or scale ornaments, and, like all these specimens, is of a late period. — S. B.

more studiously attended to, and far better understood, than at the present day.

The secret of making these glass ornaments is more readily explained from this specimen than any I have met with. It consists of separate squares, whose original division is readily discovered in a bright light, as well as the manner of adjusting the different parts and of uniting them in one mass; and here and there we find that the heat applied to cement the squares has caused the colors to run between them, in consequence of partial fusion from too strong a fire. This fact, and the disposition of the separate squares, will be better understood from a reference to the plate (XIV., *figs.* 5, 6, 7), from which, too, some idea may be obtained of the fineness of the lines composing the devices.

Not only were these various parts made at different times, and afterwards united by heat, rendered effective on their surfaces by means of a flux applied to them, but each colored line was at first separate, and, when adjusted in its proper place, was connected with those around it by the same process; and these, as Winkelmann very properly suggests, were cylinders or laminae, according to the pattern proposed, which passed in direct lines through the substance or ground in which they were imbedded.

Paw, Goguet, and other antiquaries had long ago been convinced that glass was known to the Egyptians, as well as to the Phœnicians, at a very remote period, and the immense emeralds mentioned by ancient authors were considered glass imitations of those precious stones; a conjecture rendered still more plausible by the experience of modern times, which shows that the most noted jewels of Christian churches are frequently formed of the same materials. Such were the colossal statue of Serapis,¹ in the Egyptian labyrinth, nine cubits, or thirteen feet and a half, in height; an emerald presented by the king of Babylon to an Egyptian Pharaoh,² which was four cubits, or six feet, long, and three cubits broad; and an obelisk³ in the temple of Jupiter, which was forty cubits, or sixty feet, in height, and four cubits broad, composed of four emeralds.⁴

The opinion of those writers respecting the early invention

¹ Plin. lib. xxxvii. 5, on the authority of Apion, surnamed Plistoniceus.

² Plin. *loc. cit.* on the authority of Theophrastus.

³ Plin. *loc. cit.* See also Theophrastus on Stones, s. 44.

⁴ To have made them of glass required extraordinary skill.

of glass is now fully confirmed; and whether the first idea originated with the Phœnicians, or their neighbors the Egyptians, we have satisfactory evidence of its use 3300, or perhaps 3500 years ago.

Of the different purposes to which glass was applied by the ancients, Winkelmann gives a further account in the same chapter, where he pronounces his opinion that, 'generally speaking, it was employed more frequently in ancient than in modern times;' and cites, as another proof of their great skill in its manufacture, the vase preserved in the Palazzo Barberini, at Rome, which, from the manner in which the layers of color were united, 'had been mistaken for a real sardonyx.' It is the same that is now in the British Museum, and known by the name of the Portland vase.¹

That the Egyptians, at the early period of the 18th Dynasty, were well acquainted, not only with the manufacture of common glass for beads and bottles of ordinary quality, but with the art of staining it of divers colors, is sufficiently proved by the fragments found in the tombs of Thebes; and so skilful were they in this complicated process that they imitated the most fanciful devices, and succeeded in counterfeiting the rich hues and brilliancy of precious stones.² The green emerald, the purple amethyst, and other expensive gems were successfully imitated; a necklace of false stones could be purchased at a Theban jeweller's, to please the wearer or deceive a stranger by the appearance of reality; and the feelings of envy might be partially allayed, and the love of show gratified, by these specious substitutes for real jewels.

Pliny states³ that the emerald was more easily counterfeited than any other gem, and considers the art of imitating precious stones a far more lucrative piece of deceit than any devised by the ingenuity of man: Egypt was, as usual, the country most

¹ Some imitations of it were made by Wedgwood. This vase is of blue glass, with white figures in relief, which have been subsequently polished and chased by the wheel or graver. One side represents the capture of Thetis by Peleus, the other is unknown. It is said to have been found in the sarcophagus of Alexander Severus, in the Monte del Grano, near Rome, in a large sarcophagus, which is of the period, if not of the emperor, and the vase is of Greek or Græco-Roman work. It has been often described. (G. Millingen, 'Ancient Unedited Monuments,' pl. A.) — S. B.

² Seneca says that Democritus first showed the method of polishing ivory, and of imitating precious stones, (Epiſt. 90); but this was long after the art was common in Egypt. Plin. xxxvi. 26, and Herodot. ii. 69, who calls them *λίθινα χύτρα*, or melted composition of stone.

³ 'Non est smaragdo alia imitabilior gemma mendacio vitri;' and 'ex crystallo tinguntur smaragdi, . . . neque est ulla fraus vitæ lucrosior' (lib. x. xxvii. c. 12, 33, 75).

noted for its skill in this manufacture,¹ and Strabo² says, 'that an earth found there was the only kind which would answer for certain rich and variegated compositions.' The emeralds mentioned by Apion and Theophrastus, which, as before observed, are supposed to have been of glass, might also be cited to show that the art was known in a Pharaonic age, if we had not abundant and far more satisfactory proofs from specimens found in the ruins of Thebes; and we can readily believe the assertion of Pliny, that in his time they succeeded so completely in the imitation as to render it difficult to distinguish false from real stones.³

Many, in the form of beads, have been met with in different parts of Egypt, particularly at Thebes; and so far did the Egyptians carry this spirit of imitation, that even small figures, scarabæi, and objects made of ordinary porcelain, were counterfeited, being composed of still cheaper materials. A figure which was entirely of earthenware, with a glazed exterior, underwent a somewhat more complicated process than when cut out of stone, and simply covered with a vitrified coating: this last could therefore be sold at a low price; it offered all the brilliancy of the former, and its weight alone betrayed its inferiority: by which means, whatever was novel or pleasing from external appearance, was placed within the reach of all classes; or at least the possessor had the satisfaction of appearing to partake in each fashionable novelty.

Such inventions, and successful endeavors to imitate costly ornaments by humbler materials, not only show the progress of art among the Egyptians, but strongly argue the great advancement they had made in the customs of civilized life: since it is certain, that until society has arrived at a high degree of luxury and refinement, artificial wants of this nature are not created, and the lower classes do not yet feel the desire of imitating their wealthier superiors, in the adoption of objects dependent on taste or accidental caprice.

Glass bugles and beads were much used by the Egyptians for necklaces, and for a sort of network with which they covered the wrappers and cartonnage of mummies, arranged so as to form, by their varied hues, numerous devices and figures, in the manner of

¹ The memoir of M. Boudet, 'Sur l'Art de la Verrerie, né en Égypte,' in that valuable work the 'Description de

l'Égypte,' vol. ix. p. 213.

² Strabo, lib. xvi. p. 521, ed. Cas.

³ Plin. xxxvii. 12.

our bead purses ; and the ladies sometimes amused themselves by stringing them for ornamental purposes, as at the present day.

The principal use to which glass was applied by the Egyptians (besides the beads and fancy work already noticed) was for the manufacture of bottles, vases, and other utensils. wine was frequently brought to table in a bottle, or handed to a guest in a cup¹ of this material, and a body was sometimes buried in a glass coffin.² Occasionally a granite sarcophagus was covered with a coating of vitrified matter, usually of a deep green color, which displayed, by its transparency, the sculptures or hieroglyphic legends engraved upon the stone: a process well understood by the Egyptians, and the same they employed in many of the blue figures of pottery and stone commonly found in their tombs; the stone, in one case, being covered with a composition capable of vitrifying, and then exposed to a certain degree of heat until properly melted and diffused over the surface, and in the other dipped into a mixture, which was vitrified in the same manner.³

Like the Romans, they used glass for mosaic work, and pieces of various colors were employed in fancy ornaments, in the figures of deities, in sacred emblems, and in the different objects for which inlaid work was particularly adapted, the quality there used being generally of an opaque kind.⁴ In some of these vitrified compositions, the colors have a brilliancy which is truly surprising; the blues which are given by copper are vivid and beautifully clear; and one of the reds, which is probably derived from minium, has all the intenseness of *rosso antico*, with the brightness of the glassy material in which it is found; thus combining the qualities of a rich enamel.

Many of the cups discovered at Thebes present a tasteful arrangement of varied hues, and evince the great skill of the Egyptians in the manufacture of porcelain; and no one can

¹ In Rome the use of glass vases superseded that of gold and silver (Plin. xxxvi. 26).

² Alexander the Great was said to have been buried in a glass coffin at Alexandria. [Of glass as known to the ancient Greeks, see Aristotle, 'Problem.,' and Aristophanes, 'Clouds,' 756. — G. W.]

³ The principal material used for glazing was the steatite already mentioned, and that chiefly for smaller objects, as scarabæi, cylinders, small cups, figures, &c. — S. B.

⁴ The principal employment was for

inlaying hieroglyphs and figures on walls and other places, in a kind of tereotic work, the parts representing the flesh of deities being blue, and of mortals red. The hieroglyphic objects were of their appropriate colors; white, yellow, blue, and red are found. Large specimens, probably from the walls, were found at Tel-el-Yahoudeh. At the Ptolemaic period, small figures of deities, principally Isis and Nephthys, made for attaching to necklaces, of dark blue glass produced by cobalt, are found. — S. B.

examine similar specimens without feeling convinced of the great experience they possessed in this branch of art. The manner in which the colors are blended and arranged, the minuteness of the lines, frequently tapering off to an almost imperceptible fineness, and the varied directions of tortuous curves traversing the substance, but strictly conforming to the pattern designed by the artist, display no ordinary skill, and show that they were perfect masters of the means employed to produce the effect proposed.

The Egyptian porcelain¹ should perhaps be denominated glass-porcelain, as partaking of the quality of the two and not being altogether unlike the porcelain-glass invented by the celebrated Réaumur; who discovered, during his curious experiments on different qualities of porcelain, the method of converting glass into a substance very similar to chinaware.

The ground of Egyptian porcelain is generally of one homogeneous quality and hue, either blue or green, traversed in every direction by lines or devices of other colors — red, white, yellow, black, light or dark blue, and green, or whatever the artist chose to introduce; and these are not always confined to the surface, but frequently penetrate considerably into the ground, sometimes having passed half, at others entirely through, the fused substance; in which respect they differ from the porcelain of China, where the flowers or patterns are applied to the surface, and perhaps justify the use of the term glass-porcelain, which I have adopted. In some instances, the yellows were put on after the other colors, upon the surface of the vase, which was then again subjected to a proper degree of heat; and after this, the handles, the rim, and the base were added, and fixed by a repetition of the same process. It was not without considerable risk that these additions were made, and many vases were broken during the operation; to which Martial alludes, in an epigram on the glass cups of the Egyptians.²

That the Egyptians possessed considerable knowledge of

¹ On the porcelain of Egypt, see Birch, 'History of Ancient Pottery,' 8vo, Lond., 1873, p. 47. It was made of a white sand, slightly fused, and then covered by a colored body or glaze. It was not a true porcelain, but rather a kind of faience. — S. B.

² Martial, Epig. lib. xiv. 115. [The epigram is headed by the word '*Murrhina*.' If of the feminine gender, this signifies

'perfumed wine;' it is more frequently spelt *Murrhina*. If neuter, it signifies murrhine cups, which are often called simply *murrha*. By comparing the 13th book of Martial's Epigrams with the 14th, we see the latter — 'Murrhine cups' — is more probable; had he meant 'perfumed wine,' he would have placed the epigram in book xiii. — G. W.]

chemistry and the use of metallic oxides, is evident from the nature of the colors applied to their glass and porcelain; and they were even acquainted with the influence of acids upon color, being able, in the process of dyeing or staining cloth, to bring about certain changes in the hues,¹ by the same means adopted in our own cotton works, as I shall show in describing the manufactures of the Egyptians.

It is evident that the art of cutting glass was known to the Egyptians at the most remote periods, hieroglyphics and various devices being engraved upon vases and beads made in the time of the 18th Dynasty; and some glass, particularly that which bears figures or ornaments in relief, was cast in a mould. Some have supposed that the method of cutting glass was unknown to the ancients, and have limited the period of its invention to the commencement of the seventeenth century of our era, when Gaspar Lehmann, at Prague, first succeeded in it, and obtained a patent from the Emperor Rodolph II.; but we may infer from the authority of Pliny, that glass-cutting was known to the ancients, and that the diamond was used for the purpose, as at the present day, even if they were ignorant of the art of cutting this stone with its own dust. ‘Diamonds,’ says that author,² ‘are eagerly sought by lapidaries, who set them in iron handles, for they have the power of penetrating anything, however hard it may be.’ He also states that emeralds and other hard stones were engraved, though in early times it was ‘considered wrong to violate gems with any figures or devices;’³ and the diamond was found capable of cutting those of the hardest quality, ‘for all gems,’ he observes, ‘may be engraved by the diamond.’⁴

It is difficult to decide upon the precise method adopted by the Egyptians for cutting glass and hard stones; but if nothing remains to show the process they employed, there is sufficient evidence of its effect; and their early intercourse with India may have led them to the knowledge of the diamond, and of its great utility in engraving those materials. It is also probable that emery powder, as I shall hereafter have occasion to observe, and the lapidary’s wheel, were used in Egypt; and there is little doubt that the Israelites learnt the art of cutting and engraving stones in that country.⁵

¹ Plin. xxxv. 11.

² Ibid. xxxvii. 4.

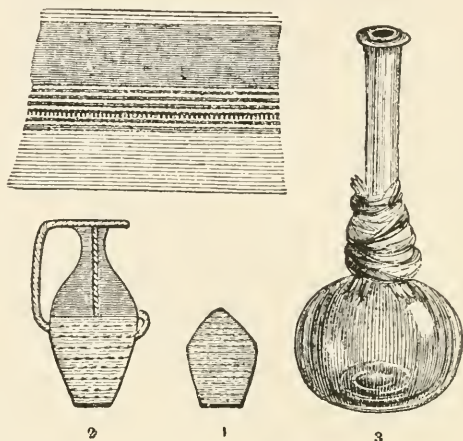
³ Ibid. xxxvii. Proem. and xxxiii. 1.
He thinks the stone of Polycrates’ ring was

a sardonix (xxxvii. 1).

⁴ Ibid. xxxvi. 13.

⁵ The stones engraved by the Israelites were the sardius, topaz, and carbuncle;

Some glass bottles were enclosed in wicker-work,¹ very nearly resembling what is now called by the Egyptians a *damagán*: they were generally of considerable size, holding from one to two gallons of fluid; and some of a smaller size, from six to



No. 383.

Fig. 1. Has apparently leather sewed over the glass.

2. Glass *damagan* enclosed in wicker-work.

3. Glass bottle covered with papyrus rush, like the Florence oil-flasks.

4. A piece of cloth with a border of a blue color. Harrow Museum.

nine inches in height, were protected by a covering made of the stalks of the papyrus or *cyperus* rush, like the modern bottles containing Florence^e oil:² others again appear to have been partly cased in leather, sewed over them much in the same manner as some now made for carrying liquids on a journey.³

Among the many bottles found in the tombs of Thebes, none have excited greater curiosity and surprise than those of Chinese manufacture, presenting inscriptions in that language. The accidental discovery of a single bottle of this kind would naturally pass unheeded, and if we felt surprised that it should be deposited in an Egyptian sepulchre, conjecture would reasonably suggest that an accidental visitor in later times might have dropped it there, while searching for ancient treasures of a more

the emerald, sapphire, and *diamond*, the figure, agate, and amethyst; the beryl, onyx, and jasper. (Exod. xxviii. 17-20, and xxxix. 10-13.)

¹ Woodcut No. 383, fig. 2.

² Woodcut No. 383, fig. 3.

³ Woodcut No. 383, fig. 1. The vases of transparent glass, dark green, with globular or conical bodies and long necks, like the Roman unguentaria, appear.

Some of these were found in a tomb of the age of the 26th Dynasty at Gizeh. A few of these bottles, with more oblate bodies, and of a white or light blue color, are in different collections, and are possibly earlier; but the oldest known dated specimen of transparent glass is the kind of alabaster, stamped with the name of Sargon, B C 607. — S. B.

valuable kind. But this explanation ceases to be admissible when we find the same have been discovered in various Theban tombs. I myself have seen several, two of which I brought to England; ¹ another is described by Rosellini, ² and found by him 'in a previously unopened tomb, of uncertain date, which' he refers, 'from the style of the sculptures, to a Pharaonic period not much later than the 18th Dynasty;' a fourth is in the museum



No. 384.

Chinese bottles found in the Egyptian tombs.

Fig. 1. In the Museum of Alnwick Castle.

2. Brought by me from Thebes.

3. Belonging to Mr. W. Hamilton.

4. From Thebes.

at Jersey, another was purchased by the late Duke of Northumberland, at Coptos, and is now in the Museum at Alnwick Castle; two others are in the possession of Mrs. Bowen; and another belongs to Mr. W. Hamilton. They are about two inches in height: one side presents a flower, and the other an inscrip-

¹ One is in the British Museum.

² In his extensive work on the Egyptian Monuments, part 2, vol. ii. p. 337.

tion, containing, according to the valuable authority of Sir J. Davis (in three out of the eight), the following legend, — ‘The flower opens, and lo! another year;’ and another has been translated by Thoms, ‘During the shining of the Moon the fir-tree sends forth its sap,’ which in a thousand years becomes amber.

The quality of these bottles is very inferior, and they appear to have been made before the manufacture of porcelain had attained the same degree of perfection in China as in after-times. A paper presented by Medhurst to the Royal Asiatic Society would establish the fact of their having been brought by the Arab traders, if, as there stated, the style of the characters did not come into use till the third century of our era, and the poems, from which the sentences were taken, were not written till the 8th and 11th centuries. The earliest mention of porcelain in China is also limited to the 2nd century B.C. A similar bottle was found by Mr. Layard at Arban, on the Khaboor.

[It is now known that these bottles are of a comparatively recent period. M. Prisse discovered, by questioning the Arabs of Cairo engaged in selling objects of antiquity, that they confessed the bottles were never found in the tombs or ruins, and that the greater part of the bottles came from Qous, Keft, and Cosseir, depôts of the commerce with India on the Red Sea. The interpretation of the inscriptions of some of these bottles has been given by Medhurst,¹ and they are verses of poets who flourished in the 7th and 8th centuries A.D. The one translated by Sir J. Davis — reading *Hwa kae yew yih neen*, ‘The flower opens to another year’ — is a verse of the poet Wei yung wuh, who wrote from A.D. 702 to 725. Another bottle (*d*) has *Che tsai tsze shan chung*, ‘Alone on the mountain,’ taken from the poet Keih taou, who flourished A.D. 831–837.² The other inscription about the fir-tree on bottle *fig. 2* has not been identified with the composition of the poet who wrote it. Some translate, ‘Few know it.’ The bottles resemble in shape those used by the Chinese for holding snuff. — S. B.]

It has been questioned if the Egyptians understood the art of enamelling upon gold or silver, though, even in the absence of

¹ Transactions of the China branch of the Royal Asiatic Society. Pt. iii. 1851–1852, pp. 34–41.

² Jacquemart and Le Blant, ‘Histoire de la Porcelaine,’ fol., Paris, 1862, p. 192 and foll.

further evidence, we might infer it from an expression of Pliny,¹ who says, 'The Egyptians paint their silver vases, representing Anubis upon them, the silver being painted and not engraved.' Small gold figures are frequently found with ornamented wings and bodies, whose feathers, faces, or other colored parts are composed of a vitrified composition, let into the metal; some again appear to have been really enamelled; and it is probable that the early specimens of *encaustum* were made by tooling the devices to a certain depth on bronze, and pouring a vitrified composition into the hollow space, the metal being properly heated at the same time; and when fixed, the surface was smoothed down and polished.

Both the encaustic painting in wax, and that which consisted in burning in the colors, were evidently known to the ancients, being mentioned by Pliny,² Ovid,³ Martial,⁴ and others; and the latter is supposed to have been on the same principle as our enamelling on gold. Pliny⁵ says it was uncertain to whom the invention was due: some ascribed it to Aristides, as that of perfecting the art to Praxiteles; but he supposes 'it was known, long before that time, to Polygnotus, Nicanor, and Arcesilaus of Paros.' Bottles of various kinds, glass, porcelain, alabaster, and other materials, were frequently exported from Egypt to other countries. The Greeks, the Etruscans, and the Romans received them as articles of luxury, which, being remarkable for their beauty, were prized as ornaments of the table; and when Egypt became a Roman province, part of the tribute annually paid to the conquerors consisted of glass vases, from the manufactories of Memphis and Alexandria.⁶ The intercourse between Egypt and Greece had been constantly kept up after the accession of Psammaticus and Amasis: and the former, the parent of the arts at that period, supplied the Greeks and some of the Syrian tribes with the manufactures they required.

The Etruscans, a commercial people, appear to have traded with Egypt, about, or a little after, the same period, and we repeatedly find small alabaster and porcelain bottles in their tombs, which have all the character of the Egyptian; and not only does

¹ Plin. xxxiii. 9.

² Ibid. xxxv. 11.

³ Ovid, Fast. lib. viii. 275.

⁴ Mart. Epig. lib. iv. ep. 39.

⁵ Plin. xxxv. 11.

⁶ Great quantities of glass of all sorts and shapes were made at Alexandria during the Roman period. One great branch

of the manufacture was the production of glass cameos, like the Portland vase. The sand of Alexandria is stated by Strabo to have produced excellent glass, and the glass-works of Egypt, especially of Alexandria, successfully competed with those of Sidon.—S. B.

the stone of the former proclaim by its quality the quarries from which it was taken, but the form and style of the workmanship leave no doubt of the bottles themselves being the productions of Egyptian artists.

It is uncertain of what stone the murrhine vases mentioned by Pliny,¹ Martial, and other writers, were made: it was of various colors, beautifully blended, and even iridescent, and was obtained in greater quantity in Carmania than in any country. It was also found in Parthia and other districts of Asia, but unknown in Egypt: a fact quite consistent with the notion of its being fluor-spar, which is not met with in the valley of the Nile: and explaining the reason why the Egyptians imitated it with the composition known under the name of false murrhine, said to have been made at Thebes² and Memphis. The description given by Pliny certainly bears a stronger resemblance to the fluor-spar than to any other stone, and the only objection to this having been murrhine arises from our not finding any vases or fragments of it; and some may still be disposed to doubt if the stone is known to which the naturalist alludes. But the fluor-spar appears to have the strongest claim; and the porcelain of Egypt, whose various colors are disposed in waving lines, as if to imitate the natural undulations of that crystallized substance,³ may perhaps be looked upon with reason as the false murrhine of the ancients.

It is difficult to say whether the Egyptians employed glass for the purpose of making lamps or lanterns: ancient authors give us no direct information on the subject: and the paintings offer no representation which can be proved to indicate a lamp, a torch, or any other kind of light.⁴

Herodotus⁵ mentions a 'fête of burning lamps' which took place at Saïs, and indeed throughout the country, at a certain period of the year, and describes the lamps used on this occasion as 'small vases filled with salt and olive oil, on which the wick floated and burnt during the whole night;' but it does not

¹ Plin. xxxvii. 2.

² Arrian (in his 'Periplus of the Red Sea,' p. 3) mentions γυθίας ὑαλῆς πλειόνα γίνη, καὶ ἄλλης μορμίνης τῆς γενομένης ἐν Διόσπολει. At Medeenet Haboo are numerous agatized pebbles, which were evidently brought there (the nearest known spot where they are found being Nubia), but at what period is uncertain. Were they not for

some purpose connected with art? If so, it is not probable they were brought there by the Christians, though generally found upon the surface of the mounds.

³ Woodcuts No. 280, fig. 2; and No. 281, figs. 4 and 9.

⁴ In the funeral processions one person carries what seems to be a candle or torch.

⁵ Herodot. ii. 62.

appear of what materials those vases were made, though we may reasonably suppose them to have been of glass.¹

The sculptures of Tel el Amarna, again, represent a guard of soldiers, one of whom holds before him what resembles, and may be considered, a lantern; but here too there is great uncertainty, and neither of these is sufficient to decide the question.

The Egyptians, from a most remote era, were celebrated for their manufacture of linen and other cloths, and the produce of their looms was exported to and eagerly purchased by foreign nations. The fine linen and embroidered work, the yarn and woollen stuffs, of the upper and lower country, are frequently mentioned, and were highly esteemed.² Solomon purchased many of those commodities, as well as chariots and horses, from Egypt; and Chemmis, the city of Pan, retained³ the credit it had acquired in making linen stuffs nearly till the period of the Roman conquest.

Woollen garments were chiefly used by the lower orders: sometimes also by the rich, and even by the priests, who were permitted to wear an upper robe in the form of a cloak of this material; but under-garments of wool were strictly forbidden them, upon a principle of cleanliness: and as they took so much pains to cleanse and shave the body, they considered it inconsistent to adopt clothes made of the hair of animals.⁴ No one was allowed to be buried in a woollen garment,⁵ in consequence, as I have already observed, of its engendering worms, which



A guard apparently with a lantern.
No. 385. *Tel el Amarna.*

¹ No lamps made of terra-cotta have been found in Egypt older than the Roman period, nor has any glass vessel that could possibly have been used as a lamp been discovered. That the Egyptians used lights and oil for the purpose of illumination is clear from the temples and inscriptions, but the particular shape of the lamp is not known. — S. B.

² There is no mention of woollen stuffs in any of the lists hitherto found, or in the papyrus of Rameses III., in which the

offerings and gifts to the temples are described in detail. — S. B.

³ Strabo, xvii. p. 559.

⁴ Herodot. ii. 81.

⁵ Wool is exceptionally found on the mummies in the Tombs. The workmen buried in the Tourah quarries had woollen wraps; and part of a woollen cloth wrap, with patterns in various colors, was found on a body amidst the rubbish of the Pyramid. The age of these mummies is, however, uncertain. — S. B.

would injure the body; nor could any priest enter a temple without taking off this part of his dress.

The quantity of linen manufactured and used in Egypt was truly surprising; and independent of that made up into articles of dress, the great abundance used for enveloping the mummies, both of men and animals, shows how large a supply must have been kept ready for the constant demand at home, as well as for that of the foreign market.

That the bandages employed in wrapping the dead are of linen, and not, as some have imagined, of cotton, has been already ascertained by the most satisfactory tests; and though no one, even among the unscientific inhabitants of modern Egypt, ever thought of questioning the fact, received opinion in Europe had till lately decided that they were cotton; and it was forbidden to doubt that 'the bands of *byssine* linen' said by Herodotus¹ to have been used for enveloping the mummies, were cotton. My own impression had certainly been that the mummy cloths were invariably linen, but positive experience had not then confirmed my opinion, and I reluctantly yielded to the universal belief, and concluded that some at least might be cotton.

The accurate experiments made, with the aid of powerful microscopes, by Ure,² Bauer, Thompson,³ and others, on the nature of the fibres of linen and cotton threads, have shown that the former invariably present a cylindrical form, transparent, and articulated or jointed like a cane, while the latter offer the appearance of a flat ribbon, with a hem or border at each edge: so that there is no possibility of mistaking the fibres of either, except, perhaps, when the cotton is in an unripe state, and the flattened shape of the centre is less apparent. The results having been found similar in every instance, and the structure of the fibres thus unquestionably determined, the threads of mummy cloths were submitted to the same test, and no exception was found to their being linen, nor were they even a mixture of linen and cotton thread.

The fact of the mummy cloths being linen is therefore decided.⁴ It now remains to inquire into the nature of the *byssus*, in which I confess considerable difficulty presents itself, owing to the

¹ Herodot. ii. 86.

² Ure's 'Philosophy of Manufactures,' p. 95.

³ Mr. Thompson on the Mummy Cloth of Egypt.

⁴ This question, with all the authorities on the subject, is detailed in Yales, 'Texturinum Antiquorum,' Svo. Lond. 1843, p. 254 and foll. — S. B.

Hebrew *shash* being translated *byssos* in the Septuagint Version, and in our own, 'fine linen;' ¹ and to *shash* being the name applied at this day by the Arabs to fine muslin, which is of cotton and not of linen: ² for the similarity of the words in these cognate languages argues in favor ³ of the same meaning. On the other hand, Herodotus says the mummy cloths were 'of *byssine sindon*,' ⁴ and they are found to be invariably linen: he uses the expression 'tree wool' to denote cotton; ⁵ and Julius Pollux adopts the same name, ⁶ distinguishing it also from byssus, which he calls a species of Indian flax. The use of the two words *byssus* and *linon* presents no difficulty, since they might be employed, like our flax and linen, to signify the plant and the substance made from it. ⁷

Cotton cloth, however, was among the manufactures of Egypt, and dresses of this material were worn by all classes. Pliny states that the Egyptian priests, though they used linen, were particularly partial to cotton robes, ⁸ and 'cotton garments,' supplied by the government for the use of the temples, ⁹ are distinctly mentioned in the Rosetta stone. Herodotus and Plutarch ¹⁰ affirm that linen was preferred, owing as well to its freshness in a hot climate as to its great tendency to keep the body clean, and that a religious prejudice forbade the priests to wear vestments of any other quality; ¹¹ we may, however, conclude that this refers to the inner portion of the dress; and the prohibition of entering a temple with cotton or woollen garments may have led to the notion that none but linen were worn by them at any time. The same custom was adopted by the votaries of Isis, when her rites were introduced by the Greeks and Romans; ¹² and linen dresses were appropriated to those who had been initiated ¹³ in the sacred mysteries.

¹ In Exodus xxv. 4; in Coptic, *shens*.

² The word *byssos* is derived from the Egyptian *hbos*, 'to clothe,' or 'clothes.' It is supposed to mean flax; but that was called *h'mā* or *māh*. — S. B.

³ There are instances to the contrary, as *kussuf*, 'silver,' in Hebrew, and *kussub*, 'gold lace,' in Arabic, and others.

⁴ Herodot. *loc. cit.* *Sindon* is unquestionably linen. *Sindon* is probably the Hellenized form of the Egyptian word *shenti*, which was applied to a garment.

⁵ Herodot. iii. 47.

⁶ J. Pollux, Onom. vii. 17.

⁷ The other Greek term applied to linen was *phōsōn*, a coarse cloth or canvas, used for towels or sails found in Egyptian as

pes, and apparently referring to the prepared or boiled nature of the material, and used for towels and sails. (Yates, 'Texturinum Antiquorum,' p. 265.) — S. B.

⁸ Plin. xix. 1.

⁹ 'The sacred robes with which the statues of the gods are adorned.' (Plut. de Isid. s. 78.)

¹⁰ Plut. de Isid. s. 4.

¹¹ Herodot. ii. 37: 'The priests . . . wear only one robe of linen, and sandals of the byblus. They are not allowed to have any other vestment, or covering to the feet.'

¹² Plut. de Isid. s. 3.

¹³ Apul. Metam. lib. vi. [Hence 'liniger sacerdos,' applied to the Egyptian priests. (Lucan, Phars. ix. 159.) — G. W.]

Whatever restrictions may have been in force respecting the use of cotton among the priesthood, it is probable that other individuals were permitted to consult their own choice on this point; and it was immaterial whether they preferred, during life, the coolness of flax, or the softness of cotton raiment, provided the body, after death, was enveloped in bandages of linen;¹ and this regulation accounts for the mummy cloths of the poorest individuals being invariably found of that material.

It was not only for articles of dress that cotton was manufactured by the Egyptians; a great quantity was used for the furniture of their houses, the coverings of chairs and couches, and various other purposes: and a sort of cloth was made of the united filaments of flax and cotton. This is mentioned by Julius Pollux, who, after describing the cotton plant as an Egyptian production, and stating that cloth was manufactured of the 'wool of its nut,' says they sometimes 'make the woof of it, and the warp of linen.'² The Jews³ were forbidden to wear dresses of wool and linen — a quality of cloth still manufactured by the modern Egyptians.

From the few representations which occur in the tombs of Thebes, it has been supposed that the Egyptian looms were of rude construction, and totally incapable of producing the fine linen so much admired by the ancients; and as the paintings in which they occur were executed at a very early period, it has been conjectured that, in after times, great improvements took place in their construction. But when we consider with what simple means Oriental nations are in the habit of executing the most delicate and complicated work, we cease to feel surprised at the apparent imperfection of the mechanism or instruments used by the Egyptians: and it is probable that their far-famed 'fine linen,' mentioned in Scripture and by ancient writers,⁴ was produced from looms of the same construction as those represented in the paintings of Thebes and Eileithyia. Nor was the praise bestowed upon that manufacture unmerited;⁵ and, as I have already observed, the quality of some extant specimens of linen fully justifies it, and excites equal admiration at the present

¹ In England woollen cloth has been chosen for this purpose, in order to encourage the staple commodity of the country.

² J. Pollux, *Onom.* vii. 17.

³ Dent. xxii. 11

⁴ Pliny allows that the Egyptians in-

vented the art of weaving (vii. 56); and Athenæus ascribes it to Pathymias the Egyptian (*Deipn.* lib. ii.).

⁵ Some was so fine that it obtained the appellation of 'woven air.'

day, being to the touch comparable to silk, and not inferior in texture to our finest cambric.

The mummy cloths are generally of a very coarse quality; and little attention was bestowed on the disposition of the threads in the cloths of ordinary manufacture. Mr. Thompson, who examined many specimens of them, is of opinion that the number of threads in the warp invariably exceeded those in the woof, occasionally even by four times the quantity; and as his observations are highly interesting, I shall introduce an extract from his pamphlet on the subject.

‘Of the products of the Egyptian loom, we know scarcely more than the mummy pits have disclosed to us; and it would be as unreasonable to look through modern sepulchres for specimens and proofs of the state of manufacturing art amongst ourselves, as to deduce an opinion of the skill of the Egyptians from those fragments of cloth which envelop their dead, and have come down, almost unchanged, to our own time. The curious or costly fabrics which adorned the living, and were the pride of the industry and skill of Thebes, have perished ages ago. There are, however, amongst these remains some which are not unworthy of notice, which carry us back into the workshops of former times, and exhibit to us the actual labors of weavers and dyers of Egypt more than 2000 years ago.

‘The great mass of the mummy cloth employed in bandages and coverings, whether of birds, animals, or the human species, is of coarse texture, especially that more immediately in contact with the body, which is generally impregnated with resinous or bituminous matter. The upper bandages, nearer the surface, are finer. Sometimes the whole is enveloped in a covering coarse and thick, and very like the sacking of the present day; sometimes in cloth coarse and open, like that used in our cheese-presses, for which it might easily be mistaken. In the College of Surgeons are various specimens of these cloths, some of which are very curious.

‘The beauty of the texture and peculiarity in the structure of a mummy cloth given to me by Mr. Belzoni were very striking. It was free from gum or resin, or impregnation of any kind, and had evidently been originally white. It was close and firm, yet very elastic. The yarn of both warp and woof was remarkably even and well spun. The thread of the warp was *double*, consisting of two fine threads twisted together. The woof was single. The warp contained 90 threads in an inch; the woof,

or weft, only 44. The fineness of these materials, estimated after the manner of cotton yarn, was about thirty hanks in the pound.

The subsequent examination of a great variety of mummy cloths showed that the disparity between the warp and woof belonged to the system of manufacture, and that the warp generally had twice or thrice, and not seldom four times, the number of threads in an inch that the woof had: thus, a cloth containing 80 threads of warp in the inch, of a fineness about 24 hanks in the pound, had 40 threads in the woof; another with 120 threads of warp, of 30 hanks, had 40; and a third specimen only 30 threads in the woof. These have each respectively double, treble, and quadruple the number of threads in the warp that they have in the woof. This structure, so different from modern cloth, which has the proportions nearly equal, originated, probably, in the difficulty and tediousness of getting in the woof, when the shuttle was thrown by hand, which is the practice in India at the present day, and which there are weavers still living old enough to remember as the universal practice in this country.

Mr. Thompson then mentions some fragments of mummy cloths sent to England by the late Mr. Salt, which he saw in the British Museum. They were of different degrees of fineness: some fringed at the ends, and some striped at the edges. 'My first impression,' he continues, 'on seeing these cloths, was that the finest kinds were *muslin*, and of Indian manufacture, since, we learn from the "Periplus of the Erythrean Sea," ascribed to Arrian, but more probably the work of some Greek merchant himself engaged in the trade, that muslins from the Ganges were an article of export from India to the Arabian Gulf; but this suspicion of their being cotton was soon removed by the microscope of Mr. Bauer, which showed that they were all, without exception, linen. Some were thin and transparent, and of very delicate texture. The finest appeared to be made of yarns of near 100 hanks in the pound, with 140¹ threads in the inch in the warp, and about 64 in the woof. A specimen of muslin in the museum of the East India House, the finest production of the Dacca loom, has only 100 threads in an inch in the warp, and 64 in the woof: but the surprising fineness of the yarn,

¹ The finest linen from recent researches is found to have 152 threads in the warp and 71 in the woof, while the coarser kinds

vary from 80 to 120 threads in the warp to 40 in the woof. (Rev. Arch. 1870, pp. 217-221.)—S. B.

which, though spun by hand, is not less than 250 hanks in the pound, gives to this fabric its unrivalled tenuity and lightness.

Some of the cloths were fringed at the ends, and one, a sort of scarf, about four feet long, and twenty inches wide, was fringed at both ends. Three or four threads twisted together with the fingers to form a strong one, and two of these again twisted together, and knotted at the middle and at the end to prevent unravelling, formed the fringe, precisely like the silk shawls of the present day.

The selvages of the Egyptian cloths are generally formed with the greatest care, and are well calculated by their strength to protect the cloth from accident. Fillets of strong cloth or tape also secure the ends of the pieces from injury, showing a knowledge of all the little resources of modern manufacture. Several of the specimens, both of fine and coarse cloth, were bordered with blue stripes of various patterns, and in some alternating with narrow lines of another color. The width of the patterns varied from half an inch to an inch and a quarter. In the latter were seven blue stripes, the broadest about half an inch wide nearest the selvage, followed by five very narrow ones, and terminated by one an eighth of an inch broad. Had this pattern, instead of being confined to the edge of the cloth, been repeated across its whole breadth, it would have formed a modern gingham, which we can scarcely doubt was one of the articles of Egyptian industry.

A small pattern, about half an inch broad, formed the edging of one of the finest of these cloths, and was composed of a stripe of blue, alternating with three lines of a fawn color, forming a simple and elegant border. These stripes were produced in the loom by colored threads previously dyed in the yarn. The nature of the fawn color I was unable to determine. It was too much degraded by age, and the quantity too small to enable me to arrive at any satisfactory conclusion. Though I had no doubt the coloring matter of the blue stripes was indigo, I subjected the cloth to the following examination. Boiled in water for some time, the color did not yield in the least; neither was it at all affected by soap, nor by strong alkalies: sulphuric acid, diluted only so far as not to destroy the cloth, had no action on the color. Chloride of lime gradually reduced, and at last destroyed it. Strong nitric acid, dropped upon the blue, turned it orange, and in the same instant destroyed it. These tests prove the coloring matter of the stripes to be indigo.

‘This dye was unknown to Herodotus, for he makes no mention of it. It was known to Pliny, who, though ignorant of its true nature and the history of its production, has correctly described the most characteristic of its properties, the emission of a beautiful purple vapor when exposed to heat. Had his commentators been acquainted with the sublimation of indigo, it would have saved many learned doubts. We learn from the *Periplus* that it was an article of export from Barbarike on the Indus, to Egypt, where its employment by the manufacturers of that country, probably from a remote period, is clearly established by the specimens here described.’

I have a piece of cloth, which was brought from Thebes by Arundale, that offers a very good instance of the colored border mentioned by Thompson. It is of ordinary quality; the number of threads in the inch are 96 in the warp, and 34 in the woof; and the border consists of one broad band, and six narrow stripes, of a blue color, evidently dyed with indigo. The band which is nearest the selvage is one inch and two-tenths in breadth; the others consist each of two threads, in the direction of the warp, with the exception of the innermost one, which is of five threads; and the dividing line between the fourth and fifth is varied by the introduction of a blue thread down the centre.¹ The rest of the cloth has the usual yellowish tinge, ‘supposed to arise from some astringent preparation employed for its preservation,’ which, according to Thompson, imparts to water a similar color, but offers no trace of tannin. ‘In none of the specimens I have examined,’ he adds, ‘did either gelatine or albumen, or solution of iron afford any precipitate; but the sub-acetate of lead produced a cloud, indicating the presence of extractive matter.’

It was evident that the color was imparted to the threads previous to the cloth being made,² as the blue remains unaltered; and the cloths with broad-colored borders are the more curious, as they illustrate the representations in the paintings, and show that they were similar to those made by the looms used in the age of the Pharaohs of the 16th and 18th Dynasties, which occur in the tombs at Eileithyia and Thebes; and it is curious to see

¹ Woodcut No. 383, *fig.* 4.

² As was the case with the threads used by the Israelites (*Exod.* xxxv. 25): ‘And all the women that were wise-hearted did

spin with their hands, and brought that which they had spun, both of blue, and of purple, and of scarlet, and of fine linen.’

the Nubians wearing shawls with the same blue borders, manufactured in the valley of the Nile, at the present day.

Another piece of linen, which I obtained at Thebes, has 152 threads in the warp, and 71 in the woof, to each inch: it is of a much darker hue than the cloth just mentioned, and was perhaps dyed with the *Carthamus tinctorius*,¹ or saff-flower, which Thompson supposes to have been used for this purpose. The piece of fine linen, previously alluded to, is of the same light-brown color. Some idea may be given of its texture from the number of threads in the inch,² which is 540 (or 270 double threads) in the warp; and the limited proportion of 110 in the woof³ shows the justness of Mr. Thompson's observation that this disparity belonged to their 'system of manufacture,' since it is observable even in the finest quality of cloth.⁴

Another very remarkable circumstance in this specimen is, that it is covered with small figures and hieroglyphics, so finely drawn that here and there the lines are with difficulty followed by the eye; and as there is no appearance of the ink having run in any part of the cloth, it is evident they had previously prepared it for this purpose.

Pliny cites four qualities of linen particularly noted in Egypt: the Tanitic and Pelusiatic, the Butine and the Tentyritic; and mentions in the same place⁵ the cotton-tree of Egypt, which he confines to the upper country. He also states that the quantity of flax cultivated in Egypt was accounted for by their exporting linen to Arabia and India; and the quality of that produced by the Egyptian looms is shown to have been far superior to any other.

The threads used for nets were remarkable for their fineness; 'and so delicate were some of them,' says Pliny,⁶ 'that they would pass through a man's ring, and a single person could carry a sufficient number of them to surround a whole wood. Julius Lupus, who died while governor of Egypt, had some of these nets, each string of which consisted of 150 threads — a fact

¹ I am still doubtful if it was indigenous in Egypt.

² Some of our cambric has only 160 in an inch of warp, and 140 of the woof.

³ The Egyptians, instead of throwing the shuttle, appear to have put in the thread by means of a rod with a hook at either end. Woodcuts Nos. 110 and 387.

⁴ [Conf. Hesiod, Op. et Dies, 536, where he is directing how to make a warm winter garment. — G. W.]

⁵ Plin. xix. 1: 'Superior pars Ægypti in Arabiam vergens gignit fruticem, quem aliqui gossipion vocant, plures xylon, et ideo lina inde facta xylina.'

⁶ Ibid.

perfectly surprising to those who are not aware that the Rhodians preserve to this day, in the Temple of Minerva, the remains of a linen corselet presented to them by Amasis, king of Egypt, whose threads are composed each of 365 fibres; and in proof of the truth of this, Mutianus, who was thrice consul, lately affirmed at Rome that he had examined it; and the reason of so few fragments remaining was attributable to the curiosity of those who had frequently subjected it to the same scrutiny.'

Herodotus mentions this corselet,¹ and another, presented by Amasis to the Lacedæmonians, which had been carried off by the Samians: 'it was of linen, ornamented with numerous figures or animals, worked in gold² and cotton. Each thread of the corselet was worthy of admiration. For, though very fine, every one was composed of 360 other threads, all distinct; the quality being similar to that dedicated to Minerva at Lindus by the same monarch.'

Many of the Egyptian stuffs presented various patterns worked in colors by the loom, independent of those produced by the dyeing or printing process, and so richly composed that they vied with cloths embroidered with the needle.³ The art of embroidery⁴ was commonly practised in Egypt. We find that the Hebrews, on leaving the country, took advantage of the knowledge they had there acquired to make a rich 'hanging for the door of the tent, of blue, and purple, and scarlet, and fine twined linen, wrought with needlework.'⁵ A coat of fine linen was embroidered for Aaron; and his girdle was 'of fine twined linen, and blue, and purple, and scarlet, of needlework.'⁶

The gold thread used for these purposes is supposed to have been beaten out with the hammer,⁷ and afterwards rounded; and even the delicate net made by Vuleau, which was so fine that the gods themselves were unable to see it, is represented to have been forged on his anvil with the hammer.⁸ Pliny mentions cloth woven with gold threads, sometimes entirely of those materials, without any woollen or linen ground, as were the gar-

¹ Herodot. ii. 182, and iii. 47.

² Conf. Exod. xxxix. 3.

³ Martial, xiv. Epigr. 50.

⁴ Ezekiel xxvii. 7: 'Fine linen with brodered work from Egypt.'

⁵ Exod. xxvi. 36, xxvii. 16, xxxvi. 37, and xxxviii. 18.

⁶ Exod. xxviii. 39, and xxxix. 29.

⁷ Conf. Exod. xxxix. 3: 'And they did beat the gold into thin plates, and cut it into wires, to work it in the blue, and in the purple, and in the scarlet, and in the fine linen.'

⁸ Hom. Od. o, 274.

ment of Agrippina,¹ the tunie of Heliogabalus,² and that worn by Tarquinius Priscus, mentioned by Verrius.³

‘Colored dresses,’ says Pliny,⁴ ‘were known in the time of Homer, from which the robes of triumph were borrowed; and from the Phrygians having been the first to devise the method of giving the same effect with the needle, they have been called *Phrygiones*. But to weave cloth with gold thread was the invention of an Asiatic king, Attalus,⁵ from whom the name Attalic was derived; and the Babylonians were most noted for their skill in weaving cloths of various colors.’

The question still remains undecided respecting the time when silver thread came into use; and as no mention of silver stuffs occurs in the writings of ancient authors, it has been supposed that its introduction was of late date. Silver wire, however, was already known in Egypt at the remote epoch of the 18th Dynasty, as is proved by being found at Thebes of the time of the third Thothmes; nor is there any reason to suppose it was then a novel invention, and it was probably known and used as early as gold wire, which we find attached to rings bearing the date of Usertesén the First.

This wire is supposed not to have been drawn, like our own, through holes in metal plates, but to have been beaten out, and rounded with the file; but the appearance of some found at Thebes almost justifies the conclusion that a mode of drawing it was not unknown to them; and the omission of every representation of the process in the paintings cannot be adduced as an argument against it, since they have also failed to introduce the casting of metals, and various other arts, with which they were undoubtedly acquainted.⁶

It is reasonable to suppose that wire-drawing was first attempted with the most ductile metals, that gold and silver were first used, and brass and iron at a much later period; and this is further argued by the probability of wire having been originally employed for ornamental purposes. Gold thread and wire were always made entirely of that metal, even to the time of the later Roman emperors;⁷ nor are there any instances of flattened wire

¹ Plin. xxxiii. 3.

² Lamprid. Vit. Heliog. c. 23.

³ Plin. *loc. cit.*

⁴ *Ibid.* viii. 48.

⁵ Attalus, king of Pergamus.

⁶ In the drawings of the Hay Collection in the British Museum, the casting of

metals is represented in the tomb of Rekmara, at the time of Thothmes III. The hieroglyph of a man melting gold by blowing through a blow-pipe appears as early as the 12th Dynasty. — S. B.

⁷ Probably till the reign of Aurelian.

wound round silk or linen threads, or of silver or other wire gilt, in the ruins of Herculaneum and Pompeii. That the Egyptians had arrived at great perfection in the art of making the thread is evident, from its being sufficiently fine for weaving into cloth, and for embroidery; and the exceeding delicacy of the linen corselet of Amasis,¹ on which numerous figures of animals were worked in gold, required a proportionate degree of fineness in the gold thread used for the purpose.

The colored dresses represented in the Egyptian paintings, worn by women of rank and by the deities, much resemble our modern chintzes in the style of their patterns, though it is probable that they were generally of linen instead of calico; some were probably worked with the needle,² and others woven with gold threads.

I have already observed that the Egyptians possessed a knowledge of the effect of acids on color, and submitted the cloth they dyed to one of the same processes adopted in our modern manufactories; as is plainly pointed out by Pliny in the following passage:³ ‘*Pingunt et vestes in Ægypto inter pauca mirabili genere, candida vela postquam attrivere inlinentes non coloribus, sed colorem sorbentibus medicamentis. Hoc cum fecere, non adparet in velis: sed in cortinam pigmenti ferventis mersa, post momentum extrahuntur picta. Mirumque, cum sit unus in cortina colis, ex illo alius atque alius fit in vestes, accipientis medicamenti qualitate mutatus, nec postea ablui potest: ita cortina non dubie confusura colores, si pictos acciperet.*’ ‘Moreover in Egypt they stain cloths in a wonderful manner. They take them in their original state, quite white, and imbue them, not with dye, but with certain drugs which have the power of absorbing and taking color. When this is done, there is still no appearance of change in the cloths; but so soon as they are dipped into a bath of the pigment (which has been prepared for the purpose) they are taken out properly colored. The singular thing is, that though the bath contains only one color, several hues are imparted to the piece, these changes depending on the nature of the drug employed; nor can the color be afterwards washed off; and surely if the bath had many colors in it they must have presented a confused appearance on the cloth.’

From this it is evident that the cloth was prepared before steeping; the instantaneous effect he mentions could only be

¹ Herod. iii. 47.

² Lucan, Phars. x. 141.

³ Plin. xxxv. 11.

produced by the powerful agency of mordants; and they not only used them to make the cloth take the color equally, but also to change the hues.

Whether the Egyptians really understood the principle on which the salts and acids of the mordants acted, or calculated their effects solely from the experience they had acquired, it is difficult to decide. They had long been used in Europe before their chemical agency was properly explained; and when the term *mordant* was first applied by the French dyers they imagined that the intention of passing the substances which were to be dyed through certain saline liquors was to corrode something that opposed the entering of the coloring principle, and to enlarge the pores of the substances (the effect of acids in changing the hues being a later discovery). We cannot therefore positively prove that the Egyptians had a knowledge of chemistry, though from their long experience, and from their skill in the employment of the metallic oxides, we may find strong reasons to infer it: for, if at first ignorant of the reason of such changes, it is probable that in process of time they were led to investigate the causes by which they were effected.

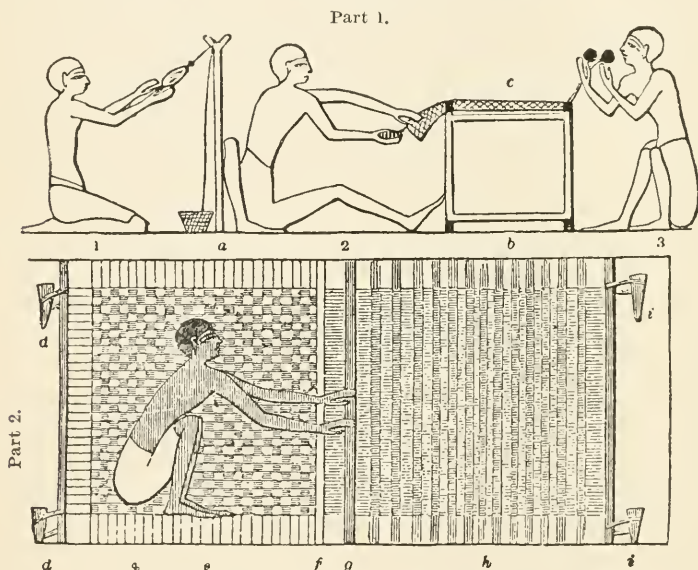
Many discoveries, and even inventions, are more the effect of chance than of studious reflection, and the principle is often the last to be understood. In discoveries this is generally the case, in inventions frequently. But when men have observed, from long practice, a fixed and undeviating result their curiosity naturally becomes excited; the thirst for knowledge, and above all the desire of benefiting by the discovery, prompt them to scrutinize the causes to which they are so much indebted; and few people who have made any advance in the arts of civilized life long remain ignorant of the means of improving their knowledge.

We may therefore suppose some general notions of chemistry, or at least of chemical agency, were known to the Egyptians; and the beautiful colors they obtained from copper, the composition of various metals, and their knowledge of the effects produced on different substances by the salts of the earth, tend to confirm this opinion.

The Egyptian yarn seems all to have been spun with the hand, and the spindle is seen in all the pictures representing the manufacture of cloth. Spinning was principally the occupation of women;¹ but men also used the spindle, and were engaged in

¹ Woodcut No. 110, vol. i. p. 317.

the loom; though not, as Herodotus¹ would lead us to suppose, to the exclusion of women, who, he pretends, undertook the duties of men in other countries, 'by going to market, and engaging in business, while the men, shut up in the house, worked at the loom. Men, to this day, are employed in making cloth in Egypt and in other countries, but it cannot be said that they have relinquished their habits for those of women; and we find from the paintings executed by the Egyptians themselves, far



No. 386. Part 1. Men engaged in spinning, and making a sort of network.

2. The horizontal loom, or perhaps mat-making, as in Spain.

Beni-Hassan.

more authentic and credible than the casual remarks of a Greek, that both men and women were employed in manufacturing cloth.

'Other nations,' continues the historian, 'make cloth by pushing the woof upwards, the Egyptians, on the contrary, press it down;' and this is confirmed by the paintings² which represent the process of making cloth: but at Thebes, a man who is engaged in making a piece of cloth with a colored border or selvage, appears to push the woof upwards, the cloth being fixed above him to the upper part of the frame. They had also the horizontal loom, which occurs at Beni-Hassan and other places.

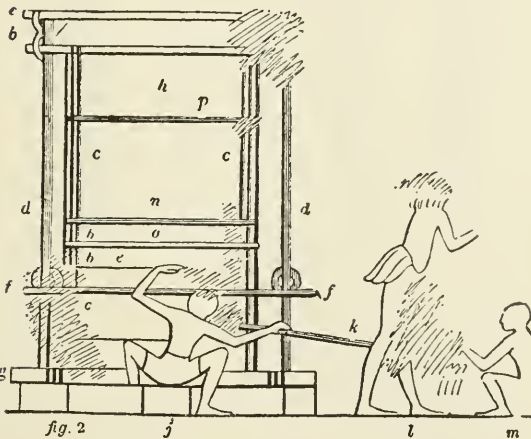
¹ Herodot. ii. 35. Sophocles, *Œdip.* Col. v. 352, makes the same remark.

² In woodcut No. 110, *fig.* 2, vol i. p. 317.

In the hieroglyphics over persons employed with the spindle, it is remarkable that the word *saht*, which in Coptic signifies 'to twist,' constantly occurs. The spindles were generally small, being about one foot three inches in length, and several have been found at Thebes, and are now preserved in the mu-



fig. 1.



No. 387.

Fig. 1. A piece of cloth on a frame.
2. A loom.

Eileithyia.
Thebes.

k is a shuttle, not thrown, but put in with the hand. It had a hook at each end.
Woodcut No. 110, fig. 2.

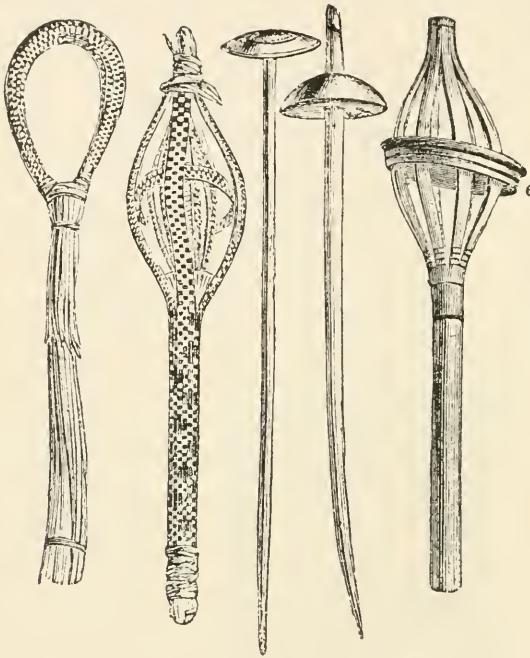
seums of Europe.¹ They were generally of wood, and, in order to increase their impetus in turning, the circular head was occasionally of gypsum, or composition: some, however, were of a light plaited work, made of rushes, or palm leaves, stained of various colors and furnished with a loop of the same materials, for securing the twine after it was wound.²

¹ One of those in the British Museum, which was found at Thebes, had some of the linen thread with it. Woodcut No.

388, fig. 2.

² Woodcut No. 388, fig. 5. Another of wood, fig. 6.

Besides the use of the spindle,¹ and the form of the loom, we find the two principal purposes to which flax was applied represented in the paintings of the tombs: and at Beni-Hassan



No. 388.

Spindles.

British and Berlin Museums.

- Fig. 1* is a sort of cane split at the top to give it a globular shape.
2 has the head of gypsum.
3, entirely of wood.
4, of plaited or basket work.
5, the loop to put over the twine.
6, a ring of wood for securing the twine.

the mode of cultivating the plant, in the same square beds now met with throughout Egypt (much resembling our salt-pans), the process of beating the stalks and making them into ropes, and the manufacture of a piece of cloth, are distinctly pointed out.²

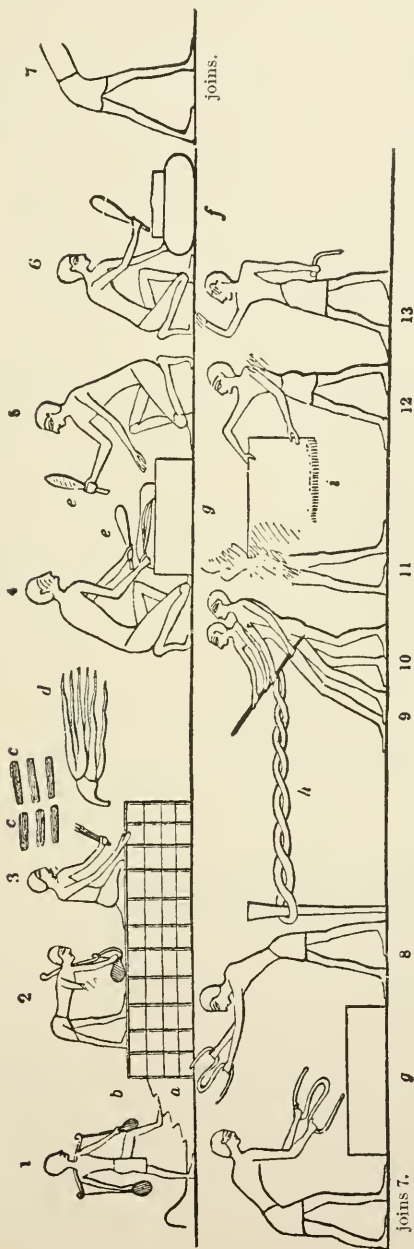
It is, however, possible that the part of the picture where men are represented pouring water from earthen pots, may refer to the process of steeping the stalks of the plant, after they were cut; the square spaces would then indicate the different pits in

¹ The ordinary distaff does not occur in these subjects, but we may conclude they had it; and Homer mentions one of gold, given to Helen by 'Alcandra, the wife of

Polybus,' who lived in Egyptian Thebes (Od. Δ, 131.)

² Woodcut No. 389.

which they were immersed, containing some less, some more water, according to the state in which they were required; and this is rendered more probable by the flight of steps, for



Beni-Hassan.

Preparing the flax, beating it, and making it into twine and cloth.

a, steps leading up to the top of the pits, *b*, where the flax was steeped.
c, *c*, the flax taken by *fig. 3* to dry, previous to beating.
d, the stalks fresh cut.

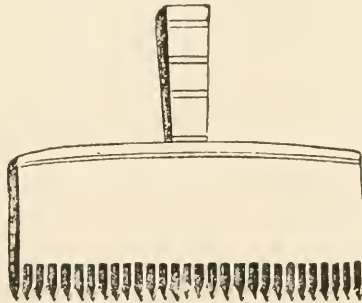
Fig. 1 brings water in earthen pots.
Figs. 4 and *5* are engaged in beating the flax with mallets, *e*, *e*.
7 and *8*, striking it, after it is made into yarn, on a stone, *g*.
Figs. 9 and *10*, twisting the yarn into a rope.
11 and *12* show that a piece of cloth, *1*, has been made of the yarn.
13, a superintendent.

No. 389.

ascending to the top of the raised side of the pits, which would not have been introduced if the level ground were intended.

The steeping, and the subsequent process of beating the stalks with mallets, illustrate the following passage of Pliny¹ upon the same subject: ‘The stalks themselves are immersed in water, warmed by the heat of the sun, and are kept down by weights placed upon them: for nothing is lighter than flax. The membrane, or rind, becoming loose, is a sign of their being sufficiently macerated. They are then taken out, and repeatedly turned over in the sun, until perfectly dried; and afterwards beaten by mallets on stone slabs. That which is nearest the rind is called *stupa*, “tow,” inferior to the inner fibres, and fit only for the wicks of lamps. It is combed out with iron hooks, until all the rind is removed. The inner part is of a whiter and finer quality. Men are not ashamed to prepare it. . . . After it is made into yarn, it is polished by striking it on a hard stone moistened with water; and when woven into cloth, it is again beaten with clubs, being always improved in proportion as it is beaten.’

They also parted and cleansed the fibres of the flax with a sort of comb, probably answering to the iron hooks mentioned by Pliny; two of which, found with some tow at Thebes, are



No. 390.

Wooden comb found with some tow.

Berlin Museum.

preserved in the Berlin Museum; one having twenty-nine, the other forty-six, teeth.²

The border of some of their cloths consists of long fringes, formed by the projecting threads of the warp, twisted together, and tied at the end in one or more knots, to prevent their unravelling, — ‘precisely,’ as Mr. Thompson observes, ‘like the

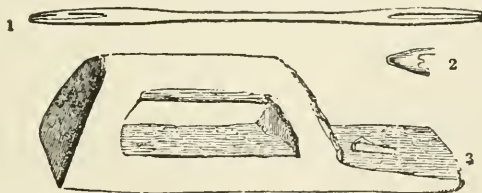
¹ Plin. xix. 1.

² Woodcut No. 390.

silk shawls of the present day;’ and specimens of the same borders, in pieces of cloth found in the tombs, may be seen in the British Museum and other collections.¹

The sculptures, as well as the cloths which have been discovered, perfectly bear out Herodotus in his statement that they had the custom of leaving a fringe to their pieces of linen,² which, when the dresses were made up, formed a border round the legs; but they do not appear to have been universally worn. This kind of dress he calls *calasiris*. When the fringe was wanting, the border was hemmed, which had the same effect of preventing the unravelling of the cloth. The Jews wore a similar kind of fringed dress, and Moses commanded the children of Israel to ‘make them fringes in the borders of their garments, . . . and . . . put upon the fringe of the borders a riband of blue.’³

Besides the process of making cloth, that of smoothing, or calendering, is represented in the paintings; which appears to have been done by means of wooden rods, passed to and fro over the surface; but from the appearance of some of the fine linen found in the tombs, we may conjecture that much greater pressure was sometimes used for this purpose, and such as could only be applied by a press, or cylinders of metal.



No. 391. .

Fig. 1. Netting needle of wood, in Mr. Salt's Collection.

2. Part of another of bronze, of later date, found by me at Berenice.

3. Wooden plane for smoothing or pressing cloth.

From Thebes.

For smoothing linen after washing, a wooden substitute for what we call an *iron* was used by the Egyptian washerwomen, some of which have been found at Thebes, six inches in length, made of *athul* or tamarisk wood.⁴

I have had occasion to observe that the Egyptians had carpets, which, according to Diodorus,⁵ were spread for the sacred animals, and are noticed by Homer⁶ as a very early invention;

¹ Woodcut No. 383, *fig.* 4. Deut. xxii. 12.

² Herodot. ii. 81.

³ Numbers xv. 38.

⁴ Woodcut No. 391, *fig.* 3.

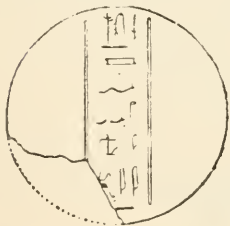
⁵ Diodor. i. 34.

⁶ Hom. Od. Δ, 124, and called *tapeta*, the modern name of a carpet.

they were of wool,¹ but of their quality we are unable to form any opinion, the fragments discovered in the tombs being very imperfectly preserved. Some portions of woollen work have been found at Thebes, which presented the appearance of a carpet; and a small rug was brought to England, and was in the possession of Mr. Hay, whose valuable collection of drawings from Thebes and other parts of Egypt I have already noticed.

This rug is eleven inches long by nine broad. It is made like many carpets of the present day, with woollen threads on linen string. In the centre is the figure of a boy in white, with a goose above it, the hieroglyphic of 'child,' upon a green ground; around which is a border composed of red and blue lines; the remainder is a ground of yellow, with four white figures above and below, and one at each side, with blue outlines and red ornaments; and the outer border is made up of red, white, and blue lines, with a fancy device projecting from it, with a triangular summit, which extends entirely round the edge of the carpet. Its date is uncertain; but from the child, the combination of the colors, and the ornament of the border, I am inclined to think it really Egyptian.²

I have also been informed by Lord Prudhoe, that in the



Turin Museum he met with 'some specimens of worked worsted upon linen, in which the linen threads of the weft had been picked out, and the colored worsted sewed on the warp.'



Wooden reel with thread, inscribed with the name of Ai, royal scribe and divine father, probably the heretic king Ai, of the 18th Dynasty. No. 392. Leyden Museum.

[The Egyptian thread was thin and fine, and when ready for use was wound round small cylindrical wheels grooved in the centre. These reels were made of wood, porcelain, and other materials, but wood was generally preferred for the purpose as lighter and more useful. Sometimes these reels had hieroglyphic inscriptions engraved upon them, and it appears from one in the Museum of Leyden that the names of their possessors were men as well as women — either that they were the property of their households, or else that they actually used them.] — S. B.

¹ As in Homer, *loc. cit.*

² It is not of the Pharaonic, but of the Greek or Roman period. — S. B.

I have noticed the use of flax for making ropes, string, and various kinds of twine; for large ropes, however, of ordinary quality, and for ordinary purposes, the *leaf*, or fibres of the date-tree, were employed as at the present day; and many specimens of these durable materials have been found in the excavations of Upper and Lower Egypt.

In a tomb at Thebes, of the time of Thothmes III., is represented the process of twisting thongs of leather, which, as it is probably the same as that adopted in rope-making, may be properly introduced here.

The ends of four thongs were inserted and fastened into a hollow tube, from the side of which a bar projected, surmounted by a heavy metal ball; and the man who twisted them held the tube in his right hand, whirling it round, as he walked backwards, by means of the impetus given by the ball. A band attached to a ring at the other end of the tube went round his body, in order to support it and give it a free action, and the ring turned upon a swivel, to prevent the band itself from twisting.

At the other extremity of the walk, a man seated on the ground, or on a low three-legged stool, let out the separate thongs, and kept them from becoming entangled. Behind him sat another, who, with the usual semi-circular knife, cut the skin into strips as he turned it round: showing that what we term the circular cut was known to the ancient Egyptians at this early period, and that they had already adopted this mode of obtaining the longest thongs from a single piece of leather.¹ When finished, the twisted thongs were wound round a hollow centre, through which the end was passed, and repeatedly bound over the concentric coils in the same manner as ropes.

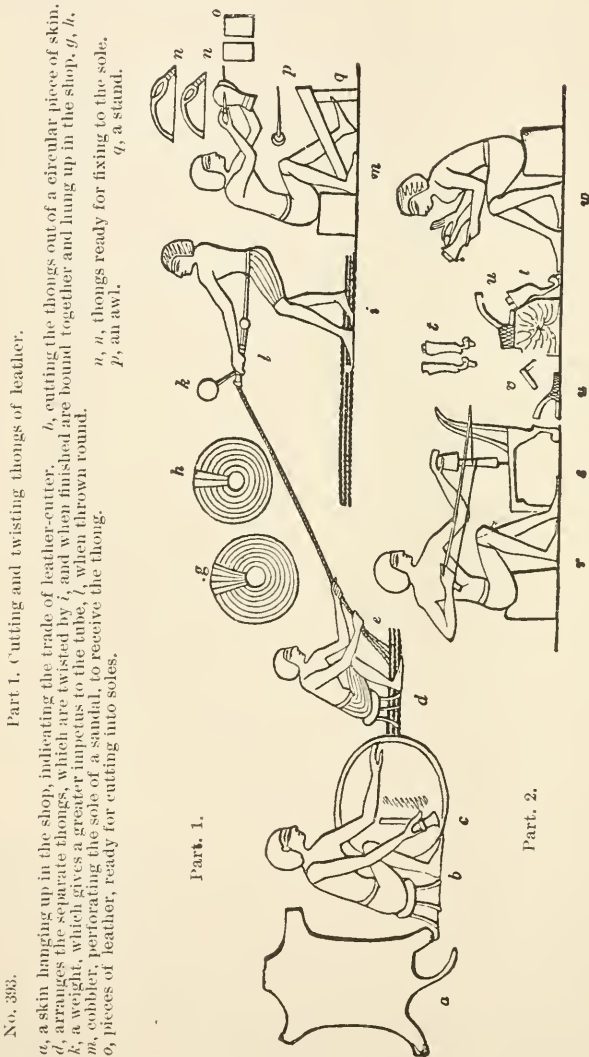
Some, indeed, have supposed the present subject to represent rope-making; but the presence of the skin on the left, and the shoemakers on the right, forming a continuation of the picture, sufficiently prove that they are engaged in preparing leathern thongs for sandals and other similar purposes.

Their nets were made of flax-string,² both for fishing and fowling: and portions of them have been discovered at Thebes, and are preserved in our European museums. The netting

¹ This calls to mind the fable of Dido's purchasing as much land in Africa as could be covered by a bull's hide, upon which she built Byrsa, the origin of Carthage. (Virgil, *Æn.* i. 368.)

² Conf. Isaiah xix. 9: 'They that work in fine flax, and they that weave networks.' Plin. xix. 1; and *suprà*, p. 165.

needles¹ were of wood, very like our own, split at each end, and between ten and eleven inches in length, and others were of bronze, with the point closed.



No. 383.

Part 1. Cutting and twisting thongs of leather.

a, a skin hanging up in the shop, indicating the trade of leather-cutter. *b*, cutting the thongs out of a circular piece of skin. *c*, arranging the separate thongs, which are twisted by *i*, and when finished are bound together and hung up in the shop, *d*, *h*, *k*, a weight, which gives a greater impetus to the tube, *l*, when thrown round. *m*, a cobbler, perforating the sole of a sandal, to receive the thong. *n*, *o*, thongs ready for fixing to the sole. *p*, an awl. *q*, a stand.

Part 1.

Part 2.

Part 2. Carpenters.

s, drills a hole in the seat of a chair, *t*, *u*, legs of chairs. *v*, man planing or polishing the leg of a chair. *w*, a carpenter's square.

u, *u*, alizes. *w*, man planing or polishing the leg of a chair.

Sieves were often made of string; but some of an inferior quality, and for coarse work, were constructed of small thin rushes or reeds² (very similar to those used by the Egyptians for

¹ Woodcut No. 391, *figs.* 1 and 2.

² [Pliny says, the Egyptians made sieves of the stalks of papyrus and rushes,

the Spaniards of string, and the Gauls of horsehair (xviii. 11).—G. W.]

writing, and frequently found in the tablets of the scribes); a specimen of which kind of sieve is preserved in the Paris Museum. The paintings also represent them made of the same materials; and indeed it is probable that the first they used were all of this humble quality, since the hieroglyphic indicating a sieve is evidently borrowed from them.

The Egyptians were not less famed for their manufacture of paper than for the delicate texture of their linen. The plant from which it was made, the *Cyperus papyrus*¹ of modern botanists, mostly grew in Lower Egypt, in marshy land, or in shallow brooks² and ponds formed by the inundation of the Nile, where they bestowed much pains on its cultivation.

The right of growing and selling it belonged, as I have already observed, to the government, who made a great profit by its monopoly: and though we frequently find mention of the use of the byblus or papyrus, for constructing canoes or rude punts, for making baskets, parts of sandals, sails, and for numerous other common purposes, it is evident that we are to understand, in these instances, some other species of the numerous family of *Cyperus*: which, too, is unequivocally shown by Strabo, when he distinguishes the ordinary from 'the hieratic byblus.'³

The papyrus, or 'byblus hieraticus' of the geographer, our *Cyperus papyrus*, was particularly cultivated in the Sebennytic nome:⁴ other parts of the Delta also produced it, and probably even some districts in Upper Egypt. The paper made from it differed in quality: being dependent upon the growth of the plant, and the part of the stalk whence it was taken: and we find many of the papyri which have been preserved vary greatly in their texture and appearance. They are generally fragile and difficult to unroll, until rendered pliant by gradual exposure to steam, or the damp of our climates: and some are so brittle that they appear to have been dried by artificial means.

We are, however, less surprised at the effect of the parched climate of Upper Egypt, when we consider the length of time they have been kept beyond the reach of moisture, and observe that our drawing-paper, after a very few years, becomes so dry

¹ Or the *Cyperus antiquorum*, the modern *Berd*. Its ancient name was *pu apu*, 'the *apu*,' whence papyrus. The word *tufi* appears to have been applied to papyrus. When made up or manufactured, it was called *t ama*. — S. B.

² Isaiah xix. 7: 'The paper reeds by the brooks, by the mouth of the brooks.'

³ The papyrus was called by the Greeks *bublos*, the Latin *byblus*.

⁴ Plin. xiii. 11.

in that country that it is too brittle to fold without breaking. Indeed, those papyri which have not been exposed to the same heat, being preserved in the less arid climate of Lower Egypt, still preserve their pliability; and a remarkable proof of this is shown in one brought by me from Memphis, which may be bent and even twisted in any way, without breaking, or without being more injured than a piece of common paper. The hieroglyphics, from their style, show it to be of an ancient Pharaonic age, and, what is remarkable, they present the name of the city where the papyrus was found, Menofre, or Memphis.

The mode of making papyri was this: The interior of the stalks of the plant, after the rind had been removed, was cut into thin slices in the direction of their length, and these being laid on a flat board in succession, similar slices were placed over them at right angles;¹ and their surfaces being cemented together by a sort of glue, and subjected to a proper degree of pressure and well dried, the papyrus was completed. The length of the slices depended of course on the breadth of the intended sheet, as that of the sheet on the number of slices placed in succession beside each other; so that though the breadth was limited, the papyrus might be extended to an indefinite length.

The papyrus is now no longer used, paper from linen rags and other materials having superseded it: but some few individuals, following the example of the Cavaliere Saverio Landolina Nava, of Syracuse, continue to make it: and sheets from the plant, which still grows in the small rivulet formed by the fountain of Cyane near Syracuse, are offered to travellers as curious specimens of an obsolete manufacture. I have seen some of these small sheets of papyrus; the manner of placing the pieces is the same as that practised in former times; but the quality of the paper is very inferior to that of ancient Egypt, owing either to the preparation of the slices of the stalk before they are glued together, or to the coarser texture of the plant itself, certain spots occurring here and there, throughout the surface, which are never seen on those discovered in the Egyptian tombs.

Pliny thus describes² the plant and the mode of making paper: 'The papyrus grows in the marsh-lands of Egypt, or in

¹ The slices which were placed longways were called by the Romans *stamen*,

the others crossing them *subtemen*, like the warp and the woof in cloth.

² Plin. xiii. 11.

the stagnant pools left inland by the Nile, after it has returned to its bed, which have not more than two cubits in depth. The root of the plant is the thickness of a man's arm; it has a triangular stalk, growing not higher than ten cubits (fifteen feet), and decreasing in breadth towards the summit, which is crowned as with a thyrsus, containing no seeds, and of no use except to deck the statues of the gods. They employ the roots as fire-wood, and for making various utensils. They even construct small boats of the plant; and out of the rind, sails, mats, clothes, bedding, and ropes: they eat it either crude or cooked,¹ swallowing only the juice: and when they manufacture paper from it, they divide the stem, by means of a kind of needle, into thin plates or laminae, each of which is as large as the plant will admit. . . .

‘All the paper is woven upon a table, and is continually moistened with Nile water, which, being thick and slimy, furnishes an effectual species of glue.² In the first place, they form upon a table, perfectly horizontal, a layer the whole length of the papyrus, which is crossed by another placed transverse, and afterwards enclosed within a press. The different sheets are then hung in a situation exposed to the sun in order to dry, and the process is finally completed by joining them together, beginning with the best. There are seldom more than twenty³ slips, or stripes, produced from one stem of the plant.⁴

‘Different kinds of broad paper vary in breadth. The best is thirteen digits broad; the hieratic only eleven; the Fannian⁵ ten, and the amphitheatric nine. The Saitic is still narrower, being only the breadth of the mallet; and the paper used for business is only six digits broad. Besides the breadth, the fineness, thickness, whiteness, and smoothness are particularly regarded; . . . when it is coarse, it is polished with a boar's tooth, or a shell; but then the writing is more readily effaced, as it does not take the ink so well.’⁶

Pliny is greatly in error when he supposes that the papyrus

¹ Diod. i. 80

² It is scarcely necessary to correct this misconception of Pliny, or to suggest the necessity of something more tenacious than Nile water.

³ Some read *vicinae*, not *viginti*.

⁴ On the examination of papyri, there appears to be some doubt how the material was prepared, and it is possible that it may have been cut in a continuous cir-

cular manner, so as to make one large sheet from a single stem, like the mode in which the so-called rice paper, the pith of the *Aralia papyrifera*, is produced by the Chinese. — S. B.

⁵ So called from Fannius, who had a manufactory at Rome for preparing paper.

⁶ Plin. xiii. 12, where he makes other observations on the quality of paper.

was not used for making paper before the time of Alexander the Great, since we meet with papyri of the most remote Pharaonic periods; and the same mode of writing on them is shown from the sculptures to have been common in the age of Suphis, or Cheops, the builder of the Great Pyramid, more than 2000 years before our era. [The breadth of the papyrus varied at different times, the oldest, that of the 5th Dynasty, being six inches in width; at the time of the 12th Dynasty it is the same, and in the 18th generally about thirteen inches; under the 19th line it was nine and eleven inches; and at the time of the 20th as broad as fourteen and a half inches. The demotic contracts under the Ptolemies are about eleven inches, while the Greek papyri of the Roman period are from twelve and a half to fourteen inches wide. The color varies according to its antiquity, the oldest papyrus being the darkest; but some papyri are much lighter, and of finer and more silky quality, even at a comparatively early period. At the time of the 26th Dynasty some papyri are of a remarkably white color. — S. B.]

It is uncertain until what period paper made of the papyrus continued in general use; but there is evidence of its having been occasionally employed to the end of the seventh century, when it was superseded by parchment. All public documents, under Charlemagne and his dynasty, were written on this last, and the papyrus was then entirely given up.¹

Parchment, indeed, had been invented long before, and was used for writing, as early as the year 250 before our era, by Eumenes, king of Pergamus, who being desirous of collecting a library which should vie with that of Alexandria, and being prevented by the jealousy of the Ptolemies from obtaining a sufficient quantity of papyrus, had recourse to this substitute, and its invention at Pergamus claimed, and secured to it, the lasting name of Pergamena.² It was made of the skins of sheep and calves; but to the former the name of parchment is more correctly applied, as to the latter that of vellum.³

¹ The Bull of Pope John VIII., A.D. 876, makes its use as late as the ninth century, and it was used in Italy till the twelfth; the last dated document in it being the Bull of Pope Paschal II. about A.D. 1100. — S. B.

² Called also *membrana* by the Romans. It appears from the inscriptions that leather came into use long before papyrus; documents written upon it in the time of

Cheops of the 4th, and Apappus of the 5th Dynasty, being mentioned in some papyri, and entirely copied on others. An exceptional ritual in the British Museum (Salt, 256) is of white leather, a kind of vellum or parchment, and is many centuries older than the reign of Eumenes. — S. B.

³ From *vellus*, 'a skin,' or *vitulinum*, 'of calf.'

The monopoly of the papyrus in Egypt so increased the price of the commodity that persons in humble life could not afford to purchase it for ordinary purposes; few documents,¹ therefore, are met with written on papyrus, except funeral rituals, the sales of estates, and official papers, which were absolutely required; and so valuable was it that they frequently obliterated the old writing, and inscribed another document on the same sheet.

For common purposes, pieces of broken pottery, stone, board, and leather were used; an order to visit some monument, a soldier's leave of absence, accounts, and various memoranda, were often written on the fragments of an earthenware vase; an artist sketched a picture, which he was about to introduce in a temple or a sepulchre, on a large flat slab of limestone, or on a wooden panel prepared with a thin coating of stucco; and even parts of funeral rituals were inscribed on square pieces of stone, on stuccoed cloth, or on leather. Sometimes leather rolls were substituted for papyri, and buried in the same manner with the deceased; they are of an early period, and probably adopted in consequence of the high price of the papyrus; but few have hitherto been found at Thebes.

In the infancy of society various materials were employed for writing, as stones, bricks, tiles, plates of bronze, lead and other metals, wooden tablets,² the leaves and bark of trees, and the shoulder-bones of animals. Wooden tablets covered with wax were long in use among the Romans, as well as the papyrus;³ and the inner bark of trees,⁴ and pieces of linen,⁵ had been previously adopted by them.

Many Eastern people still write on the leaves of trees, or on wooden tablets, and *waraka* continues to signify, in Arabic, both 'a leaf' and 'paper.'

The early Arabs committed their poetry and compositions to the shoulder-bones of sheep; they afterwards obtained the

¹ Papyrus appears to have been used for all official, civil, and legal purposes; but as most of the papyri found are those made for the mummies, they are, of course, funeral. There are, however, several papyri with miscellaneous subjects, while the number of inscriptions on slices of calcareous stone and pottery, to which the Greek term *ostraka* has been conventionally applied, is comparatively small. — S. B.

² These wooden tablets, which are covered with a glazed composition capable

of receiving ink, were used by the Egyptians long after they had papyri, and they are still common in schools at Cairo in lieu of our slates. One is represented in woodcut No. 109, *fig.* 1.

³ Whence the word 'paper,' as in *hyblus*, or *biblus*, originated the name bible or book.

⁴ Called *liber*, whence the Latin name *liber*, 'a book.'

⁵ Liv. iv. 7, xiii. 20: 'Linteis libris,' about the year 410 B.C.

papyrus paper from Egypt, on which the poems called *Moallaqât* were written in gold letters; and after their conquests in Asia and Africa, these people so speedily profited by and improved the inventions of the nations they had subdued, that parchment was manufactured in Syria, Arabia, and Egypt, which in color and delicacy might vie with our modern paper. It speedily superseded the use of the papyrus, and continued to be employed until the discovery of the method of making paper from cotton and silk, called *Carta bombycina*, which is proved by Montfaucon to have been known at least as early as A.D. 1100, and is supposed to have been invented about the beginning of the ninth century. Being introduced into Spain from Syria, it was denominated *Carta damascena*; and some manuscripts on cotton paper are said to exist in the Escorial, written in the eleventh century.

It is a matter of doubt to what nation and period the invention of paper manufactured from linen ought to be ascribed. The Chinese were acquainted with the secret of making it from various vegetable substances long before it was known in Europe; ¹ the perfection to which they have carried this branch of art continues to excite our admiration; and ‘the librarian Casiri relates,’ according to Gibbon, ‘from credible testimony, that paper was first imported from China to Samarcand A.H. 30² (A.D. 652), and *invented*, or rather introduced, at Mecca, A.H. 88 (A.D. 710).’ ³

It may, however, be questioned whether it was made from linen at that early period, and we have no positive proof of linen paper being known, even by the Saracens, prior to the eleventh century. The Moors, as might be expected, soon introduced it into Spain, and the Escorial library is said to contain manuscripts written on this kind of paper as old as the twelfth century.⁴

But paper of mixed cotton and linen, which was made at the same time, appears to have been in more general use; and linen paper continued to be rare in most European countries till the fifteenth century. That it was known in Germany as early as the year 1312 has been satisfactorily ascertained by existing documents; and a letter on linen paper, written from Germany to Hugh Despencer about the year 1315, is preserved in the

¹ A.D. 95. — S. B.

² Some raise it to A.D. 704, but no Arabic paper manuscript older than A.D. 950 is known. — S. B.

³ Gibbon, vol. ix. c. 51, p. 379.

⁴ Some doubt the existence of any M.S. on linen paper before the year 1270; but an Arabic version of the Aphorisms of Hippocrates, in the Escorial, dates from the beginning of the thirteenth century.

Chapter-house at Westminster; which, even to the water-mark, resembles that made at the present day.

It was not till the close of the sixteenth century that paper was manufactured in England. The first was merely of a coarse brown quality, very similar to that of the modern Arabs, whose skill in this, as in many arts and sciences, has been transferred to people once scarcely known to them, and then greatly their inferiors; and writing or printing paper was not made in London before 1690;¹ France and Holland having, till that time, supplied us with an annual importation to the amount of nearly 100,000 pounds.

The tanning and preparation of leather was also a branch of art in which the Egyptians evinced considerable skill; the leather-cutters, as I have already observed, constituted one of the principal subdivisions of the third caste; and a district of the city was exclusively appropriated to them in the Libyan part of Thebes.

Leather is little capable of resisting the action of damp, the salts of the earth, or excessive dryness, so that we cannot reasonably expect to find it sufficiently well preserved to enable us to judge of its quality; but the fineness of that employed for making the straps placed across the bodies of mummies discovered at Thebes, and the beauty of the figures stamped upon them,² satisfactorily prove the skill of 'the leather-cutters' and the antiquity of embossing; some of these bearing the names of kings who ruled Egypt about the period of the Exodus, or 3300 years ago.

Many of the occupations of their trade are portrayed on the painted walls of the tombs at Thebes. They made shoes, sandals, the coverings and seats of chairs or sofas, bow-cases, and most of the ornamental furniture of the chariot: harps were also adorned with colored leather, and shields and numerous other things were covered with skin prepared in various ways. They also made skins for carrying water, wine, and other liquids; and

¹ [But Queen Elizabeth is said to have knighted Spelman for having set up the first paper-mill in England; and Shakespeare makes Jack Cade say to Lord Say (1450), 'Whereas before our forefathers had no other book but the score and the tally, thou hast caused printing to be used, and contrary to the king, his crown and dignity, thou hast built a paper-mill:' but

Shakespeare is not quite an authority for this, or the paper-mill. — G. W.]

² These are the stamped ends of the cross-straps of the mummies of the time of the 20th Dynasty, the oldest known being that of Rameses XIII. (Osburn, mummy at Leeds, pl. 2.) These embossed bands continued in use during the subsequent dynasties, or till about 525 B.C. and after that were disused. — S. B.

the custom of coating them within with a resinous substance¹ was the origin, as I have already observed, of that acquired taste, which led the Egyptians to imitate the flavor it imparted to wine, even in their earthen amphoræ.

Part of the process of curing the skins is introduced in the sculptures; and that of dyeing them is mentioned in the Bible,² being doubtless borrowed by the Jews from Egypt. In one instance a man is represented dipping the hide³ into a vase, probably containing water, in which it was suffered to soak, preparatory to the lime being applied to remove the hair—a process very similar to that adopted at the present day in Egypt and other countries. The Arabs prefer the acrid juice of a plant growing in the desert for the purpose, as its effect is still more rapid, and as it has the advantage of making the skin better and more durable.

This plant is the *Periploca secamone*; its stalks contain a white milky juice, which exudes from it when bruised, and which is so acrid as to be highly injurious to the eye or to the wounded skin. It supports itself by winding around every neighboring shrub, and its not ungraceful stalks appear to have been occasionally used by the ancient Egyptians for the same ornamental purpose as the ivy, in forming festoons. But there is no evidence of its having been employed by them in curing skins, though they seem to have been well acquainted with the properties of the plants which grew in the deserts, as well as in the valley of the Nile; and however we might be inclined to suppose that, in the sculptures of Thebes representing the occupations of carriers, they are pounding something of the kind for this purpose, the absence of every indication of the contents of the vase or mortar leaves it undecided if it be the *periploca*, or lime, salt, or other substance.

According to the Arabs, the method of preparing skins with the *periploca*, or *Ghulga*, is as follows: 'The skins are first put into flour and salt for three days, and are cleansed of all the fat and the impurities of the inside. The stalks of the plant being pounded between large stones, are then put into water, applied

¹ Also scabbards of swords. A leather cap, No. 2564, and apron, No. 2567, are in the collections of the British Museum. Papyri containing documents or letters were sometimes transmitted in leather cases, and bags of leather were used by

workmen for holding tools or instruments — S. B.

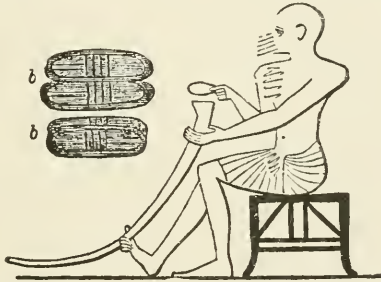
² Exod. xxv. 5: 'And rams' skins dyed red.'

³ The Egyptian word for leather is *tehar*; the hide or unprepared skin was called *anem*. — S. B.

to the inner side of the skin for one day; and the hair having fallen off, the skin is left to dry for two or three days, and the process is completed.'

The mode of stretching or bending leather over a form is frequently represented at Thebes; and it is curious to observe that the semicircular knife,¹ used by the ancient Egyptians between 3,000 and 4,000 years ago, is precisely similar to that of our modern curriers.

As in other trades, the tools they employed were neither numerous nor complex, and their means might sometimes appear inadequate, did we not see the beautiful work performed at the present day in China, India, and other countries, where the implements are equally simple. The semicircular knife, a sort of chisel, the common awl (specimens of which have been



No. 394. Currier holding a strap of leather with his toes, while cutting it. *Thebes.*
b b are straps tied up, and deposited in the shop.

found at Thebes, similar to our own), a stone for polishing the leather, the cutting table, the bending form, the horn, and a few other utensils, were all that occurred in the shop of the shoemaker or the currier; and a prepared skin, the emblem of their trade, was suspended together with ready-made shoes and other articles, to indicate their skill, and to invite a customer.

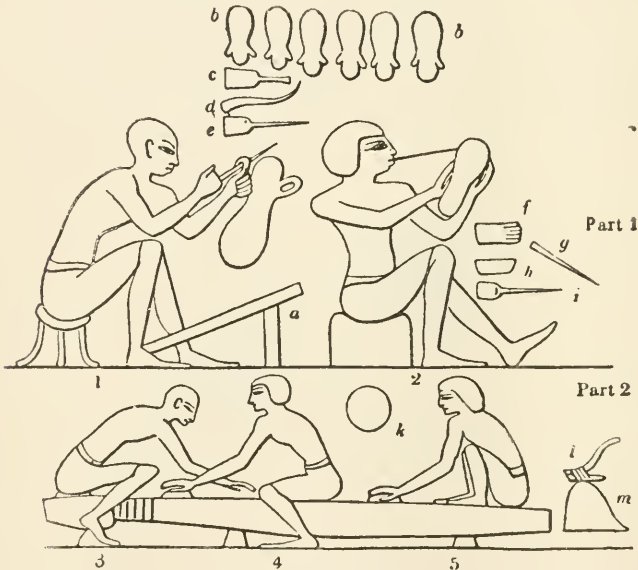
The shops of an Egyptian town were probably similar to those of Cairo,² and other Eastern cities; which consist of a square room, open in front, with falling or sliding shutters, to close it at night; and the goods, ranged in shelves or suspended against the walls, are exposed to the view of those who pass. In front is generally a raised seat, where the owner of the shop and his customers sit, during the long process of concluding a

¹ Woodcut No. 65, *fig. c.* It is the same as the Greek *arbelon*.

² Lane, 'Modern Egyptians,' vol. ii. pp. 9 and 10, woodcuts.

bargain, previous to the sale and purchase of the smallest article: and here an idle lounge frequently passes whole hours, less intent on benefiting the shopkeeper, than in amusing himself with the busy scene of the passing crowd.

Among the many curious customs introduced in the paintings and still retained in the East, is that of holding a strap of leather or other substance with the toes, which from their being always free, and unencumbered with tight shoes, retain their full power and pliability; and the singular, I may say primitive, mode



No. 395.

Part 1. Sandal-makers.

2. Men employed in polishing a column. Thebes.

Fig. 1, making a hole with an awl.

2, tightening a thong with his teeth.

b b, sandals hanging up in the shop.

c to l, various tools.

of tightening a thong with the teeth, while sewing a shoe, is also portrayed in the paintings of the time of the third Thothmes.

It is probable that, as at the present day, they ate in the open front of their shops, exposed to the view of every one who passed: and to this custom Herodotus may allude, when he says, 'the Egyptians eat in the street.'¹

In Eastern towns, no regal arms or gilded inscription proclaim the patronage² of 'his Majesty,' and no picture or description

¹ Herodot. ii. 35.

² A Turk in London once observed, 'How very changeable your king must be,

if all the shops having royal arms have been successively tried by him!'

affixed to the shop announces the trade of the owner: being thought sufficiently shown by the goods exposed for sale: but this does not prevent the inconsistency, perhaps profanation, of attaching a religious sentence, or the name of the Deity, to walls which hourly witness an attempt to defraud the inexperienced customer. Nor is there any direct evidence that the ancient Egyptians affixed the name and trade of the owner of the shop, though the presence of hieroglyphics, denoting this last, together with the emblem which indicated it, may seem to argue in favor of the custom; and the absence of many individuals' names in the sculptures is readily accounted for by the fact that these scenes refer to the occupation of the whole trade, and not to any particular person.

Of all people, we may suppose Egyptian shopkeepers most likely to display the patronage received from royalty; the name of a monarch being so often introduced in the most conspicuous manner on the coffins of private individuals, and in the paintings of the tombs, many of the scarabæi they wore presenting the name of a king, and the most ordinary devices being formed to resemble a royal oval. But whether or not they had this custom, or that of affixing the name and occupation of the tradesman, it is difficult to determine: and indeed in those cities where certain districts were set apart for particular trades, the latter distinction was evidently uncalled for and superfluous.

The great consumption of leather in Egypt, and the various purposes to which skins,¹ both in the tanned and raw state, were applied, created a demand far greater than could be satisfied by the produce of the country: they, therefore, imported skins from foreign countries, and part of the tribute levied on the conquered tribes of Asia and Africa consisted of hides and the skins of wild animals, as the leopard, fox, and others; which are frequently represented in the paintings of Thebes, laid before the throne of the Egyptian monarch, together with gold, silver, ivory, rare woods, and the various productions² of each vanquished country.

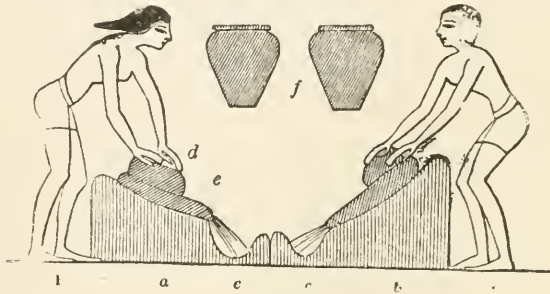
¹ Skins were considered of great value by many ancient people: the rewards in the games at Chemmis in Upper Egypt were skins, cattle, and cloaks, and we find the same custom among the Greeks. (Hom. II. X, 159; Herodot. ii. 91.)

² Some of these tributes put us in mind of the objects which came in Solomon's ships: 'gold, and silver, ivory, and apes, and peacocks' (1 Kings x. 22). See also

Athenæus, lib. v., where he mentions the presents brought to Ptolemy Philadelphus. [The name of the peacock in Hebrew is *tokim*, from *toki*, a peacock, in the Tamil language of South India, whence they came. Apes, *kofm*, is also in Tamil *kap*; but it is in Egyptian *toj*, and *kaf* is the long-tailed monkey of Ethiopia. The Tamil was the language of South India before the Hindoo race inhabited it, as in the

For tanning they used the pods of the *Sont*, or *Acacia* (*Acacia* or *Mimosa nilotica*), the *acanthus* of Strabo and other writers, which was cultivated in many parts of Egypt, being also prized for its timber and gum; and it is probable that the bark and wood of the *Rhus oxyacanthoides*, a native of the desert, were employed for the same purpose.¹

Many persons, both men and women, were engaged in cleaning cloth and stuffs of various kinds; and the occupations of the



No. 396.

Fullers.

Beni-Hassan.

a, b, inclined tables. *c, c*, the water running off into the trough below

fuller form some of the numerous subjects of the sculptures. It is, however, probable that they were only a subdivision of the dyers, whose skill in coloring cloth I have already noticed.

A far more numerous class were the potters: and all the processes of mixing the clay, and of turning, baking, and polishing the vases, are represented in the tombs of Thebes and Beni-Hassan.

They frequently kneaded the clay with their feet: and after it had been properly worked up, they formed it into a mass of convenient size with the hand, and placed it on the wheel,² which, to judge from that represented in the paintings, was of very simple construction, and turned with the hand. The various forms of the vases were made out by the finger during their revolution:

time of Solomon and before his day; and the aboriginal tribe who speak it is there still. — G. W.]

The Egyptian name of the monkey was *qaf*, and is the same as the Greek *kebos*, and has been supposed to be derived from the Sanserit; but the Egyptian word appears in the tombs at the time of Cheops of the 4th Dynasty, over the animal, and shows that it is much older than the Sanserit form. Apes were called *ben*, and the

Cynocephalus auni. Both came as tribute from Kush, or Æthiopia, and Punt, or Somali. — S. B.

¹ The Arabs also use the bark of the *Acacia sayal* for tanning; it grows in the desert, but not in the valley of the Nile.

² Some supposed the potter's wheel to have been invented by Anacharsis, but, as Strabo observes, it was already known to Homer. (Strabo, vii. p. 209. Seneca, Epist. 90. Plin. vii. 56.)

the handles, if they had any, were afterwards affixed to them; and the devices and other ornamental parts were traced with a wooden or metal instrument, previous to their being baked. They were then suffered to dry, and for this purpose were placed on planks of wood; they were afterwards arranged with great care in trays, and carried by means of the usual yoke, borne on men's shoulders, to the oven.


Many of the vases, bottles, and pans of ordinary quality were very similar to those made in Egypt at the present day, as we learn from the representations in the paintings, and from those found in the tombs, or in the ruins of old towns; and judging from the number of Coptic words applied to the different kinds, their names were as varied as their forms. Coptos and its vicinity were always noted for this manufacture; the clays found there were peculiarly suited for porous vases to cool water; and their qualities are fully manifested, at the present day, in the *goolleh*¹ or *bardak* bottles of Qeneh.

That the forms of the modern *goollehs* are borrowed from those of an ancient time is evident, from the fragments found amidst the mounds, which mark the sites of ancient towns and villages, as well as from the many preserved entire; and a local tradition affirms that the modern manufacture is borrowed from, and has succeeded without interruption to, that of former days.²

It is impossible to fix the period of the invention of the potter's wheel; and the assertion of Pliny, who attributes it to Corœbus the Athenian,³ is not only disproved by probability, but by the positive fact that it was known at the earliest epoch of Egyptian history, of which the sculptures have been preserved, previous to the arrival of Joseph, and consequently long before the foundation of Athens.

But Pliny's chapter of inventions abounds with errors of this kind, and serves to show how commonly the Greeks adopted the discoveries of other nations, particularly of Egypt and Phœnicia, and claimed them as their own: even the art of cutting stones

¹ This is the old Egyptian word *garreh*,

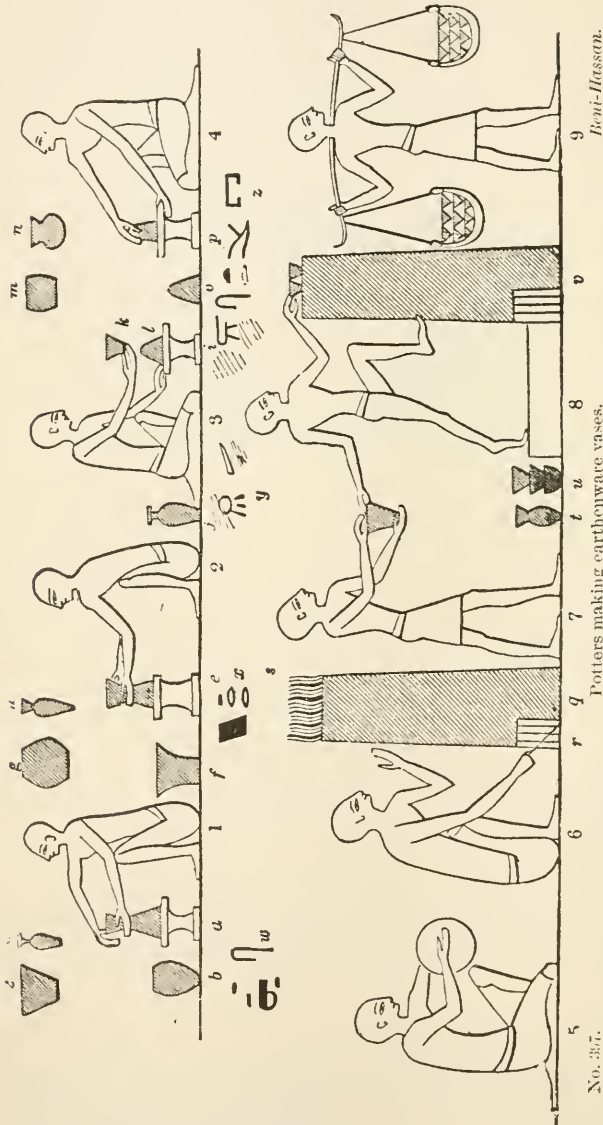
 for pottery, handed down to the present day.

² Vessels of pottery are mentioned in a tomb close to the pyramid of Meidoum, supposed to be as old as the 2d Dynasty. (Mariette, 'Monum. divers,' pl. 12.) Small

hand-made vases abound in the *débris* of the tombs of the Pyramids of Saqqarah, of the age of the 5th Dynasty, and numerous terra-cotta vases of red earthenware are given by Lepsius, Denkm. Abth. ii. Bl. 163. They are of the age of the 4th and 5th Dynasties. — S. B.

³ Plin. vii. 56.

is attributed to Cadmus of Thebes; and Thales of Miletus was said to have enlightened the Egyptians, under whom he had



No. 357.

Potters making earthenware vases.

Beni-Hassan.

a, c, i, p, the wheels on which the clay was put. *Fig. 1* forms the inside and lip of the cup as it turns on the wheel, *a, b, c, d,* are cups already made. *Fig. 2* forms the outside of the cup, indenting it with the hand at the base, preparatory to its being taken off. *Fig. 3* has just taken off the cup from the clay, *l.* *Fig. 4* puts on a fresh piece of clay. *Fig. 5* forms a round slab of clay with his two hands (*syat, 'forms'*). *Fig. 6* stirs and prepares the oven, *q.* At *s* is the fire which rises through the long narrow tube or chimney of the oven, upon the top of which the cups are placed to bake, as at *r* (*grer, 'furnace'*). *Fig. 7* hands the cups to the baker, *s* (*abt, 'dried'*). *Fig. 9* carries away the baked cups from the oven (*i set er fecht, 'takes them to the store-house'*).

long been studying,¹ by teaching them to measure the altitude

¹ The Greeks went to study in Egypt, as modern artists in Italy.

of a pyramid, or other body, by its shadow,¹ at the late period of 600 B.C. Though we may pardon, we must smile at, the vanity of the Greeks, who pretended to the merit of pointing out to their instructors a discovery² of which men so skilful in astronomy and mathematics could not have been ignorant; but we must express our surprise at the simplicity of modern writers who believe and repeat so improbable a story.

The Egyptians displayed much taste in their gold, silver, porcelain, and glass vases; but when made of earthenware for ordinary purposes they were sometimes devoid of elegance, and scarcely superior to those of England before the classic taste of Wedgwood substituted the graceful forms of Greek models for the unseemly productions of our old potteries. Though the clay of Upper Egypt was particularly suited to porous bottles, it could not be obtained of a sufficiently fine quality for the manufacture of vases like those of Greece and Italy; in Egypt, too, good taste did not extend to all classes as in Greece; and vases used for fetching water from a well, or from the Nile, were frequently of a very ordinary kind, far inferior to those carried by the Athenian women to the fountain of Kallirrhoë.

The Greeks, it is true, were indebted to Egypt for much useful knowledge, and for many early hints in art, but they speedily surpassed their instructors in taste, and improved on the information they had acquired; and in nothing, perhaps, is this more strikingly manifested than in the productions of the potter.

[Earthenware was extensively used in Egypt for many purposes, and afforded ample employment to the potter; for domestic uses the chief ones being the amphoræ of unglazed or polished ware for holding wine, oils, and other liquids, water vases, jugs for pouring out liquids, bottles, and jars, generally of small size, for holding various edible and other substances. These were sometimes inscribed with the name of their contents, and the mouth secured by a clay stopper, fastened by a linen bandage. Saucers, or pateræ, a kind of plate, were also made, as also various small phials, or unguentaria. Some of these vases were often painted with colors in tempera, covered with a glaze, the chief designs being bands around the body, or vandyked or checkered

¹ Plin. xxxvi. 12; 'When the shadow was equal to its height,' at an angle of 45°.

² On a par with this is their deriving

foreign names from their own language, as Isis from the Greek word signifying 'knowledge' (Plut. de Isid. s. 2); and many others.

patterns at the neck, occasionally with representations of collars and other simple ornaments, but never with elaborate designs. At a later period some of the bottles have on them a representation of the god Bes or Bessa. It is of course impossible to define all the uses to which those small vases of unglazed earthenware were applied; but all trades used the larger for manufactures: jar-shaped vases held various liquids, tall jugs wine or Nile water; oil and drugs were kept in jars, other cosmetics in jugs with spouts; wine, honey, and milk were often kept in wide-mouthed vessels resembling the Roman *olla*. The clay varies according to the place and period; and the best vessels made by the potter are those of the color of sealing-wax, polished and lucent, some of which are of very elegant shape, and modelled in the human shape or that of animals. But the finest of all the products of the Egyptian potter were the vases, covered with a vitreous glaze, produced for the toilet, of a blue, green, or other colors, consisting of small vases with inscriptions and figures, and of different shapes.¹ hemispherical bowls or pateræ, lotus-shaped goblets, drop-shaped vases, others of the type for holding stibium, the flasks of the age of the 26th Dynasty, and a few moulded in the shape of goats, hedge-hogs, and other animals. These are the porcelain of Egypt, and the beautiful blue of the best age is unrivalled at the present day. Besides objects for domestic use the potter made tiles, mouldings, and other pieces for inlaying, for architecture, and sepulchral purposes, and largely supplied the undertaker with rings, beads, and bugles, for the decoration of the mummies, and made sepulchral jars and sepulchral figures in large numbers for the sepulchres.² — S. B.]

Carpenters and cabinet-makers were a very numerous class of workmen: and their occupations generally form one of the most important subjects in the paintings which represent the Egyptian trades. Egypt produced little wood: and, with the exception of the date and dôm palms, the sycamore, tamarisk, and acacias, few trees of native growth afforded timber either for building or for ornamental purposes. The principal uses of the date and dôm trees I have already mentioned. For coffins, boxes, tables, doors, and other objects which required large and thick planks, for idols and wooden statues, the sycamore was principally employed; and from the great quantity discovered in the tombs alone, it is

¹ The various shapes will be found in Rosellini, 'Monum. Civili,' tav. l. and foll.

² Birch, 'Ancient Pottery, Svo., Lond., 1873, p. 15 and foll.

evident that the tree was cultivated to a great extent. It had the additional recommendation of bearing a fruit to which the Egyptians were very partial; and a religious prejudice claimed for it and the *Persea* the name and rank of sacred fruit trees.

The tamarisk was preferred for the handles of tools, wooden hoes, and other things requiring a hard and compact wood; and of the acacia were made the planks and masts of boats, the handles of offensive weapons of war, and various articles of furniture. Large groves of this tree were cultivated in many parts of Egypt, especially in the vicinity of Memphis and Abydos, where they still exist; and besides its timber, the acacia was highly valued for the pods it produced, so useful for tanning, and for the gum which exudes from the trunk and branches, now known under the name of gum arabic.¹ This tree is not less prized by the modern Egyptians, who have retained its name as well as its uses: *sont* being applied to this species of acacia, both in Arabic and the ancient Egyptian language.

Besides the *Sont*, or *Acacia (Mimosa) Nilotica*, the *Sellem*, *Sumr*, *Tulh*, *Fitneh*, *Lebbeh*, and other acacias, which grew in Egypt, were also adapted to various purposes; and some instances are met with of the wood of the *Egleq*, or *Balanites Egyptiaca*, and of different desert trees, having been used by the Egyptian carpenters. For ornamental purposes, and sometimes even for coffins, doors, and boxes, foreign woods were employed; deal and cedar were imported from Syria; and part of the contributions exacted from the conquered tribes of Ethiopia and Asia consisted in ebony and other rare woods, which were annually brought by the chiefs deputed to present their country's tribute to the Egyptian monarchs.

Boxes, chairs, tables, sofas, and other pieces of furniture were frequently made of ebony, inlaid with ivory; sycamore and acacia were veneered with thin layers, or ornamented with carved devices, of rare wood, applied or let into them: and a fondness for this display suggested to the Egyptians the art of painting common boards to imitate foreign varieties, so generally adopted at the present day. The colors were usually applied on a thin coating of stucco, laid smoothly upon the previously prepared wood, and the various knots and grains painted upon this

¹ Other acacias produce this gum. The *Tulh* has, *par excellence*, the specific title of *gummifera*.

ground indicated the quality of the wood they intended to counterfeit.

The usual tools¹ of the carpenter were the axe, adze, hand-saw, chisels of various kinds (which were struck with a wooden mallet), the drill, and two sorts of planes (one resembling a chisel,² the other apparently of stone, acting as a rasp on the surface of the wood, which was afterwards polished by a smooth body, probably also of stone³); and these, with the ruler,⁴ plummet, and right angle,⁵ a leather bag containing nails, the hone, and horn of oil, constituted the principal, and perhaps the only, implements he used. Some of the furniture of their rooms, the work of the cabinet-maker, I have already noticed,⁶ and have observed the perfection to which they had arrived in the construction of the chairs and ottomans of their saloons; nor can I omit the mention of the art of dovetailing already practised in the earliest Pharaonic ages, or the mode of applying two planks together in the same plane by means of broad pins or tongues of hard wood. Of the former numerous instances occur, both in large and small objects, and no illustration of it is required; the latter is peculiar, and shows the great care taken to make everything durable, which characterizes all the works of the Egyptians.

When two boards are joined together by our modern carpenters, they insert small round pins horizontally into corresponding parts of the edges, and then apply them together, so as to form as it were a single piece, but the Egyptian carpenter was not content with this precaution, and, having used flat pins for this purpose about two inches in breadth, he secured these again, after the boards had been applied to each other, by round pins or wooden nails, driven vertically through the boards, into each of the flat pins; and thus the possibility of the joint opening was effectually prevented, even should the glue, which was added, as in our modern boxes, fail to hold them. After the wood had been reduced to a proper size by the saw, the adze⁷ was the principal

¹ Woodcut No. 172.

² Woodcut No. 108, *fig.* 3.

³ Woodcut No. 108, *fig.* 2.

⁴ Woodcut No. 398, *e.*

⁵ Woodcut No. 393, part 2, *v.*; and No. 398, *f.*

⁶ At the beginning of chapter vi.

⁷ The adze answered in Egypt all the purposes of the modern plane, a tool

which the Egyptians had not invented. Each adze (*nu*, or *sef*) or tool had its name, and on the tablet in the Leyden Museum a list of adzes and their names (as, 'Anup, or Anubis, is its name') is given. ('*Zeitschrift f. ägyptisch. Spr. u. Alterth.*,' 1873, s. 152.) Different kinds of adzes were employed, according to the requirements; one being adopted for trim-

tool employed for fashioning it; and from the precision with which even the smallest objects are worked with it at the present day by the unskilful carpenters of modern Egypt, we may form some idea of its use in the hands of their expert predecessors; and we are less surprised to meet with it so frequently represented in the sculptures.¹

Many of them, together with saws and chisels, have been found at Thebes: the blades are all of bronze, the handles of the acacia or the tamarisk; and, which is very singular, the general mode of fastening the blade to the handle appears to have been by thongs of hide. It is probable that some of those discovered in the tombs are only models, or unfinished specimens,² and it may have been thought sufficient to show their external appearance, without the necessity of nailing them beneath the thongs;³ for those which they used were bound in the same manner, though I believe them to have been also secured with nails. Some, however, evidently belonged to the individuals in whose tombs they were buried, and, like the chisels, appear to have been used: for these last often bear signs of having been beaten with the hammer or mallet.

The drill is frequently exhibited in the sculptures. Like all the other tools, it was of the earliest date, and precisely similar to that of modern Egypt, even to the nut of the dôm in which it turned, and the form of its bow with a leathern thong.⁴ The chisel was employed for the same purposes,⁵ and in the same manner, as at the present day, and was struck with a wooden mallet, sometimes flat at the two ends, sometimes of circular or oval form; several of which last have been found at Thebes, and are preserved in our European museums. The handles of the chisels were of acacia, tamarisk, or other compact wood; the

ming wood, another by boat-builders, and a third by bow and arrow makers. (Chabas, 'Études sur l'Antiquité historique,' p. 74.) Some of the adzes had wooden handles, and others iron blades. — S. B.

¹ The ancient names were *bes*, the saw; *menxa*, mallet, or hammer, some of the latter being used by the Egyptians; *sheneb*, a chisel; *tefa*, a hand-saw; *ant*, a kind of knife or adze; *nu*, an adze; *seff*, another kind of same; *sa. t.*, a brush; *netet aft*, a square. ('Zeitschrift f. ägyptisch. Spr. u. Alterth.,' 1873, s. 152.) — S. B.

² A set of tools used as models and recording the fact of Thothmes III., hav-

ing 'stretched the cord, equivalent to the modern laying of the foundation, of the gate, or part of the building of the temple of Karnak, called Amen-tsar, has been found at Thebes. The blades were thinner and lighter than those in actual use. (Chabas, 'Études,' pp. 76, 79.) — S. B.

³ It is probable that the stone and bronze celts found in Britain were fastened to their handles in the same manner. Woodcut No. 398, *c*; and No. 393, *u*, part 2.

⁴ Woodcut No. 393, part 2.

⁵ Various chisels are given in Chabas, 'Études,' p. 78.

blades of bronze: and the form of the points varied in breadth, according to the work for which they were intended.

The hatchet was principally used by boat-builders, and those who made large pieces of framework; and trees were felled with the same instrument.

The mode of sawing timber was primitive and imperfect, owing to their not having adopted the double saw: and they were obliged to cut every piece of wood, however large, single-handed. In order, therefore, to divide a beam into planks, they placed it, if not of very great length, upright between two posts, firmly fixed in the ground, and being lashed to them with cords, or secured with pins, it was held as in a vice.

Among the many occupations of a carpenter, that of veneering is noticed in the sculptures of Thebes, as early as the time of the third Thothmes, whom I suppose to be the Pharaoh of the Exodus; and the application of a piece of rare wood of a red color to a yellow plank of sycamore or other ordinary kind, is clearly pointed out.¹ And in order to show that the yellow wood is of inferior quality, the workman is represented to have fixed his adze carelessly in a block of the same color, while engaged in applying them together. Near him are some of his tools, with a box or small chest, made of inlaid and veneered wood of various hues; and in the same part of the shop are two other men, one of whom is employed in grinding something with a stone on a slab, and the other in spreading glue with a brush.

It might, perhaps, be conjectured that varnish was intended to be here represented; but the appearance of the pot on the fire, the piece of glue with its concave fracture, and the workman before mentioned applying the two pieces of wood together, satisfactorily decide the question, and attest the invention of glue² 3300 years ago. This is not, however, the only proof of its use at an early period, and several wooden boxes have been found in which glue was employed to fasten the joints.

Various boxes, shrines, articles of furniture, and other works of the cabinet-maker, are frequently portrayed in the paintings of Thebes, many of which present not inelegant forms, and are

¹ Woodcut No. 398, *a*.

² Rosellini seems to think that the application of color is here represented; but the presence of the pot, containing the brush, upon the fire (woodcut No. 398, *i*) will scarcely admit of this, though the figure (*fig. 2*) grinding on the slab might

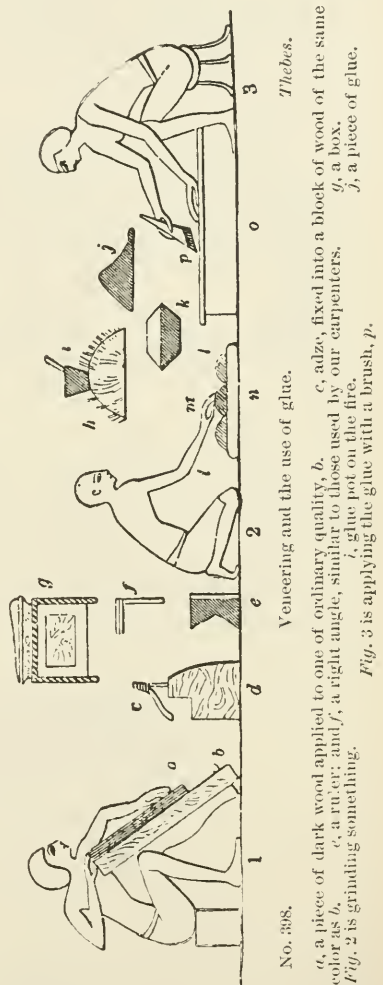
appear to strengthen his conjecture. He has placed this subject with the painters of Beni-Hassan, but it is at Thebes. Pliny ascribes the invention of glue to Dædalus, as well as of the saw, the axe, the plumb-line, and the auger. (Plin. vii. 56.)

beautifully made. I have already noticed several of the smaller objects, as boxes for trinkets and ointment, wooden spoons, and the like; and have described a curious substitute for a hinge¹ in some of those discovered at Thebes.

Many boxes had lids resembling the curved summit of a royal canopy,² and were ornamented with the usual cornice;³ others had a simple flat cover; and some few a pointed summit, resembling the shelving roof of a house.⁴ This last kind of lid was divided into two parts, one of which alone opened, turning on two small pins at the base, on the principle of the doors of their houses and temples; and, when necessary, the two knobs at the top⁵ could be tied together and sealed, in the same manner as in that previously mentioned.⁶

When not veneered, or inlaid with rare wood, the sides and lid were painted; and those intended for the tombs, to be deposited there in honor of the deceased, had usually a funeral inscription, or a religious subject painted upon them, representing offerings presented by members of his family.⁷

Several boxes have been found at Thebes; and the British Museum possesses some formerly belonging to Mr. Salt, one of which is remarkable



No. 398.

Veneering and the use of glue.

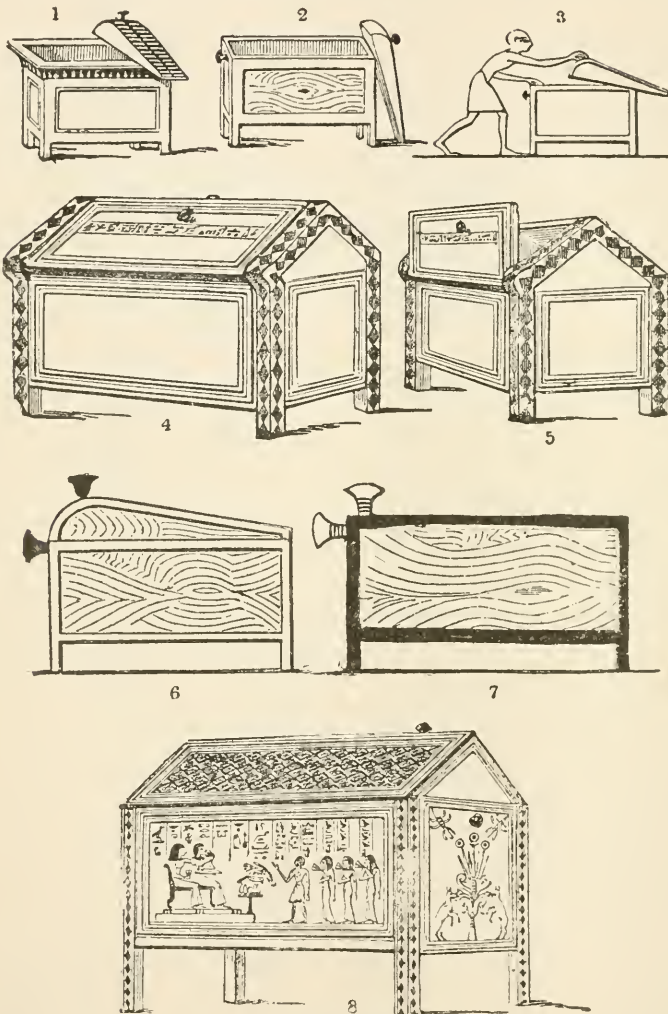
Thebes.

a, a piece of dark wood applied to one of ordinary quality, *b*, *c*, adze, fixed into a block of wood of the same color as *b*, *c*, a ruler; and *f*, a right angle, similar to those used by our carpenters. *g*, a box. *h*, a piece of glue. *i*, glue pot on the fire. *j*, a brush, *p*.

¹ A box in the British Museum, No. 5906, has a hinge like a modern snuff-box, cylindrical, and dove-tailed into the upper part of the back. — S. B.
² Woodcut No. 399, *figs.* 1, 2, 3, 6.

³ Woodcut No. 399, *fig.* 1.
⁴ *Figs.* 4 and 8.
⁵ *Fig.* 4.
⁶ In vol. i. p. 362
⁷ Woodcut No. 399, *figs.* 4 and 8.

for the brilliancy of the colors imparted to the pieces of ivory with which it is inlaid. The box is of ebony; the ivory,



No. 399.

Different boxes.

Figs. 1 and 2. Mode of placing the lid when the box was opened.

Fig. 3. Man opening a box, from a painting at Thebes.

Figs. 4 and 5. A painted box of Mr. Salt's Collection, showing how the lid opened.

Figs. 6 and 7. Boxes from the paintings of Thebes.

Fig. 8. Another box with a shelving lid, from a tomb at Thebes, in the Ashmolean Museum.

painted red and blue, is let into the sides and edges, and the lid is ornamented in the same manner. There is in this a substitute for a hinge, similar to the one before mentioned.

except that here the back of the cross-bar, cut to a sharp edge along its whole extent, fits into a corresponding groove at the end of the box: the two knobs are fixed in their usual place at the top and front. The lids of many boxes were made to slide in a groove, like our small color boxes, as that given in a preceding wood-cut; ¹ others fitted into the body, being cut away at the edges for this purpose; and some turned on a pin at the back, as I have shown in the long-handled boxes before mentioned. ² In opening a large box they frequently pushed back the lid, and then either turned it sideways. ³ and left it standing across the breadth of the box, or suffered it to go to the ground; but in those of still larger dimensions, it was removed altogether and laid upon the floor.

With the carpenters may be mentioned the wheelwrights, the makers of coffins, and the coopers; and this subdivision of one class of artisans, showing a systematic partition of labor, is one of many proofs of the advancement of this civilised people.

I have already shown that the Egyptian chariot was of wood, ⁴ and have pointed out what portion of it was the province of the carpenter and the currier; and having described the war-chariot ⁵ and the curriele of the towns, it only remains to notice the travelling car, or light *plaustrum*, which was drawn by oxen: the Egyptians also yoked mules to chariots; an instance of this occurs in the British Museum. Though so frequently used in Egypt, it is singular that one instance alone occurs of this kind of car, in a tomb opened at Thebes in 1827; and this ought to show how wrong it is to infer the non-existence of a custom from its not being met with in the sculptures. The same remark also applies to the camel, which, in consequence

¹ Woodcut No. 293.

² Woodcuts Nos. 283, 291, and 293.

³ Woodcut No. 399, *figs.* 1, 2, 3.

⁴ I have stated that the Egyptian chariot had only two wheels, and one instance is alone met with of a four-wheeled carriage. Pliny says wagons with four wheels were an invention of the Phrygians (*lib.* vii. 56).

⁵ Chariots do not appear to have been in use in Egypt till the commencement of the 18th Dynasty. There was a considerable importation of them from the Rut-en-uu, or Northern Syria and Mesopotamia, and they are described in the annals of Thothmes III. as made of beech-wood and orna-

mented with gold, silver, and colors. ('Records of the Past,' vol. ii. p. 26.) They had two wheels with six spokes, and no seats, but could hold three persons standing; but it appears that a carpet was sometimes placed on the bottom, on which the driver sat with his legs hanging down; the body or outer framework was painted, and perhaps plated with gold and silver, and the pole was attached by leather straps. War-chariots had, in addition, quivers at the sides for holding the bow and arrows; the collar was in shape of a bow. (Pierret, 'Dict. d'Arch. Égypt.', pp. 123, 124.) — S. B.

of its not being found either in the paintings or hieroglyphics.¹ is conjectured by some to have been unknown in Egypt at an early period; though, as I have already observed,² it is distinctly mentioned in the Bible among the presents given to Abraham by the king of Egypt.

The plaustrum was very similar to the war-chariot³ and the curriele, but the sides appear to have been closed, and it was drawn by a pair of oxen instead of horses. The harness was much the same, and the wheels had six spokes. In a journey it was occasionally furnished with a sort of umbrella, fixed



No. 400. An Ethiopian princess travelling in a plaustrum, or ear drawn by oxen.
Over her is a sort of umbrella.

Thebes.

Fig. 3, an attendant. 4, the charioteer or driver.

upon a rod rising from the centre, or back part of the ear: the reins were the same as those used for horses, and apparently furnished with a bit; and besides the driver, a groom sometimes attended on foot, at the head of the animals, perhaps feeding them as they went.

The above wood-cut represents an Ethiopian princess, who is on her journey through Upper Egypt to Thebes, where the court then resided; but whether it was on the occasion of

¹ I have noticed an instance of it on a seal I found in Nubia, of uncertain date.

² In chap. viii.

³ It has been always a matter of sur-

prise how the ancients could traverse hilly countries, where no roads were made, with so much facility, in chariots.

her projected marriage with the king, the brother of the third Amenophis, or merely to present her homage to him, is uncertain. A large tribute is brought at the same time from her countrymen, the Cush, or Ethiopians; which seems to show that it merely relates to a visit of ceremony from the queen or princess of that country; and the fact of the charioteer and some other of the attendants being Egyptians, suggests that the *plaustrum* was also provided from Egypt, as was the case when Pharaoh sent for Jacob and his family to bring them to Egypt.¹ The *plaustra* are called in Genesis ‘wagons;’² they were commonly used in Egypt for travelling: and Strabo performed the journey from Syene to the spot where he crossed the river to visit Philæ in one of those carriages.³

Besides the *plaustrum*, they had a sort of palanquin,⁴ and a canopy or framework answering the purpose of a sedan-chair, in which they sometimes sat or stood, in their open pleasure-boats, or in situations where they wished to avoid the sun; and these were also the work of the cabinet-maker.

Certain persons were constantly employed in the towns of Egypt, as at the present day in Cairo and other places, to pound various substances in large stone mortars; and salt, seeds, and other things were probably taken, in the same manner, by a servant to these shops, whenever it was inconvenient to have it done in the house. The pestles they used, as well as the mortars themselves, were precisely similar to those of the modern Egyptians, and their mode of pounding was the same, two men alternately raising ponderous metal pestles with both hands, and directing their falling point to the centre of the mortar, which is now generally made of a large piece of granite, or other hard stone, scooped out into a long narrow tube, to little more than half its depth. When the substance was well pounded, it was taken out and passed through a sieve, and the larger particles were again returned to the mortar, until it was sufficiently and equally levigated; and this, and the whole process here represented, so strongly resemble the occupation of the public pounders at Cairo, that no one who has been in the habit of walking in the streets of that town can fail to recognize the custom, or doubt of its having been handed down from the early Egyptians, and retained without the slightest alteration, to the present day.

¹ Gen. xlv. 19.

² They were termed *ageloot*, עגלות, wheeled carriages. (Gen. *loc. cit.*)

³ Strabo, lib. xvii. p. 562, ed. Cas.;

ἀπὸ πη.

⁴ Woodcut No. 199.

In a country where water and other liquids were carried or kept in skins and earthenware jars, there was little necessity for the employment of wooden barrels, which, too, are little suited to a climate like the hot and arid Egypt; and modern experience there shows how ill adapted barrels are for such purposes, and how soon they fall to pieces, if neglected or left empty for a very short period. We cannot, therefore, expect that they should be in common use among the ancient Egyptians; and the skill of the cooper¹ was only required to make wooden measures for grain,² which were bound with hoops either of wood or metal, and resembled in principle those now used in Egypt for the same purpose, though in form they approached nearer to the small barrels,³ or kegs, of modern Europe.



a, g, i, mortars. d d, pestles. Figs. 1 and 2 are alternately raising and letting fall the pestles into the mortar. Figs. 3 and 4 are sifting the substance after it is pounded; the coarser parts, h, being returned into the mortar to be again pounded. The inscriptions are the directions: k reads, 'Hasten all the work in taking care of all that is given out; make ye the bread'; l, 'The pounding of the corn in the storehouses of . . .'

In an agricultural scene, painted at Beni-Hassan, a small barrel is represented, placed upon a stand, apparently at the end of the field, which I at first supposed to have been intended to hold water for the use of the husbandmen, one of whom is approaching the spot: calling to mind the cup of wine presented to the ploughman on reaching the end of the furrow, mentioned by Homer in his description of the shield of Achilles:⁴ but it is

¹ The coopers of Cairo are generally Greeks.

² One of these is represented in woodcut No. 109, fig. 2.

³ In Europe, barrels were said by Pliny to have been invented by the Gauls, who

inhabited the banks of the Po. Varro and Columella mention them in their time. They were pitched within, and came into use at Rome in the days of Domitian.

⁴ Homer, Il. 2, 545.

probable that in this instance also it is intended to indicate the measure of grain with which the land was to be sown after the plough had passed.

A great number of persons were constantly employed in making coffins, as well as the numerous boxes, wooden figures, and other objects connected with funerals, who may be comprehended under the general head of carpenters; the undertakers, properly so called, being a different class of people, attached to and even forming part of the sacerdotal order, though of an inferior grade. Indeed the ceremonies of the dead were so numerous, and so many persons were engaged in performing the several duties connected with them, that no particular class of people can be said to have had the sole direction in these matters; and we find that the highest orders of priests officiated in some, and in others those of a very subordinate station. Thus the embalmers were held in the highest consideration, while those who cut open the body, when the intestines were removed, are said to have been treated with ignominy and contempt.¹

The boat-builders may be divided into two separate and distinct classes; one of which formed a subdivision of the carpenters, the other of the basket-makers, or the weavers of rushes and osiers, another very numerous class of workmen.

The boats made by these last were a sort of canoe or punt, used for fishing, and consisted merely of water-plants or osiers, bound together with bands made of the stalks of the papyrus or cyperus.² They were very light, and some so small that they could easily be carried from one place to another;³ and the Ethiopian boats mentioned by Pliny,⁴ which were taken out of the water and carried on men's shoulders past the rapids of the cataracts, were probably of a similar kind.

Strabo,⁵ on the other hand, describes the boats at the cataracts of Syene passing the falls in perfect security, and exciting the surprise of the beholders, before whom the boatmen delighted in displaying their skill; and Celsus affirms that they were made of the papyrus.

Papyrus boats are frequently noticed by ancient writers. Plutarch describes Isis going, in search of the body of Osiris, through the fenny country, in a bark made of the papyrus;

¹ Diod. i. 91.

² Not the same species as that used for making paper.

³ Achilles Tatius, lib. iv.

⁴ Plin. v. 9.

⁵ Strabo, lib. xvii. p. 562, ed. Cas.

whence it is supposed that persons using boats of this description are never attacked by crocodiles, out of fear and respect to the goddess; ¹ and Moses is said to have been exposed in 'an ark (or boat) of bulrushes, daubed with slime and with pitch.' ² From this last we derive additional proof that the body of such boats was composed of rushes, which, as I have observed, were bound together with the papyrus; and the mode of rendering them impervious to water is satisfactorily pointed out by the coating of pitch with which they were covered. Nor can there be any doubt that pitch was known in Egypt at that time, since we find it on objects which have been preserved of the same early date; and the Hebrew word *zift* is precisely the same as that used for pitch by the Arabs to the present day.

Pliny mentions boats 'woven of the papyrus,' ³ the rind being made into sails, curtains, matting, ropes, and even into cloth; and observes elsewhere that the papyrus, the rush, and the reed were all used for making boats in Egypt. ⁴

'Vessels of bulrushes' are again mentioned in Isaiah. ⁵ Lucan alludes to the mode of binding or sewing them with bands of papyrus; ⁶ and Theophrastus ⁷ notices boats made of the papyrus, and sails and ropes of the rind of the same plant. That small boats were made of these materials is very probable; and the sculptures of Thebes, Memphis, and other places abundantly show that they were employed as punts or canoes for fishing in all parts of Egypt during the inundation of the Nile, particularly in the lakes and canals of the Delta.

There was another kind, called by Strabo *pécton*, in one of which he crossed the Nile to the Island of Philæ, 'made of thongs, so as to resemble wicker-work;' ⁸ but it does not appear from his account whether it was formed of reeds bound together with thongs, or was like those made in Armenia, and used for going down the river to Babylon, which Herodotus describes, of osiers covered with hides. ⁹

The Armenian boats were merely employed for transporting goods down the current of the Euphrates, and on reaching Babylon

¹ Plut. de Isid. s. 18.

² Exod. ii. 3. The bulrush is called

בִּלְבָבִים; the paper reeds in Isaiah xix. 7 are

בִּלְבָבִים.

³ Plin. xiii. 11.

⁴ Ibid. vi. 22, and vii. 16.

⁵ Isaiah xviii. 2.

⁶ Lucan, iv. 136.

⁷ Theophrast. iv. 9.

⁸ Strabo, xvii. pp. 54, 562.

⁹ Herodot. i. 194. The coracles of the ancient Britons were made of wicker-work covered with hides. (Cæs. B. G. i. 54.) [And the geographer mentions another kind of boat used on the canals during the inundation (*testacea*, *δορράκινα*). — G. W.]

were broken up; the hides being put upon the asses which had been brought on board for this purpose, and the traders returning home by land. 'They were round, in form of a shield, without either head or stern; the hollow part of the centre being filled with straw.' 'Some were large, others small, and the largest were capable of bearing 5,000 talents' weight.' They were, therefore, very different from the boats reported by the same historian to have been made in Egypt for transporting goods up the Nile, which he describes as being built in the form of ordinary boats, with a keel, and a mast and sails.

'The Egyptian boats of burden,' Herodotus says, 'are made of a thorn wood, very similar to the lotus of Cyrene, from which a tear exudes, called gum. Of this tree they cut planks, measuring about two cubits, and, having arranged them like bricks, they build the boat in the following manner: They fasten the planks round firm long pegs, and, after this, stretch over the surface a series of girths, but without any ribs, and the whole is bound within by bands of papyrus. A single rudder is then put through the keel, and a mast of thorn-wood, and sails of the papyrus (rind) complete the rigging. These boats can only ascend the stream with a strong wind, unless they are towed by ropes from the shore; and when coming down the river, they are provided with a hurdle made of tamarisk,¹ sewed together with reeds, and a stone, about two talents' weight, with a hole in the centre. The hurdle is fastened to the head of the boat, and allowed to float on the water; the stone is attached to the stern, so that the former, carried down the river by the rapidity of the stream, draws after it the *baris* — for such is the name of these vessels — and the latter, dragged behind and sinking into the water,² serves to direct its course. They have many of these boats, some of which carry several thousand talents' weight.'³

That boats of the peculiar construction he here describes were really used in Egypt is very probable; they may have been employed to carry goods from one town to another, and navigated in the manner he mentions; but we may be allowed to doubt their carrying several thousand talents' or many tons' weight; and we have the evidence of the paintings of Upper and Lower Egypt to show that the large boats of burthen

¹ Plin. xiii. 21: 'Myricen, quam alii tamaricen vocant.'

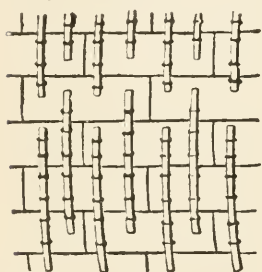
² They now put stones at the head of their light boats, on going down the

stream; but no hurdle anywhere in the water. — G. W.]

³ Herodot. ii. 96.

were made of wooden planks, which men are seen cutting with saws and hatchets, and afterwards fastening together with nails and pins: and they were furnished with spacious cabins, like those of modern Egypt.

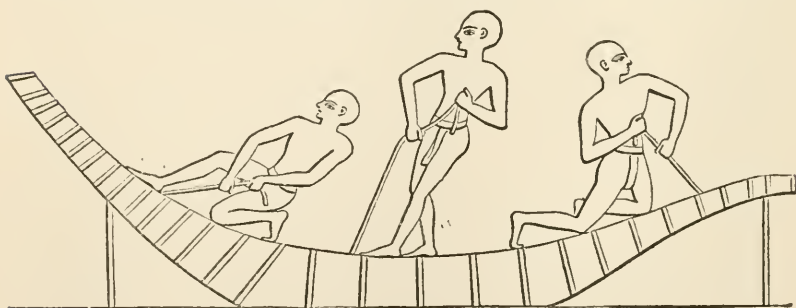
[The boats of the Nile are still built with planks of the *sont*. The planks, arranged as Herodotus states, like bricks, appear to have been tied to several long stakes, fastened to them internally. Something of the kind is still done, when they raise an



Method of building boats, as No. 402. seen from within.

extra bulwark above the gunwale. In the large boats of burthen the planks were secured by nails and bolts, which men are represented in the paintings driving into holes, previously drilled for them. There was also a small kind of punt or canoe, made entirely of the papyrus, bound together with bands of the same plant, the vessels of bulrushes mentioned in Isaiah;¹ but these were not

capable of carrying large cargoes, and still less would papyrus ships cross the sea to the Isle of Taprobane, Ceylon, as Pliny supposes.² This mistake may have originated in some sails and ropes having been made of the papyrus: but these were rarely used, even on the Nile. In one of the paintings at Kon el Ahmar one is represented with a sail, which might be made of the papyrus rind, and which appears to fold up like those of the Chinese;



No. 403.

Canoe of papyrus, bound with bands of the same.

and the mast is double, which was usual in large boats in the time of the 4th and other early dynasties.³ That cloth sails, occasionally with colored devices worked or painted on them,

¹ Isaiah xviii. 20. Plin. vi. 22; vii. 16; xiii. 11. Theophrast. iv. 9. Plut. de Isid.

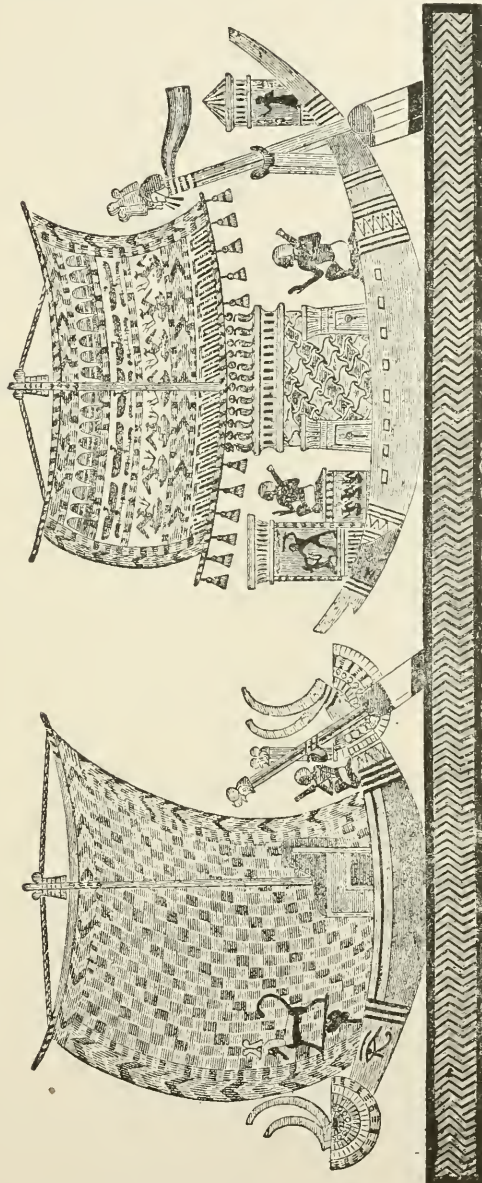
s. 18. Lucan, iv. 136.

² Plin. vi. 22.

³ Woodcut No. 410.

should be found on the monuments at least as early as the 18th and 19th Dynasties, is not surprising, since the Egyptians were noted at a very remote period for the manufacture of linen and other cloths, and exported sail-cloth to Phœnicia.¹ Hempen² and palm ropes are also shown by the monuments to have been adopted for all the tackling of boats. The process of making them is found at Beni-Hasan and at Thebes; and ropes made from the strong fibre of the palm-tree are frequently found in the tombs. This last was probably the kind most generally used in Egypt, and is still very common there, as the cocoa-nut ropes are in India.

The large boats had generally a single rudder, which resembled a long oar, and traversed on a beam at the stern, instances of which occur in many countries at the present day; but many had two rudders, one at each side, near the stern, suspended



Boats with embroidered sails of many colors.

No. 494.

¹ Ezek. xxvii. 7.

² Herod. vii. 25.

at the gunwale, or slung from a post, as a pivot, on which it turned. The small-sized boats of *buren* were mostly fitted with two rudders: and one instance occurs of three on the same side. On the rudder, as on the bows of the boat, was painted the eye, a custom still retained in the Mediterranean and in China; but the Egyptians seem to have confined it to the funeral *baris*. The boats always had one mast at the time Herodotus was in Egypt; but it may be doubted if it was of the heavy *acantha* wood, which could with difficulty have been found sufficiently long and straight for the purpose; and fir-wood was too well known in Egypt not to be employed for masts. Woods of various rare kinds were imported into Egypt from very distant countries as early as the time of the 18th Dynasty; and deal was then used for all common purposes, as well as the native sycamore. The hulls of boats were even sometimes made of deal; and it would have been strange if they had not discovered how much more it was adapted for the masts. In the time of the 4th, 6th, and other early dynasties the mast was double: but this was given up as cumbrous, and was not used after the accession of the 18th or even of the 12th Dynasty. The custom of towing up the stream is the same at present in Egypt; but the modern boatmen make use of the stone in coming down the stream to impede the boat, which is done by suspending it from the stern, while the tamarisk raft before the head is dispensed with. The contrivance Herodotus mentions was not so much to increase the speed as to keep the boat straight, by offering a large and buoyant object to the stream. When the rowers are tired, and boats are allowed to float down, they turn broadside to the stream; and it was to prevent this that the stone and tamarisk raft were applied. A practice almost entirely similar is described by the late Col. Chesney as prevailing to this day on the Euphrates. Speaking of the *kufah*, or round river-boat, he says: 'These boats, in descending the river, have a bundle of hurdles attached, which float in advance, and a stone of the weight of two talents drags along the bottom to guide them.' Æschylus had used this word before Herodotus as the proper term for an *Egyptian* boat.¹ He had also poetically extended it to the whole fleet of Xerxes.² Euripides used it as a *foreign* term.³ Afterwards it came to be a mere variant for *πλοῖον*.⁴ I had supposed *Baris* to mean 'Boat of

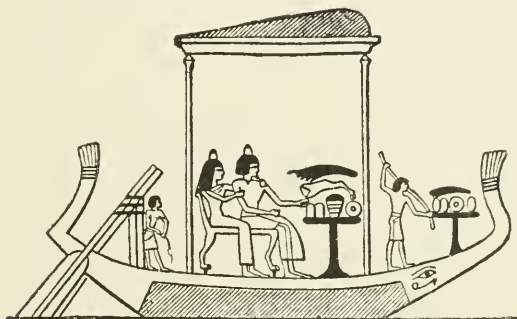
¹ Suppl. 815 and 858.

² Pers. 555.

³ Iph. in Aulid: βαρβάροος βάρδης.

⁴ Bloomfield's note on Æschyl. Pers. 595.

the Sun.' Baris has erroneously been derived from Bai, 'palm branch,' which had certainly this meaning,¹ but *Oua*, or *Ua*, a 'boat' is a different word, though a Greek would write it with a β , or beta. The name Baris is used by Plutarch² and others. There was an Egyptian boat with a cabin, called by Strabo *thalamegus*, or *thalamiferus*,³ used by the governors of provinces for visiting Upper Egypt; and a similar one was employed in



No. 405.

Funeral boat or Baris, with shrine.

the funeral processions on the sacred Lake of the Dead.⁴ There was also a small kind of boat, with a cabin or awning, in which gentlemen were towed by their servants upon the lakes in their pleasure-grounds.⁵ But all their large boats had cabins, often of great height and size, and even common market boats were furnished with them, and sufficiently roomy to hold cattle and various goods.⁶ The size of boats on the Nile varies now as of old; and some used for carrying corn, which can only navigate the Nile during the inundation, are rated at from 2000 to 4800 ardebs, or about 10,000 to 24,000 bushels' burthen. The ships of war of the ancient Egyptians were not generally of great size, at least in the early times of the 18th and 19th Dynasties, when they had a single row of from 20 to 44 or 50 oars, and were similar to the 'long ships' and *pentekonteroi* of the Greeks, and the galleys of the Mediterranean during the Middle Ages. Some were of much larger dimensions. Diodorus mentions one of cedar, dedicated by Sesostris to the god of Thebes, measuring 280 cubits (from 420 to 478 feet) in length and in later times they were remarkable both for length and height: one built by

¹ And which is even used in John xii. 13, τὰ βῆλα τῶν φοινίκων, 'palm branches.'

² De Isid. s. 18; Iamblichus, de Myst. s. 6, ch. v.

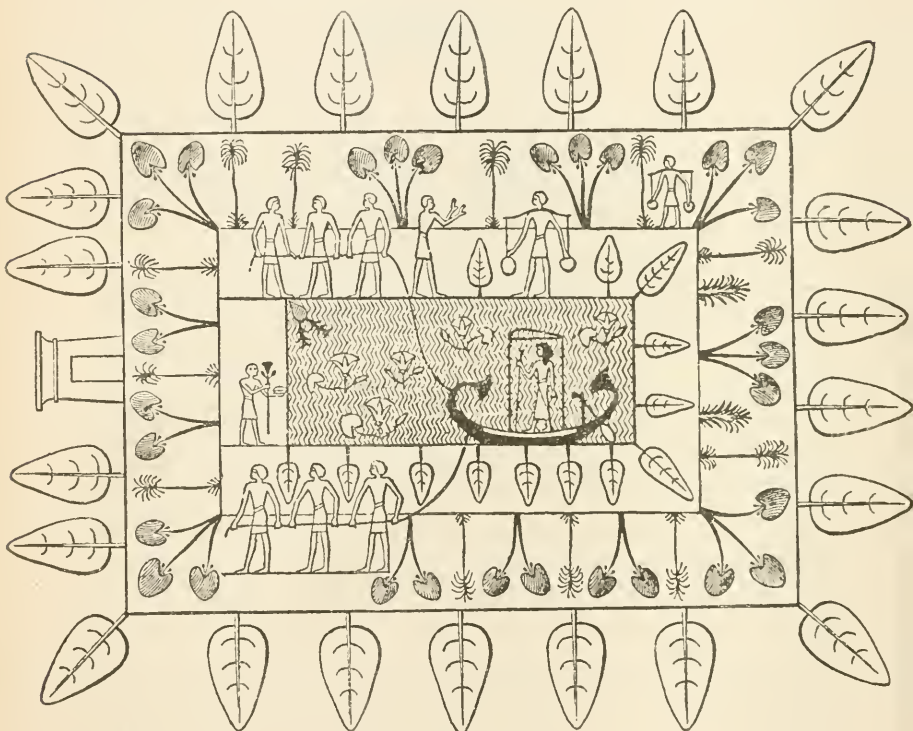
³ Strabo, xvii. pp. 1134-5.

⁴ Woodcut No. 405.

⁵ Woodcut No. 406.

⁶ Woodcut No. 407.

Ptolemy Philopator having 40 banks of oars, and measuring 280 cubits (or about 478 feet) in length, 38 in breadth, and 48 cubits (or about 83 feet) in height, or 53 from the keel to the top of the poop, which carried 400 sailors, besides 4000 rowers, and near 3000 soldiers.¹ Athenæus says Philopator built another, used on the Nile, half a stadium or about 300 feet long, upwards of 40 cubits broad, and nearly 30 high; and 'the number belonging



No. 406.

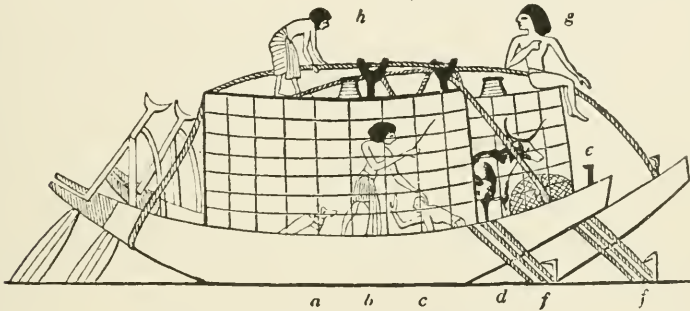
Pleasure-boat towed round a pond.

Thebes.

to Ptolemy Philadelphus exceeded those of any other king, he having two of 30 banks, one of 20, four of 14, two of 12, fourteen of 11, thirty of 9, thirty-seven of 7, five of 6, seventeen quinqueremes, and more than twice that number of quadriremes, triremes, &c. He also describes Hiero's ship of 20 banks sent as a present to Ptolemy. It is singular that no Egyptian, Assyrian, Greek, or Roman monument represents a galley of more than

¹ Plut. Vit. Demet. Athen. Deipn. v. p. 204; Pliny, vii. 56, who mentions one of 40, and another of 50 banks of oars.

one, or at most two tiers of oars except a Roman painting found in the Orti Farnesiani which gives one with three, though triremes and quinqueremes were the most generally employed. We are not, however, reduced to the necessity of crediting these statements of Pliny and Herodotus; and though punts and canoes of osiers and papyrus, or reeds, may have been used on some occasions, as they still are,¹ on the Nile and the lakes of Egypt, we may be certain that the Egyptians had strong and well-built vessels for the purposes of trade by sea, and for carrying merchandise, corn, and other heavy commodities on the



No. 497.

Boats for carrying cattle and goods on the Nile.

Thebes.

The two boats are fastened to the bank by ropes and stakes, *f, f*. In the cabin of the first boat, a man bastinadoes a boatman, *c*. He is accompanied by a dog, *a*. In the second boat is a cow, *d*, and a net of hay or chopped straw, *shent*, *e*, as used at present. Men at *g* and *h* are lashing the boats together.

Nile; and that, even if they had been very bold and skilful navigators, they would not have ventured to India,² nor have defeated the fleets of Phœnicia,³ in their paper vessels.

The sails, when made of the rind of the papyrus, have been supposed similar to those of the Chinese, which fold up like our Venetian blinds; but there is only one boat represented in the paintings which appears to have sails of this kind, though so many are introduced there; nor can we believe that a people noted for their manufactures of linen and other cloths, would have preferred so imperfect a substitute as the rind of a plant, especially as they exported sail-cloth to Phœnicia for that very purpose.⁴

¹ They are very rude, and much smaller than those of ancient times.

² Among the numerous productions of India met with in Egypt, which tend to prove an intercourse with that country, may be mentioned the pine-apple, models of which are found in the tombs, of glazed pottery. One was in the possession of Sir Richard Westmacott.

[These are supposed to have been bottles

for holding quicksilver, introduced by the Arabs, from some of that metal having been found in them. Others have conjectured them to have been powder-flasks or grenades. — S. B.]

³ In the reign of Apries.

⁴ Ezekiel xxvii. 7. In the lamentation of Tyre, 'Fine linen with brodered work from Egypt was that which thou spreadest forth to be thy sail.' [A sail of this

Diodorus¹ and Herodotus² both mention the fleet of long vessels, or ships of war, fitted out by Sesostris in the Arabian Gulf. The former states that they were four hundred in number, and that Sesostris was the *first* Egyptian monarch who *built* similar vessels: but Herodotus merely says he was the first who passed into the ocean; and the necessity of previously having ships of war to protect the trade and coasts of Egypt disproves his statement, and suggests that they were used at the early period, when the port of Philoteris traded with the Arabian and, perhaps, even the Indian shore.

Pliny supposes that ships were first built by Danaus,³ and taken from Egypt to Greece when he migrated to that country, rafts only having been previously known; and he states that some attributed their invention to the Trojans and Mysians, who crossed the Hellespont in their wars with Thrace.⁴ The sculptures, however, of ancient Egypt still remain to decide the question; and their dates being now ascertained, we are enabled to form our own opinions on the subject, without the necessity of trusting to the uncertain accounts of ancient writers. From the sculptures of the 18th Dynasty, it appears that the same kind of boats for carrying heavy burthens was then employed in Egypt, as in the later days of Psammaticus and Amasis; they are found at Eileithyia and Beni-Hassan of the age of Amasis,⁵ and of Usertesén, the contemporary of Joseph: and in the tombs near the Pyramids they again occur, of an epoch previous to the 16th Dynasty and the reign of Usertesén.

[Boats, indeed, are represented on the sculptures at the earliest period, as early as the 4th Dynasty, and in a country like Egypt were a necessity of the earliest civilization: they were chiefly boats of burthen and transports. The remarkable inscription of Una, of the 5th Dynasty,⁶ mentions, however, war vessels, and describes the transport of the stone for the pyramid Shanefer, of the king Merenra, to have been made by six boats of burthen, three towing-boats, three boats of eight lengths, and one war-vessel. This officer also states that he made for the purpose

kind, made of separate pieces tied together, and hauling up like a Venetian blind, is in the Liverpool Museum, and shows that such sails were actually employed. — S. B.]

¹ Diodor. i. 55.

² Herodot. ii. 102.

³ Plin. vii. 56.

⁴ Clemens thinks Atlas, the Libyan, to have been the first who built ships and ventured on the sea.

⁵ These two names are both written Ames in the hieroglyphics, but I use them thus by way of distinction, and in accordance with Manetho.

⁶ 'Records of the Past,' ii. 7.

a boat of burthen 60 cubits, or rather more than 90 feet long, and 30 cubits, or 35 feet broad, in 17 days—a very rapid construction. Besides galleys, *mèns'*, there were sacred barges, the repairs of which at the time of the 18th Dynasty are mentioned in the papyri. These were to be executed by means of beams of acacia and cedar. There are also descriptions of barges of acacia, cedar, and other woods, placed on the Nile by Thothmes III. and Rameses III. The material of the cedar barges came from the Rutennu.—S. B.]

The ingenious Champollion conjectured that some hieroglyphics at Eileithyia proved¹ the inmate of one of the tombs there, called 'Ahmosis the son of Obschne,' to have been 'chief of the mariners, or rather of the pilots,' who 'entered the naval career in the time of King Ahmosis,' and 'accompanied that monarch, when he went up by water to Ethiopia to impose tribute upon it,' and 'commanded ships under Thoutmosis the First.' If this be true, it confirms what I have before stated respecting the early existence of an Egyptian fleet; and whatever improvement may have been afterwards made in the ships of war fitted out by Sesostris and other monarchs in the Arabian Gulf and Mediterranean,² we have sufficient evidence from the paintings of the tombs at Eileithyia, that in the time of the same Amosis the ordinary travelling boats of the Nile were of a construction far superior to those mentioned by Herodotus.

The construction of the various boats used on the Nile varied according to the purposes for which they were intended. The punts or canoes were either pushed with a pole or propelled with a paddle;³ they had neither mast nor rudder; and many of the small boats, intended merely for rowing, were unprovided with a mast or sails. They were also destitute of the raised cabin common in large sailing-boats, and the rowers appear to have been seated on the flat deck, which covered the interior from the head to the stern, pushing instead of pulling the oars, contrary to the usual custom in boats of larger dimensions. The absence of a mast did not altogether depend on the size of the boat, since those belonging to fishermen, which were very small, were often furnished with a sail, besides three or four oars;⁴ and some large boats, intended for carrying cattle and heavy goods, were sometimes without a mast.

¹ Champollion's twelfth letter from Egypt. ('Lit. Gazette,' p. 617.)

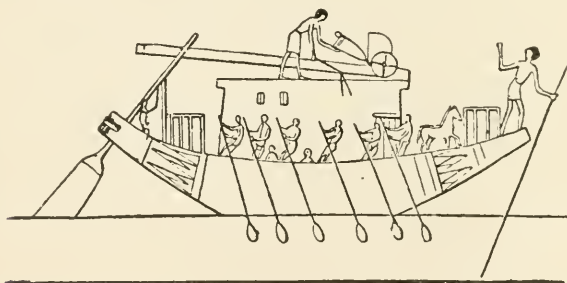
² Herodot. ii. 102 and 159. Diodor. i. 68.

³ Contest of boatmen, woodcut No. 341, fig. 1.

⁴ Fishing scene, woodcut No. 361, part 1, a.

In going up the Nile they used the sail whenever the wind was favorable, occasionally rowing in those parts where the sinuosities of the river brought it too much upon the bows; for it is probable that, like the modern Egyptians, they did not tack in navigating the river; and when the wind was contrary, or during a calm, they generally employed the tow-line, which was pulled by men on shore.

After they had reached the southernmost point of their journey up the stream, the sail was no longer considered necessary; and the mast and yards being taken down, were laid over the top of the cabin, or on a short temporary mast, with a forked summit, precisely in the same way, and with the same view, as at the present day, on board the *cangias*, and other masted rowing boats of Egypt. For as the wind generally blows from the N.W., it seldom happens that the sail can be used in going



No. 408. A boat with the mast and sail taken down, having a chariot and horses on board.
Eileithyia.

down the Nile, and in a strong wind the mast and rigging are so great an incumbrance, that the boat is unable to make any way against it with oars.

The heavy boats of burthen, which, from their great size, cannot be propelled by oars, are suffered to retain their masts and sails, and float down the river sideways at the rate of the stream, advantage being taken of the wind whenever the bends of the river allow of it; and the large *germs*, used for carrying corn during the inundation, are only employed when the water is very deep, and are laid up the rest of the year, and covered with matting from the sun. These, therefore, form exceptions to the ordinary boats of the Nile, and may be considered similar to some represented in the sculptures of Alabastron, which are fastened to the shore by several large ropes, and are shown from the size of their cabins, the large awning in front for covering

the goods they carried, and the absence of oars, to have been of unusual dimensions.

In a boat given in the preceding woodcut from a tomb at Eileithyia an error has frequently been made respecting the wheel upon the top of the cabin, which some have supposed to be connected with the sail,¹ in order to enable the yard to traverse with greater facility, or for some such purpose; but on a careful examination of the subject it proves to be part of a chariot, too much defaced by time to be easily perceived at first sight, and the horses belonging to it are seen below in front of the cabin. This circumstance not only shows the comforts with which the Egyptian grandees travelled when going from one part of the country to the other, but affords additional proof of the size of the boats used upon the Nile.

Large boats had generally one, small pleasure-boats two rudders at the stern. The former traversed upon a beam, between two projecting heads, a short pillar or mast supporting it and acting as the centre on which it moved; the latter were nearly the same in principle except that they turned on a bar, or in a ring, by which they were suspended to the gunwale at either side: and in both instances the steersman directed them by means of a rope fastened to the upper extremity. The rudders consisted of a long broad blade and still longer handle, evidently made in imitation of the oars by which they originally steered their boats before they had so far improved them as to adopt a fixed rudder; and in order to facilitate its motion upon the mast or pillar, and to avoid the friction of the wood, a piece of bull's hide was introduced, as is the custom in the modern boats, between the mast and yard.

The oar was a long, round, wooden shaft, to which a flat board, of oval or circular form, was fastened, and it is remarkable that the same oar is used to this day on the Ganges and in the Arabian Gulf. These turned either on thole-pins, or in rings, fastened to the gunwale of the boat, and the rowers sat on the deck, on benches, or on low seats, or stood or knelt to the oar, sometimes pushing it forwards, sometimes, and indeed more generally, pulling it, as is the modern custom in Egypt and in most other countries.

At the head of the boat a man usually stood,² with a long

¹ The other boat represented in this subject has the sail up, and the same chariot on board. It is, indeed, the same boat, with and without the sail.

² Ovid, *Met.* iii. 617.

pole¹ in his hand, by² which he tried at intervals the depth of the water, lest they should run upon any of the numerous sandbanks with which the river abounds, and which, from their often changing at the time of the inundation, could not always be known to the most skilful pilot; a precaution still adopted by the modern boatmen of the Nile.

That the ancient Egyptian boats were built with ribs like those of the present day is sufficiently proved by the rude models discovered in the tombs of Thebes. It is probable that they had very little keel, in order to enable them to avoid the sandbanks, and to facilitate their removal from them when they struck; and indeed, if we may judge from the models, they appear to have been flat-bottomed. The boats now used on the Nile have a very small keel, particularly at the centre, where it is concave: so that when the head strikes they put to the helm, and the hollow part clears the bank, except in those cases where the impetus is too great, or the first warning is neglected.

The sails of the ancient boats appear to have been always square, with a yard above and below, in which they differ from those now adopted in Egypt. The only modern boats with square sails are a sort of lighter, employed for conveying stones from the quarries to Cairo and other places, and these have only a yard at the top. All other boats have *latine* or triangular-shaped sails, which, in order to catch the wind when the Nile is low, are made of immense size; for unless they reach above its lofty banks they are often prevented from benefiting by a side wind at that season of the year; but the number of accidents which occur are a great objection to the use of such disproportionate sails.

The cabins of the Egyptian boats were lofty and spacious; they did not, however, always extend over the whole breadth of the boat, as in the modern cangias, but merely occupied the centre; the rowers sitting on either side, generally on a bench or stool. They were made of wood, with a door in front, or sometimes on one side, and they were painted within and without with numerous devices, in brilliant and lively colors.² The same custom continued to the latest times, long after the conquest of the country by the Romans; and when the Arabs invaded Egypt in 638, under Amer, the general of the Caliph

¹ The *middree* of the Arabs; the *contus*, or *pertica*, of the Romans.

² Plate XIII. [Virgil, Georg. iv. 289:]

'Et circum pietis vehitur sua rura faselis.' — G. W.]

Omer, one of the objects which struck them with surprise was the gay appearance of the painted boats of the Nile.

The lotus was one of their favorite devices, as on their furniture, the ceilings of rooms, and other places, and it was very common on the blade of the rudder, where it was frequently repeated at both ends, together with the eye. But the place considered peculiarly suited to the latter emblem was the head or bow of the boat;¹ and the custom is still retained in some countries to the present day. In India it is very generally adopted; and we even see the small barques which ply in the harbor of Malta and other parts of the Mediterranean, and even as far north as the Bay of Cadiz, bearing the eye on their bows, in the same manner as the boats of ancient Egypt; and the ancient Greeks used this device on their boats, shields, and in other places. Many instances are found on the vases of Italy, the work of Greek colonists settled in that country.

They do not appear to have had anything like the *aplustre* of the Romans, an ornament fixed to the stern, and sometimes to the prow, on which a staff was erected, bearing a ribbon or flag; but streamers were occasionally attached to the pole of the rudder, and a standard was erected near the head of the vessel.² The latter was generally a sacred animal;³ a sphinx, or some emblem connected with religion or royalty, like those belonging to the infantry before described; and sometimes the top of the mast bore a shrine of feathers, the symbol of the deity to whose protection they committed themselves during their voyage. [Sacred boats or barges had generally the head and collar of the deity to whom they were sacred, made of bronze, attached to them: thus the boats or arks of Amen-ra had the ram's head surmounted by a disk and the collar, *usz*; those of Isis, the head and collar of the goddess. — S. B.]

There is a striking resemblance, in some points, between the boats of the ancient Egyptians and those of India: the form of the stern, the principle and construction of the rudder, the cabins, the square sail, the copper eye on each side of the head, the line of small squares at the side, like false windows,⁴ and the shape of the boats used on the Ganges, forcibly call to mind those of the Nile, represented in the paintings of the Theban tombs.

[The war-galleys, which belong to this section, have already

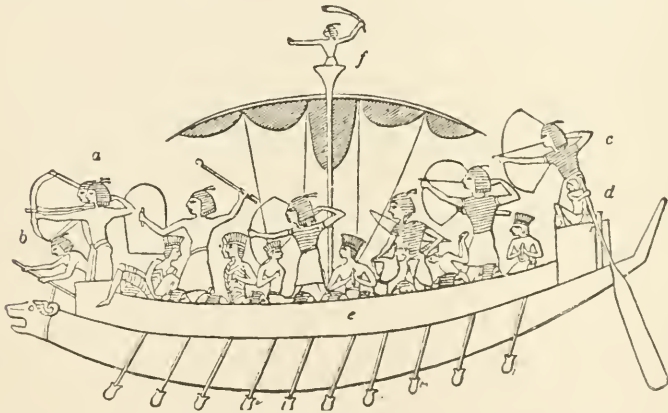
¹ [Some have supposed the eye was only on the boats of the dead. — G. W.]

² Plate XIII., boats with colored sails.

³ Perhaps answering to the *πυρόσημον* of the Greeks, though not at the prow itself.

⁴ Woodcut No. 411.

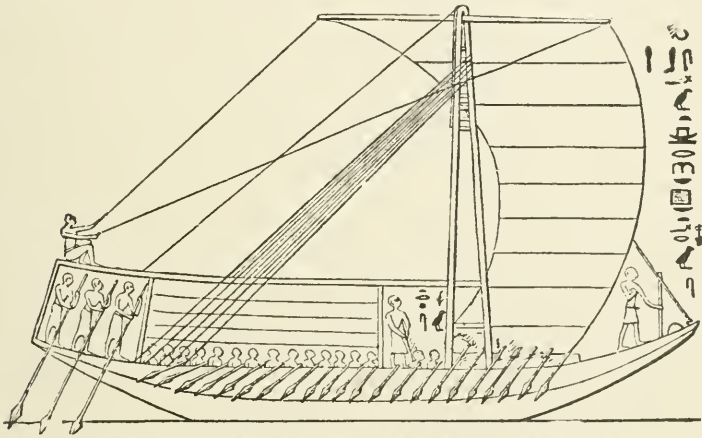
been described in Chapter III., and do not appear on the monuments till the reign of Rameses III., the first monarch whose fleet is represented upon the sculptures. In their construction they offer a considerable resemblance to the biremes of Assurbanipal, seen on the monuments of Kouyunjik: but they are never seen with more than one bank of oars, although the use of the ship of war is as old as the time of the 6th Dynasty, when they were sent down the Nile for the purpose of conveying stone and other materials from Nubia, and escorting the ships of burthen then destined to bring these things to Lower Egypt. It would indeed appear that even at that early time the sail had come into use, and it was continued till a later time. At the period of the 20th Dynasty, the war-galley had been considerably modified. The prow has the introduction of a brazen head, like the rostrum



No. 409. War-galley; the sail being pulled up during the action. *Thebes.*
a, raised forecastle, in which the archers were posted. *c*, another post for the archers, and the pilot, *d*. *e*, a bulwark, to protect the rowers. *f*, slinger, in the top.

of the Roman galley, and the sides have high raised bulwarks to protect the crew from boarding assaults or the effect of arrows. The Phœnician galley had the bucklers of the soldiers hung outside the bulwarks to afford additional protection to the crew, when not going into action: and the Egyptians, in going into action, stationed an archer at the maintop or crow's nest, and appear from the raising of the sail to have depended chiefly on the effects of ramming by aid of the rowers to propel the prow against a hostile vessel. In the above woodcut it will be seen that the vessel is full of captives as well as soldiers, showing the humanity of the Egyptians. These captives are natives of the race of the Pulusatu, the supposed Pelasgi or

Philistines. The war-vessel (No. 409) had twenty oars, but it is probable that all are not represented, and galleys with as many as fifty-two oars appear at the time of the Pyramids. For these larger galleys the rudder, *hem*, required as many as six men. The galleys, however, which the queen Hasheps or Hatasu sent to Pount had only thirty oars. These vessels were, as at the present day, named; and those in which Aahmes son of Abna embarked during the war against the Shepherds were called 'the Calf,' 'the North,' and 'the Memphian sunrise.' These ships of war of the enemies of the Egyptians had the head of a swan, and, like the Egyptian galleys, had two decks. Besides the war galleys, there



No. 410. Large galley of 44 oars with sail, apparently made of the papyrus, a double mast, and many rowers. *In a tomb at Kom el Ahmar, above Minieh.*

were galleys without masts or sails. The fleet of Hasheps had one-decked galleys or barges with seats or shrines, their prows and sterns ornamented with figures of Harmachis, lotus-flowers, heads of Isis and the cow of Athor, Mentu-ra, and the Ibex. In some of these there was no covering,¹ so that the crew must have slept in cabins below, indicated by the ports. The rower stood or sat, and the whip seems to have been applied. A small galley of older period has an awning supported by a pole, to protect the rowers from the heat of the sun.² In all these larger galleys the look-out was kept by a pilot or captain, who had a stick or wand or held a sceptre. With the wand he sounded the depths. The

¹ Duemichen, 'The Fleet of an Egyptian Queen;' London, 1868, Taf. ii.-v.

² *Ibid.* Taf. xxv. 2, 11.

boats of burthen either had no sails or else lowered their masts and yards; they carried these supported on poles, to cover the rowers; they often had cabins or nettings for the transport of objects. Sometimes four oars were lashed to the neck of a cow placed in the prow, to aid or as a substitute for rowers probably on the return voyage down the Nile with the crew.

The galleys with sails, not for the purposes of war, were all much upon the same plan; they never had more than one mast, like a ladder, and one sail, and were with or without a man's cabin, as the case might be, placed abaft the mast. The sail was generally raised and turned from the deck, by lines to the ends of the yards, by a man seated above the cabin: occasionally men hauled from the lower yard. They were rarely braced. Sometimes the masts were lowered. The prows also often terminated in the heads of animals, like the war-galleys. The greater boats of this kind had ornamented awnings of diapered cloth or basket-work. They resembled our yachts. The smaller boats of burthen were the same as our barges, and it is remarkable to find that, as in our barges, women occasionally steered,¹ or accompanied the master of the boat. These barges were called *uskh*, which means 'broad,' as if the war galleys, *mensh*, were long.

The smaller boats were called *bari*, and were used for general purposes, but contained fewer rowers, sometimes only one person: they seem to have principally been made of papyrus. There were also tow boats, which were drawn along the banks of the river and canals by gangs of sailors or peasants, but these were perhaps only occasionally required, and the boat generally propelled by the oar.

To these smaller boats pertained those which acted as gondolas of the dead. The mummy was laid on a bier, having over it a baldequin or canopy, and, besides a few sailors, carried the mourners and priests. Various other terms were applied to different boats, as the *seket* and *at* to the boat of the sea.

The sacred barques or barges were paraded at certain festivals, and carried by priests on their shoulders by means of a stand and poles; many representations of which occur on the sculptures. The description of one thus exhibited in the hypostyle hall of Karnak, dedicated by Seti I. to the god Amen-ra, runs thus: "It was gilded with foreign gold and inlaid with precious stones, and ornamented with lapis-lazuli. It illuminated, like

¹ Duemichen, 'The Fleet of an Egyptian Queen,' Taf. xxvii. 7, 9.

the sunrise, the river by its splendor. It was hailed on its passage when it returned to Thebes."

In the coffin of the Queen Aah-hetp of the 18th Dynasty a remarkable model of a galley was found, made of solid gold, with silver rowers, having in the centre a person holding a hatchet and curved stick; a steersman, who guided the vessel with a rudder; and a boatswain, who, standing up, directed by a song the keeping time of the oars. The galley was placed on a car of four wheels, the oldest instance of the employment of so many, and showing how the boats were shipped.¹ In some instances, a man with a trumpet stationed in the prow gave a signal of the advance, or else spoke through it to other boats to keep out of the way.²

The names and various parts of a boat are described in the 99th chapter of the 'Ritual.'³ They are as follows: the boat itself, *mazen*; the pole, *mena*; the keel, *zerp*; the prow, *haut*; the hold, *agt*; the mast, *za*; the lower deck, *ann.t kar*; the scuttle-hole, *buta*; the sail, *huta*; the haulyards, *s'et tut*; the pump, *matábu*; the planks or pegs, *ukai*; the seat or deck, *sars*; the rudder, *hen*; the keel, *tep*. — S. B.]

There is no instance of a boat with a rudder at both ends, said to have been used by some ancient nations,⁴ nor do we find them provided with more than one mast and a single sail; in which respect they resembled those of the Greeks at the period of the Trojan war.⁵ Sometimes the single rudder, instead of traversing in a groove or hollow space, merely rested on the exterior of the curved stern, and was suspended by a rope or bands; but that imperfect method was confined to boats used in religious ceremonies on the river, an instance of which may be seen in the model preserved at Berlin, as well as in the paintings of Thebes.

This model, which is very curious, shows the position of the rowers, the arrangement of the mast and yard when taken down, the place of the pegs and mallet for fastening the boat to the shore, and of the landing plank, which were always kept in readiness, as at the present day, in the bows, and were under the surveillance of the man stationed at the prow to report and fathom the depth of the water; it also shows that the boat was

¹ Pierret, 'Dict. d'Archéol. Égypt.,' p. 87.

² Duemichen, 'The Fleet of an Egyptian Queen,' Taf. xxv. 6.

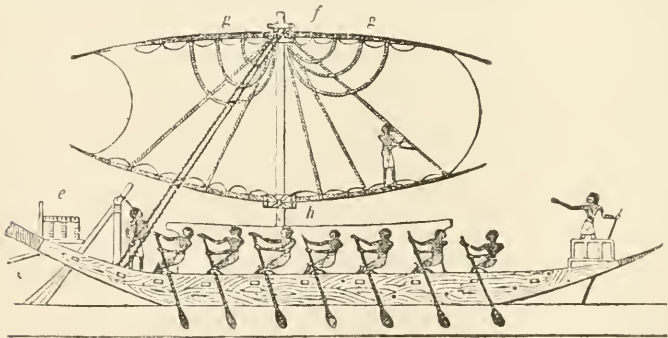
³ Lepsius, 'Todtenbuch,' xxxv. and xxxvi. c. 99, l. 6, and foll.

⁴ Tacit. de Mor. Germ. 44. and Ann. ii. 6.

⁵ Homer, Od. E, 254.

decked, and that the cabin did not extend over the whole breadth, which is in perfect accordance with the sculptures, representing the pleasure-boats of the Nile, and those of their funeral ceremonies. In some boats of burthen, the cabin, or raised magazine, was broader, reaching probably from one side to the other, and sufficiently large to contain cattle, horses, and numerous stores.¹ Unlike the modern Egyptians, they paid great attention to the cleanliness of their boats, the cabins and decks being frequently washed and swept, and we find the Theban artists thought it of sufficient importance to be indicated in the sculptures.

Herodotus states that the mast was made of the acanthus, the *Acacia*, or *Mimosa Nilotica*; but as the trunk and limbs of this tree are not sufficiently long or straight, it is evident that the historian was misinformed; and we may readily conceive that they preferred the fir, with which they were well acquainted,²



No. 411. Boat of the Nile; showing how the sail was fastened to the yards, and the nature of the rigging. *g*, yard. *h*, mast. *f*, hole for ropes to haul up sail. *e*, forecabin. *Thebes*.

great quantity of the wood being annually imported into Egypt from Syria. The planks, the ribs, and the keel were of the acacia, which, from its resisting the effect of water for a length of time, was found, says Pliny,³ well adapted for this purpose, as is fully proved by modern experience. The foot of the mast was let into a strong beam, which crossed the whole breadth of the boat; it was supported by and lashed to a knee, rising to a considerable height before it; and the many stout stays fastened at the head, stern, and sides, sufficiently secured it, and compensated for the great pressure of the heavy yards and sails it carried. [The braces and stays were fastened to the gunwale, as in the modern

¹ Woodcut No. 407.

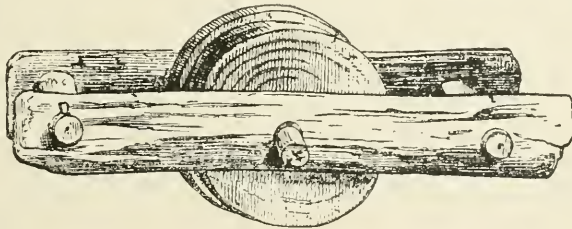
² Plin. xvi. 40.

³ Ibid. xiii. 9

boats of the Nile, which agrees with the description of Herodotus, that other people fasten the ropes, etc., on the outside, the Greeks on the inside of their boats.¹

I have observed that in ships of war the yard was allowed to remain aloft after the sail had been reefed; but in the boats of the Nile, which had a yard at the top and bottom of the sail, as soon as it was furled, they lowered the upper yard, and in this position it remained until they again prepared for their departure. To loosen the sail from the lower yard must have been a tedious operation, if it was bound to it with the many lacings represented in some of the paintings; but in these cases it may have been folded up between the two yards as soon as the upper one was lowered; the whole being lashed together by an outer rope.

It is uncertain whether they used pulleys for raising and lowering the yards, or if the halliards merely passed through a dead-sheave-hole at the top of the mast.² The yards were evi-



No. 412.

Pulley.

Museum at Leyden.

dently of very great size and of two separate pieces, scarfed or joined together at the middle,³ sometimes supported by five or six lifts, and so firmly secured that men could stand or sit upon them while engaged in arranging the sail; and from the upper yard were suspended several ropes, resembling the *horses* of our square-rigged ships,⁴ and perhaps intended for the same purpose when they furled the sail. The Egyptians, however, were not ignorant of the pulley; and I am inclined to believe they introduced it in the rigging of their boats; though, owing to their imperfect style of drawing, it is not indicated; and one has actually been found in Egypt, and is now in the Museum at Leyden. It is, however, of uncertain date, and was apparently intended for drawing water from a well. The sides are of *athul* or

¹ Herodot. ii. 36.

² Woodcut No. 412.

³ Woodcut No. 411, *h*.

⁴ Woodcut No. 411, *g g*.

tamarisk wood,¹ the roller of fir; and the rope of *leaf* or fibres of the date-tree, which belonged to it, was found at the same time.

Many of the sails were painted with rich colors,² or embroidered with fanciful devices, representing the phœnix, flowers and various emblems; some were adorned with checks, and others were striped, like those of the present day. This kind of cloth, of embroidered linen, appears to have been made in Egypt expressly for sails, and was bought by the Tyrians³ for that purpose; but its use was confined to the pleasure-boats of the grandees, or of the king himself, ordinary sails being white; and the ship, says Pliny,⁴ in which Antony and Cleopatra went to the battle of Actium, was distinguished from the rest of the fleet by its purple sails, which were the peculiar privilege of the admiral's vessel. The same writer states that the custom of dyeing the sails of ships was first adopted in the fleet of Alexander the Great, when navigating the Indus: but that it was practised long before in Egypt is evident from the paintings at Thebes, which represent sails richly ornamented with various colors, in the time of the third Rameses, nine hundred years previous to the age of Alexander.

The devices with which they were painted or embroidered depended on fancy, and the same monarch had ships with sails of different patterns. Of all these the phœnix appears to have been the most appropriate emblem, if, as is stated by Horapollo,⁵ it indicated 'the return of a traveller who had long been absent from his country;' and it is probable that the boats used in sacred festivals upon the Nile were decorated with appropriate symbols, according to the nature of the ceremony, or the deity in whose service they were engaged. The edges of the sail were furnished with a strong hem or border, also neatly colored, serving to strengthen it and prevent an injury, and a light rope was generally sewed round it for the same purpose.

Some of the Egyptian vessels appear to have been of very great size.⁶ Diodorus⁷ mentions one of cedar wood, dedicated by Sesostris to the god of Thebes, 280 cubits, or 420 feet, long; another built by Caligula in Egypt, to transport one of the

¹ *Tamarix orientalis*.

² The sails of our own vessels, in the fifteenth century, had coats-of-arms emblazoned upon them, if we may trust the official seals of the admirals.

³ Ezek. xxvii. 7. *Vide supra*, p. 213, note 5.

⁴ Plin. xix. 1.

⁵ Horapoll. Hierogl. lib. i. c. 35.

⁶ Conf. Hor. 1 Epod. i. 1, referring to the large ships of M. Antony.

⁷ Diodor. i. 57.

obelisks to Rome, carried 120,000 *modii* (pecks) of lentils as ballast;¹ and Ptolemy Philopator built one of 40 benches of oars, which was 420 feet long, and 72 from the keel to the top of the poop, and carried 400 sailors, besides 4000 rowers, and near 3000 soldiers.² Athenæus mentions this vessel of Philopator, and says it had 40 benches, was 280 cubits (420 feet) long, and 38 broad; the poop stood 53 cubits above the water. It had four rudders, 30 cubits long; the longest oars were 38 cubits, and were poised by lead at the handles, so as to make them manageable, &c. It had more than 4000 rowers, 2850 marines, besides a crowd of other men. He also mentions one on the Nile, built by Philopator, of a large size.

Of the origin of navigation no satisfactory conjecture can be offered, nor do we know to what nation to ascribe the merit of having conferred so important a benefit on mankind. It is evident that the first steps were slow and gradual, and that the earliest attempts to construct vessels on the sea were rude and imperfect. Ships of burden were originally mere rafts, made of the trunks of trees bound together, over which planks were fastened, which Pliny states to have been first used on the Red Sea;³ but he is wrong in limiting the era of ship-building to the age of Danaus, and in supposing that rafts alone were employed until that period. Rafts were adopted, even to carry goods, long after the invention of ships, as they still are for some purposes on rivers and other inland waters; but boats made of hollow trees and various materials, covered with hides or pitch, were also of very early date, and to those may be ascribed the origin of planked vessels. Improvement followed improvement; and in proportion as civilization advanced, the inventive genius of man was called forth to push on an invention⁴ so essential to those communities where the advantages of commerce were understood, and numerous causes contributed to

¹ Plin. xvi. 40; and xxxvi. 9.

² Plut. Life of Demetrius. Athenæus Deipn. lib. v. p. 203. Pliny (vii. 56) says it had fifty benches; and he mentions another of Ptolemy Philadelphus with forty.

³ Plin. vii. 57. The Phœnicians were supposed to have come from the Red Sea, and to have settled on the coasts of the Mediterranean. (Herodot. i. Strabo, lib. i. p. 29.)

⁴ There is a very early statue of a

royal naval constructor of the time of the Pyramids, apparently as old as the 4th Dynasty, made of granite, and in the British Museum. ('Guide to the Egyptian Galleries, Vestibule, &c., p. 19, No. 70a') He is represented seated on a stool or chair; in his left hand he holds the boat-builder's adze, the blade of which is over his left shoulder. He held the high office or position of *suten rex*, or 'royal relative.'—S. B.

the origin of navigation, and the construction of vessels for traversing the sea.¹

Curiosity may have prompted those who lived on the coast to visit a neighboring island; or the desire of conquest, to cross a narrow channel, to invade a foreign land, as Pliny observes in the case of the Trojans. But it is more probable that the occupation of the fisherman was the principal cause and promoter of this useful art: those who at first employed themselves merely on a sheltered river venturing at length in the same boat upon the sea, and, having acquired confidence from habit, extending their excursions along the coast; for it was long before the art of navigation was so far improved that the boldest mariner dared to trust his vessel out of sight of land.

The first sea-voyages of which we have any direct notice are those undertaken by the Egyptians at the early period when they led colonies into Greece; but the people to whom the art of navigation was most indebted, who excelled all others in nautical skill, and who carried the spirit of adventure far beyond any contemporary nation, were the Phœnicians; and those bold navigators even visited the coast of Britain in quest of tin.

The fleets of Sesostris and the third Rameses certainly date from a very remote age, and some Phœnician sailors sent by Necho² on a voyage of discovery to ascertain the form of the African continent, actually doubled the Cape of Good Hope, about twenty-one centuries before the time of Bartholomew Diaz, and Vasco da Gama; but it was not till the discovery of the compass³ that navigation became perfected, and the uncertain method of ascertaining the course by the stars⁴ gave place to the more accurate calculations of modern times.

After the fall of Tyre and the building of Alexandria, Egypt

¹ The Egyptian boats had often a symbolic eye, that of Horus, Tum, or Shu, the principal solar deities of Egypt, painted at the sides, the object of which is unknown. Although under the Pharaohs the war-vessels had only one bank of oars, the invention or use of the double-banked galley, the bireme, by the Phœnicians, at the time of Sennacherib, about B.C. 701, led to the adoption of the trireme, which Necho, B.C. 610, constructed in his dock-yards on the Red Sea, and which went through his canal, made wide enough for two to pass one another. The trireme continued to be the war-vessel of Egypt under the Persians and Ptolemies, and

formed the Egyptian squadron at Salamis, and the fleet at Actium. — S. B.

² Pliny mentions others who performed this voyage (lib. ii. 67).

³ The Chinese used the compass at a very early period; and Marco Polo probably introduced it from China, about 1290 A.D., twelve years before Gioia of Amalfi, its supposed inventor. The loadstone (*Heraclius lapis*) was different from the *Magnetis* of Theophrastus (On Stones, 73), as is explained by Hesychius. Plutarch says the loadstone was mentioned by Manetho (de Isid. s. 62).

⁴ Hom. Odys. i, 272.

became famous as a commercial country and the emporium of the East; the riches of India, brought to Berenice, Myos-Hormos, and other ports on the Red Sea, passed through it, to be distributed over various parts of the Roman empire; and it continued to benefit by these advantages until a new route was opened to India by the Portuguese, round the Cape of Good Hope.

It is difficult to explain how, at that early period, so great a value came to be attached to tin that the Phœnicians should have thought it worth while to undertake a voyage of such a length, and attended with so much risk, in order to obtain it; even allowing that a high price was paid for this commodity in Egypt and other countries, where the different branches of metallurgy were carried to great perfection. It was mixed with other metals, particularly copper, which was hardened by an alloy of tin, and was employed, according to Homer, for the raised work on the exterior of shields,¹ as in that of Achilles; for making greaves,² and binding various parts of defensive armor,³ as well as for household⁴ and ornamental purposes, and, which is very remarkable, the word *kassitéros*, used by the poet to designate it, is the same as the Arabic *kasdeer*,⁵ by which the metal is still known in the East, being probably derived from the ancient Phœnician.

We have no means of ascertaining the exact period when the Phœnicians first visited our coasts in search of tin; some have supposed about the year 400 or 450 before our era; but that this metal was employed many ages previously is shown from the bronze vessels⁶ and implements discovered at Thebes and other parts of Egypt. It cannot, however, be inferred that the mines of Britain were known at that remote period, since the intercourse with India may have furnished the Egyptians with tin; and the Phœnicians probably obtained it from Spain⁷ and India long before they visited those distant coasts, and dis-

¹ Hom. II. xviii. 565, 574.

² Ib. xviii. 612.

³ Ib. xviii. 474.

⁴ No copper vessels have yet been found, even of Roman time, washed with tin, and few only with silver. Several gilt have been met with in Egypt, Greece, and Italy. Dioscorides mentions tinned boilers (lib. i. c. 38). He is supposed to have been physician to Antony and Cleopatra, or to have lived in the time of Nero. (Also Plin. xxxiv. 17, on the tinning of copper vessels.)

⁵ It will be observed that the accent in the Greek is over the same part of the word, *κασσιτερος*. It is, I trust, unnecessary to observe that the ancient Greeks pronounced according to accent, as they now do in Greece, or to point out the origin of those marks.

⁶ Bronze is made of copper and tin: brass, of copper and zinc.

⁷ The mines of Spain and Portugal produce very little tin. There are some in Saxony and Bohemia. Those of Malacca are very productive.

covered the richness of our productive mines.¹ Ezekiel, indeed, expressly says that the Tyrians received tin, as well as other metals, from Tarshish; which, whether it was situated, as some suppose, in Arabia,² or on the Indian coast, traded in the productions of the latter country: and the lamentation³ of the prophet on the fall of Tyre, though written as late as the year 588 before our era, relates to a commercial intercourse with that place, which had been established, and continued to exist, from a much earlier period.⁴

It is probable that the Phœnicians supplied the Egyptians with this article, even before it was brought from Spain and Britain. The commercial intercourse of the two nations dated from a most remote epoch;⁵ the produce and coasts of Arabia and India appear to have been known to the Phœnicians long before any other people; and some have even supposed that they migrated from the Red Sea to the shores of Syria.⁶

That the productions of India already came to Egypt at the early period of Joseph's arrival in the country is evident from the spices which the Ishmaelites⁷ were carrying to sell there; and the amethysts, hæmatite,⁸ lapis-lazuli, and other objects⁹ found at Thebes, of the time of the third Thothmes and succeeding Pharaohs, argue that the intercourse was constantly kept up.

The first mention of tin, though not the earliest proof of its use, is in connection with the spoils taken by the Israelites from the people of Midian, in the year 1452 B.C., where they are commanded by Moses to purify the gold and silver, the brass, the iron, the tin, and the lead, by passing it through the fire.¹⁰ Its combination with other metals is noticed by Isaiah in the year 760 before our era, who alludes to it as an alloy mixed with a more valuable substance;¹¹ and Ezekiel¹² shows that it was used for this purpose in connection with silver.

¹ In the year 1791 about 3000 tons of tin were taken from the mines of Cornwall, of which 2200 tons were sold in the European market for 72*l.* each, the remaining 800 being sent to India and China at 62*l.* a ton. (Univ. Dict. of Arts and Sciences, Tin.)

² Bruce supposed it to be Mokha.

³ Ezek. xxvii. 12: 'Tarshish was thy merchant by reason of the multitude of all kind of riches; with silver, iron, tin, and lead, they traded in thy fairs.'

⁴ The gold of Ophir being mentioned

by Job is one of many proofs of an early intercourse with India. (Job. xxii. 24.)

⁵ Herodot. i. 1.

⁶ Ibid.

⁷ Gen. xxxvii. 25.

⁸ This kind of iron ore is found also in Spain, Italy, Germany, and England.

⁹ I might, perhaps, add siderite.

¹⁰ Numb. xxxi. 22. Tin in Hebrew is called *bedeel*, בְּדֵיִל.

¹¹ Isaiah i. 25: 'I will . . . purge away thy dross, and take away all thy tin.'

¹² Ezek. xxii. 18, 20: 'They are brass,

Strabo, Diodorus, Pliny, and other writers mention certain islands discovered by the Phœnicians, which, from the quantity of tin they produced, obtained the name *Cassiterides*; and are supposed to have been the cluster now known as the Scilly Isles, and to have included part of the coast of Cornwall itself.¹ The secret of their discovery was carefully concealed, says Strabo,² from all other persons, and the Phœnician vessels continued to sail from Gades, the present Cadiz, in quest of this commodity, without its being known from whence they obtained it; though many endeavors were made by the Romans at a subsequent period to ascertain the secret, and to share the benefits of this lucrative trade.

So anxious, indeed, were the Phœnicians to retain their monopoly, that on one occasion, when a Roman vessel pursued a trader bound to the spot, the latter purposely steered his vessel on the shoal, preferring to suffer shipwreck, provided he involved his pursuers in the same fate, to the disclosure of his country's secret. His artifice succeeded: the Roman crew, exposed to additional risk in consequence of being unprepared for the sudden catastrophe, were all lost with their foundered vessel, and the Phœnician, having the good fortune to escape with his life, was awarded from the public treasury for his devotion and the sacrifice he had made.³

Pliny mentions a report of 'white lead,' or tin, being brought from certain islands of the Atlantic; yet he treats it as a 'fable,' and proceeds to state that it was found in Lusitania and Gallicia, and was the same metal⁴ known to the Greeks in the days of Homer by the name *kassitéros*;⁵ but Diodorus and Strabo, after noticing the tin of Spain and the *Cassiterides*, affirm that it was also brought to Massilia (Marseilles) from the coast of Britain.⁶

Spain in early times was to the Phœnicians what America at a later period was to the Spaniards; and no one can read the accounts of the immense wealth derived from the mines of that country, in the writings of Diodorus and other authors, without being struck by the relative situation of the Phœnicians and

and tin, and iron, and lead, in the midst of the furnace; they are even the dross of silver.'

¹ Beckmann and Borlase are also of this opinion.

² Strabo, lib. iii. *ad fin.* p. 121.

³ *Ibid.*

⁴ Beckmann, in his 'History of Inventions' (vol. iv. pp. 10, 20), doubts the

stannum of Pliny, or the *kassitéros* of Homer, being tin. Pliny's account of *stannum* is obscure.

⁵ Plin. xxxv. 16. He places the *Cassiterides* off the coast of Celtiberia (lib. iv. 22).

⁶ Strabo, lib. iii. p. 101, and Diodor. v. 38.

ancient Spaniards, and the followers of Cortes or Pizarro and the inhabitants of Mexico or Peru.

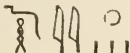
'The whole of Spain,' says Strabo, 'abounds with mines . . . and in no country are gold, silver, copper, and iron in such abundance or of such good quality: even the rivers and torrents bring down gold in their beds, and some is found in the sand:' and the fanciful assertion of Posidonius, regarding the richness of the country in precious metals, surpassed the phantoms created in the minds of the conquerors of America.

The Phœnicians purchased gold, silver, tin, and other metals from the inhabitants of Spain and the Cassiterides by giving in exchange earthenware vessels, oil, salt, bronze instruments, and other objects of little value, in the same manner as the Spaniards on their arrival at Hispaniola: and such was the abundance of silver that, after loading their ships with full cargoes, they stripped the lead from their anchors, and substituted the same weight of silver.

[It is uncertain if tin were known to the Egyptians at the earliest period, for a small curved object, apparently the end of the handle of a tool or weapon, found in one of the air-passages of the great Pyramid, was copper. Other tools recently discovered at Tel el Yahoudeli were also of that metal. There is, however, no doubt about the use of tin in the composition of bronze at an early period; and five objects of the Passalacqua Collection, now at Berlin, analyzed by Vauquelin, gave 85 parts of copper, 14 of tin, and about 1 of iron,² enough however to show the knowledge of tin or of tin ores, for it is possible that bronze may have been produced from them, and not the pure metal, by the Egyptians. Various metals, indeed, are mentioned in the different texts, papyri, and inscriptions, but it is not quite certain if tin is one of them. A metal or material, perhaps tin,³ is placed in certain lists of substances, after lead. That it was known in its pure state at a later period is clear from the plates of it engraved with the symbolic eye placed over the flank incisions of a mummy. These when bent give the crepitating sound peculiar to tin. — S. B.]

¹ Diodor. lib. v. 35.

² Passalacqua, 'Catalogue raisonné,' Paris, 1826, pp. 238, 239.

³ It is called  *t'ehi* and

is mentioned in the great Harris papy-

rus, amongst the lists of offerings of Rameses III. (pl. 10, 6, l. 14; 'Records of the Past,' vol. vi. p. 69). Some ingots or plates of this metal, leaden colored, are represented in the tomb of Rekhmara. — S. B.

A strong evidence of the skill of the Egyptians in working metals, and of the early advancement they made in this art, is derived from their success in the management of different alloys; which, as M. Goguet observes,¹ is further argued from the casting of the golden calf, and still more from Moses being able to burn the metal and reduce it to powder—a secret which he could only have learnt in Egypt.² It is said in Exodus,³ that ‘Moses took the calf which they had made, and burnt it in the fire, and ground it to powder, and strewed it upon the water, and made the children of Israel drink of it;’ an operation which, according to the French *savant*, ‘is known by all who work in metals to be very difficult.’

‘Commentators’ heads,’ he adds, ‘have been much perplexed to explain how Moses burnt and reduced the gold to powder. Many have offered vain and improbable conjectures; but an experienced chemist has removed every difficulty upon the subject, and has suggested this simple process. In the place of tartaric acid, which we employ, the Hebrew legislator used natron, which is common in the East. What follows, respecting his making the Israelites drink this powder, proves that he was perfectly acquainted with the whole effect of the operation. He wished to increase the punishment of their disobedience, and nothing could have been more suitable; for gold reduced and made into a draught, in the manner I have mentioned, has a most disagreeable taste.’

The use of gold, for jewellery and various articles of luxury, dates from the most remote ages. Pharaoh having ‘arrayed’⁴ Joseph ‘in vestures of fine linen, put a gold chain about his neck; and the jewels of silver and gold borrowed from the Egyptians by the Israelites⁵ at the time of their leaving Egypt (out of which the golden calf was afterwards made⁶) suffice to prove the great quantity of precious metals wrought at that time into female ornaments. It is not from the Scriptures alone that the skill of the Egyptian goldsmiths may be inferred; the sculptures of Thebes and Beni-Hassan afford their additional

¹ Goguet, ‘Origine des Loix, des Arts, et des Sciences,’ tome ii. liv. 2, ch. iv. p. 145.

² Goguet is wrong in supposing that the smelting of tin is one of the most difficult operations in metallurgy (tome ii. liv. 2, ch. iv. p. 146). Tin melts more readily than lead: the latter requires a

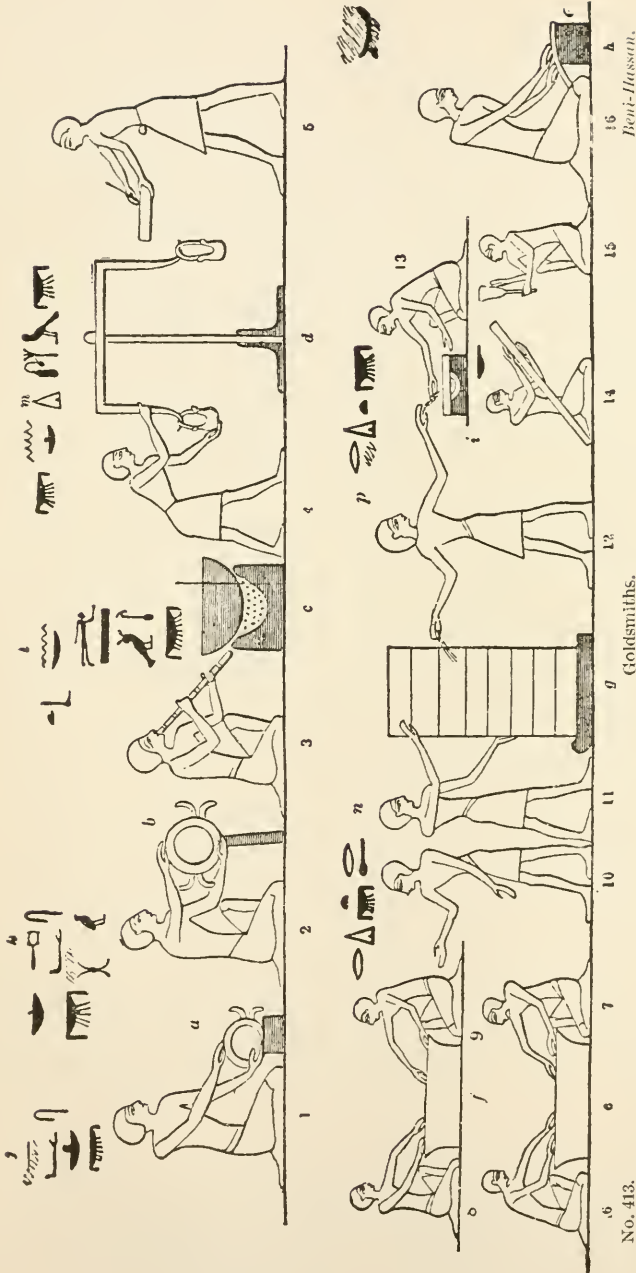
heat of 550° Fahr., the former only of 420°.

³ Exod. xxxii. 20.

⁴ This custom of conferring rank by presenting a suitable dress (or *kisweh*) still continues in the East.

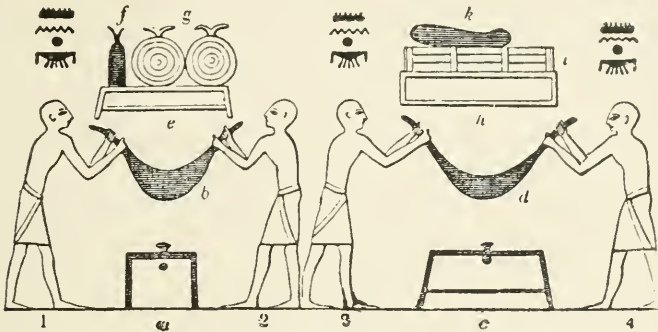
⁵ Exod. iii. 22, and xii. 35.

⁶ Exod. xxxii. 2, 3.



No. 413. *Goldsmiths.*
 Figs. 1, 2, making jewellery. 3, blowing the fire for melting the gold. 4, weighing the gold. 5, clerk or scribe. 6, 7, 8, 9, washing gold.
 10, superintendent. The remaining part relates to the preparation of the metal before it was worked.
 The inscriptions read — j, 'works the gold.' k, 'works a gold collar.' l, 'melts the gold.' m, 'gives the gold, register of the gold. n, 'gives gold.'
 p, 'gives gold.'

testimony ; and the numerous gold and silver vases, inlaid work, and jewellery, represented in common use, show the great ad-

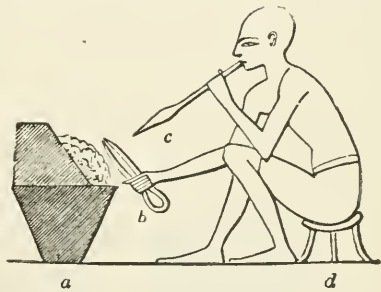


No. 414. Goldsmiths. Thebes. *f, g,* are articles of jewellery. The hieroglyphics read *men neb*, 'goldsmith,' or worker in gold.'

vancement they had already made, at a remote period, in this branch of art.

The engraving of gold, the mode of casting it, and inlaying it with stones, were evidently known at the same time : they are mentioned in the Bible,¹ and numerous specimens of this kind of work have been found in Egypt.

The origin of the sign signifying 'gold,' has been happily explained by the ingenious Champollion ; as the *bowl*² in which the metal was washed, the *cloth* through which it was strained, and the *dropping of the water*, united into one character, at once indicative of the process and the metal.



Blowpipe, *c,* and small fireplace with checks to confine and reflect the heat. Thebes.

Much cannot, of course, be expected from the objects found in the excavated tombs to illustrate the means employed in smelting the ore, or to disclose any of the secrets they possessed in metallurgy ; and little is given in the paintings, beyond the use of the blowpipe, the forceps,³ and their mode of concen-

¹ Exod. xxvii. 4. Aaron 'fashioned it with a graving tool, after he had made it a molten calf.' On engraving and setting stones, see Exod. xxviii. 9 and 11.

² Or the frame over which the cloth was laid. Woodcut No. 414 *fig. a.* It

rather represents a particular kind of 'collar,' called *neb*, the same as the word 'gold.' — S. B.

³ Bronze forceps, tongs, and tweezers have been found, retaining their spring perfectly.

trating heat, by raising checks of metal round three sides of the fire in which the crucibles were placed. Of the latter, indeed, there is no indication in these subjects, unless it be in a preceding woodcut;¹ but their use is readily suggested, and some which have been found in Egypt are preserved in the Berlin Museum. They are nearly five inches in diameter at the mouth, and about the same in depth, and present the ordinary form and appearance of those used at the present day.

From the mention of earrings and bracelets, and jewels of silver and gold, in the days of Abraham,² it is evident that in Asia as well as in Egypt the art of metallurgy was known at a very remote period; and workmen of the same countries are noticed by Homer³ as excelling in the manufacture of arms, rich vases, and other objects inlaid or ornamented with metals. His account of the shield of Achilles⁴ proves the art of working the various substances of which it was made — copper, tin, gold, and silver — to have been well understood at that time; and the skill required to represent the infinity of subjects he mentions was such as no ordinary artisan could possess; and unless similar works had been already made, the poet would not have ventured on the description he has given.

The ornaments in gold found in Egypt consist of rings, bracelets, armlets, necklaces, earrings, and numerous trinkets belonging to the toilet; many of which are of the early times of



No. 416.

Golden baskets represented in the tomb of King Rameses III.

Thebes.

Usertesen I. and Thothmes III., the contemporaries of Joseph and of Moses. Gold and silver vases, statues, and other objects of gold and silver, of silver inlaid with gold, and of bronze inlaid with the precious metals, were also common at the same time; and besides those manufactured in the country from the produce of their own mines,⁵ the Egyptians exacted an annual tribute

¹ Woodcut No. 413, c.

² Gen. xxiv. 47, 53.

³ Hom. II. X. 741. A silver cup, the work of the Sidonians, Od. Δ, 618, &c. *Vide* II. B 872, H 236, the armor of Glaucus.

⁴ Hom. II. xviii. 474.

⁵ Diodorus mentions the silver mines of Egypt, which produced 3200 myriads of mine, but I am not aware of their position. Diodor. i. 49, and *infra*, p. 239 and foll.

from the conquered provinces of Asia and Africa, in gold and silver, and in vases made of those materials.

I have frequently had occasion to notice the elegance of the Egyptian vases, whether of gold or other materials. Many other objects were equally graceful in their form and the devices which ornamented them; and among these I may cite the golden baskets in the tomb of Rameses, which in their shape call to mind our European bread-baskets.

[Various objects of gold are described in the Egyptian inscriptions, and the word 'gold' appears at the earliest period, and great quantities must have been used at the time of the 12th Dynasty. The tributes of the 18th Dynasty also record and represent the quotas or presents of gold sent by the Ethiopians and Asiatic nations to Egypt. The gold which Rameses III. gave to the principal cities and temples of Egypt is detailed in the great Harris papyrus: the gold is classed as gold ore, gold of the balance, best gold, gold of the second quality, and white gold (apparently electrum, distinguished from silver, which is afterwards mentioned).¹ The gold was also used for gold crowns, collars, rings, and other ornaments or decorations; silver was chiefly employed for vases. The gold principally came from Kush or Æthiopia; the silver from Asia. — S. B.]

At Beni-Hassan the process of washing the ore, smelting, or fusing the metal with the help of the blow-pipe, and fashioning it for ornamental purposes, weighing it, taking an account of the quantity so made up, and other occupations of the goldsmith, are represented; but, as might be supposed, these subjects merely suffice as they were intended, to give a general indication of the goldsmith's trade, without attempting to describe the means employed.²

The gold mines of Egypt, though mentioned by Agatharcides and later writers, and worked even by the Arab caliphs, long remained unknown, and their position has only been ascertained a few years since by M. Linant and Mr. Bonomi. They lie in the Bisháree desert, or, as Edrécsee and Aboolfeda call it, the land of Bigá³ or Bojá, about seventeen or eighteen days' journey to the southeastward from Derow, which is situated on the Nile, a little above Kom Ombo, the ancient Ombos.

¹ 'Records of the Past,' vi. 21 and foll.; viii. 6 and foll.

² Woodcut No. 413.

³ Bigah **بج** or Begga is the name which the Bisháreen Arabs give themselves.

Those two travellers met with some Cufic funeral inscriptions there, which from their dates show that the mines were worked in the years 339 A.H. (951 A.D.) and 378 A.H. (989 A.D.); the former being in the fifth year of the Caliph Mostukfee Billah, a short time before the arrival of the Fatemites in Egypt, the latter in the fourteenth of El Azeéz, the second of the Fatemite dynasty.

They continued to be worked until a much later period, and were afterwards abandoned, the value of the gold, as Aboolfeda states,¹ barely covering the expenses; nor did Mohammed Ali, who sent to examine them and obtain specimens of the ore, find it worth while to reopen them.

The matrix is quartz; and so diligent a search did the Egyptians establish throughout the whole of the deserts east of the Nile for this precious metal, that I never remember to have seen a vein of quartz in any of the primitive ranges there which had not been carefully examined by their miners; certain portions having been invariably picked out from the fissures in which it lay, and broken into small fragments. At a spot near the quarries of *breccia verde*, on the road from Coptos to Kossayr, the working of quartz veins has been carried on to such an extent and on so grand a scale, the houses of the miners are so numerous, the consequence of the place so strongly argued by the presence of a small stone temple bearing the name and sculptures of Ptolemy Euergetes I., and the length of time the workmen inhabited it so distinctly proved by the large mounds of broken pottery found there, from which the valley has derived the name of Wadee Foäkheer, that I cannot suppose their labors to have been confined to the mere cutting of *tazzi*, sarcophagi, fonts, vases, columns, and similar objects from the *breccia* quarries, which, too, are distant three miles from the spot; and the number of 1320 huts, which I counted in the different windings of the Wadee Foäkheer, containing far more workmen than the quarries would require, appears conclusive respecting the object they had in view, and suggests that they had succeeded in finding gold here also, though probably in far less quantities than in the mines of the more southerly district.

The gold mines are said by Aboolfeda to be situated at El Allaga, or Ollagee; but Eshuranib, or Eshuanib, the principal

¹ Aboolfeda's 'Description of Egypt,' s. 68.

place, is about three days' journey beyond Wadée Ailaga, according to Mr. Bonomi, to whom I am indebted for the following account of the mines: 'The direction of the excavations depends,' as Diodorus states, 'on that of the strata in which the ore is found, and the position of the various shafts differ accordingly. As to the manner of extracting the metal, some notion may be given by a description of the ruins at Eshuranib, the largest station, where sufficient remains to explain the process they adopted. The principal excavation, according to M. Linant's measurement, is about 180 feet deep: it is a narrow, oblique chasm, reaching a considerable way down the rock. In the valley, near the most accessible part of the excavation, are several huts, built of the unhewn fragments of the surrounding hills, their walls not more than breast high, perhaps the houses¹ of the excavators or the guardians of the mine; and separated from them by the ravine or course of the torrent is a group of houses, about 300 in number, laid out very regularly in straight lines. In those nearest the mines lived the workmen who were employed to break the quartz into small fragments, the size of a bean, from whose hands the pounded stone passed to the persons who ground it in hand-mills, similar to those now used for corn in the valley of the Nile, made of a granitic stone, one of which is to be found in almost every house at these mines, either entire or broken.

'The quartz thus reduced to powder was washed on inclined tables, furnished with two cisterns, all built of fragments of stone collected there; and near these inclined planes are generally found little white mounds, the residue of the operation. Besides the numerous remains of houses in this station, are two large buildings, with towers at the angles, built of the hard blackish granitic, yet luminous, rock that prevails in the district. The valley has many trees, and in a high part of the torrent bed is a sort of island, or isolated bank, on which we found many tombstones, some written in the ancient Cufic character, very similar to those at E'Souán.'

Such is the description Mr. Bonomi has been kind enough to send me of the gold mines of Allaga; and as Diodorus's account of the mining operations, and the mode of extracting the gold, is highly interesting, I shall introduce some extracts from his work.

The historian states that those who worked in the mines were

¹ Similar huts are met with at all the quarries and mines of these deserts.

principally captives taken in war, and men condemned to hard labor for crimes, or in consequence of offences against the government. They were bound in fetters, and obliged to work night and day: every chance of escape being carefully obviated by the watchfulness of the guards, who, in order that persuasion might not be used to induce them to relax in their duty, or feelings of compassion be excited for the sufferings of their fellow-countrymen, were foreign soldiers, ignorant of the Egyptian language.

Whether this system was introduced by the Ptolemies and the latter Pharaohs, or was always carried on in the earliest times, it is difficult to say, Diodorus confining his remarks to the state of the mines during his own time. 'The soil,' says the historian, 'naturally black,¹ is traversed with veins of marble² of excessive whiteness, surpassing in brilliancy the most shining substances; out of which the overseers cause the gold to be dug by the labor of a vast multitude of people; for the kings of Egypt condemn to the mines notorious criminals, prisoners of war, persons convicted by false accusations or the victims of resentment.³ And not only the individuals themselves, but sometimes even their whole family are doomed to this labor, with the view of punishing the guilty, and profiting by their toil.

'The vast numbers employed in these mines are bound in fetters, and compelled to work day and night without intermission, and without the least hope of escape, for they set over them barbarian soldiers, who speak a foreign language, so that there is no possibility of conciliating them by persuasion, or the kind feelings which result from familiar converse.

'When the earth containing the gold is hard they soften it by the application of fire; and when it has been reduced to such a state that it yields to moderate labor, several thousands (myriads) of these unfortunate people break it up with iron picks. Over the whole work presides an engineer, who views and selects the stone, and points it out to the laborers. The strongest of them, provided with iron chisels, cleave the marble shining rock by mere force, without any attempt at skill; and in excavating the shafts below ground they follow the direction of the shining stratum without keeping in a straight line.

¹ The rock in which the veins of quartz run is an argillaceous schist.

² Diodor. iii. 11. He evidently alludes

to the quartz, which is the matrix of the ore.

³ More probably of false accusations.

‘In order to see in these dark windings they fasten lamps to their foreheads, having their bodies painted, sometimes of one and sometimes of another color, according to the nature of the rock; and as they cut the stone it falls in masses on the floor, the overseers urging them to the work with commands and blows. They are followed by little boys, who take away the fragments as they fall, and carry them out into the open air. Those who are above thirty years of age are employed to pound pieces of the stone, of certain dimensions, with iron pestles in stone mortars, until reduced to the size of a lentil. It is then transferred to women and old men, who put it into mills arranged in a long row, two or three persons being employed at the same mill, and it is ground until reduced to a fine powder.

‘No attention is paid to their persons: they have not even a piece of rag to cover themselves; and so wretched is their condition that every one who witnesses it deplores the excessive misery they endure. No rest, no intermission from toil, are given either to the sick or maimed: neither the weakness of age, nor women’s infirmities are regarded; all are driven to their work with the lash, till, at last, overcome with the intolerable weight of their afflictions, they die in the midst of their toil. So that these unhappy creatures always expect worse to come than what they endure at present, and long for death as far preferable to life.

‘At length the masters take the stone thus ground to powder and carry it away to undergo the final process. They spread it upon a broad table a little inclined, and, pouring water upon it, rub the pulverized stone until all the earthy matter is separated, which, flowing away with the water, leaves the heavier particles behind on the board. This operation is often repeated, the stone being rubbed lightly with the hand: they then draw up the useless and earthy substance with fine sponges, gently applied, until the gold comes out quite pure. Other workmen then take it away by weight and measure, and putting it with a fixed proportion of lead, salt, a little tin, and barley bran into earthen crucibles well closed with clay, leave it in a furnace for five successive days and nights; after which it is suffered to cool. The crucibles are then opened, and nothing is found in them but the pure gold, a little diminished in quantity.

‘Such is the method of extracting the gold on the confines of Egypt, the result of so many and such great toils. Nature indeed, I think, teaches that as gold is obtained with immense

labor, so it is kept with difficulty, creating great anxiety, and attended in its use both with pleasure and grief.

[At the time of the 12th Dynasty the search for gold and the working of the mines is already recorded. Ameni, a prince and officer of the reign of Usertesén I., states that he had escorted the gold from the mines to Coptos. Under the 19th Dynasty the mines of Rhedésieh, at a place called the Wady Abbas, had been extensively worked, and an account of them has been discovered on the temple there. Another inscription of importance has been found at Kuban, on the eastern bank of the Nile, opposite to Dakkeh or Contra-Pselcis. The inscriptions of Seti I. mention the workings and endowment of the temples with part of the produce. The tablet at Kuban records the construction of a tank or reservoir to supply with water the miners and others who crossed the desert with asses to reach the mines and bring back the gold, and is dated in the 3d year of Rameses. Seti I., it appears, had bored a well 120 cubits, or about 190 feet deep, for the purpose, but did not reach the water. Rameses bored 12 feet deeper, and was rewarded by the water rising. A papyrus at Turin has a map and plan of these gold mines, the royal tablet, well, houses of the miners, and roads which led to the shafts.¹—S. B.]

In the early stages of society, when gold first began to be used, idols, ornaments, or other objects were made of the metal in its pure state, till being found too soft, and too easily worn away, an alloy was added to harden it, at the same time that it increased the bulk of the valuable material. As men advanced in experience, they found that the great ductility of gold enabled them to cover substances of all kinds with thin plates of the metal, giving all the effect of the richness and brilliancy they admired in solid gold ornaments; and the gilding of bronze, stone, silver, and wood was speedily adopted.

The leaves so used were at first thick, but skill, resulting from experience, soon showed to what a degree of fineness they could be reduced; and we find that in Egypt substances of various kinds were overlaid with fine gold leaf at the earliest periods of which the monuments remain, even in the time of the first Usertesén. Some things still continued to be covered with thick leaf, but this was from choice, and not in consequence

¹ 'Records of the Past,' viii. p. 57. 4to, Paris, 1862; and 'Une Inscription historique de Seti I.,' 4to, Châlon, 1856.

of any want of skill in the workmen; and in the early age of Thothmes III. they were already acquainted with all the various methods of applying gold, whether in leaf, or by inlaying, or by beating it into other metals, previously tooled with devices to receive it.

That their knowledge of gilding¹ was coeval with the sojourn of the Israelites in the country is evident from the direct mention of it in the Bible, the ark of shittim wood made by Moses being overlaid with pure gold; and the casting of the metal is noticed on the same occasion:² nor can we doubt that the art was derived by the Jews from Egypt, or that the Egyptians had long before been acquainted with all those secrets of metallurgy in which the specimens that remain prove them to have so eminently excelled.

The method devised by the Egyptians for beating out the leaf is unknown to us; but from the extreme fineness of some of that covering wooden and other ornaments found at Thebes, we may conclude it was done nearly in the same way as formerly in Europe, between parchments, and perhaps some membrane taken from the intestines of animals was also employed by them.

In Europe the skin of an unborn calf was at first substituted for the parchment previously used; but in the beginning of the seventeenth century the German gold-beaters, having obtained a fine pellicle from the entrails of cattle,³ found that they could beat gold much thinner than before, and this still continues to be used, and is known to us under the name of gold-beaters' skin. 'About the year 1621,' says Beckmann,⁴ 'Merunne excited general astonishment when he showed that the Parisian gold-beaters could beat an ounce of gold into sixteen hundred leaves, which together covered a surface of one hundred and five square feet. But in 1711, when the pellicles discovered by the Germans came to be used in Paris, Réaumur found that an ounce of gold in the form of a cube, five and a quarter lines at most in length, breadth, and thickness, and which covered only a surface of about twenty-seven square lines, could be so extended by the gold-beaters as to cover a surface of more than 1466½ square feet.

¹ Pliny mentions the lycophoron, a composition used for attaching gold to wood. (Plin. xxxv. 6.) 'Sinopidis Ponticæ selibra, silis lucidi libris x., et melini Græciensis duabus mixtis tritisque una, per dies xii., leucophoron fit, hoc est, glutinum auri, cum inducitur ligno. (Theophrastus, on Stones, s. 46.)

² Exod. xxv. 11, 12.

³ This 'pelle del budello' is mentioned by Lancellotti, who wrote in the year 1636.

⁴ Vide Beckmann's valuable work, the 'History of Inventions,' vol. iv., on Gilding.

This extension, therefore, is nearly one-half more than was possible about a century before.'

Many gilt bronze vases, implements of various kinds, trinkets, statues, toys, and other objects, in metal and wood, have been discovered in the tombs of Thebes: the faces of mummies are frequently found overlaid with thick gold leaf, the painted cloth, the wooden coffin, were also profusely ornamented in this manner; and the whole body itself of the deceased was sometimes gilded previous to its being enveloped in the bandages. Not only were small objects appertaining to the service of the gods, and connected with religion, or articles of luxury and show, in the temples, tombs, or private houses, so decorated; the sculptures on the lofty walls of an adytum, the ornaments of a colossus, the doorways of the temples, and parts of numerous large monuments, were likewise covered with gilding; of which the wooden heifer, which served as a sepulchre to the body of king Mycerinus's daughter,¹ the sculptures at the temple of Kalabshi in Nubia, the statue of Minerva sent to Cyrene by Amasis,² and the Sphinx at the pyramids may be cited as instances.

Gold is supposed by many to have been used³ some time before silver,⁴ but the earliest authority, which is that of the Bible, mentions both these metals at the most remote age. The Egyptian sculptures represent silver as well as gold in the time of the third Thothmes, and silver rings have been found of the same epoch.⁵ Abraham was said to have been 'very rich, in cattle, in silver, and in gold;'⁶ and the use of silver as money⁷ is distinctly pointed out in the purchase of the field of Ephron, with its cave,⁸ which Abraham bought for 'four hundred shekels of silver, current money with the merchant.'


On this occasion, as usual, the price paid was settled by weight,⁹—a custom retained among the Egyptians, Hebrews, and other Eastern people till a late period; and, indeed, until a


¹ Herodot. ii. 129, 132.

Ibid. ii. 182.

³ Phny attributes the art of working gold to Cadmus (vii. 56).

⁴ [Silver was evidently of later use in Egypt than gold, silver being called 'white


gold,' . White is *het*, and gold *noub*,

Noubhet, or simply *het*. *Hat* is white, as milk was called white; , *lebn*, in Hebrew is 'white,' and *lebn* thus came to imply 'milk.'—G. W.]

⁵ In the Museum of Alnwick Castle is a silver ring of Amenophis III. Silver rings

and ornaments of every epoch are less common than gold.

⁶ Gen. xiii. 2. But no mention is made of it as money till after Abraham's return from Egypt, as Goguet has justly observed (tom. i. liv 2, ch. iv.).

⁷ The word silver,  is commonly used in Hebrew to signify money, as *argent* in French [and *arian*, 'silver,' in Welsh signifies 'money.'—G. W.].

⁸ Gen. xxiii. 16, 17.

⁹ Job xxviii. 15: 'It (wisdom) cannot be got for gold, neither shall silver be weighed for the price thereof.'

government stamp, or some fixed value, was given to money : this could be the only method of ascertaining the price paid, and of giving satisfaction to both parties. Thus Joseph's brethren, when they discovered the money returned into their sacks, brought it back to Egypt, observing that it was 'in full weight ;' and the paintings of Thebes frequently represent persons in the act of weighing¹ gold on the purchase of articles in the market. This continued to be the custom when rings² of gold and silver were used in Egypt for money, and even to the time of the Ptolemies, who established a coinage of gold, silver, and copper in the country.³

These princes were not the first who introduced coined money into Egypt : it had been current there during the Persian occupation of the country ; and Aryandes, who was governor of Egypt, under Cambyses and Darius, struck silver coins, in imitation of the gold Darics of his sovereign, for which act of presumption he was condemned to death.⁴

It is uncertain, as Pliny observes, when and where the art of stamping money originated. Herodotus attributes it to the Lydians, 'the first people who coined gold and silver for their use ;'⁵ Servius Tullius made⁶ copper money about the year 560 B.C., and impressed upon it the figure of a sheep, *pecus*, whence it obtained the name *pecunia* ; silver was coined at Athens⁷ 512 years before our era, and at Rome five years before the first Punic war,⁸ or 269 B.C. ;⁹ and some suppose Phidon, king of Argos, to have invented weights and measures, and silver coinage,¹⁰ in the year 895 B.C.¹¹

The fact of the sheep being impressed upon it seems to agree with the custom of many people of taking a lamb as the standard of value. In Ethiopia and Darfoor they reckon a piece of cloth as equal to a full-grown sheep, and to sixty pounds, which calls to mind the *kesitæ* of the Hebrews ;¹² and I have myself heard an

¹ Woodcut No. 97, vol. i. p. 285.

² The Chinese and Japanese have a sort of ring money, or at least round coins with a hole in the centre, which are strung together. (Plin. xxxiii. 1.) [Called *le* and *cash*, in India. — G. W.]

³ [2 Kings, v. 23 ; Tobit ix. ; and 'Proceedings of Numismatic Society,' pp. 177, 233, and 377. — G. W.]

⁴ Herodot. iv. 166.

⁵ Ibid. i. 93. Jul. Poll. Onom., vi. 83. Lucan, Phars. vi. 402.

⁶ Plin. liii. 3.

⁷ Aristot. Œconom. lib. ii.

⁸ Plin. *loc. cit.*

⁹ Livy, however, mentions the *denarius* (a silver coin) much earlier, B.C. 337 (viii. 11). Gold was not struck at Rome till B.C. 207.

¹⁰ 'In Ægina.' Strabo, lib. viii. p. 259 ; on the authority of Ephorus.

¹¹ Pausanias says gold and silver money was unknown in the age of Polydorus, king of Sparta, who died B.C. 724 (lib. iii. c. 12). That it was not in use at the time of the Trojan war, is shown by Homer. Il. H, 473, their mode of buying wine.

¹² 'Proceedings of Numismatic Society, 1837-38, p. 231.

Ethiopian talk of his sheep as his *floos*, or 'money.' Iron money is still used in Kordofan: it is of the form of a broad arrow, or a bird on the wing: these coins are of the value of a para each, forty being equal to one piastre, 100 piastres to £1 English: they are called *kashasha*, and, though different in weight, are all of one value.

Though stamped money was not used by the ancient Egyptians, we have evidence of weights and measures having been invented by them long before the Greeks existed as a nation; and it is probable that they were known even in Greece previous to the time of Phidon.

The balance used for weighing gold differed slightly from those of ordinary construction, and was probably more delicately formed. It was made, as usual, with an upright pole, rising from a broad base or stand, and a cross-beam turning on a pin at its summit: but instead of strings suspending the scales was an arm on either side, terminating in a hook, to which the gold was attached in small bags.¹

Large scales were generally a flat wooden board, with four ropes attached to a ring at the extremity of the beam; and those of smaller size were of bronze, one of which I found in Upper Egypt, one and a half inch in diameter, pierced near the edge in three places for the strings.

The principle of the common balance was simple and ingenious: the beam passed through a ring suspended from a horizontal rod immediately above and parallel to it, and when equally balanced, the ring, which was large enough to allow the beam to play freely, showed when the scales were equally poised, and had the additional effect of preventing the beam tilting when the goods were taken out of one, and the weights suffered to remain in the other.² To the lower part of the ring a small plummet was fixed, and this being touched by the hand, and found to hang freely, indicated, without the necessity of looking at the beam, that the weight was just. The figure of a baboon, sometimes placed upon the top, was not connected in any way with the balance, but was the emblem of the god Thoth, the regulator of measures, of time, and of writing, in his character of the moon; but I do not find any notion of the goddess of Justice being

¹ Woodcut No. 413, *d*.

² Woodcut No. 97, vol. i. p. 285. [The balance was called *maxa*, and was generally of large size, but hand scales are represented on the monuments; the Egyp-

tians did not use the steelyard till the Roman period, many leaded bronze weights of which are found from time to time in Egypt. — S. B.]

connected with the balance, except in the judgment scenes of the dead.

The pair of scales was the ordinary and apparently only kind of balance used by the Egyptians, no instance of the steelyard being met with in the paintings of Thebes, or of Beni-Hassan, and I conclude that the introduction of the latter is confined to a Roman era [as those found are evidently of that time, with three different degrees of weights].

The Egyptians had another kind of balance, in which the equalization of the opposite weights was ascertained by the plummet; and this last, whose invention has been ascribed by Pliny to Dædalus, is shown to have been known and applied in Egypt at least as early as the time of Usertesén, the contemporary of Joseph.

For ordinary purposes copper was most commonly used: arms, vases, statues, instruments, and implements of every kind, articles of furniture, and numerous other objects, were made of this metal, hardened by an alloy of tin, and even chisels for cutting stone, as well as carpenters' tools and knives, were of bronze. It is generally allowed that copper or bronze was known long before iron; ¹ and though Tubal Cain is said to have been 'the instructor of every artificer in brass and iron,' ² no direct mention is made of iron arms ³ or tools ⁴ till after the Exodus; and some are even inclined to doubt the *barzel* of the Hebrews being really that metal.

According to the Arundelian Marbles, iron was known one hundred and eighty-eight years before the Trojan war, about 1370 years B.C.: but Hesiod, Plutarch, ⁵ and others, limit its discovery to a much later period after the capture of Troy. Homer, however, distinctly mentions its use; ⁶ and that there is little reason to doubt the *sideros* of the poet being iron, is shown by the simile, ⁷ derived from the quenching of iron in water, which he applies to the hissing noise produced on piercing the eye of Polyphemus with the pointed stake, thus rendered by Pope:—

'And as when armorers temper in the ford
The keen-edged pole-axe, or the shining sword,
The red-hot metal hisses in the lake,
Thus in his eyeball hiss'd the plunging stake.'

Among the earliest authorities for the use of iron may be cited

¹ Thus Lucretius, 'Sed prius æris erat
quam ferri cognitus usus' (lib. v. 1292).

² Gen. iv. 22.

³ Numb. xxxv. 16.

⁴ Deut. xxvii. 5.

⁵ Paus. Græc. lib. iii. c. 3, Lacon.

⁶ Hom. Il. xxiii. 261, &c.

⁷ Hom. Od. ix. 391.

the bedstead of Og, the king of Bashan,¹ who is said to have lived about the year 1450 before our era: and Thrasyllus² agrees with the Arundelian Marbles in supposing iron to have been known before the Trojan war, or indeed one hundred and fourteen years previous to the foundation of Troy,³ 1537 before our era. On the other hand, it has been argued that offerings of iron in the temples of Greece distinctly showed the value attached to that metal, as well as its limited use for ordinary purposes, and rings of iron were worn by the ancients, some of which have been found in the tombs of Egypt. But these last are of very late date, long after iron was commonly used, and I possess one of them, engraved with the figure of Harpocrates, which is undoubtedly of a Ptolemaic or Roman era, and which only claims some degree of interest from its bearing a device noticed by Pliny as becoming fashionable at Rome in his time.⁴

That iron, as early as the days of Lycurgus, was held in little estimation, is shown by that legislator forbidding the introduction of gold and silver in his republic, and restricting the Spartans to the use of iron, and some notion may be formed of its value at that time by the assertion of Plutarch,⁵ that it required a cart drawn by two oxen to carry the small sum of ten minæ.

The Jews appear to have been acquainted with two kinds of iron previous to the Babylonish captivity. — the *barzel*, which was in common use, and the northern iron, as well as steel:⁶ even as early as the days of Job⁷ iron was known; and Moses mentions an iron furnace.⁸

One of the arguments against the early use of iron⁹ is the difficulty of smelting the ore, and of reducing it to a malleable state; and the various processes required to discover all its most useful properties render it less likely to be employed than a more ductile metal. Gold, silver, and copper were easily fused, and a single process sufficed to make them available for every purpose; the principal art required for fabricating implements

¹ Deut. iii. 11.

² [Clemens says Celmis and Damanus first discovered iron in Cyprus. — G. W.] Clem. Alex. Strom. i.

³ Founded B. C. 1423.

⁴ Plin. xxxiii. 3: 'Jam vero Harpocratem, statuasque Ægyptiorum numinum, in digitis viri quoque portare incipiunt.'

⁵ Plut. in Lycurgo.

⁶ Jerem. xv. 12.

⁷ Job xxviii. 2: 'Iron is taken out of

the earth, and brass is molten out of the stone.' ['Brass' should, of course, be 'copper.' The age of Job is not considered so early as was formerly supposed. — G. W.]

⁸ Deut. iv. 20.

⁹ Pliny says the fabulous Cyclopes were the inventors of the ironsmith's forge, and the Idæi Dactyli of Crete, according to Hesiod, the first to introduce the use of iron. (Plin. vii. 56.)

of copper depending on the proper proportions and qualities of alloy introduced.

‘Those three metals,’ as Robertson has observed,¹ ‘are found in their perfect state in the clefts of rocks, in the sides of mountains, or the channels of rivers. They were accordingly first known, and first applied to use. But iron, the most serviceable of all, and to which man is most indebted,² is never discovered in its perfect form; its gross and stubborn ore must feel twice the force of fire, and go through two laborious processes, before it becomes fit for use. Man was long acquainted with the other metals before he acquired the art of fabricating iron, or attained such ingenuity as to perfect an invention, to which he is indebted for those instruments wherewith he subdues the earth and commands all its inhabitants.’

In the infancy of the arts and sciences, the difficulty of working iron might long withhold the secret of its superiority over copper and bronze; but it cannot reasonably be supposed that a nation so advanced, and so eminently skilled in the art of working metals as the Egyptians, should have remained ignorant of its use, even if we had no evidence of its having been known to the Greeks and other people; and the constant employment of bronze arms and implements is not a sufficient argument against their knowledge of iron, since we find the Greeks and Romans made the same things of bronze long after the period when iron was universally known.

Another argument to show that bronze was used in Greece before iron is derived from the word ‘smith’ in Greek having the signification of ‘coppersmith,’ whether applied to a worker of copper or iron.³ In Latin, on the contrary, *ferrum*,⁴ ‘an iron,’ is the word frequently applied to a sword; and some have hence argued the use of iron for those weapons, at the earliest period, among the Romans. Yet we find that their swords were constantly made of bronze, as well as their defensive armor. The Etruscans almost invariably used iron for swords, daggers, spear-heads, and other offensive weapons, and confined bronze to defensive armor; a much more reasonable custom, inasmuch as the iron is more capable of perforating the softer metal: and if the early Romans did make their swords of iron,

¹ Robertson, ‘America,’ book iv. p. 125.

² Herodot. i. 68.

³ χαλκίς, Hom. Od. ix. 391. Herodot. i. 68.

⁴ Those who derive *barzel* from *bers*, the Chaldee and Syriac word signifying ‘to perforate,’ might perhaps suppose *ferrum*, ‘iron,’ taken from *ferire*, ‘to strike.’

it is probable they adopted the custom from their Italian neighbors.¹

After examining numerous authorities, some of which assert that nations of antiquity were confined to the use of copper and bronze, while others affirm that iron was known at a most remote epoch, we may still remain in uncertainty respecting the question. But to conclude, from the want of iron instruments or arms bearing the names of early monarchs of a Pharaonic age, that bronze was alone used, is neither just nor satisfactory, since the decomposition of that metal, especially when buried for ages in the nitrous soil of Egypt, is so speedy as to preclude the possibility of its preservation.² Until we know in what manner, and for what sort of stone, the Egyptians employed bronze tools, the discovery of them affords neither additional light, nor even argument; since, as I before observed, the Greeks and Romans continued to make bronze instruments of various kinds long after iron was known to them:³ and the general use of bronze may have arisen from the greater facility of working the metal, remelting and casting it afresh, as well as from its being easier to find than iron; for though this last, in its various combinations, is more universally diffused over the face of the globe,⁴ it does not always occur in a state of which the miner can easily avail himself, and I only know of one mine in Egypt worked by the ancients. It lies in the eastern desert, between the Nile and the Red Sea, at a place called Hammami, and was discovered by my friend, Mr. Burton, who visited it in 1822, and found the metal to be in the form of specular and red iron ore.

In Ethiopia iron was much more abundant than in Egypt, and Herodotus may be correct in stating that copper was there a rare metal;⁵ though we are not disposed to believe his assertion of prisoners in that country being bound with golden fetters.

[The question of the use of iron amongst the Egyptians has

¹ Iron swords have been found in Etruscan tombs, and there is no doubt of the use of iron by the Italian nations at an early period. Among the Assyrians, dated specimens of iron are as old as eight centuries B.C. at least. — S. B.

² [Herodotus speaks of iron tools used in building the pyramids (ii. 125). The piece of iron found by Colonel Howard Vyse, embedded between two stones of the Great Pyramid, may have been placed there when the pyramid was built, or may

have been forced between them when the Arabs were removing the blocks. But there are other and better proofs of the use of iron in Egypt. Of course, in no land could iron be preserved so long as other metals. — G. W.]

³ Beekmann's 'History of Inventions,' on the early use of steel, vol. iv.

⁴ As Pliny observes, 'Metallorum omnium vena ferri largissima est' (xxxiv. c. 14).

⁵ Herodot. iii. 23.

been rendered long doubtful by the few specimens of that metal found in the monuments and sepulchres. A thin fragment of wrought plate-iron was found in one of the air-passages of the Great Pyramid,¹ and the iron blade of a falchion under a sphinx at Karnak.² Lately a broken statue of bronze from the neighborhood of the Pyramids and of the age of the Ramessids has been found with iron wires passed through the sand core to sustain it in its oval places.³ Amongst other objects of iron may be cited the iron blade of an adze with a bone or ivory handle.⁴ There is of course no doubt about the use of iron at a later period, and under the Romans iron nails have been found in the hasps of doors and in coffins, replacing the wooden plugs employed for that purpose at the Pharaonic time.⁵ Two words have been found descriptive of iron, — *baa en pe*, ‘heavenly metal,’ supposed to be meteoric iron, and *ba nu ta*, or ‘terrestrial metal,’ that found in the earth. Another word has been supposed to mean steel, but it seems doubtful. Iron vessels were brought from Syria and Phœnicia as tribute to Thothmes. — S. B.]

In the sepulchres of Thebes I have had occasion to remark butchers represented sharpening their knives on a round bar of metal attached to their apron; and the blue color of the blades, and the distinction maintained between the bronze and steel weapons in the tomb of Rameses III., one being painted red and the other blue, leave little doubt that the Egyptians of an early Pharaonic age were acquainted with the use of iron.

Many implements of husbandry — the plough, the hoe, and the fork — were frequently of wood, as simple in their form as in the materials of which they were made; the ploughshare was probably sometimes sheathed with, or the blade of a hoe formed of, metal; but it is uncertain whether iron was employed for this purpose, or if, like the tools of earlier days mentioned by Hesiod,⁶ they were confined to bronze.

Several wooden hoes have been found in Egypt, and are now preserved in the museums of Europe: the blades and handles are simply inserted the one into the other, and bound together in the middle with a twisted rope; and their general appearance,

¹ ‘Trans. International Congress of Orientalists,’ 4to, London, 1875, pp. 396, 397.

² ‘Guide to Egyptian Rooms, British Museum,’ 1874, p. 38, No. 5110.

³ Belonging to Mr. Baldry.

⁴ Devéria, ‘Mélanges d’Archeologie

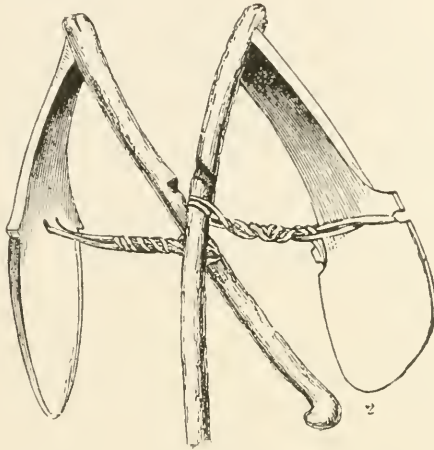
égyptienne,’ i. 2; Chabas, ‘Études sur l’Antiquité historique.’

⁵ Rhind, ‘Thebes, its Tombs,’ p. 218.

⁶ Hesiod, ‘Oper. et Dies,’ v. 151: ‘Men tilled the ground with bronze, iron not being as yet known.’

according exactly with those represented in the agricultural scenes of the tombs, shows them to have been the kind most commonly used,¹ even to the latest times.

It is true that the Berlin Museum has the head of a small hoe of iron, but of what date is uncertain; and no inference can be drawn from it, especially as its form differs essentially from those of the paintings.



No. 417.

Wooden hoes.

Berlin Museum.

I have already stated that the speedy decomposition of iron would be sufficient to prevent our finding implements of that metal of an early period, and that the greater opportunities of obtaining copper ore, added to the facility of working it, were a reason for preferring the latter whenever it answered the purpose instead of iron. I shall presently endeavor to show how bronze tools might be made available for sculpturing and engraving stone: though there is great difficulty in accounting for their use in mines and quarries, where the stone was frequently hewn with them: as Agathareides² informs us in his account of the gold mines, and as I have reason to believe was done in cutting the limestone rock of the tombs at Thebes; having found a bronze chisel amidst the chippings of the stone, where it had been accidentally left by the workmen.

The hieroglyphics on obelisks and other granitic monuments

¹ Woodcut No. 112, vol. i. p. 344.

² He says, *λατομίδης χάλκαται*, 'wedges of

bronze are found,' and infers that they were not then acquainted with iron.

are sculptured with a minuteness and finish which, even if they used steel as highly tempered as our own, cannot fail to surprise the beholder, and to elicit from him the confession that our modern sculptors are unable to vie with them in this branch of art.

Some are cut to the depth of more than two inches, the edges and all the most minute parts of the intaglio presenting the same sharpness and accuracy; and I have seen the figure of a king in high relief, reposing on the lid of a granite coffin, which was raised to the height of nine inches above the level of the surface. What can be said, if we deny to men who executed such works as these the aid of steel, and confine them to bronze implements? Then, indeed, we exalt their skill in metallurgy far beyond our own, and indirectly confess that they had devised a method of sculpturing stone of which we are ignorant. In vain should we attempt to render copper, by the addition of certain alloys, sufficiently hard to sculpture granite, basalt, and stones of similar quality. No one who has tried to perforate or cut a block of Egyptian granite will scruple to acknowledge that our best steel tools are turned in a very short time,¹ and require to be retempered: and the labor experienced by the French engineers who removed the obelisk of Luxor from Thebes, in cutting a space less than two feet deep along the face of its partially decomposed pedestal, suffices to show that, even with our excellent modern implements, we find considerable difficulty in doing what to the Egyptians would have been one of the least arduous tasks. At Thebes chisels are represented in the paintings as used in cutting granite statues, but whether they are of bronze it is difficult to say.

Some have imagined that the granite, being somewhat softer at the time it is taken from the quarry, was more easily sculptured

¹ I am indebted to Sir R. Westmacott for the following observations on this subject: 'Granite, as most hard materials of that nature, being generally worked with a pick of various strength, until reduced to a surface, the duration of the tools depends on its form; the more obtuse the longer it will work, remaining longer cold. In *jumping* (as it is termed) holes for the admission of bolts into fractured parts of granite, the tools are usually of strong tempered iron, about three-quarters of an inch in diameter, which resist the heat sometimes half an hour, seldom longer.

One man holds and turns or moves the tool, whilst the other strikes it with a heavy hammer, the hole being supplied with water. Tools of less diameter are formed of steel, but these will not resist more than three hundred strokes, when the points fly, and require to be fresh battered. Sculptors generally use tools formed of blistered steel, or of cast steel, the finer sort highly tempered, by immersing them, when heated to a proper degree, into cold water. Carpenters' tools again, and saws, are of the best cast-steel, and are tempered in oil.'

when the Egyptians put up the obelisks than at present, and thus satisfy themselves that the labor was considerably less; but this argument is entirely overthrown by the fact of other sculptures having been frequently added, one hundred and one hundred and fifty years after the erection of the monument, as in the lateral lines of hieroglyphics on obelisks, which are sometimes found more deeply cut and more beautifully executed than those previously sculptured. Others have suggested that the stone being stunned, as it is termed, in those places where it was to be sculptured, yielded more readily to the blow of the chisel; but neither is this sufficient to produce the effect proposed, nor an advantage exclusively enjoyed by the ancient Egyptians.¹

Thus, then, we find that the facility they possessed of sculpturing granite is neither attributable to any process for bruising the crystals, nor to its softer state on coming from the quarry: we must therefore account for it in the skill they had acquired, and endeavor to discover the means they employed with such wonderful success.

The hieroglyphics on the obelisks are rather engraved than sculptured; and, judging from the minute manner in which they are executed, we may suppose they adopted the same process as engravers, and even in some instances employed the wheel and drill. That they were acquainted with the use of emery powder² is not at all improbable, since, being found in the islands of the Archipelago, it was within their reach: and if this be admitted, we can account for the admirable finish and sharpness of the hieroglyphics on granitic and basaltic monuments, and explain the reason of their preferring tools of bronze to those of harder and more compact steel: for it is evident the powder enters more readily into the former, and its action upon the stone is increased in proportion to the quantity retained by the point of the chisel; whence we now prefer tools of soft iron to hard steel for the same purpose.

As far as the sculpture or engraving of hieroglyphics, this explanation might suffice for their preference of bronze imple-

¹ It has been supposed that owing to the method of working by stunning, so as to shake the block every time when struck, the necessity arose of leaving the parts between the arms and legs reserved, or not cut away. — S. B.

² It is probable that this powder was

used in sawing granite, a process not uncommonly resorted to by the Egyptians; and the presence of oxide of copper in the part where the rock was cut, which surprised De Rozière and others, may thus be more readily accounted for.

ments; but when we find tools used in quarries made of the same metal, we are unable to account for it, and readily express our surprise how they could render a bronze chisel capable of hewing stone. We know of no means of tempering copper, under any form or united with any alloys, for such a purpose. The addition of tin or other metals to harden it, if exceeding certain proportions, renders it too brittle for use; and that such is not the case is evident from the chisel I found at Thebes, which, though it contains an alloy of tin, viz. 5·9 parts of tin in 100, is far from being brittle, and is easily turned by striking it against the very stone it was once used to cut. Had it depended on the proportions of its alloys, it ought still to possess the same power as formerly, and its point should act in the same manner upon the stone; for, what is very remarkable, the summit was turned over by the blows it had received from the mallet, while the point was intact, as if it had recently left the hands of the smith who made it.

What, then, gave it the power of cutting the stone, and of resisting in this manner? for unless some medium was employed, as a sheath of steel or other protection to its point, we must confess that the Egyptians appear to have possessed certain secrets for hardening or tempering bronze with which we are totally unacquainted. The size of this chisel is from 9 to 9½ inches in length; its diameter at the summit is 1 inch, and the point is $\frac{7}{16}$ of an inch in its greatest width: its weight is 1 lb. 12 oz., and in general form it resembles those now used by the masons of modern Europe.

The skill of the Egyptians in compounding metals is abundantly proved by the vases, mirrors, arms, and implements of bronze discovered at Thebes and other parts of Egypt; and the numerous methods¹ they adopted for varying the composition of bronze, by a judicious admixture of alloys,² are shown in the many qualities of the metal. They had even the secret of giving to bronze and brass³ blades a certain degree of elasticity; as may be seen in the dagger of the Berlin Museum already noticed.

¹ Greek bronzes of the earliest and latest times have generally the same proportion of alloy. A little silver sometimes occurs, but this is supposed to have entered accidentally with the tin. [Dr. Ure, 'Dict. of Arts and Manufactures,' COPPER.—G. W.]

² In almost all the bronzes hitherto

analyzed, the proportion is about twelve parts of tin in a hundred.

³ There is no direct proof of brass implements being known to the ancient Egyptians, and no analysis has yet shown the presence of zinc. I have a ring apparently of brass, but it is possible that gold is there used instead of zinc.

which probably depended on the mode of hammering the metal, and the just proportions of peculiar alloys.

Another remarkable feature in their bronze is the resistance it offers to the effect of the atmosphere: some continuing smooth and bright, though buried for ages, and since exposed to the damp of European climates, and some presenting the appearance of *previous* oxidation purposely induced.¹

It is not known at what period they began to cast statues and other objects in bronze, or if the use of beaten copper long preceded the art of casting in that metal. No light is thrown on this point by the paintings of Beni-Hassan and Thebes, or by the tombs in the vicinity of the Pyramids, which, from their early date, would be an authority highly satisfactory and important. It is, indeed, singular that at no period do we find any representation, among the many subjects connected with the trades, arts, and occupations of the Egyptians, which relate to this process: even in tombs or on monuments made at a time when we know from positive evidence that they were acquainted with it:—another convincing proof that no argument against the existence of a custom ought to be derived from the circumstance of its not being indicated on the monuments.

Many bronze statues have been found, evidently from their style, of a very early period; but in the absence of a king's name it is impossible to fix their exact date, though I feel persuaded that the art of casting metal was known before the commencement of the 18th Dynasty, and it is probable that many specimens exist of the age of Usertesen and Thothmes.

Pausanius,² in speaking of the art of casting metal, observes that the people of Pheneum in Arcadia pretended that Ulysses dedicated a statue of bronze to Neptune Hippius, in order that he might recover the horses he had lost through the intervention of the deity; 'and indeed' he adds, 'they showed me an inscription on the pedestal of the statue offering a reward to any person who should find and take care of the animals; but I do not give credit to the whole of their statement, and no one can persuade me that Ulysses erected a *bronze* statue to Neptune. The art of fusing metal and casting it in a mould was not yet known; a statue was made in those times like a dress, successively and in pieces, not at one time or in a single mass, as I

¹ I suppose the metal was then coated with some substance which filled the pores. This is done at the present day.

² Paus. Græc. lib. viii. c. 14, Arcad.

have already shown - in speaking of the statue of Jupiter, sur-named the Most High. In fact, the first who cast statues were Rhœcus the son of Philæus, and Theodorus² the son of Telecles, both natives of Samos; the latter the same who engraved³ the beautiful emerald in the ring of Polycrates.'

The Samians were noted at an early period for their skill in this branch of art; and before the foundation of Cyrene, or B.C. 630, they made a bronze vase, ornamented with griffins, supported on three colossal figures of the same metal, for the temple of Juno.⁴ The art was also known at a very remote period in Italy. Among the Etruscans bronze statues were common before the foundation of Rome; and Romulus is said to have placed a statue of himself, crowned by Victory, in a four-horse car of bronze, which had been captured at the taking of Camerium.⁵

Pliny attributes the discovery of gold and the secret of smelting it to Cadmus,⁶ who is supposed to have gone to Greece 1493 years before our era; but this, like most of the inventions mentioned by him, was long before known to the Egyptians: and we may apply the same remark to the supposed discovery of Rhœcus and Theodorus.

It is uncertain whether the Egyptians possessed the art of damascening or inlaying iron with gold, since, owing to the speedy decomposition of that metal, nothing made of iron has been preserved of a remote era; but we may conclude, from their inlaying bronze in this manner, that it was not unknown to them.

Some have supposed that Glaucus of Chios was the inventor of this art, and that the stand of his silver vase — presented to the temple of Delphi by Alyattes, king of Lydia, which, according to Herodotus,⁷ was the most beautiful of all the offerings there — was made of iron inlaid with gold. But the description given of it by Pausanias⁸ will not sanction this opinion, as he expressly states 'it consisted of several plates of iron, adjusted one over the other in the form of steps; the last — that is, those of the summit — curving a little outwards. It had the form of a tower, large at the base and decreasing upwards, and the pieces of which it was composed were not fastened either with nails or pins, but simply soldered together.'

¹ Paus. Græc. lib. iii.

² Pliny (vii. 56) says, 'Theodorus invented the rule, the level, the turner's instrument, and the key.'

³ Herodot. iii. 41. Plin. xxxvii 1.

⁴ Herodot. iv. 152.

⁵ Dionys. Hal. Ant. Rom. l. ii. Plut. in Rom.

⁶ Plin. vii. 56.

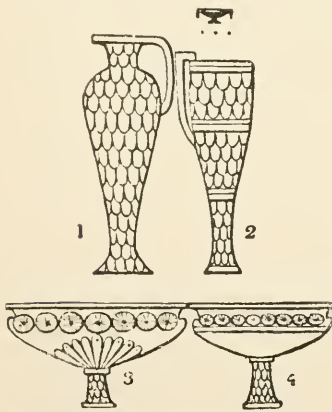
⁷ Herod. i. 25.

⁸ Paus. lib. x. 16. Phoc.

The Greeks, however, were not ignorant of damascening; and though the stand of Alyattes' vase was not so inlaid, it is certain they possessed the art, and ornamented goblets and other objects in that manner. The process was very simple: the iron was carved with various devices, and the narrow lines thus hollowed out were filled with gold or with silver, which in some instances were probably soldered, and in others simply beaten in with the hammer, the surface being afterwards filed and polished.

The term damascening, though generally confined to iron or steel so inlaid (owing to its having been borrowed from the specimens of this work in the modern sword-blades of Damascus), may with equal propriety be extended to any metal; and numerous instances of bronze inlaid with gold and silver occur in statues, scarabæi, and various ornamental objects discovered at Thebes and other places. Hard stones were also engraved in the same manner, and the intaglio filled with gold or silver beaten into it; a process commonly adopted at the present day by the Turks and other Eastern people in their *hookahs* or *nârgilehs*, handles of daggers, and the stone ornaments of their amber mouth-pieces; but at what time this was first done it is needless to conjecture.

The art of soldering metals had long been practised in Egypt



No. 418. Vases of the time of Thothmes III., imbricated, or ornamented with plates of metal. Over them is the word 'gold,' showing the material of which they were made. *Thebes*

before the time of Glaucus; and it is curious to find gold and bronze vases, made apparently in the same manner as the stand of that mentioned by Pausanias, represented at Thebes in sculptures executed during the reign of the third Thothmes, 1490 years before our era, and consequently many centuries previous to the Chian artist. They are shown to have been composed of plates of metal, imbricated, or overlapping each other, as Pausanias describes, and sometimes bound at intervals with bands of metal. Instances occur in the same sculptures

of gold vases with stands formed of similar plates, which are interesting also from the elegance of their forms.

In coarser work, or in those parts which were out of sight, the Egyptians soldered with lead, but we are ignorant of the time

when it was first used for that purpose, though it could only have been after the discovery of tin; for, as Pliny¹ justly observes, 'lead can only be united by the addition of tin, nor is this last efficient without the application of oil.'² The oldest specimen of metal soldered with lead with which I am acquainted is the sistrum of Mr. Burton;³ its date, however, is uncertain; and though, from the style of the figures engraved upon it, we may venture to ascribe it to a Pharaonic age, the exact period when it was made cannot be fixed.

In early ages, before men had acquired the art of smelting ore, and of making arms and implements of metal, stones of various kinds were used, and the chasseur was contented with the pointed flint with which nature had provided him. The only effort of his ingenuity was to fix it in some kind of handle, or at the extremity of a reed, in order to make the knife or the arrow; and we still witness the skill which some savage people of the present day display in constructing those rude weapons.

The Egyptians, at a remote period, before civilization dawned upon them, probably adopted the same, since we find that stone-tipped arrows continued to be occasionally used for hunting, even after they had improved every species of weapon, and after the arts had arrived at the state of perfection in which they appear subsequently to the accession of the 18th Dynasty. Long habit had reconciled them to the original reed shaft, with its head of flint, and even to arrows made with a point of hard wood inserted into them, which were also the remnant of a primeval custom.⁴

Those, however, who preferred them of a stronger kind, adopted arrows of wood, tipped with bronze heads; and these were considered more serviceable, and were almost invariably used in war. But when this improvement took place in the construction of their arms it is impossible to conjecture, being coeval with the early stages of a civilization which is concealed by the veil of ages, and dates long before the period of which any monuments remain.

It is, indeed, a remarkable fact that the first glimpse we

¹ Plin. xxxiv. 16.

² Or resin, which we now use.

³ In the British Museum, No. 6355.

⁴ The period of the use of bronze arrow-heads appears uncertain, as none of those discovered bear any date or inscription

showing their age, and some are evidently of the Greek, or even Roman period, especially the three-bladed ones. Those from the early times have either pointed wooden or stone heads. — S. B.

obtain of the history and manners of the Egyptians shows us a nation already advanced in all the arts of civilized life, and the same customs and inventions that prevailed in the Augustan era of that people, after the accession of the 18th Dynasty, are found in the remote age of Usertesen, the contemporary of Joseph; nor can there be any doubt that they were in the same civilized state when Abraham visited the country.

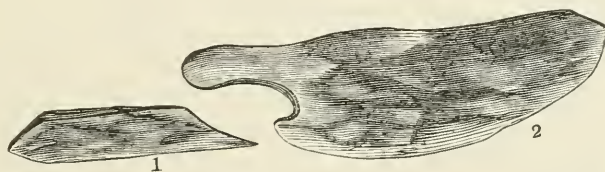
I have observed that the fact of private citizens going unarmed, and of the soldier laying aside his sword and other weapons when not on service, may be considered a strong proof of refinement, and of their advancement in the habits of social life. The same custom was already adopted at the time to which I allude; and many circumstances unite in proclaiming the civilization of Egypt at least as early as the 18th century before our era. How far does this throw us back into the infancy of the world! at least of the world peopled by the descendants of Noah — and when we recollect that the pyramids of Memphis were erected within three hundred years after the era assigned to the Deluge, and that the tombs of Beni-Hassan were hewn and painted with subjects describing the arts and manners of a highly-civilized people about six hundred years after that event, it may occur that the distance between the Deluge and the construction of those pyramids and tombs is not greater than from the present day to the reigns of our own Elizabeth and Henry III.

The same prejudice in favor of an ancient and primitive custom retained the use of stone knives for certain purposes connected with religion among the Egyptians; and Herodotus tells us it was usual to make an incision in the body of the deceased, when brought to be embalmed, with an Ethiopic stone.¹ This name, though very indefinite, seems here, as in all instances where the stone is said to be applied to a similar purpose, to signify flint; and this conjecture is not only confirmed by probability, and by the frequent use of it by many people as a cutting instrument, but by the fact of our finding several knives of that stone in the tombs of Thebes. In other cases the Ethiopic stone mentioned by Herodotus is evidently granite, so called from being common in Ethiopia; and it is possible that the flint received that name from its black color.

The knives found in the excavations and tombs, many of which are preserved in our European museums, are generally of

¹ Herodot. ii. 86.

two kinds; one broad and flat like the blade of a knife, the other narrow and pointed at the summit, several of which are preserved in the Berlin Museum. These last¹ are supposed to have been used for making the incision in the side of the body, for the purpose of removing the intestines, preparatory to the embalming process already mentioned; and considering how strongly men's minds are prepossessed in favor of early habits connected with religion, and how scrupulous the Egyptians were, above all people, in permitting the introduction of new customs in matters relating to the gods, we are not surprised that they should have retained the use of these primitive instruments in a ceremony of so sacred a nature as the embalming of the dead.



No. 418.*

Flint knives.

Berlin Museum.

[The use of stone weapons amongst the ancient Egyptians has lately attracted² considerable attention, and without doubt, dated from the earliest period, a beautiful little stone saw having been found by Professor Hayter Lewis at the Pyramid of Zowet el Arrian, built under one of the first six dynasties. The various stone knives in the museums of Europe are of pyromachous silex, of a light brown, not dark color, and they were often deposited in baskets near the mummies, and fragments or slices of flint have been discovered in the tombs. Arrow-heads resembling those of the stone period have also been discovered in a tomb of the 22d dynasty, or the 9th century B.C.; and other leaf-shaped pieces, apparently for the same use. Great quantities of flint instruments have also been found in the neighborhood of Egyptian temples and stations in the peninsula of Sinai in Arabia, amongst them stone hammers; knives of dark steatite are also known, and the blade of a dagger of pyromachous silex.

¹ Woodcut No. 418,* *fig.* 1.

² Chabas, 'Études sur l'Antiquité historique,' Svo, Paris, 1872, p. 328 and foll.



VIGNETTE I. — Tomb at Saqqara, arched with stone, of the time of Psammatichus I., whose name occurs on the roof to the left, and other places.

CHAPTER X.

Style of Art among the Egyptians — Names of early Kings: Cheops, or Suphis, and others — Some of the Subjects of the Sculptures in the Temples — Colors — Relief and Intaglio — Painting — Brick Pyramids — The Arch — Quarries — Large Blocks of Stone moved — Bellows, Siphons, Inventions — Dresses — Wigs — Women's Dresses and Jewelry — Eyes painted — Baths — Medical Men — Exvotos.

THE same veneration for ancient usage and the stern regulations of the priesthood, which forbade any innovation in the form of the human figure, particularly in subjects connected with religion, fettered the genius of the Egyptian artists, and prevented its development. The same formal outline, the same attitudes and postures of the body, the same conventional mode of representing the different parts were adhered to, at the latest as at the earliest

periods ; no improvements, resulting from experience and observation, were admitted in the mode of drawing the figure, no attempt was made to copy nature, or to give proper action to the limbs. Certain rules, certain models, had been established by law, and the faulty conceptions of early times were copied and perpetuated by every successive artist: for, as Plato and Syne-sius inform us, sculptors were not suffered to attempt anything contrary to the regulations laid down regarding the figures of the gods; they were forbidden to introduce any change, or to invent new subjects and habits; and thus the art, and the rules which bound it, always remained the same.

Egyptian bas-relief appears to have been, in its origin, a mere copy of painting, its predecessor. The first attempt to represent the figures of gods, sacred emblems, and other subjects, consisted in painting simple outlines of them on a flat surface, the details being afterwards put in with color; but in process of time these forms were traced on stone with a tool, and the intermediate space between the various figures being afterwards cut away, the one level surface assumed the appearance of a bas-relief. It was, in fact, a pictorial representation on stone, which is evidently the character of all the bas-reliefs on Egyptian monuments, and which readily accounts for the imperfect arrangement of their figures.

Deficient in conception, and, above all, in a proper knowledge of grouping, they were unable to form those combinations which give true expression; every picture was made up of isolated parts, put together according to some general notions, but without harmony or preconceived effect. The human face, the whole body, and everything they introduced, were composed in the same manner, of separate members placed together one by one, according to their relative situations: the eye, the nose, and other features composed a face; but the expression of feelings and passions was entirely wanting; and the countenance of the king, whether charging an enemy's phalanx in the heat of battle, or peaceably offering incense in a sombre temple, presented the same outline and the same inanimate look. The peculiarity of the front view of an eye introduced in a profile is thus accounted for: it was the ordinary representation of that feature added to a profile, and no allowance was made for any change in the position of the head.

It was the same with drapery: the figure was first drawn, and the drapery then added, not as part of the whole, but as an

accessory; they had no general conception, no previous idea of the effect required to distinguish the warrior or the priest, beyond the impressions received from costume, or from the subject of which they formed a part; and the same figure was dressed according to the character it was intended to perform. Every portion of a picture was conceived by itself, and inserted as it was wanted to complete the scene; and when the walls of the building, where a subject was to be drawn, had been accurately ruled with squares, the figures were introduced, and fitted to this mechanical arrangement. The members were appended to the body, and these squares regulated their form and distribution in whatever posture they might be placed.

Thus then, as Diodorus observes¹ of Egyptian statues, various portions of the same figure might be made by several artists in different places, the style and attitude having been previously agreed upon, which, when brought together, would necessarily agree, and form a complete whole.

As long as this conventional system continued, no great change could take place beyond a slight variation in the proportions, which at one period became more elongated, particularly in the reign of the second Rameses; but still the general form and character of the figures continued the same, which led to the remark of Plato, 'that the pictures and statues made ten thousand years ago are in no one particular better or worse than what they now make.'² And that they were still bound by the same regulations, which prohibited all change in these matters, even to the latest times, is evident from the sculptures of the monuments erected when Egypt had long been a Roman province. All was still Egyptian, though of a bad style; and if they then attempted to finish the details with more precision, it was only substituting ornament for simplicity; and this love of minuteness plainly indicated a deficiency of taste, the natural consequence of the decadence of art.

In the composition of modern paintings three objects are required — one main action; one point of view; and one instant of time: and the proportions and harmony of the parts are regulated by perspective. But in Egyptian sculpture these essentials were disregarded: everything was sacrificed to the principal

¹ Diod. i. 98. This I believe never to have been done by the Egyptians, because their statues were all of one piece. He mentions a Greek statue of Apollo of

Samos, made in two pieces, by Telecles and Theodorus, at Samos and Ephesus.

² Plato, Second Book of Laws.

figure ; its colossal dimensions pointed it out as a centre to which all the rest was a mere accessory ; and, if any other was made equally conspicuous or of equal size, it was still in a subordinate station, and only intended to illustrate the scene connected with the hero of the piece.

In the paintings of the tombs greater license was allowed in the representation of subjects relating to private life, the trades, or the manners and occupations of the people ; and some indication of perspective in the position of the figures may occasionally be observed : but the attempt was imperfect, and probably, to an Egyptian eye, unpleasing : for such is the force of habit that even where nature is copied, a conventional style is sometimes preferred to a more accurate representation.

In the battle-scenes on the temples of Thebes, some of the figures representing the monarch pursuing the flying enemy, despatching a hostile chief with his sword, and drawing his bow, as his horses carry his car over the prostrate bodies of the slain, are drawn with much spirit, and the position of the arms gives a perfect idea of the action which the artist intended to portray ; still, the same imperfections of style and want of truth are observed. There is action, but no sentiment, expression of the passions, or life in the features ; it is a figure ready formed, and mechanically *varied* into movement ; and whatever position it is made to assume the point of view is the same : the same profile of the human body with the anomaly of the shoulders seen in front, and attached as a separate though component part of the whole figure.

Limited to such a conventional mode of drawing, it was in vain for the Egyptian artists to aspire to that degree of excellence attained by the Greeks, unfettered by prejudice, and allowed to imitate the beauties of nature ; much less could they arrive at that degree of feeling which formed taste, and called forth the poetry of the mind : their imaginative powers were checked ; they were forced to remain contented with the models already before them ; and no new conceptions were elicited or required.

In the representation of animals, they appear not to have been restricted to the same rigid style ; but genius once cramped can scarcely be expected to make any great effort to rise, or to succeed in the attempt ; and the same union of parts into a whole, the same preference for profile, are observable in these as in the human figure. Seldom did they attempt to draw the face in

front, either of men or animals: and when this was done, it fell far short of the profile, and was composed of the same juxtaposition of parts. It must, however, be allowed, that in general the character and form of animals were admirably portrayed: the parts were put together with greater truth; and the same license was not resorted to as in the shoulders and other portions of the human body. Nor will I deny that great life and animation are given to the antelope and many wild beasts in the hunting scenes of the Theban tombs, or refuse my assent to the observation of Madame de Staël,¹ *Les sculpteurs Égyptiens saisissaient avec bien plus de génie la figure des animaux que celle des hommes.*

The mode of representing men and animals in profile is primitive, and characteristic of the commencement of art:² the first attempts made by an uncivilized people are confined to it; and until the genius of artists bursts forth this style continues to hold its ground. From its simplicity it is readily understood: the most inexperienced perceive the object intended to be represented; and no effort is required to comprehend it. Hence it is that, though few combinations can be made under such restrictions, those few are perfectly intelligible, the eye being aware of the resemblance to the simple exterior; and the modern uninstructed peasant of Egypt, who is immediately struck with and understands the paintings of the Theban tombs, if shown an European drawing, is seldom able to distinguish men from animals; and no argument will induce him to tolerate foreshortening, the omission of those parts of the body concealed from his view by the perspective of the picture, or the introduction of shadows, particularly on the human flesh.

Bas-relief may be considered the earliest style of sculpture. It originated in those pictorial representations which were the primeval records of a people anxious to commemorate their victories, the accession or the virtues of a king, and other events connected with their history. These were the first purposes to which the imitative powers of the mind were applied: but the progress was slow, and the infant art (if it may be so called) passed through several stages ere it had the power of portraying real occurrences and imitating living scenes. The rude drawing of a spear, a sword, a bow, or other weapon, supplied at first the

¹ *Corinne*, vol. i. p. 127.

² See prehistoric remains in the British Museum.

place of the action itself, of which it was a species of hieroglyphic; but in process of time the outlines of a warrior and a prostrate foe were attempted, and the valor of the prince who had led them to victory was recorded by this simple group.

As their skill increased, the mere allegorical representation was extended to that of a descriptive kind, and some resemblance of the hero's person was attempted; his car, the army he commanded, and the flying enemies, were introduced; and what was at first scarcely more than a symbol, assumed the more exalted form and character of a picture. Of a similar nature were all their historical records, and these pictorial illustrations were a substitute for written documents. Sculpture, indeed, long preceded letters; and we find that even in Greece, to describe, draw, engrave, and write, were expressed by the same word, *graphein*.

The want of letters, and the inability to describe an individual, his occupations, or his glorious actions, led them in early ages to bury with the body some object which might indicate the character of the deceased. Thus, warriors were interred with their arms;¹ artisans with the implements they had used; the oar was placed over the sailor; and pateræ, and other utensils connected with his office, or the emblems of the deity in whose service he had been employed, were deposited in the sepulchre of a priest. In those times we find no inscription mentioned; a simple mound was raised over a chief, sometimes with a *stylos* or rough stone pillar placed upon it, but no writing; and when, at a later period, any allusion to the occupations of the deceased was attempted, a rude allegorical emblem, of the same nature as the early historical records before alluded to, was engraved on the levelled surface of the stone.

Poetry and songs also supplied the want of writing to record the details of events; and tradition handed down the glorious achievements of a conqueror, and the history of past years, with the precision and enthusiasm of national pride. The poetry was recited to the sound of music, whence the same expression often implied the ode and the song; and as laws were recorded in a similar manner, the word *nomos* signified, as Aristotle observes, both a law and a song.

Sculpture dates long before architecture. A simple hut, or a rude house, answers every purpose as a place of abode, and a long time elapses before man seeks to invent what is not demanded by necessity.

¹ Virgil, *Æn.* vi. 233, at the tomb of Misenus.

Architecture is a creation of the mind; it has no model in nature: and it requires great imaginative powers to conceive its ideal beauties, to make a proper combination of parts, and to judge of the harmony of forms altogether new and beyond the reach of experience. But the desire in man to imitate and to record what has passed before his eyes—in short, to transfer the impression from his own mind to another—is natural in every stage of society: and however imperfectly he may succeed in representing the objects themselves, his attempts to indicate their relative position, and to embody the expression of his own ideas, are a source of the highest satisfaction.

As the wish to record events gave the first, religion gave the second impulse to sculpture. The simple pillar of wood or stone¹ which was originally chosen to represent the deity, afterwards assumed the human form, the noblest image of the power that created it; and the memorial of the primitive substitute for a statue is curiously preserved in the Greek name *κίον*, implying a column and an idol. Pausanias² thinks that ‘all statues were in ancient times of wood, particularly those made in Egypt:’ but this must have been at a period so remote as to be far beyond the known history of that country; though it is probable that, when the arts were in their infancy, the Egyptians were confined to statues of that kind; and they occasionally erected wooden figures in their temples, even till the times of the later Pharaohs.

Long after men had attempted to make out the parts of the figure, statues continued to be very rude. The arms were placed directly down the side to the thighs, and the legs were united together: nor did they pass beyond this imperfect state in Greece until the age of Dædalus. The Egyptians, at the latest periods, continued to follow the imperfect models of their early artists, and grace and feeling were forever prevented from forming a feature of their sculpture: and though they made great progress in other branches of art, though they evinced considerable taste in the forms of their vases, their furniture, and even in some architectural details, they were forever deficient in the combination of ideal beauty with the natural position of parts in the human figure.

One great impediment to the advancement of the statuary's

¹ Lucan (iii. 412), mentioning the statues of the gods of Massilia, says,—

‘Simulacraque mœsta deorum
Arte carent, cacisque extant informia
truncis.’

And Tacitus (de mor. Germ.) describes those of the Germans as ‘e stipitibus et imposito robore.’

² Pausanias, lib. ii. c. 19.

art in Egypt was the unvarying posture of the figures, which were always in a state of repose, or in a position that only required the limbs to be straight, without any attempt at action, or indeed any indication of life: they were really *statues* of the person they represented, not the person 'living in marble,' in which they differed entirely from those of Greece. No statue of a warrior was sculptured in the varied attitudes of attack and defence: no wrestlers; no *discobolus*, except one in the Tombs of the Kings; no pugilist exhibited the grace, the vigor, or the muscular action of a man; nor were the beauties, the feeling, and the elegance of female forms displayed in stone: all was made to conform to the same invariable model, which confined the human figure to a few conventional postures.

A sitting statue, whether of a man or woman, was represented with the hands placed upon the knees, or held across the breast; a kneeling figure sometimes supported a small shrine or sacred emblem; and when standing, the arms were placed directly down the sides to the thighs, one foot being advanced beyond the other, as if in the attitude of walking, but without any attempt to separate the legs. [Groups were exceedingly rare, and seldom exceed two figures, generally husband and wife, seated on the same seat or chair, holding one another's hands, or placing their arms round one another's waists or on the shoulders. Occasionally the principal figure is seated or standing, and the other younger or inferior members of the family carved in small proportions at the sides. The seated figures are in the attitude of a man resting on his haunches, his hands brought up to his chin, and the greater part of his body covered with drapery from which the hands alone emerge, or else seated on a chair or throne, the hands brought down to the thighs. An attitude more rarely seen is that of a man seated on his legs upon the ground, unrolling and reading a roll of papyrus. The kneeling figures are either kneeling on both knees, their hands at the sides, or else holding before them a shrine, altar, or some other object. The standing statues have the left foot advanced, the hands pendent at the sides, and the fists sometimes clenched, one holding a cylindrical roll or folded sash or napkin, and, in the case of deities or deified kings, an emblem of life. Another attitude of standing figures is that of bringing back one hand upon the breast, and holding a sceptre or other emblem.¹ The figures of mummied deities or persons

¹ Gliddon, 'Indigenous Races of Mankind,' 4to, 1857, p. 98 and foll.

generally represent the deceased wrapped in bandages, the arms emerging from them crossed, and holding emblems or other objects; often they have a kind of upright tablet or slab, resembling in some instances an obelisk, at the back, which is attached to them, and they stand on a square plinth or pedestal. In all these examples the parts between the legs in statues made of stone are reserved or not cut away, said to be owing to the manner of working by stumping out the limbs. The individual treatment made the hair fall in vast masses almost to the shoulder, or else in regular rows of curls from the centre of the head; the eyes, eyelashes, and brows prolonged in the direction of the ear: the eyelids sharp and shell-like; the hole of the ear on a level with the pupil of the eye: the lips strongly marked and slightly Nubian. The beard is conventional. The form on the whole is slender: the features calm, without sentiment or emotion. In bas-relief and cavo-rilievo profile is used by preference, as more distinct to the eye of the spectator. The drapery and other adjuncts varied according to time, rank, and circumstances.¹—S. B.]

‘The feet,’ says Winkelmann,² ‘of the Egyptian differ from those of the Greek statues in being more flat and broad, and in having the toes perfectly straight, with the joints as little indicated as in the fingers, and a gradual diminution in their length: nor is the little toe curved or bent under, as in those of the Greeks.’ This last remark is just, and their mode of representing it accords with what they saw in nature: but the length of the toes of an Egyptian foot do not undergo a gradual diminution, the second being invariably made longer than any other, which too agrees with the natural form. The reason of this uniformity I have already explained: and it is probable that, if their genius had not been cramped by superstitious prejudice, the Egyptians would have excelled in painting and sculpture, and the imitation of the human figure have kept pace with their advancement in other points.³

¹ ‘Guide to the Egyptian Galleries of the British Museum,’ pp. 15-18.

² Winkelmann, i. p. 110.

³ Since this has been written, the excellence of Egyptian art in portraiture, and the high state which it had reached under the earlier dynasties, has been demonstrated by the remarkable statues discovered of the age of the 3d and following dynasties. The sculptors, indeed, worked by a hieratic canon, which varied

at different periods, but which only affected the proportions and not the mode of treatment. The oldest canon, which dates as early as the 3d Dynasty, reckoned the proper height of the human figure from the sole of the foot to the crown of the head, and the subdivisions were made one-half or one-third of the foot. A change took place at the time of the 12th Dynasty, dividing the height into eighteen parts, or square of half the foot. This continued

No accidents, arising from the consequences of invasion or from any other cause, were ever capable of changing their fixed reverence for prescribed forms: nor do we find, after the Greek and Roman conquests, that any deviation from established custom was tolerated, or that any innovation was introduced from communication with those foreigners, however superior their art, and however evident its resemblance to the originals which nature daily presented to their eyes. After the accession of the Ptolemies, Greek art became well known in Egypt, and every opportunity was given to their artists to improve from the best models; but no change was effected by this intercourse with the Greeks; and when Adrian wished divine honors to be paid to his favorite Antinous, and statues to be erected to his memory, no form was admitted but that which religious usage had established and Egyptian models prescribed.

Though the general character of painting and sculpture continued the same, and a certain conventional mode of representing the human figure was universally adopted throughout the country, which was followed by every artist through successive ages, from the earliest Pharaonic era until the religion of Egypt was supplanted by the final establishment of Christianity, it is reasonable to suppose that several styles were introduced, and that the genius of artists varied considerably during that lengthened period. Plato's assertion is therefore to be taken in a limited and general sense, signifying that the Egyptians followed the same conventional forms, and that no nearer approach to the *beau idéal* of the human figure was made at one period than another. This is perfectly true; but every eye accustomed to Egyptian drawing readily perceives the difference between subjects executed during the Augustan age of art, the reigns of Rameses the Great and his father Osirei, and those of a Ptolemaic epoch. Truth may be wanting, as it necessarily must be where nature is not copied; but there are a grace and boldness in the outline, as well as in the execution of the sculptures of the former period, which at once indicate the work of superior genius.

The hieroglyphics on the obelisks of that epoch proclaim the same fact; and in architecture the temples erected by the great

till the 22d Dynasty. The height above one-sixth of the foot was not reckoned. A third canon, which prevailed at the time of the 22d Dynasty and subsequently, made twenty-one parts from the sole of the foot

to the crown of the head. Although this change was not very great, it yet shows that Egyptian art was not one of entire immutability. — S. B.

Rameses far surpass in elegance and grandeur, in harmony of proportion and simplicity of style, the monuments of any previous or subsequent era. It cannot, however, be denied that in the time of Usertesén and at the commencement of the 18th Dynasty, Egyptian art flourished greatly, and monuments of that age also claim our admiration for taste, simplicity, and symmetry of details. And if some fanciful innovations were introduced in the buildings of the third Thothmes, they are attributable to momentary caprice and not to be looked upon as a change in the architecture of that period. This I shall have occasion to mention hereafter.

The paintings at Beni-Hassan are certainly far inferior to those of the age of Rameses, or of the early part of the 18th Dynasty; but the style of the hieroglyphics on some other monuments of the Usertesén epoch, as the obelisk of Heliopolis, show that sculpture has greatly advanced at that remote period; and if historical bas-reliefs had been preserved, we might discover still more to prove the skill of the artists of the same era.

Few paintings or sculptures remain of an age prior to the accession of Usertesén I., whom I suppose to have been the contemporary of Joseph, and to have ascended the throne about the year 1740 B.C. The tombs in the vicinity of the Pyramids, and those I discovered hewn in the rock near Qasr e'Syád, the ancient Chenoboscion, are certainly anterior to the grottoes of Beni-Hassan; and the style of the masonry, as well as the names of the kings found there, show that the former were the places of sepulture of individuals who lived in the time of Suphis and his immediate successors. They, therefore, date about the year 2090 and 2050 B.C., upwards of a century before the arrival of Abraham in Egypt, if, as I suppose, the patriarch came to that country during the reign of Apappus.

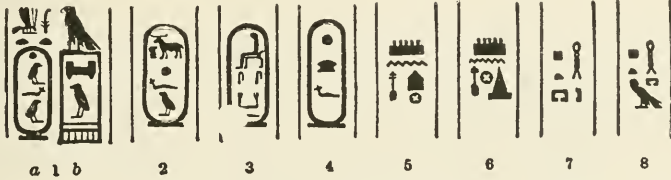
It is evident that the tombs built of stone, which stand in the area before and behind the Great Pyramid,¹ were erected after it had been commenced, if not completed, as their position is made to conform to that monument; and that those hewn in the rock at the same place were not of an older period is shown by the style of the sculptures and the names of the same kings.

Among these we evidently perceive Suphis, or, as the hiero-

¹ It is remarkable that Memphis is styled 'the land of the pyramid.' Its Egyptian name in the hieroglyphics is Menefer, in Coptic Memfi, Manfi, Membe, Panoufi, or Mefi, being probably corrupted

from Ma-ñ-nofri, 'the abode of good,' or as Plutarch calls it, 'the haven of good men.' It was also called Pthah-ci, the abode of Pthah. (Woodcut No. 419, *figs.* 5, 6, 7, 8.)

glyphics write it, Shufu or Khufu, a name easily converted into Suphis or Cheops, by adding *s*, the Greek termination.¹ But it is difficult, as I have already observed, to refer them to their proper epoch, or to fix their relative position in the list of kings. Nor can we decide whether the first two names here introduced



No. 419. 1. *a, b*, the name of Shufu, or Suphis. 2. Numba-khufu, or Chembes. 3. Asseskaf, or Shepeskaf. 4. Shafra, Khafra, or Kephren. 5, 6. The name of Memphis. 7, 8, (Memphis, or) Ptah-eï, the abode of Ptah.
From the Tombs near the Pyramids.

are both of Suphis, or if the second is of the founder of the other pyramid, whose name *Sen-Suphis* signifies the *brother* of Suphis; though they certainly appear to be of different kings, who lived about the same epoch.²

They occur again at Mount Sinai, and the former has the banner or square title given in the woodcut,³ which would satisfactorily decide this question if it should ever be found with the other name. For these square banners, as I have already shown in a former work,⁴ relate to the kings and not to the deities: and though the learned and ingenious Champollion expressed a different opinion in his '*Précis*,'⁵ he was afterwards convinced of this fact, which is now universally admitted.

The other names in these tombs are of the same remote period; and though there is no positive proof of their relative antiquity,

¹ As I have observed already.

² The reading *Sen-Suphis* is now abandoned by all scholars, and considered to be *Suphis II*.

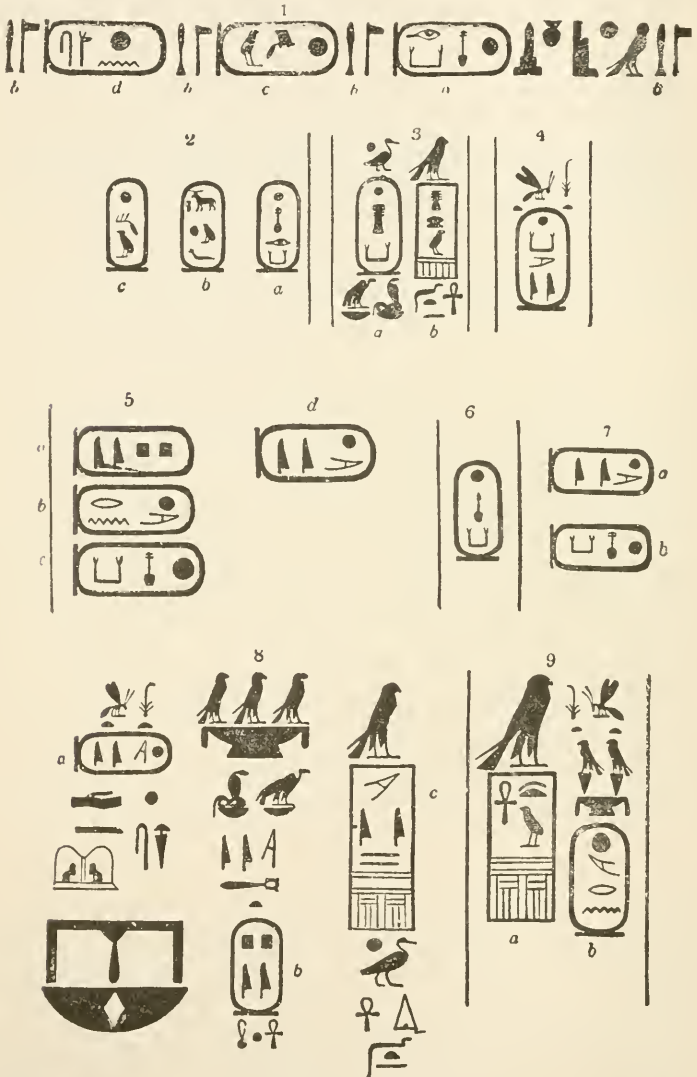
³ Woodcut No. 419, *fig.* 1, *b*.

⁴ *Materia Hierog.*, Extracts from Hieroglyphical Subjects, p. 7: 'One more remark I have to offer, which, I confess, is not at all consonant with the ideas of Dr. Young and M. Champollion: that the square beneath the hawk, containing sometimes a bull and arm, sometimes other devices, does not refer to the god in whose honor the monument was raised, but to the king, whose name *always* follows it; and to this I have been led by the following circumstance wherever a king has erased the name of a predecessor, and in-

scribed his own in its stead, the hieroglyphics in this square have also been erased and changed: they cannot, therefore, refer to the god to whom the building was erected; otherwise the dedication and other sculptures containing his name would also be altered throughout the same monument. We should likewise find all the different names of kings in the same temple, preceded by a square containing the same devices, as relating to the deity of that temple, which is *not* the case.' I have also shown (in p. 8) that the *καρτίθος* 'Απόλλων is Phrah, or Pharaoh, the king in the character of the sun. ('*Egypt and Thebes*,' p. 5.)

⁵ '*Précis du Système hiéroglyphique*,' p. 152.

we may conclude they belonged to the immediate successors of Suphis and his brother. It is remarkable that in some instances they are preceded by, and in others destitute of regal titles, and



No. 420.

Names of ancient kings.

Fig. 1. Nefer kar ra ar. Ra amakhu. Ra en user. 2. Ra amakhu. Khuumba Khufu. Nefer kar ra Ar; at the tombs near the Pyramids. 3. At Saqqára and Mount Sinai: Tat karu. 4. Rameri ka, at E'Siout. 5, 6. At Chenoboscion. *a* has been cut over *d*. *a*, *b*, *c*, seem to have reigned in succession. 7. Pepi. Nefarkara: at Wady Maghára, near Mount Sinai. 8. Pepi. 9. Merenra, on the Kossayr road. The characters *b*, *b*, in fig. 1, signify 'priest.'

sometimes they appear to have the word 'priest' prefixed to them, like those at Chenoboscion. Three of the names, however, are so arranged, that we may suppose they indicate the order in which the kings ruled, though the arrangement is different in another part of the same tomb, where the name of Suphis, or of Sen-Suphis, intervenes between two of them.¹

At Saqqára other tombs of the same early period occur, and some of the grottoes of E'Siout probably date long before the accession of Usertesén. The former have a name, which, like most of these, bears in its simplicity the character of great antiquity, and in the latter is that of another ancient monarch; but neither of them² can be traced in the chamber of kings at Karnak.

The most interesting, after those at the Pyramids, are the names in the grottoes of Chenoboscion, not only from their antiquity, — 'which' as I have observed,³ 'may vie with that of any other catacomb or monument in Egypt, if we except the Pyramids and the tombs in their vicinity,' — but from their being placed in chronological order, and from the circumstance of a king having erased one of them, and introduced his own name in its stead.⁴ The title applied to them is not 'king,' but 'priest,' though the name is enclosed in an oval, the symbol of royalty; and that they really had the rank and appellation of king is shown by the same names occurring elsewhere with the usual royal prefix, and even the square title.

The first⁵ of these is the name to which I alluded as having been erased to admit that of another monarch: it reads Ramai, or Maira, or 'the beloved of the son.' The other is Papi,⁶ a name which occurs in Egyptian history, being borne, according to Manetho, by the father of the priest Amenophis, who lived in the time of the Shepherds.⁷

Several tablets⁸ and monumental records of king Papi⁹ have been preserved; and on the rocks of the Kossayr road his name occurs in the same inscription with that of Ramai, who is elsewhere shown to have reigned sixteen years. It is remarkable

¹ Woodcut No. 420, *fig.* 1, *a* and *c*, and *fig.* 2, where *b* comes between *a* and *c*

² *Figs.* 3, *a*, and 4.

³ 'Egypt and Thebes,' pp. 401, 402.

⁴ Woodcut No. 420, *fig.* 5, *a* and *c*, and *d* cut over by *a*.

⁵ *Fig.* 5, *a*.

⁶ *Fig.* 5, *d*.

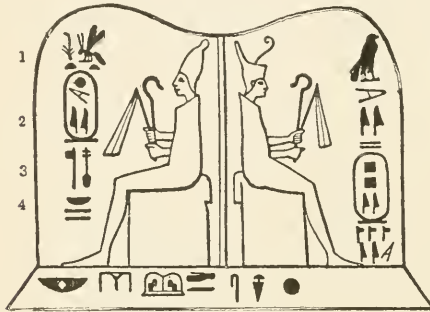
⁷ Joseph. contra Ap. i. 26. Cory's valuable collection of 'Ancient Fragments,' p. 176.

⁸ There is one in the British Museum.

⁹ Papi, or rather Pepi, is the king with the prænomen Maira, and the Pheops or Apappus of the Greek lists of the 6th Dynasty. — S. B.

that the two princes appear seated on their thrones in the hall of assembly, wearing, one the crown of the upper, the other that of the lower country; ¹ showing either that they were contemporary sovereigns, one ruling at Thebes and the other at Memphis, or that Papi was the phonetic nomen of Ramai, and that they were the same monarch.

The former is a point which has been long contested in Egyptian history. Manetho evidently alludes to contemporary dynasties when he speaks of the kings of the Thebaïd and the rest of Egypt uniting in a common cause against the Shepherds; ²



Figures of kings wearing the crown of Upper and Lower Egypt, with the names Ramai and Papi. No. 421. *Kossayr road.*

and some chronologers have endeavored to account for the long list of Egyptian kings by supposing that they ruled at the same time in different parts of the country. This opinion was suggested by the learned Sir John Masham; but, though correct as far as it applies to the early epochs of their history,

there is sufficient evidence to prove that, from the time of Ames and Amenophis, the sovereignty of Upper and Lower Egypt continued to be vested in one person, whether the royal residence was at Thebes, Memphis, or Saïs; and even if Papi has erased the name of his contemporary Ramai, though it appears more probable that these are the prænomen and nomen of the same king, he may only have reunited the two crowns, which had been previously separated; for that Menes was sole monarch of all Egypt appears to have been universally allowed; and the division of the kingdom was, perhaps, owing to the preference of his son Athothes for the new capital founded by his father, which caused the court to be transferred to Memphis.

In noticing these ancient names, it is necessary to repeat a remark I have previously had occasion to make, ³ that the custom of affixing a prænomen to the phonetic nomen was not introduced in early times, and that Menes and many other kings had merely

¹ Woodcut No. 421; see also woodcut No. 420, *figs.* 5 and 8.

² Cory, p. 171.

³ *Materia Hierogl.*, Extracts, p. 9.

one oval, containing their name, preceded by the title 'king,' 'lord of the world,' or other regal prefix. Ramaï and Papi might therefore be different kings, each with a single oval; and, if they really are the same person, we have probably here the first instance of the introduction of a nomen: for there can be no doubt of the great antiquity of these names from the appearance of the grottoes and monuments where they occur, and the many collateral facts connected with the succeeding monarchs.

It may not be irrelevant to suggest that the hieroglyphics forming the name of Papi may also read Apap or Aphoph,¹ the Apophis or Apappus or Manetho and Eratosthenes. The era at which he lived, about a century after the time of Suphis; well accords with that of Papi; and if this be admitted, we have evidence of the style of sculpture at another fixed period, the arrival of Abraham in Egypt.

Both the names of Papi and Remeren are found in the chamber of kings at Karnak, and in other lists.

I have entered thus into detail upon the antiquity of these kings, with a view to ascertain a period when the art of painting and sculpture was in a less advanced state than under the kings of the 18th Dynasty. In the tombs near the Pyramids, and those of Chenoboscion, we find the same agricultural and other scenes represented which usually occur in the sepulchral chambers of the Theban necropolis; and this gives an opportunity of judging of the comparative state of art at those two periods, which are separated by an interval of from five to six hundred years. The mode of treating those subjects is certainly very inferior even to that of the Usertesén era, particularly at Chenoboscion; but some allowance must be made for sculptures executed by provincial artists, who had not attained the excellence of those of Thebes and Memphis. And the same apology may be offered for the paintings of Beni-Hassan.

At the tombs of the Pyramids we likewise observe an inferiority of style, compared with the elegance and taste of the 18th Dynasty; and the epochs of Suphis, of Usertesén, of the early part of the 18th Dynasty, and of Seti and Rameses the Great, may be looked upon as the four known gradations through which the arts passed from mediocrity to excellence.

After the reign of Rameses the Great the arts remained stationary; the peaceful or inactive reigns of his successors

¹ Aphoph is 'a giant' in Coptic. It is translated 'Maximus.'

offered little encouragement to sculpture, and few opportunities were given to artists to improve, or even to exercise their talents. The ambition, the warlike spirit, or the indignation of the third Rameses, roused by the rebellion of the conquered provinces of Asia, which had been subdued and rendered tributary by his victorious predecessor, once more awakened the dormant genius of his country; and, as it frequently happens that great military events, as well as internal convulsions, produce great development of talent, we are not surprised that the success which attended his arms should have benefited the arts. The same remark applies, and in a greater degree, to the glorious era of Osirei and his son; and at no period of Egyptian history did the arms of the Pharaohs attain greater celebrity, or the arts reach a higher degree of perfection, than in the reign of the Great Rameses.

As soon as the third Rameses had returned from his successful expedition into Asia, sculpture and painting were called upon to commemorate the triumphs he had gained, and to record the victories of his country on the walls of the splendid edifices of Thebes. The sculptures in the palace-temple of Medeenet Haboo, erected by this monarch, display a degree of spirit which is only surpassed in those of his great namesake and predecessor; and so little do they fall short of the style of that period that few who have not entered into the real feeling of Egyptian drawing can observe in what their inferiority consists.

In order that the reader may form some idea of the nature of the subjects represented on the walls of the Egyptian temples, and the profusion of painted sculptures with which they were ornamented, I shall introduce a description of the palace-temple of Rameses III. at Medeenet Haboo, from my 'Egypt and Thebes.'¹

On the east or northeast wall (of the inner area), Rameses is borne in his shrine or canopy, seated on a throne, ornamented with the figures of a lion and a sphinx, which is preceded by a hawk.² Behind him stand two figures of Truth³ and Justice, with outspread wings. Twelve Egyptian princes, sons of the king,⁴ bear the shrine; officers⁵ wave flabella around the monarch:

¹ 'Egypt and Thebes,' p. 61, *et seq.*

² The emblem of the king as Phrah (Pharaoh).

³ This refers to the double character of this goddess, my authority for whose name I have given in my 'Materia Hierog.' p. 45.

⁴ They are always distinguished by a badge appended from their head-dress, enclosing, probably, the lock of hair, usually denoting son or child.

⁵ Probably the Pterophori.

and others, of the sacerdotal order, attend on either side, carrying his arms and insignia. Four others follow; then six of the sons of the king, behind whom are two scribes and eight attendants of the military class, bearing stools and the steps of the throne.

‘In another line are members of the sacerdotal order, four other of the king’s sons, fan-bearers, and military scribes; a guard of soldiers bringing up the rear of the procession. Before the shrine, in one line, march six officers, bearing sceptres and other insignia; in another, a scribe reads aloud the contents of a scroll he holds unfolded in his hand, preceded by two of the king’s sons and two distinguished persons of the military and priestly orders. The rear of both these lines is closed by a pontiff,¹ who, turning round towards the shrine, burns incense before the monarch; and a band of music, composed of the trumpet, drum, double-pipe, and other instruments, with choristers, forms the van of the procession.

‘The king, alighted from his throne, officiates as priest before the statue of Amen Khem, or Amenra *generator*; and, still wearing his helmet,² he presents libations and incense before the altar, which is loaded with flowers and other suitable offerings. The statue of the god, attended by officers bearing flabella,³ is carried on a palanquin, covered with rich drapery, by twenty-two priests; behind it follow others, bringing the table and the altar of the deity. Before the statue is the sacred bull, followed by the king on foot, wearing the cap of the “lower country.” Apart from the procession itself stands the queen, as a spectator of the ceremony; and before her, a scribe reads a scroll he has unfolded. A priest turns round to offer incense to the white bull; and another, clapping his hands, brings up the rear of a long procession of hieraphori, carrying standards, images, and other sacred emblems, and the foremost bear the statues of the king’s ancestors.

‘This part of the picture refers to the *coronation* of the king, who, in the hieroglyphics, is said to have “put on the crown of the upper and lower countries;” which the birds, flying to the four sides of the world, are to announce to the gods of the south, north, east, and west.⁴ Such appears to be the meaning of this ceremony, rather than the *triumph* of the king; and the presence

¹ Not the ‘eldest son of the king,’ as M. Champollion supposes. ² Herod. ii. 151.

³ The larger of these are, in fact, umbrellas; the smaller ones fans or fly traps. Flabella of a similar kind are carried be-

fore the Pope at the present day.

⁴ [Or ‘the four winds,’ as in Mark xiii. 27; Matt. xxiv. 31.—G. W.] I am indebted for the construction of this part of it to M. Champollion’s letter.

of Rameses, wearing for the *first time* the above-mentioned crown, and the great analogy between this and part of the text of the Rosetta Stone, fully justify this opinion.

• In the next compartment the president of the assembly reads a long invocation, the contents of which are contained in the hieroglyphic inscription above; and the six ears of corn¹ which the king, once more wearing his helmet, has cut with a golden sickle, are held out by a priest toward the deity. The white bull and images of the king's ancestors are deposited in his temple, in the presence of Amen Khem, the queen still witnessing the ceremony, which is concluded by an offering of incense and libation made by Rameses to the statue of the god.

• In the lower compartment, on this side of the temple, is a procession of the arks of Amenra, Mut, and Khonsu (the Theban triad), which the king, whose ark is also carried² before him, comes to meet. In another part the gods Abtaut and Hat pour alternate emblems of life and power over the king; and, on the south wall, he is introduced by several divinities into the presence of the patron deities of the temple.

• In the upper part of the west wall Rameses makes offerings to Pthah Sokari and to Kneph; in another compartment he burns incense to the ark of Sokari; and near this is a tablet relating to the offerings made to the same deity. The ark is then borne by sixteen priests, with the pontiff and another of the sacerdotal order in attendance.

• The king afterwards joins in another procession formed by eight of his sons and four chiefs, behind whom two priests turn round to offer incense to the monarch. The hawk, the emblem of the king, or of Horus, precedes them, and eighteen priests carry the sacred emblem of the god Nefur Atmu, which usually accompanies the ark of Sokari.

• On the south wall marches a long procession, composed of hieraphori, bearing different standards, thrones, arks, and insignia, with musicians, who precede the king and his attendants. The figure of the deity is not introduced, perhaps intimating that this forms part of the religious pomp of the corresponding wall; and, from the circumstance of the king here wearing the *pschent*, it is not impossible it may also allude to his coronation.

• The commencement of the interesting historical subjects of Medeenet Haboo is in the southwest corner of this court, on the

¹ A fit emblem for an agricultural people.

² Rosetta Stone.

inner face of the tower. Here Rameses, standing in his car, which his horses at full speed carry into the midst of the enemy's ranks, discharges his arrows on their flying infantry. The Egyptian chariots join in the pursuit; and a body of their allies¹ assist in slaughtering those who oppose them, or bind them as captives. The right hands of the slain are then cut off as trophies of victory.

'The sculptures on the west wall are a continuation of the scene. The Egyptian princes and generals conduct the "captive chiefs" into the presence of the king. He is seated at the back of his car, and the spirited horses are held by his attendants on foot. Large heaps of hands are placed before him, which an officer counts, one by one, as the other notes down their number on a scroll; each heap containing three thousand, and the total indicating the returns of the enemy's slain. The number of captives, reckoned 1000 in each line, is also mentioned in the hieroglyphics above, where the name of the Rebo² points out the nation against whom this war was carried on. Their flowing dresses, striped horizontally with blue or green bands on a white ground, and their long hair and aquiline nose, give them the character of an Eastern nation in the vicinity of Assyria and Persia, as their name reminds us of the Rhibii of Ptolemy, whom he places near the Caspian and the north bank of the Oxus. . . . A long hieroglyphic inscription is placed over the king; and a still longer tablet, occupying a great part of this wall, refers to the exploits of the Egyptian conqueror, and bears the date of his fifth year.

'The suite of this historical subject continues on the south wall. The king, returning victorious to Egypt, proceeds slowly in his car,³ conducting in triumph the prisoners he has made, who walk beside and before it, three others being bound to the axle. Two of his sons attend as fan-bearers, and the several *regiments* of Egyptian infantry, with a corps of their allies, under the command of three other of these princes, marching in regular step and in the close array of disciplined troops, accompany their king. He arrives at Thebes, and presents his captives to Amenra and Mut, the deities of the city, who *compliment* him as usual on the victory he has gained, and the overthrow of the enemy he has "trampled beneath his feet."

¹ The same whom this monarch is represented as having vanquished in another battle-scene of this temple.

² Now considered to be *Lebu*, that of the Libyans. — S. B.

³ Plate V.

‘On the north wall the king presents offerings to different gods, and below is an ornamental kind of border; composed of a procession of the king’s sons and daughters. Four of the former, his immediate successors, bear the asp or basilisk, the emblem of majesty, and have their kingly ovals added to their names. . . .

‘If the sculptures of the area arrest the attention of the antiquary, or excite the admiration of the traveller, those of the exterior of this building are no less interesting in an historical point of view, and the north and east walls are covered with a profusion of the most varied and instructive subjects.

‘At the northeast extremity of the end wall a trumpeter assembles the troops, who salute the king as he passes in his ear. In the first compartment on the east side Rameses advances at a slow pace in his chariot, attended by fan-bearers, and preceded by his troops. A lion, running at the side of the horses, reminds us of the account given of Osymandyas, who was said to have been accompanied in war by this animal and another instance of it is met with at E’Dayr, in Nubia, among the sculptures of the second Rameses.

‘*Second compartment.* — He continues his march,¹ his troops leading the van, and a trumpeter summons them to form for the attack.

‘*Third compartment.* — The Rebo await the Egyptian invaders in the open field; the king presses forward in his ear, and, drawing his bow, gives the signal for the attack. Several regiments of Egyptian archers, in close array, advance on different points and harass them with showers of arrows. The chariots rush to the charge; and a body of Asiatic allies² maintain the combat hand to hand with the Rebo, who are *at length* routed, and fly before their victorious aggressors. Some thousands are left dead on the field, whose hands,³ being cut off, are brought by the Egyptian soldiers as proofs of their success. Three thousand five hundred and thirty-five hands and tongues form part of the registered returns; and two other heaps, and a third of tongues, containing each a somewhat larger number, are deposited under the superintendence of the chief officers, as

¹ This evidently denotes the distance marched by the Egyptians before they reached the enemy’s country.

² They are the Shairetana, a maritime people, whose features and high furred caps particularly denote their Asiatic origin; and a large amulet, suspended

from their neck, reminds us of a custom very usual among the nations of the East. Woodcut No. 10, *fig.* 2, and woodcut No. 76, *fig.* 6, *a* and *b*.

³ The Turks, at the present day, cut off the right ear.

trophies of victory, The monarch then alights from his chariot, and distributes rewards to his troops.

· In the next compartment the king's military secretaries draw up an account of the number of spears, bows, swords, and other arms taken from the enemy, which are laid before them; and mention seems to be made in the hieroglyphics of the horses that have been captured.

· Rameses then proceeds in his car, having his bow and sword in one hand and his whip in the other, indicating that his march still lies through an enemy's country. The van of his army is composed of a body of chariots; the infantry in close order, preceding the royal car, constitute the centre; and other similar corps form the flank and rear.

· They are again summoned by sound of trumpet to the attack of another Asiatic enemy:¹ and, in the next compartment, the Egyptian monarch gives orders for the charge of the hostile army, which is drawn up in the open plain. Assisted by their allies, the Shaietana, a maritime people armed with round bucklers and spears, they fall upon the undisciplined troops of the enemy, who after a short conflict are routed, and retreat in great disorder. The women endeavor to escape with their children on the first approach of the Egyptians, and retire in *plaustra*² drawn by oxen.³ The flying chariots denote the greatness of the general panic, and the conquerors pursue them to the interior of the country. Here, while passing a large morass, the king is attacked by several lions,⁴ one of which, transfixing with darts and arrows, he lays breathless beneath his horse's feet; another attempts to fly towards the jungle, but, receiving a last and fatal wound, writhes in the agony of approaching death.⁵ A third springs up from behind his car, and the hero prepares to receive it and check its fury with his spear.

¹ The Takkarni, or supposed Teuceri.

² They were used in Egypt from the earliest times, and are mentioned in Genesis xlv. 19, &c. Strabo also speaks of them, lib. xvii. They are the more remarkable here, as putting us in mind of a custom very prevalent among some Eastern nations, of posting their wagons in the rear when going to battle. The Tartars of later times were noted for this custom.

³ With the hump of Indian cattle. They seem to have been formerly very common in Egypt also, as they are at present in Kordofan and Sennâr.

⁴ One author has supposed this to represent a lion chase; another has discovered in it the lion of Osymandyas, which *assisted* him in battle. We have frequently known sportsmen shoot their *own* dogs, but nothing justifies a similar opinion with regard to the king on this occasion.

⁵ The position of the lion is very characteristic of the impotent fury of the disabled animal. Of the third little is seen but part of the fore-paw; the attitude of the king supplies the rest.

Below this group is represented the march of the Egyptian army, with their allies, the Shairetana, the Sha . . . and a third corps, armed with clubs, whose form and character are but imperfectly preserved.

The enemy, having continued their rapid retreat, take refuge in the ships of a maritime nation,¹ to whose country they have retired for shelter. The Egyptians attack them with a fleet of galleys . . . and, bearing down their opponents, succeed in boarding them, and taking several prisoners. One of the hostile galleys is upset; and the slingers in the tops, with the archers and spearmen on the prows, spread dismay among the few who resist. The king, trampling on the prostrate bodies of the enemy, and, aided by a corps of bowmen, discharges from the shore a continued shower of arrows; and his attendants stand at a short distance with his chariot and horses, and await his return. Below this scene, the conquering army leads in triumph the prisoners of the two nations they have captured in the naval fight, and the amputated hands of the slain are laid in heaps before the military chiefs. . . . In the next compartment, the king distributes rewards to his victorious troops, and, then proceeding to Egypt, he conducts in triumph the captive Rebo and Tsekkaru, whom he offers to the Theban triad, Amen, Mut, and Konshu.

In the compartments above these historical scenes the king makes suitable offerings to the gods of Egypt; and, on the remaining part of the east wall, to the south of the second propylon, another war is represented.

In the first picture the king, alighted from his chariot, armed with his spear and shield, and trampling on the prostrate bodies of the slain, besieges the fort of an Asiatic enemy, whom he forces to sue for peace. In the next he attacks a larger town surrounded by water. The Egyptians fell the trees in the woody country which surrounds it, probably to form testudoes and ladders for the assault. Some are applied by their comrades to the walls; and, while they reach their summit, the gates are broken open, and the enemy are driven from the ramparts, or precipitated over the parapet by the victorious assailants, who announce by sound of trumpet the capture of the place.

¹ The Shairetana; part of the same people who joined the Egyptians as allies in this war. The expression 'maritime

people' may imply merely that they lived near a large lake.

‘In the third compartment, on the north face of the first propylon, Rameses attacks two large towns, the upper one of which is taken with but little resistance, the Egyptian troops having entered it and gained possession of the citadel. In the lower one the terrified inhabitants are engaged in rescuing their children from the approaching danger by raising them from the plain beneath to the ramparts of the outer wall. The last picture occupies the upper or north end of the east wall, where the king presents his prisoners to the gods of the temple. The western wall is covered by a large hieroglyphical tablet, recording offerings, made in the different months of the year, by Rameses III.’

This may serve to give an idea of the profusion of sculpture on the walls of an Egyptian temple. The whole was colored; and this variety served as a relief to the otherwise sombre appearance of massive straight walls, which formed the exterior of Egyptian temples. All the architectural details were likewise painted; and though a person unaccustomed to see the walls of a large building so decorated might suppose the effect to be far from pleasing, no one who understands the harmony of colors will fail to admit that they perfectly understood their distribution and proper combinations, and that an Egyptian temple was greatly improved by the addition of painted sculptures.

In a work of so limited a scale as the present, it is impossible to give an adequate notion of a large temple whose details are so made up, or to give the general effect of this kind of *chiaroscuro*; but an idea may be conveyed of some of the parts from the capitals of the columns.

The introduction of color in architecture was not peculiar to the Egyptians: it was common to the Etrurians, and even to the Greeks. For though the writings of ancient authors afford no decided evidence of the practice in Greece, and the passages adduced in support of it from Vitruvius,¹ Pliny,² and Pausanias,³ are neither satisfactory nor conclusive, the fact of color having been found on the monuments of Attica and Sicily is so well authenticated, that no doubt can be entertained of certain parts,

¹ Vitruv. iv. 2; lib. vii. c. 9 and c. 5, where he shows the bad taste of the Romans in their mode of painting their houses.

² Plin. xxxvi. 23; also lib. xxxv. c. 8, where he again mentions Pannæus; and,

after saying Phidias was originally a painter, adds that Panæus assisted in painting the figure of Olympian Jupiter.

³ Pausan. lib. v. Elis, c. xi. He mentions the works of the brother of Phidias, whom he calls Panéus.

at least, of Greek temples, of the oldest and even of the best periods, having been painted.

In the temple of Theseus at Athens vestiges of colors are seen on the ground of the frieze, on the figures themselves, and on the ornamental details.¹ The Parthenon presents remains of painting on some members of the cornice; and the ground of the frieze, above the interior of the peristyle, containing the reliefs of the Panathenaic procession, was blue. The propylæa of the Acropolis, the Ionic temple on the Ilissus, and the Choric monument of Lysicrates also offer traces of color; and vestiges of red, blue, and green have been discovered on the metopes of a temple at Selinus in Sicily, by Messrs. Angell and Harris, who excavated and examined the site of that ancient city in 1823. In one of these the figure of Minerva has the eyes and eyebrows painted;² her drapery and the girdle of Perseus are also ornamented with colored devices, and the whole ground of this and two other of the metopes is red.

Red and blue seem to have been generally used for the ground; and these two, with green, were the principal colors introduced in Greek architecture, many members of which were also gilt, as the shields, guttæ, and other prominent details: and many suppose that the shafts of columns were always white, the colored parts being confined to the entablature and pediment.

In Egyptian buildings, indeed, it sometimes happened that the shafts of columns were merely covered with white stucco, without any ornament, and even without the usual line of hieroglyphics; and the same custom of coating certain kinds of stone with stucco was common in Greece. The Egyptians always put this layer of stucco, or paint, over stone, whatever its quality might be, and we are surprised to find the beautiful granite of obelisks and other monuments concealed in a similar manner: the sculptures engraved upon them being also tinted either green, blue, red, or other color, and frequently one and the same throughout.

Whenever they employed sandstone, it was absolutely necessary to cover it with a surface of a smoother and less absorbent nature, to prevent the color being too readily imbibed by a so porous a stone; and a coat of calcareous composition was

¹ 'Transactions of the Institute of Brit. Architects,' on the Polychromy of Greek Architecture, translated from the German

of Kugler, by W. R. Hamilton, Esq., p. 85 *et seq.*

² 'The Sculptured Metopes of Selinus,' by Messrs. Harris and Angell, p. 49.

laid on before the paint was applied. When the subject was sculptured, either in relief or intaglio, the stone was coated, after the figures were cut, with the same substance, to receive the final coloring; and it had the additional advantage of enabling the artist to finish the figures and other objects with a precision and delicacy in vain to be expected on the rough and absorbent surface of sandstone.

The Egyptians mixed their paint with water, and it is probable that a little portion of gum was sometimes added, to render it more tenacious and adhesive. In most instances we find red, green, and blue adopted; a union which, for all subjects, and in all parts of Egypt, was a particular favorite; when black was introduced, yellow was added to counteract or harmonize with it; and in like manner they sought for every hue its congenial companion.

In the examination of the colors used for painting the walls, while at Thebes, I was led to the conjecture,¹ that the reds and yellows were ochres; the blues and greens metallic, and prepared from copper; the black an ivory or bone-black; and the white a finely-levigated and prepared lime. I have since been favored with an analysis of those brought by me from Thebes, which my friend Dr. Ure has had the kindness to make, and which I am happy in being able to introduce.

‘The colors are green, blue, red, black, yellow, and white. 1st. The green pigment, scraped from the painting in distemper, resists the solvent action of muriatic acid, but becomes thereby of a brilliant blue color, in consequence of the abstraction of a small portion of yellow ochreous matter. The residuary blue powder has a sandy texture; and when viewed in the microscope is seen to consist of small particles of blue glass. On fusing this vitreous matter with potash, digesting the compound in diluted muriatic acid, and treating the solution with water of ammonia in excess, the presence of copper becomes manifest. A certain portion of precipitate fell, which, being dissolved in muriatic acid and tested, proved to be oxide of iron. We may hence conclude that the green pigment is a mixture of a little ochre with a pulverulent glass, made by vitrifying the oxides of copper and iron with sand and soda. The vitreous green coat upon the small Osiris figures, so numerous in the Egyptian tombs of the earliest times, is a similar composition.

¹ ‘Egypt and Thebes,’ p. 443.

·The green color, washed from the stone with a sponge and afterwards evaporated, consists of blue glass in powder, mixed with a little ochre, and particles of colorless glass, to which it owes its brighter hue.

·2. The blue¹ pigment scraped from the stone is a pulverulent blue glass of like composition, without the ochreous admixture, brightened with a little of the chalky matter used in the distemper preparation.

·3. The red pigment obtained by washing the colored stone in the tombs of the kings with a wet sponge, and evaporating the liquid to dryness, when treated with water evinces the presence of glutinous gummy matter.² It dissolves readily, in a great measure, in muriatic acid, and affords muriates of iron and alumina. It is merely a red earthy bole.

·4. The black pigment, washed off the stone in the same manner with a sponge, is not affected by digestion in rectified petroleum, and contains, therefore, no bitumen. It softens in hot water immediately, and dissolves readily into a black liquid, which evidently contains a gummy or mucilaginous matter. When exposed to a red heat, upon a slip of platinum, it takes fire, and burns with a fleeting white flame. The remaining matter is difficult to incinerate, even under the blowpipe, and then leaves a bulky grey ash. This residuum dissolves, with very little effervescence, in hot muriatic acid. When ammonia is dropped into this solution it causes a bulky precipitate, which does not redissolve in excess of solution of potash. These phenomena show the pigment in question to be bone-black (mixed with a little gum). By another experiment, I found in it traces of iron.

·5. The white pigment, scraped from the stone in the tombs of the kings is nothing but a very pure chalk, containing hardly any alumina, and a mere trace of iron.

·6. The yellow pigment is a yellow iron ochre.⁷

The oldest Egyptian sculptures on all large monuments were in low relief, and, as usual, at every period, painted: obelisks and everything carved in hard stone,³ some funeral tablets

¹ It is remarkable how much the Egyptian method of making this color resembled in principle that of our smalt. It agrees with the false *cyanus* of Theophrastus (s. 98), invented by an Egyptian king, which, he says, was laid on thicker than the native (or lapis-lazuli). Pliny confounds the two (xxxvii. 9).

² The Egyptian colors contain gum; but the quantity in these specimens was owing to my having added it to form them into cakes.

³ Some few granite monuments are in relief, but they are rare.

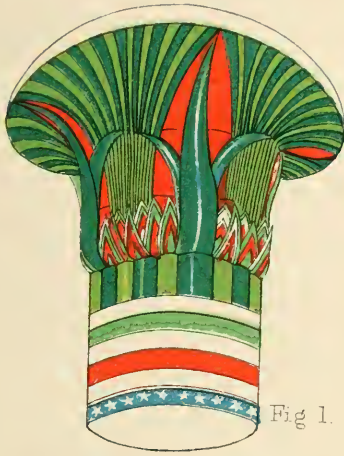


Fig. 1.

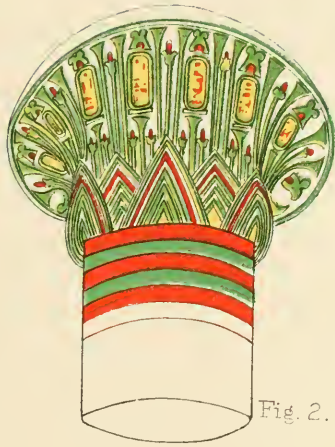


Fig. 2.



Fig. 5.



Fig. 6.



Fig. 7.

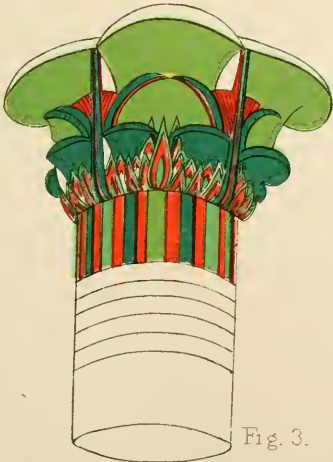


Fig. 3.

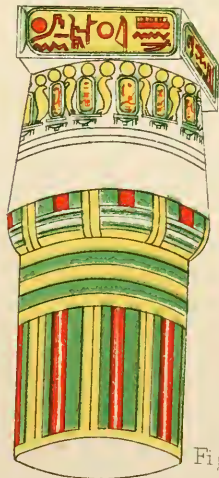


Fig. 4.

CAPITALS of COLUMNS
and a Piece of coloured Glass (Figs 5.6.7.)

and other small objects being in intaglio. This style continued in vogue until the time of Rameses II., who began to introduce intaglio generally on large monuments, and even his battle-scenes at Karnak and the Memnonium are executed in this manner. The reliefs were little raised above the level of the wall; they had generally a flat surface, the edges softly rounded off, in effect far surpassing the intaglio; and it is to be regretted that the best epoch of art, when design and execution were in their zenith, should have abandoned a style so superior, which, too, would have improved in proportion to the advancement of that period.

Intaglio continued to be generally employed until the accession of the 26th Dynasty, when the low relief was again introduced; and in the monuments of Psammaticus and Amasis are numerous instances of the revival of the ancient style. This was afterwards universally adopted, and no return to intaglio on large monuments was attempted, either in the Ptolemaic or Roman periods.

The intaglio introduced by Rameses may, perhaps, be denominated *intaglio rilievo*, or relieved intaglio. The sides of the *incavo*, which are perpendicular, are cut to a considerable depth, and from that part to the centre of the figure (or whatever is represented) is a gradual swell, the centre being frequently on a level with the surface of the wall. On this all the parts of the dress, features, or devices are delineated and painted; and even the perpendicular sides are ornamented in a corresponding manner, by continuing upon them the adjoining details.¹

In the reign of Rameses III. a change was made in the mode of sculpturing the intaglios, which, as I have already observed, consisted in carving the lower side to a great depth, while the upper face inclined gradually from the surface of the wall till it reached the innermost part of the intaglio; it was principally done in the hieroglyphics, in order to enable a person standing immediately beneath and close to the wall on which they were sculptured, to distinguish and read them; and the details upon the perpendicular sides, above mentioned, had the same effect.

It was a peculiarity of style not generally imitated by the successors of Rameses III., and hieroglyphics bearing this character may serve to fix the date of monuments, wherever they

¹ One of the great advantages of this style is that it protects the sculptures by preventing the bas-relief or field from

destructive influences, such as the desert sand or wilful mutilation. — S. B.

are found, to the age of that monarch. After his reign no great encouragement appears to have been given to the arts: the subjects represented on the few monuments of the epoch intervening between his death and the succession of the 26th Dynasty are principally confined to the sacred subjects, in which no display of talent is shown; and the records of Sheshonk's victories at Karnak are far from partaking of the vigor of former times, either in style or in the mode of treating the subject.

After the accession of the 26th Dynasty some attempt was made to revive the arts, which had been long neglected; and, independent of the patronage of government, the wealth of private individuals was liberally employed in their encouragement. Public buildings were erected in many parts of Egypt, and beautified with rich sculpture: the city of Saïs, the royal residence of the Pharaohs of that dynasty, was adorned with the utmost magnificence; and extensive additions were made to the temples of Memphis, and even to those of the distant Thebes.¹

The fresh impulse thus given to art, was not without effect: the sculptures of that period exhibit an elegance and beauty which might even induce some to consider them equal to the productions of an earlier age; and in the tombs of the Assaseéf, at Thebes, are many admirable specimens of Egyptian art. To those, however, who understand the true feeling of this peculiar school, it is evident, that though in minuteness and finish they are deserving of the highest commendation, yet, in grandeur of conception and in boldness of execution, they fall far short of the sculptures of Osirei² and the second Rameses.

In forming an opinion of the different styles of Egyptian sculpture, it is frequently difficult for an unpractised eye to decide upon their peculiar merits, or their respective ages; and in nothing, perhaps, has this been more fully demonstrated than in the Isiac Table, now at Turin. Every one acquainted with Egyptian art must be struck at first sight with the very modern date and Roman origin of this monument; and the position of the hieroglyphics shows that the maker of it was ignorant of the subject he was treating. I should, therefore, not have thought it necessary to notice so palpable a forgery, had not the learned Winkelmann censured Bishop Warburton for a judicious remark,

¹ The favorite material of the period was basalt, black and green, especially the last variety. There is a great suppleness and softness in the limbs, but not the dis-

play of that anatomical knowledge of the form visible in the older efforts of Egyptian sculpture. The canon of proportion, too, is changed. — S. B. ² Seti I.

in which he is borne out by fact and for which he deserves great credit. 'I cannot help,' says Winkelmann,¹ here noticing an error of Warburton, who advances, that the famous Isiac Table of bronze, inlaid with figures in silver, is a work made at Rome. His opinion is destitute of foundation, and he only appears to have adopted it because it suited his own system. Be it as it may, this monument has all the character of the most ancient Egyptian style.' Justice must be done to the judgment of Warburton, and a remark of this kind, made by a person of Winkelmann's reputation, is of too great weight to pass unnoticed.

The invasion of Cambyses, as I have already stated, struck a deathblow to the arts in Egypt. Sculptors, painters, and artisans of every description, were taken from their country, and sent to Persia by the victors to embellish the monuments of their enemies with the records of their own misfortunes; and in spite of the encouragement afterwards given by the Ptolemies, the spark of genius, then so nearly extinguished, could not be re-kindled, and Egypt was doomed to witness the total decadence of those arts for which she had been long renowned.

The sculptures of the Ptolemaic period are coarse and heavy, deficient in grace and spirit, and totally wanting in the character of the true Egyptian school, at the same time that they partake of nothing Greek either in form or feeling; for the Egyptians never borrowed any notions on those points from the foreigners with whom they had so long an intercourse throughout the period of Greek and Roman² rule. The sculptures executed in the time of the Cæsars are still more degraded in every respect, and so low did they fall at this period, that many do not claim a rank above those of the humblest village tombstone. Still the architecture continued to be grand and majestic, and many of the monuments of a Ptolemaic and Roman era merit a better style of sculpture.

'Architecture,' as I have elsewhere observed,³ 'more dependent on adherence to certain rules than the sister art, was naturally less speedily affected by the decline of taste and

¹ Winkelmann, 'Hist. de l'Art,' lib. ii. c. 1, s. 46.

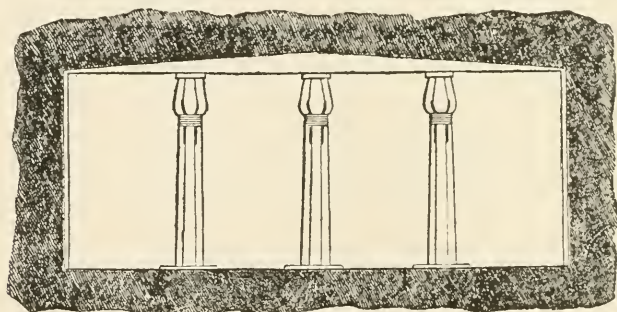
² There are very few statues extant, except of monarchs of the Ptolemaic period, and they all show the great influence of Greek art and type. The bas-

reliefs follow more closely the Egyptian style. The architecture was florid, and stands in about the same relation to the earlier styles as the Corinthian to the Doric. — S. B.

³ 'Egypt and Thebes,' p. 163.

ingenuity of its professors; and as long as encouragement was held out to their exertions, the grandest edifices might be constructed from mere imitation, or from the knowledge of the means necessary for their execution. But this could never be the case with sculpture, which had so many more requisites than previous example or long-established custom; nor could success be attained by the routine of mechanism, or the servile imitation of former models.'

It is remarkable that the architecture even of the early time of Usertesén far excelled the sculpture of that day; and the grace and simplicity of the grottoes at Beni-Hassan, which call to mind in their elegant columns the Doric character, must be highly admired, even though seen amidst the grandeur of the monuments of Rameses. These columns are 3 feet 4 inches in



No. 422.

Section of one of the *southern* grottoes of Beni-Hassan.

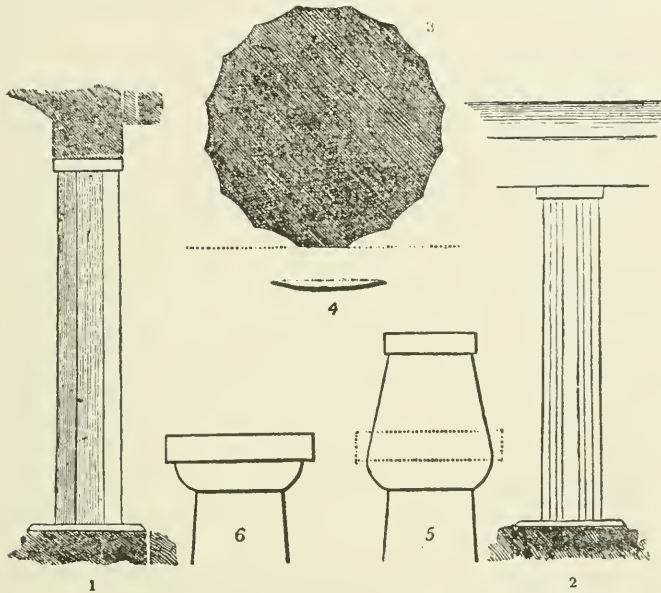
diameter, and 16 feet 8½ inches high;¹ they have sixteen faces or grooves, each about 8 inches wide, and so slight and elegant that their depth does not exceed half an inch. One of the faces, which is not hollowed into a groove, is left for the introduction of a column of hieroglyphics.

The roofs of some of the grottoes of Beni-Hassan are cut into a slight segment of a circle, in imitation of the arch, which, as I have had occasion to observe, was probably known in Egypt at this early period; and it is remarkable that the walls are stained and sprinkled with color to give them the appearance of red granite. This is the general character of the larger and northernmost grottoes: the others differ, both in the form and style of the columns, and in their general appearance; but the transverse section of one of them will suffice to show the elegance

¹ Woodcut No. 423, *figs.* 2 and 3.

of their depressed pediment — which extends, in lieu of architrave, over the columns of the interior — and the simplicity of their general effect.

The most favorite Egyptian capitals¹ were those in form of the full-blown water-plant, supposed by some to be the papyrus, which was emblematic of the lower country, and the unopened bud of the same, or of the lotus; and that this last gave the original idea of the Doric capital is not improbable, since, by



No. 423. *Fig. 1.* Columns in the portico of the northern grottoes of Beni-Hassan.

Fig. 2. Columns of the interior.

Fig. 3. Horizontal section of *fig. 2*, showing the grooves.

Fig. 4. One of the grooves on a larger scale.

Fig. 5. An Egyptian capital, which seems to have been the origin of the Doric, *fig. 6.*

removing the upper part and bringing down the abacus, it presents the same appearance as the early Greek style.²

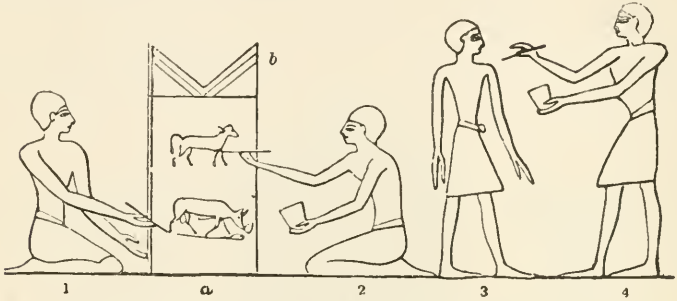
Of painting, apart from sculpture, and of the excellence to which it attained in Egypt, we can form no accurate opinion, nothing having come down to us of a Pharaonic period, or of that epoch when the arts were at their zenith in Egypt: but that already in the time of Usertesen they painted on boards is shown by one of the subjects at Beni-Hassan, where two artists are

¹ Capitals of columns. Plate XIV. There is a very valuable 'Synopsis of the Classification of Ptolemaic Capitals,' among the newly-acquired Hay Collection in the

MSS. department of the British Museum. — S. B.

² Woodcut No. 423, *figs. 5 and 6.*

engaged on a picture, representing a calf and an antelope overtaken by a dog. The painter holds his brush in one hand, and his palette or saucer of color in the other: but, though the boards stand upright, there is no indication of a contrivance to steady or support the hand.



No. 424. Artists painting on a board, and coloring a figure. *b*, the word *kat*, 'paint.'
Beni-Hassan.

Mention is made of an Egyptian painting by Herodotus,¹ who tells us that Amasis sent a portrait of himself to Cyrene, probably on wood; and some, of uncertain period, have been found in the tombs of Thebes. Three of these are preserved in the British Museum, but they are evidently of Greek time, and, perhaps, even after the conquest of Egypt by the Romans. It is therefore vain to speculate on the nature of their painting, or their skill in this branch of art; and though some of the portraits taken from the mummies may prove that encaustic painting with wax and naphtha were adopted in Egypt, the time when it was first known there is uncertain, nor can we conclude from a specimen of Greek time that the same was practised in a Pharaonic age.

Pliny states, in his chapter on Inventions,² that 'Gyges, a Lydian, was the earliest painter in Egypt; and Eucheir, a cousin of Dædalus, according to Aristotle, the first in Greece; or, as Theophrastus thinks, Polygnotus the Athenian.' But the painting represented at Beni-Hassan evidently dates before any of those artists. Pliny, in another place,³ says, 'The origin of painting is uncertain: the Egyptians pretend that it was invented by them 6,000 years before it passed into Greece; a vain boast, as everyone will allow.' It must, however, be admitted that all the

¹ Herod. ii. 182.

² Plin. vii. 56.

³ Plin. xxxv. 3. He also mentions line drawings as an invention of the Egyptians.

arts were cultivated in Egypt long before Greece existed as a nation; and the remark he afterwards makes,¹ that painting was unknown at the period of the Trojan war, can only be applied to the Greeks, as is shown by the same unquestionable authority at Beni-Hassan, of the remote era of Usertesen, who lived upwards of 1700 years before our era, between five and six hundred years previous to the taking of Troy.

The skill of the Egyptian artists in drawing bold and clear outlines, is, perhaps, more worthy of admiration than anything connected with this branch of art, and I have had occasion to notice the freedom with which the figures in the unfinished part of Belzoni's tomb at Thebes are sketched. I have also noticed² the manner in which they began those drawings previous to their being sculptured and painted.

The walls having been ruled in red squares, 'the position of the figures was decided by the artist, who traced them roughly with a red color; and the draughtsman then carefully sketched the outlines in black, and submitted them to the inspection of the former, who altered (as appears in some few instances here) those parts which he deemed deficient in proportion or correctness of attitude; and in that state they were left for the chisel of the sculptor.' Sometimes the squares were dispensed with, and the subjects were drawn by the eye, which appears to have been the case with many of those in the tomb here alluded to.

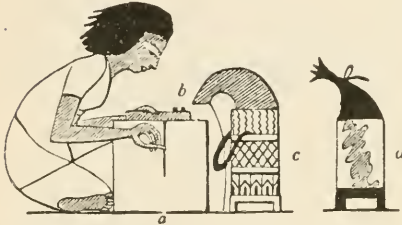
In some pictures we observe certain conventional rules of drawing which are singular, and perhaps confined to the Egyptians and Chinese, an instance of which may be seen in the frontispiece to my *'Materia Hieroglyphica.'* The subject represents Amen-ra, the god of Thebes, seated on his throne, and presenting the emblem of life to Rameses the Great, who stands before him. The deities Khonsu and Bubastis are also present. The god being considered the principal figure, every means are used to prevent the intervention of any object which might conceal or break through its outline: the leg, therefore, of the king, though in reality coming in front, is placed behind his foot: but as the base of the throne is of less importance than the leg of the king, the latter is continued in an unbroken line to the bottom of the picture; and the same is observed in his hand, which, being an object of more consequence in the subject than the tail of the deity, is not subjected to any interruption. The Egyptians

¹ Plin. xxxv. 3, at the end.

² *'Egypt and Thebes,'* p. 107.

rarely used perspective, either in figures or in the representation of inanimate objects; and those on the same plane, instead of being shown one behind the other, were placed in succession one above the other, on the perpendicular wall.

Of the quality of the pencils they used for drawing and painting it is difficult to form any opinion. Those generally employed for writing were a reed or rush,¹ many of which have been found with the tablets or inkstands belonging to the scribes; and with these, too, they probably sketched the figures in red and black upon the stone or stucco of the walls. To put in the color, we may suppose that brushes of some kind were used; but the minute scale on which the subjects are indicated in the sculptures prevents our deciding the question.



No. 425. A scribe writing on a tablet. *c* and *d* are two cases for carrying writing materials. *Thebes.*

Habits among men of similar occupations are frequently alike, even in the most distant countries; and we find it was not un-



No. 426. Scribe with his inkstand on the table. One pen is put behind his ear, and he is writing with another. *Thebes.*

usual for an Egyptian artist or scribe to put his reed pencil behind his ear when engaged in examining the effect of his painting, or listening to a person on business, as in the modern studio or the counting-house of a European town.

Painters and scribes deposited their writing implements in a box

with a pendent leather top, which was tied up with a loop or thong; and a handle or strap was fastened to the side to enable them to carry it more conveniently. Their ordinary wooden tablet was furnished with two or more cavities for holding the colors, a tube in the centre containing the pens or reeds: and certain memoranda were frequently written at the back of it

¹ Called *kash*; they were frayed at one end, but not pointed. Brushes of reeds and fibres were used for some of the coarser painting of the walls. — S. B.

when a large piece of papyrus, or the wooden slab,¹ was not required.

Of the architecture, plans, and distribution of their dwelling-houses I have already treated, and also of the great use they made of crude brick for this purpose; those burnt in a kiln being rarely employed except in damp situations.² The bricks were formed in a simple mould, frequently bearing a government stamp; and the number of persons employed in their manufacture is readily accounted for by the great demand for those materials in the construction of dwelling-houses and ordinary buildings, stone being confined principally to the temples and other monuments connected with religion; but this has been already noticed, and I now merely introduce the subject of crude brick in connection with the arch.

I have frequently had occasion to mention the antiquity of the arch,³ and have shown that it existed of brick in the reign of Amenophis I., as early as the year 1540 before our era,⁴ and of stone in the time of the second Psammaticus, B.C. 600.⁵ I have suggested the probability of its having owed its invention to the small quantity of wood in Egypt, and the consequent expense of roofing with timber, and have ventured to conclude from the paintings at Beni-Hassan that vaulted buildings were made in Egypt as early as the reign of Usertesen, the contemporary of Joseph, who lived between three and four thousand years ago.

The age of the crude brick pyramids of Memphis and the Arsinoï nome is unknown. Herodotus tells us the first built of those materials was erected by Asychis, whom he makes the predecessor of Anysis, the contemporary of Sabaco, thus limiting its date to the ninth century before our era; and consequently, as I have observed, making it posterior to those of Thebes, which were erected about the period of the 18th Dynasty.

It is, however, far more probable that a long period intervened between the reigns of Asychis and Anysis; and that the former lived many ages before Bocchoris, which is confirmed by another passage in Herodotus, placing him as the immediate

¹ The Egyptians wrote on various materials, — papyrus for letters, religious and other writs; slices of stone were used as slates for copies and memoranda; wood, either bare or else covered with a layer of stucco, for copies of acts or regulations to hang up to the wall. — S. B.

² The southern extremity of the quay, near the temple of Luxor, at Thebes, is

built of burnt brick. Crude bricks were common in many Eastern countries, as at Babylon and other places.

³ The newly-discovered rudimentary arch of the age of the 5th Dynasty assigns it to a still earlier age — S. B.

⁴ Egypt and Thebes, pp. 81 and 126.

⁵ *Ibid.* p. 337.

successor of Mycerinus, the son of Cheops; and the ruinous and crumbled appearance of the brick pyramids of Dashoor fully justifies the opinion that they were erected very soon after the stone ones, near which they stand, and to which the inscription of Asyehis forbade the spectator to compare them. They have had chambers, the lower parts of whose side walls are still visible; and we may be permitted to conclude that they were arched like those of Thebes.

If, then, the brick pyramids of Memphis were erected by the successor of the son of Cheops, and the chambers were, as I suppose, vaulted, the invention of the arch will be carried back nearly 700 years prior to the reign of Amenophis I., about 2020 years before our era. This is a conjecture on which I do not wish to insist; we may, for the present, be satisfied with the fact that this style of building was in common use 3370 years ago, and rejoice that the name of Amenophis I. has been preserved on the stucco coating the interior of a vaulted tomb at Thebes, to announce it, and to silence the incredulity of a sceptic.¹

The appearance and position of other tombs in the vicinity of the Ptolemaic temple of Dayr el Medeenah at Thebes had always convinced me that their vaulted roofs were of the time of Amenophis I. and his immediate successors; but, however satisfied on this point myself, I could find no name to sanction my opinion, or to justify me in its assertion, until accident threw in my way the building in question,² while prosecuting my researches there in 1827; and another tomb has since been discovered of similar construction, which presents the ovals of the third Thothmes.

The pyramids of Gebel Birkel (Napata) and Dunkalah (Meroë) are of uncertain date; but there is every reason to believe them, as well as the small temples attached to their front, of an age long anterior to the Ptolemies, or, as Hoskins thinks, 'of a far more ancient date than Tirhakah;'³ and we there find stone arches, both round and *pointed*, some of which are built with a keystone,⁴ on the same principle as our own.

At Memphis, too, near the modern village of Saqqára, is a

¹ [None of the false arches cut in horizontal stones are as old as some of the true arches of crude brick at Thebes at the age of Amenoph. Canina agrees with me that the use of brick led to the invention of the arch.—G. W.]

² 'Materia Hieroglyphica,' p. 80.

³ Hoskins' 'Ethiopia,' p. 156.

⁴ The keystone is mentioned by Seneca (Epist. 90). Many round and pointed arches of a late time have been built without it, and the principle of the arch does not depend upon it, but on the adjustment of *all* the stones.

tomb, with two large vaulted chambers, whose roofs display in every part the name and sculptures of the second Psammaticus. They are cut in the limestone rock; and in order to secure the roof, which is of a friable nature, they are lined, if I may so call it, with an arch, as our modern tunnels. The arch is of stone, and presents a small and graceful segment of a circle, having a span of 7 feet 10 inches, and a height of 2 feet 8½ inches.

Numerous crude brick arches, of different dates, exist in Thebes,¹ besides the small pyramids already alluded to, some of which are of very beautiful construction. The most remarkable are the doorways of the enclosures surrounding the tombs in the Assaseéf, which are composed of two or more concentric semicircles of brick, as well constructed as any of the present day. They are of the time of Psammaticus and other princes of the 26th Dynasty, immediately before the invasion of Cambyses. All the bricks radiate to a common centre; they are occasionally pared off at the lower part, to allow for the curve of the arch, and sometimes the builders were contented to put in a piece of stone to fill up the increased space between the upper edges of the bricks. In those roofs of houses or tombs which were made with less care, and required less solidity, the bricks were placed longitudinally, in the direction of the curve of the vault, and the lower ends were then cut away considerably to allow for the greater opening between them; and many were grooved at the sides, in order to retain a greater quantity of mortar between their united surfaces.

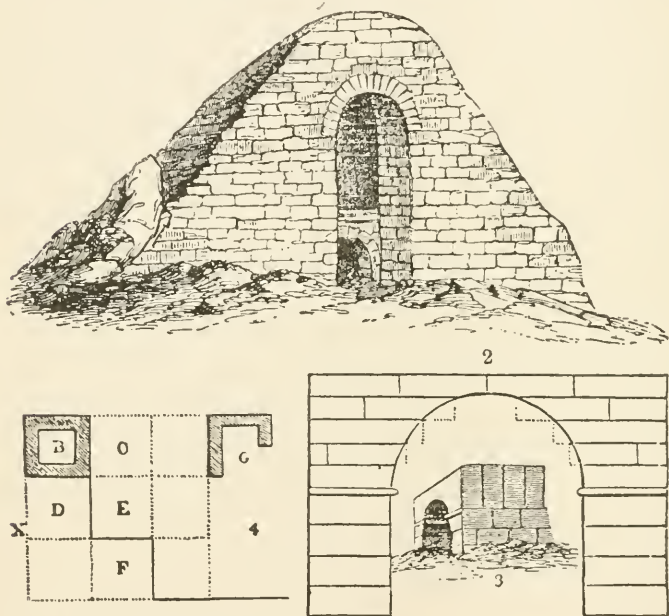
Though the oldest stone arch whose age has been positively ascertained dates only in the time of Psammaticus, we cannot suppose that the use of stone was not adopted by the Egyptians for that style of building previous to his reign, even if the arches of the pyramids in Ethiopia should prove not to be anterior to the same era. Nor does the absence of the arch in temples and other large buildings excite our surprise when we consider the style of Egyptian monuments; and no one who understands the character of their architecture could wish for its introduction.²

¹ One is introduced into woodcut No. 427, fig. 1.

² [Even in Roman times, when conquered Egypt had completely fallen, and her taste, too, had passed away, the universal preference for the arch was not allowed to intrude into her sacred edifices;

and prejudice forbade it even in the small out-of-the-way temples of the Oases — except in a position where it did not interfere with the character of the building. See my 'Architecture of Ancient Egypt.' — G. W.]

In some of the small temples of the Oasis the Romans attempted this innovation; but the appearance of the chambers so constructed fails to please, and the whimsical caprice of Osirei, or Seti I., who introduced an imitation of the arch in a temple at Abydus, was not followed by any of his successors. In this building the roof is formed of single blocks of stone reaching from one architrave to the other, which, instead of being placed in the usual manner, stand upon their edges, in order to allow



No. 427. *Fig. 1.* Vaulted rooms and doorway of a crude brick pyramid at Thebes.
 2. An imitation of an arch at Thebes.
 3. Another at Abydus.
 4. Mode of commencing a quarry.

room for hollowing out an arch in their thickness; but it has an effect of inconsistency, without the plea of advantage or utility.

Another imitation of the arch occurs in a building at Thebes. Here, however, a reason may perhaps be given for its introduction, being in the style of a tomb, and not constructed as an Egyptian temple, nor bound to accord with the ordinary rules of architecture. The chambers, like those of the tomb of Saqqára, lie under a friable rock, and are cased with masonry, to prevent the fall of its crumbling stone; but, instead of being roofed on the principle of the arch, they are covered with a number of

large blocks placed horizontally, one projecting beyond that immediately below it, till the uppermost two meet in the centre, the interior angles being afterwards rounded off to form the appearance of a vault.

The date of this building is about 1500 B.C., consequently many years after the Egyptians had been acquainted with the art of vaulting; and the reason of their preferring such a mode of construction probably arose from their calculating the great difficulty of repairing an injured arch in this position, and the consequences attending the decay of a single block; nor can any one suppose, from the great superincumbent weight applied to the *haunches*, that this style of building is devoid of strength, and of the usual durability of an Egyptian fabric, or pronounce it ill suited to the purpose for which it was erected.

The most ancient buildings in Egypt were constructed of limestone, hewn from the mountains bordering the valley of the Nile to the east and west, extensive quarries of which may be seen at El Maasara,¹ Nesleh Shekh Hassan, El Maabdeh, and other places; and evidence of its being used long before sandstone is derived from the tombs near the Pyramids, as well as those monuments themselves, and from the vestiges of old substructions at Thebes.² Limestone continued to be occasionally employed for building even after the succession of the 16th Dynasty;³ but so soon as the durability of sandstone was ascertained, the quarries of Silsilis⁴ were opened, and those materials were universally adopted, and preferred for their even texture and the ease with which they are wrought. The extent of the quarries at Silsilis is very great; and, as I have elsewhere observed, 'it is not by the size and scale of the monuments of Upper Egypt alone that we are enabled to judge of the stupendous works executed by the ancient Egyptians: these would suffice to prove the character they bore, were the gigantic ruins of Thebes and other cities⁵ no longer in existence. And safely may we apply the expression, used by Pliny in speaking of the porphyry quarries, to those of Silsilis, "they are of such extent, that masses of any dimensions might be hewn from them."'

¹ 'Egypt and Thebes,' pp. 322 and 348, the 'Troici lapidis mons' of Ptolemy and Strabo.

² Limestone blocks are sometimes found in the thickness of the walls of sandstone temples, of the time of Rameses II. and other kings, taken from older monuments.

³ Herodotus says, Amasis even used

the stone of the quarries near Memphis, probably of the Maasara hills, for part of the temple of Minerva at Sais (lib. ii. 175). ('Egypt and Thebes,' p. 442.)

⁴ 'Egypt and Thebes,' p. 439.

⁵ Herodotus (ii. 177) and Pliny (v. 9) reckon 20,000 cities in Egypt in the time of Amasis.

In opening a new quarry, when the stone could not be taken from the surface of the rock, and it was necessary to cut into the lower part of its perpendicular face, they pierced it with a horizontal shaft; beginning with a square trench, and then breaking away the stone left in the centre as indicated in wood-cut No. 427 by the space B, its height and breadth depending of course on the size of the stones required. They then cut the same around C, and so on to any extent in a horizontal direction: after which they extended the work downwards, in steps, taking away E and leaving D for the present, and thus descending as far as they found convenient, or the stone continued good. They then returned, and cut away the steps D, F, and all the others, reducing each time one step in depth, till at last there remained at X a perpendicular wall; and when the quarries were of very great horizontal extent, pillars were left at intervals to support the roof.

In one of the quarries at El Maasara, the mode of transporting the stone is represented. It is placed on a sledge, drawn by



No. 428.

Removing a stone from the quarries at El Maasara.

oxen, and is supposed to be on its way to the inclined plane that led to the river; vestiges of which may still be seen a little to the south of the modern village.

Sometimes, and particularly when the blocks were large and ponderous, men were employed to drag them, and those condemned to hard labor in the quarries as a punishment appear to have been required to assist in moving a certain number of stones,¹ according to the extent of their offence, ere they were liberated; and this expression, 'I have dragged 110 stones for the building of Isis at Philæ,' in an inscription at the quarries of Gertassy in Nubia, seems to confirm my conjecture. In order to keep an account of their progress, they frequently cut the initials

¹ Mention of blocks of stone drawn from the quarries is made in some of the papyri, especially of the Aperui, a foreign race, who dragged them for the construction of some of the edifices in the Delta,

during the reign of Rameses II. They have been supposed to be the Hebrews, but this has been disputed. (Chabas, 'Recherches sur la XIX^e Dynastie,' p. 153.) — S. B.

of their name, or some private mark, with the number, on the rock whence the stone was taken, as soon as it was removed: thus, C.XXXII., PD. XXXIII., PD. XXXIII., and numerous other signs occur at the quarries of Fateereh.

The blocks were taken from the quarry on sledges; and in a grotto behind E'Dayr, a Christian village between Antinoë and El Bersheh, is the representation of a colossus,¹ which a number of men are employed in dragging with ropes; a subject doubly interesting, from being of the early age of Usertesens II., and one of the very few paintings which throw any light on the method employed by the Egyptians for moving weights: for it is singular that we find no illustration of the mechanical means of a people who have left so many unquestionable proofs of skill in these matters.

It is not to be supposed that the colossus was hewn in the hill of El Bersheh. This picture, like the trades, fowling scenes, and other subjects represented in similar grottoes, only refers to one of the occupations of the Egyptians:² nor does it even follow that the inmate of the tomb had any office connected with the superintendence of the quarries whence it was brought.

One hundred and seventy-two men,³ in four rows, of forty-three each, pull the ropes attached to the front of the sledge; and a liquid, probably grease, is poured from a vase by a person standing on the pedestal of the statue, in order to facilitate its progress as it slides over the ground; which was probably covered with a bed of planks, though they are not indicated in the painting.

Some of the persons employed in this laborious duty appear to be Egyptians; the others are foreign slaves, who are clad in the costume of their country; and behind are four rows of men, who, though only twelve in number, may be intended to represent the set which relieved the others when fatigued.

Below are persons carrying vases of the liquid, or perhaps water, for the use of the workmen, and some implements connected with the transport of the statue, followed by taskmasters with their wands of office. On the knee of the figure stands a man who claps his hands to the measured cadence of a song, to mark the time and insure their simultaneous draught; for it is

¹ This curious subject was first discovered by Captains Irby and Mangles. From the beard we see the statue is of a private individual.

² 'Egypt and Thebes,' p. 142.

³ The number may be indefinite; and it is probable that more were really employed than are indicated in the painting.

evident that, in order that the whole power might be applied at the same instant, a sign of this kind was necessary; and the custom of singing at their work¹ was common to every occupation² among the Egyptians, as it now is in that country, in India, and many other places. Nor is it found a disadvantage among the modern sailors of Europe, when engaged in pulling a rope, or in any labor which requires a simultaneous effort.

The height of the statue appears to have been about twenty-four feet, including the pedestal, and it was of limestone,³ as the color and the hieroglyphics inform us. It was bound to the sledge by double ropes, which were tightened by means of long pegs inserted between them, and twisted round until completely braced; and to prevent injury from the friction of the ropes upon the stone, a compress of leather or other substance was introduced at the parts where they touched the statue.

It is singular that the position of the ring to which all the ropes were attached for moving the mass was confined to one place at the front of the statue, and did not extend to the back part of the sledge; but this was owing to the shortness of the body, and when of great length it is probable that ropes were fixed at intervals along the sides, in order to give an opportunity of applying a greater moving power. For this purpose, in blocks of very great length, as the columns at Fateereh, which are about 60 ft. long and 8½ ft. in diameter, certain pieces of stone were left projecting from the sides, like the trunnions of a gun, to which several ropes were attached, each pulled by its own set of men,

Small blocks of stone were sent from the quarries by water to their different places of destination, either in boats or rafts; but those of very large dimensions were dragged by men overland in the manner here represented; and the immense weight of some shows that the Egyptians were well acquainted with mechanical powers, and the mode of applying a locomotive force with the most wonderful success.

The obelisks transported from the quarries of Syene, at the First Cataracts, in latitude 24° 5' 23'', to Thebes and Heliopolis, vary in size from seventy to ninety-three feet in length. They

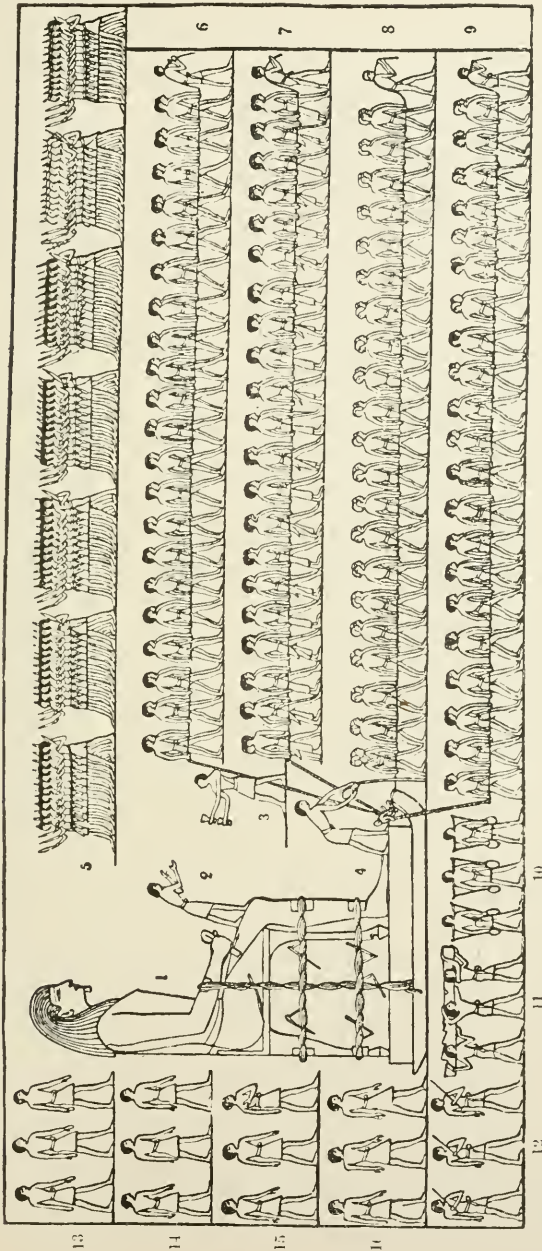
¹ The custom of singing or shouting while treading grapes in the wine-press, is mentioned by Jeremiah (xxv. 30): 'He shall give a shout as they that tread the grapes;' and Isaiah (xvi. 10): 'In the vineyard there shall be no singing;' being

common to other people as well as to the Egyptians.

² Also during the dance: 1 Sam. xxi. 11.

³ The word in the hieroglyphics signifies either limestone or sandstone.

are of one single stone; and the largest in Egypt, which is that of the great temple at Karnak, I calculate to weigh about



No. 429.

Mode of transporting a colossus from the quarries, from a lithographic drawing by Mr. Bankes.
In a grotto at Dayr F. Shaka, near El Bersheh.

- Fig. 1. The statue bound upon a sledge with ropes. It is of a private individual, not of a king or a deity.
- 2. Man probably beating time with his hands, and giving out the verse of a song, to which the men responded; though 3 appears as if about to throw something which 2 is preparing to catch, or striking crotala.
- 4. Pouring a liquid, perhaps grease, from a vase.
- 5. Egyptian soldiers, carrying boughs.
- 6. Men carrying water, or grease.
- 7. 8, 9. Men, probably captives and convicts, dragging the statue.
- 10. Some implement.
- 11. Some implement.
- 12. Taskmasters.
- 13, 14, 15, 16. Reliefs of men.

297 tons. This was brought about 138 miles from the quarry to where it now stands, and those taken to Heliopolis passed over a space of more than 800 miles. The power, however, to move the mass was the same, whatever might be the distance; and the mechanical skill which transported it five, or even one, would suffice for any number of miles.

In examining the ruins of Western Thebes, and reading the statements of ancient writers regarding the stupendous masses of granite conveyed by this people for several hundred miles, our surprise is greatly increased. We find in the plain of Qoorneh two colossi of Amenophis III., of a single block each,¹ forty-seven feet in height, which contain about 11,500 cubic feet, and are made of a stone not known within several days' journey of the place; and at the Memnonium is another of Rameses II., which, when entire, weighed upwards of 887 tons,² and was brought from E'Sooan to Thebes, a distance, as before stated, of 138 miles. This is certainly a surprising weight, and we cannot readily suggest the means adopted for its transport, or its passage of the river; but the monolithic temple said by Herodotus to have been taken from Elephantine to Buto, in the Delta, was still larger, and far surpassed in weight the pedestal of Peter the Great's statue at St. Petersburg, which is calculated at about 1200 tons. He also mentions a monolith at Saïs, of which he gives the following account: 'What I admire still more is a monument of a single block of stone, which Amasis transported from the city of Elephantine.'³ Two thousand men, of the class of boatmen, were employed to bring it, and were occupied three years in this arduous task. The exterior length is twenty-one cubits (31½ feet), the breadth fourteen (22 feet), and the height eight (12 feet); and within it measured eighteen cubits twenty digits (28 feet 3 inches) in length, twelve (18 feet) in breadth, and five (7½ feet) in height. It lies near the entrance of the temple, not having been admitted into the building, in consequence, as they say, of the engineer, while superintending the operation of dragging it forward, having sighed aloud, as if exhausted with fatigue, and impatient of the time it had occupied; which being looked upon by Amasis as a bad omen, he

¹ One of these is the vocal Memnon. ('Egypt and Thebes,' p. 33, *et seq.*) This was broken and repaired.

² 'Egypt and Thebes,' p. 11.

³ The island opposite Syene, immediately below the First Cataract. The

granite rocks stretch from the interior of the desert to the Nile in this part: the sandstone crosses the river more to the north, a little below Eleithyia. ('Egypt and Thebes,' pp. 420 and 452.)

forbade its being taken any further. Some, however, state that this was in consequence of a man having been crushed beneath it while moving it with levers.'¹

Herodotus' measurement is given as it lay on the ground; his length is properly its height, and his height the depth from the front to the back: for, judging from the usual form of these monolithic monuments, it was doubtless like that of the same king at Tel-et-Mai, given in Burton's *Excerpta*,² the dimensions of which are 21 feet 9 inches high, 13 feet broad, and 11 feet 7 inches deep; and internally 19 feet 3 inches, 8 feet, and 8 feet 3 inches.

The weight of the Saïte monolith cannot certainly be compared to that of the colossus of Rameses; but when we calculate the solid contents of the temple of Latona at Buto, our astonishment is unbounded; and we are perplexed to account for the means employed to move a mass which, supposing the walls to have been only 6 feet thick — for Herodotus³ merely gives the external measurement of forty cubits, or 60 feet in height, breadth, and thickness — must have weighed upwards of 5000 tons.⁴

The skill of the Egyptians was not confined to the mere moving of immense weights: their wonderful knowledge of mechanism is shown in the erection of obelisks, and in the position of large stones, raised to a considerable height, and adjusted with the utmost precision; sometimes, too, in situations where the space will not admit the introduction of the inclined plane. Some of the most remarkable are the lintels and roofing stones of the large temples; and the lofty doorway leading into the grand hall of assembly at Karnak is covered with sandstone blocks 40 feet 10 inches long, and 5 feet 2 inches square.

In one of the quarries at E'Sooan, or Syene, is a granite obelisk, which, having been broken in the centre after it was finished, was left in the exact spot where it had been separated from the rock. The depth of the quarry is so small, and the entrance to it so narrow, that it was impossible for them to turn the stone, in order to remove it by that opening; it is, therefore, evident that they must have lifted it out of the hollow in which it had been cut, as was the case with all the other shafts previously hewn in the same quarry. Such instances as these suffice to prove the wonderful mechanical knowledge of the Egyptians: and we may question whether, with the ingenuity and science of

¹ Herodot. ii. 175.

² Plate xli.

³ Herodot. ii. 155.

⁴ This is supposing it to be granite, as these monolithic temples were.

the present day, our engineers are capable of raising weights with the same facility as that ancient people.¹

Pliny mentions several obelisks of very large dimensions, some of which were removed to Rome, where they now stand as tokens of the empty vanity of man.

The Egyptians naturally looked on those monuments with feelings of veneration, being connected with their religion and the glorious memory of their monarchs; and at the same time perceived that, in buildings constructed as their temples were, the monotony of numerous horizontal lines required a relief of this kind: but the same feelings did not influence others, and few motives can be assigned for their removal to Europe, beyond the desire of possessing what required great difficulty to obtain, and flattered the pride of a vain people.²

I will not pretend to say that the ancient Romans committed the same strange outrage to taste as their modern successors, who have destroyed the effect of the most graceful part of these monuments by crowning the apex, which should of course terminate in a point, with stars, rays, or other whimsical additions; and, however habit may have reconciled the eye to such a monstrosity, every one who understands the beauty of form and the harmony of lines must observe and regret the incongruity of balls and weathercocks on our own spires.

Pliny³ says, that the first Egyptian king who erected an obelisk was Mesphres, who held his court at Heliopolis,⁴ the city of the Sun, the deity to whom they were said to have been dedicated.⁵ Many others were raised by different monarchs, and 'Rameses' made one 99 feet in height, 'on which he employed 20,000 workmen.' 'And, fearing lest the engineer should not take sufficient care to proportion the power of the machinery to

¹ M. Lebas, well known in France as an eminent engineer, who removed the obelisk of Luxor now at Paris, has paid a just tribute to the skill of the Egyptians.

² They took some time to erect; that of the Lateran remained thirty-five years and upwards in its place in the hands of the workmen at Southern Thebes, according to the inscription. ('Records of the Past,' iv. p. 15.) — S. B.

³ Plin. xxxvi. 8.

⁴ Obelisks came into use for sepulchral purposes as early as the 4th and 5th Dynasties, and were small, and made of calcareous stone, and placed before the doors of sepulchres; larger ones have been found of the time of the 12th Dynasty. (Mariette,

'Monuments divers,' pl. 19a.) The oldest obelisk before a temple is that of Usertesene I., at Heliopolis. Large obelisks were made at the time of the 18th and 19th Dynasties, but declined afterwards, although later obelisks of basalt of smaller size have been found dedicated by monarchs of the 26th and later dynasties and Ptolemies, and their use continued under the Roman Empire. (Birch, 'Notes upon Obelisks,' Classical Museum, 1851, p. 201; Pierret, 'Dict. d'Archéol. Égypt.' p. 379.) — S. B.

⁵ At Heliopolis; but in other places to other deities, as at Thebes to Amen, the god of that city.

the weight he had to raise, he ordered his own son to be bound to the apex, more effectually to guarantee the safety of the monument.'¹

The same writer describes a method of transporting obelisks from the quarries down the river, by lashing two flat-bottomed boats together, side by side, which were admitted into a trench cut from the Nile to the place where the stone lay, laden with a quantity of ballast exactly equal to the weight of the obelisk; which, so soon as they had been introduced beneath the transverse block, was all taken out; and the boats rising as they were lightened, bore away the obelisk in lieu of their previous burden. But we are uncertain if this method was adopted by the Egyptians; and though he mentions it as the invention of one Phœnix, he fails to inform us at what period he lived.

No insight, as I have already observed, is given into the secrets of their mechanical knowledge from the sculptures, or paintings of the tombs, though so many subjects are there introduced. Our information connected with this point is confined to the use of levers, and a sort of crane; which last is mentioned by Herodotus in describing the mode of raising the stones from one tier to another when they built the Pyramids. He said it was made of short pieces of wood,²—an indefinite expression, conveying no notion either of its form or principle,—and every stone was raised to the succeeding tier by a different machine.

Diodorus tells us,³ that machines were not invented at that early period, and that the stone was raised by mounds or inclined planes; but we may be excused for doubting his assertion, and thus be relieved from the effort of imagining an inclined plane five hundred feet in perpendicular height, with a proportionate base.

It is true that the occupations of the mason and the statuary are sometimes alluded to in the paintings; the former, however, are almost confined to the levelling or squaring of a stone, and the use of the chisel. Some are represented polishing and painting statues of men, sphinxes, and small figures; and two instances occur of large granite colossi, surrounded with scaffolding,⁴ on which men are engaged in chiselling and polishing the stone; the painter following the sculptor to color the hieroglyphics he has engraved at the back of the statue.

The usual mode of cutting large blocks from the quarries was

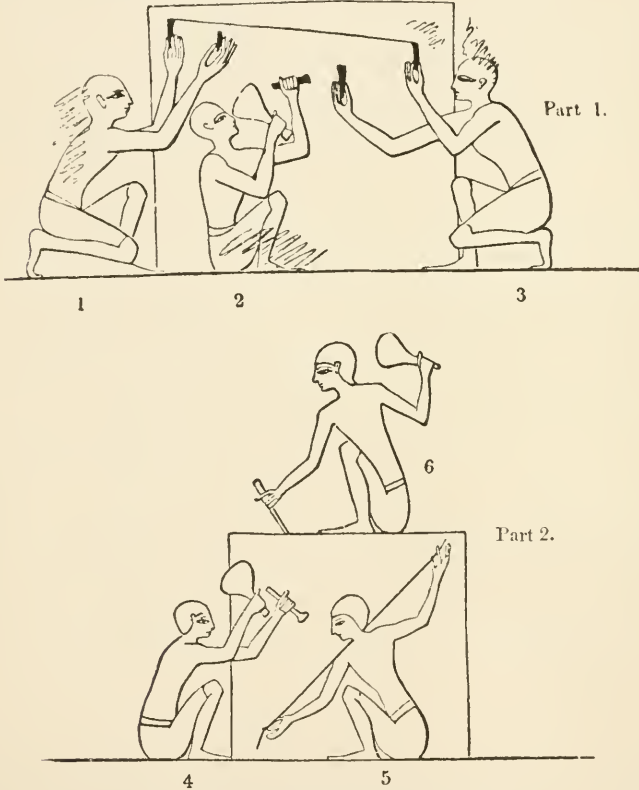
¹ Plin. xxxvi. 9.

² Herod. ii. 125.

³ Diodor. i. 63.

⁴ Woodcut No. 431.

by a number of metal wedges, which were struck at the same instant along its whole length: sometimes, however, they seem to have been of highly dried wood, which being driven into holes previously cut for them by a chisel, and then saturated with water, split the stone by their expansion; and the troughs frequently found along the whole line of the holes where the wedges were inserted argue strongly in favor of this opinion.



No. 430.

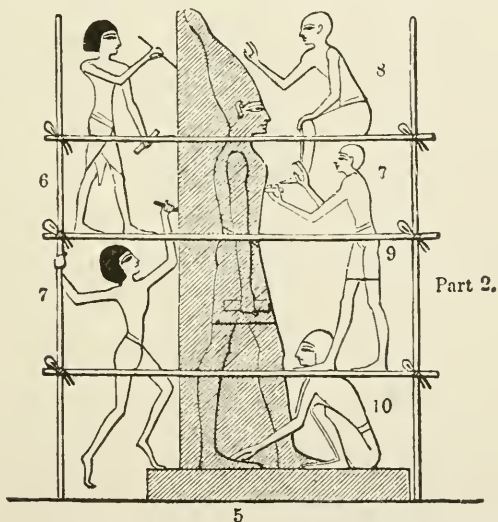
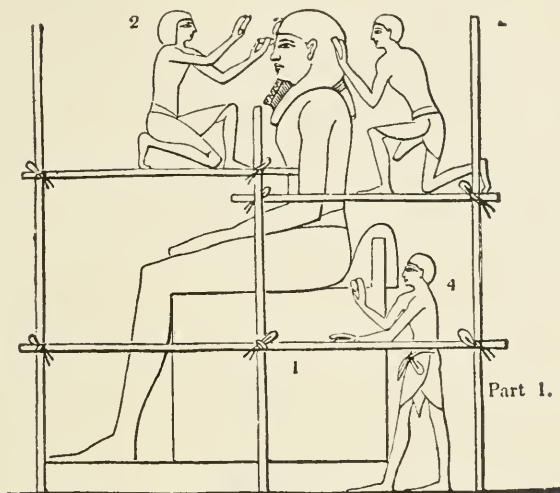
Part 1, levelling, and Part 2, squaring a stone.
Figs. 2, 4, and 6 are using the chisel and mallet.

Thebes.

Such a method could only be adopted when the wedges were in an horizontal position, upon the upper surface of the stone; but those put into the sides were impelled by the hammer only.

To separate the lower part of a ponderous mass from the rock we may suppose they cut under it, leaving long pieces here and there to support it, like beams, which traversed its whole depth from the front to the back; and then, having introduced wooden rafters into the open spaces which were cleared away, they re-

moved the remainder of the stone, and the block rested on the wood.



No. 431. Part 1. Large sitting colossus of granite, which they are polishing. *Thebes.*

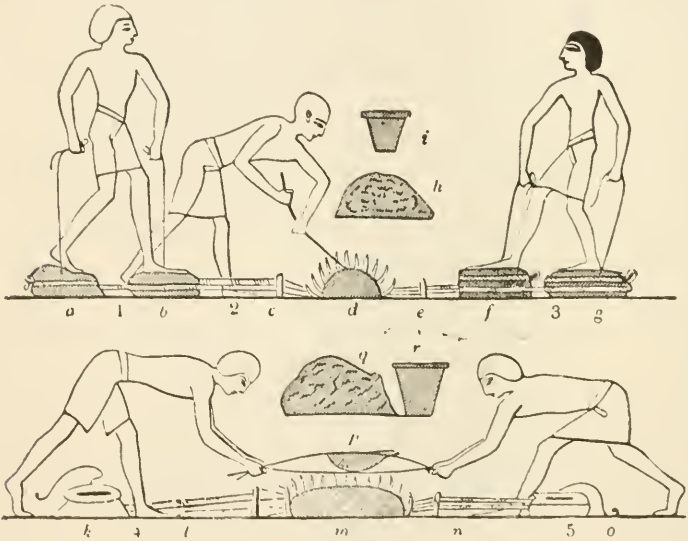
Part 2. Standing figure of a king, and, like the former, painted to represent granite.

Figs. 8, 9, and 10 are polishing it; and figs. 6 and 7, painting and sculpturing the hieroglyphics at the back.

Some have imagined that they used the same means as now practised in India, of lighting a fire along the whole length of the mass, in the direction where they intended it should split; and then pouring water upon it, cracked the stone in that part by its sudden action: but this is very doubtful, and the presence of the

holes for the wedges sufficiently proves the method they usually employed.

Among the remarkable inventions of a remote era among the Egyptians may be mentioned bellows¹ and syphons. The former were used at least as early as the reign of Thothmes III., the contemporary of Moses, being represented in a tomb bearing the name of that Pharaoh. They consisted of a leather bag, secured and fitted into a frame, from which a long pipe extended, for carrying the wind to the fire. They were worked by the feet, the operator standing upon them with one under each foot,



No. 432.

Bellows.

Thebes.

a, b, f, g, the leather case. *c, e, l, n,* the pipes conveying the wind to the fire. *d, m,* the fire. *h, q,* charcoal. *k* and *o* are raised as if full of air.

and pressing them alternately, while he pulled up each exhausted skin with a string he held in his hand. In one instance we observe from the painting, that when the man left the bellows, they were raised as if full of air;² and this would imply a knowledge of the valve.

It is uncertain when bellows were first invented: the earliest contrivance of this kind was probably a mere reed or pipe, which we find used by goldsmiths in the age of Usertesén,³ and also at

¹ [Isaiah (liv. 16) says, 'The smith that bloweth the coals (charcoal) in the fire.' — G. W.]

² Woodcut No. 432, *k, o*.

³ It does not follow, from the use of the

pipe at Beni-Hassan, that bellows were unknown at that period, because it continued to be used long after the time of Thothmes. Woodcut No. 413.

a late period, after the invention of bellows; and the tubes of these last appear even in the time of Thothmes III. to have been simply of reed, tipped with a metal point, to resist the action of the fire.

In process of time the sack containing the air was added, and various improvements succeeded each other in the form and principle of the bellows; there are, however, no means of ascertaining the period when they assumed their present form, and the merit of the late invention of *wooden* bellows is still disputed. Strabo ascribes the bellows¹ to Anacharsis, but with the evident conviction that these, the double anchor, and the potter's wheel,² were of an age far anterior to the Scythian philosopher; which is fully proved by the paintings at Thebes.

The ordinary hand-bellows, now used for small fires in Egypt, are a sort of bag made of the skin of a kid, with an opening at one end (like the mouth of a common carpet-bag), where the skin is sewed upon two pieces of wood; and these being pulled apart by the hands, and closed again, the bag is pressed down, and the air thus forced through the pipe at the other end. It is, perhaps, an ancient invention, but I find no indication of it in the paintings. The bellows with sides of wood, made at the present day, are a more perfect construction than these last, or the foot-bellows of the time of Thothmes. They are supposed to have been known to the Greeks, though, I confess, the expression of Virgil³ is rather calculated to convey the idea of bellows made of ox leather,⁴ without wooden sides. The syringe was an early invention in Egypt, and used by the embalmers for injecting liquids into the head and other cavities of the body, as well as for other purposes.

Siphons are shown to have been invented in Egypt, at least as early as the reign of Amenophis II., 1450 years before our era; and they again occur in the paintings of the third Rameses. In a tomb at Thebes bearing the name of Amenophis their use is unequivocally pointed out by one man pouring a liquid into some vases, and the other drawing it off, by applying the siphon to his mouth, and thence to a large vase; and it is not improbable that they owed their invention to the necessity of allowing

¹ Strabo, vii. p. 209.

² Seneca, Ep. 90. Plin. vii. 56.

³ Virg. Georg. iv. 171. Herodot. i. 68. Sculptures at Philæ, &c.

⁴ Beekmann says 'that bulls' leather,' which Virgil mentions, 'is unfit for bellows, and that ox or cow leather can only be used for that purpose.'

the Nile water to deposit its thick sediment in vases, which could not be moved without again rendering it turbid, whether by inclining the vessel, or dipping a cup into it with the hand.

Julius Pollux says they were used for tasting wine;¹ and Heron of Alexandria, the first writer of consequence who mentions them, and who lived under Ptolemy Euergetes II., shows them to have been employed as hydraulic machines, on a grand scale, for draining lands, or conveying water over a hill from one valley to



No. 433.

Siphons used in the year 1450 B.C.

Thebes.

Fig. 1 pours a liquid into vases from the cup, b; and fig. 2 draws it off by the siphons, a.

another. Their name, siphon, is evidently Oriental, and derived from the word *siph*, or *sif*, 'to imbibe,' or 'draw up with the breath,' analogous to, and the origin of, our own expression 'to sip.'

Of the numerous inventions to which the Egyptians may lay claim, we learn little from the works of ancient authors; but their skill in various branches of art is highly extolled by those² who visited, or were acquainted with, the country.

Herodotus³ ascribes the origin of geometry to the necessity of ascertaining every successive year the quantity of land, increased or diminished by accidents arising from the inundation of the Nile; which is, indeed, not inconsistent with reason: but the historian is wrong in limiting the date of land-surveying to the age of Sesostris, since it was evidently known long before his

¹ Jul. Poll. Onom. vi. 2, and x. 20.

² Diodorus (i. 74) says that the arts were carried to a higher degree of perfection and excellence among the Egyptians than any other people; which he ascribes

to the artisans being confined to their own occupations. The Chinese have shown that, like many other ideas, this is plausible in theory, but bad in practice.

³ Herodot. ii. 102.

time; and so ancient did the Egyptians¹ consider it, that they ascribed its invention to Thoth.²

That the Greeks should have been indebted to Egypt for their early lessons in science is not surprising, since it is known that in those days Egypt took the lead in all philosophical pursuits. Thales, the first Greek who arrived at any proficiency in geometry, went to study there; and his example was afterwards followed by others, who sought the best school of science and philosophy. Pliny's story of Thales teaching his instructors to measure the height of a pyramid by its shadow is sufficiently improbable; but that it should be repeated and believed at the present day is surprising, and some appear to think the Egyptians were incapable of making canals until taught by the Greeks. Equally inconsistent is the story of Pythagoras' theory of musical sound; not only because he had visited countries where music had long been a profound study, but because the anvil (like a bell) gives the *same* sound when struck by different hammers, at least when struck on the same part.

If Plato ascribes the invention of geometry to Thoth; if Iamblichus says it was known in Egypt during the reign of the gods; and if Manetho attributes a knowledge of science and literature to the earliest kings,—these facts merely argue that such pursuits were reputed to be of very remote date there. The monuments, however, prove the truth of the reports of ancient authors respecting the early knowledge of geometry, astronomy, and other sciences among the Egyptians. Mensuration and surveying were the first steps that led to geography; and the Egyptians were not satisfied with the bare enumeration of conquered provinces and towns; for, if we may believe Eustathius, 'they recorded their march in *maps*, which were not only given to their own people, but to the Scythians also, to their great astonishment.'

The practical results of their knowledge had sufficiently proved the great advancement made by them, ages before the Greeks were in a condition to study or search after science. It was in Egypt that the Israelites obtained that knowledge which enabled them to measure and 'divide the land;' and it was the known progress made by the Egyptians in the various branches

¹ A geometric and arithmetic papyrus, now in the British Museum, has a portion devoted to the triangulation and mensuration of fields. It professes to be a copy of

a much earlier document. ('Zeitschr. f. ägypt. Spr.' 1868, p. 108.)—S. B.

² Plato in Phædo.

of philosophical research that induced the Greeks to study in Egypt. Those, too, who followed Thales only varied the theories he had propounded; and the subsequent visits of others, as Pythagoras, Eudoxus, and Plato, introduced fresh views, and advanced the study of philosophy and positive science on the same grounds, but with greater knowledge, as they went deeper into the views of their teachers. It was doubtless from Egypt that 'Thales and his followers' derived the fact of 'the moon receiving its light from the sun.'¹

No one will for a moment imagine that the wisest of the Greeks went to study in Egypt for any other reason than because it was there that the greatest discoveries were to be learnt; or that Pythagoras, or his followers,² suggested, from no previous experience, the theory (we now call Copernican) of the sun being the centre of our system;³ or the obliquity of the ecliptic, or the moon's borrowed light, or the proof of the milky way being a collection of stars,⁴ derived from the fact that the earth would otherwise intercept the light if derived from the sun, taught by Democritus and by Anaxagoras, according to Aristotle,⁵ the former of whom studied astronomy for five years in Egypt,⁶ and mentions himself as a disciple of the priests of Egypt, and of the Magi, having also been in Persia and at Babylon.⁷

Iamblichus says Pythagoras derived his information upon dif-

¹ Plut. de Placit. Philos. ii. 28; Cic. de Nat. Deor. i.; and Diog. Laert. 8; which Anacreon has introduced into a drinking ode (19). The same was the belief of Aristarchus at a later time (Vitruv. ix. 4); and Macrobius (on Cicero's Somn. Scip. i. p. 44) says, 'lunam, quæ luce propriâ caret, et de sole mutuatur.'

² Plut. de Placit. Philos. iii. 11.

³ Aristot. de Cælo, ii. 13.

⁴ Plut. de Placit. Philos. iii. 1.

⁵ Arist. Met. i. 8.

⁶ Diodor. i. 98.

⁷ Clem. Str. i. p. 304. The same may be said of the principle by which the heavenly bodies were attracted to a centre, and impelled in their order, (Arist. de Cæl. ii. 13), the theory of eclipses and the proofs of the earth being round (ibid. ii. 14). These and many other notions were doubtless borrowed from Egypt, to which the Greeks chiefly resorted, or from the current opinions of the 'Egyptians and Babylonians,' the astronomers of those days; from whose early discoveries so much had been derived concerning the heavenly bodies (Arist. de Cæl. ii. 12). Cicero, on the authority of Theophrastus,

speaks of Hicetas of Syracuse, a Pythagorean, having the same idea respecting the earth revolving in a circle round its own axis (Acad. Quæst. ii. 39), which Diogenes Laertius says another Pythagorean, Philolaus, had propounded before him (Life of Philolaus); and Aristotle (de Cælo, ii. 13) observes, that though the greater part of philosophers say the earth is the centre of the system, the Pythagoreans who live in Italy maintain that fire is the centre, and the earth being one of the planets rotates about the centre and makes day and night. And if Plato mentions the same, as Cicero says, 'rather more obscurely' (Tim. 80, p. 530), it is probably owing to his having heard of it while in Egypt, without giving the same attention to the subject as his predecessor, Pythagoras. This heliocentric system was finally revived in Europe by Copernicus, after having been for ages lost to the world; though Nicolas of Cus, long before his time, and perhaps some others, were acquainted with it; and when Peru was conquered by the Spaniards it was found that the sun had there long been considered the centre of our system.

ferent sciences from Egypt; he learnt philosophy from the priests; and his theories of comets, numbers, and music were doubtless from the same source: but the great repugnance evinced by the Egyptian priests to receive Pythagoras will account for their withholding from him much that they knew, though his great patience, and his readiness to comply with their regulations, even to the rite of circumcision,¹ obtained for him more information than was imparted to any other Greek.² Clemens says,³ 'Pythagoras was the disciple of Soncliês, the Egyptian arch-prophet (Plutarch says of Onuphis, and Solon of Sonchis the Saïte); Plato of Sechnuphis of Heliopolis; and Eudoxus the Cnidian of Conuphis;' and he repeats the story of Plato,⁴ of the Egyptian priest saying, 'Solon, Solon, you Greeks are always children:' which shows what the general belief was among the Egyptians and Greeks respecting the source of knowledge in early times. Strabo indeed affirms that 'the Greeks did not even know the (length of the) year till Eudoxus and Plato went to Egypt,'⁵ at the late period of 370 B.C.⁶ The development given in after-times by the Greek mind to what they learnt originally from Egypt, is what showed their genius, and conferred an obligation on mankind: and it is by keeping this in view, and by perceiving how the Greeks applied what they learnt, that we shall do them justice, not by erroneously attributing to them the discovery of what was already old when they were in their infancy.

Herodotus, on this as on other occasions, is far above the prejudices of his countrymen; he claims no inventions borrowed from other people; and his reputation has not suffered from the injudicious accusation of Plutarch, 'of malevolence towards the Greeks.'

'The *γνώμων* and the *πλόζ*,' says Herodotus, 'were received by the Greeks from the Babylonians;' but they attributed the invention of the gnomon to Anaximander, and that of various dials to Eudoxus and others; some again ascribing them to Berossus.⁷

¹ Clem. Strom. i. p. 302.

² Plut. de Isid. s. 10.

³ Strom. i. p. 303. ⁴ Tim. p. 466, tr. T.

⁵ Strabo, xvii. p. 554.

⁶ See also Diodor. i. 28 and 81, and what is cited by Eusebius, Præp. Evang. x. p. 480, respecting the visits of several Greeks; also Clem. Strom. i. 300, and Diog. Laert. 'Life of Thales,' 15; and Cicero, Somn. Scip., who says, 'Plato Ægyptios omnium philosophiæ disciplinarum parentes secutus est.'

⁷ Vitruv. ix. 9. That the dial was of very early date is evident, since in the days of Hezekiah, between three and four hundred years before Eudoxus, and about one hundred years before Anaximander, it was known to the Jews, as is shown in Isaiah xxviii. 8 and 2 Kings xx. 16, where the shadow is said to have been brought 'ten degrees (*mâlûth*) backward, by which it had gone down on the dial (*mâlûth*) of Ahaz.' The Hebrew word 'step,' 'degree,'

At all events the *use* of the dial was known in Judæa as early as seven centuries before our era, and it is not mentioned as a novelty. All that Anaximander could have done was to introduce it into Greece, and *adoption* should frequently be substituted for *invention* in the claims set up by the Greeks. Indeed, they often claimed inventions centuries after they had been known to other people; and we are not surprised at the statement of Plato, that 'when Solon inquired of the priests of Egypt about ancient matters, he perceived that neither he nor any one of the Greeks (as he himself declared) had any knowledge of very remote antiquity.'¹ And when Thales is shown by Laertius to have been the first who was acquainted with geometry, some notion may be had of the very modern date of science in Greece, since he was a contemporary of Cæsar,² and lived at a time when Egypt had already declined from its greatness, and more than seven centuries after astronomical calculations had been recorded on the monuments of Thebes.³

Vitruvius attributes the invention of the semi-circular (concave) dial, or *hemicyclium*, to Berosus, the Chaldean historian, who was born in the reign of Alexander, which is reducing the date of it to a very recent period.⁴

'Eudoxus,' according to Vitruvius, 'invented the *arachné* (spider's web), or, as some say, Apollonius: and Aristarchus of Samos the *scaphé* or hemisphere, as well as the disk on a plane: which (if he means a dial on a plane surface) was a still further improvement, and required greater knowledge for its construction. The most perfect hydraulic clock was invented by Ctesibius, at Alexandria, in the time of Ptolemy Euergetes II.; but the more simple clepsydra was known long before, being mentioned by

𐤀𐤊𐤁𐤁, *mālā* or *māleh*, is the same as the Arabic *dārāqā*, 'step' or 'degree,' and the Latin *gradus*; and is taken from *ālāh*, 'to go up.' Mr. Bosanquet has explained the manner in which the sun during an annular eclipse caused the shadow to go back in what he supposes to have been really a flight of steps, and fixes the date of it in January, B.C. 689.

¹ Plat. in Tim. p. 467.

² Herod. i. 75.

³ Clemens (Strom. i. p. 300) says Thales is thought by some to be a Phœnician, and quotes Leander and Herodotus; but the latter only says his ancestors were Phœnicians (i. 170).

⁴ This was a simple kind of *πóλος* (for,

as before observed, the *πóλος* is the dial, and *γνώμων* merely a perpendicular rod which showed the time by the length of its shadow), and it was very generally used till a late period, judging from the many that have been found of Roman times. It consisted of a basin, *λεκανίς*, with a horizontal *γνώμων* in the centre of one end, and eleven converging lines in the concave part divided it into the twelve hours of the day; the older dials having been marked by degrees, probably like that of Ahaz. The Greeks marked the divisions by the first twelve letters of the alphabet, and four of these reading ΖΗΘΙ, 'Enjoy yourself,' are alluded to in an epigram ascribed to Lucian (Epigr. 17).

Aristophanes and described by Aristotle,¹ and not being then a novelty.² Herodotus says the Greeks received the twelve hours from the Babylonians, and the Jews are supposed not to have adopted them till after the Captivity. The first mention of an hour is in the Book of Daniel;³ for though even there the sense might require it to mean only 'moment,' the use of the word 'time,' immediately before, shows that *sah* was a division of time, which is still employed by the Arabs in the same sense of 'hour,' and 'moment.'

The Jews at first divided the day into four parts, and their night into three watches, and the mention of the dial of Abaz proves that they had also recourse to a more minute division of time, but no hours are specified; and afterwards, when they adopted them, the numbering of their hours was irregular, as with the Arabs, being reckoned from sunrise to sunset. The Greek word *ἡρα* was used long before hours were introduced into Greece. Homer divides the day into three parts,⁴ and at Rome it consisted of two, sunrise and sunset, *meridies* or noon separating the two; and the twelve equal parts were adopted B.C. 291. The natural division of the circle by its radius of 60° into six parts, and into six more by the half of those parts, or by the same radius starting from the second diameter, C D, which crosses the first, A B, at right angles, may have been the origin of this conventional division into twelve parts; as that into three parts may have been the division of the circle by the length of its diameter, or 120°.



No. 434.

The Egyptians had twelve hours of day and twelve of night at a very early period; but there is nothing to show whether this division was first used in Egypt or Chaldæa. The Greeks, however, who frequented Egypt from the time of Thales, ought to have been acquainted with the twelve hours there: and their intercourse being far greater, both for study and for trade, with Egypt than with Babylon, we might suppose them more likely to receive them from the former than from that inland city: but an intercourse through Asia Minor may have brought them to Greece from the Babylonians.

It has been a question whether the Egyptians had a week of

¹ Probl. sect. 16, p. 933.

² Athen. Deipn. iv. p. 174, and xi. p.

497; Vitruv. ix. 9; Plin. vii. 37, and ii. 16, on the Horologium.

³ Dan. iv. 19; iii. 6. ⁴ Il. xxi. 111.

seven days. Dion Cassius evidently shows that this was the case,¹ and his statement agrees with what Herodotus says of days being consecrated to certain deities, though the fact of the Egyptians having reckoned by ten days may argue against it. It must, however, be observed that the division of the month into decades must date after the adoption of a solar year, and that weeks were the approximate result of the lunar division of time, which is the older of the two. Weeks were certainly used at a very early period; as we find from Genesis and the account of the Creation; and the importance of the number seven is sufficiently obvious from its frequent occurrence throughout the Bible.²

That the seven-day division was known to the Egyptians seems to be proved by the seven-days' *fête of Apis* (a fourth part of the number twenty-eight assigned to the years of *Osiris*' life) as well as by their seventy days' mourning for the dead, or ten weeks of seven days;³ and the seven days that the head took annually to float to Byblus from Egypt,⁴ the fourteen pieces into which the body of *Osiris* was divided, and his twenty-eight years, evidently point to the length of a week (4×7). The time of mortification imposed on the priests lasted from seven to forty-two days (one to six weeks):⁵ which shows the entire number to have been based on seven; and the same occurs again in the forty-two books of *Hermes*, as well as in the forty-two assessors of *Amenti*. Indeed the frequent occurrence of seven shows that it was as favorite a number with the Egyptians as with the Jews; and the Pythagoreans borrowed their preference for the hebdomadal division from Egypt. There is no reason to conclude the Egyptians had not weeks of seven days because they divided their solar month into the very natural division of three parts of ten each: it would rather argue that the original lunar month was divided into seven-day weeks, and that the decade division was a later introduction, when the months were made to consist of thirty days. And as the monuments are all of a time long after the thirty days were adopted, the more frequent mention of a

¹ Hist. Rom. xxxvii. 19.

² It was common to all the Semitic nations and to those of India; but in China it was only used by the Buddhists, who introduced it there; and the Chinese as well as all the Mongolian races always had five-day divisions, and cycles of sixty years instead of centuries. The Aztecs had also weeks of five days, four of which made a month, and the year contained eighteen months of twenty days, with five

days added at the end, which were unlucky, as one of them was in Egypt. They had also their astronomical computation by months of thirteen days, 1461 of which made their cycle of fifty-two years, the same number as that of the vague years composing the Egyptian Sothic period.

³ Gen. 1. 3.

⁴ Lucian, de Deâ Syr.

⁵ Porphyry, de Abstin. iv. 7.

decade instead of the hebdomadal division is readily accounted for. Moreover these months of thirty days still continued to be called 'moons,' as at the present day. Dion Cassius also distinctly states that the seven days were first referred to the seven planets by the Egyptians.¹

Sufficient data cannot, of course, be expected from the sculptures of the tombs, and the accidental introduction of their occupations, to enable us to form an accurate opinion respecting the extent of their knowledge, the variety of their inventions, or the skill of their workmen in different branches of art. The objects buried with the dead were frequently mere models of those they used; and the pains taken in making them depended on the sums expended by the friends of the deceased after his death. It was left to their good intentions, or their superstitious feelings, to decide of what quality they should be, or what labor should be bestowed upon them; and if the kind regards of a friend frequently induced some to incur considerable expense in providing such objects, many, on the other hand, were less scrupulous in the last duties to their departed relative. The former purchased ornaments of the most costly materials, as agate,² basalt, granite, alabaster, onyx, jasper, gold, and precious stones; the latter were contented with common porcelain, wax, limestone, or wood. But even the best which have been found in the tombs are evidently of inferior quality; and, like their vases and chairs, none have been discovered equal in beauty to those represented in the paintings, with the exception of a few rings and some female ornaments, which had been actually worn by the deceased.

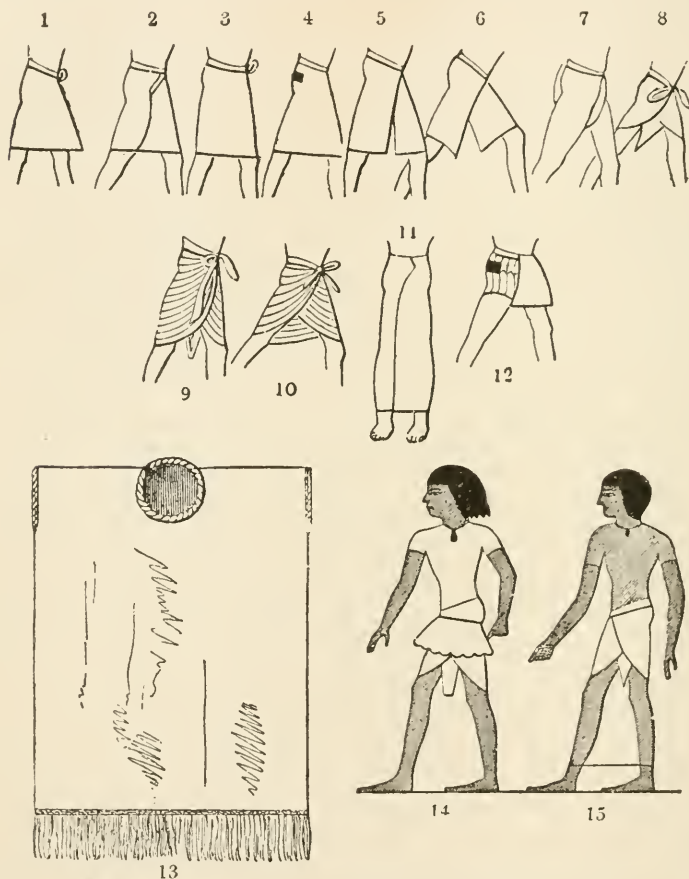
The paintings, again, indicate a very small portion of their inventions; many, with which we know they were acquainted, are omitted; and the same remark applies to some of their most common occupations, to the animals they kept, and to the ordinary productions of their country. No exact notion can even be formed of their costume and the dresses of various grades, either

¹ The Greeks, like the Egyptians, divided their month into three parts, and their year into three decades of months, corresponding to the three seasons of the Egyptians: and the Roman month consisted of calends, nones, and ides, the periods before each being of different lengths; but they afterwards adopted the division of weeks, giving the names of the sun, moon, and five planets to the seven days we now use. The Egyptians had both decimal and duodecimal calculation,

as the twelve hours of day and night, the twelve kings, twelve gods, twelve months ($12 \times 30 = 360$ days), and 360 cups at Osiris' tomb in Philæ; $12 \times 6 = 72$ conspirators against Osiris; and $12 \times 6 = 72$, which some fix as the number of days of the embalmed; and instances of both methods of notation are found on the oldest monuments of the 4th Dynasty. — G. W.

² So called from Aehate, a river in Sicily. (Theophr. § 58.)

among men or women, though so frequently represented; partly owing to their conventional style of drawing figures, partly to their want of skill in depicting drapery: which, as I have observed, was merely added to the figure, without forming part



No. 435. Men's dresses. 13, a shirt from the work of Professor Rosellini.

of the subject described: it is, therefore, only the most simple portion of their dress which can be understood.

Ordinary workmen, and indeed all the lower orders, were clad in a sort of apron, or kilt, sometimes simply bound round the loins, and lapping over in front; and others had short drawers, extending half-way to the knee.² The same kind of

¹ Woodcut No. 435. This was called the *s'enti* or *sinдон*, and was worn by all classes.

² Woodcut No. 435, *figs.* 14 and 15.

apron was worn by the higher orders, under an ample dress of fine linen, reaching to the ankles,¹ and provided with large sleeves.² The apron was generally fastened by a girdle, or by a sort of sash, tied in front in a bow or knot:³ it was sometimes folded over, with a centre-piece falling down in front, beneath the part where it overlapped; and some of the poorer classes, while engaged in laborious occupations, were contented with a roll of linen passed between the legs, from the back to the front of the girdle;⁴ which is frequently used at this day by the peasants when drawing water by the *shadoof*.

Herodotus mentions⁵ some Egyptian dresses, which he describes of linen, with a fringe on the border around the legs, called *calasiris*; over which they wore a cloak of white wool, similar, no doubt, to the *bornous*⁶ of the present day, so common in Egypt and the coast of Barbary. I never remember seeing this cloak represented, except in the dresses worn by the captives of the Rut-en-nu, who appear to have something of the kind over their inner garments.

The same custom of edging their dresses with fringes was common to the Israelites, who were ordered⁷ to make them 'in the borders of their garments;' 'a blue ribbon' being 'put upon the fringe.' These fringes, as already observed, were only the ends of the threads composing the woof, left in order to prevent the cloth unravelling; and the blue ribbon added by the Israelites was intended to strengthen it, and prevent its tearing.⁸

I have noticed the woollen cloak, and the prohibition which Herodotus says was issued against their wearing it when they entered a temple, or being buried in cloths of that quality; and I have also observed that, though cotton garments were sometimes used, the preference was given to linen, which was considered more conducive to cleanliness and health. With regard to the *calasiris* mentioned by Herodotus, it does not appear that they were very generally used; but dresses are occasionally represented in the paintings with a fringe,⁹ and pieces of cloth have been found in the tombs with this kind of border. Some

¹ Woodcut No. 436, *figs.* 5, 6, and Pl. XII., *fig.* 14 [called *basui*].

² Woodcuts No. 370 and No. 136, *fig.* 5

³ Woodcut No. 97 [the sash or girdle was called *rut*, the tie, *ta*. — S. B.]

⁴ Woodcut No. 435, *fig.* 7.

⁵ Herodot. ii. 81.

⁶ The *bornous* is a woollen cloak, open

in front, and buttoned over the breast. It has a hood.

⁷ Numb. xv. 38.

⁸ Many fragments of rolls of linen, with these blue selvages, are in the different collections. — S. B.

⁹ Woodcuts No. 436, *figs.* 1, 7, 9; and No. 438, *fig.* 1.

wore a sort of shirt with loose or tight sleeves, open at the neck, where it was tied with strings; ¹ and except that it was of linen, instead of wool, it was not unlike the *bisht* of the modern inhabitants of Upper Egypt. The dresses of the priests and persons of rank consisted of an under-garment, similar to the apron already mentioned, and a loose upper robe with full sleeves, secured by a girdle round the loins; or of the apron, and a shirt with short, tight sleeves, over which was thrown a loose robe, leaving the



No. 436.

Dresses of priests.

Thebes.

8, 9. hierogrammateis, or sacred scribes.

right arm exposed.² Sometimes a priest, when officiating in the temple, laid aside the upper vesture, and was satisfied to wear an ample robe bound round the waist, which descended over the apron to his ankles; and occasionally he put on a long, full garment, reaching from below the arms to the feet, and supported over the neck with straps.³ Others again, in the sacred processions, were entirely covered with a dress of this kind, reaching to the throat, and concealing even the hands and arms.⁴

¹ Woodcuts No. 109, *fig.* 5, and No. 426.

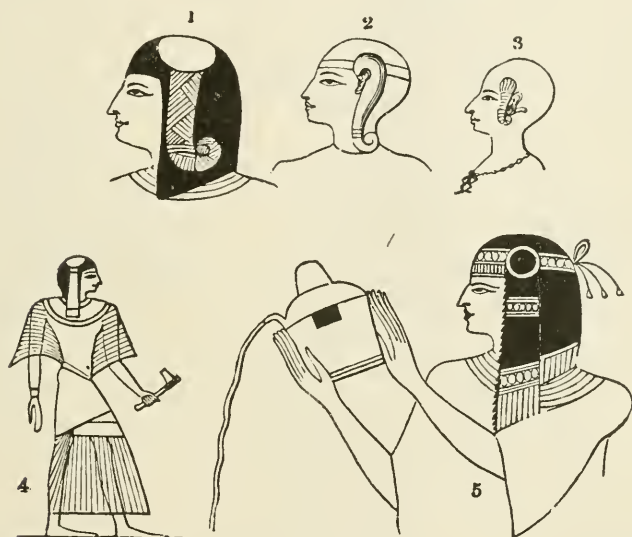
² Woodcut No. 457, *fig.* 1.

³ Woodcut No. 436, *fig.* 4.

⁴ Woodcut No. 436, *fig.* 5.

The costume of the hierogrammateus, or sacred scribe, consisted of a large kilt or apron, either tied in front, or wound round the lower part of the body; and the loose upper robe with full sleeves, which, in all cases, was of the finest linen; he had sometimes one or two feathers on his head, as described by Clemens of Alexandria¹ and Diodorus.²

The pterophori, when bearing the sacred emblems, wore a long full apron reaching to the ankles, tied in front with long bands, and a strap, also of linen, passed over the shoulder to support it;³ but they had no upper robe on these occasions. Some-



No. 437.

Princes and children.

Thebes.

1, head-dress of a prince. 2 and 3, a lock of hair worn by children. 4, dress of a son of Ramesses III. 5, head-dress of a prince, Ramesses.

times a priest who offered incense was clad in this long apron, and the full robe with sleeves: sometimes only in the former; and the dresses of the others in like manner varied on different occasions.

The princes wore a dress very like that of the sacred scribe, the apron wound round the body, and divided into three different

¹ 'The hierogrammateus walks first, having feathers on his head, and a book in his hand.' (Clem. Alex. Strom. 5, 6.)

² Diodor. i. 87: 'The sacred scribes wear a purple fillet and hawk's feather on their head.' Woodcut No. 436, fig. 9. This officer in the Decree of Canopus is

called the *pterophoros*, or feather-bearer, in the Greek version, and described as the sacred scribe in the hieroglyphics. (Lepsius, 'Das bilingue Dekret von Canopus,' fol. Berlin, 1870.) — S. B.

³ Woodcut No. 436, fig. 6.

folds, over which was a garment with large sleeves; but their distinguishing mark was a peculiar badge at the side of the head, descending to the shoulder, and frequently adorned and terminated with a gold fringe. This, I suppose, to have contained the lock of hair indicative of youth, which is seen in the statues of Harpocrates, and frequently represented on the heads of children. For though the Egyptians were shaved, and wore wigs and other coverings to the head, children were allowed to leave certain locks of hair;¹ and if the sons of the king, long before they arrived at the age of manhood, had abandoned this youthful custom, the badge was attached to their head-dress as an emblem of their rank as princes; or really to show they had not, during the lifetime of their father, arrived at *kinghood*; on the same principle that a Spanish prince, of whatever age, continues to be styled an 'infant.'

I have already noticed those priests who wore a leopard-skin, which some have mistaken for that of the *nebris*, or fawn, and improperly ascribed to Bacchus. It was generally thrown over their dress; its fore-legs sometimes made to form sleeves for the arms; and the robes worn beneath it varied at different times. It was usually confined to the high-priests, who superintended the sacrifices and processions of the sacred boats or arks; who presented the offerings at the altar of the gods, and at the funerals of individuals, or who anointed the king at his coronation; and the same badge was assumed by the monarch when officiating on similar occasions.

The robes of the sovereign varied, of course, according to his immediate occupation. When engaged as high-priest, they much resembled those worn by the principal functionaries of the sacerdotal order, with the exception of the apron and head-dress, which were of peculiar form, and belonged exclusively to his rank as king.

This apron was richly ornamented in front with lions' heads and other devices, probably of colored leather; and the border was frequently formed of a row of asps, the emblems of royalty. Sometimes the royal name, with an asp on each side as *supporters*, was embroidered upon it, the upper part being divided into square compartments of different colors; but it is not improbable that this formed an appendage to the girdle, rather than to the apron; and several straps falling down at the side of

¹ Woodcuts No. 437, *fig.* 3; and No. 220, *fig.* 2.

the centre piece show that it was tied in front, and came over the folds of the apron, and even of the upper robes.

The head-dress of the king, on state occasions, was the crown of the upper or of the lower country, or the *pschent*, the union of the two. Every king, after the sovereignty of the Thebaid and Lower Egypt had become once more vested in the same person, put on this double crown at his coronation; and we find in the



Dress of the king.

No. 438.

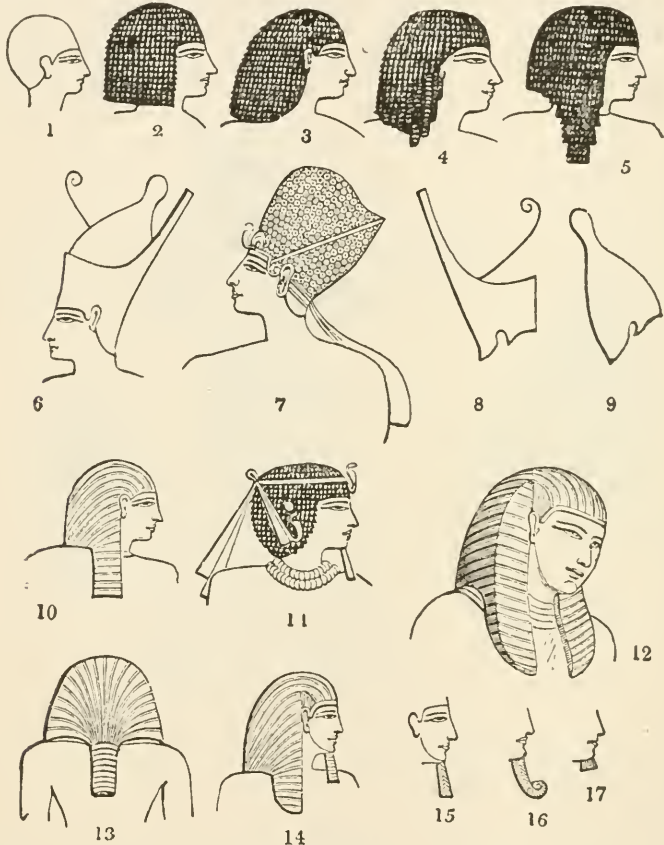
2, 3, the king's apron. 3 is from a statue of Amenophis III. in the Museum at Alnwick Castle. 4, wreath of the crown of Sabaco's statue at the Isle of Argo.

grand representation given of this ceremony at Medeenet Haboo, that the principal feature of the proclamation, on his ascension to the throne, was the announcement to the four sides of the world, that 'Rameses had put on the crown of the upper and lower country.' He even wore his crown during the heat of battle¹ like the kings of olden days in Europe; sometimes merely

¹ Generally the king wore a peculiar kind of helmet called *χεπερς*, larger and broader at the top, which is vaulted, than where it fitted the head. It is always, when painted, colored blue with yellow amulets, perhaps intended to represent studs. The helmet of Psammaticus I.

was of bronze, and the Shairetana, or Sardinians, evidently wore metallic helmets, so that the regal helmets may have been of steel covered with brass or gold studs. According to some, it was of panther skin. A ribbon was attached to it. (Pierret, 'Dict. d'Arch. Égypt.' p. 119.) — S. B.

a wig; but a helmet,¹ made apparently of woollen stuff with a thick nap, not very unlike the modern Persian cap, was generally preferred; and in religious ceremonies he put on a striped head-



No. 439.

Head-dresses.

1, a close cap. 2, 3, 4, 5, wigs. 6, the crown of the upper and lower country, or 8 and 9 united. 10 to 14, royal head-dresses. 15, beard of a king. 16, of a god. 17, of a private individual of rank.

dress, probably of linen, which descended in front over the breast, and terminated behind in a sort of *queue* bound with riband.² When crowned, the king invariably put on the two crowns at the same time, though on other occasions he was permitted to wear

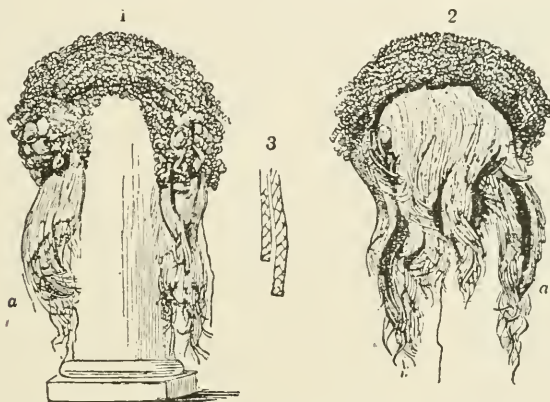
¹ The Egyptian helmet had no crest. I have mentioned the origin of crests. The Greek crest was copied from the mane of a horse; and in illustration of this we frequently find the scales or check-pieces of the helmet made to imitate the ears of that

animal, which, when raised and turned up, project from the upper part on either side. Conf. *Iliad*, A, 382, the helmet of Achilles with a horse's tail, and *Virg. Æn.* x. 369.

² Woodcut No. 439, *fig.* 13.

each separately, whether in the temple, the city, or the field of battle; and he even appeared in his helmet¹ during the ceremonies in honor of the gods. On some occasions he wore a short wig, on which a band was fastened, ornamented with an asp, the emblem of royalty.²

It may appear singular that so warm a covering to the head should have been adopted in the climate of Egypt; but when we recollect that they always shaved the head, and that the reticulated texture of the groundwork, on which the hair was fastened,



No. 440. Front and back of an Egyptian wig, in the British Museum.

3 shows the appearance of the long plaits, *a a*.

allowed the heat of the head to escape, while the hair effectually protected it from the sun, it is evident that no better covering could have been devised, and that it far surpassed in comfort and coolness the modern turban, which is always found by those who are in the habit of wearing it, to be very agreeable in hot weather, provided all the particulars are attended to which the Turks find so essential, but which those Europeans who merely put it on for effect too often neglect.

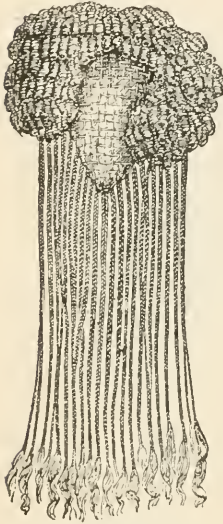
The upper portion of the wig was frequently made with curled, and not with plaited hair, this last being confined to the sides and lower part, as is the case in the wigs preserved in the British and Berlin Museums; but the whole was sometimes composed of a succession of plaits, commencing from the centre of the crown, extending downwards, and increasing in length

¹ Herodot. ii. 151.

² Woodcut No. 439, *fig.* 11.

towards the bottom. Some smaller wigs, worn by persons of rank, consisted of short locks of equal length arranged in uniform lines, imitations of which appear to have been made in woollen or other stuffs, under the denomination of false wigs, for the use of those who could not afford the more expensive quality of real hair.

Wigs were worn both within the house and out of doors, like the turban of the present day; and a priest might even officiate on some occasions in his wig. At parties, the head-dress of every guest was bound with a chaplet of flowers, and ointment¹ was put upon the top of the wig, as if it had really been the hair of the head;² and one instance occurs of a wreath of leaves placed round the crown of a king, on a statue of Sabaco, in Ethiopia, precisely similar to those worn by the Romans.³



Wig about 2½ feet in length,
seen in front.
No. 441. Berlin Museum.

The Egyptians, says Herodotus, 'only let the hair of their head⁴ and beard grow in mourning, being at all other times shaved;⁵ which agrees perfectly with the authority of the Bible,⁶ and of the sculptures. So particular, indeed, were they on this point, that to have neglected it was a subject of reproach and ridicule; and whenever they intended to convey the idea of a man of low condition, or a slovenly person, the artists represented

him with a beard.⁷ It is amusing to find that their love of caricature was not confined to the lower orders, but extended even to the king; and the negligent habits of Rameses VII. are indicated in his tomb at Thebes by the appearance of his chin, blackened by an unshorn beard of two or three days' growth. But it was likewise given as the test of hardships undergone in a severe campaign; and the warlike character of Rameses the Great is pointed out in the same manner.

¹ Athen. xv. 13, and Juv. Sat. xv. 50.

² The chaplet was called *meh*, or crown, the head oil, or ointment, *api*, or *tepi*. — S. B.

³ Woodcut No. 438, *fig.* 4.

⁴ Diodorus (i. 18) states that they suffered the hair to grow when on a journey;

but this was probably on accomplishing a vow.

⁵ Herodot. ii. 36, and iii. 12. [Juvenal, Sat. vi. 532. — G. W.]

⁶ Gen. xli. 14. Joseph, when sent for by Pharaoh from prison, 'shaved himself, and changed his raiment.'

⁷ Woodcut No. 135.

The Egyptians did not confine the privilege of shaving to freeborn citizens, like the Romans, who obliged slaves to wear their beards and hair long, and only permitted them the use of a cap¹ after they had been enfranchised; and though foreigners who were brought to Egypt as slaves had beards on their arrival in the country, we find that so soon as they were employed in the service of this civilized people, they were obliged to conform to the cleanly habits of their masters, their beards and heads were shaved, and they adopted a close cap.

The priests were remarkable for their love of cleanliness, which was carried so far that they shaved the whole body every three days, and performed frequent daily ablutions, bathing twice a day and twice during the night.² It was not confined to their order: every Egyptian prided himself on the encouragement of habits which it was considered a disgrace³ to neglect: we can, therefore, readily account for the disgust they felt on seeing the squalid appearance and unrefined habits of their Asiatic neighbors, whose long beards were often the subject of ridicule to the Egyptian soldier: and for their abhorrence of the bearded and long-haired Greeks, which was so great, that, according to Herodotus,⁴ 'no Egyptian of either sex would on any account kiss the lips of a Greek, make use of his knife, his spit and caldron, or taste the meat of an animal which had been slaughtered by his hand.' The same habits of cleanliness are also indicated by the 'changes of raiment' given by Joseph⁵ to his brethren when they set out to bring their father to Egypt. Barbers may be considered the offspring of civilization; and as a Roman youth, when arrived at the age of manhood, cut off his beard, and consecrated it to some deity as a token of having emerged from a state of childhood, so a people, until they have adopted the custom of shaving, may be supposed to retain a remnant of their early barbarism. The Romans, at first, like other people, allowed their beards to grow, until about 454 years after the building of the city (B.C. 299), when P. Ticinius Mena, having brought barbers from Sicily, introduced the custom at Rome, and, as Pliny states,⁶ 'Scipio Africanus was the first Roman who shaved every day.' They resembled the Egyptians rather than

¹ Livius, xlv. 44: 'Pileatum, capite raso . . . libertum.'

² Herod. ii. 37. Porphyry says thrice a day, and a nocturnal ablution occasionally.

³ Ibid. ii. 37. Plut. de Isid s. 3.

⁴ Ibid. ii. 41 and 91.

⁵ Gen. xlv. 22: 'To all of them he gave each man changes of raiment; but to Benjamin he gave three hundred pieces of silver, and five changes of raiment.'

⁶ Plin. vii. 59.

the Greeks in this respect, and in the habit of allowing the hair of the head¹ and beard to grow in mourning; the Greeks, on the contrary, shaving themselves on those occasions.

The prejudice of these last in favor of long hair² seems to be retained to the present day; for though the modern Greeks have adopted a *Moslem* custom, and wear the red *faz* of the coast of Barbary, they have remained insensible to the comfort and cleanliness of shaving, and have preferred the inconsistency of covering the head with a close cap³ and cherishing the growth of long hair.

With the Egyptians it was customary to shave the heads even of young children, leaving only certain locks at the front, sides, and back,⁴ and those of the lower classes were allowed to go out in the sun with the head exposed, without the protection of a cap, which is the reason assigned by Herodotus⁵ for the hardness of the Egyptian skulls compared with those of other people. 'I became acquainted,' says the historian, 'with a remarkable fact, which was pointed out to me by the people living in the neighborhood of the field of battle, where the Egyptians and the army of Cambyses fought; the bones of the killed being still scattered about, those of the Persians on one side, and of the Egyptians on the other. I observed that the skulls of the former were so soft that you could perforate them with a small pebble, while those of the latter were so strong that with difficulty you could break them with a large stone. The reason of which, as they told me, and I can readily believe it, is that, the Egyptians being in the habit of shaving their heads in early youth, the bones become thickened; and hence, too, they are never bald, for certainly, of all countries, nowhere do you see fewer bald people than in Egypt. The Persians, on the contrary, have soft skulls, in consequence of their keeping the head covered from the sun, and enveloped in soft caps. I also observed the same of those who were killed in the battle between Achæmenes and Inarus the Libyan.' It was usual for the lower orders to work in the sun without any covering to the head, as the modern peasants of Egypt, who appear to inherit from their predecessors skulls of uncommon

¹ And in youth, whence children are called 'capillatos' by Petronius Arbiter (Satyr.). Martial, Epigr. lvii lib. 10.

² Homer, II. B, 11; O, 53, &c Apollo was represented with long hair. 1 Cor. xi. 14.

³ The Greeks ridicule and abhor our

unbecoming hats, but there is not the same objection to them on the score of cleanliness.

⁴ As with the Chinese, and modern Egyptians. Woodcut No. 220, fig. 2.

⁵ Herod iii. 12.

hardness; and we see the same class of persons represented in the paintings with and without a cap, whether in the house or in the open field. Herodotus says,¹ when the Egyptians perform their vows, they shave the heads of their children, either entirely, or half, or only a third;² and putting the hair and some silver into a pair of scales, dedicate an equal weight of the latter to the animal which is sacred to the deity they invoke. This does not, however, imply that they left the whole head unshaven; and the hair to which he refers was probably the long, pendent locks represented in the Theban sculptures. Persons of all classes occasionally wore caps, some of which were large, others fitting tight to the head; but these last were considered far less becoming than the wig, and suited rather to the lower orders than to persons of rank. Women always wore their own hair,³ and they were not shaved even in mourning or after death.

The use of wigs was not confined to the Egyptians of all people of antiquity: the Romans, under the Emperors, adopted also a sort of peruke, called *capillamentum* or *galerus*, though it seems rather to have been worn by women than men; and Juvenal⁴ describes Messalina putting on a wig of flaxen hair to conceal her own black locks when she left the palace in disguise.

The most singular custom of the Egyptians was that of tying a false beard under the chin, which was made of plaited hair, and of a peculiar form, according to the person by whom it was worn. Private individuals had a small beard, scarcely two inches long; that of a king was of considerable length, square at the bottom; and the figures of gods were distinguished by its turning up at the end. No man ventured to assume, or affix to his image, the beard of a deity: but after their death it was permitted to substitute this divine emblem on the statues of kings, and all other persons who were judged worthy of admittance to the Elysium of futurity, in consequence of their having assumed the character of Osiris, to whom the souls of the pure returned on quitting their earthly abode.

¹ Herod. ii. 65.

² The barber, called *haq*, was in constant employment, and scenes of shaving are represented in the sculptures. His instruments and razors varied at different times, being sometimes in shape of a small short hatchet, with recurved handle; other instruments, knife-shaped, were also employed. These were carried in a small open-mouthed bag. He is described in a

papyrus as hard at work, going about from street to street seeking for employment till the evening. ('Records of the Past,' vol. iii. p. 148.)—S. B.

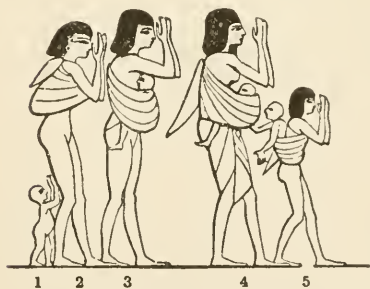
³ 1 Cor. xi. 6.

⁴ Juv. Sat. vi. 120: 'Et nigrum flavo crinem abscondente galero.' [The ancients often dyed their hair, a practice condemned by Clemens of Alexandria (Pædagog. iii. c. 2 and 3), and also by St. Jerome.—G. W.]

The form of the beard, therefore, readily distinguishes the figures of gods and kings in the sacred subjects of the temples: and the allegorical connection between the sphinx and the monarch was pointed out by its having the kingly beard, as well as the crown, and other symbols of royalty.

The dresses of children of the lower classes were very simple; and, as Diodorus¹ informs us, the expenses incurred in feeding and clothing them amounted to a mere trifle. 'They feed them,' he says, 'very lightly, and at an incredibly small cost; giving them a little meal of the coarsest and cheapest kind, the pith of the papyrus, baked under the ashes, with the roots and stalks of some marsh weeds, either raw, boiled, or roasted; and since most of them are brought up, on account of the mildness of the climate, without shoes, and indeed without any other clothing,² the whole expense incurred by the parents does not exceed 20 drachmæ (about 13 shillings) each; and this frugality is the true reason of the populousness³ of Egypt.' But the children of the higher orders were often dressed like grown persons, with a loose robe reaching to the ankles, and sandals.⁴

Infants do not appear to have been swaddled, as among the Jews, Greeks, and Romans. When too young to walk, if taken out by a mother or nurse, they were carried in a shawl, suspended at her back, before her or at her side; a custom still retained by the women of the Moghrebin Arabs; and in Ethiopia they were carried in baskets, supported at the mother's back by a band passing over her forehead.⁵



No. 442. Women carrying their children in a funeral procession. *Thebes*.

Sometimes, though nearly or entirely naked, the neck of an Egyptian child was decorated with a string of beads; and occasionally a *bullæ*, or charm, was suspended in the centre, representing the symbol of truth and justice, which has been supposed also to indicate the heart, and is usually found in the

¹ Diodor. i. 80.

² Woodcut No. 220, *fig. 2*, and No. 442.

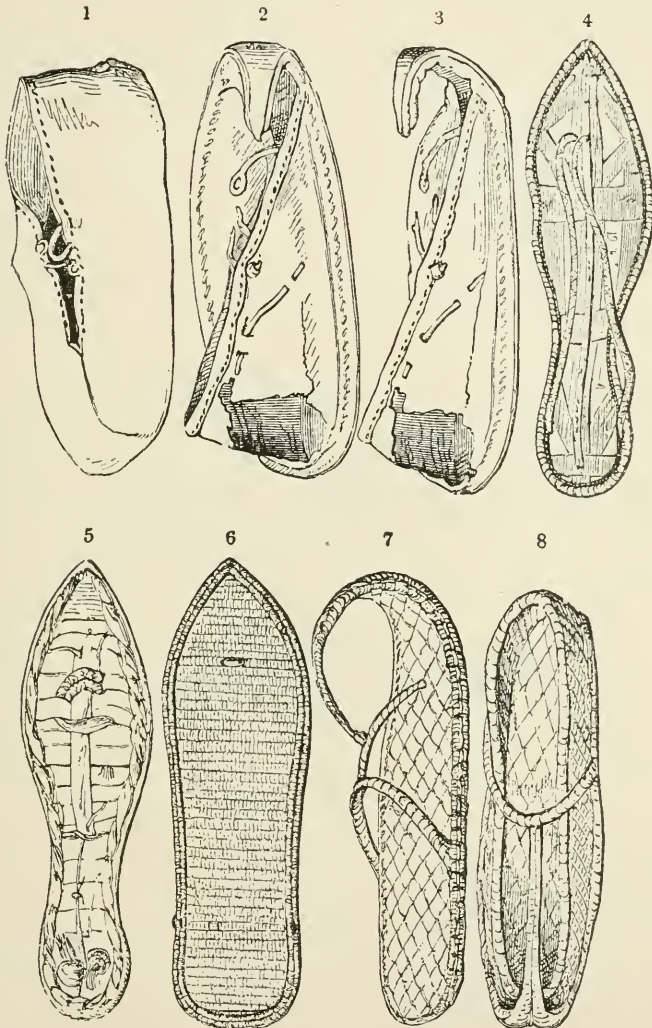
³ Pliny (vii. 3) might attribute it to the Egyptian women having occasionally *seven*

children at a birth. He gives as his authority, Troguus.

⁴ Plate XII., *fig. 1*.

⁵ Woodcut No. 88.

balance of the judgment scenes, as a representative of the good works of the deceased. A *bull* of this kind was worn by the



No. 443.

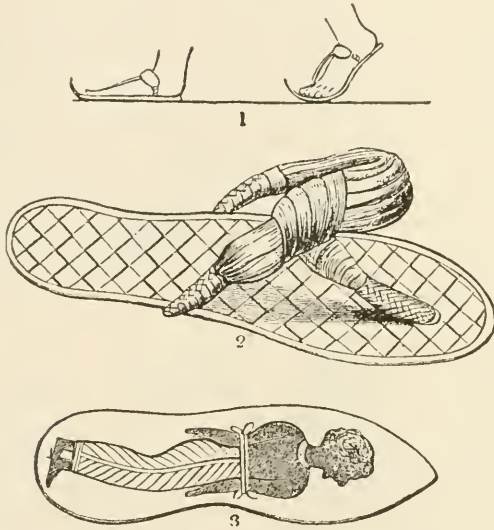
Sandals and shoes found in Egypt.

- 1, 2, 3, shoes of green leather, probably of Greek time. Mr. Salt's Collection.
- 4, 5, upper and lower side of a pair of sandals, made of palm leaves and the papyrus, 11 inches long and 3 broad. In the Museum of Alnwick Castle.
- 6, sole of a sandal 1 foot long and 3½ inches broad. Alnwick Castle.
- 7, a sandal, and 8, a sandal with sides like a shoe, both in the Berlin Collection.

youthful deity Harpocrates.¹ It was probably of gold, or hard

¹ *Materia Hieroglyphica*, Pantheon, plate 17, *fig.* 3.

stone, like those of the Romans;¹ and others worn by the poorer classes, as at Rome and in modern Egypt, were of leather. They were supposed to prompt the wearer to virtue and wisdom, to keep off the evil eye, or to avert misfortune; and superstition induced many to appeal to them in danger, and derive from them omens of forthcoming events. Sometimes a charm consisted of a written piece of papyrus tightly rolled up, and sewed into a covering of linen or other substance, several of which



No. 444.

Sandals.

Berlin Museum.

1, from the sculptures. 2, in the Berlin Museum; made of the papyrus.
3, figure of a captive on the sole.

have been found at Thebes: and emblems of various deities were appended to necklaces for the same purpose.

Ladies and men of rank paid great attention to the beauty of their sandals; but on some occasions those of the middle classes who were in the habit of wearing them preferred walking bare-footed; and in religious ceremonies the priests frequently took them off while performing their duties in the temple. The sandals² varied slightly in form: those worn by the upper classes

¹ The Roman and Etruscan children had sometimes three or four *bullæ*, as we see from statues that have been found. (Virg. *Æn.* vii. 942.) Pliny (xxviii. 1) explains who wore the golden *bullæ*, and

who the leathern *lorum*. (Juv. Sat. xiii. 33, and Pers. Sat. v. 31, &c.)

² Sandals did not come into use till the 5th Dynasty, and there is no instance of them before that time on the marbles.

and by women were usually pointed and turned up at the end, like our skates and many Eastern slippers of the present day. Some had a sharp flat point, others were nearly round. They were made of a sort of woven or interlaced work, of palm leaves and papyrus stalks, or other similar materials, sometimes of leather, and were frequently lined within with cloth, on which the figure of a captive was painted; ¹ that humiliating position being considered suited to the enemies of their country, whom they hated and despised — an idea agreeing perfectly with the expression which so often occurs in the hieroglyphic legends accompanying a king's name, when his valor and victories are recorded on the sculptures: 'You have trodden the impure Gentiles under your powerful feet.' Shoes, or low boots, were also common in Egypt, many having been found at Thebes: ² but these I believe to have been of late date, and to have belonged to Greeks; for, since no persons are represented in the paintings wearing them except foreigners, ³ we may conclude they were not adopted by the Egyptians, at least in a Pharaonic age. They were of leather, generally of a green color, laced in front by thongs, which passed through small loops on either side, and were principally used, as in Greece and Etruria, by women.

The dresses of women consisted sometimes of a loose robe or shirt, reaching to the ankles, with tight or full sleeves, and fastened at the neck, like those of the men, with a string, over which they wore a sort of petticoat, secured at the waist by a girdle; and this, in mourning, while bewailing the death of a relative, was frequently their only dress. ⁴

Such was the costume of the lower classes of women; and sometimes indeed, as at the present day, it consisted merely of the loose shirt or robe, without shoes or sandals.

The higher orders wore a petticoat or gown, secured at the waist by a colored sash, or by straps over the shoulders; and above this was a large loose robe, made of the finest linen, with full sleeves, ⁵ and tied in front below the breast; and during some religious ceremonies the right arm was taken out of the sleeve

They were, when off the feet, sometimes carried by an attendant, showing that they were not always worn. On entering the royal presence they were taken off. Their shape varied at different periods: that of No. 444, *fig.* 1, is of the period of the 20th Dynasty. — S. B.

¹ Woodcut No. 444, *fig.* 3.

² Woodcut No. 443, *figs.* 1, 2, 3.

³ Plate XII.; and woodcut No. 78, *fig.* 1.

⁴ Woodcut No. 7. Herodot. ii. 85.

⁵ *Materia Hierog.* part 2, plate iv.; and woodcut No. 8, *fig.* 5.

and left exposed,¹ as in the funeral processions. The petticoat or gown was of richly-colored stuff, presenting a great variety of patterns, not unlike our modern chintzes, the most elegant of which were selected for the robes of deities and the dresses of queens.



No. 445.

Dresses of women.

The sash in *figs.* 1 and 2, though represented at the side, is to be understood as tied in front. In *fig.* 3 the side hair appears to be fixed by a comb; and before it, on the cheek, the short hair is arranged in separate plaits. *Fig.* 4 shows the shirt tied at the neck; it is a terra-cotta statue.

Slaves or servants were not allowed to wear the same costume as ladies, and their mode of dressing the hair was different. They generally bound it at the back part of the head into a sort of loop, or arranged it in one or more long plaits at the back, and eight or nine similar ones were suffered to hang down at either side of the neck and face.² They wore a long tight gown, tied at the neck, with short close sleeves, reaching nearly to the elbow; and sometimes a long loose robe was thrown over it, when employed to dance, or to present themselves on festive occasions; and strings of beads were worn round their hips, as is now the case in Kordofan and Upper Ethiopia, where also the women dress their hair like the ancient Egyptians, in two parts, as in woodcut No. 445, *fig.* 3.

¹ Woodcut No. 8, *figs.* 1, 2, and 3. Rosellini, pl. xix. No. 1.

² Woodcuts No. 261 and No. 304.

Ladies wore their hair long and plaited. The back part was made to consist of a number of strings of hair, reaching to the bottom of the shoulder-blades, and on each side other strings of the same length descended over the breast. The hair was plaited in the triple plait, the ends being left loose; or, more usually, two or three plaits were fastened together at the extremity by woollen string of corresponding color. Around the head was bound an ornamental fillet, fastened with a lotus bud, falling over the forehead; and the strings of hair at the sides were separated and secured with a comb or band, ornamented in various ways according to the fancy of the wearer; and occasionally a round stud or pin was thrust into them at the front. The women of ancient Egypt appear to have been very pretty, though some authors have denied this. Their charms were recommended to Cambyses.



Head-dress of a lady, from a No. 446. mummy-case.

The short hair at the side of the face, which the ingenuity of ancient Roman¹ and modern European ladies has, by the aid of gum, compelled it to lie in an immovable curve upon the cheek, was interwoven with several of its longer neighbors; and these being bound together at the end with string or in a single 'corkscrew' curl, fell down before the earring, which they partially concealed. This appears to have been peculiar to married women,

Many of the mummies of women have been found with the hair perfectly preserved, plaited in the manner I have mentioned; the only alteration in its appearance being the change of its black hue, which became reddened by exposure to great heat during the process of embalming. Sometimes, too, the hair of another person, perhaps of an attached relative, was buried with the mummy.

The earrings most usually worn by Egyptian ladies² were large, round, single hoops³ of gold, from one inch and a half to two inches and one-third in diameter, and frequently of a still

¹ This little *crève-cœur* appears in the busts of several Roman ladies of the time of the Empire.

² [Earrings were, and are, worn by men

in Africa and Italy, but not by men in Egypt. — G. W.]

³ Woodcuts No. 452, *fig.* 5, and No. 296.

greater size; or made of six rings soldered together. Sometimes an asp, whose body was of gold set with precious stones, was worn by persons of rank as a fashionable caprice: but it is probable that this emblem of majesty was usually confined to members of the royal family.

Earrings of other forms have also been found at Thebes, but their date is uncertain; and it is difficult to say if they are of an ancient Egyptian age, or of Greek introduction. Of these the most remarkable are a dragon,² and another of fancy shape, which is not inelegant.³ Some few were of silver, and plain hoops, like those made of gold already noticed, but less massive, being of the thickness of an ordinary ring; at one end was a small opening, into which the curved extremity of the other caught after it had been passed through the ear;⁴ and others were in the form of simple studs.⁵

Women wore many rings,⁶ sometimes two and three on the same finger. The left was considered the hand⁷ peculiarly privileged to bear these ornaments; and it is remarkable that its third finger was decorated with a greater number than any other, and was considered by them, as by us, *par excellence* the ring finger;⁸ though there is no evidence of its having been so honored at the marriage ceremony.⁹ They even wore a ring on the thumb:

¹ Woodcut No. 452, *figs.* 6 and 7.

² Woodcut No. 448, *fig.* 10, not unlike one of the Chinese dragons.

³ Woodcut No. 448, *fig.* 21.

⁴ Woodcut No. 452, *fig.* 5.

⁵ Cf. Woodcut No. 452, *fig.* 4.

⁶ In the great Harris papyrus signets, *xatem*, and finger-rings, *teb*. The principal varieties of rings are already described in the text. Those with square revolving bezels or scarabæi are of the period of the 18th and 19th dynasties. Solid gold rings, with oval bezels, appear to be rather later, as do those with square bezels. Silver, plated copper, or bronze rings of the same shape, came into use at the same time, and continued till the Greek and Roman period, when iron rings of the shape were introduced. The use of the scarabæus declined after the 20th Dynasty. When set in swivel rings, they were mounted in a gold frame round the edge, which was sometimes engraved. The seals attached to letters of the Ptolemaic and Roman period appear to have been impressed from signet rings. The porcelain rings are of the 18th and 19th dynasties, not later. Cylinders have been rarely if ever found set as swivel

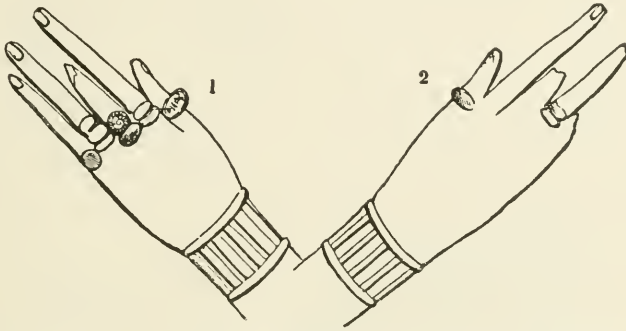
rings, although a plain lapis-lazuli one, in an Egyptian setting, is in the collection of the British Museum. Solid jasper, carnelian, and other rings of hard stone, are found in all collections, and were evidently in use in the days of Rameses III., and later; but none occur at an early period. It is very difficult to distinguish between the ring worn for mere ornament and the signet employed to seal epistles and other things. Signet and other rings are often found on the fingers of the mummies, and were buried with them—a custom not found prudent or convenient at the present day. The devices on rings were, as stated above, very various.—S. B.

⁷ The same with the Romans (Plin. xxxiii. 1); they wore rings on all but the middle finger. This last was preferred by the Gauls and Britons.

⁸ Plin. xxxiii. 1. Of the fingers on which rings were worn. [Macrob. Sat. vii.—G. W.]

⁹ Plin. (xxxiii. 1) mentions the iron ring worn by a person betrothed. He thinks they had no rings in Homer's time. But in Egypt they were used long before. [Clem. Alex. Pædagog. iii. 99.—G. W.]

and I have seen upon the right hand of a wooden figure a ring on the thumb and two on the third finger ; and upon the left, one upon the thumb and little finger, two on the fore and second fingers, and three on the third, as may be seen in the accompanying



No. 47. Hands of a wooden figure of a woman. On the lid of a mummy-case in the British Museum.

wood-cut. The upper ring on the middle finger is set with a shell of a species common in the Red Sea, a *monodonta*, or a *trochus*.

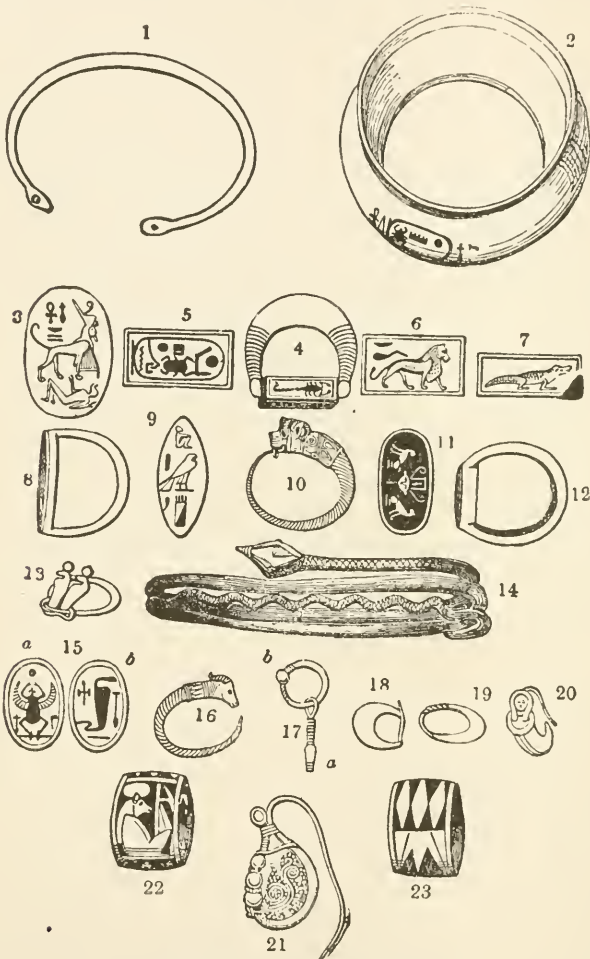
Some rings were simple ; others were made with a scarabæus, or an engraved stone ; and they were occasionally in the form of a snail, a knot, a snake, or some fancy device. They were mostly of gold ; and this metal seems to have been always preferred to silver for rings and other articles of jewellery. Silver rings, however, are occasionally met with ; and two in my possession, which were accidentally found in a temple at Thebes, are engraved with hieroglyphics containing the name of the royal city.

Bronze was seldom used for rings, though some signet rings were of this material. Some have been discovered of brass¹ and iron (of a Roman time, as I have before observed) ;² but ivory and blue porcelain were the materials of which those worn by the lower classes were usually made. The scarabæus was the favorite form both for rings and the ordinary ornaments of necklaces : in some, the stone, flat on both faces, turned on pins, like many of our seals at the present day ; and the ring itself was bound round at each end, where it was inserted into the stone, with gold wire. This was common not only to rings but to signets, and was intended for ornament as well as security.

¹ I am not sure if the alloy in them is zinc. I suspect it to be gold.

² Plin. xxxiii. 1 and 3, on iron rings.

One of the largest signets I have seen was in the possession of a French gentleman at Cairo, which contained twenty pounds'



No. 448.

Rings, signets, bracelets, and earrings.

Fig. 1. Bronze bracelet, or bangle, in the Museum of Alnwick Castle. 2. Gold bracelet in the Leyden Museum, bearing the name of Thothes III. $1\frac{1}{2}$ inch high, and 3 inches in diameter. 3. Scarabaeus of amethyst with a sphinx, emblematic of the king, trampling on a prostrate enemy; over it is the expression 'Good God, Lord of the world.' 4. a gold signet, mentioned in this page. 5, 6, 7. The three other sides of the plinth. 8. A gold ring, mentioned in this page. 9. The engraved face of it. 10. A gold earring, about $1\frac{1}{2}$ inch in diameter. 12. A gold ring in my possession, four-fifths of an inch in diameter. 11. The face of it, of the real size. 13. Gold ring with two asps. 14. A snake bracelet of gold. 15. A stone scarabaeus. 16. Gold earring. 17. Gold earring with two pearls, *a* and *b*. 18, 19, 20. Other gold earrings. 21. Gold earring, 1 inch high, and six-tenths broad. 22, 23. Rings of porcelain, or blue-glazed pottery; Museum of Alnwick Castle.

worth of gold. It consisted of a massive ring, half an inch in its largest diameter, bearing an oblong plinth, on which the devices

were engraved,¹ one inch long, $\frac{6}{10}$ in. in its greatest, and $\frac{4}{10}$ in. in its smallest breadth. On one face was the name of a king, the successor of Amenophis III., who lived about B.C. 1400; on the other a lion, with the legend 'Lord of strength,' referring to the monarch: on one side a scorpion, and on the other a crocodile.² Two cats, sitting back to back and looking round towards each other, with an emblem of the goddess Athor between them, seem to have been a favorite device on gold rings; and I have seen three or four of this pattern, one of which is in my possession.³

They also had large gold anklets or bangles,⁴ armlets, and bracelets,⁵ frequently inlaid with precious stones or enamel; some were in the shape of snakes, and others as simple rings, and worn by men as well as women. Kings are often represented with armlets and bracelets; and in the Leyden Museum is a gold one⁶ bearing the name of the third Thothmes, which was doubtless once worn by that monarch; and, without any great license of imagination, we may suppose it to have been seen by Moses himself, if Thothmes was the Pharaoh who oppressed the Israelites, and into whose presence the Jewish legislator was so often summoned.

Handsome and richly-ornamented necklaces were a principal part of the dress, both of men⁷ and women; and some idea may be formed of the number of jewels they wore from those borrowed by the Israelites at the time of the Exodus, and by the paintings of Thebes. They consisted of gold, or of beads of various qualities and shapes, disposed according to fancy; generally with a large drop or figure in the centre. Scarabæi, gold, and cornelian bottles, or the emblems of goodness and stability, lotus flowers in enamel, amethysts, pearls, false stones, imitations of fish, shells, and leaves, with numerous figures and devices, were strung in all the variety which their taste could suggest: and the sole Museum of Leyden possesses an infinite assortment of those objects, which were once the pride of the ladies of Thebes.

Some wore simple gold chains, in imitation of string, to

¹ Pliny (xxxiii. 1) is wrong.

² Conf. also the gold signet ring with the name and titles of Thothmes III., published by Bonomi in the 'Trans. of the Royal Soc. of Lit.,' 2d series, vol. i. p. 109.

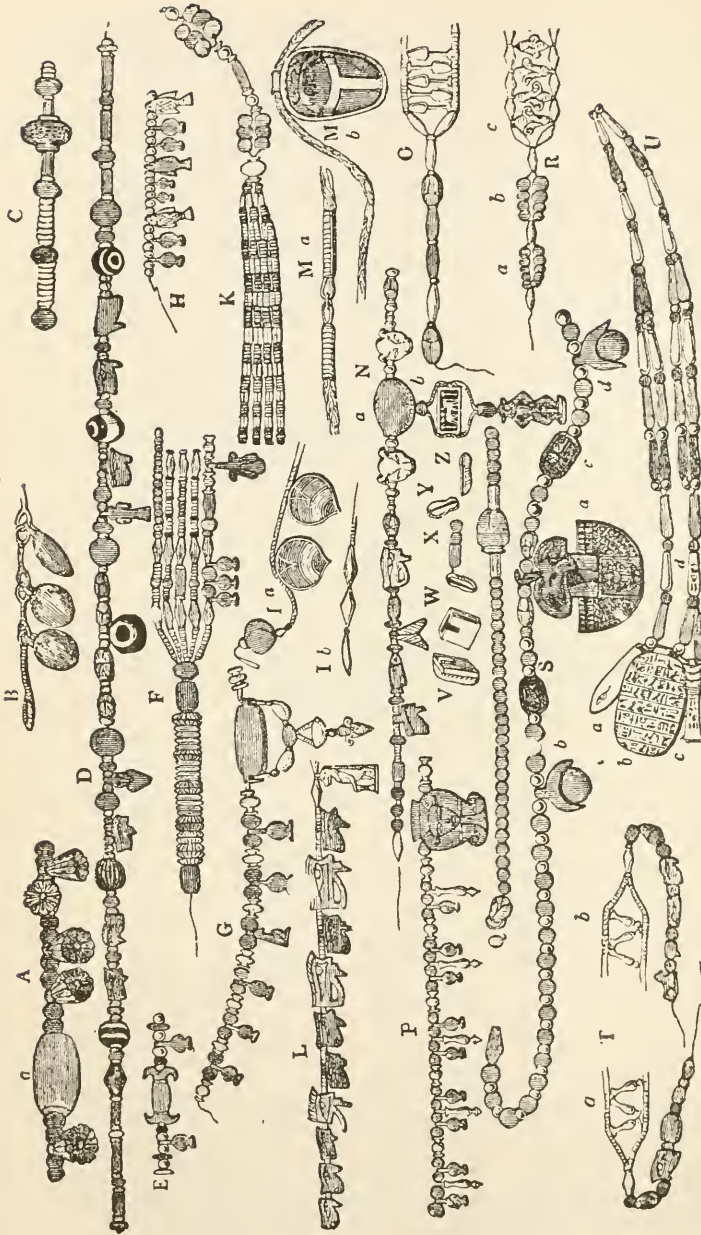
³ Woodcut No. 448, *figs.* 11 and 12.

⁴ Plin xxxiii. 3.

⁵ Called *men nefer en q. bi*, 'armlets,' or *al*, 'chains.'

⁶ Woodcut No. 448, *fig.* 2.

⁷ Necklaces and bracelets were worn by the Carthaginians, and by many Europeans, as the Gauls, Sabines, and others. Judah's bracelets and signet are mentioned in Gen. xxxviii. 18.



No. 449.

Various necklaces from the Leyden Museum.¹

B is composed of small covered cups, of bronze gilt.
 I b is the other end of I a. These leaves are of gold, inlaid with lapis-lazuli and green and red stones.
 M a, a sort of gold *torques*, or chain, of which a stone scarabæus framed in gold forms the centre ornament.
 U, in the possession of Mr. Madox.
 V, W, X, Y, Z, gold catches of necklaces, one sliding into the other.

¹ As these necklaces have always been re-strung, the exact arrangement of the beads cannot always be relied on; and in some instances beads from other neck-

laces, or even collars, have been introduced. The sepulchral scarabæus, for example, b in U, could never have been used for a necklace. — S. B.

which a stone scarabæus, set in the same precious metal, was appended; but these probably belonged to men, like the *torques* of the Romans.¹ A set of small cups, or covered saucers, of bronze gilt, hanging from a chain of the same materials, were sometimes worn by women; a necklace of which has been found belonging to a Theban lady — offering a striking contrast in their simplicity to the gold leaves, inlaid with lapis-lazuli,² red and green stones, of another she wore, which served, with many more in her possession, to excite the admiration of her friends.

The devices engraved on scarabæi, rings, and other objects of ornamental *luxé*, varied according to the caprice of individuals. Rings frequently bore the name of the wearer; others of the monarch in whose reign he lived; others, again, the emblems of certain deities; and many were mere fanciful combinations. The greater number consisted of scarabæi, mounted upon a gold ring passing through them: the scarabæus itself was of green stone, carnelian, hæmatite, granite, serpentine, agate, lapis-lazuli, root of emerald, amethyst, and other materials; and a cheaper kind was made of limestone, or steatite, stained to imitate a harder and dearer quality, or of the ordinary blue pottery.

Of the various objects of the toilet, found at Thebes and other places, the principal are bottles or vases for holding ointment and *kohl*³ or collyrium for the eyes, mirrors, combs, and the small boxes, spoons, and saucers already mentioned. The ointment was scented in various ways, and I have had occasion to notice some preserved in the Museum at Alnwick Castle, which has retained its odor⁴ several centuries: and the great use⁵ of ointment by the Egyptians is sufficiently indicated in the paintings representing the reception of guests at their parties.

With the exception of the little found in the tombs, we have nothing to guide us respecting the nature of Egyptian ointments. Some appear to be made with a nut oil,⁶ but it is probable that animal as well as vegetable grease was employed for this purpose: the other ingredients depending on the taste of the maker, or

¹ Pharaoh 'put a gold chain about (Joseph's) neck' (Gen. xli. 42), and 'a ring upon Joseph's hand.' Woodcut No. 449, *fig. M.*

² Woodcut No. 449, *figs. B, I a.*

³ It has the same name in Hebrew. [Called by the Egyptians *stem* (the Latin *stibium*) or *nustem*; one kind was called *uat*, green or bluish green, and was applied to the lids. — S. B.

⁴ Theophrastus says, 'The Egyptian ointment was not very strongly scented.'

⁵ Athenæus says the revenues of Anthylla were given to the queens of Egypt for the purchase of ointments, another term for pin-money (lib. i. 25. Corn. Nep. in Vitâ Agesilai, and Juv. Sat. xv. 50).

⁶ This agrees with the *balanon* of Theophrastus. (Plin. xiii. l.)

the purchaser. Julius Pollux¹ mentions a black kind made in Egypt, and speaks of the *sagdas* as an ointment of that country. Theophrastus,² on the contrary, states that Egyptian ointments were colorless; but we can readily account for this variance of opinion by supposing that they had in view two different qualities;³ which is further proved by the fact of our finding them both preserved at Thebes. Ointment was frequently kept in alabaster⁴ bottles, or vases, whence these obtained, among the Greeks, the name of *alabastron*, even if made of other materials: sometimes in those of the onyx⁵ or other stone, glass, ivory, bone, or shells;⁶ specimens all of which have been discovered in the tombs.

Strabo⁷ says that the common people used the oil of the *kikki*, or castor-berry, for anointing themselves, both men and women: the general purpose to which it was applied being for lamps; and many oils, as from the *simsim*,⁸ olive, almond, flax, *selgam*, colesseed, *seemya*, lettuce, and other vegetable productions, were extracted in Egypt.⁹

The custom of anointing the body is usual in hot climates, and contributes greatly to comfort. Even the Greeks, Romans,¹⁰ and others, whose limbs were mostly covered with clothes and protected from the dryness of the air, found the advantage of its use, and those whose skin was much exposed, in consequence of their scanty clothing, as the Ethiopians and other inhabitants of Africa, felt the necessity of softening and cooling the skin by the application of oils or ointments; and we find the custom most prevalent among the blacks who wear the least covering to their body. Their principal care is bestowed upon the hair of the head, which they are not in the habit of shaving, except some of the upper classes among the inhabitants of the large towns; and the highest ambition of the Ethiopians is to obtain a sufficient quantity of grease, whatever kind it may be, to cover their head, and to run down upon the shoulders, so as to give them a shining gloss, which they delight in displaying as they walk in the sun.¹¹

¹ J. Pollux, *Onom.* vi. 19.

² Theophr. *de Odoribus*.

³ Plin. xiii. 3. They adulterated their ointments. (Plin. xiii. 1.)

⁴ Matt. xxvi. 7: 'An alabaster box of very precious ointment.'

⁵ Conf. Hor. iv. Od. xi. 17.

⁶ Hor. ii. Od. v. 23.

⁷ Strabo, lib. xvii. p. 567. Herod. ii. 94. Plin. xv. 7.

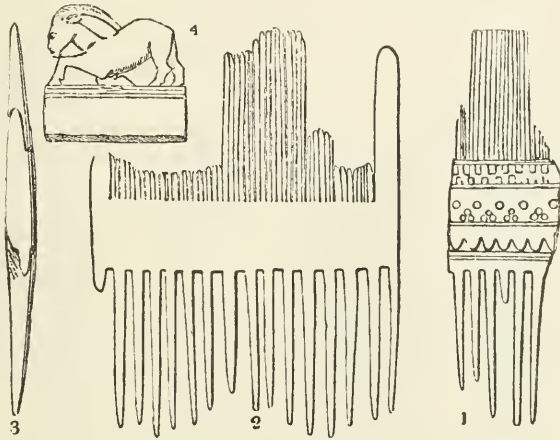
⁸ *Sesamum orientale*.

⁹ Plin. xiii. 1.

¹⁰ Ennius tells us that, even in the time of Tarquin, they had this custom. Pliny doubts when it was introduced at Rome (xiii. 3).

¹¹ Virg. *Æn.* v. 135.

The Egyptian combs were usually of wood, and double, one side having large, the other small teeth; the centre part was frequently ornamented with carved work, and perhaps inlaid. They were about four inches long and six deep; and those with a single row of teeth were sometimes surmounted with the figure of an ibex or other animal.¹



No. 450.

Combs found at Thebes.

1. Comb, with the centre part ornamented.
3. Side view of *fig. 2*.
4. An ibex, supposed to have formed the top of a comb.

The custom of staining the eyelids and brows with a moistened powder of a black color was common in Egypt from the earliest times; it was also introduced among the Jews and Romans, and is retained in the East to the present day. It is thought to increase the beauty of the eye, which is made to appear larger by this external addition of a black ring; and many even suppose the stimulus its application gives to be beneficial to the sight. It is made in various ways. Some use antimony, black oxide of manganese, preparations of lead, and other mineral substances; others the powder or the lamp-black of burnt almonds or frankincense; and many prefer a mixture of different ingredients.

Lane² is perfectly correct in stating that the expression ‘painted her face,’ which Jezebel is said to have done when Jehu

¹ These combs appear to be of a late period, and always made of wood. They are found in the Græco-Egyptian mummies. No representation or allusion to combing

the hair is seen or mentioned at the Pharaonic period. — S. B.

² ‘Modern Egyptians,’ vol. i. p. 43.

came to Jezreel, is, in the Hebrew, 'painted her eyes;' ¹ the same is again mentioned in Jeremiah and Ezekiel; ² and the lengthened form of the ancient Egyptian eye, represented in the paintings, was probably produced, as Lane supposes, by this means. Such is the effect described by Juvenal, ³ Pliny, ⁴ and other writers who notice the custom among the Romans. At Rome it was considered disgraceful for men to adopt it, as at



No. 451. Boxes, or bottles, for holding the *kohl*, for staining the eyelids.

1. In the British Museum. *c* is the bodkin for applying the *stem* or *stibium*. The others are in the Museum of Alnwick Castle. [*Figs. 5 and 7* are inscribed with the name of its possessor, 'Kams, priest, eldest royal son of Amen,' a very unusual title. — S. B.]

present in the East, except medicinally; but if we may judge from the similarity of the eyes of men and women in the paintings at Thebes, it appears to have been used by both sexes among the ancient Egyptians.

Many of these *kohl* bottles have been found in the tombs, together with the bodkin used for applying the moistened powder.

¹ 2 Kings ix. 40. In our translation, 'She painted her face, and tired her head, and looked out at a window.' In the margin, 'put her eyes in painting.'

² Ezek. xxiii. 40: 'For whom thou didst

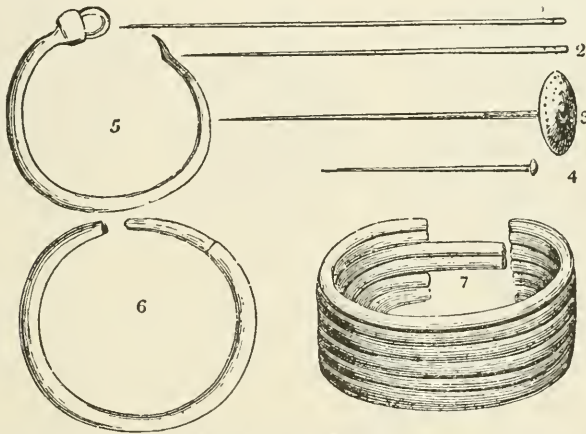
wash thyself, paintedst thine eyes, and deckedst thyself with ornaments.' In Jeremiah (iv. 30) it is 'eyes' in Hebrew.

³ Juv. Sat. ii. 93.

⁴ Plin. Ep. vi. 2.

They are of various materials, usually stone, wood, or pottery, sometimes composed of two, sometimes of four and five separate cells, apparently containing each a mixture, differing slightly in its quality and hue from the other three. Many were simple round tubes, vases, or small boxes; some were ornamented with the figure of an ape, or monster, supposed to assist in holding the bottle between his arms, while the lady dipped into it the pin, with which she painted her eyes; and others were in imitation of a column made of stone, or rich porcelain of the choicest manufacture.¹

Pins and needles were also among the articles of the toilet which have been occasionally found in the tombs. The former



No. 452.

Needles, pins, and earrings.

1, 2. Bronze needles in the Museum of Abwick Castle, 3 and 3½ inches long. 3. Large gold-headed pin, in the Berlin Collection. 4. Another, of smaller size. 5. Silver earring, in my possession, one and four-tenths of an inch in diameter. 6. Gold earring in the Berlin Museum, one and one-third of an inch in diameter. 7. Another, seen from above.

are frequently of considerable length, with large gold heads; and some of a different form, tapering gradually to a point, merely bound with gold at the upper end, without any projecting head, seven or eight inches in length, appear to have been intended for arranging the plaits or curls of hair, like those used in England in the days of Elizabeth for nearly the same purpose.

Some needles were of bronze, from three to three and a half inches in length: but as few have been found, we are not able to form any opinion respecting their general size and quality,

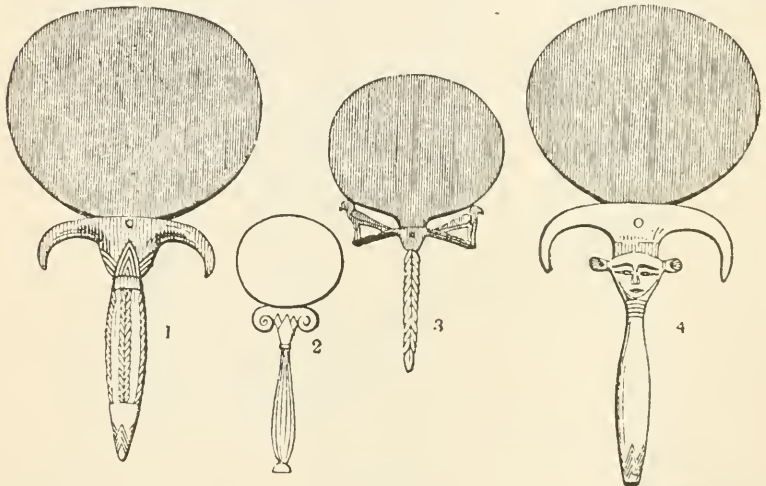
¹ The little boxes and cases for holding stibium had occasionally inscriptions on them describing the use of the cosmetic: as, 'to lay on the lids or lashes;' 'good for

the sight;' 'to stop bleeding;' 'best stibium,' 'to cause tears.' (Pierret, 'Dict. d'Arch. Égypt.' p. 139.)—S. B.

particularly of those used for fine work, which must have been of a very minute kind.

One of the principal objects of the toilet was the mirror. It was of mixed metal, chiefly copper, most carefully wrought and highly polished; and so admirably did the skill of the Egyptians succeed in the composition of metals, that this substitute for our modern looking-glass was susceptible of a lustre which has even been partially revived at the present day, in some of those discovered at Thebes, though buried in the earth for many centuries.

The mirror itself was nearly round, inserted into a handle of wood, stone, or metal, whose form varied according to the



No. 453.

Metal mirrors.¹

British Museum.

1. Bronze mirror, handle in shape of a papyrus sceptre. 2. Do., handle in shape of lotus column. From a painting at Thebes. 3. Handle in shape of a tress of hair and two hawk standards. 4. Handle in shape of a papyrus sceptre and head of the goddess Athor; about 11 inches high.

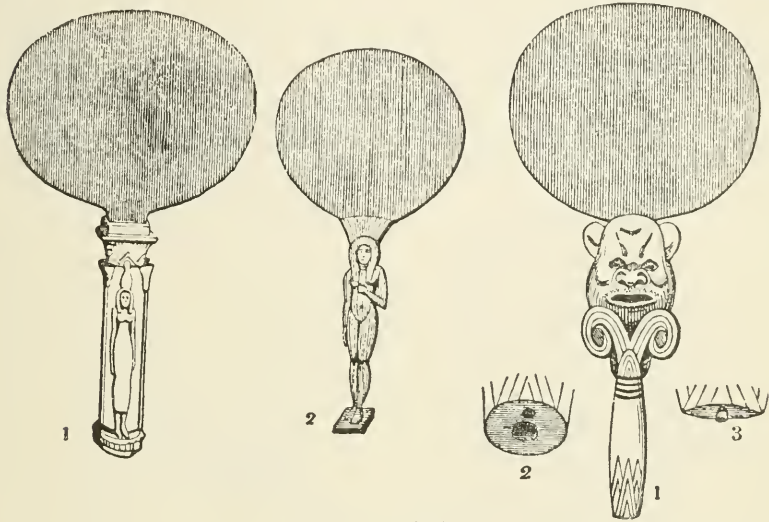
taste of the owner. Some presented the figure of a female, a flower, a column, or a rod ornamented with the head of Athor, a bird, or a fancy device; and sometimes the face of the deity Bes was introduced to support the mirror, serving as a contrast to the features whose beauty was displayed within it.² The same kind of metal mirror was used by the Israelites, who doubtless brought

¹ [Conf. with the metal mirrors on stands of the Chinese. — G. W.]

² The mirrors of the Egyptian period have oval or oblate disks, with spikes to insert into the handles. It is not till the Roman period that the disks became circular. They are always made of a kind of bronze. No brass has been found in

Egypt. The mirror was called *maa her*, 'see face,' or *un her*, 'show face.' In order to retain its polish when not in use, it had a leather case, in which it was kept. The handle of the mirror, and sometimes the mirror itself, were inscribed with the name of the possessor. — S. B.

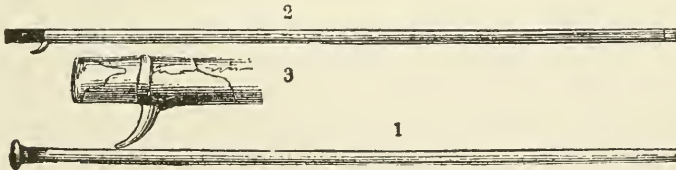
them from Egypt; and the brazen laver made by Moses for the tabernacle was composed 'of the looking-glasses of the women, which assembled at the door of the tabernacle of the congregation.'¹



Other metal mirrors.

No. 454. — Fig. 1, in Mr. Salt's Collection; with a wooden handle, ornamented with the goddess Neneb. Fig. 2, in the Museum of Alnwick Castle; handle in shape of the goddess Anucis.

No. 455. — in the possession of Dr. Hogg. Figs. 2 and 3 show the bottom of the handle, to which something has been fastened.



No. 456.

Walking-sticks found at Thebes.

2 is of cherry-wood, in the British Museum. 3 shows the peg at the side.

When walking from home, Egyptian gentlemen frequently carried sticks, varying from three or four to about six feet in length, some of which were surmounted with a knob, imitating a

¹ Exod. xxxviii. 8: 'He made the laver of brass, and the foot of it of brass, of the looking-glasses of the women assembling.' The word brass, *nahas*, is used in Hebrew, as in Arabic [like the *farass* of Southern Spain, which is evidently a Moorish word — G. W.], to denote copper in any form.

or with any alloy. The 'looking-glass' or mirror is, in Hebrew and Arabic, *mirāth*, or *mirāh* [or *marraeh*. In Job xxxvii. 18 a mirror is called *rai*. — G. W.]. The roots of these two words, and probably of the Coptie, are related.

flower,¹ and others with the more usual peg projecting from one side,² some of which have been found at Thebes. One in the possession of Mr. Salt, of the latter form, was of *cherry*³ wood, and only three feet three inches long; and those I have seen with the lotus head were generally about the same length. Others appear to have been much longer; the sculptures represent them at least six feet; and one brought to England by Madox was about five feet in length. On entering a house, they left their stick in the hall or at the door; and poor men were sometimes employed to hold the sticks of the guests who had come to a



No. 457.

Priests and other persons of rank walking with sticks.

Thebes.

party on foot,⁴ being rewarded by the master of the house for their trouble with a trifling compensation, with their dinner, or a piece of meat to carry to their family. The name of each person was frequently written on his stick⁵ in hieroglyphics (instances of which I have seen in those found at Thebes); for which reason a hard wood was preferred, as the *acacia*, which seems to have been more generally used than any other.⁶

We have little knowledge of the nature of their baths: but as they were forbidden in deep mourning to indulge in them,⁷

¹ Woodcut No. 457, *fig.* 4, and No. 156, *fig.* 1.

² Woodcut No. 457, *fig.* 2, and No. 456, *fig.* 2.

³ According to Pliny (xv. 25), this tree was introduced into Italy by Lucullus, from Pontus, and thus went to Britain. He says it would not grow in Egypt, and it is not now found there; but is not a species *indigenous* in the north of our island?

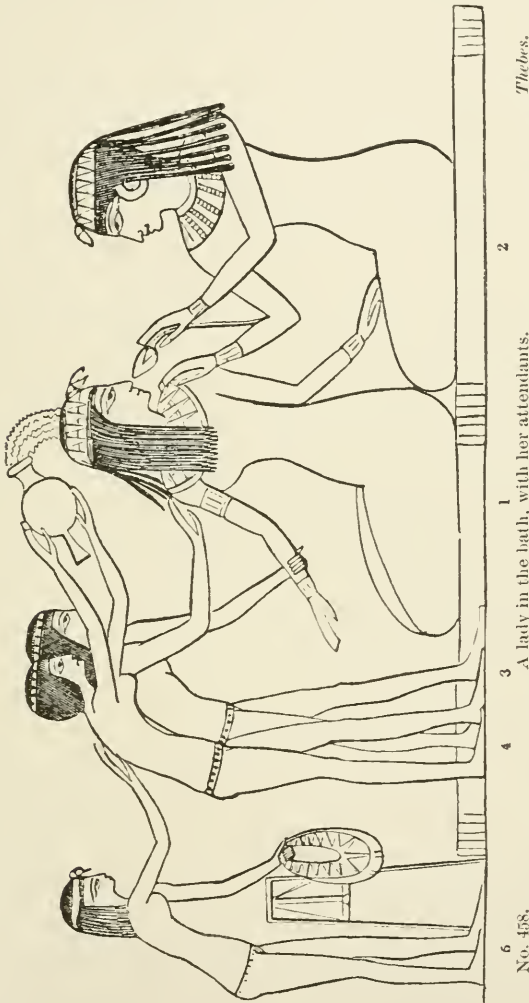
⁴ Plate XI., *fig.* 10.

⁵ Numb. xvii. 2: 'Write thou every man's name upon his rod.'

⁶ The inscriptions on sticks have not only the names of the possessors, but also addresses to the stick itself as the support of their old age. Besides the long walking-stick, a short stick, called *batana*, used for the *bastinado*, was also used by the Egyptians. Many of the walking-sticks had a head in shape of a papyrus flower. — S. B.

⁷ Diod. i. 72.

we may conclude they were considered as a luxury, as well as a necessary comfort. The only instance I have met with in the paintings is in a tomb at Thebes, where a lady is represented with four attendants, who wait upon her, and perform various



No. 458. Thebes.
 1. A lady in the bath, with her attendants.
 2. An attendant, holding a flower and supporting her. 3 rubs her arm with the hand, as in the modern Turkish bath. 4 pours water over her. 5 takes care of her clothes and ornaments.

duties. One removes the jewelry and clothes she has taken off, or suspends them to a stand in the apartment ; another pours water from a vase over her head, as the third rubs her arms and body with her open hands ; and a fourth, seated near her, holds a sweet-scented flower to her nose, and supports her as she sits.

The same subject is treated nearly in the same manner on some of the Greek vases, the water being poured over the bather, who kneels, or is seated on the ground. Warm¹ as well as cold baths were used by the Egyptians, though for ordinary ablutions cold water was preferred; and both were probably recommended and taken medicinally when occasion required.

The Egyptians paid great attention to health, and 'so wisely,' says Herodotus,³ was medicine managed by them, that no doctor was permitted to practise any but his own peculiar branch. Some were oculists, who only studied diseases of the eye; others attended solely to complaints of the head; others to those of the teeth; some again confined themselves to complaints of the intestines, and others to secret and internal maladies; accoucheurs being usually, if not always, women.⁴ They received certain salaries from the public treasury; and after they had studied those precepts which had been laid down from the experience of their predecessors, they were permitted to practise; and in order to ensure their attention to the prescribed rules, and to prevent dangerous experiments being made upon patients, they were punished if their treatment was contrary to the established system; and the death of a person entrusted to their care, under such circumstances, was adjudged to them as a capital offence.⁵ If, however, every remedy had been administered according to the sanitary law, they were absolved from blame;⁶ and 'these provisions,' says Diodorus, 'were made with the persuasion that few persons could be capable of introducing any new treatment superior to what had been sanctioned and approved by the skill of old practitioners.'

Though paid by government as a body, it was not illegal to receive fees for their advice and attendance; and demands could be made in every instance, except on a foreign journey and on military service, when patients were visited free of expense.⁷ The principal mode adopted by the Egyptians for preventing illness was attention to regimen and diet: 'being persuaded that the majority of diseases proceed from indigestion and excess of eating;' and they had frequent recourse to abstinence, emetics, slight doses of medicine, and other simple means of relieving the

¹ Diodorus (i. 84) says they were even kept for the sacred animals.

² Herodot. ii. 37.

³ *Ibid.* ii. 84.

⁴ As at present in Egypt. Exod. i. 15.

⁵ Pliny (xxix. 1) observes, there is no law to punish their ignorance at Rome, and that a physician is the only man who can kill another with impunity.

⁶ *Diod.* i. 82.

⁷ *Ibid.*

system,¹ which some persons were in the habit of repeating every two or three days. 'Those who live in the corn country,' as Herodotus terms it,² were particular for their attention to health. 'During three successive days, every month, they submitted to a regular course of medicine;' from the conviction that illness was wont to proceed from some irregularity in diet: and if preventives were ineffectual, they had recourse to suitable remedies, adopting a mode of treatment very similar to that mentioned by Diodorus. The employment of numerous drugs in Egypt has been mentioned by sacred and profane writers; and the medicinal properties of many herbs which grow in the deserts, particularly between the Nile and Red Sea, are still known to the Arabs, though their application has been but imperfectly recorded and preserved. 'O virgin, daughter of Egypt,' says Jeremiah,³ 'in vain shalt thou use many medicines, for thou shalt not be cured.' Homer, in the *Odyssey*,⁴ describes the many valuable medicines given by Polydamna, the wife of Thonis, to Helen, while in Egypt, 'a country whose fertile soil produces an infinity of drugs, some salutary and some pernicious, where each physician possesses knowledge above all other men;' and Pliny makes frequent mention of the productions of that country, and their use in medicine.

He also notices the physicians of Egypt;⁵ and as if their number⁶ was indicative of the many maladies to which the inhabitants were subject, he observes that it was a country productive of numerous diseases. In this, however, he does not agree with Herodotus,⁷ who affirms that 'after the Libyans, there are no people so healthy as the Egyptians, which may be attributed to the invariable nature of the seasons in their country.'⁸

¹ Diod. i. 82.

² Herodot. ii. 77.

³ Jerem. lvi. 11.

⁴ Homer, *Od.* Δ, 229.

⁵ Plin. xxvi. 1.

⁶ Herodotus says, 'Every place is full of doctors,' in Egypt (ii. 84).

⁷ Herodot. i. 77.

⁸ The science of medicine was one of the earliest discoveries of Egypt. Athetaes, the successor of Menes of the 1st Dynasty, is said to have written on the subject, and five papyri on the subject have survived. They are of the period of the 18th and 19th dynasties. One known as the Papyrus Ebers, from its discoverer, is attributed to the age of Kherperes or Bikeres. The second, that of Berlin, found in the reign

of Usaphais of the 1st Dynasty, was completed by Senet or Sthenes of the second line. The third, that of the British Museum, contains a receipt said to have been mysteriously discovered in the reign of Cheops of the 4th Dynasty. A fourth, of Leyden, as well as another in the possession of Mr. Edwin Smith, is not assigned to any age. Their anatomical doctrine was erroneous, and referred the action of the blood and the nervous power to thirty-two vessels in the head. The maladies of which they treat are various, and amongst others obstetric cases, and the diagnosis is by no means wrong. The curatives in use were ointments, drinks, plasters, fumigations, and clysters, and the drugs employed were taken from vegetables, minerals, and ani-

In Pliny's time the introduction of luxurious habits and excess had probably wrought a change in the people; and to the same cause may be attributed the numerous complaints among the Romans, 'unknown to their fathers and ancestors.'¹

The same author tells us that the Egyptians examined the bodies after death, to ascertain the nature of the diseases of which they had died;² and we can readily believe that a people so far advanced in civilization and the principles of medicine as to assign each physician his peculiar branch, would have resorted to this effectual method of acquiring knowledge and experience for the benefit of the community.

It is evident that the medical skill of the Egyptians was well known even in foreign and distant countries; and we learn from Herodotus³ that Cyrus and Darius both sent to Egypt for medical men.

Diodorus tells us⁴ that dreams were regarded in Egypt with religious reverence, and the prayers of the devout were often rewarded by the gods with an indication of the remedies their sufferings required; but this and magic⁵ were only a last resource when the skill of the physician had been baffled, and all hopes of their recovery were lost; and a similar superstitious feeling induced them to offer exvotos in their temples for the same purpose.⁶ [Origen says, when any part of the body was affected by disease, they invoked the demon to whom it was supposed to belong to obtain a cure.—G. W.]

They consisted of various kinds. Some persons promised a certain sum for the maintenance of the sacred animals belonging to the deity whose interposition they solicited; which, in the case of children, was decided by weighing a certain portion of the hair of their head, 'either all, or half, or a third,'⁷ shaved

mals. Those for each draught were mixed together, pounded, boiled, and strained through linen. Pure water was used to combine them generally, but beer, wine, oil, and milk were also employed. The draughts were sweetened with honey and taken hot morning and evening. Many maladies were attributed to the possession of an evil spirit, who was exorcised by the physician. The doctors belonged to the college of *hierogrammateis*, or sacred scribes, as appears by one of that order being sent to cure the Princess of Bakhtan in the reign of Rameses XII. Altogether medicine amongst the Egyptians was pure empiricism, and anatomy not understood, notwithstanding the constant dissection

practised for the purposes of embalming. (Maspero, 'Histoire ancienne,' p. 81. Pierret, 'Dict. d'Ant. Egypt.,' p. 329, where the various sources of information will be found.)—S. B.

¹ Plin xxvi. 1.

² Ibid. xix. 5.

³ Herodot. iii. 1 and 132.

⁴ Diodorus' account of learning remedies from dreams is not quite consistent with the positive observations they took so much care to make. The advocates for animal magnetism may perhaps see it in this passage of the historian. (Diodor. i. 25.)

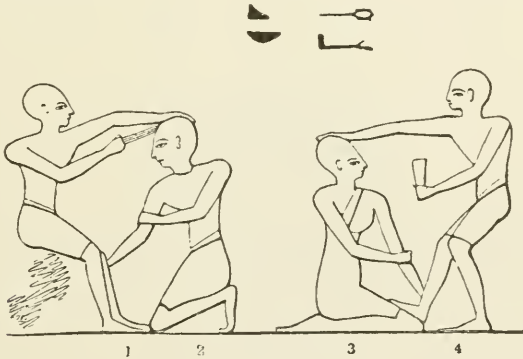
⁵ Wisdom of Solomon, xvii. 8.

⁶ [Clemens, apud Origen, lib. viii. p. 41, edit. Cantab.—G. W.]

⁷ Herodot. ii. 65.

expressly for the purpose; and as soon as the cure had been effected, they accomplished their vow by giving an equal weight of silver to the curators.

These persons occasionally visited different parts of the country, carrying with them the banners of their respective deities; and the credulity of the peasants being frequently induced to solicit their aid, and to barter the doubtful assistance of the god for the real rewards lavished on his artful servants, much money was collected by them. And so profitable was it, that neither the change of religion, nor the simplicity of Islám, have been able to discard the custom; and the guardians of the sheikh's tombs, in like manner, send their emissaries with flags and drums to different parts of the country to levy contributions from the credulous in return for the promised assistance of their *wellee*, or patron saint.



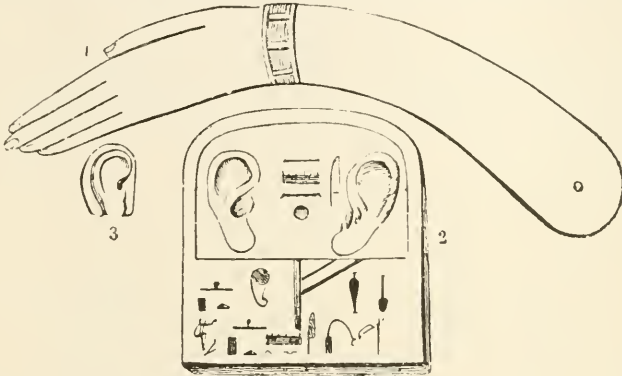
No. 459.

Barbers. Above, *haq*, 'to shave.'*Beni-Hussan.*

After the cure was effected, they frequently suspended a model of the restored part in the temple of the god whose interposition they had invoked; precisely in the same manner as in the sheikhs' tombs of modern Egypt, and in the Roman Catholic chapels of Italy and other countries, consecrated to the Virgin or to a saint; and ears, eyes, distorted arms, and other members, were dedicated as memorials of their gratitude and superstition.

Sometimes travellers who happened to pass by a temple inscribed a votive sentence on the walls to indicate their respect for the deity, and solicit his protection during their journey; the complete formula of which contained the adoration (*pros-kunéma*) of the writer, with the assurance that he had been mindful of his wife, his family, and his friends: and the reader of the inscription was sometimes included in a share of the bless-

ings it solicited. The date of the king's reign, and the day of the month, were also added, with the profession and parentage of the writer. The complete formula of the *proskunéma* was as follows: 'The adoration of Caius Capitolinus, son of Flavius Julius, of the fifth troop of Theban horse, to the goddess Isis, with ten thousand names. And I have been mindful of (or have made an adoration for) all those who love me, and my consort, and children, and all my household, and for him who reads this. In the year 12 of the Emperor Tiberius Cæsar, the 15th of Paüni.'



No. 460.

Exvotos.

1. Ivory hand, supposed castanet, British Museum. 2. Stone tablet, dedicated to Amen-ra, for the recovery of a complaint in the ear, for a scribe named Amenhetp (Amenophis): found at Thebes. 3. An ear of terra-cotta in my possession, from Thebes.

The Egyptians, according to Pliny,¹ claimed the honor of having invented the art of curing diseases. Indeed the study of medicine and surgery appears to have commenced at a very early period in Egypt, since Athothes, the second king of the country, is stated to have written upon the subject of anatomy, and the schools of Alexandria² continued till a late period to enjoy the reputation and display the skill they had inherited from their predecessors. Hermes³ was said to have written six books on medicine, the first of which related to anatomy; ⁴ and the various recipes known to have been beneficial were recorded, with their peculiar cases, in the memoirs of physic, inscribed among the laws already alluded to, which were deposited in the principal temple of the place, as at Memphis in that of Ptah, or Vulcan.

¹ Plin. vii. 56.

² [Ammian. Marcellinus (i. 16) says, for a doctor to recommend his skill, it was sufficient to say that he had studied at Alexandria. — G. W.]

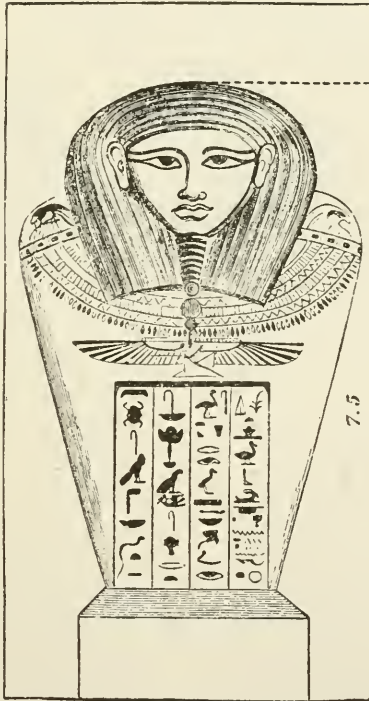
³ Hermes and Athothes may have been confounded, or they may be in this instance the same person. The god Hermes, or Thoth, generally implied intellect.

⁴ Clem. Alex. Strom. vi.

The embalmers were probably members of the medical profession, since the knowledge required for that purpose appears to be connected with their peculiar studies; and the Bible expressly states that 'the physicians¹ embalmed' Jacob. This part, however, belongs more properly to the funeral ceremonies of the Egyptians, into which I do not here enter; reserving that portion of my subject to future chapters, whose less contracted dimensions will enable me to introduce the illustrations connected with it on a more suitable scale: I have also taken advantage of the opportunity there afforded of entering more fully into the mythology of the Egyptians, and the ceremonies connected with their religion.²

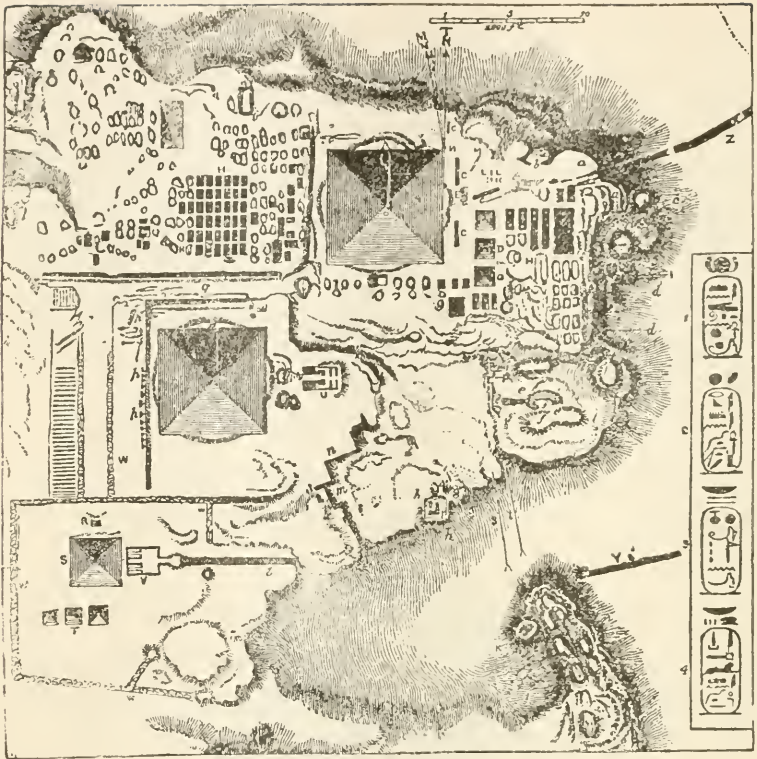
¹ Gen. 1. 2.

² See vol. iii.



No. 461.

Sarcophagus with the goddess Nut on the breast.

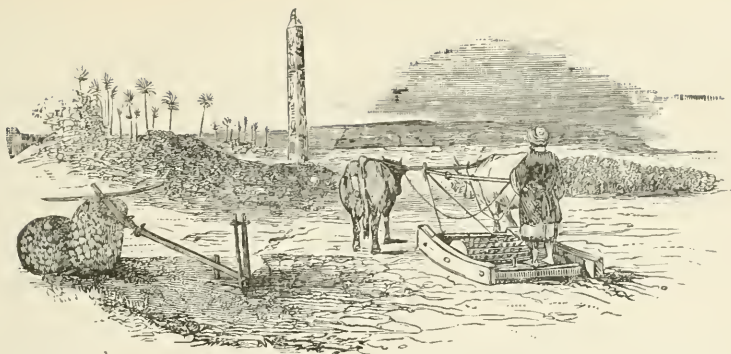


No. 462.

TOPOGRAPHICAL PLAN OF THE PYRAMIDS OF GIZEH.

- A. Entrance to the Great Pyramid.
- B. Entrance to the Second Pyramid.
- CC. Long pits, by some supposed for mixing the mortar.
- D. Pyramid of the daughter of Cheops (Herodotus ii. 126).
- E. Pavement of black stones (basaltic trap), the same as found on the causeways of the pyramids of Saqqâra.
- F. Remains of masonry.
- G. Round enclosures of crude brick, of Arab date, at N. E. angle of this pyramid.
- H. Tombs of individuals, with deep pits.
- I. The tomb of numbers.
- K. Two inclined passages, meeting underground, apparently once belonging to a small pyramid that stood over them.
- LL. The rock is here cut to a level surface.
- M. A narrow and shallow trench cut in the rock.
- N. A square space cut in the rock, probably to receive and support the corner stone of the casing of the pyramid.
- P. Here stood a tomb which had received the title of the Temple of Osiris.
- Q. Tomb of trades, to west of Tombs H.
- R. A pit cased with stone, of modern date.
- S. The Third Pyramid.
- T. Three small pyramids.
- U, V. Ruined buildings, whose original use it is now difficult to determine.

- W W W. Fragments of stone, arranged in the manner of a wall.
 - X. A few palms and sycamores, with a well.
 - Y. Southern stone causeway.
 - Z. Northern causeway, repaired by the Caliphs.
 - a. Tombs cut in the rock.
 - b. Masonry.
 - c. Black stones.
 - d, d. Tombs cut in the rock.
 - e. The sphinx.
 - f. Pits, probably unopened.
 - g. Pits.
 - h. Stone ruin on a rock.
 - i. Doorway, or passage, through the causeway.
 - k. A grotto in the rock.
 - l. Inclined cause-way, part of Y.
 - m, n. Tombs in the rock.
 - o. Some hieroglyphics on the rock.
 - p. Tombs cut in the scarp of the rock.
 - q. Stone wall.
 - r. Steps cut in the rock, near the N. W. angle of the Great Pyramid.
 - s, t. Magnetic south, in 1832 and 1836, corresponding to M N; T N being 'true north.'
- The names I and 2 are of king Ergamenes, mentioned by Diodorus (lib. iii. s. 6), and another Ethiopian monarch, found at Dakkeh.



VIGNETTE K. — Machine used as a harrow after the land is ploughed. Heliopolis—Cairo in the distance.

CHAPTER XI.

Richness of Egypt — An agricultural and manufacturing Country — Origin of Mensuration and Geometry — Astronomical Calculations connected with the Rise of the Nile — Year of 365 Days — Sothic Year of 365½ Days — Flocks — Sheep kept for their Wool — Former Advantages of Egypt in Manufactures — Abundance of Produce — Land Measures — Weights — Irrigation — The Inundation — Mode of cultivating the Land — Plough — Hoe — Swine and Cattle to tread in the Seed — Sowing — Soil of Egypt — The Nile, its Branches — Dressing of Lands — Different Crops — Cultivation of Wheat, gathering the Corn, and threshing — Inundation — Different Levels of Egypt — Edge of Desert cultivated — Harvest Home and other Festivals of the Peasants — Care of Animals — Veterinary Art — Eggs hatched by artificial Means.

IN a country like Egypt, whose principal riches consist in the fruitfulness of its soil, it is reasonable to suppose that agriculture was always one of the principal cares of the inhabitants, and a subject to which their attention was directed at the earliest period of their existence as a nation.

The richness of the valley of the Nile was proverbial; and this had no doubt induced the conquering tribe, who, as already observed, were the ancestors of the afterwards powerful Egyptians, to migrate from Asia and settle in that fertile country; and the same continued to be an inducement to other people in later times to invade and possess themselves of Egypt. The pastor race, called Hyksos or Shepherd Kings, appear to have been the first to follow the example of the early Asiatic invaders; and though the period and history of their conquest are involved in obscurity, it is evident that they entered Egypt from the side of Syria, and that they obtained for some years a firm footing in the country, possessing themselves of Lower Egypt, with a portion of the Thebaid, and perhaps advancing to

Thebes itself. I at first supposed them to have come from Assyria: but on more mature consideration have been disposed, as already stated, to consider them a Scythian tribe,¹ whose nomad habits accord more satisfactorily with the character of a pastoral race, and whose frequent inroads at early periods into other countries show the power they possessed as well as their love of invasion, which were continued till a late time, and afterwards imitated by their successors, the Tartar hordes of Central Asia. This inroad of the Shepherds was followed, after a long interval, by the successive occupations of Egypt by the Persians, the Macedonians, and the Romans; and Egypt, after having passed under the dominion of the Arabs and at length of the Turks, still continues, in spite even of the injuries it has received from the misrule of these last, to be coveted for the richness and capabilities of its productive soil.

It is an old and true remark, that the inhabitants of a rich country are ever exposed to the aggressions of powerful neighbors whose soil is less productive, whilst the destiny of these last is rather to be conquerors than conquered: and this has been fully proved by experience and the history of the world. We are, therefore, more surprised at the great duration of the power of Egypt, which, to calculate only from the reign of Usertesen to the Persian conquest, continued without interruption through a period of twelve hundred years. So remarkable a circumstance can only be attributed to the rigid discipline of the Egyptian constitution and the stern regulations of the priesthood, which, by scrupulously watching over the actions of the monarch, and obliging him to conform to certain rules established for his conduct both in public and in private, prevented the demoralizing effect of luxurious habits, with the baneful example of a corrupt court, and, by a similar attention to the conduct of all classes, exercised a salutary influence over the whole community. And the successful promotion of industry, the skill of their artisans, and the efficiency of their army, were owing to the same well-ordered system.

Particular attention was always given to the agricultural classes: grain was looked upon as the staple commodity of the Egyptian market, and the memorial of this was maintained to a late time, after Egypt had attained an unrivalled celebrity as a

¹ Recent discoveries show them to have been of Semitic and not Tartar origin. Pleyte, 'Culte du Dieu Sét.' — S. B.

manufacturing country, in some of the religious ceremonies, and, above all, at the festival of the coronation. Such, indeed, was the respect paid in Egypt to the pursuits of husbandry that the soldiers, a class inferior only to the priesthood, and from which alone the king, when not of the priestly order, could be chosen, were permitted and even encouraged to occupy their leisure time in the tillage of the lands allotted them by Government; and every priest and noble of the country was expected to use his utmost endeavors to encourage the industry of the agricultural population.

Of the three states of society — the hunter, the shepherd, and the agriculturist — the last, as has been already observed, is the most capable of arriving at and advancing in civilization; and those countries where agriculture is successfully encouraged speedily rise to opulence and power. To this was Egypt indebted for its immense resources, which, even from so confined a valley, maintained a population of 7,000,000, supplied several neighboring countries with corn, supported an army of 410,000 men besides auxiliaries, extended its conquests into the heart of Asia, and exercised for ages great moral influence throughout a large portion of Asia and Africa.

In the infancy of her existence as a nation, Egypt was contented with the pursuits of agriculture; but in process of time the advancement of civilization and refinement led to numerous inventions, and to improvements in the ordinary necessities of life, and she became at length the first of nations in manufactures, and famed amongst foreigners for the excellence of her fine linen, her cotton and woollen stuffs, cabinet-work, porcelain, glass, and numerous branches of industry. That Egypt should be more known abroad for her manufactures than for her agricultural skill might be reasonably expected, in consequence of the exportation of those commodities in which she excelled, and the ignorance of foreigners respecting the internal condition of a country from which they were excluded by the jealousy of the natives; though, judging from the scanty information imparted to us by the Greeks, who in later times had opportunities of examining the valley of the Nile, it appears that we have as much reason to blame the indifference of strangers who visited the country as the exclusiveness of the Egyptians. The Greeks, however, confessed the early advancement of the Egyptians in agricultural as well as mechanical pursuits; and Diodorus is evidently of opinion that, with colonization, the knowledge of

husbandry and various institutions were carried from Egypt into Greece.¹

There are fortunately other sources of information, which explain their mode of tilling the land, collecting the harvest, and various peculiarities of their agriculture; and, independent of what may be gleaned from Herodotus and Diodorus, numerous agricultural scenes, in the tombs of Thebes and Lower Egypt, give full and amusing representations of the process of ploughing, hoeing, sowing, reaping, threshing, winnowing, and housing the grain. In considering the state of agriculture in Egypt, we do not confine its importance to the direct and tangible benefits it annually conferred upon the people, by the improved condition of the productions of the soil; the influence it had on the manners and scientific acquirements of the people is no less obvious and worthy our contemplation: and to the peculiar nature of the Nile, and the effects of its inundation, has been reasonably attributed the early advancement of the Egyptians in geometry and mensuration. Herodotus, Plato, Diodorus,² Strabo,³ Clemens of Alexandria,⁴ Iamblichus, and others, ascribe the origin of geometry to changes which annually took place from the inundation, and to the consequent necessity of adjusting the claims of each person respecting the limits of the lands; and, though Herodotus may be wrong in limiting the commencement of those observations to the reign of Sesostrius, his remark tends to the same point, and confirms the general opinion that this science had its origin in Egypt.

It is reasonable to suppose, that, as the inundation subsided, much litigation sometimes occurred between neighbors respecting the limits of their unenclosed fields; and the fall of a portion of the bank, carried away by the stream during the rise of the Nile, frequently made great alterations in the extent of land near the river-side. We therefore readily perceive the necessity of determining the quantity which belonged to each individual, whether to settle disputes with a neighbor, or to ascertain the tax due to government.⁵ But it is difficult to fix the period when the science of mensuration commenced: if we have ample proofs of its being known in the time of Joseph, this does not carry us far back into the ancient history of Egypt; and there is evidence of geometry and mathematics having already

¹ Diodor. i. s. 20, 23, 28, 96, &c., and v. 58.

² Strabo, xvii. p. 542.

³ Clem. Strom. i. p. 20.

⁴ Ibid. i. 81.

⁵ Herodot. ii. 109.

made the same progress at the earliest period of which any monuments remain, as in the later era of the patriarch, or of the great Rameses.

Besides the mere measurement of superficial areas, it was of paramount importance to agriculture, and to the interests of the peasant, to distribute the benefits of the inundation in due proportion to each individual, that the lands which were low might not enjoy the exclusive advantages of the fertilizing water, by constantly draining it from those of a higher level. For this purpose, the necessity of ascertaining the various elevations of the country, and of constructing accurately-levelled canals and dykes, obviously occurred to them; and if it be true that Menes, their first king, turned the course of the Nile into a new channel he had made for it, we have a proof of their having, long before his time, arrived at considerable knowledge in this branch of science, since so great an undertaking could only have been the result of long experience.

These dykes were succeeded or accompanied by the invention of sluices, and all the mechanism appertaining to them. The regulation of the supply of water admitted into plains of various levels, the report of the exact quantity of land irrigated, the depth of the water and the time it continued upon the surface, which determined the proportionate payment of the taxes, required much scientific skill; and the prices of provisions for the ensuing year were already ascertained by the unerring prognostics of the existing inundations. This naturally led to minute observations respecting the increase of the Nile during the inundation: Nilometers, for measuring its gradual rise or fall, were constructed in various parts of Egypt, and particular persons were appointed to observe each daily change, and to proclaim the favorable or unfavorable state of this important phenomenon. On these reports depended the time chosen for opening the canals, whose mouths were closed until the river rose to a fixed height,¹ upon which occasion grand festivities were proclaimed throughout the country, in order that every person might show his sense of the great benefit vouchsafed by the gods to the land of Egypt. The introduction of the waters of the Nile into the interior, by means of these canals, was allegorically construed into the union of Osiris and Isis; the instant of cutting away the dam of earth which separated the bed of the

¹ Pliny, lib. xviii. 18. The canals are now generally cut about the 10th of August.

canal from the Nile, was looked forward to with the utmost anxiety; and it is reasonable to suppose that many omens were consulted in order to ascertain the auspicious moment for this important ceremony.

Superstition added greatly to the zeal of a credulous people. The deity or presiding genius of the river was propitiated by suitable oblations, both during the inundation and about the period when it was expected; and Seneca¹ tells us, that on a particular *fête* the priests threw presents and offerings of gold into the river near Philæ, at a place called the Veins of the Nile, where they first perceived the rise of the inundation. Indeed, we may reasonably suppose that the grand and wonderful spectacle of the inundation excited in them feelings of the deepest awe for the divine power to which they were indebted for so great a blessing: and a plentiful supply of water was supposed to be the result of the favor of the gods, as a deficiency was attributed to their displeasure, punishing the sins of an offending people.

On the inundation depended all the hopes of the peasant: it affected the revenue of the government, both by its influence on the scale of taxation, and by the greater or less profits on the exportation of grain and other produce; and it involved the comfort of all classes. For in Upper Egypt no rain fell to irrigate the land; it was a country, as ancient writers² state, which did not look for showers to advance its crops; and if, as Proclus³ says, these fell in Lower Egypt, they were confined to that district, and heavy rain was a prodigy in the Thebaid. There is, however, evidence that heavy rain did occasionally fall in the vicinity of Thebes, from the appearance of the deep ravines worn by water in the hills, about the tombs of the kings, though probably, as now, after intervals of fifteen or twenty years; and it may be said from modern experience, that slight showers fall there about five or six times a year, in Lower Egypt much more frequently, and at Alexandria almost as often as in the south of Europe. The result of a favorable inundation was not confined to tangible benefits: it had the greatest effect on the mind of every Egyptian by long anticipation; the happiness arising from it, as the regrets on the appearance of a scanty supply of water, being far more sensibly felt than in countries

¹ Seneca, Nat. Quæst. iv. 2, p. 886.

² Mela, i. c. 9.

³ Proclus, in Tim. lib. 1.

which depend on rain for their harvest, where future prospects not being so soon foreseen, hope continues longer; the Egyptian, on the other hand, being able to form a just estimate of his crops even before the seed is sown, or the land prepared for its reception.¹

Other remarkable effects may likewise be partially attributed to the interest excited by the expectation of the rising Nile; and it is probable that the accurate observations required for fixing the seasons, and the period of the annual return of the inundation, which was found to coincide with the heliacal rising of Sothis or the Dog-star, contributed greatly to the early study of astronomy in the valley of the Nile. The precise time when these and other calculations were first made by the Egyptians it is impossible now to determine; but from the height of the inundation being already recorded in the reign of Mæris,² we may infer that constant observations had been made, and Nilometers constructed, even before that early period; and astronomy,³ geometry, and other sciences are said to have been known in Egypt in the time of the hierarchy which preceded the accession of their first king, Menes.

We cannot, however, from the authority of Diodorus and Clemens of Alexandria, venture to assert that the books of Hermes which contained the science and philosophy of Egypt were all composed before the reign of Menes; the original work, by whomsoever it was composed, was probably very limited and imperfect, and the famous books of Hermes were doubtless compiled at different periods, in the same manner as the Jewish collection of poems received under the name of David's Psalms, though some were composed after the Babylonish captivity. Nor was Hermes, or Mercury, as I have elsewhere observed, a real personage, but a deified form of the divine intellect, which being imparted to man had enabled him to produce this effort of genius; and the only argument to be adduced respecting the high antiquity of any portion of this work is the tradition of the people, supported by the positive proof of the great mathematical skill of the Egyptians in the time of Meres, by the change he made in the course of the Nile. It may also be inferred, from their great advancement in arts and sciences at this early period, that many ages of civilization had preceded the accession of their first monarch.

¹ Seneca, *Quæst. Nat.* iv. 2.

² Herodot. ii. 13.

³ Diodor. i. 16, and Clem. Alex. *Strom.* 6.

At all events, we may conclude that to agriculture and the peculiar nature of the river, the accurate method adopted by the Egyptians in the regulation of their year is to be attributed; that by the return of the seasons, so decidedly marked in Egypt, they were taught to correct those inaccuracies to which an approximate calculation was at first subject; and that the calendar, no longer suffered to depend on the vague length of a solar revolution, was thus annually brought round to a fixed period. It is highly probable that the Egyptians, in their infancy as a nation, divided their year into twelve lunar months: ¹ the twenty-eight years of Osiris' reign being derived, as Plutarch observes, ² from the number of days the moon takes to perform her course round the earth; and it is worthy of remark that the hieroglyphic signifying 'month' was represented by the crescent of the moon, ³ as is abundantly proved from the sculptures and the authority of Horapollo. From this we also derive another very important conclusion; that the use of hieroglyphics was of a far more remote date than is generally supposed, since they existed previously to the adoption of solar months. The substitution of solar for lunar months was the earliest change in the Egyptian year. It was then made to consist of twelve months of thirty days each, making a total of 360 days: ⁴ but as it was soon discovered that the seasons were disturbed, and no longer corresponded to the same months, five additional days were introduced at the end of the last month, Mesoré, ⁵ in order to remedy the previous defect in the calendar, and to insure the returns of the seasons to fixed periods.

The twelve months were Thoth, Paopi, Athor, Choeak, Tobi,

¹ The moon's revolution round the earth is evidently the origin of this division of the year into months. The German *Monat* signifies both 'moon' and 'month,' from which our own words are derived; the Greek *mên* and *mênê*, 'a month' and 'the moon,' the Latin *mensis*, and the Sanscrit *más*, 'month,' *más* or *mása*, 'moon,' are from the same origin. (Plut. Tim. p. 498; trans. Taylor.)

² Plut. de Isid. s. 42.

³ There is also an evident cycle of thirty years, called *Set*, the *Triakonteris* of the Greeks, which appears as early as Phrops, of the 6th Dynasty, and which continued till the Ptolemies. A year called the *χet* of Phrops is also recorded on the monuments, but its meaning is difficult. According to Brugsch, the *set* meant the cycle of four

years, or *tetraeris*; but the inscriptions of the time of Rameses II. incline to a *tria-konteris*. The divisions of time were *han han*, 'cycles,' perhaps Sothic, *set, triakonteres*; *renpa*, 'years'; *aah*, 'moons,' 'months'; *heru*, 'days'; *unnu*, 'hours'; *at*, 'subdivision of hour'; *ha*, 'minutes'; *ân*, 'winks' or 'seconds.' — S. B.

⁴ The 360 cups, filled daily with milk at the tomb of Osiris at Philæ, appear to show that the year once consisted of 360 days. (Diodor. i. 22.)

⁵ The day was divided into twelve and the night into as many hours. The first hour of the day commenced with the dawn, so that the hours could not originally have been of equal length; at the Ptolemaic period the hour was subdivided into minutes and moments. (Lepsius, Einleit.)

Mechir, Phamenoth, Pharmuthi, Pachons, Paoni, Epep, Mesoré : and the year being divided into three seasons,¹ each period comprised four of these months. The 1st of Thoth, in time of Julius Cæsar, fell on the 29th of August ; and Mesoré, the last month, began on the 25th of July.² I have introduced the modern names given them by the Copts,³ who still use them in preference to the lunar months of the Arabs ; and, indeed, the Arabs themselves are frequently guided by the Coptic months in matters relating to agriculture, particularly in Upper Egypt.

A people who gave any attention to subjects so important to their agricultural pursuits, could not long remain ignorant of the deficiency which even the intercalation of the five days left in the adjustment of the calendar ; and though it required a period of 1460 years for the seasons to recede through all the twelve months, and to prove by the deficiency of a whole year the imperfection of this system, yet it would be obvious to them, in the lapse of a very few years, that a perceptible alteration had taken place in the relative positions of the seasons : and the most careless observation would show that in 120 years, having lost a whole month, or thirty days, the rise of the Nile, the time of sowing and reaping, and all the periodical occupations of the peasant, no longer coincided with the same month. They therefore added a quarter day to remedy this defect, by making every fourth year to consist of 366 days ; which, though still subject to a slight error, was a sufficiently accurate approximation : and, indeed, some modern astronomers are of opinion that, instead of exceeding the solar year, the length of the sidereal, computed from one heliacal rising of the Dog-star to another, accorded

¹ Each month was under the protection of a deity ; these vary in type, according to the representations of the Memnonium, in the reign of Rameses II., and at Edfu both the names are the same.

1. Thoth — goddess Τεχι.
2. Paophi — Ptah.
3. Athyr — Hathor.
4. Choepak — Σεχετ, or Kahak.
5. Tybi — Amsi, or Khem.
6. Mecheir — Ρεχ-ur (Anubis).
7. Phamenoth — Ασχετ (Apheru).
8. Pharmuthi — Ρανου (Harvest).
9. Pachons — Chous.
10. Payni — Ηαρ γοντ χυρτ.
11. Epiphi — Apef.
12. Mesori — Harmachis.

Epagomenæ, or Intercalary Days, viz. .

1. Birth of Osiris.
2. Birth of Horus.
3. Birth of Set.
4. Birth of Isis.
5. Birth of Nephthys.

(Brugsch, 'Mat. du Cal.,' pp. 53-55.) — S. B.

² Each day of the month was sacred to a deity, and had a festival, by which it could be cited instead of its numerical order ; but it is probable that each month had a separate series or nomenclature. These were the eponymous dates ; thus, the 1st day was called the festival of the Neomema ; the 26th the festival of the manifestation of Khem or Amsi ; the 30th the festival of the locust. (Brugsch, *ut supra*.) — S. B.

³ See pp. 373-4.

exactly in that latitude (in consequence of a certain concurrence in the positions of the heavenly bodies) with the calculation of the Egyptians.¹ 'This sidereal or Sothic year,' says Censorinus, 'the Greeks term *cynikon*, the Latins *canicularis*, because its commencement is taken from the rising of the Dog-star on the first day of the month, called by the Egyptians Thoth;' ² which, while it accords with the observations of Porphyry, that 'the first day of the month is fixed in Egypt by the rising of Sothis,' fully confutes the opinion of those who suppose that the name Thoth was applied to the first day alone, and not to the month itself. That the five days,³ called of the Epact, were added at a most remote period, may readily be credited; and so convinced were the Egyptians of this that they referred it to the fabulous times of their history, wrapping it up in the guise of allegory: and it is highly probable that the intercalation of the quarter day, or one day in four years, was also of very early date.

On this subject much controversy has been expended, without, as usual on such occasions, arriving at any satisfactory result; many doubting that it was known to them before the late time of the Roman conquest, some confining it to the period of the Persian conquest, and others assigning it to the year 1322 before our era, which was the beginning of a Sothic period, when the solar year of 365 days coincided with the Sothic of 365¹ days, or which, in other words, intercalated an additional day every fourth year. For the Egyptians, finding by observation that 1460 Sothic were equal to 1461 solar years, the seasons having in that time passed through every part of the year and returned again to the same point, established this as a standard for adjusting their calendar, under the name of the Sothic period: and though for ordinary purposes, as the dates of their kings and other events, they continued to use the solar or vague year of 365 days, every calculation could thus be corrected, by comparing the time of this last with that of the Sothic or sidereal year. The sacred was the same as the solar or vague year: and

¹ Mure, 'Calendar and Zodiac of Ancient Egypt,' p. 8.

² Censorin. de Die Nat. c. 13. Porphyry and Solinus say the Egyptians considered this period to commence at the beginning of the world.

³ The five days called *hru*, 'additional,' or by the Greeks *Epagomenai*, were introduced into the calendar at the time of the

12th Dynasty, previous to which they are not mentioned on the monuments. The solar year of 365 was in use in the days of Euergetes II., B.C. 208, and attempted to be reformed on account of the confusion it had produced in the calendar. (Lepsius, 'Das Dekret von Canopus,' fol. Berl. 1770.) — S. B.

an ancient author, cited by Jablonski,¹ asserts that the Egyptian kings took an oath in the adytum that they would not intercalate any month or day, but that the sacred year of 365 days should remain as instituted in ancient times. If this be true, it argues that intercalation of the additional day was coeval with the era of the Pharaohs, since the prohibition could only have been directed against this innovation. But without pretending to give a decided opinion respecting the period of its first introduction, I may observe that the positive testimony of Diodorus² shows it to have been in use before the Roman conquest, that historian having lived, and, as he says, 'visited Egypt, under Ptolemy Neus Dionysus;'³ and the ignorance of Herodotus on the subject, who speaks⁴ of the Egyptian year of 365 days having the effect of keeping the seasons in their proper places, is readily accounted for by the fact of the Egyptians only using this solar year for their ordinary calculations, the knowledge of the sidereal one being confined to the priests. For it is more reasonable to suppose the Father of History to be mistaken in this, as he is on so many points relating to Egypt, than that so important a discovery, which had escaped them whilst their astronomical skill was at its zenith, during the flourishing period of the Pharaohs, should be made at a time when 'the wisdom' of Egypt had already declined, and, above all, during the confusion consequent upon the occupation of the country by the Persians. Nor does the circumstance of the Hebrews neglecting to adopt the Sothic year argue that it was introduced subsequently to the Exodus and the age of Moses: the Arabs, who conquered Egypt long after its universal adoption, persisted and still persist in the use of their imperfect lunar months: as some Europeans are indifferent to the introduction of the Gregorian calendar: but both these are not the less known because unadopted, and no argument can fairly be derived from similar omissions. I do not, however, assert that the Sothic year was invented before the time of Moses, and it will probably long remain uncertain when the Egyptians first introduced so important an innovation.

[No point has been more disputed than the question of the existence of a fixed year amongst the ancient Egyptians. It is clear that after the Alexandrian reformation of the calendar a year, called 'the year according to the ancients,' corresponding to

¹ Jablonski, *Panth. Egypt. lib. iv. c. 2.*
p. 210.

² Diodor. i. 50.

⁴ Herodot. ii. 4.

³ *Ibid.* i. 44.

the vague year, was also in use. That the vague year of 365 days was in common employment under the Ptolemies appears from the Decree of Canopus, which recites the fact of the disturbance of the calendar owing to the festivals being celebrated at inappropriate times, and the attempt to reform it by the introduction of a sixth intercalary day at the end of every fourth year. Philologically, it has been attempted to be proved that there were two years, from such expressions as 'the first year,' *ap tep*, or *renpa*; 'the opening of the year,' *ap renpa*, and *un renpa*; and 'the ending year,' *arg renpa*: but doubt is thrown upon the philological position by the consideration that *ap renpa* may mean 'yearly,' as *ap abut* means 'monthly' in the Rosetta inscription. The older calendars, prior to the 14th Dynasty, give the following series of festivals as running through the year: 1. The commencement of the year. 2. The festival of Thoth. 3. New year. 4. Of the Uata. 5. Of Sostaris. 6. Great and little heat or burning. 7. Holocaust. 8. Appearance or showing of the god Khem or Asi. 9. Of *Sat'*. 10. First of month. 11. Fifteenth of month. 12. All other festivals. Some of these were movable festivals; and under the 11th and 12th Dynasties the festivals of Osiris, the five intercalary days, or Epagomenæ, and of the appearance of Sothis, were mentioned in the calendar for the first time, as also those of the Neomenia, 2d, 6th, 10th, 15th. This would show that the introduction of the solar in place of the lunar year was not older than the 12th Dynasty, when the Sothic cycle was first instituted to correct the wandering improved year of 365 days. In the correct or normal year, the 1st of Thoth ought to correspond to the heliacal rising of Sothis or Sirius the Dog-star, and the commencement of the rise of the Nile. Such a state of the calendar is alluded to in the ceiling of the Memnonium and the walls of Medinat Habu; but it is evident from the zodiacs of the tombs of Rameses VI. and Rameses IX. that a vague year was in use even for astronomical observations, to which the calendar of Elephantine gives evidence by its recording the rise of Sothis in the reign of Thothmes III. on the 28th Epiphi instead of the 1st Thoth. Normally, the rise of Sirius, and the commencement of the Sothic year, was the 20th July, 1st of Thoth, and the fixed year ought to commence with it. There were, without doubt, many attempts to correct the vague year owing to the obvious disturbance of the phenomena, but it is very doubtful if a fixed year actually came into use till the final reformation of the calendar by Augustus, when the beginning of the year was finally fixed, in B.C. 27, to the 29th

of August, the 1st of Thoth, up to which period the vague year was in sacerdotal and secular use.¹ — S. B.]

[Though Herodotus does not call the twelve portions, into which the Egyptian year was divided, months, it is certain that the original division was taken, as among most other people, from the moon; the hieroglyphic signifying 'month' being the crescent.² The Egyptians had three years: one unintercalated, of 360 days; and two intercalated, respectively of 365 and 365½ days. They were divided into three seasons ('spring, summer, and winter,'³ according to Diodorus⁴), each composed of four months of 30 days; and in the two intercalated years five days were added at the end of the twelfth month, which completed the 365 days; the quarter day in the last of them being added every fourth year, as in our leap-year.

The three seasons were thus represented, with the four months belonging to each:—

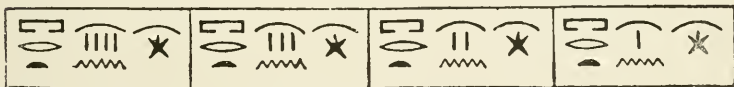
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THE TWELVE EGYPTIAN MONTHS.



Egyp. name. } Coptic name. }	Choeak.	Athor.	Paopl.	Thoth.
	Keeak.	-Hatoor.	Babeh.	Toot.
	27th Nov.	28th Oct.	29th Sept.	began 29th Aug. o. s.

Season of the Water Plants.



Egyp. name. } Coptic name. }	Pharmuthi.	Phamenoth.	Meechir.	Tobi.
	Baramoodeh.	Baramhât.	Imsheer.	Toobeh.
	27th March.	25th Feb.	26th July.	27th Dec.

Season of Ploughing.

¹ Lepsius, 'Einleit.,' p. 147, and foll. Brugsch, 'Mat. du Calendrier chez les Égyptiens,' 4to, Leipzig, 1864. Le Page Rerouf, 'Calendar of Astron. Observ. in the Trans. Soc. Bibl. Arch.,' vol. iii. p. 400, and foll. — S. B.

² Although month was expressed by aah, 'moon,' the form aah occurs, the same as the Coptic abôt; in the hieroglyphics having the value of soul, ba, as well as star, &c. There is no proof of the simultaneous confusion of

three years, although all existed necessarily. — S. B.

³ The Egyptian seasons were *sa*, the commencement or inundation, certainly not the spring, as it precedes the second season; *per*, the Coptic *pro*, or winter; and the third season, *sem*, or summer. Although reversed, summer, winter, spring, would coincide with the idea of spring, the real difficulty being that summer must have ended before the 29th July in the normal year. (Brugsch, 'Mat. du Cal.,' p. 34.) — S. B.

⁴ Diod. i. 11.

<i>Egypt. name.</i> { Mesoré.	Epep.	Paoni.	Pachons.
<i>Coptic name.</i> { Mesoree.	Ebib.	Baonch.	Beshens.
25th July	25th June.	26th May.	26th April.

Season of the Waters.

The first season began with the month Thoth (the first day of which, in the time of Augustus, B.C. 24, coincided with the 29th August, O.S.), and was composed of the four months Thoth, Paopi, Athor, Choek, the second of Tobi, Meehir, Phamenoth, Pharnuthi; the third of Pachons, Paoni, Epep, and Mesoré; at the end of which were added the five days of the intercalated year. The names of the seasons appear to be, 1st, of the plants; 2d, of flowering, or harvest; and 3d, of the waters, or inundation: which originally corresponded nearly to, 1st, November, December, January and February; 2d, March, April, May and June; 3d, July, August, September and October. But as, in course of time, the seasons changed, and those of summer fell in winter, they found it necessary to make another correction: and for this purpose they resolved on ascertaining the period that elapsed between the return of a fixed star to the same place in the heavens, which they perceived would not be variable as were their conventional seasons. The heliacal rising of the dog-star, Sothis, was therefore the point fixed upon, and in 1460 Sothic (or 1461 of their vague) years they found that it rose again heliacally, that their seasons had returned to their original places again, and that they had lost one whole year, according to the calculation of 365 days. This showed them that the difference of a quarter of a day annually required that one day every four years should be intercalated to complete the true year: and though they had already devised other means of fixing the return of a certain period of the year, this was the first nearly accurate determination of its length. The period when they first began their observations, as well as that still more remote one when the first intercalated year of 365 days came into use, must have been long before the year 1322 B.C.: and an inscription (in the Turin Museum) of the time of Amenophis I., the second king of the 18th Dynasty, mentions the year of 365 days. Lepsius and M. de Rougé have also shown that the five days were already noticed in the 12th Dynasty, and that the rise of Sothis was celebrated at the same period. The heliacal rising of Sothis was therefore ascertained

long before the year 1322; and the reputed antiquity of the intercalary days is shown by their being ascribed, according to Strabo, to Hermes, as well as by the fable of the five sons of Seb having been born on those days; nor would the Egyptian kings have 'sworn to retain the sacred year of 365 days without intercalating any day or month,' unless the Sothic year had been already invented. Herodotus also says that they were indebted to the *stars* for their mode of adjusting the year and its seasons. But there is reason to believe that the still older year of 360 days was retained for the dates of kings' reigns; and that this unintercalated year of 360 days was the one used in their records and monumental stelæ: thus, an Apis was born in the 53d year of Psammaticus I., the 19th Mechir, and died in the 16th year of Neco, on the 6th Paopi, aged 16 years 7 months and 17 days. Now from 19th Mechir to 6th Paopi are 210 days + 11 to the end of Mechir + 6 of Paopi = 227, or 7 months 17 days over the 16 years; without any intercalary 5 days. It is, however, *possible* that the five days were included in the last month of the year, and that it was a year of 365 days; but there is no mention of the 31st, or any other day beyond the 30th, of Mesoré.

The Sothic year of $365\frac{1}{4}$ days was called the square year, the *annus quadratus* of Pliny;¹ and the same mentioned by Diodorus,² Macrobius,³ and Horapollo. The retention of the unintercalated and intercalated vague year would prevent the confusion which might have been expected from the older and later chronological memoirs having been kept in years of a different reckoning; for it was always easy to turn these last into Sothic years, when more accurate calculations were required; and this Sothic, or sidereal year, was reserved for particular occasions, as the old Coptic year is used by the modern Egyptians when they wish to fix any particular period, or to ascertain the proper season for agricultural purposes.

The Egyptians had therefore an object in retaining the vague year, in order that the festivals of the gods, in course of time, might pass through the different seasons of the year, as Geminus the Rhodian (who lived in 77 B.C.) informs us. It is also evident that without the accuracy of the Sothic year they could not, as Herodotus supposes, have fixed the exact return of the seasons.

¹ Plin. ii. 47.

² Dioid. i. 50.

³ Macrob. i. 16.

We may conclude that the Egyptians had at first a lunar year, which being regulated by the moon, and divided into twelve moons or months, led to a month being ever after represented in hieroglyphics by a moon: but this would only have been at a most remote period, before the establishment of the Egyptian monarchy; and some might hence derive an argument in favor of the early use of hieroglyphics, and suppose that they were invented before the introduction of the solar months. In India also the lunar year was older than the solar. — G.W.]

The examination of the astronomical subjects in the Tombs of the Kings and on other monuments may perhaps some day tend to decide this question, when the complete interpretation of hieroglyphics does away with the necessity of conjecture; in the meantime, I feel less regret in abstaining from the mention of many arguments which might be adduced to maintain the antiquity of the intercalation of the quarter day, as the learned Letronne has already prepared an elaborate essay on the subject, and is supported in his opinion by the authority of a Greek papyrus in the collection of the Louvre. And whilst mentioning this, I must not omit my tribute of praise to another excellent work, in which this question is treated with great candor and learning; many valuable remarks being embodied in Mure's *Calendar and Zodiac of Ancient Egypt*. I have also introduced some remarks on the adoption of the Sothic year, in another part of this work, extracted from a previous publication in the year 1828.

The pursuits of agriculture did not prevent the Egyptians from arriving at a remarkable pre-eminence as a manufacturing nation; nor did they tend to discourage the skill of the grazier and the shepherd; though the office of these last was looked down upon with contempt, and the occupation of persons engaged in manufactures and all handicraft employments was, to the soldier at least, ignoble and unmanly. Large flocks and herds always formed part of the possessions of wealthy individuals; the breed of horses was a principal care of the grazier, and, besides those required for the army and private use, many were sold to foreign traders who visited the country;¹ and the rearing of so many sheep in the Thebaïd, where mutton was unlawful food,² proves the object to have been to supply the wool-market

¹ 1 Kings x. 28, 29.

² Strabo (lib. viii. p. 552) says sheep were only sacrificed in the Nitriotic nome.

with good fleeces, two of which, owing to the attention they paid to its food, were annually supplied by each animal. That the Egyptians should successfully unite the advantages of an agricultural and a manufacturing country is not surprising, when we consider that in those early times the competition of other manufacturing countries did not interfere with their market; and though Tyre and Sidon excelled in fine linen and other productions of the loom, many branches of industry brought exclusive advantages to the Egyptian workman. Even in the flourishing days of the Phœnicians, Egypt exported linen to other countries, and she probably enjoyed at all times an entire monopoly in this, and every article she manufactured, with the caravans of the interior of Africa.

Now, indeed, the case is widely different. The population of Egypt is so reduced as not to suffice for the culture of the lands; an overgrown military force has drained the country of able-bodied men, who ought to be employed in promoting the wealth of the community, by increasing the produce of the soil; and a number of hands are continually withdrawn from the fields to advance manufactures, which, without benefiting the people, are inferior (especially for exportation) to those of other countries. Add to this the great cost for machinery, which is quickly injured by the quantity of fine sand that constantly clogs the wheels and other parts, causing additional mischief from the nitre with which it is impregnated; and it must be evident that modern Egypt, with a population of not one million and a half, and with the competition of European manufacturing countries, is no longer in the same position as Egypt of the Pharaohs, with upwards of four times the population, less competition, greater variety of manufactures, and no comparative local disadvantages unexperienced by their rivals.

I have attributed the early advancement of the Egyptians in land-surveying, levelling, and various branches of geometry, to their great attention to the agricultural interests of the country; and as it is reasonable to suppose the knowledge they thus acquired led to many other important discoveries, we are not surprised to find them at a very early time well versed in numerous operations indicative of mathematical science and mechanical skill.

Of these the most remarkable instances occur in the construction of those ancient and magnificent monuments, the Pyramids of Gizeh (where the beauty of the masonry of the

interior has not been surpassed, and I may even say has not been equalled, in any succeeding age); in the transport and erection of enormous masses of granite: and in the underground chambers excavated in the solid rock at Thebes and other places; where we admire the combined skill of the architect, the surveyor, and the mason. The origin of these subterraneous works was derived from the custom of burying the bodies of the dead in places removed beyond the reach of the inundation, and not, as some have supposed, from the habit of living in caves, ascribed to the fabled Troglodytæ; and it is a remarkable fact that the excavated tombs and temples bear direct evidence of having derived their character from built monuments, in the architrave reaching from column to column, which is taken from the original *beam* supporting a roof,—a feature totally inconsistent with a simple excavated chamber.

These feelings, derived from architecture, are carried still further: we find them extended to statues, which are supported from behind by an obelisk, or a *stèle*; and the figure of a king is applied to a square pillar, both in built and excavated temples.

The abundant supply of grain and other produce gave to Egypt advantages which no other country possessed.¹ Not only were her dense population supplied with a profusion of the necessaries of life, but the sale of the surplus conferred considerable benefits on the peasant, in addition to the profits which thence accrued to the state: for Egypt was a granary where, from the earliest times, all people felt sure of finding a plenteous store of corn;² and some idea, as I have already had occasion to observe, may be formed of the immense quantity produced there, from the circumstance of ‘seven plenteous years’ affording, from the superabundance of the crops, a sufficiency of corn to supply the whole population during seven years of dearth, as well as ‘all countries’ which sent to Egypt ‘to buy’ it, when Pharaoh by the advice of Joseph³ laid up the annual surplus for that purpose.

The right of exportation, and the sale of superfluous produce to foreigners, belonged exclusively to the government, as is

¹ It appears, however, from the Decree of Canopus, already cited, that Egypt occasionally, in consequence of deficient Niles, was obliged to import corn for its own consumption. Even in the time of

Thothmes III. corn seems to have been brought along with other things as tribute to Egypt.—S. B.

² Gen. xii. 10, and xlii. 2.

³ Gen. xli. 29 *et seq.*

distinctly shown by the sales of corn to the Israelites from the royal stores, and the collection having been made by Pharaoh only; and it is probable that the landowners were in the habit of selling to government whatever quantity remained on hand at the approach of each successive harvest. Indeed, their frugal mode of living enabled the peasants to dispose of nearly all the wheat and barley their lands produced, and they may frequently, as at the present day, have been contented with bread made of the *doora*¹ flour; children, and even grown-up persons, according to Diodorus,² often living on roots and esculent herbs, as the papyrus, lotus, and others, either raw, roasted, or boiled. At all events, whatever may have been the quality of the bread they used, it is certain that the superabundance of grain was very considerable, Egypt annually producing three, and even four crops; and though the government obtained a large profit on the exportation of corn, and the price received from foreign merchants far exceeded that paid to the peasants, still these last derived great benefit, and the money thus circulated through the country tended to improve the condition of the agricultural classes.

The Egyptian land measure was the *aroura*, which, according to Herodotus and Horapollon,³ being a square of 100 cubits, covered an area of 10,000 cubits, and, like our acre, was solely employed for measuring land. The other measures of Egypt were the *schœne*, which varied from thirty and thirty-two to forty stadia, according to Pliny;⁴ and the cubit, which Herodotus considers equal to that of Samos:⁵ for though the stade is often used by Greek writers in giving the measurements of monuments in

¹ The *Holcus Sorghum*.

² Diodor. i. 80, and also xxxiv. 43, and Herodot. ii. 92.

³ Horapollon, Hierog. i. 5.

⁴ [Plin. v. 10; xii. 14. Strabo distinctly says (xvii. p. 1140), it was of various lengths in different parts of Egypt. Herodotus says it was equal to sixty stadia (ii. 6), and makes the length of the coast of Egypt 3600 stadia, which, at 600 feet to the stadium, would be more than 400 English miles. The real length of the coast from the Bay of Plinthiné at Taposiris, or at Plinthiné, even to the eastern end of the Lake Serbonis, is by the shore little more than 300 English miles. Diodorus estimates the breadth of Egypt by the coast at 2000 stadia; and Strabo gives only 1770 stadia from the Temple of

Jupiter Casus at the Serbonic Lake to Pharos, which, added to 200 stadia to Taposiris, make 1970 stadia. The real distance from Casius to Pharos is about 1944 stadia, and from Pharos to Taposiris or to Plinthiné nearly 260, being a total of about 2204 stadia. Plinthiné was a town near the Lake Mareotis (Strabo, xvii. p. 1133; Ptol. iv. c. 5; Scylax. Perip. 105). From it the lake, as well as the bay, was sometimes called 'Plinthinetan.' The name 'Arapotes,' given in Plin. v. 10 to this lake, is evidently a false reading. It should be Rachotis, and applies to Alexandria. The *schœne* served, like the Greek stade, the Persian parasang, and the more modern mile, for measuring distance, or the extent of a country. — G. W.]

⁵ Herodot. ii. 168.

Egypt, it was not really an Egyptian measure, as Herodotus plainly shows by ascribing its use to the Greeks, and the schœnus to the Egyptians.¹ They also mention the plethrum in giving the length of some buildings, as the Pyramids; but this was properly a Greek measure, doubling the Greek aroura, and containing, according to some, 10,000 square feet, or, as others suppose, 1444. When used as a measure of length, it was usually estimated at 100 feet; though, if Herodotus' measurement of the Great Pyramid be correct, it could not complete 100 of our feet, as he gives the length of each face 8 plethra. But little reliance can be placed on his measurements,² since in this he exceeds the true length; and to the face of the third pyramid he only allows 3 plethra, which, calculating the plethrum at 100 feet, is more than half a plethrum short of the real length — each face, according to the measurement of Colonel Howard Vyse,³ being 354 feet.

In former times the difficulty of measuring the exterior dimensions of the pyramid was much less than at present; and owing to the mound of broken stone, earth, and sand, which has accumulated about the centre of each face, it is so difficult to ascertain their exact extent, that no two persons agree in their measurements: and all attempts to calculate the value of ancient measures from this monument are hopeless, as well from the inaccuracy and disagreement of Greek and Roman writers upon the subject, as from the variation of modern measurements. Of my own, I shall only say that the mode I adopted in measuring the face of the Great Pyramid appeared to me as little liable to error as any I could devise; which was of ascending to the tier above the level and encumbrance of the mound of earth in the centre of the face, and measuring along that uninterrupted horizontal line, from whose end having let fall a perpendicular (easily determined by the eye) to the base, in order to ascertain the additional portion at each corner, I completed the whole measurement by adding the bases of those two right angles. This made the total length of the present face 732 feet, agreeing to within one foot with the measurement of Mr. Lane, who gives it 733 feet; an approximation highly satisfactory

¹ Herodot. ii. 6, 149.

² We may forgive Herodotus and other writers for an error in the height of the pyramid. He makes it equal to the length of the face; Strabo says, the side is a little

less than the height.

³ The importance of the discoveries made by Col. Howard Vyse at the Pyramids can only be appreciated on referring to his valuable work.

from the well-known accuracy of his observations. The total length when entire I believe to have been 755 or 766 feet, which would be exactly 440 cubits, according to the length I shall presently show to have been that of the Egyptian cubit.

I do not pretend to derive (or even to require) any authority from this monument respecting the length of the cubit. The measurements are not sufficiently accurate for this purpose, and the cubit is too small a measure to be defined by the proportionate parts of so long a line; nor are the courts of different temples suited to guide us in so delicate a calculation; and even the small dimensions of colossi may mislead, as it is not certain (and indeed there are evident proofs to the contrary) that they were measured to a decimal number of cubits. The *vocal* statue of Thebes and its companion are little more than 60 feet high (including the pedestal), which make 35 cubits: but this leads to no conclusion, because we are uncertain whether a fixed measurement was assigned to the whole statue with its pedestal, or to the figure alone, and neither this part nor the pedestal bears an exact proportion to the cubit. It is, indeed, probable that a monument of such magnitude and of such consequence as the pyramid was measured by a decimal number of cubits, and the exact length of its faces was doubtless divisible by such a number; but, as I have already stated, the accurate determination of its original dimensions is still a desideratum, and no conclusion can thence be formed of the length of the Egyptian cubit. Happily other data of a less questionable nature are left us for this purpose, and the graduated cubit in the Nilometer of Elephantine, and the wooden cubits discovered in Egypt, suffice to establish its length, without the necessity of uncertain hypotheses. Some have supposed that the Egyptian cubit varied at different periods, and that it consisted at one time of 24, at another of 32 digits; or that there were two cubits of different lengths,¹ — one of 24 digits or 6 palms, the other of 32 digits or 8 palms, employed at the same period for different purposes. Some have maintained, with M. Girard, that the cubit used in the Nilometer of Elephantine consisted of 24 digits, others that it contained 32;² and numerous calculations have been deduced from these conflicting opinions respecting the real length of the cubit.

¹ The Jewish cubit was 1 ft. 8-24 in., or 1 ft. 9-888 in

² *Mém. de l'Acad.* vol. xvi. p. 333 *et seq.*

But a few words will suffice to show the manner in which that cubit was divided, the number of its digits, and its exact length in English inches; and respecting the supposed change in the cubit used in the Nilometers of Egypt, I shall only observe, that people far more prone to innovation than the Egyptians would not readily tolerate a similar deviation from long-established custom; and it is obvious that the greatest confusion would be caused throughout the country, and that agriculture would suffer incalculable injuries if the customary announcement of a certain number of cubits for the rise of the Nile were changed, through the introduction of a cubit of a different length. The peasant would no longer understand the quantity of water, the proportionate height of the river, or the proper time for admitting it from the canals; in short, all the system of irrigation would be deranged, and this without any result, without any advantage to compensate for this arbitrary change in the standard of measurement. Indeed, the very few alterations made by the Ptolemies, beyond the precincts of Alexandria, in the habits and customs of the Egyptians, are a strong argument against the probability of their interference in a matter of so much importance, and involving so many interests, as the change in the mode of measuring the inundation of the Nile; and the ancient wooden cubits found in Egypt are the same measure as the graduated scale at Elephantine. To these I now invite the attention of the reader.

The Nilometer in the island of Elephantine is a staircase between two walls descending to the Nile, on one of which is a succession of graduated scales containing one or two cubits, accompanied by inscriptions recording the rise of the river at various periods, during the rule of the Cæsars. Every cubit is divided into fourteen parts, each of 2 digits, giving 28 digits to the cubit: and the length of the cubit is 1 ft. $8\frac{5}{8}$ in., or 165 eighths, which is 1 ft. 8.625 in. to each cubit, and 0.736 in. to each digit. The wooden cubit, published by M. Jomard, is also divided into 28¹ parts or digits, and therefore accords, both in its division, and, as I shall show, very nearly in length, with the cubit of Elephantine. In this last we learn, from the inscriptions accompanying the scales, that the principal divisions were palms and digits; the cubit being 7 palms or 28 digits: and the former in

¹ M. Jomard represents one with twenty-nine divisions, which he computes at a total of 0.5235 millimètres.

like manner consisted of 7 palms or 28 digits.¹ The ordinary division, therefore, of the cubit was:—

THE CUBIT IN THE NILOMETER OF ELEPHANTINE.

			Feet.	Inches.
1 digit			0	0·736
4	1 palm		0	2·946
28	7	1 cubit	1	8·625

In the cubits of M. Jomard the divisions, or digits, commence on the left with 1, 2, 3, and 4 digits or 1 palm: the latter indicated by a hand (sometimes with, sometimes without, a thumb): next to this is the whole hand, or 5 digits (with the thumb); then the fist, or as the Arabs call it, the *kubdeh* (the hand closed, with the thumb erect), making 6 digits; after which may perhaps be traced the *dichas*, or 2 palms, of 8 digits; the *fitr*, or span with the forefinger and thumb; and the *shibr*, or spithamé, the entire span; the former of 11, the latter of 13 digits. But there is no indication of a foot, and the 15 last digits are solely occupied with fractional parts, beginning with a 16th and ending in $\frac{1}{2}$ a digit: from which we may conclude that the smallest measurement in the Egyptian scale of length was the 16th of a digit, or the 46th of an inch.

¹ No point has been more disputed than the exact measurement of the cubit, called in Egyptian *mā*, one of the long ends of which was always bevelled. Several of these have been found made of stone, wood, and other materials. There was a royal cubit, *saten mā*, of 7 palms, *sāp*, or 28 digits, called fingers, *teb*; the whole equal to 525 millimètres, or according to Sir H. James, 20·728 inches. The ordinary cubit measured 6 palms or 24 digits, and was employed in the construction of the monuments. After the *mah nets*, lesser cubit, or as it may be read, *mah āa*, came the greater cubit; for after it the *mah* or cubit again occurs of 5 palms or 16 digits, which by some is read *keb*, or arm, supposed to be the *pygon* of the Greeks. The next subdivision was the *t'er* of 4 palms or 16 digits, and then the spithamé, one of the great spithamé, *remen da*, or half of the royal cubit, equal to $3\frac{1}{2}$ palms or 14 digits, and *remen nets*, or small spithame, equal to 12 digits. The next subdivision was the two

hands, *tut sen*, of 8 digits; then the foot, *χep*, of $1\frac{1}{2}$ palm or 6 digits; then the palm, *s'ap*, of 4 digits; and lastly the *teb*, finger, or digit, which was subdivided, as in modern scales for plan drawing, into an arithmetic succession from two to sixteen divisions, called *ru*. It is clear from the fact of Egyptian monuments, such as the Pyramids, not being constructed of equal length on all four sides, and the impossibility of measuring to a decimal such long sides, that no reliance can be placed on deductions of length derived from subdivisions of such incorrect and mutilated monuments, while the actual existing cubits afford better if not absolutely correct data. Each inch was dedicated to a deity, the cubits consecrated to the gods for the persons to whom they belonged, and one accompanied by the names of certain cities and distances specified. (Lepsius, 'Die alt-ägyptische Elle,' Ito, Berlin, 1865, in the 'Abhandl. d. K. Akad. d. Wissenschaften.') — S. B.

From this may be constructed the following scale and division of the Egyptian cubit:—

PARTS OF THE CUBIT.						Cubit of the Nilometer.	Cubit of Memphis, according to Jomard.
						Inches English.	Inches English.
$\frac{1}{16}$	of a digit	.	.	.	.	0·04603	0·04569
16	1 digit	.	.	.	.	0·7366	0·73115
	2	1 condyle?	.	.	.	1·4732	1·4623
	4	2	1 palm	.	.	2·9464	2·9247
	5	—	—	1 hand	.	3·6830	3·6557
	6	—	—	—	1 <i>kubdeh</i>	4·4196	4·3869
	8	—	2	—	1 <i>dichas</i> , or 2 palms.	5·8928	5·8494
	11	—	—	—	—	1 <i>fitr</i>	8·1026
	13	—	—	—	—	—	1 <i>shibr</i> , spithamé. or span.
	28	—	7	—	—	—	—
							1 cubit.
						20·6250	20·47291

In the foregoing table I have compared the cubit of the Nilometer, according to my measurements, taken from the monument, and the wooden cubit found at Memphis, described by M. Jomard,¹ which he reckons at 520 millimetres, or 20·47291 English inches.

That in the Museum at Turin he states to be	522	$\frac{7}{16}$	millimetres,	or 20·57869	English inches.
Another	523		“	or 20·61806	“
Another	524		“	or 20·65843	“
And he computes that of the Nilometer at	527		“	or 20·74840	“

which last far exceeds my calculation.

The careless manner in which the graduation of the scales of the Nilometer at Elephantine has been made by the Egyptians renders the precise length of its cubit difficult to determine: but as I have carefully measured all of them, and have been guided by their general length as well as by the averages of the whole, I am disposed to think my measurement as near the truth as possible; and, judging from the close approximation of different wooden cubits, whose average M. Jomard estimates at 523·506 millimetres, we may conclude that they were all intended

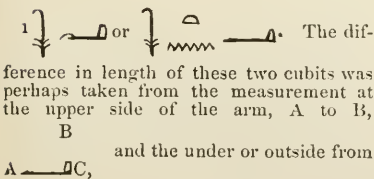
¹ Jomard, 'Étalon métrique,' and 'Lettre à M. Abel Rémusat sur une nouvelle Mesure de Coudée.'

to represent the same measures, strongly arguing against the supposition of different cubits having been in use, one of 24 and others of 28 and 32 digits; and, indeed, if at any time the Egyptians employed a cubit of a different length, consisting of 24 digits, it is not probable that it was used in their Nilometers, for architectural purposes, or for measuring land.

If it really existed, the name of Royal Cubit,¹ inscribed on these wooden measures, was doubtless applied exclusively to that of 28 digits (which I have shown to be the usual length of the wooden measures, and of the cubit of Elephantine), and the simple cubit may have contained only 24. I have received from Mr. Harris, of Alexandria, an account of a measure which has been discovered at Karnak, on the removal of some stones from one of the towers of a propylon, between which it appears to have been accidentally left by the masons, at the time of its erection, at the remote period² of the 18th Dynasty. It is divided into 14 parts, but each part is double in length those of the cubit of Elephantine, and therefore consists of 4 digits; and the whole measure is equal to 2 cubits, being $41\frac{3}{10}$ inches English. Thus then one of these contains 20.6500 inches, which suffices to show that the cubit of Elephantine was employed for ordinary purposes (differing from it only in .0250 decimal parts), and confirms my opinion respecting the general use of one and the same measure. This double cubit has the first division in its scale of 14 parts subdivided into halves, and the next into quarters, one of these last being equal to 1 digit.

The length of the ancient Egyptian cubit and its parts may be stated as follows:—

	Of the Nilo- meter of Elephantine.	Of Memphis, according to Jomard.
1 digit or dactylus . . . = English inches	0.7366	.. 0.73115
4 digits or 1 palm . . . =	2.9464	.. 2.92470
28 " or 7 palms or 1 cubit =	20.6250	.. 20.47291



A to C, which would be a difference of about four fingers.

² These towers were erected by Horus, or Haremhebi, a king of the 18th Dynasty, who reigned from 1408 to 1395 B.C., and who used stones from older monuments, bearing the *ovals* of the king [Khuenaten] whose name occurs at Tel el Amarna (Materia Hierog. V and W), who had also erased the name of Amenophis III.

The lengths of different Egyptian cubits are :—

	Millimetres.	Eng. inches.
The cubit in the Turin Museum, according to my measurement	522 $\frac{1}{10}$	or 20'5730
The same, according to Jomard	522 $\frac{7}{10}$	or 20'5786
Another	523	or 20'6180
Another	524	or 20'6584
Jomard's cubit of Memphis, mentioned above	520	or 20'4729
Cubit of Elephantine Nilometer, according to Jomard	527	or 20'7484
The same, according to my measurement		20'6250
Part of a cubit found by me on a stone at E'Sooan		about 21'0000
The cubit, according to Mr. Perring's calculation at the Pyramids about 20'6280(?)		
Mr. Harris' cubit from Thebes		20'6500

It is highly probable that the *aroura*,¹ or square land measure, was divided into poles, answering to the *ḳassobeh*, reed, now used in Egypt, by which the *feddán* is measured; and in the absence of any explanation of the ancient land measure, it may not be irrelevant to notice the mode of dividing the modern *feddán*. Till lately it was a square of 20 *ḳeerát*, carrots, or 400 *ḳassobeh*, reeds, or rods; and each *ḳassobeh* was divided into 24 *kharoobeh* or *ḳubdeh*. But various alterations have taken place in the modern land measure of Egypt; and even supposing the ancient *aroura* to have been divided in a similar manner, nothing can be obtained respecting the real contents of it, beyond what we learn from Herodotus of its being a square of 100 cubits.

There is also much uncertainty respecting the length of the stade.² It is generally estimated at 600 feet or 606·875; though, from Herodotus at one time specifying 'a stade of six *plethra*,³ it would seem that on ordinary occasions he uses another of a different length; and the proportionate value of the measures, and of the dimensions of the monuments he describes in Egypt, are far from satisfactory. Nor is the *schœne* accurately defined; and Strabo,⁴ on the authority of Artemidorus, states that the length of the *schœne* varied among the Egyptians.

Of the *nomes*, or provinces, of Egypt I have already treated; and have shown that the *nomarchs*,⁵ who were similar to 'the officers appointed over the land' by Pharaoh,⁶ and answered to

¹ The *ar* is supposed to be equal to the *schœne*, and the pole, $\chi\alpha$, equal to the *orgyia* of six feet. The mode of dividing and calculating the contents of a field is given in the geometric papyrus. The fields appear generally to have been small — S. B.

² [If 600 stadia were equal to one degree, then the stade will be 611 $\frac{30}{60}$ feet, or in

round numbers 610 feet (Col. Leake on the Stade). — G. W.]

³ This is supposed to be the *atur*, a certain distance performed by a boat on the river. — S. B. Herodot. ii 149.

⁴ Strabo, xvii. p. 553.

⁵ Called *ha*; they were hereditary *repa*, but their fiefs were originally conferred upon them by the crown. — S. B.

⁶ Gen. xli. 34

the *beys* of the present system, superintended all the agricultural regulations established for the interests of the peasant, or connected with the claims of government. I do not believe that the government interfered directly with the peasant respecting the nature of the produce he cultivated, or that any of the vexations of later times existed under the Pharaohs. The peasants were naturally supposed to have obtained, from actual observation, the most accurate knowledge on all subjects connected with husbandry; and, as Diodorus observes,¹ 'being from their infancy brought up to agricultural pursuits, they far excelled the husbandmen of other countries, and had become acquainted with the capabilities of the land, the mode of irrigation, the exact season for sowing and reaping, as well as all the most useful secrets connected with the harvest,² which they had derived from their ancestors, and had improved by their own experience.' 'They rent,' says the same historian, 'the arable land belonging to the kings, the priests, and the military class, for a small sum, and employ their whole time in the tillage of their farms; and the laborers who cultivated land for the rich peasant or other landed proprietors, were superintended by the steward or owner of the estate, who had authority over them, and the power of condemning delinquents to the bastinado, and the paintings of the tombs frequently represent a person of consequence inspecting the tillage of the field, either seated in a chariot, walking, or leaning on his staff, accompanied by a favorite dog.

Their mode of irrigation I have already noticed. It was the same in the field of the peasant as in the garden of the villa: and the principal difference in the mode of tilling the former consisted in the use of the plough. The water of the inundation was differently managed in various districts. This depended either on the relative levels of the adjacent lands, or on the crops they happened to be cultivating at the time. When a field lay fallow, or the last crop had been gathered, the water was permitted to overflow it as soon as its turn came to receive it from the nearest sluices; or, in those parts where the levels

¹ Diodor. i. 72.

² The condition of the husbandman, however, is not described in glowing terms by the scribe Pentaur in the Sallier Papyrus I. When he would gather in the crops, it says, the caterpillar ravages the kitchen garden, and the beasts, or hippopotami, eat up the other things; rats invade the fields, birds alight, beasts consume, and

sparrows steal; thieves also plunder, the ploughshare rusts, the yoke of beasts or horses die at ploughing, the tax-gatherer takes the sheaves, police and negroes add to the squabble and woes; and if he drinks, his wife and children suffer for it. (W. II. Goodwin, in the 'Cambridge Essays,' 1858, p. 250.) — S. B.

were low and open to the ingress of the rising stream, as soon as the Nile arrived at a sufficient height: but when the last autumn crop was in the ground, every precaution was taken to keep the field from being inundated; and 'as the water rose gradually, they were enabled,' says Diodorus,¹ 'to keep it out by means of small dams, which could be opened if required, and closed again without much trouble.'

In the sculptures of the tombs are sometimes represented canals conveying the water of the inundation into the fields; and the proprietor of the estate is seen, as described by Virgil,² plying in a light painted skiff or papyrus punt, and superintending the maintenance of the dykes, or other important matters connected with the land. Boats carry the grain to the granary, or remove the flocks from the lowlands; and as the water subsides, the husbandman ploughs the soft earth with a pair of oxen, and the same subjects introduce the offering of first-fruits to the gods, in acknowledgment of the benefits conferred by 'a favorable Nile.'³ These subjects, however, give little insight into the actual mode of laying out the canals, being rarely more than conventional pictures; though we may infer from their general character that the main canal was usually carried to the upper or southern side of the land, and that small branches leading from it at intervals traversed the fields in straight or curving lines, according to the nature or elevation of the soil.

As the Nile subsided, the water was retained in the fields by proper embankments: and the mouths of the canals being again closed, it was prevented from returning into the falling stream. By this means the irrigation of the land was prolonged considerably, and the fertilizing effects of the inundation continued until the water was absorbed. And so rapidly does the ardent sun of Egypt, even at this late period of the season — in the months of November and December — dry the mud when once deprived of its covering of water, that no fevers are generated, and no illness visits those villages which have been entirely surrounded by the inundation. For though some travellers pretend that the Nile ceases to rise to the same height as in the days of Herodotus, and assert that the villages no longer present

¹ Diodor. i. 36.

² Virg. Georg. iv. 289.

³ This is a translation of the expression used in Egypt for a favorable inundation.

where they always speak of 'the time of the Nile,' or 'a good Nile,' — meaning the *inundation*.

the appearance he describes,¹ of islands resembling the Cyclades in the Ægean Sea, it is not less certain that the great inundations have precisely the effect he mentions; and I have seen the villages perfectly isolated, as in olden times. But this, as may be reasonably supposed, does not happen every year; and, as in all ages of Egyptian history, the Nile sometimes rises to a great height, and at others falls short of the same limit; and a casual observer, judging only of what he witnessed during a short stay in the country, may form too hasty an opinion, and draw conclusions which longer experience would prove to be erroneous.

As soon as the canals were closed the quantity of fish collected in them afforded an abundant supply to the neighboring villages; and, as already observed, the advantages arising from these fisheries were of the greatest importance both to the people and the revenue.

The land being cleared of the water, and presenting in some places a surface of liquid mud, in others nearly dried by the sun and the strong N. W. winds (that continue at intervals to the end of autumn and the commencement of winter), the husbandmen prepared the ground to receive the seed; which was either done by the plough and hoe, or by more simple means, according to the nature of the soil, the quality of the produce they intended to cultivate, or the time the land had remained under water. When the levels were low, and the water had continued long upon the land, they often dispensed with the plough,² and probably, like their successors, broke up the ground with hoes, or simply dragged the moist mud with bushes³ after the seed had been thrown upon the surface; and then merely drove a number of cattle, asses, pigs, sheep, or goats into the field, to tread in the grain.⁴

‘In no country,’ says Herodotus,⁵ ‘do they gather their seed with so little labor. They are not obliged to trace deep furrows with the plough, to break the clods, nor to partition out their fields into numerous forms, as other people do; but when the river of itself overflows the land, and the water retires again, they sow their fields, driving the pigs over them to tread in the seed; and this being done, every one patiently awaits the harvest.’

¹ Herodot. ii. 97.

² To this, perhaps, the tenth verse of Dent. xi. refers, where mention is made of the simple process of sowing the seed in Egypt, ‘as a garden of herbs.’

³ A sort of harrow seems to have been

used as early as the time of Job (xxxix. 10).

⁴ Diodor. i. 36. Plin. xviii. 18. Woodcut No. 464.

⁵ Herodot. ii. 14. *

On other occasions they used the plough, but were contented, as

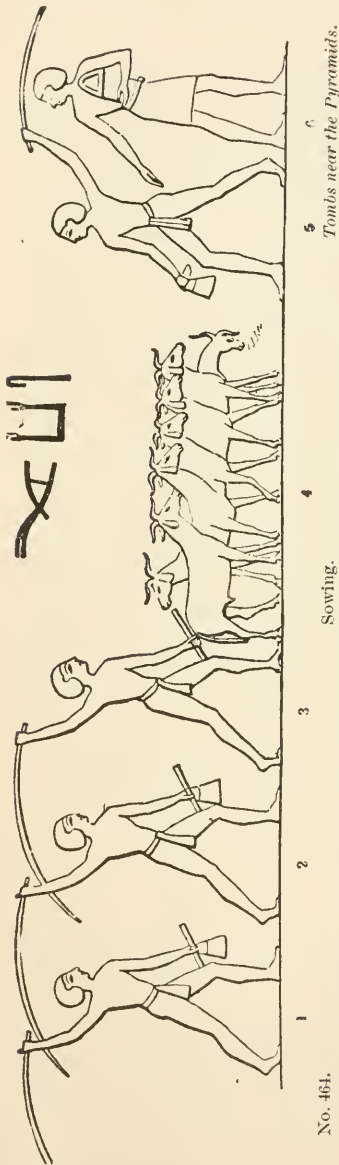


Fig. 4. Goats treading in the grain, when sown in the field, after the water has subsided. 6 is sprinkling the seed from the basket he holds in his left hand; the others are driving the goats over the ground. The hieroglyphic word above, *sk*, or *skéi*, signifies 'tillage,' and is followed by the demonstrative sign, a plough.

Diodorus¹ and Columella² observe, with 'tracing slight furrows with light ploughs on the surface of the land;' and others followed the plough with wooden hoes³ to break the clods of the rich and tenacious soil. The modern Egyptians sometimes substitute for the hoe a machine⁴ called *khon-fud*, 'hedgehog,' which consists of a cylinder studded with projecting iron pins, to break the clods after the land has been ploughed; but this is only used when great care is required in the tillage of the land; and they frequently dispense with the hoe; contenting themselves, also, with the same slight furrows as their predecessors, which do not exceed the depth of a few inches, measuring from the lowest part of the summit of the ridge. This mode of ploughing was called by the Romans *scarificatio*. The ancient plough was entirely of wood, and of very simple form, like that still used in Egypt. It consisted of a share, two *handles*, and the pole or beam; which last was inserted into the lower

¹ Diodor. i. 36.

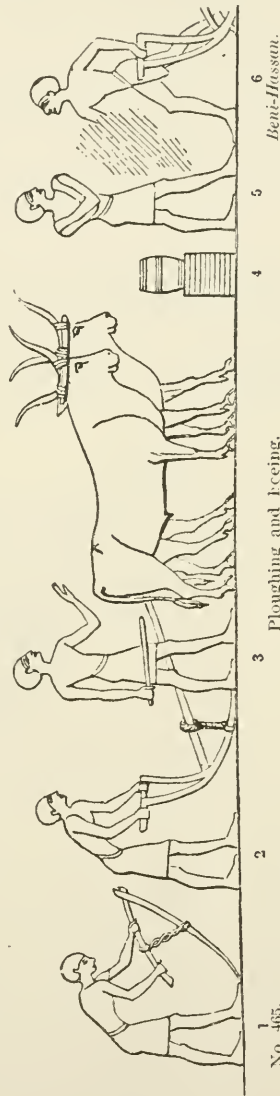
² Columella, de Re Rust. ii. 25.

³ Of this instrument, dedicated to the god of gardens, I have given a remarkable instance ('Materia Hierog.' pl. vi. and in

plates of the Pantheon, in this volume). See Woodcuts No. 465 and No. 467.

⁴ Vignette K, at the beginning of this chapter.

end of the stilt, or the base of the handles, and was strengthened by a rope connecting it with the heel. It had no coulter, nor were wheels applied to any Egyptian plough: but it is probable that the point was shod with a metal sock, either of bronze or iron. It was drawn by two oxen; and the ploughman guided and drove them with a long goad, without the assistance of reins, which are used by the modern Egyptians. He was sometimes accompanied by another man, who drove the animals,¹ while he managed the two handles of the plough; and sometimes the whip was substituted for the more usual goad. The mode of yoking the beasts was exceedingly simple. Across the extremity of the pole, a wooden yoke or cross-bar, about fifty-five inches or five feet in length, was fastened by a strap, the *zygodesmos* of the Greeks, lashed backwards and forwards over a prominence, *omphalos*, projecting from the centre of the yoke, which corresponded to a similar peg, or knob, at the end of the pole; and occasionally, in addition to these, was a ring passing over them, as in some Greek chariots.² At either end of the yoke was a flat or slightly



Beni-Hassan.

Ploughing and seeding.

No. 465.

- Fig. 1 breaks the clods of earth after the plough has passed.
 2. A ploughman.
 3. The driver.
 4. A barrel, probably containing the seed.
 5. An attitude common to the Egyptians.
 6. Another ploughman. The Ancient Egyptians were evidently as fond of talking while at work as their successors.

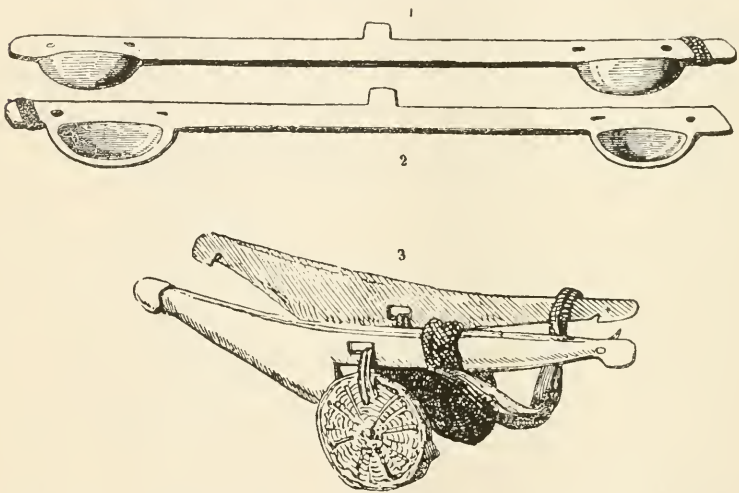
¹ Instances of both are given in woodcut No. 143, vol. i. p. 372.

² The parts, according to Homer, were called *ῥυμός*, the pole; *ζυγός*, the yoke; *ὀμφαλός*, a prominence in the centre of the

yoke, corresponding with a peg or knob, *ἔστωρ*, at the end of the pole; to which it was connected by a ring, *κρικος*, and then bound by the *ζυγὸδέσμος*, or strap. (Π. Ω, 268.)

concave projection, of semicircular form, which rested on a pad placed upon the withers of the animal: and through a hole on either side of it passed a thong for suspending the shoulder-pieces, which formed the collar. These were two wooden bars, forked at about half their length, padded so as to protect the shoulder from friction, and connected at the lower end by a strong band passing under the throat.

Sometimes the draught, instead of being from the shoulder, was from the head, the yoke being tied to the base of the



No. 466. Yoke of an ancient plough found in a tomb. *Collection of S. D'Anastazy.*

Figs. 1, 2. The back and front of the yoke.

3. Collar or shoulder-pieces attached to the yoke.

4, 4. The pieces of matting for protecting the shoulders from friction.

horns;¹ and in religious ceremonies oxen frequently drew the bier, or the sacred shrine, by a rope fastened to the upper part of the horns, without either yoke or pole.

From a passage in Deuteronomy,² 'Thou shalt not plough with an ox and an ass together,' it might be inferred that the custom of yoking two different animals³ to the plough was common in Egypt; but since no representation of it occurs in the sculptures, we may conclude, if it ever was done there, that it was of very rare occurrence; and it is probable that the Hebrew lawgiver had in view a practice adopted by some of the people of Syria, whose

¹ Woodcut No. 465.

² Dent. xxii. 10.

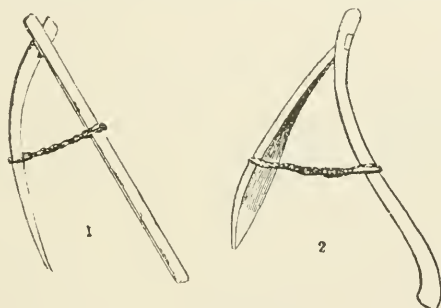
³ I have often seen it done in Italy.

The cruelty of the custom is evident, the horn of the ox wounding its companion.

country the Israelites were about to occupy, rather than the land of Egypt they had recently quitted.

The name of the plough was *hebi*; ¹ ploughed land appears to have been *art*, a word still traced in the Arabic *hart*, which has the same import; and the Roman *aratrum* appears to indicate, like the *aroura*, an Egyptian origin.

The hoe was of wood, and in form not unlike our letter A, with one limb shorter than the other, and curving inwards: the longer limb, or handle, being of uniform thickness, round, and smooth; and the lower extremity of the other, or the blade, being of increased breadth, and either terminated by a sharp point, or rounded at the end. The blade was frequently inserted into the handle, ² and they were bound together, about the centre, with a twisted rope. They are frequently represented in the sculptures, and several which have been found in the tombs of



No. 467.

Wooden hoes.

Fig. 1. From the sculptures. Fig. 2. Found in a tomb.

Thebes are preserved in the museums of Europe. The figure of the hoe in hieroglyphics is well known; its alphabetic force is an M, though the name of this instrument was in Egyptian, as in Arabic, *toré*. It forms the commencement of the word *mai*, 'beloved,' and enters into numerous other combinations. I have found no instance of hoes with metal blades; nor is there evidence of the ploughshare having been sheathed with metal; though, as I have already observed, probability suggests that on some occasions the Egyptians may have adopted this simple improvement in their implements of husbandry.

The axe had a metal blade, either bronze or iron; and the peasants are sometimes represented felling trees with this implement; while others are employed in hoeing the field preparatory

¹ ΖΗΒΙ.² Woodcut No. 467.

to its being sown — confirming what I before observed, that the ancient as well as the modern Egyptians frequently dispensed with the use of the plough.

There has been some doubt respecting the admission of swine into the fields after the inundation, and considerable criticism has been expended on the statement of Herodotus above quoted. Some have objected that their voracious habits were more likely to injure than to benefit the cause of the husbandman, and that many other animals might be chosen for the purpose of treading in the grain, without the fear of their destroying what they were intended to preserve; but the learned Larcher very properly suggests that muzzling them would effectually obviate this inconvenience, and that the historian may allude to their admission into the fields previous to the sowing of the grain, for the purpose of clearing the land of roots and noxious weeds, whose growth was favored by the water of the inundation; an opinion which



No. 468.

Hoeing and sowing the land, and felling trees.

Thebes.

is strengthened by the representation of some pigs given in a previous part of this work, from a tomb at Thebes, where the introduction of water-plants seems to indicate the use for which they were employed. Nor, indeed, considering how unclean these animals were considered by the Egyptians — the swineherd being deemed unworthy to intermarry with other persons — is it likely that they were kept for any but agricultural purposes; and no one has a greater appearance of probability than that to which I have alluded.

The heat of the climate rendered the duties of the ploughman particularly arduous, and care was taken to provide a supply of water, which was sometimes kept cool by suspending the skin that held it in a tree. At Beni-Hassan a barrel is represented placed at the extremity of the furrows, which calls to mind the description given by Homer¹ of the ploughing scene of the shield of Achilles, where, as soon as each ploughman arrived at the end of the field, a man presented him with a cup of wine; but, as

¹ Hom. II. E, 541. Woodcut No. 465.

already observed, it seems more probable that it contained the grain intended for sowing the field after the plough had passed.

Like the Romans, they usually brought the seed in a basket,¹ which the sower held in his left hand, or suspended on his arm (sometimes with a strap round his neck), while he scattered the seed with his right;² and, judging from the paintings of the tombs, the sower sometimes followed the plough in those fields which required no previous preparation by the use of the hoe, or from their elevated level were free from the roots of noxious herbs. The mode of sowing was what we term 'broadcast,' the seed being scattered loosely over the surface, whether ploughed or allowed to remain unbroken; and in no agricultural scene is there any evidence of drilling or dibbling. Nor was the harrow or rake known in Egypt; and the use of the spade was supplied by the hoe, as it still is throughout the valley of the Nile.

Corn, and those productions which did not stand in need of constant artificial irrigation, were sown in the open field, as in other countries; but for indigo, esculent vegetables, and herbs, which required to be frequently watered, the fields were portioned out into square beds like our salt pans, surrounded by a raised border of earth to keep in the water, which was introduced by channels from the *shadoof*, or poured in with buckets;³ and it is probably to this method of sowing the land and turning the water from one square to another, by pushing aside the mud to open one and close the next with the foot, that reference is made in a passage of Deuteronomy, already noticed.

Sometimes, as we are informed by Pliny,⁴ they used a dressing of nitrous soil, which was spread over the surface—a custom continued to the present day; but this was confined to certain crops, and principally to those reared late in the year, the fertilizing properties of the alluvial deposit answering all the purposes of the richest manure.⁵ Its peculiar quality is not merely indicated by its effects, but by the appearance it presents: and so tenacious and silicious is its structure, that when left upon rock, and dried by the sun, it resembles pottery, from its brittleness and consistence. Its component parts, according to the analysis given by Regnault, are⁶—11 water, 9 carbon, 6 oxide of iron, 4 silica,

¹ The Roman basket of seed contained three pecks or *modii*. (Colum. ii. 9.)

² Conf. Plin. xviii. 24.

³ These square beds are represented in woodcut No. 389.

⁴ Plin. lib. xix. c. 5.

⁵ Cf. Plin. xviii. 18. Macrobius attributes the use of manure to Saturn (lib. i. c. 7).

⁶ 'Mémoires sur l'Égypte,' tome i. p. 351.

4 carbonate of magnesia, 18 carbonate of lime, 48 alumen = 100 ; the quantity of silica and alumen varying according to the places

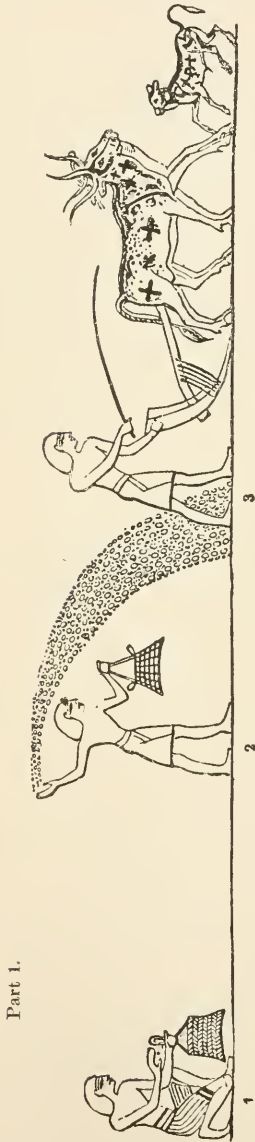
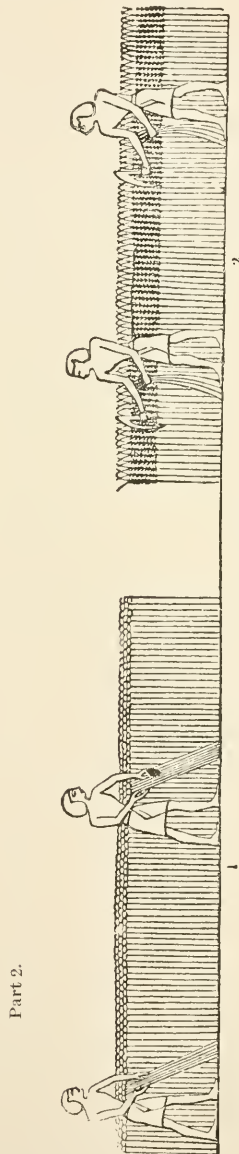


Fig. 1 puts the seed into the basket.
2 sowing the land, after the plough has passed. The handle of the plough has a peg at the side like the modern Egyptian plough, which may be seen in vignette K.



Tombs of the Kings -- Thebes.

Ploughing, sowing, and reaping.
Fig. 1 plucking up the weeds by the roots.
2 sowing wheat.
2 reaping wheat.

No. 469.

whence the mud is taken, which frequently contains a great admixture of sand near the banks, and a larger proportion of argillaceous matter at a distance from the river.

The same quality of soil and alluvial deposit seems to accompany the Nile in its course from Abyssinia to the Mediterranean; and though the White River is the principal stream, being much broader, bringing a larger supply of water, and probably coming from a greater distance than the Blue River, or Abyssinian branch, which rises a little beyond the lake Dembea, still this last claims the merit of possessing the real peculiarities of the Nile, and of supplying those fertilizing properties which mark its course to the sea.¹ The White River, or western branch, likewise overflows its banks, but no rich mud accompanies its inundation; and though, from the force of the stream (which brings down numbers of large fish and shells at the commencement of its rise, probably from passing through some large lakes), there is evidence of its being supplied by an abundance of heavy rain, we may conclude that the nature of the mountains at its source differs considerably from that of the Abyssinian ranges.

Besides the admixture of nitrous earth, the Egyptians made use of other kinds of dressing for certain produce; and in those places where the vine was cultivated on alluvial soil, we may conclude they found the addition of gravel beneficial to that valuable plant—a secret readily learnt from its thriving condition, and the superior quality of the grape in stony soils: and some produce was improved by a mixture of sand. Nor were they neglectful of the advantages offered for the growth of certain plants by the edge of the desert, which, being composed of clay and sand, was peculiarly adapted to such as required a light soil; and the cultivation of this additional tract, which only stood in need of proper irrigation to become highly productive, had the advantage of increasing considerably the extent of the arable land of Egypt. In many places we still find evidence of its having been tilled by the ancient inhabitants, even to the late time of the Roman Empire; and in some parts of the Fyóom, the vestiges of beds and channels for irrigation, as well as the roots of vines, are found in sites lying far above the level of the rest of the country.

The occupation of the husbandman depended much on the produce he had determined on rearing. Those who solely cultivated corn had little more to do than to await the time of harvest;

¹ [From what I observed in the Eastern Desert respecting the decomposition of basaltic rocks I infer that the mud of the Nile is produced from the decomposition

of volcanic rocks in Abyssinia, and that similar rocks are not to be met with in the upper course of the Bahr el Abiad, or White River. — G. W.]

but many crops required constant attention, and some stood in need of frequent artificial irrigation.

In order to give a general notion of the quality of the crops, and other peculiarities relating to their agriculture, I shall introduce the principal productions of Egypt in the two following tables; of which the first presents those raised after the retirement of the inundation:—

English Name.	Botanical Name.	Remarks.
Wheat	Triticum sativum . (Arab. <i>Kumh.</i>)	Sown in November; reaped in beginning of April, a month later than barley; conf. Exod. ix. 32.
Barley	Hordenum vulgare . (Arab. <i>Shaycer.</i>)	Sown at the same time; reaped some in 90 days, some in the 4th month. ¹
Beans	Vicia faba (Arab. <i>Fool.</i>)	Sown in October or November; cut in about 4 months.
Peas?	Pisum arvense (Arab. <i>Bisilleh.</i>)	Sown in the middle of November; ripen in 90 or 100 days.
Lentils	Ervum lens (Arab. <i>Ads.</i>)	Sown in the middle or end of November; ripen in 100 or 110 days, or about 10th to 20th of March.
Vetches. . . .	(Hommos) Cicer arietinum (Arab. <i>Hommos.</i>)	
Lupins	Lupinus Termis (Arab. <i>Termus.</i>)	Id. Called <i>tharmos</i> in Coptic, which is still retained in the modern Arabic name <i>Termus</i> .
Clover	Trifolium Alexandrinum. (Arab. <i>Bersim.</i>)	Sown in beginning of October; first crop after 60 days, second after 50 more days, third left for seed; if a fourth crop is raised by irrigation it produces no seed.
	Trigonella fœnum-græcum. (Arab. <i>Helbeh.</i>)	The <i>Helbeh</i> , or Trigonella fœnum-græcum, sown in November; cut in about 2 months.
	Lathyrus sativus (Arab. <i>Gilbán.</i>)	Lathyrus sativus, a substitute for clover, gathered in 60 days; seed ripens in 110.
A sort of French Bean.	Dolichos lubia (Arab. <i>Loobieh.</i>)	Sown at the same time as wheat in November; ripens in 4 months. A crop raised by the <i>shadoof</i> in August, gathered in about 3 months; its beans for cooking in 60 days.
Safflower	Carthamus tinctorius (Arab. <i>Kortum.</i>)	The flowers used for dyeing; the seeds giving an oil. Sown middle of November; seeds ripen in 5 months.
Lettuce	Lactuca sativa (Arab. <i>Khus.</i>)	Cultivated for oil. Sown in middle of November; seeds ripen in 5 months.
Flax	Linum usitatissimum (Arab. <i>Kettán.</i>)	Sown middle of November; plucked in 110 days.
Coleseed	Brassica oleifera (Arab. <i>Selgam.</i>)	Yields an oil. Sown middle of November; cut in 110 days.
Hemp?	Canabis sativa (Arab. <i>Hasheesh.</i>)	
Cummin	Cuminum Cyminum (Arab. <i>Kammoon.</i>)	Sown middle of December; cut in 4 months.
Coriander	Coriandrum sativum (Arab. <i>Kooshera.</i>)	

¹ Pliny (xviii. 7) says in the sixth, and wheat in the seventh month after sowing.

English Name.	Botanical Name.	Remarks.
Poppy	Papaver somniferum. (Arab. <i>Aboonöm.</i>)	Sown end of November; seeds ripen in April. The Arabic name signifies father (of) sleep.
Watermelon, and several other Cucurbitæ.	Cucurbita citrullus . (Arab. <i>Batëekh.</i>)	Sown middle of December; cut in 90 days.
Cucumber, and other Cucumidæ.	Cucumis sativus . .	Cut in 60 days.
<i>Doora</i>	Holcus Sorghum . . (Arab. <i>Doora Say-fee.</i>)	Independent of the crop raised by the <i>shadoof</i> , and that <i>during</i> the inundation; sown middle of November; ripens in 5½ months.

All these, the ordinary productions of modern Egypt, appear to have been known to and cultivated by the ancient inhabitants; and, according to Dioscorides, from the *Helbeh*, or Trigonella, was made the ointment called by Athenæus¹ *Telinon*. The *Carthamus tinctorius* is now proved, by the discovery of its seeds in a tomb at Thebes, to have been an old Egyptian plant; and there is reason to believe the coleseed to be an indigenous production, though it may be doubted if peas and hemp were formerly grown in the valley of the Nile.

The *Carthamus* was not only cultivated for the dye its flower produced, but for the oil extracted from its seeds. The ancient as well as the modern Egyptians also obtained oil from other plants, as the olive, *simsim* or sesamum, the *cici* or castor-berry tree, lettuce, flax, and *selgam* or coleseed. This last, the *Brassica oleifera* of Linnæus, appears to be the Egyptian *raphanus* mentioned by Pliny² as 'celebrated for the abundance of its oil,' unless he alludes to the *seemga*, or *Raphanus oleifer* of Linnæus, which is now only grown in Nubia and the vicinity of the First Cataract. The seeds of the *simsim* also afford an excellent oil, and they were probably used, as at the present day, in making a peculiar kind of cake, called by the Arabs *Koosbeh*, which is the name it bears when the oil has been previously extracted.³ When only *bruised* in the mill, and still containing the oil, it is called *Tahéneh*; and the unbruised seeds are strewed upon cakes, or give their name and flavor to a coarse conserve, called *Haloweh simsemeéh*. The oil of *simsim* (called *seeriy*) is considered the best lamp-oil in the country; it is also used for cooking, but is reckoned inferior in flavor to that of the lettuce.⁴

¹ Athen. lib. v. p. 195.

² Plin. xix. 5, and xv. 7. ³ Ibid. xviii. 10.

⁴ Pliny shows it was inferior to the oil of the cypros, since they were in the habit

The castor-berry tree is called by Herodotus¹ *Sillicyprion*, and the oil, *kiki* (*cici*), which he says is not inferior to that of the olive for lamps, though it has the disadvantage of a strong, unpleasant smell. Pliny² calls the tree *cici*, which, he adds, 'grows abundantly in Egypt, and has also the names of croton, traxis, tree sesamum, and ricinus.' The mode he mentions of extracting the oil, by putting the seeds into water over a fire and skimming the surface, is the manner now adopted in Egypt; though he says the ancient Egyptians merely pressed them after sprinkling them with salt. The press, indeed, is employed for this purpose at the present day, when the oil is only wanted for lamps;³ but by the other method it is more pure, and the coarser qualities not being extracted, it is better suited for medicinal purposes. Strabo says, 'Almost all the natives of Europe used its oil for lamps, and workmen, as well as all the poorer classes, both men and women, anointed themselves with it,' giving it the same name, *kiki*, as Pliny, which he does not confine, like Herodotus, to the oil; and of all those by which it was formerly known in Egypt or Greece, no one is retained by the modern Egyptians. It grows in every part of Upper and Lower Egypt; but the oil is now little used, in consequence of the extensive culture of the lettuce, the coleseed, the olive, the carthamus, and the *simsim*, which afford a better quality for burning: it is, therefore, seldom employed except for the purpose of adulterating the lettuce and other oils; and the ricinus is rarely cultivated in any part of the country.

Herodotus tells us the ancient Egyptians adopted both methods of pressing and boiling the seeds, which is much more probable than the statement of Pliny; the choice of the two depending, as I have observed, on the quality of the oil they required. The enicon, a plant unknown in Italy, according to Pliny,⁴ 'was sown in Egypt for the sake of the oil its seeds afforded;' the chorticon, urtica, and amaracus⁵ were cultivated for the same purpose,⁶ and the cypros, 'a tree resembling the ziziphus in its foliage, with seeds like the coriander, was noted in Egypt, particularly on the Canopic branch of the Nile, for the excellence of its oil.'⁷ Egypt was also famed for its 'oil of bitter

of 'adulterating the cyprine with the sesame oil' (xiii. 1).

¹ Herodot. ii. 94.

² Plin. xv. 7.

³ Pliny evidently had an aversion to castor oil, in which he cannot be considered singular. Strabo, xvii. p. 566.

⁴ Plin. xxi. 15.

⁵ Ibid. xxi. 11, 22.

⁶ Ibid. xv. 7, and xvii. 13.

⁷ Ibid. xii. 24, xiii. 1, and xxiii. 4. Athen. xv. p. 688.

almonds;¹ and many other vegetable productions were encouraged for the sake of their oil,² for making ointments, or for medicinal purposes.

In the length of time each crop took to come to maturity, and the exact period when the seed was put into the ground, much, of course, depended on the duration of the inundation, the state of the soil, and other circumstances; and in the two accompanying tables I have been guided by observations made on the crops of modern Egypt, which, as may be supposed, differ in few or no particulars from those of former days; the causes that influence them being permanent and unvarying.

‘The plants of the summer season,’ as I have elsewhere observed,³ ‘which succeed the above mentioned, either immediately or after a short interval, are produced solely by artificial irrigation.’ ‘But the use of the *shadoof* is not confined to the productions of summer; it is required for some in spring, and frequently throughout the winter, as well as in autumn, if the inundation be deficient;’ and the same system was, of course, adopted by the ancient Egyptians. The chief productions sown the half year before and during the inundation are enumerated in the table below. Herbs and esculent roots were cultivated in great abundance by the Egyptians, experience having taught them that a vegetable diet was highly conducive to health in their climate; and the sculptures, the authority of Pliny,⁴ the fact of four thousand persons being engaged in selling vegetables at Alexandria⁵ when that place was taken by Amer, and the habits of the people at the present day, show how partial they always were to their use. The same may be remarked of the Italians; and it is a curious fact that several Roman families of note received their names from the cultivation of certain pulse.⁶

¹ Plin. xiii. 1.

² In the former place, I have mentioned some ointment preserved in a vase at Alwick Castle, upon which I have lately received some observations by Dr. Ure, who says, ‘In consistence, this unguent is intermediate between tallow and hog’s lard. It has an orange-yellow color. Its specific gravity is 0.391; and this density would seem to indicate the presence of rosin. It gives a greasy stain on paper, not removable by heat. It is soluble in hot oil of turpentine and in hot alcohol, but it precipitates from the latter in the cold. From these results I am of opinion that it is of the nature of a fixed fat, which may have

been flavored with an essence or volatile oil; but it does not belong to the class of stearoptenes, like attar of roses, or the precious Oriental perfumes.’ I may also here introduce the analysis which Dr. Ure has favored me with of a bronze chisel: of 100 parts, 94.0 are copper, 5.9 tin, 0.1 iron = 100.

³ ‘Topography of Thebes and General View of Egypt,’ p. 263.

⁴ Conf. Plin. xvi. 15.

⁵ Pliny says, ‘All kinds of pulse appear above the ground, in Egypt, on the third day’ (xviii. 7).

⁶ As the Lentuli, Fabii, Pisones.

English Name.	Botanical Name.	Remarks.
Rice ¹	<i>Oryza sativa</i> . . (Arab. <i>Roos</i> or <i>Aroos</i> .)	Cut in 7 months: in October. Grown in the Delta.
<i>Doora</i>	<i>Holeus Sorghum</i> . (Arab. <i>Doora</i> <i>Kaydee</i> .)	Sown at beginning or end of April; cut at rise of Nile in 100 days. Its seed sown as <i>Byoód</i> .
<i>Byoód</i> or autumn <i>Doora</i> .	<i>Holeus Sorghum</i> . (Arab. <i>D. Byoód</i> or <i>Dimeéree</i> .)	Sown middle of August; cut in 4 months; but its seed, no longer prolific, is all used for bread.
Yellow <i>Doora</i> . . .	<i>Holeus Sorghum</i> . (Arab. <i>D. Saf- fru</i> .)	Sown when the Nile is at its height, in middle of August, and banked up from the inundation; ripens in 120 days.
Millet	<i>Holeus saccharatus</i> (Arab. <i>Dokhn</i> .)	Only in Nubia and the Oases: sown at same time as the <i>Doora</i> .
Cotton	<i>Gossypium herb- aceum</i> . ² (Arab. <i>Koton</i> .)	Planted in March, and summer. In good soil some is gathered the 5th month.
<i>Simsim</i> , Sesame . .	<i>Sesamum orientale</i> (Arab. <i>Simsim</i> .)	Gives an oil. Ripens in about 100 days. Sown 10 days after the <i>Doora</i> <i>Byoód</i> .
Indigo	<i>Indigofera argen- tea</i> . ³ (Arab. <i>Néelch</i> .)	Sown in April: the first crop in 70 days; second in 40; third in 30; fourth in 25, in the first year: it is then left without water all the winter, and watered again in March. Then the first crop is cut after 40 days: second in 30; third in 30; and the same in the third year. After three years it is renewed from seed. The first year's crop is the best.
<i>Henneh</i>	<i>Lawsonia spinosa</i> et <i>inermis</i> .	Used for the dye of its leaves.
Watermelon	And other Cucur- bitæ. (Arab. <i>Bateekh</i> , &c.)	During the rise of the Nile and in March, on the sandbanks of the river.
Onion (Leek, and Garlic).	<i>Allium Ceba</i> , &c. (Arab. <i>Bussal</i> .)	Sown in August.
<i>Bámia</i>	<i>Hibiscus esculen- tus</i> , or perhaps only the <i>H. præ- cox</i> .	Mostly in gardens. Gathered in 50 or 60 days, in September or October. Many other vegetables were raised at different seasons, by artificial irrigation.

Having in the preceding tables shown the seasons when the principal productions of Egypt were raised, I proceed to enumerate those which appear from good authority to have been grown by the ancient Egyptians. Wheat,⁴ barley,⁴ *doora*,⁵ peas,⁶ beans,⁷

¹ It is not certain that rice was cultivated formerly in Egypt. [There is no evidence of it, and none has been found.—S. B.]

² Has not been found in Egypt.

³ The blue color of the selvages of the ancient linen may have been produced by

indigo.

⁴ Exod. ix. 31, 32, and the seed found in the tombs.

⁵ The seeds found in the tombs.

⁶ Said to be found in the tombs.

⁷ Herodot. ii. 37. Diodor. i. 89. Plin. xviii. 12.

lentils,¹ *hommos*,² *gilbán*,³ carthamus,⁴ lupins,⁴ *bámia*,⁵ *figl*,⁶ *simsim*,⁷ indigo,⁸ sinapis or mustard,⁹ origanum,¹⁰ succory,¹¹ flax,¹² cotton,¹³ cassia senna,¹⁴ colocynth,¹⁵ cummin,¹⁶ coriander,¹⁷ several cucurbitæ, cucumbers, melons, leeks, onions, garlic,¹⁸ lotus,¹⁹ nelumbium,²⁰ cyperus esculentus,²¹ papyrus,²² and other cyperi,²³ are proved to have been cultivated by them; and the learned Kircher mentions many productions of the country,²⁴ principally on the authority of Apuleius and early Arab writers. But the greater part of these last are wild plants; and indeed, if all the indigenous productions of Egypt (which unquestionably grew there in ancient as well as modern times) were enumerated, a large catalogue might be collected, those of the desert alone amounting to nearly 250 species. For though the Egyptian Flora is limited to about 1300, the indigenous plants constitute a large proportion of that number,

¹ Virg. Georg. i. 228. Plin. xviii. 21: 'Duo genera ejus in Ægypto.' Plut. de Isid. s. 68. Anl. Gell. xvii. 8, and in the tombs.

² *Cicer arietinum*.

³ *Lathyrus sativus*.

⁴ Found in the tombs.

⁵ *Hibiscus esculentus*.

⁶ *Raphanus sativus*, var. *edulis*, of Linnæus. Herodot. ii. 125. Plin. xv. 7, and xix. 5.

⁷ Plin. xv. 7.

⁸ Cloths found dyed with it.

⁹ Plin. xiv. 8: 'Semen (sinapis) optimum Ægyptium.'

¹⁰ Ibid. xix. 8.

¹¹ Ibid. xix. 8, xx. 8, and xxi. 15. *Cichorium intybus*, Linn. Pliny calls it 'Erraticum intubum.'

¹² Exod. ix. 31, &c.

¹³ Plin. xiv. 1, &c.

¹⁴ An indigenous plant, called by the Arabs *Senna mekkeh*: the best is brought from Ethiopia and the interior of Africa.

¹⁵ An indigenous plant.

¹⁶ Plin. xx. 15. Seeds used on bread in Egypt, as at the present day (ibid. xix. 8).

¹⁷ Plin. xx. 20. In Numbers xi. 7, the manna was compared to coriander seed, which the Israelites had seen in Egypt. The name of manna, properly *men* or *min*, signifies 'what:' for 'when the children of Israel saw it, they said to one another, *What* (is) this? (it is *manna*) for they wist not *what* it was.' (Exod. xvi. 15.) 'And the house of Israel called the name thereof *what* (*manna*).' (ver. 31.)

¹⁸ Numbers xi. 5.

¹⁹ Buds found in the tombs. Herodot. ii. 92, &c. Plin. xiii. 7.

²⁰ Herodot. ii. 92. It now only grows in India. It is called by Pliny *Colocasia* as well as *Cyamon* (xxi. 15).

²¹ The seeds found in the tombs.

²² Plin. xviii. 11. Herodot. ii. 92. Isaiiah xix. 7. Found dried in the tombs.

²³ Indigenous. (Plin. xxi. 18.)

²⁴ *Antiamas*, or minor Centaurea. *Asout*, or Plantago major. *Mené*, or Satyrion, called Panion. *Ortebioké*, or *Opitheboca*, Pentaphyllum. *Nemenestphe*, or *Nesphe*, Chamæpythys. *Anesen*, or Artemisia. *Saphr*, or Hyoscyamus. *Sephseph*, or *Sophsoph* [*Safsaf* in Arabic is the willow — G.W.] (Arab. *Zarawend*), *Aristolochia*? Linn. *Sennæori*, or *Samur*, *Chamaelea*. *Eminion*, or *Asclepias*, probably the *Osher*, or *Asclepias gigantea*. *Pemptemphr*, *Verbena*? *Antouerm'bous*, *Lingua bovis* (*Lissan-é'tor*), *Borrago officinalis*? Linn. *Asteropé*, or *Marrubium*, or *Prasion* (*Phrasecon*), *Marrubium Alyssum*, Linn. *Sulétho*, or *Squill*, *Scilla maritimi* (*Bussal el far*). *Semet*, or *Nasturtium*? *Taborin* (*Chamomile*) (Arab. *Babooneg*), *Santolina fragrantissima*, Forsk. *Stemphr* (*Sanguinaria*), *Polygonum*, *Palatia*, or *Cyclaminus*. *Ethôoui*, or *Venus's Hair*, *Adiantum Capillus Veneris*, Linn. *Nisine*, or *Heliotrope*. *Meniph*, or *Dictamnus*. *Lotometra*, or *Lotus*, *Nymphæa Lotus*, Linn. *Soumonas*, or *Mint* (*Naanaa*), *Mentha Kahirina*, Forsk. *Somi*, or *Absynthium Marinum*, or *Seriphium*. *Aphlopyoi*, or *Mercurialis Herba*. *Thôôn*, or *Bryonia*, *Vitis alba*. *Phepre*, or *Scelopendra*. *Agathosdemon*, or *Cyclaminus*. *Pantagatha*, or *Origanum*. *Aiméós*, or wild Myrtle. *Dentorobon*, or *Coscuta*. *Motmoutin*, or *Portulaca* (*Oleracea*?). *Iratôria*, or *Betonica*. *Ocheôn*, or *Coriander*. *Anysi*, or *Salvia*. (Kircher, Prod. et Lex. Sup. c. 8, and *Ædipus*.)

and few countries have a smaller quantity introduced from abroad than Egypt, which, except in a few instances, has remained contented with the herbs and trees of its own soil; and the plants of the desert may be considered altogether indigenous, without, I believe, one single exception. It is true, as I have observed, that these last belong to ancient as well as modern Egypt, but I do not think it necessary to enter into any description of them in the present work; and shall content myself with a brief enumeration of those mentioned by Pliny, together with the most striking characteristics or properties he ascribes to them. I have arranged them in the order in which they are given by the naturalist, not according to their botanical classification, some being unknown; and in assigning the botanical names, I have received much assistance from the Paris edition of Pliny, by Desfontaines, from which I have in few instances found reason to dissent.

Name from Pliny.	lib. cap.	Botanical Name.	Remarks.
A plant producing ladanum.	xii. 17	<i>Cistus ladaniferus</i> .	* The plants which produce ladanum, introduced into Egypt by the Ptolemies.' <i>Plin.</i>
Tree producing Myrobalanum, Myrobalanus.	xii. 21 } xxiii. 5 }	<i>Moringa aptera</i> ? ¹ . (Arab. <i>Yessur</i> , fruct. <i>Hab-ghálee</i> .)	* Producing a fruit from which an oil or ointment was extracted. Growing in the Thebaid.' <i>Plin.</i>
Palma, ² called Adipsos.	xii. 22	_____?	* Gathered before ripe; that which is left is called Phœnicobalanus, and is intoxicating.' <i>Plin.</i>
Sphagnos, Bryon, or Sphacos.	xii. 23, 28 } xiii. 1 } xxiv. 6 }	<i>Parmelia parietina</i> ? (Arab. <i>Shegeret e'neudeh</i> .)	* Said to grow in Egypt' <i>Plin.</i> A sort of Lichen growing on trees. Oil extracted from it. <i>Plin.</i> xiii. 1.
Cypros	xii. 24 } xiii. 1 } xxi ¹ 4 }	<i>Lawsonia spinosa et inermis</i> . (Arab. <i>Hernch</i> .)	* Bearing leaves like the Zizyphus. Cooked in oil to make the ointment called Cyprus. The best grown about Canopus. Leaves dye the hair.' <i>Plin.</i>
Maron	xii. 24	<i>Teucrium Iva</i> ? . . (Arab. <i>Miskeh</i> ?)	There are four or five other species of <i>Teucrium</i> in Egypt.

¹ There appears more reason to suppose it the moranga than the *Balanites Egyptiaca*, or *Myrobalanus Chebulus* (Arab. arbor *Egléeg*, fruct. *Lalób*). They both grow in the Egyptian desert. The former is called *Yessur*; the seeds, contained in a long pod, are called *Hab-gháli*. This and the *Balanites* are very different; but Pliny's description is very indefinite, and might apply to one or the other.

Theophrastus and Dioscorides neither agree with each other, nor with Pliny.

² Pliny appears to mention two trees which produced myrobalanum, the myrobalanus and the 'palma que fert myrobalanum.' (Lib. xxiii. 5.) The fruit of this last being without any stone, was owing to their gathering it when young. When full grown, it was called Phœnico-balanus.

Name from Pliny.	lib. cap.	Botanical Name.	Remarks.
(—————) . .	xii. 25	Amyris Opobalsamum. (Arab. <i>Belisán.</i>)	Balsam in Egypt, according to Dioscorides and Strabo, till lately cultivated at Heliopolis.
Elate (Abies?) Palma, or Spathe. }	xii. 28 } xxiii. 5 }	—————?	'Of use for ointments.' <i>Plin.</i> It is supposed to be the sheath of the palm flowers. <i>Dioscor.</i> i. 150. (Arab. <i>Sabát</i> , conf. <i>Spathe.</i>)
Amygdalus, Almond	xiii. 1	Amygdalus communis. (Arab. <i>Lôz.</i>)	'Oil of bitter almonds made in Egypt.' <i>Plin.</i>
Palma, Palm . . .	xiii. 4	Phoenix dactylifera. (Arab. <i>Nakhl.</i>)	'Thebaic palms.' <i>Plin.</i> xxiii. 4.
Myxa	xiii. 5	Cordia Myxa, Sebastea domestica. <i>Vlin.</i> (Arab. <i>Mokháyt.</i>)	'Wine made from the fruit in Egypt.' <i>Plin.</i>
Ficus Ægyptia . }	xiii. 7 } xxiii. 7 }	Ficus Sycomorus . (Arab. <i>Gimmayz.</i>)	'Fruit growing on the stem itself.' <i>Plin.</i> and <i>Athen.</i> Deipn. ii. p. 51.
(<i>Ceraunia Siliqua</i>). .	xiii. 8	Ceratonia Siliqua . (Arab. <i>Kharóób.</i>)	Locust tree, or <i>Kharóób</i> , said by Pliny <i>not</i> to grow in Egypt. It is now an Egyptian tree.
Persica or Peach. }	xiii. 9 } xv. 13 }	Amygdalus Persica . (Arab. <i>Khokh.</i>)	Pliny rejects the idle tale of the peach being a poisonous fruit introduced by the Persians into Egypt (lib. xv. 13.) [The apricot grows in the oases, especially in the Western Oasis, and in the little oases. In the first of these places I found it in blossom in the middle of February. It also grows at Faráfieh, in the Western desert. — G. W.]
Cuci	xiii. 9	Hyphæne Thebaïca. (Arab. <i>Dôm.</i>)	'Like to a palm, but with spreading branches. Fruit fills a man's hand; of a
brown yellow color. That within large and hard: turned and made into pulleys or sail rings. The nucleus within it eaten when young; exceedingly hard when dry (and) ripe.' [The name <i>kuko</i> in the hieroglyphics has been supposed to mean the coco-nut palm, but it must be the <i>Hyphæne Thebaïca</i> . And the coco does not, and will not, grow in Egypt. — G. W.]			
Spina Ægyptia, the } Acanthus of Herodotus and } Strabo. }	xiii. 9, 11 } xxiv. 11, 12 }	Mimosa Nilotica . . . (Arab. <i>Sont.</i>)	'Seed pods used for tanning.' 'Produces gum.' <i>Plin.</i> ; <i>Athen.</i> xv. p. 680. Groves of it at Thebes, Memphis, and Abydus: the last two still remain.
Quercus, Oak . . .	xiii. 9	Quercus — . . .	'About Thebes, where the Persica, olive (and spina) grow.' ² <i>Plin.</i> The oak is now unknown in Egypt.

¹ Pliny appears to have confounded the Peach and Persea together in lib. xii. 9. In lib. xv. 13, he is evidently speaking of the peach.

² In this sentence, 'Cirea Thebas hæc (spina) ubi et quercus, et Persica et oliva,' on the authority of Theophrastus (who says, lib.

iv 3, 'Silva ingens circa agrum Thebanum est, ubi et robur, et Persea, et olea'), the Persica should be Persea; supposed to be the *Balanites Ægyptiaca*. The trees now growing at Thebes are principally the *Mimosa Nilotica*, *Tulk*, *Sellem*, and *Albida* [*Sodada decidua*, which I met with at Thebes and

Name from Pliny.	lib. cap.	Botanical Name.	Remarks.
(Persea)	xiii. 9	Balanites Ægyptiaca (Arab. <i>Egléeg</i> , fruct. <i>Lulób.</i>)	Grows in the Eastern desert of the Thebaid. <i>Descr. de l'Egypte. Bot.</i> , pl. 28, fig. 1.
Oliva, Olive . . . }	xiii. 9 xv. 3 }	Olea Europæa . . . (Arab. <i>Zaytoon.</i>)	'The olives of Egypt very fleshy, but with little oil.' <i>Plin.</i> xv. 3. This is very true. Strabo says, 'The Arsinoite nome alone (excepting the gardens of Alexandria) produces the olive.'
Prunus, Ægyptia	xiii.	Rhamnus ¹ Spina Christi, or R. Nabeca, <i>Forsk.</i> (Arab. <i>Nebk.</i>)	'Near Thebes.'
Papyrus or Byblus,	xiii. 11,12 xxiv. 11 }	Cyperus papyrus, ² (Arab. <i>Berdi</i> ?)	Strabo, xvii. p. 550.

The oil is very good if carefully extracted; if not, the quantity is great, but with a strong odor' (lib. xvii. p. 556). [The olive is much cultivated in the gardens of the oases; but the oil, roughly extracted, is strong and bad. The olives are bruised between two stones, and the oil has salt added to it. In the Wad e' Dakhleh they have oil pressed only by the hand, near the fire; this makes a better quality of oil. The olives are about one inch in length, as in the gardens of the Convent of St. Anthony in the Eastern desert, where some are even larger. — G. W.]

Medeenet Haboo], and sycamore. The wood Pliny mentions was at some distance from the Nile; but there must be an error in his expression, 300 stades (about 37 miles) from the river. I have introduced the Persea as well as the Peach. The former, if it be really the *Egléeg*, is now only found in Southern Ethiopia, and in the deserts south of the latitude of Ombos and E'Soan; and indeed it appears, even in the time of the Romans, that care was required for its preservation in the valley of Egypt, since a law was made by them against cutting down the Persea.

¹ Pliny's description does not altogether agree with the *Rhamnus*, as he says the *Prunus* resembles the *Spina* or *Acacia*, especially in its feathery leaves, which when touched fall, and rise again. This calls to mind the sensitive plant, or *Mimosa sensitiva*; but it is unknown in Egypt. [It is only found as a bush in Ethiopia, where it abounds by the river-side. — G. W.] I thought Pliny might have had in view the *Sodada decidua*, or *Tonthob*; but I am inclined to refer his *prunus* to the *Nabeca*. [The *R. Nabeca* was the *Lotus* of Homer's *Lotophagi*. — G. W.]

² [This is the *Cyperus papyrus* which, like the *Nelumbium*, is no longer a native of Egypt. It now only grows in the Anapus, near Syracuse, and it is said to have been found in a stream on the coast of Syria, as in Pliny's time (xiii. 11). Herodotus is wrong in calling it an annual plant. The use of the pith of its triangular stalk for paper made it a very valuable plant; and the right of growing the best quality, and of selling the papyrus made from it, belonged to the government.

It was particularly cultivated in the Sebennyitic nome, and various qualities of the paper were made. It is evident that other *Cyperis*, and particularly the *Cyperus dives*, were sometimes confounded with the *Papyrus*, or *Byblus hieraticus* of Strabo; and when we read of its being used for mats, sails, baskets, sandals, and other common purposes, we may conclude that this was an inferior kind mentioned by Strabo; and sometimes a common *Cyperus*, which grew wild, as many still do, was thus employed in its stead. It is, however, evident that a variety of the papyrus was so used, men being represented on the monuments making small boats of it; and we may conclude this was a coarser and smaller kind not adapted for paper. The best was grown with great care. Pliny says the papyrus was not found about Alexandria, because it was not cultivated there; and the necessity of this is shown by Isaiah's mention of 'the paper reeds by the brooks . . . and everything sown by the brooks.' (Is. xix. 7.) This prophecy is still more remarkable from its declaring that the papyrus shall no longer grow in the country; that it 'shall wither, and be driven away, and be no more.' Theophrastus is correct in saying it grew in shallow water; or in marshes, according to Pliny; and this is represented on the monuments, where it is placed at the side of a stream, or in irrigated lands. Pliny describes the mode of making the paper (xiii. 11), by cutting thin slices of the pith and laying them in rows; and these being crossed with other slices, the whole was made to adhere by great pressure. — G. W.]

Name from Pliny.	lib. cap.	Botanical Name.	Remarks.
Lotus	{ xiii. ¹ 17 } { xxiv. 2 }	<i>Nymphaea Lotus</i> ² . (Arab. <i>Beshnûn</i> .)	‘The flower called Balau-stium.’ <i>Plin.</i> It is the an-cient <i>rhodon</i> or rose, which was used for its dye, and gave its name to the island of Rhodes. It is possibly on the reverse of the coins of that island [in their archaic style, but not on those of later times, when the true rose is always represented.—G.W.]
Punicum malum or Granatum, Pome-granate.	xiii. 19	<i>Punica Granatum</i> . (Arab. <i>Roomân</i> .)	
Tamarix, Myrice, Tamarisk	{ xiii. 21 } { xxiv. 9 }	<i>Tamarix Gallica</i> . (Arab. <i>Tarfâ</i> .)	‘Called also Myrice, or wild brya, very abundant in Egypt and Syria.’ ‘Brya, or bryonia, commonly called <i>Arbor infelix</i> .’ <i>Plin.</i>
Ferula	{ xiii. 22 } { xx. 23 }	<i>Ferula communis</i> ? or <i>Bubon tortuo-sum</i> ? (The <i>Cryth-mum Pyrenaicum</i> of Forskal.) (Arab. <i>Shebet e’ Gebel</i> .)	‘Knotted and hollow stem, very light, good for matches. Some call the seed <i>Thapsia</i> .’ <i>Plin.</i> Two kinds, like the anethum. A large umbelli-ferous plant, supposed to be a sort of wild fennel.

¹ In lib. xiii. c. 16, Pliny mentions the *Thya* tree growing in the Oasis of Ammon and the Cyrenaica, on the authority of Theophrastus, which he says was known to Homer; its wood was very durable, and was used for rafters in temples.

² [This *Nymphaea Lotus* grows in ponds and small channels in the Delta during the inundation, which are dry during the rest of the year; but it is not found in the Nile itself. It is nearly the same as our white water-lily. Its Arabic name is *nufâr*, or *nilôfer*, or *beshnûn*; the last being the ancient *pi-sshnn*, or *pi-shneen*, of the hieroglyphics. There are two varieties—the white, and that with a bluish tinge, or the *Nymphaea caerulea*. The Buddhists of Tibet and others call it *nemuphar*. Though the favorite flower of Egypt, there is no evidence of its having been sacred; but the god Nefer-Atum bore it on his head, and the name *nufar* is probably related to *nofar*, ‘good,’ and connected with his title. It was thought to be a flower of Hades, or Amenti; and on it also Harpocrates is often seated. He was the Egyptian Aurora, or day-spring; not the god of silence, as the Greeks supposed, but figured with his finger in his mouth, to show one of the habits of childhood of which he was the emblem. Hence he represented the beginning of day, or the rise and infancy of the sun, which was typically portrayed rising every morning from that flower, or from the water; and this may have given rise to the notion of Proclus that the lotus flower was typical of the sun. Eratosthenes also says this son of Isis was the ‘god of day.’ The Egyptian mode of indicating silence was by

placing the ‘hand on the mouth’ (Job xxix. 9). The frog was also an emblem ‘of man as yet in embryo,’ as Horapollo and the Egyptian monuments show. The lotus flower was always presented to guests at an Egyptian party; and garlands were put round their heads and necks;—the ‘multæque in fronte coronæ.’ (Hor. Od. i. 26 and 38; ii. 7; iii. 10; iv. 11. Athenæus, xv. Ovid, Fast. v. Anaereon, ode iv.) It is evident that the lotus was not borrowed from India, as it was the favorite plant of Egypt before the Hindoos had established their religion there.

Besides the seeds of the lotus, poor people doubtless used those of other plants for making bread, like the modern Egyptians, who used to collect the small grains of the *Mesembry-anthemum nodiflorum* for this purpose; and Diodorus (i. 80) says the roots and stalks of water-plants were a great article of food among the lower classes of Egyptians.

Perhaps the *Nymphaea Nelumbo*, or *Nelumbium*, which is common in India, but which grows no longer in Egypt. And the care taken in planting it formerly seems to show it was not indigenous in Egypt. Crocodiles and the *Nelumbium* are represented, with the Nile god, on the large statue in the Vatican at Rome, and in many Roman-Egyptian sculptures; but it is remarkable that no representation of the *Nelumbium* occurs in the sculptures of ancient Egypt, though the common *Nyp-siphæ Lotus* occurs so often. Pliny calls it *Colocasia*, as well as *Cyanon* (xxi. 15). Dr. Pickering’s ‘Phys. Hist. of Man,’ p. 368, &c. —G.W.]

Name from Pliny.	lib. eap.	Botanicae Name.	Remarks.
Capparis	xiii. 23	Capparis spinosa . (Arab. <i>Lussuf</i> .)	The Caper. The fruit of the Egyptian caper, or <i>Lussuf</i> , is very large, like a small cucumber, about 2½ inches long, which is eaten by the Arabs.
Sari	xiii. 23	Cyperus dives? or C. fastigiatus? (Arab. <i>Dees</i> .)	<i>Theophr.</i> iv. 9. 'It grows on the banks of the Nile, with a head (<i>coma</i>) like the papyrus, and is eaten in the same manner.' <i>Plin.</i>
Vitis, Vine	xiv. 3, 7 } xvi. 18 }	Vitis vinifera . . . (Arab. <i>Enéb</i> .)	Pliny says that no trees, not even vines, lose their leaves about Memphis and Elephantine. (Lib. xvi. 21.)
Cici, Croton, Trixis, } or Sesamum . . . }	xv. 3	Ricinus communis . (Arab. <i>Kharwah</i> .)	Castor-berry tree, or Palma Christi. 'Oil extracted from it abounds in Egypt.' <i>Plin.</i>
Raphanus	xv. 7 } xix. 5 }	Raphanus oleifer, or the Brassica oleifer. (Arab. <i>Seemga</i> , or the <i>Selgam</i> ?)	'Oil made from its seeds in Egypt.' <i>Plin.</i> It is probably the <i>Seemga</i> or Raphanus oleifer, and not the sativus, that he alludes to. He may perhaps have had in view the <i>Selgam</i> (Brassica oleifer), or coleseed, so common throughout Egypt. The <i>Seemga</i> is now confined to Nubia and the southern extremity of the Thebaïd.
Chorticon, a Grass, Sesama	xv. 7 xv. 7	————— Sesamum orientale. (Arab. <i>Simsim</i> .)	'Oil extracted from it.' <i>Plin.</i> 'Cultivated for its oil.'
Urtica, called Cne- cium, or Cnidium } }	xv. 7 } xxii. 13 }	Urtica pilulifera . . (Arab. <i>Fiss el Ke- lab</i> .)	'Giving an oil.' 'The Alex- andrian the best quality.' 'Used also medicinally.' <i>Plin.</i> Supposed to be a nettle.
Pyrus Alexandrina, } Pear of Alex'dria, }	xv. 15	Pyrus communis ? . (Arab. <i>Koomittree</i> .)	Perhaps of Greek introduc- tion.
Ficus, Fig	xv. 18	Ficus Carica (Arab. <i>Tin</i> .)	It is a singular fact that the small fruit of the wild fig of the Egyptian desert, and of Syria, is called by the Arabs <i>Kottayn</i> , since Pliny says, 'the small Syrian figs are called <i>Cottana</i> .' (Lib. xiii. c. 5.) The tree is called <i>Hamât</i> .
Myrtus, Myrtle . . .	xv. 29 ¹ } xxi. 11 }	Myrtus communis . (Arab. <i>As</i> , or <i>Mer- sia</i> .)	'The myrtle of Egypt is the most odoriferous.' <i>Plin.</i> and <i>Athen.</i> xv. It is now

only grown in gardens. Pliny in another place says, 'The flowers of Egypt have very little odor' (xxi. 7),² probably on the authority of Theophrastus. *Hist. Plant.* vi. 6; *De Caus. Plant.* vi. 27.

¹ According to Pliny, 'the cherry-tree could not be produced in Egypt by any means.' (Lib. xv. c. 25.) It is not known there now.

² Pliny contradicts himself when he says, 'in Ægypto minimo odorati flores, quia

nebulosus et roscidus aer est a Nilo flumine,' having before stated (lib. v. 9) that the same river alone, of all others, 'nullas expirat auras;' and (lib. xvii. 2) 'calidus semper aer est in Ægypto:' and the reason he assigns for the

Name from Pliny.	lib. cap.	Botanical Name.	Remarks.
Calamus, Reed . . .	xvi. 36 ¹	Arundo donax, and Arundo Isiaca. (Arab. <i>Kussub</i> , and <i>Boos</i> .)	'Used by many nations for arrows, so that half the world has been conquered by reeds.' <i>Plin.</i>
Hordeum, Barley . .	xviii. 7	Hordeum vulgare. (Arab. <i>Shayir</i> .)	
Triticum, Wheat . .	xviii. 8	Triticum sativum. (Arab. <i>Kumh</i> .)	
Zea	xviii. 8	Triticum Zea . . .	} 'The Egyptians make a me- dicinal decoction of olya for children, which they call Athara.' <i>Plin.</i> xxii. 25.
Olyra	xviii. 10	Holcus Sorghum? (Arab. <i>Dóora</i> .)	
Tiphe	xviii. 11	Triticum Spelta?	} 'With a prickly stalk.' <i>Plin.</i>
Faba, Beans	xviii. 12	Vicia Faba (Arab. <i>Fool</i> .)	
Lens, Lentils	xviii. 12	Ervum Lens (Arab. <i>Atz</i> or <i>Alduz</i>)	'Two kinds of lentils in Egypt.' <i>Plin.</i>
Linum, Flax	xix. 1	Linum usitatissimum (Arab. <i>Kettán</i> .)	'Four kinds,—the Tanitic, Pelusiatic, Butic, and Tenty- ritic.' <i>Plin.</i>
Gossypion, Cotton . .	xix. 1	Gossypium herba- ceum. (Arab. <i>Kóton</i> .)	'Called Gossypion, or Xylon: the cloths named from it hence called Xylina.' <i>Plin.</i>
Aron	} xix. 5 } xxiv. 16 }	Arum Colocasia? (Arab. <i>Kolkás</i> .)	'About the size of a squill;' 'with a bulbous root' <i>Plin.</i>
Aris		xxiv. 16		Arum Arisarum?
Allium, Garlic	xix. 6	Allium sativum . . . (Arab. <i>Tóm</i> .)	} 'Both ranked by the Egyp- tians among gods, taking an oath.' <i>Plin.</i>
Cepa, Onion	xix. 6	Allium Cepa (Arab. <i>Bussal</i> .)	
Porrum, Leek	xix. 6	Allium Porrum . . . (Arab. <i>Korrát</i> .)	'The best kind is in Egypt.' <i>Plin.</i>
Cuminum Cummin {	} xix. 8 } xx. 15 }	Cuminum Cuminum, and Nigella sativa. (Arab. <i>Kammoon- abiad</i> and <i>Kam- moonaswed</i> .)	Pliny speaks of two, one whiter than the other, used for the same purpose, and put upon cakes of bread at Alexan- dria. The white and black Cuminum are called by the Arabs <i>Kammoon-abiad</i> and <i>Kammoon-aswed</i> ; the latter is the Nigella sativa.
Origanum		} xix. 8 } xx. 17 } xxv. 4 }		Origanum Ægyptia- cum. (Arab. Bar- dakoosh.)	Heracleotic.

deficiency of scent in Egyptian flowers would rather tend to increase than diminish it. Herodotus (ii. 19) and Diodorus (i. 38) say the same of the Nile. The words of the former are, 'The Nile is the only river which does not produce cold winds;' of the latter, 'The Nile is the only river about which clouds never collect, cold winds never blow, and where the air is not thickened (by fogs):' but these statements are not borne out by fact. Some flowers in Egypt, in certain situations particularly, have a very strong scent, as the bean, which is much more powerful than in

Europe. Those of the class *Pentandria* (a very extensive one in nature) may be considered as having less scent than in Europe; but this class, it is true, does not contain the most fragrant species of plants; and many of the *Syngenesia* (as well as *Didynamia*) have a very powerful scent, particularly the Artemisias, the *Santolina*, and the *Robl*, a kind of *Inula*.

¹ Pliny says (lib. xvi. 40), 'Cedar wood was used by the kings of Egypt and Syria for want of fir (*abies*):' but he does not state that it grew in Egypt.

Name from Pliny.	lib. cap.	Botanical Name.	Remarks.
Sinapis, Mustard	xix. 8	<i>Sinapis juncea</i> . . . (Arab. <i>Khardel</i> , or <i>Kubbr.</i>)	'The best seed is the Egyptian. Called also Napy, Thaspi, and Saurion.' <i>Plin.</i>
Cichorium, or Intybus erraticus . . . } Seris }	xx. 8 } xxi. 15 } xx. 8 }	<i>Cichorium Intybus</i> . . . } (Arab. <i>Shihōrieh.</i>) } <i>Cichorium Endivia?</i> } (Arab. <i>Heudebeh.</i>) }	'In Egypt the wild endive is called Cichorium; the garden endive, Seris.' <i>Plin.</i>
Anisum, Aniseed . . .	xx. 17	<i>Pimpinella Anisum</i> . . . (Arab. <i>Yeusoón.</i>)	'The Egyptian is the best quality after the Cretan.' <i>Plin.</i>
Coriandrum . . .	xx. 20	<i>Coriandrum sativum</i> . (Arab. <i>Kuzber</i> , or <i>Koozbareh.</i>)	'The best is from Egypt.' <i>Plin.</i>
[<i>Papaver nigrum</i> . . .	xx. 18	<i>Papaver somniferum</i> . (Arab. <i>Aboo-nóm.</i>)	Its opium is exported from Egypt, and is often adulterated at Alexandria. The wild poppy is the Rhœas of the Greeks. (<i>Plin.</i> xix. 8.) It is so called from its red
		color. The seeds of the poppy, so freely used in Greek cookery (<i>Athenæus passim.</i>) have no soporific properties. — G.W.]	
Buceros or Fœnum } Græcum }	xxi. 7 } xxiv. 19 }	<i>Trigonella Fœnum</i> } Græcum } (Arab. <i>Helbeh.</i>) }	'Without any scent.' <i>Plin.</i>
(<i>Helenium</i>) . . .	xxi. 10, 21	<i>Teucrium Creticum?</i>	<i>Helenium</i> (according to Dioscorides), a native of Egypt. This and four other species of <i>Teucrium</i> now grow there.
Amaracus	xxi. 11, 22	<i>Origanum Majorana</i> .	'What is called by Diocles and the Sicilians, Ameracus, is known in Egypt and Syria as the Sampsuchum.' 'An oil made from it.' <i>Plin.</i> Athenæus (xv. p. 676) says, 'The Amaracus abounds in Egypt;' and in lib. v. he mentions Amara-cine ointment.
Melilotus	xxi. 11	<i>Trifolium Melilotus</i> Indica. (Arab. <i>Rekrak</i> or <i>Nafal?</i>)	'Grows everywhere.' <i>Plin.</i>
Rosa, Rose	xxi. 11	<i>Rosa centifolia</i> . . . (Arab. <i>Werd.</i>)	[If by 'In Ægypto sine odore hæc omnia,' Pliny means that all the flowers mentioned in this chapter are Egyptian, many others might be here introduced.]
Viola, Violet . . .	xxi. 11	<i>Viola odorata</i> . . . (Arab. <i>Benefsig.</i>)	
Colocasia, or Cyamus, or Faba Ægyptia . . . }	xxi. 15 }	<i>Nymphaea Nelumbo</i> , or <i>Nelumbium</i> .	'Growing in the Nile;' one of the wild plants which abound so plentifully in Egypt.' <i>Plin.</i> Athen. iii. p. 72. <i>Strabo</i> , xvii. p. 550.
Anthaliium	xxi. 15, 29	Supposed to be the <i>Cyperus esculentus</i> . (Arab. <i>Hab el āzeez.</i>)	'Grows some distance from the Nile.' 'Fruit like a medlar, without husk or kernel. Leaf of the cyperus. No other use but for food.' <i>Plin.</i> Some suppose it the <i>Cyperus esculentus</i> , which is very doubtful.

Name from Pliny.	lib. cap.	Botanical Name.	Remarks.	
Cetum	xxi. 15	Supposed to be the <i>Arachis hypogea</i> ? ¹	'Also eaten in Egypt. Few leaves; large root.' <i>Plin.</i> Theophrastus says, it has a long root, gathered at the time of the inundation, and used for crowning the altars. (Lib. i. c. 1, 11.)	
Arachidna	xxi. 15	_____?	} 'These two have spreading and numerous roots; but neither leaf nor anything above the ground.' <i>Plin.</i>	
Aracos ²	xxi. 15	_____?		
Condrylla	xxi. 15	<i>Lactuca sativa</i> ? . (Arab. <i>Khuss.</i>)	} Lettuce?	
Hypocheiris	xxi. 15	<i>Hyoseris lucida</i>		
Caucalis	xxi. 15	<i>Caucalis daucoides</i> ?	} All esculent plants.	
Anthriscum	xxi. 15	<i>Caucalis anthriscus.</i> (Arab. <i>Gezzer e' shaytán.</i>)		
Scandix or Tragopogon	xxi. 15	<i>Tragopogon picroides</i> ? (Arab. <i>Edthbálh?</i>)		'Leaves like a crocus.' <i>Plin.</i>
Parthenium	xxi. 15, 30 xxii. 17 xxv. 5	<i>Matricaria Parthenium</i> , or <i>M. Chamomilla.</i>		Dioscorides describes its flower with a white circuit and yellow within.
Strychnum, or Strychnus, or Trychos, or Solanum	xxi. 15, 31 xxvii. 13	{ <i>Solanum Dulcamara</i> , or <i>Solanum nigrum.</i> (Arab. <i>Eneb e' deeb</i>)	'Used in Egypt for chaplets; the leaves like ivy: of two kinds; one has red berries (in a sort of bladder) full of grains, and is called <i>Halicacabus</i> , or <i>Callion</i> . and, in Italy, <i>Vesicaria</i> : the third kind is very poisonous.' <i>Nightshade.</i>	
Corechorus	xxi. 15, 32	<i>Corchorus olitorius.</i> . (Arab. <i>Melokhéh.</i>)	'Eaten at Alexandria.' <i>Plin.</i>	
Aphace	xxi. 15	<i>Leontodon Taraxacum.</i>	'Flowers all the winter and spring, till the summer.' <i>Plin.</i> Dandelion.	
Acinos	xxi. 15, 27	<i>Thymus Acinos</i> , or <i>Ocimum Zatarhendi.</i> (Arab. <i>Zátar.</i>)	'The Egyptians grow the <i>Acinos</i> for making chaplets and for food. It appears the same as the <i>Ocimum</i> , but its leaves and stalks are more hirsute.' <i>Plin.</i>	
Epipetron	xxi. 15	<i>Sedum confertum.</i> . (Arab. <i>Heialem.</i>)	'Never flowers.' <i>Plin.</i> Some editions of Pliny make this and the <i>Achinos</i> the same; but they are generally believed to be different.	
Cnicus, or Atractylis.	xxi. 15, 32	{ <i>Carthamus tinctorius</i> ? (Arab. <i>Koortum.</i>) The other is perhaps the <i>Carthamus Creticus.</i>	Supposed to be the <i>Carthamus.</i> 'Unknown in Italy. Oil extracted from the seeds, and of great value. Two kinds; the wild and the cul-	

tivated; and two species of the former. Remedy against the poison of scorpions and other reptiles.' *Plin.* It is supposed that the *Cnicus* and *Atractylis* are not the same plant.

¹ I do not believe this to be a native of Egypt.

² Some have supposed these two to be of the genus *Lathyrus*: I think erroneously.

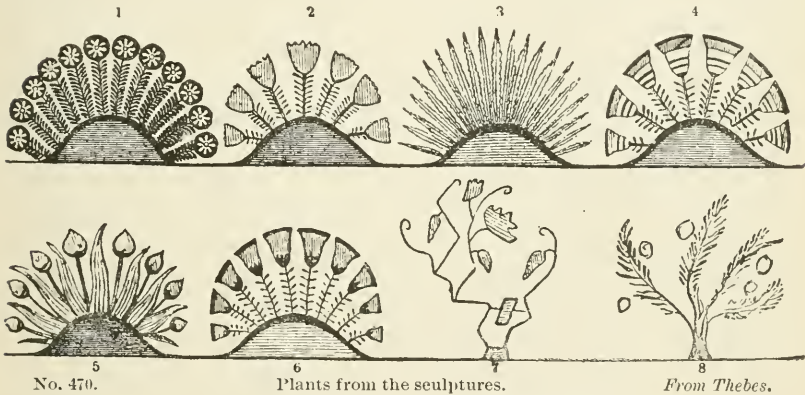
Name from Pliny.	lib. cap.	Botanical Name.	Remarks.
Tribulus }	xxi. 16 } xxii. 10 }	Trapa natans . . .	'Grows about the Nile in marshes, and is eaten. Leaf like the elm.' <i>Plin.</i>
Perdicum }	xxi. 17 } xxii. 17 }	—————	'Eaten by other people, as by the Egyptians.' 'Grows on walls and tiles of houses.' <i>Plin.</i>
Ornithogale . . .	xxi. 17	Ornithogalum Arabicum?	
Juncus	xxi. 18	Juncus acutus . . . (Arab. <i>Samár.</i>)	'Sieves made of it in Egypt.' <i>Plin.</i>
Cyperus	xxi. 18	Gladiolus communis.	'With a bulbous root.' <i>Plin.</i>
Cyperus	xxi. 18	Cyperus Niloticus, and many other species.	'A triangular rush.' <i>Plin.</i>
Heliochrysum, or } Chrysanthemum }	xxi. 25	Gnaphalium Stœchas	'Gods crowned with it; a custom particularly observed by Ptolemy, king of Egypt.' <i>Plin.</i>
Persoluta	xxi. 33	—————	'Grown in gardens in Egypt for making chaplets.' <i>Plin.</i>
Lotometra	xxii. 21	A large kind of cultivated lotos or Nymphaea Lotus.	'Coming from the garden lotos, from whose seed, like millet, the Egyptian bakers make bread.' <i>Plin.</i>
(<i>Rhus</i>)	xxiv. 11 ¹	Rhus oxyacanthoides (Arab. <i>Errin.</i>)	'Rhus: leaves like myrtle, used for dressing skins.' Though Pliny does not mention it as an Egyptian plant, it is indigenous in the desert, and the leaves and wood are used by the Arabs for tanning.)
Egyptian Clematis, } or Daphnoïdes, or } Polygonoides . . }	xxiv. 15	Vinea major et minor?	'Mostly produced in Egypt.' <i>Plin.</i>
Ophiusa	xxiv. 17	—————	'About Elephantina.' <i>Plin.</i>
Stratiotis	xxiv. 18	Pistia Stratiotes . . (Arab. <i>Heiulem el ma.</i>)	'Only in Egypt during the inundation of the Nile.' <i>Plin.</i>
Nepenthes }	xxi. 21 } xxv. 2 }	Perhaps the <i>Bust</i> or <i>Hasheesh</i> , a preparation of the <i>Canabis sativa</i> .	'Homer attributes the glory of herbs to Egypt. He mentions many given to Helen by the wife of the Egyptian king, particularly the Nepenthes, which caused oblivion of sorrow.' <i>Plin.</i> [The Nepenthes is thought to be a preparation of

opium, and not a plant; but opium was well known to the ancients, as well as various preparations of that drug. Pliny says: 'The Helenium, which sprang (as stated xxi. 10) from the tears of Helen has a similar effect with Nepenthes.' 'The Helenium is a shrub with small branches stretching along the ground, about nine inches long, with a leaf resembling that of wild thyme' (x). Some suppose the Helenium to be the *Inula campania*, or Elecampane, but neither its properties nor its appearance accord with the account of Pliny. The best Helenium grows in the island of Helene or Maeris (now called Maconis, and lying five miles from Sunium, and from Cos), thought, says Strabo, to be the Homeric Cranaë. Writers are not, however, all agreed as to the modern Maconis being Helene. — G. W.]

¹ In the same chapter Pliny says ebony is not produced in Egypt.

Name from Pliny.	lib. cap.	Botanical Name.	Remarks.
Absinthium marinum, or Seriphium Myosotis . . .	xxi. 21 } xxvii. 7 } xxvii. 12	Artemisia Judai- ca? (Arab. <i>Bytherân.</i>) Myosotis arvensis	The best at Taposiris in Egypt: a bunch of it carried at the fête of Isis.' <i>Plin.</i> The Egyptians believe that if, on the 27th day of Thiatis (Thoth), which answers nearly to our August, any one anoints himself with its juice before he speaks in the morning, he will be free from weakness of the eyes all that year. <i>Plin.</i>

The trees of ancient Egypt have been already mentioned. I shall therefore only add, in confirmation of their having been known in the early times of the Pharaohs, that the paintings of the tombs represent the date, *dôm*, sycamore, pomegranate,¹ perseæ, tamarisk, and *Periploca Secamone*; and the fruit, seeds,



Figs. 1 to 6 inclusive, from the tomb of Rameses III.

or leaves of the *nebk*,² vine, fig, olive, *Mokhayt*,³ *Kharoób* or locust tree,⁴ palma Christi or *cici*,⁵ *Sont* or acacia,⁶ bay, and *Egléeg* or balanites,⁷ have been found in the tombs of Thebes.⁸ Many seeds and fruits also occur there; as the *Areca*, *Tamarind*, *Myrobalanus*, and others, which are the produce either of India or the interior of Africa: but these are not readily confounded

¹ Numb. xx. 5: 'of figs, or of vines, or of pomegranates.'
² *Rhamnus Nabeca*, Forsk.
³ *Cordia Myxa*, Linn.
⁴ *Ceratonia Siliqua*, Linn. Pliny calls it *Ceraunia Siliqua*, and says it did not grow in Egypt (xiii. 8).
⁵ *Ricinus communis*, Linn., the castor-berry tree.

⁶ *Mimosa* or *Acacia Nilotica*.
⁷ *Balanites Egyptiaca*, supposed to be the *Persea*.
⁸ It is said that the lime and Seville orange have been found, which is singular, as they are supposed to have been first introduced from India by the Arabs.

with the actual productions of Egypt. They are, however, highly interesting, as they show the constant intercourse maintained with those distant countries.

The sculptures represent various trees and flowers, some of which may be recognized, while others are less clearly defined: of the latter I submit those given in Woodcut No. 470 to the expert botanist, who may be disposed to suggest their names, or the family to which they belong.

Little attention is now paid by the inhabitants¹ of Egypt to the cultivation of plants beyond those used for the purpose of food, or to the growth of trees, excepting the palm, large groves of which are met with in every part of the country; and indeed, if the statement of Strabo² be true, that in all (Lower) Egypt the palm was sterile, or bore an uneatable fruit, though of excellent quality in the Thebaïd, this tree is now cultivated with more success in Lower Egypt than in former times, some of the best quality of dates being produced there, particularly at Korayn, near the Delta, where the kind called *A'maree* is superior to any produced to the N. of Nubia.

Few timber trees are now grown to any great extent either in Upper or Lower Egypt. Some sycamores, whose wood is required for water-wheels and other purposes; a few groups of *Athuls*, or Oriental tamarisks, used for tools and other implements requiring a compact wood; and two or three groves of *Sont*, or *Mimosa Nilotica*, valuable for its hard wood, and for its pods used in tanning, are nearly all that the modern inhabitants retain of the many trees grown by their predecessors. But their thriving condition, as that of the mulberry-trees (planted for the silk-worms), which form, with the *Mimosa Lebbek*,³ some shady avenues in the vicinity of Cairo, and of the *Cassia fistula* (bearing its dense mass of blossoms in the gardens of the metropolis), show that it is not the soil, but the industry of the people, which is wanting to encourage the growth of trees.

The *Egléeg*, or balanites, the supposed *Persea*, no longer thrives in the valley of the Nile; many other trees are rare, or altogether unknown; and the extensive groves of *Acanthus*, or *Sont*, are rather tolerated than encouraged, as the descendants of the

¹ Besides these, there have been recently discovered the representatives of the flora and fauna brought from the land of Taneter to Egypt in the reign of Thothmes III., in his twenty-fifth year. (Mariette, Karnak, pl. 31.) — S. B.

² Strabo, xvii. p. 563.

³ [The Arab tradition is, that this tree worshipped Christ, when He was in Egypt. It was rare in Egypt even in the time of Wansleb (1672). — G. W.]

trees planted in olden times near the edge of the cultivated land. Their value is understood: the sale of *Sont* pods is a revenue to the owner without the trouble of cultivation; the trees are found by a son as they were left by his father; but no trouble is taken to add to their number, and this careless indifference about their growth is confirmed by the unwise system of a government which taxes every tree, and makes it a cause of vexation to its possessor. But though many are gone, it is interesting to see these few remnants of ancient groves, which have continued to occupy the same spots, perhaps, from the earliest times. The grove of *Acanthus* alluded to by Strabo still exists above Memphis, at the base of the low Libyan hills: in going from the Nile to Abydus, you ride through the grove of *Acacia*, once sacred to Apollo, and see the rising Nile traversing it by a canal similar to that which conveyed the water thither when the geographer visited that city, even then reduced to the condition of a small village; and groves of the same tree may here and there be traced in other parts of the Thebaïd, from which it obtained the name of the Thebaïc thorn. Above the Cataracts the *Sont* grows in profusion upon the banks of the Nile, where it is used for charcoal, sent to Cairo for sale by the poor Nubians; and its place is supplied in the desert by the *Sealeh* and other of the *Mimosa* tribe, which are indigenious to the soil.

Many flowers and shrubs were grown in pots or wooden boxes in the gardens or the walks near the houses of the ancient Egyptians; and to the garden department belonged the care of the bees, which were kept in hives similar to our own.¹ In Egypt bees require great attention; and so few are the plants at the present day that the owners of hives often take them in boats to various spots upon the Nile in quest of flowers. They are a much smaller species than our own; and though I have met with them wild in many parts of Egypt, I never saw them in any numbers; but wasps, hornets, and ichneumons abound throughout the valley of the Nile. The wild bees hive mostly under stones, or in clefts of the rock, as in many other countries; and the expression of Moses and of the Psalmist, 'honey out of the rock,'² shows that in Palestine their habits were the same. Virgil³ mentions a mode of replenishing the stock of bees, practised in Egypt, by means of the carcase of a bull, which, as M. de Pauw supposes, is

¹ I remember to have seen them so represented in a tomb at Thebes, but have no copy of the subject.

² Deut. xxxii. 13. Ps. lxxxi. 16.

³ Virg. Georg. iv. 229. Plin. xi. 20.

probably a story derived from the custom of raising young swarms in the warmth of a stable :¹ but neither this, nor any other secret respecting their management, can be looked for in the sculptures of the tombs ; and whatever skill the Egyptians possessed in these, as in many other matters, must continue unknown to us : though, from the great importance² they attached to honey³ as a welcome offering to the gods and an article of luxury, we may conclude that great pains were taken in rearing bees ; and the difficulty of procuring for them an abundant supply of food at certain seasons doubtless led to the adoption of many curious expedients, which, being unnecessary, were unthought of in other countries.

The principal woods used by the Egyptians were the date, *dôm*, sycamore, acacia, tamarisk, *egléeg* or balanites, ebony, fir, and cedar. The various purposes to which every part of the palm or date tree was applied have been already noticed, as well as of the *dôm*, or Theban palm. Sycamore wood was employed for coffins, boxes, small idols, doors, window-shutters, stools, chairs, and cramps for building ; for handles of tools, wooden pegs or nails, cramps, idols, small boxes, and those parts of cabinet work requiring hard compact wood, the *Sont* or *Acacia Nilotica* was usually preferred ; and spears were frequently made of other acacias, which grew in the interior or on the confines of the desert.

In tools of various kinds, the wood of the *Tamarix orientalis* was likewise much used, and even occasionally in pieces of furniture, for which purpose the *egléeg* was also employed : but the principal woods adopted by the cabinet maker for fine work were ebony, fir, and cedar. The first came from the interior of Africa, and formed, with ivory, gold, ostrich feathers, dried fruits, and skins, the principal object of the annual tribute brought to Egypt by the conquered tribes of Ethiopia and the Soodán ; fir and cedar being imported from Syria. The two last were in great demand for ornamental furniture, for coffins, small boxes, and various objects connected with the dead : and many woods of a rare and valuable kind were brought to Egypt by the people of Asia tributary to the Pharaohs, the beauty and value of which may be estimated by the frequent custom of imitating them, for the satisfaction of those who could not afford to purchase furniture or trinkets of so expensive a material.

¹ He thinks of the sacred bulls ; but there is no necessity that they should have been sacred.

² Plut. de Isid. s. lxxxii. 68.

³ The bee is not represented on the

monuments : the insect, the emblem for king so often repeated, being the hornet or wasp ; honey, however, is often mentioned. — S. B.

There is reason to believe that the ancient Egyptians encouraged, or at least profited by, the growth of many wild plants of the desert, which were useful for medicinal purposes. Many of them are still known to the Arabs, as the *Salvadora Persica*, the *Irák* or *Erák* of the Arabs; the twigs are used for making tooth-brushes, by splitting or fraying out the fibres at the cut end of the branchlet; it grows plentifully in the southern parts of the Eastern desert. This has been, by some, supposed to be the Sinapis or mustard of Matthew xiii. 31. The Arabs also knew the *Heliotropium inebrians*, *Lycium Europæum*, *Scilla maritima*, *Cassia Senna*, *Ochradenus baccatus*, *Ocimum Zatarhendi*, *Linaria Ægyptiaca*, *Spartium monospermum*, *Hedysarum Alhagi*, *Santolina fragrantissima*, *Artemisia Judaica* (*monosperma* and *inculta*), *Inula undulata* and *crispa*, *Cucumis*, *Colocythis*, &c. And many others have probably fallen into disuse from the ignorance of the modern inhabitants of the country, who only know them from the Arabs, by whom the traditions concerning their properties are preserved. From what Homer tells us of 'the infinity of drugs produced in Egypt,' the use of 'many medicines' mentioned by Jeremiah, and the frequent allusion by Pliny to the medicinal plants of that country, we may conclude that the productions of the desert (where those herbs mostly grow) were particularly prized; and several were found of great use in dyeing, tanning, curing skins, and various other purposes. Of these, the most remarkable were the fungi, for dyeing; the pods of the *Acacia Nilotica*, the bark of the *Acacia Seyal*, and the wood and bark of the *Rhus oxyacanthoides*, for tanning; and the *Periploca Secamone*,¹ for curing skins.

The process adopted in the employment of these plants I shall not now stop to describe, nor shall I enter into any detail of their medicinal use, and the maladies they are said to cure: this will more properly form a part of a dissertation on the botany of Egypt, reserved for a future work. But I may be allowed to make one observation on the *Owseg*, *Owshes*, or *Lycium Europæum*, though not immediately connected with the subject of Egypt. This thorny shrub, called by the Copts *Rannus*, which is common in the hills throughout Lower Egypt and Syria, has a better claim to the title of 'the holy thorn,' of which the Saviour's crown is said to have been made, than any other plant. The modern and ancient Greeks agree with the Copts in giving it the

¹ This climbing plant appears to be Thebes, used in lieu of the ivy, which in represented in the tomb of Rameses III. at its leaf it slightly resembles.

name Rannus; and Pliny¹ evidently had in view the *Owshes* when he says, 'It is called by the Greeks Rhamnus, and is a flowering thorny plant, with spreading branches, having thorns, not curved like other briars, but straight, and larger leaves;' though the name of Rhamnus has been applied by modern botanists to a different genus.²

Of the erroneous statement made by Herodotus respecting the use of wheat, I have already spoken; and have shown that wheat and barley were abundantly cultivated in every part of Egypt. The former was cut in about five, the latter in four months;³ the best quality, according to Pliny, being grown in the Thebaïd.⁴ The wheat, as at the present day, was all bearded, and the same varieties doubtless existed in ancient as in modern times,⁵ among which may be mentioned the seven-eared quality described in Pharaoh's dream.⁶ It was cropped a little below the ear⁷ with a toothed sickle, and carried to the threshing-floor in wicker baskets upon asses,⁸ or in rope⁹ nets, the gleaners following to collect the fallen ears in hand-baskets. The rope net, answering to the *Shenfah* of modern Egypt, was borne on a pole by two men; and the threshing-floor was a level circular area¹⁰ near the field, or in the vicinity of the granary,¹¹ where, when it had been well swept,¹² the ears were deposited, and cattle were driven over it to tread out the grain. While superintending the animals employed for this purpose, the Egyptian peasant, as usual both in ancient and modern times, relieved his labors by singing; and the ingenious Champollion¹³ found in a tomb at Eileithyia a song of the threshers, written in hieroglyphics over oxen treading out the grain, to which he gives this translation:— '(1) Thresh for yourselves (twice repeated¹⁴), (2) O oxen, (3) thresh for yourselves (twice), (4) measures for yourselves, (5) measures for your masters;' similar to which may be found other songs in the sculptured tombs¹⁵ of Upper Egypt.

¹ Plin. xxiv. 14.

² Linnæus gives the name of *Rhamnus Spini Christi* to a different plant; and the Nebeea or Nebk, the *Zizyphus*, and others of this kind come under the general denomination of Rhamnus. There appears to be some confusion between the Lycium and the Rhamnus.

³ Diodor. i. 36: 'They return after four or five months to cut the corn.' Pliny (xviii. 7) says barley in the 6th and wheat in the 7th month.

⁴ Plin. xviii. 18.

⁵ 'General View of Egypt,' p. 261.

⁶ Gen. xli. 22.

⁷ Job. xxiv. 24: 'Cut off as the tops of the ears of corn.'

⁸ Woodcut No. 472, *figs.* 4 and 5.

⁹ Woodcut No. 471, *figs.* 5 and 7.

¹⁰ Those of the Romans were paved, or more usually formed of clay, well laid down and smoothed by rollers. (Virg. Geor. i. 178.

¹¹ As with the Romans. (Colum. i. 6.)

¹² Matthew iii. 12.

¹³ 'Lettres sur l'Égypte,' 11th and 12th letters, pp. 146, 196.

¹⁴ This sign of twice occurs at *a* and *b*, woodcut No 473.

¹⁵ Rosellini, vol. i. part ii. p. 311.

A certain quantity was first strewed in the centre of the area, and when this had been well triturated by the animals' feet, more was added by means of large wooden forks, from the main heap

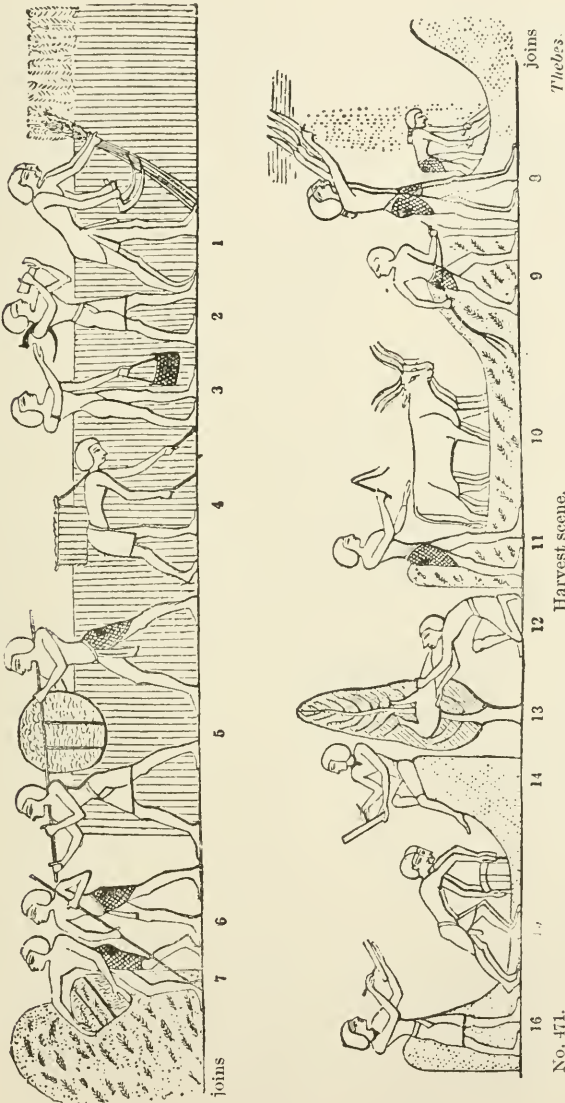


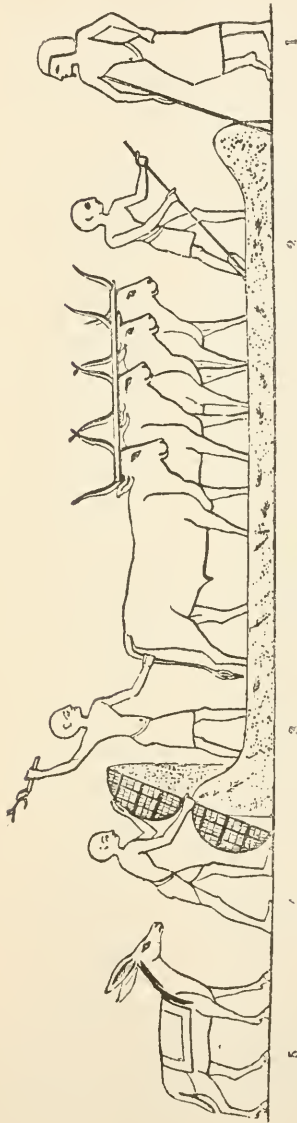
Fig. 1. The reapers. 2. A reaper drinking from a cup. 3. 4. Gleaners; the first of these asks the reaper to allow him to drink. 5. Carrying the ears in a rope basket; the length of the stubble showing the ears alone are cut off. 8. Winnowing. 10. The *titara*, answering to our threshing. 12. Drinks from a water-skin suspended in a tree. 14. Scribe, who notes down the number of bushels measured from the heap. 16 checks the account by looting those taken away to the granary.

raised around and forming the edge of the threshing-floor; and so on till all the grain was trodden out. This process was called

by the Latins *tritura*,¹ and was generally adopted by ancient as by some modern people. Sometimes the cattle were bound

together by a piece of wood or a rope fastened to their horns, in order to force them to go round the heap and tread it regularly, the driver following behind them with a stick.²

After the grain was trodden out, they winnowed it with wooden shovels; it was then carried to the granary in sacks, each containing a fixed quantity, which was determined by wooden measures, a scribe noting down the number as called by the teller who superintended its removal. Sweepers with small hand-brooms were employed to collect the scattered grain that fell from the measure: and the 'immense heaps of corn' mentioned by Diodorus,³ collected from the field which was round about every city,⁴ fully accord with the representation of the paintings in the tombs,⁵ and with those seen at the present day in the villages of the Nile. Sometimes two scribes⁶ were present, one to write down the number of measures taken from the heap of corn, and the other to check them, by



The *tritona*.
Thebes.
Fig. 1. The steward, or owner of the land.
2. throws the ears of wheat into the centre, that the oxen may pass over them and tread out the grain.

3. The driver.
4 brings the wheat to the threshing floor, in baskets carried on asses.
The oxen are yoked together that they may walk round regularly.

No. 472.

¹ Sometimes by horses. Plin. xviii. 30.
Virg. Georg. iii. 132.

² Woodcut No. 472.

³ Diodor. i. 36.

⁴ Gen. xli. 48.

⁵ Woodcuts No. 471 and No. 474.

⁶ Woodcut No. 471.

entering the quantity removed to the granary; but the office of the latter was probably to take account of the sacks actually housed: and this shows how necessary they considered it to guard against the artifices of a cunning people, and how much the refinements of civilization had tended, as is commonly the case, to substitute deception for the original simplicity of an infant state. Herodotus¹ describes the Egyptian mode of treading out the grain by oxen, in which he is fully borne out by the sculptures of the tombs; and these inform us that they occasionally, though rarely, employed asses for the same purpose. This was also the custom of the Jews, and, like the Egyptians, they suffered the ox to tread out the corn unmuzzled, according to the express order of their lawgiver.² In later times, however, it appears that the Jews



Song of the threshers to the oxen. (See p. 418)
No. 473. *Eileithyia.*

used 'threshing instruments;' though, from the offer made to David by Ornan, of 'the oxen also,' and the use of the word *das*, 'treading,' in the sentence 'Ornan was *threshing* wheat,'³ it is possible that the tritura is here alluded to, and that the threshing instruments only refer to the winnowing shovels, or other implements used on those occasions: though the 'new sharp threshing instrument having teeth,' mentioned in Isaiah,⁴ cannot fail to call to mind the *noreg*, or corn drag, of modern Egypt, which the Hebrew name *moreg* so closely resembles; and the same word is applied to the 'threshing instruments'⁵ of Ornan. The Jews, like the Greeks,⁶ bound up the wheat, when cut, into sheaves; ⁷ but this was not the usual custom of the Egyptians, who were generally contented to put it into baskets or rope nets, and to carry it loose to the threshing-floor. The same was done by the Romans; and they either cut down the corn to the roots, or culled the ears with

¹ Herodot. ii. 14.

² Deut. xxv. 4. Ælian says that, to prevent the oxen eating the grain and straw, they used in old times to rub their mouth with manure. (Hist. An. iv. 25.)

³ 1 Chron. xxi. 20 and 23.

⁴ Isaiah xli. 15.

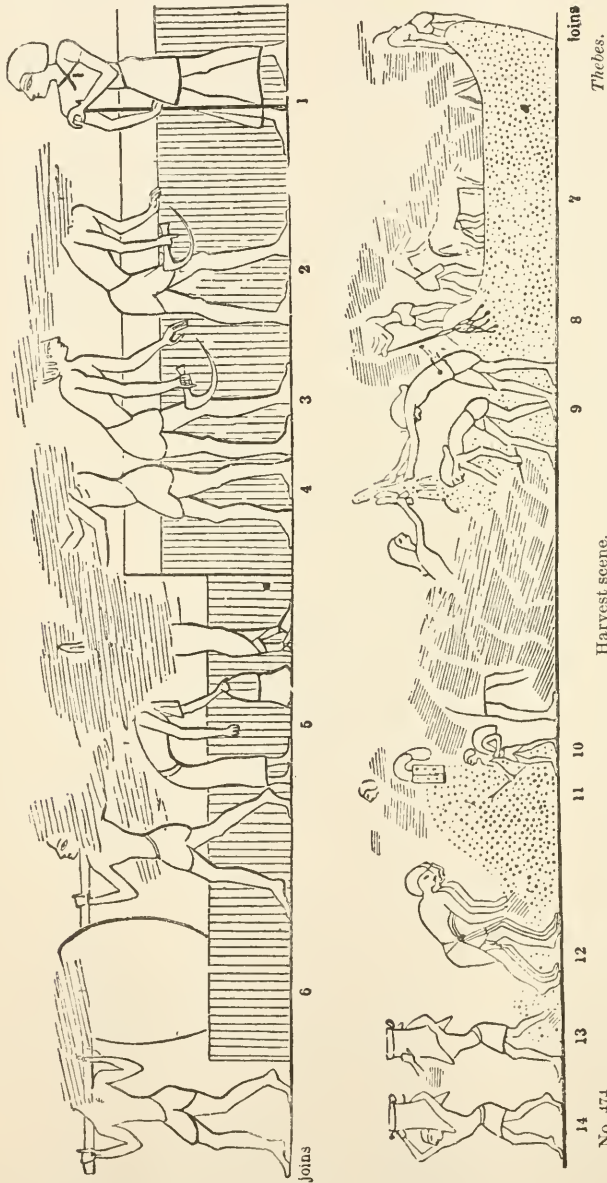
⁵ 1 Chron. xxi. 23, *moregim.*

⁶ Hom. Il. Σ, 550.

⁷ This ancient custom is mentioned in Genesis xxxvii. 7; Levit. xxiii. 10; Deut. xxiv. 19, &c.

a toothed sickle, gathering the straw afterwards,¹ or burning it for manure.²

The modern Egyptians cut the wheat close to the ground, —



Harvest scene.

No. 474.

Fig. 1. The steward. 2, 3. Reapers. 5. A woman gleaner. 6. Carrying the wheat in the usual rope net. 7. The tritura.

9. Winnowers. 11. The scribe. 13, 14. Carrying the grain to the granary in sacks.

The continuation of the scene, beyond fig. 14, is given in woodcut No. 142, vol. i. p. 371.

¹ Colum. ii. 21.

² Virg. Georg. i. 84.

barley and *doora* being plucked up by the roots, — and having bound it in sheaves, carry it to a level and cleanly-swept area near the field, in the centre of which they collect it in a heap; and then, taking a sufficient quantity, spread it upon the open area, and pass over it the *noreg* drawn by two oxen: the difference in the modern and ancient method being that in the former the *noreg* is used, and the oxen go round the heap, which is in the centre and not at the circumference, of the threshing-floor. Some instances, however, occur of the heap being in the centre, as at the present day, as in the accompanying cut.

The *noreg* is a machine consisting of a wooden frame, with three cross bars or axles, on which are fixed circular iron plates, for the purpose of bruising the ears of corn and extracting the grain, at the same time that the straw is broken up into small pieces; the first and last

axles having each four plates, and the central one three: and at the upper part is a seat on which the driver sits, his weight tending to give additional effect to the machine.¹

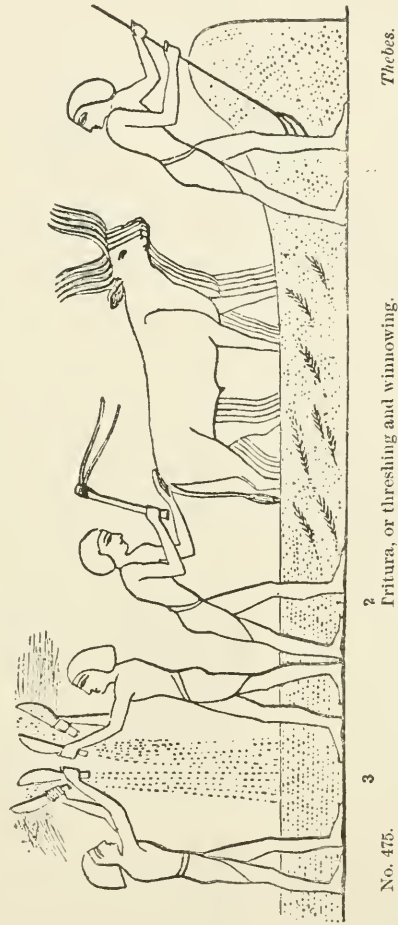
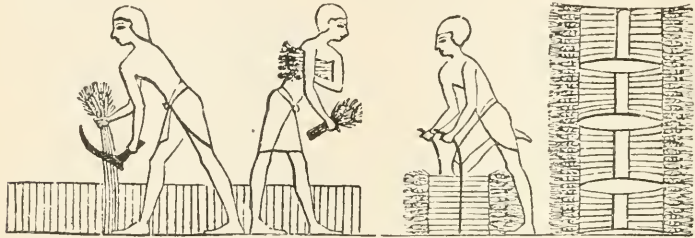


Fig. 1. Reaping the ears to the centre. 2. The driver. 3. Winnower with wooden shovels.

¹ In the endorsement of one of the Anastasi Papyri (Select Papyri, pl. clvi.) there is an account of the reaping and housing of the corn in the granary, on the 4th of the month Choak. The corn was threshed, *hi-ten*, on the 26th Paophi, and put into sacks, *aat*, or the granary, on the 15th Athyr, a month afterwards. The

contents were measured on the 3d and 12th Choak, the next month, and gave a total of 332 bushels. A chronological deduction has been attempted to be drawn from this, on the hypothesis that the word *hi-ten* means 'inundation,' and that it took place in the reign of Meneptah. (Goodwin, in 'Zeitschrift für ägyptische Sprache, 1867,

The *tribulum*,¹ which was sometimes used by the Romans, appears not to have been very dissimilar, as we learn from Varro,² who describes it as 'a frame made rough by stones or pieces of iron, on which the driver, or a great weight, was placed; and this



No. 476.

1

Wheat bound in sheaves.

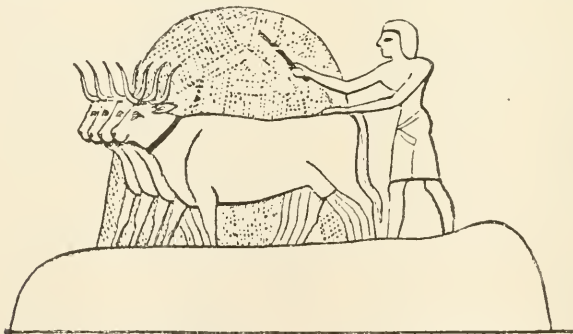
2

"

Thebes.

Fig. 1, reaping. 2, carrying the ears. 3, binding them in sheaves, put up at fig. 4.

being drawn by beasts yoked to it, pressed out the grain from the ear.' While some were employed in collecting the grain and depositing it in the granary, others gathered the long stubble from the field, and prepared it as provender to feed the horses and cattle, for which purpose it was used by the Romans³ as by



No. 477.

The oxen driven round the heap; contrary to the usual custom.

Thebes.

the modern Egyptians. They probably preferred reaping the corn close to the ear, in order to facilitate the trituration; and afterwards cutting the straw close to the ground, or plucking it by the roots, they chopped it up for the cattle; and this, with dried clover, the *drees* of modern Egypt, was laid by for autumn.

pp. 57, 58.) In the 30th year of Aménophis III. the corn was brought into the granaries on the 1st of Pachons. (Prisse, 'Monuments,' pl. xxix. and xlii.)—S. B.

¹ Virg. Georg. i. 164.

² De Re Rustica, i. 52.

³ Plin. xviii. 30.

when the pastures being overflowed by the Nile, the flocks and herds were kept in sheds or pens on the high grounds, or in the precincts of the villages.¹

The straw was doubtless cut up, as at the present day, by some contrivance answering to our hay knife, and cleansed from the earth, dust, or other impurities, previous to use: being 'winnowed with the shovel, and with the fan,' in the manner mentioned by Isaiah,² when speaking of 'provender' given to cattle. This custom of feeding some of their herds in sheds accords with the^a scriptural account of the preservation of the cattle, which had been 'brought home' from the field; and explains the apparent contradiction of the destruction of 'all the cattle of Egypt' by the murrain, and the *subsequent* destruction of the cattle by the hail;³ those which 'were in the field' alone having suffered from the previous plague, and those in the stalls or 'houses' having been preserved. An instance of stall-fed oxen from the sculptures has been given in my account of the farm-yard and villas of the Egyptians.

The first crop of wheat having been gathered, they prepared the land for whatever produce they next intended to rear; the field was ploughed and sowed, and, if necessary, the whole was inundated by artificial means, as often as the quality of the crop or other circumstances required.⁴ The same was repeated after the second and third harvests, for which, as I have already observed, the peasant was indebted to his own labors in raising water from the Nile, — an arduous task, and one from which no showers relieved him throughout the whole season. For in Upper Egypt rain may be said never to fall, five or six slight showers that annually fall there scarcely deserving that name; and in no country is artificial irrigation so indispensable as in the valley of the Nile.

Pomponius Mela calls Egypt 'terra expers imbrium;' and Proclus says if showers fell in Lower Egypt they were confined to that district, and heavy rain was a prodigy in the Thebaid. Herodotus indeed affirms⁵ that rain at Thebes portended some great calamity, and the conquest of Egypt by the Persians was thought to have been foretold by this unusual phenomenon at that place. In Upper Egypt showers only occur about five or six times in the year, but every fifteen or twenty years heavy

¹ Diodor. i. 36.

² Isaiah xxx. 24. Conf. Matt. iii. 12.

³ Exod. ix. 6 and 19, *et seq.*

⁴ Pliny, lib. xvii. 18

⁵ Herodot. iii. 10.

rain falls there, which will account for the deep ravines cut in the valleys of the Theban hills, about the Tombs of the Kings; in Lower Egypt rain is more frequent; and in Alexandria it is as abundant in winter as in the south of Europe. These ravines, and the precautions taken to protect the roofs of the temples at Thebes against rain, show that it fell there of old as now; but a continuation of heavy rain in Upper Egypt, or even at Cairo, for two or three days, would be considered a great wonder, and would cause many houses to fall down, as in 1823.¹ The Eastern desert, between the Nile and the Red Sea, where the mountains are higher, is frequently visited by heavy rain and thunder-storms in the winter, though the climate is drier than the valley of the Nile; and every four or five years the torrents run down to the Red Sea on one side and to the Nile on the other. In less than a month's time after this the beds of those torrents are covered with green herbs and numerous small flowers, and the Arabs take their flocks to graze there till the Khamseen winds and the hot sun of May have dried them up, and nothing remains except a few acacia-trees and the usual hardy shrubs of those arid districts. There are scarcely any springs in the valley of the Nile, and the few found there are probably caused by the filtration of the Nile-water through the soil.

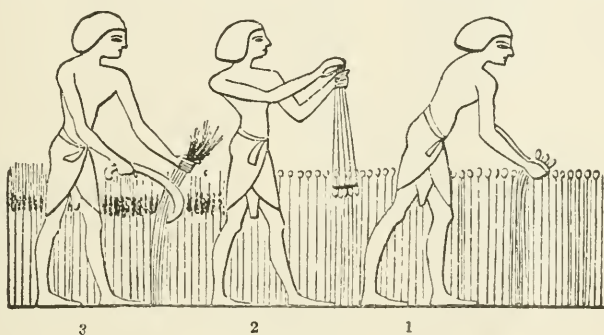
In many instances, instead of corn they grew clover, or leguminous herbs, which were sown as soon as the water began to subside, generally about the commencement of October; and at the same time that corn or other produce was raised on the land just left by the water, another crop was procured by artificial irrigation. This, of course, depended on the choice of each individual, who consulted the advantages obtained from certain kinds of produce, the time required for their succession, or the benefit of the land; for though no soil recovers more readily from the bad effects arising from a repetition of similar crops, through the equalizing influence of the alluvial deposit, it is at length found to impoverish the land; and the Egyptian peasant is careful not to neglect the universal principle in husbandry, of varying the produce on the same ground.

Besides wheat, other crops are represented in the paintings of the tombs; one of which, a tall grain, is introduced as a production both of Upper and Lower Egypt.² From the color, the

¹ Conf. Exod. ix. 18, where the hailstorm is not said to have been the only one, but such as was unlike any before it in Egypt.

² At Thebes, Elcithyia, Beni-Hassan, and Saqqara.

height to which it grows, compared with the wheat, and the appearance of a round yellow head it bears on the top of its bright green stalk it is evidently intended to represent the *doora*, or *Holeus Sorghum*. It was not reaped by a sickle, like the wheat and barley, but men, and sometimes women, were employed to pluck it up; which being done, they struck off the earth that adhered to the roots with their hands, and having bound it in sheaves, they carried it to what may be termed the threshing-floor, where, being forcibly drawn through an instrument armed at the summit with metal spikes, the grain was stripped off, and fell upon the well-swept area below, — a satisfactory illustration of which is given in one of the agricultural scenes of a tomb at



No. 478.

Gathering the *doora* and wheat.

Thebes.

Fig. 1, plucking up the plant by the roots.
2, striking off the earth from the roots.
3, reaping wheat or barley.

Eileithyia in woodcut No. 479. Much flax was cultivated in Egypt, and the various processes of watering it, beating the stalks when gathered, making it into twine, and lastly into a piece of cloth, are represented in the paintings. I have already noticed them in the preceding part of this work, as well as the difficulty presented by the name Byssus.

At the end of summer, the peasant looked anxiously for the return of the inundation, upon which all his hopes for the ensuing year depended. He watched with scrupulous attention the first rise of the river; the state of its daily increase was noted down and proclaimed by the curators of the Nilometers at Memphis and other places; and the same anxiety for the approaching inundation was felt as on each preceding year.¹

¹ No *doora* has been found in the tombs, which is remarkable, as corn and barley are, nor has it been recognized as men-

tioned in the texts and inscriptions. Straw, however, supposed to be of *doora*, has been found. — S. B.

About the middle of June, a gradual and continuous increase of the Nile was already seen, even as low as the vicinity of Memphis; 'its first rise being perceived,'¹ at the Cataracts, about the end of May, or the beginning of June; and a change from the previous clearness of the stream was soon observed in its red

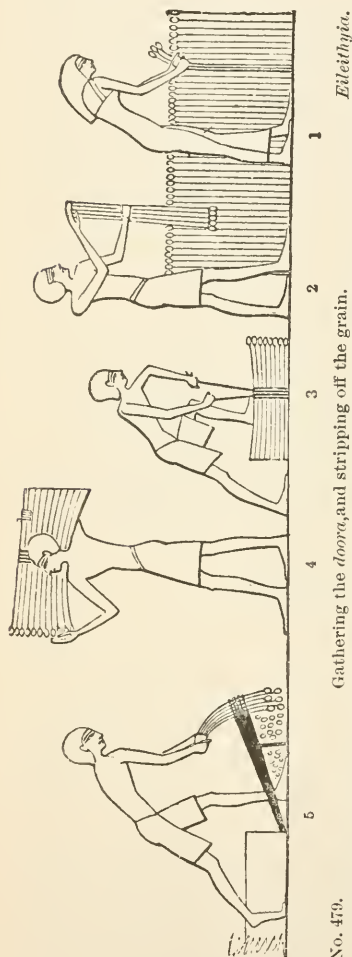


Fig. 1. Woman plucking up the plant by the roots. 2. striking off the earth from the roots after he has plucked it up. 3. binding it into a sheaf. 4. carrying it to the area. 5. stripping off the grain by drawing the head forcibly through an instrument furnished with metal spikes for the purpose.

and turbid state, caused by the rains from the mountains of Abyssinia.² It then assumed a green appearance;³ and during this period its water being deemed unwholesome, a supply previously laid up in jars was used until it had re-assumed its turbid but wholesome red color. This explains the remark of Aristides,⁴ that 'the Egyptians are the only people who preserve water in jars, and calculate its age as other nations do that of wine;' and the reason for adopting water jars as emblems of the inundation (on the authority of Horapollo^b and the sculptures) may probably be derived from this custom of laying up the pure water of the Nile in jars, about the season, or at the first approach, or the inundation; though the calculation of the age of the water must be considered a Greek exaggeration.

It was perhaps this change in the appearance of the river which led the Egyptians to represent the god Nilus both of a red and a blue color, — indi-

¹ Seneca, Nat. Quæst. iv. 2, p. 886.

² Ammianus Marcellinus and others doubted the inundation being caused by rains in Ethiopia (xxii. 15, p. 334).

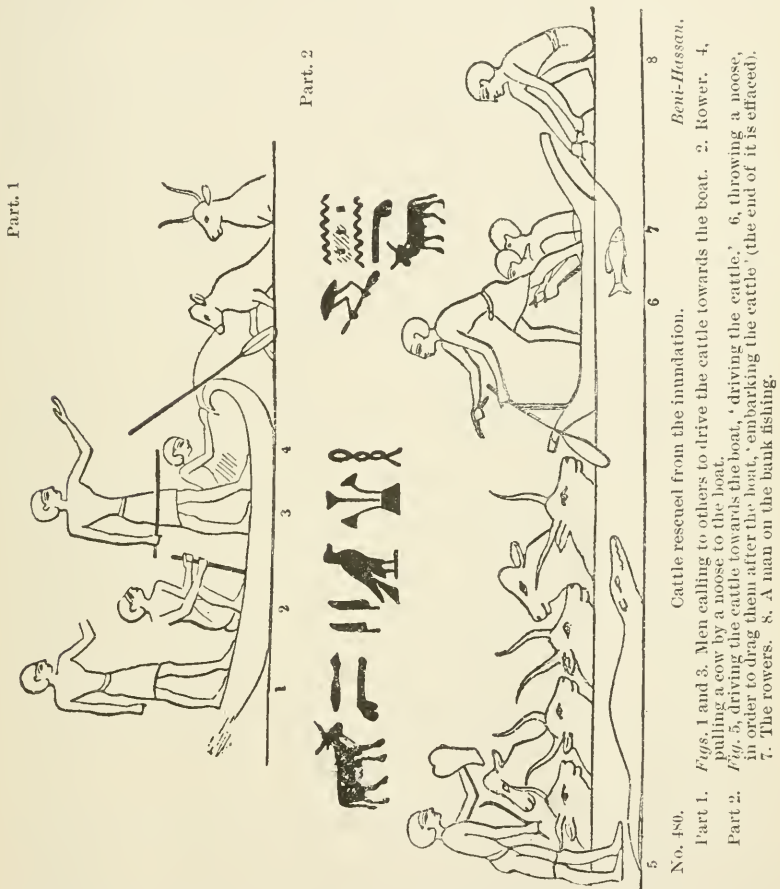
³ Probably from passing through some

lakes or marsh lands, whence green stagnant water mixed with the stream was brought down to Egypt.

⁴ Orat. Egypt. vol. ii. p. 363.

^b Horapollo, i. 21.

eating the river during the turbid state of the inundation, and the clearness of the low Nile. In the beginning of August the canals were again opened, and the waters once more overflowed the plain. That part nearest the desert, being the lowest level, was first inundated; as the bank itself, being the highest, was the last part



No. 480. *Cattle rescued from the inundation. Beni-Hassan.*
 Part 1. Figs. 1 and 3. Men calling to others to drive the cattle towards the boat. 2. Rower. 4. pulling a cow by a noose to the boat.
 Part 2. Fig. 5, driving the cattle towards the boat, 6, throwing a noose, in order to drag them after the boat, 7, embarking the cattle (the end of it is effaced). 7. The rowers. 8. A man on the bank fishing.

submerged, except in the Delta, where the levels were more uniform, and where, during the high inundations, the whole land, with the exception of its isolated villages, was under water. As the Nile rose, the peasants were careful to remove the flocks and herds from the lowlands; and when a sudden irruption of the water, owing to the bursting of a dyke or an unexpected and unusual increase of the river, overflowed the fields and pastures, they were seen hurrying to the spot, on foot or in boats, to rescue the

animals,¹ and to remove them to the high grounds above the reach of the inundation. Some tying their clothes upon their heads, dragged the sheep and goats from the water, and put them into boats; others swam the oxen to the nearest high ground; and if any corn or other produce could be cut or torn up by the roots in time to save it from the flood, it was conveyed on rafts or boats to the next village. Guards were placed to watch the dykes which protected the lowlands, and the utmost care was taken to prevent any sudden influx of water, which might endanger the produce still growing² there, the cattle, or the villages. And of such importance was the preservation of the dykes, that a strong guard of cavalry and infantry was always in attendance for their protection; certain officers of responsibility were appointed to superintend them, large sums of money were annually expended for their maintenance and repairs; and in the time of the Romans, any person found destroying a dyke was condemned to hard labor in the public works or in the mines, or to be branded and transported to the Oasis. According to Strabo,³ the system was so admirably managed, that art contrived sometimes to supply what nature denied, and, by means of canals and embankments, there was little difference in the quantity of land irrigated, whether the inundation was deficient or abundant. If, continues the geographer, it rose only to the height of eight cubits, the usual idea was that a famine would ensue, fourteen being required for a plentiful harvest; but when Petronius was prefect of Egypt, twelve cubits gave the same abundance, nor did they suffer from want even at eight; and it may be supposed that long experience had taught the ancient Egyptians to obtain similar results from the same means, which, neglected at a subsequent period, were revived, rather than, as Strabo thinks, first introduced by the Romans.

In some parts of Egypt the villages were frequently liable to be overflowed, when the Nile rose to a more than ordinary height, by which the lives and property of the inhabitants were endangered, and when their crude brick houses had been long exposed to the damp, the foundations gave way, and the fallen walls, saturated with water, were once more mixed with the mud from which they had been extracted. On these occasions the blessings of the Nile entailed heavy losses on the inhabitants; and, as Pliny⁴ observes, 'if the rise of the water exceeded sixteen cubits,

¹ Diodor. i. 36. Woodcut No. 480, and Vignette B, vol. i. p. 28.

² Strabo, xv. p. 487.

³ Ibid. xviii. 542.

⁴ Pliny, xviii. 18.

a famine was the result, as when it only reached the height of twelve.' In another place¹ he says, 'A proper inundation is of sixteen cubits; . . . in twelve cubits the country suffers from famine, and feels a deficiency even in thirteen; fourteen cause joy, fifteen security, sixteen delight; the greatest rise of the river to this period being of eighteen cubits in the reign of Claudius, the least during the Pharsalic war.'

From all that can be learned respecting the rise of the Nile, it is evident that the actual height of the inundation is the same now as in former times, and maintains the same proportion with the land it irrigates, and that, in order to arrive at great accuracy in its measurement, the scales of the Nilometers ought, after certain periods, to be raised in an equal ratio, as may be seen by any one who visits those of Cairo and Elephantine: for the bed of the river gradually rises from time to time; and the level of the land, which always keeps pace with that of the river, increases in a ratio of six inches in 100 years in some places (as about Elephantine), and in others less, varying according to the distance down the stream: the consequence, and, indeed, the proof of which is, that the highest scale in the Nilometer at the island of Elephantine, which served to measure the inundation in the reigns of the early Roman emperors, is now far below the level of the ordinary high Nile; and the obelisk of Matareeh or Heliopolis, the colossi of the Theban plain, and other similarly situated monuments, are washed by the waters of the inundation, and embedded to a certain height in a stratum of alluvial soil deposited around their base.

The continual increase in the elevation of the bed of the river naturally produced those effects mentioned by Herodotus and other writers, who state that the Egyptians were obliged from time to time to raise their towns and villages in order to secure them from the effects of the inundation; and that the same change in the levels of the Nile and the land took place in former ages as at the present day, is shown by the fact of Sabaco having found it necessary to elevate the towns throughout the country, which had been previously protected by similar means in the reign of Sesostris—an interval of about 600 years. This was done, says the historian of Halicarnassus, by the inhabitants of each place who had been condemned for great crimes to the public works. Bubastis was raised more than any other city; and the lofty mounds of Tel Basta, which mark its site, fully confirm

¹ Pliny, v. 9.

the observation of Herodotus, and show, from the height of those mounds above the present plain, after a lapse of 770 years, that 'the Ethiopian monarch elevated the sites of the towns much more than his predecessor Sesostris¹ had done,' when that conqueror employed his Asiatic captives in making the canals of Egypt.² I have already stated that the land about Elephantine has been raised about nine feet in 1700 years; at Thebes, about seven; and in a less degree towards the Delta and the mouths of the Nile: and I shall now endeavor to explain in what manner the elevations of the land and river have taken place, to compare the measures of the inundation in the ancient and modern Nilometers, and show what effect the alteration in the levels has had on the arable land of Egypt. In that part of Egypt lying to the S. of the Delta, the banks of the Nile are much more elevated than the land of the interior at a distance from the river, and are seldom quite covered with water even during the highest inundations. Little, however, projects above the level of the stream, and in some places the peasant is obliged to keep out the water by temporary embankments. This may be accounted for partly by the continued cultivation of the banks, which, being more conveniently situated for artificial irrigation, have a constant succession of crops; for it is known that tillage has the effect of raising land, from the accumulation of decayed vegetable substances, the addition of dressing, and other causes: and the greater depression of the plain in the interior is probably owing, in some degree, to the numerous channels in that direction, and to the effect of the currents which pass over it as the water covers the land; though they are not sufficient to account for the great difference between the height of the bank and the land near the edge of the desert, which is often twelve or fifteen feet, as may be seen from the respective heights of the dykes at those two points.³

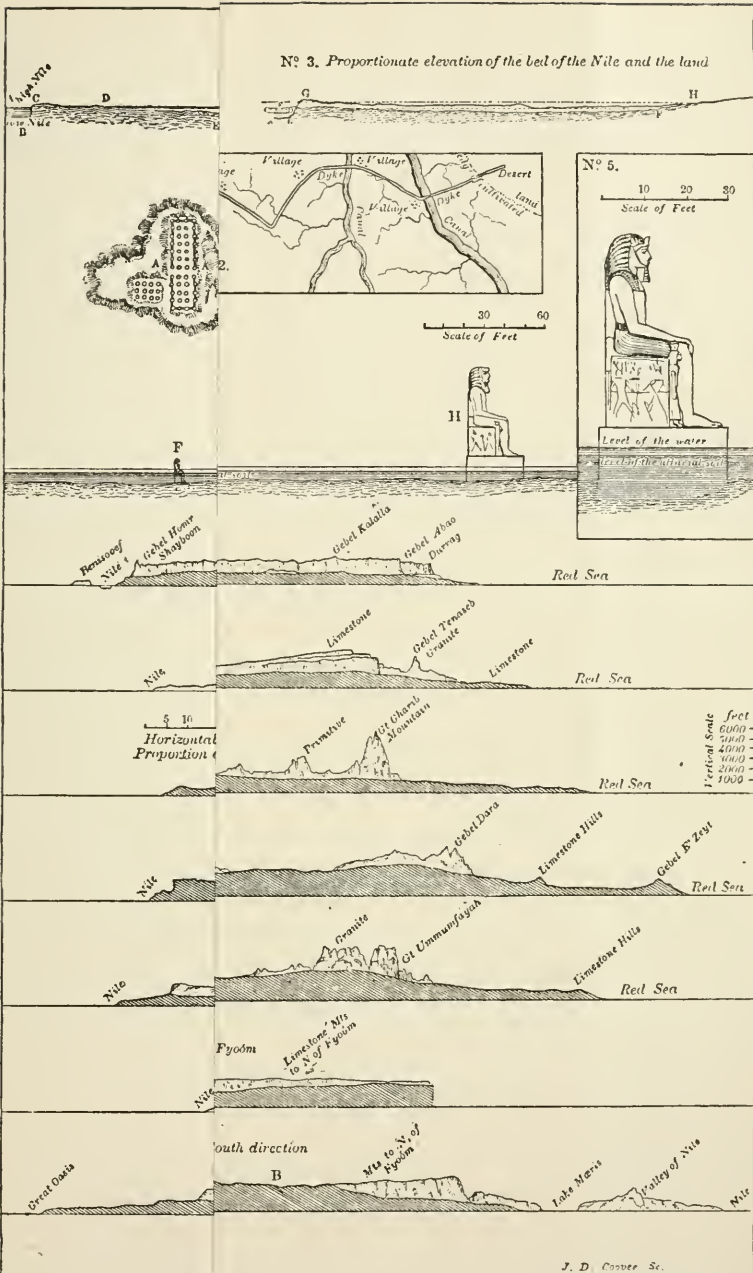
These elevated roads, the sole mode of communication by land from one village to another during the inundation, commence on a level with the bank of the river, and, as they extend to the interior, become so much higher than the fields that room is afforded for the construction of arches to enable the water to pass through them; though, generally speaking, bridges are only built on those parts where ancient or modern canals have lowered the levels sufficiently to admit of them. The general appearance

¹ Herodot. ii. 137

² *Ibid.*, ii. 108 and 137

³ See Proc. Geogr. Society.

N^o 3. Proportionate elevation of the bed of the Nile and the land



J. D. Cooper Sc.

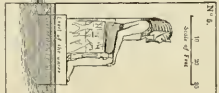
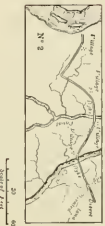
ITS DESERTS.

Fig. 1. A road *Diak* from the bank of the Nile to the edge of the Desert
 A. The *Diak* from the bank of the Nile to the edge of the Desert
 B. The *Diak* from the bank of the Nile to the edge of the Desert
 C. The *Diak* from the bank of the Nile to the edge of the Desert
 D. The *Diak* from the bank of the Nile to the edge of the Desert



Fig. 1. A road *Diak* from the bank of the Nile to the edge of the Desert
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Fig. 2. Proportional elevation of the bank of the Nile and the bank
 A. The *Diak* from the bank of the Nile to the edge of the Desert
 B. The *Diak* from the bank of the Nile to the edge of the Desert
 C. The *Diak* from the bank of the Nile to the edge of the Desert
 D. The *Diak* from the bank of the Nile to the edge of the Desert



Level of the Water of the inundation of the present day, at one of a high Nile.



Diagrammatic scale of the Nile
 Proportions of the scale in a ratio of 1 to 100000

N° 1. Lat. 21° 10'

N° 10. Lat. 21° 2'

N° 11. about lat. 21°

N° 12. Section in a N. W. line in the Papyrus

N° 13. Section in a General N. and S. direction



SECTIONS TO ILLUSTRATE THE LEVELS OF EGYPT AND ITS DESERTS.

J. D. Smith.

of the dykes may be illustrated by a section,¹ in which A is the surface of the Nile during the inundation; B, the level of the low Nile; C, the bank; D D, the raised dyke; E, the beds of canals over which bridges are built in the dyke; F, the *háyer*, or slope of the desert, extending from the junction of the irrigated land at H to the limestone mountains, G.

This section is given as if the dyke were in one straight line east or west from the river; but they follow a tortuous course, visiting the various towns on their way, and serving as roads, as well as an impediment to the arbitrary overflow of the inundation: the general direction of a dyke, therefore, varying according to circumstances, may be represented as in the accompanying plate.² It is on a plain of about five miles in breadth. Some dykes are even more circuitous and indirect than this; but in all cases the principal care is to place them so as to oppose the greatest force to the largest body or pressure of water, and to offer the readiest means of communication from one village to another. I have already observed that the perpendicular elevation of the bed of the river, and the proportionate elevation of the water of the inundation, tend to increase the extent of the arable land of Egypt; and that there is now a larger tract of cultivable soil E. and W. from the river than at any previous period. This I shall endeavor to illustrate by a similar section,³ in which it will be seen that if the Nile, rising from its ancient bed A B, inundated the country in the direction and at the elevation E F, it would, when raised to C D, its modern bed (the land being also raised in proportion to G), extend its inundation on the line G H to a far greater distance over the *háyer*, or slope of the desert, and give an additional tract of cultivable land from F to H.

That this has actually taken place I have satisfactorily ascertained by excavations, and by observing the quantity of alluvial deposit accumulated round the base of ancient monuments, and by a comparison of the height to which the water now rises and formerly rose in the Nilometer of Elephantine. In the plain of Thebes are some colossal statues of Amenophis III., of which two still occupy their original site, and one of these has long been known under the name of 'the vocal Memnon.' They stood on either side of the *dromos* leading to a temple built by that Pharaoh, and at intervals between them and the temple were other colossi, statues, and tablets, long since thrown down or mutilated, and nearly covered by the alluvial deposits of the

¹ Plate XV. No. 1.² No. 2.³ No. 3.

inundation. Their relative position may be better understood from the plan,¹ where it will be seen that before the temple, A, are the tablets, B C, and 420 feet beyond are the fragments of a colossus, E; then at a distance of 220 feet are another fallen colossus, G, and, as a pendant to it, a group of comparatively small figures, cut out of a single block, at F; the colossi, H I, which are still standing, being 300 feet further, and appearing to terminate the *dromos*.

The temple is now surrounded by alluvial soil, and the water and mud of the inundation extend to the distance of 600 feet behind it. But when erected, about the year 1420 B.C., not only the body of the temple, but the *dromos*, or paved road leading to it, as well as the base of the colossi, H I, were above the reach of the inundation; and the statues at F, which are still erect in their original position, were exposed to view, though now buried to their waist in the alluvial deposit.

Indeed, I believe this *dromos* to have been a continuation of the 'Royal street' mentioned in some papyri found at Thebes, which, crossing the western portion of the city, communicated, by means of a ferry, with the temple of Luxor, founded by the same Amenophis, on the other side of the river; as the great *dromos* of Sphinxes, connecting the temples of Luxor and Karnak, formed the main street in the eastern district of Thebes. The colossi, H I, are 47 feet² high, with the pedestal 60; but the alluvial deposit has accumulated around them to the height of from 6 feet 10 inches to 7 feet, so that they now stand only 53 feet above the plain.³ This was ascertained by excavating to the base of the pedestal; and having penetrated beneath it, I found that it stood, not on alluvial ground, but on the soil of the desert, which was paved with sandstone blocks, serving as substructions for the colossus and the *dromos*. The lower side of the pedestal had not been cut smooth, but was left of a round, irregular shape, extending 3 feet 10 inches below the level of the paved *dromos*; but that was of little importance: the main point was to ascertain whether the slope of the *dromos* corresponded with that of the desert: and this I proceeded to examine. I therefore dug to the base of what I supposed to be part of a similar colossus at Q, 300 feet behind the colossus H.⁴ This, however, proved to be a group of

¹ Plate XV. No. 4.

² By sextant I make the western colossus 47 ft.; and the other, by actual measurement, 47 ft. 9 in. See Plate XV. No. 5.

³ The ground has sunk at the base, and

the statue inclines a little to one side, so that it is difficult to ascertain the exact height of the pedestal. See Plate XV.

⁴ Plate XV. No. 6.

statues—a circumstance particularly fortunate for my purpose, as they were found to be standing in their original position. Their total height was 8 feet 1 inch from the base of the pedestal to the top of the shoulder, the part above that being broken off; they projected 2 feet 10 inches above the level of the alluvial deposit, so that it had accumulated in this part only 5 feet 3 inches. This satisfactorily settled the question I had in view, and gave, in a distance of 300 feet, a difference of 1 foot 7 inches to 1 foot 9 inches, being an average of 20 inches in 300 feet, or a decreasing ratio of 1 inch in 15 feet for the talus of the sloping desert plain on which they were placed. According to this ratio, the base-ment of the temple itself should stand very little below the level of the alluvial deposit, which, indeed, agrees with fact; though, as may be supposed, the slope of the desert is not quite so uniform as to accord with the mathematical calculation of an uninterrupted line. It suffices for our purpose to have ascertained that this gradual slope does exist, and that the colossi and the temple standing upon it are buried in alluvial deposit in an inverse ratio as they approach the edge of the desert: and the only inference necessarily is, that the alluvial soil now reaches further inland towards the desert than it did when those monuments were erected. We do not know how far the outermost colossi were, at that time, beyond the line of the alluvial deposit: all we can conclude is, that they were *above* its level, and that the *dromos*, or paved street, was also *above* the highest water-mark; but if it is out of our power to fix any exact point from which to calculate the annual increase of the perpendicular stratum of land, of this we may at least be certain — that all the deposit now existing between the colossi, H I, and the edge of the desert behind the temple, a total distance of 1900 feet, has been brought there since the reign of the third Amenophis, or within a period of 3260 years. What has now been said, fully, I trust, demonstrates these propositions — that the perpendicular rise of the bed of the Nile extends the inundation, and alluvial deposit much further in a horizontal direction E. and W. at the present day than at any previous period; that this cause has always been in operation; and that, therefore, a wider extent of irrigated land now exists than in former times. I do not, however, pretend that the same quantity of land is cultivated as formerly; this must always depend on the population, the energies of the people, the system followed by the government, and other accidental circumstances: but it is not the fault of the river, nor from any deficiency in the benefits it used to bestow

on the soil of Egypt, that much land is left fallow, and overgrown with noxious weeds; and the modern inhabitants might profit by the same means of cultivating the edge of the desert by artificial irrigation as their predecessors, if Egypt only possessed the advantages of population, a favorable system of agriculture, and a wise government. I have made the same observations respecting the extent of the land in other parts of Egypt, all confirming what I have stated, as might be reasonably expected since the same causes necessarily produce the same effects; and I now proceed to show the origin of those erroneous notions which proclaim that the drifting sands have curtailed the limits of the arable land of Egypt, and that the desert constantly encroaching on the soil threatens to overwhelm the valley of the Nile, and already counteracts the beneficial effects of the inundation.

In some parts of Egypt, as at Behmesa, at Kerdassy, a little to the N. of the Pyramids, at Werdan, and at a few other places, the sand of the Libyan desert has been drifted into the valley, and has encumbered the land with hillocks and downs, spreading itself over the fields near the edge of the desert, and sometimes burying trees and buildings to the depth of several feet. This has been particularly the case about Behmesa; and Denon, who visited it and witnessed the effect of the sand in that quarter, spread the alarm of its invasion, which has been magnified into the annihilation of the arable land of Egypt. But this evil is only partial, and, as M. Reynier observes, in a memoir upon the agriculture of Egypt, published in the great French work,¹ ‘Though many have spoken of the encroachments of the sand upon the cultivable soil, it appears to be much less considerable than is supposed; for otherwise many places indicated by ancient writers to have been on the borders of the desert would now be distant from the irrigated land, and the canal of Joseph, after so many ages of bad government, would have been long since filled up.’ In some places, he adds, this has happened, as at Werdan, in the province of Gizeh, where the sand has advanced to the distance of a league; but the position of the place — at the outlet of a gorge in the Libyan Mountains² — is, perhaps, partly the

¹ ‘Mémoires, sur l’Égypte,’ vol. iv. p. 5.

² [The only mountain where sand abounds is certainly the African range; and though there are some lofty drifts in one place on the opposite side, just below the modern Suez road, the eastern part of the valley of the Nile is generally free from it. It does not, however, encroach on the

W. to the extent that some have imagined; and if downs of sand have been raised here and there along the edge of the cultivated land, the general encroachment is greatly in favor of the alluvial deposit. In Ethiopia the sand has invaded the W. bank, but this is owing to the fall in the level of the Nile. — G. W.]

cause of this — an opinion which perfectly coincides with my own observations. In many places where valleys open upon the plain the sand is found to accumulate, and sometimes to form drifts upon the land, which, when no precautions are taken by planting the bushy tamarisk, increase so far as to prevent the overflow of the Nile from covering a portion of the previously-irrigated soil; but these incursions of sand are only partial, and in particular spots, bearing a very small proportion to the whole valley of Egypt; and it must be remembered that the desert, or gradual slope of the *húger*, between the limestone range and the arable land, is not a plain of moving sand, as some have imagined, but is composed of clay and stony ground mixed with a proportion of sand, or an old detritus of the neighboring rocks. On the eastern side of the valley very few sand-drifts are to be met with, except those seen from Cairo, beyond Heliopolis and the Birket el Hag, on the Suez road; but these do not encroach upon the arable land, from which they are far distant; and since I have shown that on the W. or Libyan side also, the places where sand encumbers the valley are partial, it may be readily imagined how slight an effect these must have compared with the whole extent of the country. In the Delta the only sandy places of consequence are here and there on the Libyan shore and on the coast of the Mediterranean, bearing an imperceptible proportion to the whole superficies of that province; and, indeed, the sand on the coast is not worthy of notice, nor can it be attributed in any way to the advance of the desert upon the land of Egypt.

In many countries — as in France, about Dunkerque, the Landes, and other places; in Scotland, about Nairn; and in several parts of Europe — sand-drifts occur of great size and extent: but the same theories are not formed upon their aggressions; and we have in this a proof how far opinions are influenced by the name and by the idea of a desert. I am far from affirming that no encroachment of the sand takes place; my arguments are only intended to show that, taking into consideration the relative advance of the sand and of the alluvial deposit, the balance is greatly in favor of the latter; and the result is that, whatever partial injury the sand may have it in its power to inflict on certain spots, the extent of the land is constantly increasing, and the number of square miles of inundated arable soil is much greater now than at any previous period. I must also make some remarks upon the nature of the desert, which will be found to differ much

from received opinion, as the simple mention of ranges of primitive mountains reaching an elevation of 5000 feet will suffice to show. I allude now to the desert lying between the Nile and Red Sea; but in order to give a just notion of this tract, and the nature of the mountains in various parts, I must refer to Plate XV., and to the accompanying sections in different latitudes.

The leading characteristic of the Eastern desert, particularly in the northern part, is its gradual ascent from the valley of the Nile to a certain distance eastward, where you arrive at a plain nearly level, and of some extent, from which all the valleys or torrents running in a westerly direction empty themselves into the Nile, and those to the eastward into the Red Sea, following a descent in the opposite direction to the coast. A section taken E. and W., about latitude 29° , will explain the appearance of the desert in that part.¹ These are all limestone mountains. The ascent from the Nile to A is about 30 miles; the high plain, A B, is about 16 miles broad; the descent then commences towards the Red Sea, which is about 50 miles distant. In that part where the primitive range commences and joins the secondary hills, about latitude $28^{\circ} 26'$, the section E. and W. presents the appearance given in the next figure of the plate.² In latitude $28^{\circ} 10'$, passing by the lofty Gharib, which is the highest peak in this desert, having an elevation of about 6000 feet, the section is of a different character.³ Another section is taken in latitude 28° from Gebel E'Zeyt, on the Red Sea, to Gebel Aboo Faýda on the Nile.⁴ The last of those in the Eastern desert, in latitude 27° ,⁵ crosses the great range of the Ummumfaýa, which is about 5000 feet high; from a comparison of which it appears that this desert has one general character in its levels from the Nile to the Red Sea. A little above Esné, about latitude $25^{\circ} 10'$, the sandstones approach the Nile on the east bank; a little further south they cross the river, near Edfoo, whence they continue on either bank; and at Silsilis are the quarries from which the sandstone used in the temples of Egypt was taken. Fourteen miles above Ombos, and on the eastern bank, the granites appear; and at E'Sooan, 14 miles further S., they cross the river. Amidst these are the cataracts, a succession of rapids, of which no single fall is more than about 5 feet.

In Nubia the valley is very narrow; the rocks of the eastern and western mountains often coming close to the river, and leaving

¹ Plate XV. No. 7.

² No. 8.

³ No. 9.

⁴ No. 10.

⁵ No. 11.

little or no space for the deposit of alluvium ; in other places on the Libyan side the sand covers the whole level space between the hills and the bank ; and the character of the country between the First and Second Cataract is totally different from Egypt. The river about Kalabshe rises between 30 and 40 feet during the inundation ; and after it has subsided, in February, the stream runs at the rate of two or three knots an hour. But I return to the deserts of Egypt.

In going to the Western or Libyan desert, in the direction of the Oasis Parva, one road passes by the Fyoóm ; which province is considerably lower than the valley of the Nile, and the Lake Mœris is about 100 or 120 feet below the level of the banks at Benisoof. I have given a section across that part of the country from the Nile to the mountain range lying behind the Lake Mœris,¹ and thence to the Oases ; from which it is evident that on leaving the Fyoóm in a southerly direction, or in going from the Nile westward, you gradually ascend till you arrive at the summit of an elevated plain, which continues on a level, or with slight undulations, for a considerable distance, and forms the extensive table-land of this part of Africa. The Oases and other valleys are depressions in this lofty plain ; and on descending to them, you find the level space or plain of the Oasis itself similar to a portion of the Valley of Egypt, surrounded by steep cliffs of limestone, at some distance from the cultivated land, which vary in height in the different Oases. Those of the Southern Oases are much higher, and consequently the level of those Oases is much lower than of the Oasis Parva, as may be seen from the last section, taken N. and S.²

From this it appears that the water of the Oasis Parva does not come directly from the Nile, and that we must look for the origin of its springs at a more southerly point. The mountains of the high plain are limestone ; the low plain of the Oases is sandstone on clay ; and it is from this last that the water rises, and by this it is retained. The limestone mountains of the Thebaïd rest in like manner on clay ; and thus we may conclude that the water is conveyed from some point to the south of, and at a greater elevation than, the Oasis, its escape to the surface taking place wherever the limestone superstratum is removed ; and that a continuation of the same bed of clay conducts it northward to the Oasis Parva — occasional opportunities being

¹ Plate XV. No. 12.

² No. 13.

afforded it for rising, as at Farafreh and other places on the way. Though I have represented the mountains as if the table-land of their summit were perfectly level, in order to show the comparative depressions of the Oases, it is not to be supposed that they are perfectly horizontal: if so, those of Lower Egypt would be more elevated than in the Thebaïd, which is not the case; the mountains of Thebes being 1200 feet above the Nile, which is a much greater elevation than any in the latitude of Cairo. From what has been said it is evident that the Oases are not fertile spots in the midst of a sandy plain, but depressions in the lofty table-land of Africa, where, by the removal of the superincumbent limestone strata, the water has the power of rising to the surface; nor is the desert a dreary plain of sand which has overwhelmed a once fertile country, whose only traces are the isolated gardens of the Oases, where the traveller runs a risk of being overwhelmed by sand, as the army of Cambyses was reported to have been.¹ The notion is of old date, from Herodotus to the modern traveller who confines his experience to the valley of the Nile; and if Strabo were listened to, it would require some degree of courage to visit the site of Memphis, lest, as he observes, the imprudent stranger should expose himself to ‘the danger of being overtaken by a whirlwind on his way.’² Strabo, *like other travellers*, must have braved great dangers during his voyage; the ancients were alarmed at the sand and wondrous monsters; and we now often read of narrow escapes from the effects of a simoom; but however disagreeable this really is, and though caravans run the risk of losing their way if incautious enough to continue their route in its dense fog of dust, and consequently to perish in this waterless region, the very unpleasant death it has been reported to cause is an exaggeration; and, speaking from the experience of many a violent simoom in the most sandy parts of the desert, I can only say that it is bad enough without being exaggerated, but that it is much more frightful in a book of travels than in the country itself.

A remarkable feature in the Valley of Egypt, which must strike every one who crosses the edge of the alluvial land, is the line of demarcation between this and the desert, which is so strongly defined, that you may almost step with one foot upon the richest, and with the other on the most barren land; for, as

¹ *Ammon. sand*, and the *dust* of the Pharaohs being united against it.

² Strabo, lib. xvii. p. 555.

Strabo says all is sterile in Egypt, where the Nile does not reach, but it only requires to be irrigated by the fertilizing water of the river to become productive; as the flower of the female plant only awaits the pollen of the male to cause it to produce — an idea analogous to the fable of Osiris (as the inundation) approaching the bed of Isis (the soil it irrigates), or more properly of Nephthys (the barren land), who also produced a son on being visited by Osiris.

Besides the land inundated by the Nile, the ancient Egyptians took into cultivation a considerable portion of the *háger*, or edge of the desert, which, being a light soil, consisting of clay mixed with sand or gravel, was peculiarly adapted for certain produce, particularly bulbous plants; and many with long fibrous roots were found to thrive in that soil. Those parts where a greater proportion of gravel prevailed were peculiarly adapted to the culture of the vine; and we are not surprised to find that the wines of Marea¹ and other places situated at the confines of the desert, were superior in quality to those from the interior of the irrigated land. In some places, as in the Fyoóm, where little change has taken place in the appearance of the surface of the land, I have frequently observed the traces of former cultivation; even the vestiges of fields appear, with channels for water, far above the level of all modern canals; and in the vicinity of the Lake Mæris are several water-courses and canals, with the roots of vines and other trees, which are distant more than twelve from the nearest irrigated land. I do not pretend to affirm that these are actually of the early time of the Pharaohs; but they doubtless owe their origin to the system of cultivating the *háger* adopted by the ancient Egyptians, and this extensive culture of the vine is at least prior to the Arab invasion. Indeed, by the universal confession of the inhabitants themselves, no canals or cultivation have been maintained in this spot within the period of Moslem records; and tradition asserts that the province

¹ [The town of Marea stood near the lake to which it gave the name of Marcotis. It was celebrated for the wine produced in its vicinity, which appears to be included in the 'wine of the north country,' so often mentioned in the lists of offerings in the Egyptian tombs. Strabo says, 'in this district is the greatest abundance of wine,' which is confirmed by Athenæus. Virgil (Georg. ii. 91) mentions the white wines of the Marcotis, and the expression of Horace,

'Mareotic,' meaning 'Egyptian wine,' points it out as the most noted of that country. Athenæus says, 'Its color is white, its quality excellent, and it is sweet and light, with a fragrant bouquet, by no means astringent, and not affecting the head;' and Strabo gives it the additional merit of keeping to a great age. Athenæus considers it inferior to the Teniotie; and that of Anthylla appears to have been preferred to it and to all others. — G. W.]

of *Fyóom*, which now contains about eighty villages, had once more than four times that number in the flourishing periods of the Pharaonic kings.

During the inundation, when the Nile had been admitted by the canals into the interior, and the fields were subjected to the fertilizing influence of its waters, the peasantry indulged in various amusements which this leisure period gave them time to enjoy.¹ Their cattle were housed and supplied with dry food, which had been previously prepared for the purpose; the tillage of the land and all agricultural occupations were suspended; and this season was celebrated as a harvest home, with games and recreations of every kind. They indulged in feasting and the luxuries of the table; games were celebrated in some of the principal towns, in which the competitors contended for prizes of cattle, skins, and other things suited to the taste or wants of the peasant, and some amused themselves with wrestling-matches, bull-fights, and gymnastic exercises, which, while they suited the habits of an active and robust people, contributed to invigorate them, and to prevent the baneful effects of indolence during a period of repose from the labors of the field. According to Julius Pollux,² the Song of Maneros was among those adopted by the Egyptian peasant; and this fabled personage was celebrated as the inventor of husbandry—an honor generally given to the still more fabulous Osiris. It is probable that many songs and games were appropriated to certain festivals: and this adaptation of peculiar ceremonies to particular occasions, and the aversion of the Egyptians for any change in the customs of their ancestors, are remarked by several ancient writers.³ They had many festivals connected with agriculture and the produce of the soil, which happened at different periods of the year. In the month *Mesoré*, they offered the first-fruits of their lentils to the god Harpocrates, ‘calling out at the same time, “The tongue is Fortune, the tongue is God:”’⁴ and the allegorical festival of ‘the delivery of Isis was celebrated immediately after the vernal equinox,’⁵ to commemorate the beginning of harvest. ‘Some,’ says Plutarch, ‘assimilate the history of those gods to the various changes which happen in the air during the several seasons of the year, or to those accidents which are observed in the production of corn in its sowing and ripening; “for” they observe, “what can the burial of Osiris more aptly signify than the first covering of the seed

¹ Diodor. i. 36.

² Jul. Poll. iv. 7.

³ Herodot. ii. 79.

⁴ Plut. de Isid. s. 68.

⁵ Ibid. s. 65.

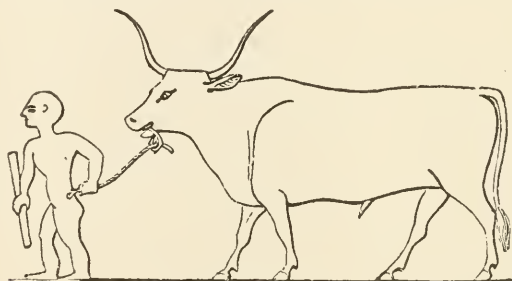
in the ground after it is sown? or his reviving and reappearing than its first beginning to shoot up? and why is Isis said, upon perceiving herself to be with child, to have hung an amulet about her neck on the 6th of the month Paophi, soon after sowing time, but in allusion to this allegory? and who is that Harpocrates whom they tell us she brought forth about the time of the winter *tropic*, but those weak and slender shootings of the corn, which are yet feeble and imperfect?"—for which reason it is that the first-fruits of their lentils are dedicated to this god, and they celebrate the feast of his mother's delivery just after the vernal equinox.' From this it may be inferred that the festival of the lentils was instituted when the month Mesoré coincided with the end of March; for since they were sown at the end of November, and ripened in about 100 or 110 days, the first-fruits might be gathered in three months and a half, or, as Plutarch tells us, 'just after the vernal equinox,' or the last week in March. It is not stated on what day of Mesoré this festival took place; we can, therefore, only arrive at an approximate calculation respecting the period when it was first instituted; which, supposing it to have fallen in the middle of the month, will carry it back 2650 years before our era, 330 years before the accession of Menes. 'On the 19th day of the first month (Thoth), which was the feast of Hermes,¹ they eat honey and figs, saying to each other, "How sweet a thing is truth!"'—a satisfactory proof that the month itself, and not the first day alone, was called after and dedicated to Thoth, the Egyptian Hermes; and another festival, answering to the 'Thesmophoria of the Athenians,' was established to commemorate the period when 'the husbandmen began to sow their corn in the Egyptian month Athor.'² Many of the sacred festivals of the Egyptians were connected with agriculture; but these I shall have occasion to notice under the head of their religious ceremonies.

I now proceed to another point connected with the occupations of the peasantry—the care and rearing of animals. The rich proprietors of land possessed a large stock of sheep, goats, and cattle; gazelles, and other wild animals of the desert, were tamed and reared with great care on their estates; and they bestowed the greatest attention to the breed of horses, asses, and other beasts of burden. The pastors, it is true, were a class apart from the peasantry, and one which was held in disrepute

¹ Plut. de Isid. s. 68.

² Ibid. s. 69.

by the Egyptians, partly in consequence of the nature of their occupation, and partly from the feeling excited against them by the remembrance of cruelties exercised upon their country by a shepherd race, which had held Egypt in subjection during a long period; and the swineherds were looked upon with such abhorrence that Herodotus affirms they could not even enter a temple, or contract marriages with any except of their own caste. But the denomination of pastors did not extend to the farmers who bred sheep or cattle; it merely applied to those who tended the flocks, or had their immediate care; and the Egyptian artists, as if to show the contempt in which these people were held, frequently represented them lame or deformed, dirty and un-



No. 481.

A deformed oxherd.

Tombs near the Pyramids.

shaven, and sometimes of a most ludicrous appearance. This feeling, however, was not carried to the extent mentioned by Josephus,¹ who asserts that 'the Egyptians were prohibited to meddle with the feeding of sheep;' and the sculptures of Thebes, and every part of Upper and Lower Egypt, abundantly prove them to have kept numerous flocks and herds, which were tended by native Egyptians. Their condition was humble; they lived in sheds² made of reeds, easily moved from place to place, which continued to be used by them to the time of Diodorus, as they are by the Ababdeh tribe, a pastoral race, in the upper part of the Thebaïd, to the present day; and it is probable that parts of Egypt, peculiarly adapted for pasture, were inhabited by large bodies of native shepherds, distinct from those employed by rich individuals upon their own farms.

In the extensive domains of wealthy landed proprietors, those who tended the flocks and herds were overlooked by other persons connected with the estate. The peasant who tilled the land

¹ Joseph. Antiq. ii. 7, 5.

² Diodor. i. 43.

on which they were fed was responsible for their proper maintenance, and for the exact account of the quantity of food they consumed; some persons were exclusively employed in the care of the sick, which were kept at home in the farmyard; the superintendent of the shepherds regulated the different arrangements connected with them, determined respecting those which were to graze in the field and those which were to be stall-fed, and attended at stated periods to give a report to the scribes belonging to the estate, by whom it was submitted to the steward, and the latter was responsible to his employer for this as well as every other portion of his possessions.

In the accompanying woodcut the head shepherd presents himself to give an account of the stock upon the estate, and behind him are the flocks committed to his charge, consisting of sheep, goats, and wild animals belonging to the person of the tomb, in which this subject is represented; and the expressive attitude of this figure, with his hand to his mouth, is well imagined to convey the idea of his endeavor to recollect the numbers he is giving from memory to the scribes.



Giving an account to the scribes of the stock on the estate.

No. 482.

Thebes.

Before *fig. 1* is the satchel, and above *fig. 2* the box for holding writing implements and papyri. They are writing on boards: in their left hands are the inkstands with black and red ink.

The shepherds on the estate were chosen by the steward, who ascertained their character and skill,

previous to their being appointed to so important a trust: as is shown to have been done in the case of the Israelites, on their arrival in the land of Goshen; Pharaoh expressly commanding Joseph, whom he had made superintendent 'over all the land of Egypt,' to select from among his brethren such as were skilful in the management of the flocks or herds, and 'make them rulers over his cattle.'¹

The cattle were brought into a court attached to the steward's

¹ Gen. xlvii. 6. The royal cattle were branded or tattooed on their rumps with

their numbers, as 'Palace — 86,' 'Palace — 43' (Rosellini, 'Mon. Civili,' xxx.). — S. B.

house,¹ or into the farmyard, and counted by the superintendent in the presence of the scribes. Every care was taken to prevent or detect frauds, and the bastinado was freely administered, whenever the peasant or the shepherd neglected the animals entrusted to his care.



No. 483.

Herdsmen giving an account of the cattle. *British Museum— from Thebes.*

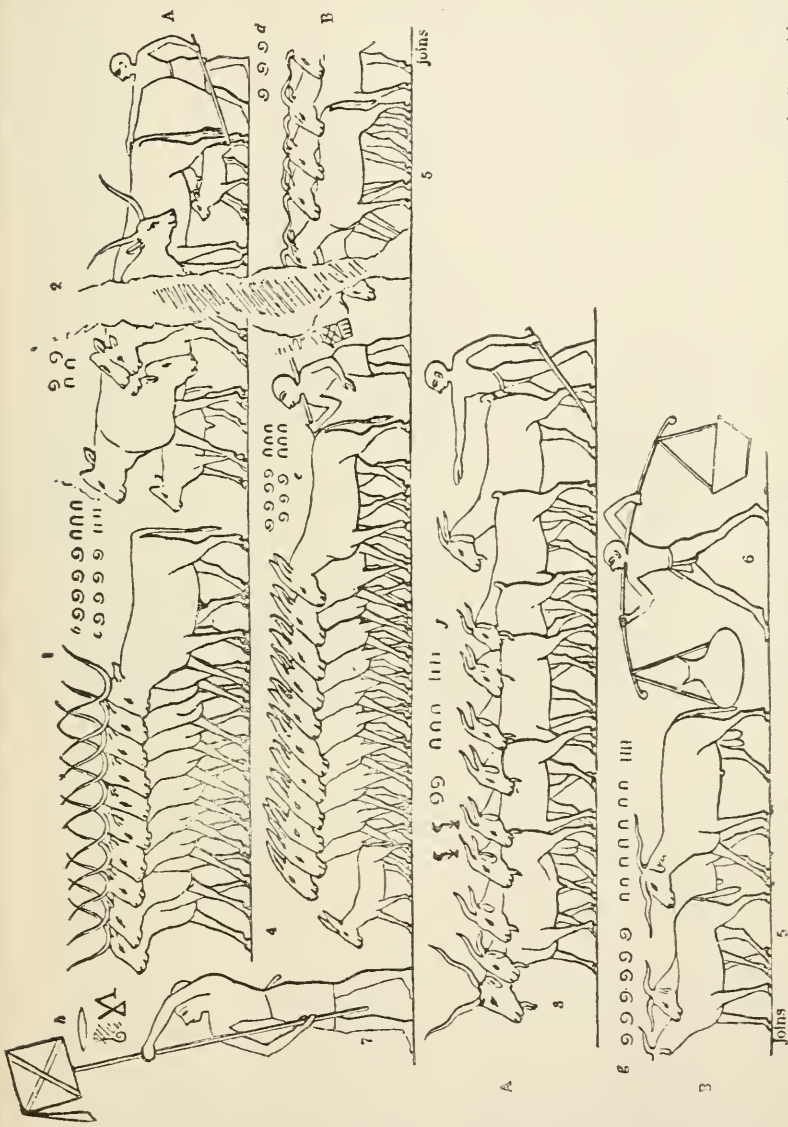
- Fig.* 1. Herdsmen giving an account to the scribe, 3.
 2. Another doing obeisance to the master of the estate, or to the scribe.
 3. Other herdsmen.
 4. The driver of the cattle, carrying a rope in his hand.
 5. Bowing and giving his report to the scribe, 7, over whom is the usual satchel and two boxes.

The accompanying woodcuts fully illustrate the mode of bringing the cattle; and woodcut No. 484 is particularly interesting from the numbers being written over the animals, answering, no doubt, to the report made to the steward, who, in the presence of the master of the estate, receives it from the

¹ The headman of the cattle was the *meraha*: such officers are found attached to

the cattle of the temple of Amen-ra at Thebes, and to the royal cattle. — S. B.

head shepherd. First come the oxen, over which is the number 834, cows 220, goats 3234, asses 760, and sheep 974; behind



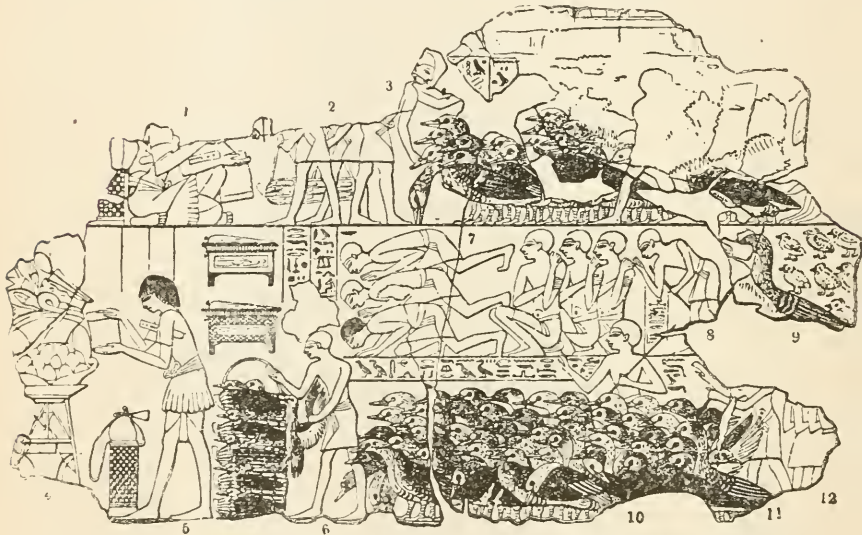
No. 481. *In a Tomb near the Pyramids.*
 Cattle, goats, asses, and sheep, with their numbers over them. *Fig. 1.* The number 834 over long-horned oxen. *Fig. 2.* 220 cows with calves. *Fig. 3.* 3234 goats. *Fig. 4.* 760 asses. *Fig. 5.* 974 sheep. *Fig. 6.* Food-carrier. *Fig. 7* gives in the account to the steward of the estate. In the original, the two upper lines join the lower at A and B.

which follows a man carrying baskets slung upon a pole. The steward, leaning on his staff and accompanied by his dog,¹ stands

¹ Another tomb has a similar scene, in the text of which are mentioned 132 oxen, 100+x sheep, goats (*ser*), 1200 kids, and

1500 pigs. (Rosellini, 'Monumenti Civili,' xxx.) — S. B.

on the left of the picture; and in another part of the tomb, the scribes are represented making out the statements presented to them by the different persons employed on the estate. The tomb where this subject occurs is hewn in the rock near the Pyramids of Gizeh, and possesses additional interest from its great antiquity, having the name¹ of a king who lived about the era of the founders of those monuments, as well as from the subjects it contains, which show the Egyptians to have had



No. 485.

Geese brought and numbered. *British Museum*—from Thebes.

Fig. 1. A scribe. 2. Men bringing eggs in baskets. 3. One of the feeders of geese. 4. Table, on which are baskets containing eggs and flowers. 5. The scribe reading the account before the steward or master of the estate, written on a papyrus he holds in his hands. 6. Men bringing the goslings in baskets. 7. The feeders of the geese doing obeisance; others seated in an attitude of respect; and, 8, bowing as he brings up the geese with their young. 9. A large flock of geese brought by others, 10, 11, 12.

the same customs at that early time, and to have arrived at the same state of civilization as in the subsequent ages of the 18th and later Dynasties,—a fact which cannot but suggest most interesting thoughts to an inquiring mind, respecting the state of the world at that remote period.²

¹ Woodcut No. 419, *fig. 4.*

² In the letters of Amenemah, No. II., the writer says, 'If there are not oxen in the stall of the house of Pharaoh, which is under my keeping, send four oxen, the very best and biggest,' &c. (Goodwin, 'Cambridge Essays,' 1858, p. 248) And again, Letter III., Pentaur replies, 'His oxen which are in the fields are well, the

oxen which are in the stalls are well, eating their provender daily; yea, their keeper filleth them with provender.' (Ibid. p. 249.) Numerous oxen were given to the temples of Thebes, Memphis, and Heliopolis, by Rameses III., taken from the Mashuasha and their confederates ('Records of the Past,' vi. pp. 35, 45); 54½ to Heliopolis alone (ibid. p. 59). The price

An account of the geese and other fowl was also brought to the steward at the same time; and so scrupulous were they in the returns made to him, that the number of eggs was even ascertained and reported, with the same care as the calves, or the offspring of the flocks.

Everything in Egypt was done by writing. The scribes were employed on all occasions, whether to settle public or private questions, and no bargain of any consequence was made without being sanctioned by the voucher of a written document. The art of curing disease in animals of every kind, both quadrupeds and birds, was carried to great perfection by the Egyptians, and the authority of ancient writers and of the sculptures is curiously confirmed by a discovery of the learned Cuvier, who, finding the left humerus of a mummied ibis fractured, and reunited in a particular manner, proved the intervention of human art. The skill they possessed, says Diodorus,¹ in rearing animals, was the result of knowledge inherited from their parents, and subsequently improved by their own observation, their whole lives being occupied in this pursuit; and the information handed down to them respecting the best mode of treating cattle when ill, and their proper food at all times, was increased not only by the improvements arising from continued experience, but by the emulation common to all men. 'What most excites our wonder,' adds the historian, 'and deserves the greatest praise, is the industry shown by the rearers of fowls and geese, who, not contented with the course of natural procreation known in other countries, hatch an infinite number of birds by an artificial process. Dispensing with the incubation of the hens, they with their own hands bring the eggs to maturity, and the young chickens thus produced are not inferior in any respect to those hatched by natural means.'² This artificial contrivance has been handed down to the present day, and continues to be employed by the modern inhabitants of Egypt, particularly the Copts, who may be considered to have the best claim to the title of descendants of the ancient Egyptians.³ The custom is for the proprietors of the ovens to make the round of the villages in the vicinity, to collect the eggs from the peasants, and to give them in charge to the rearers, who, without any previous

of an ox is given as 119 *ten*, or pounds of bronze. (Chabas, 'Melanges,' 1870, p. 222.)—S. B.

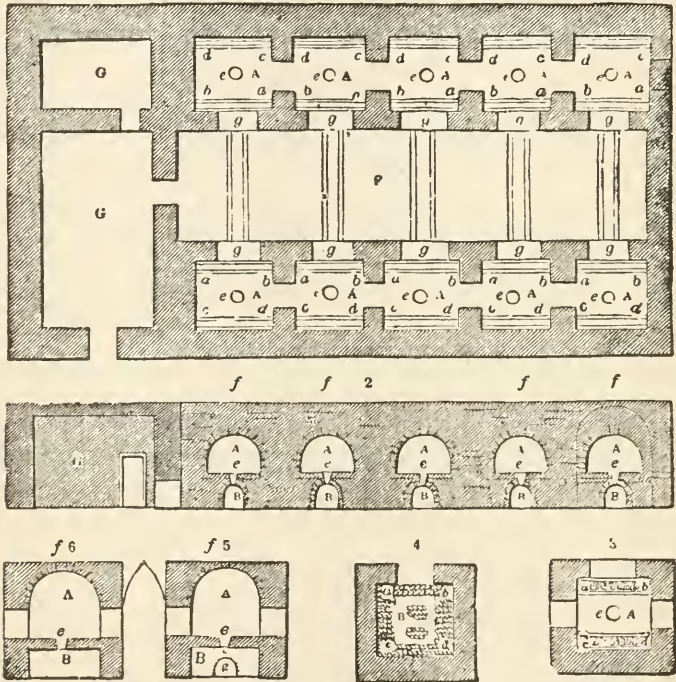
¹ Diodor. i. 74.

² Conf. Plin. x. 54.

³ 'Egypt and Thebes,' p. 246.

examination, place all they receive on mats strewed with bran, in a room about 11 feet square, with a flat roof, and about 4 feet in height, over which is another chamber of the same size, with a vaulted roof, and about 9 feet high; a small aperture in the centre of the vault (at *f*) admitting light during the warm weather, and another (*e*) of larger diameter, immediately below,

1



No. 4. Modern ovens for hatching eggs.

- Fig. 1.* Plan of the building, showing the form of the upper rooms A A, the entrance room G G, and the passage F. *e e*, the aperture communicating with the oven.
 2. Section of the same, showing the upper rooms, A and B.
 3. Plan of upper room, in which the fires are placed at *a b* and *c d*.
 4. Lower room, in which the eggs are placed.
 5, 6. Sections from the back and front of the upper and lower rooms, A and B.

communicating with the oven, through whose ceiling it is pierced. By this also the man descends to observe the eggs: but in the cold season both are closed, and a lamp is kept burning within; another entrance at the front part of the oven, or lower room, being then used for the same purpose, and shut immediately on his quitting it. By way of distinction, I call the vaulted (A) the upper room, and the lower one (B) the oven.

In the former are two fires in the troughs, *a b* and *c d*, which, based with earthen slabs, three-quarters of an inch thick, reach from one side to the other, against the front and back walls. These fires are lighted twice a day; the first dies away about midday; and the second, lighted at 3 P.M., lasts until 8 o'clock. In the oven, the eggs are placed on mats strewed with bran, in two lines corresponding to and immediately below the fires, *a b* and *c d*, where they remain half a day. They are then removed to *a c* and *b d*; and others (from two heaps in the centre) are arranged at *a b* and *c d*, in their stead; and so on, till all have taken their equal share of the warmest positions: to which each set returns again and again, in regular succession, till the expiration of six days.

They are then held up, one by one, towards a strong light; and if the eggs appear clear, and of a uniform color, it is evident they have not succeeded; but if they show an opaque substance within, or of the appearance of different shades, the chickens are already formed; and they are returned to the oven for four more days, their positions being changed as before. At the expiration of the four days they are removed to another oven, over which, however, are no fires. Here they lie for five days in one heap, the apertures (*e, f*) and the door (*g*) being closed with tow to exclude the air; after which they are placed separately about one or two inches apart, over the whole surface of the mats, which are sprinkled with a little bran. They are at this time continually turned, and shifted from one part of the mats to another, during six or seven days, all air being carefully excluded: and are constantly examined by one of the rearers, who applies each singly to his upper eyelid. Those which are cold prove the chickens to be dead, but warmth greater than the human skin is the favorable sign of their success. At length the chicken, breaking its egg, gradually comes forth: and it is not a little curious to see some half exposed and half covered by the shell; while they chirp in their confinement, which they evince the greatest eagerness to quit. The total number of days is generally twenty-one, but some eggs with a thin shell remain only eighteen. The average of those that succeed is two-thirds, which are returned by the rearers to the proprietors, who restore to the peasants one-half of the chickens; the other being kept as payment for their expenses. The size of the building depends, of course, on the means of speculation of the proprietors: but the general plan is usually the same; being a series of eight

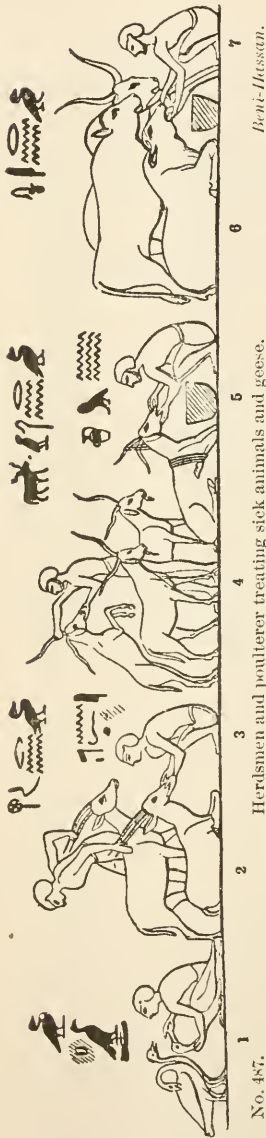
or ten ovens or upper rooms, on either side of a passage about 100 feet by 15, and 12 in height. The thermometer in any part

is not less than 24° Réaumur, or 86° Fahr.;¹ but the average heat in the ovens does not reach the temperature of fowls, which is 32° Réaumur.

Excessive heat or cold are equally prejudicial to this process; and the only season of the year at which they succeed is from the 15th of Imsheer (23d of February) to the 15th of Baramooden (24th of April), beyond which time they can scarcely reckon upon more than two or three in a hundred.

The great care bestowed by the shepherd on the breed of sheep was attended with no less important results. They were twice shorn, and twice brought forth lambs, in the course of a year;²—a circumstance fully proved by modern experience, whenever sufficient care is taken by the shepherd. But though Diodorus is perfectly correct in this part of his statement, he seems to be in error respecting the nature of the pasture on which they were fed, when he suggests that the mere accidental produce of the land after the inundation sufficed for this purpose: for it is far more reasonable to suppose that formerly, as at the present day, they were supplied with particular

food cultivated expressly for them; and from his referring to the



No. 487.

Herdsmen and poulters treating sick animals and geese.

Bent-Hassan.

Fig. 1. Feeding a sick goose, or giving medicine to it, *venem*.
 2. In the original, this figure shows more skill in the drawing than is usual in Egyptian sculpture. Curing a young *machat* or leucoryx.
 3. Feeding an oryx—the priest, *Neyta*.
 4. Poulters a sick animal while the medicine is administered to it, *venem heqet*.
 5. Treatment of goats. The fore-leg is tied up to prevent the animal rising while the medicine is administered to it, *venem heqet*.
 6. Treatment of a young ox. The fore-leg is tied up to prevent the animal rising while the medicine is administered to it, *venem heqet*.
 7. Forces a ball of medicated food taken from the vase before him, into the ox's mouth—*venem ram aa*, 'doctoring a young ox.'

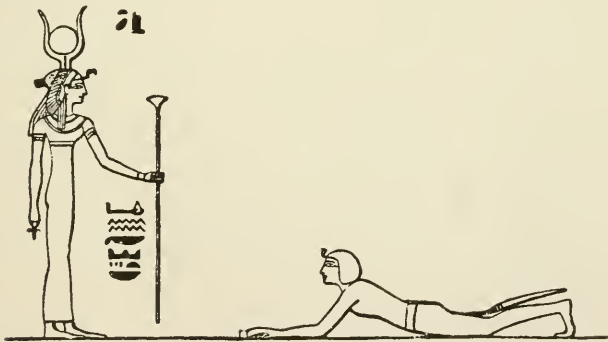
¹ Mr. Hamilton mentions the heat of 88° Fahr.

² Diodor. i. 36.

period of the inundation, we may suggest that his remark founded on the fact of their growing clover for the flocks and herds at that season, as is still the custom in Egypt. Those who exercised the veterinary art were of the class of shepherds. They took the utmost care of the animals, providing them with proper food, which they gave them with the hand, and preparing for them whatever medicine they required, which they forced into their mouths. Their medical aid was not confined to oxen and sheep; it extended also to the oryx, and other animals of the desert they tamed or bred in the farmyard; and the poulterers bestowed the same care upon the geese and fowls. Indeed, the numerous herds of the ibex, gazelle, oryx, and other of the antelope tribe, show, equally with their advancement in veterinary art, the great attention paid to the habits of animals: the wild and timid antelopes were rendered so tame as to be driven to the census in the farmyard, like the sheep and goats; and the fowlers were no less successful in their mode of rearing the *vulpanser* geese, and other wild fowl of the Nile.¹

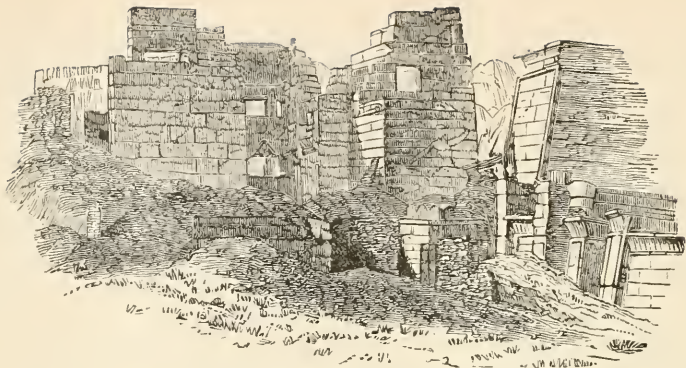
¹ Ramses III. gave to Heliopolis, besides stables for oxen, apartments to bring up fowls anew with geese and ducks. ('Records of the Past,' vi. p. 55.) He gave 17,250 water-fowl in the course of his reign of thirty-two years (ibid. p. 64). Be-

sides geese, goslings, doves, and various birds were given to the same, and 4339 fowl to Memphis. Both pigeons, *kar em pe*, the Coptic *shrompi*, and ring-doves *menat*, appear in the list. — S. B.



No. 485.

Ptolemy prostrate before Isis, who says, 'I give you all countries.'



VIGNETTE L.

Pavilion of Rameses III. at Medeenet Haboo.

Thebes.

CHAPTER XII.

Religious Opinions of the Egyptians — The Greeks borrowed many of their Notions on Religion from Egypt — The Idea of the Deity entertained by the Priests different from that taught to the uninitiated — Nature of the Gods — Numbers — The Deity manifested upon Earth — Theories in Greek Writers — The great Gods — Triads.

BEFORE we examine the nature of the Pantheon, or the attributes of the deities worshipped by the Egyptians, it will be proper to take a general view of their religious opinions, intimately connected as they were with the manners and customs of the people.

Superstitiously attached to their sacred institutions, and professing a religion which admitted much outward show, the Egyptians clothed their ceremonies with all the grandeur of solemn pomp; and the celebration of their religious rites was remarkable for all that human ingenuity could devise, to render them splendid and imposing. They prided themselves on being the nation in whom had originated most of the sacred institutions afterwards common to other people, who were believed to have adopted them from Egypt: and the mysterious nature and attributes of the deity, though presented under a different form, were recognized by the Egyptians as a direct emanation from the metaphysical philosophy of their priesthood. They claimed the merit of being the first who had consecrated each month and day¹ to a particular deity: — a method of forming the calendar

¹ Herodot. ii. 82.

which has been imitated, and preserved to the present day; the Egyptian gods having yielded their places to those of another Pantheon, which have in turn been supplanted by the saints of a Christian era:—and they also considered themselves the first¹ to suggest the idea of foretelling from the natal hour² the future fortunes of each new-born infant, the life he was destined to lead, or the death he was fated to die, which were boldly settled by astrological prediction.³ ‘The Greeks,’ says Herodotus,⁴ ‘borrowed the science of astrology from the Egyptians, but that people have invented more prodigies than all the rest of mankind. They observe and note down every occurrence, as well as whatever follows it; and then carefully watching those of a similar nature, they predict the issue from analogy, being persuaded that it will be the same.’ In like manner, observes the historian, to the Egyptians is conceded the honor of teaching mankind the proper mode of approaching the Deity:⁵ and Lucian⁶ asserts, ‘that they were reputed the first who had a conception of the gods, an acquaintance with religious matters, and a knowledge of sacred names,’—an opinion expressed in the words of an oracle of Apollo quoted by Eusebius, which declares that ‘they, before all others, disclosed by infinite actions the path that leads to the gods.’ And Iamblichus⁷ not only considers them ‘the first of men who were allowed to partake of the favor of the gods, but that the gods when invoked rejoiced in the rites of Egypt.’

The inspection of the entrails of victims, the study of omens, and all those superstitious customs which the religions of antiquity so scrupulously observed, were deemed highly important among the Egyptians; and the means adopted for divining future events, or the success of any undertaking, were as varied and fanciful as the *derb e' rummel*, and other trials of chance used by Oriental people at the present day.⁸

They even, says Plutarch,⁹ ‘look upon children as gifted with a kind of faculty of divination, and they are ever anxious

¹ Herodot. ii. 82.

² The Papyrus Sallier IV. is a calendar or almanac of this nature. The particular gods and mythical events of each day are specified, as also the things to do and avoid, and the fate of persons born on particular days. Each day was divided into three portions, and the terms good or bad applied to it in accordance with its character. (Chabas, ‘Calendrier Sallier,’ p. 21, 8vo. Paris.)—S. B.

³ Iamblich. de Myst. viii. 6: ‘According to many of the Egyptians, that which is in our power depends on the motion of the stars.’

⁴ Herodot. ii. 82.

⁵ Ibid. ii. 58.

⁶ Lucian, de Syria Dea.

⁷ Iamblich. de Myst. sect. vii. 5.

⁸ Lane's ‘Modern Egyptians,’ vol. i. p. 341, *et seq.*

⁹ Plut. de Isid. et Osir. s. 14.

to observe the accidental prattle they talk during play, especially if it be in a sacred place, deducing from it presages of future events.' Omens were frequently drawn from common accidents, as tokens of good and bad luck; and thus the circumstance of the engineer sighing, while he superintended the transport of a monolithic shrine from Elephantine to Saïs, was sufficient to stop its further progress, and to prevent its introduction into the sacred place intended for its reception;¹ and Amasis, though a man of strong mind, and more free from prejudices than the generality of his countrymen, was induced to give way to this superstitious fancy. Sacrifices of meat offerings, libations, and incense were of the earliest date in their temples; and if the assertions of Proclus be true, that 'the first people who sacrificed did not offer animals, but herbs, flowers, and trees, with the sweet scent of incense,' and that 'it was unlawful to slay victims,' they only apply to the infant state of mankind, and not to that era when the Egyptians had already modelled their religious habits and belief into the form presented to us by the sculptures of their monuments. And when he adds, that 'no animal should be offered in sacrifice to the gods, though permitted both to good and evil dæmons,' we are not to conclude that the victims slain before the altars in the Egyptian sculptures were confined to the minor deities, or that this typical institution had not its origin in a very remote age.² Macrobius, indeed, affirms³ that 'it was never permitted to the Egyptians to propitiate the gods with the slaughter of animals, nor with blood, but with prayers and incense alone;' an idea expressed also by Ovid,⁴ who says that men in former times were reported to have made use of milk⁵ and whatever herbs the earth spontaneously produced, and every one offered for himself the sacrifice he had vowed. But these remarks do not apply to the Egyptians, who offered victims on the altars of all their gods; and the privilege mentioned by Ovid, which every individual enjoyed, of offering for himself his own sacrifice, though permitted to the Jews before

¹ Herodot. ii. 175.

² The only example of actual sacrifice in the sculptures is that of Ptolemy Euergetes I. sacrificing an ox to the god Chons (Champollion, *Panth. Egypt.*); but sacrifices of animals are mentioned in the texts, as in the poem of Pentaur about Rameses II., the king says, 'I have enriched thy sacrifices, I have slain to thee

3000 bulls.' ('Records of the Past,' vol. ii. p. 70.) Rameses III. also speaks of sacrifices (*Ibid.* vols. vi. and viii.).—S. B.

³ Macrobi. Sat. i. 4. He is even guilty of stating this to be the case under the Ptolemies, when Serapis and Saturn were introduced into Egypt.

⁴ Ovid, *Fast.* lib. v.

⁵ Plin. xiv. 12.

the Exodus, seems only to have been conceded to the Egyptians on particular occasions. With the Israelites, the custom was to offer fruits, the fat and milk of animals, the fleeces of sheep, or the blood and flesh of victims; the right of making the offering being usually confined to the elders to the head of a family, and to those who were most esteemed for virtue, or venerated for their age. When keeping the sacrifice of the Passover, they were commanded to 'take every man a lamb, according to the house of their fathers, a lamb for an house,' 'a male of the first year,' 'either from the sheep, or from the goats;'¹ and to the head of the family belonged the honor of slaying the victim in the name of the whole house. This custom is retained in the East to the present day; and the sheikh of a tribe, or the master of a house, is expected to slay the victim of the feast of the *Eed*, which the Arabs and other Moslems celebrate on the 10th day of Zoolhegh, the last month of their year. The ceremony is performed in commemoration of the sacrifice of Abraham; and it is remarkable that this patriarchal privilege has never been transferred by them to the priests of the religion. Another point which appears singular to us in this traditional custom is, that the ram then slain is said to be a record of the substitute presented to Abraham in lieu of his son Ishmael, and not of Isaac. The earliest sacrifices of animals appear to have been holocausts; and, as it was deemed unlawful to eat it, the flesh of the victim was consumed by fire: but in after-times, as with the Jews, certain portions only were burnt, and in some cases the residue belonged to the priest who sacrificed, or to the individual who made the offering.² And if the fruit of the earth may be considered the *first* offering made by man,³ yet a 'firstling of the flock, and the fat thereof,' were the sacrifice looked upon as peculiarly acceptable to the Deity;⁴ and most people appear to have adopted this method of propitiating Him, and of expiating sin. Indeed, it always continued to be regarded as the most suitable species of offering; and the descriptive formula on Egyptian tablets dedicated to Osiris, and to some other deities, is so worded as to leave no doubt respecting the nature of the most important Egyptian sacrifices; in which we find oxen and geese, with cakes and wine, incense and libation, invariably mentioned; flowers and herbs being presented as a separate oblation.

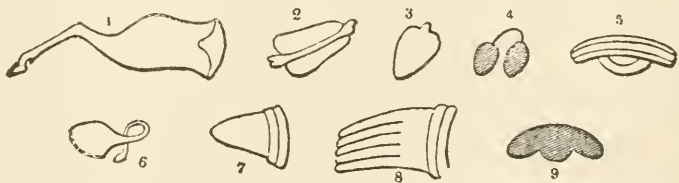
¹ Exod. xii. 3, 5.² As in the peace-offerings. Levit viii. 31.³ Gen. iv. 3.⁴ Gen. iv. 4, 5.

The sanction given for sacrificing a bull was by a papyrus band tied by the priest round the horns, which he stamped with his signet on sealing-clay. Documents sealed with fine clay and impressed with a signet are very common; but the exact symbols impressed on it by the priest on this occasion are not known. Castor says they consisted of a man kneeling, with his hands tied behind him, and a sword pointed to his throat which were probably the annexed, though they have not been found on a seal. The clay used in closing and sealing papyri is of very fine quality. A similar kind was employed for official seals by the Greeks and Assyrians.



Sma, 'to cut.'

We learn from the sculptures that the victim, having its feet tied together, was thrown on the ground; and the priest, having placed his hand on its head¹ or holding it by the horn, cut its throat, apparently from ear to ear, as is the custom of the Moslems at the present day. The skin was then removed, and after the head had been taken away, the foreleg or shoulder, generally the right,² was the first joint cut off. This was considered, and called, the chosen part (*sapt*), and was the first offered on the altar. The other parts were afterwards cut up; and the shoulder, the thigh, the head, the ribs, the rump, the heart, and the kidneys, were the principal ones placed on the altar. The



No. 489.

Sacrificial parts of animals.

1. Haunch, *χeps'*. 2. Shoulder, *sut*. 3. Heart, *hat* or *abt*. 4. Kidneys, *nes'em*. 5. Ribs, *spir* or *speh*. 6. Rump or buttock, *sat*. 7, 8. Other joints. 9. Liver.

head, which Herodotus says was either taken to the market and sold to strangers, or thrown into the river, is as common on the altars as any other joint, and an instance sometimes occurs of the whole animal being placed upon it. We may therefore conclude that the imprecations he says were called down upon the head were confined to certain occasions and to one particular victim, as in the case of the scapegoat of the Jews,⁴ and it was of that par-

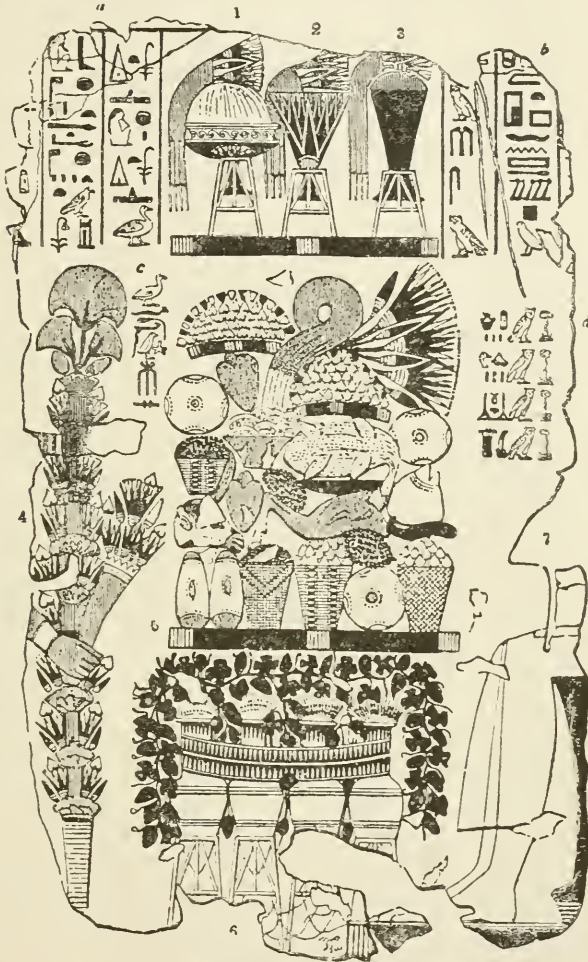
¹ Levit. i. 4; iii. 8.

² Levit. viii. 26.

³ Cf. Levit. vii. 33, viii. 25; 1 Sam. ix. 24.

⁴ Levit. xvi. 8, 10, 21.

ticular animal that no Egyptian would eat the head. It may not have been a favorite joint, since we find it given to a poor man for holding the walking-sticks of the guests at a party; but he



No. 490. Wall-painting from a tomb.

The inscription on the left is 'A royal offering to Ita, a royal offering to Seb, and the circle of the great gods of the southern hemisphere.' That on the right, which is imperfect, reads, 'In his house justified he receives . . .' Before the feet of the seated figure, at the right is, 'thousands of bread and beer, of flesh and fowl, of clothes and fabrics, of incense and wax,' the usual sepulchral formula; and on the left the name of his son Aahmes (4), whose hand offers the bunch of flowers.

was an Egyptian, not a foreigner, and this is in the paintings of a tomb at Thebes, of the early time of the 18th Dynasty.

Homer's description of the mode of slaughtering an animal ¹

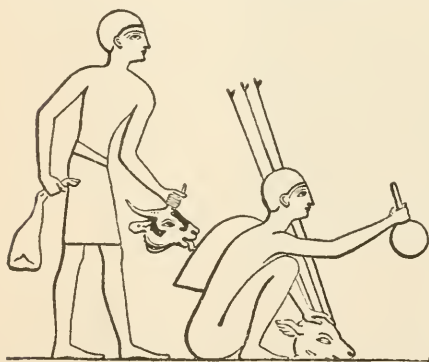
¹ Il. A, 459.

is very similar: 'They drew back the head and killed it, and after skinning it they cut off the legs, which being wrapped up in the fat (caul) folded double, they placed portions of raw meat thereon; an old man then burnt it on split wood, and poured black wine on it, while the young men beside him held five-pronged spits. When the legs (thighs and shoulders) were burnt, and they had tasted the "inward parts," they cut the rest into small pieces, and put them on skewers (spits), roasting them cleverly, and took all off again.'



No. 491. Offerings on a basket or mat.

Sheep are never represented on the altar, or slaughtered for the table, at Thebes, though they were kept there for their wool; and Plutarch says, 'None of the Egyptians eat sheep, except the Lycopolites.'¹ Goats were killed, but the Theban gentry seem to have preferred the ibex or wild goat, the oryx, the gazelle, and other game. These, however, were confined to the wealthier



No. 492. Men bringing head and haunch and some other object.

classes; others lived principally on beef, Nile geese, and other wild fowl; and some were satisfied with fish, either fresh or salted, with an occasional goose or a joint of meat; and the numerous vegetables Egypt produced appeared in profusion on every table. Lentil porridge was, as at present, a great article of food for the poor, as well as the *rapphanus* (*figl*),² cucumbers (or gourds), melons, and leeks, onions, and garlic,³ of which the gourd (*kuz*, Arabic *kûz*), melons (*abtikh*, Arabic *batikh*), onion (*bush*, Arabic *bush*), and garlic (*tôm*, Arabic *tôm*) retain their names in Egypt to the present day. They had also fruits and roots of various kinds; and Diodorus⁴ says that children had merely 'a little meal of the coarsest kind, the pith of the papyrus, baked

¹ Plut. de Isid. s. 72.

² Herod. ii. 125.

³ Numb. xi. 5.

⁴ Diod. i. 80.

under the ashes, and the roots and stalks of marsh-weeds.' Beef and goose, ibex, gazelle, oryx, and wild fowl were also presented to the gods; and onions, though forbidden to the priests, always held a prominent place on their altar, with the *figl* (*raphanus*, woodcut No. 493, *figs.* 3, 4), and gourds (*figs.* 1, 2), grapes, figs (especially of the sycamore), corn, and various flowers. Wine, milk, beer, and a profusion of cakes and bread, also formed part of the offerings, and incense was presented at every great sacrifice.



No. 493 Sacrificial food.

Of that primitive notion which led man to consider sacrifice the type of a more complete expiation, or of the vestiges of early revelation on this point, it is not necessary here to treat; but I shall have occasion to mention some curious ideas respecting the manifestation of the Deity upon earth, which occur in examining the mysteries of ancient Egypt. Oracles were of very remote date among the Egyptians; and the Greeks, as well as some other people, were indebted to them for their institution. 'The origin of the different deities,' says Herodotus,¹ 'their form, their nature, and their immortality, are with the Greeks only notions of yesterday; and the first who have described them in their theogony are Hesiod and Homer, who are only my predecessors by 400 years. They mentioned their names, their worship, their offices in heaven, and their general appearance; and the poets who are said to have preceded those two, came, in my opinion, some time after them.' 'Nearly all the names of Greek divinities,' says the same historian,² 'came from Egypt, or at least the greater part; for, with the exception of Neptune, the Dioscuri,³ Juno, Vesta, Themis, the Graces, and Nereids, the names of all the gods have been always known in Egypt. In stating this, I only repeat what the Egyptians themselves acknowledge to be the case; and the names of deities unknown to them I suppose to have been of Pelasgic origin, with the exception of Neptune, which is from Libya, where that deity has always been held in particular veneration. With regard to Heroes, they receive no funeral honors from the Egyptians. The Greeks, indeed, borrowed from the Egyptians the religious

¹ Herodot. ii. 53.² Ibid.³ Castor and Pollux, the reputed sons of Jupiter.

rites used among them, many of which I shall have occasion to notice; but it is not from them, but from the Pelasgi, that the Athenians, and after them the other Greeks, derived the custom of giving to the statues of Mercury a phallic attitude, the religious reason of which may be found explained in the mysteries of Samothrace.' Herodotus states that the Egyptians were strangers to the names¹ of the above-mentioned deities, but we are not thence to infer that the deities themselves were unknown to them; and there is direct evidence of three, Juno, Vesta, and Themis, holding a distinguished position in the Pantheon of Egypt. Juno was called Sâté, Vesta Anouké, and Themis was doubtless derived from the Egyptian *Thmei*, the goddess of Truth and Justice, from whom were borrowed both her attributes and name. The historian then goes on to observe,² 'that the Pelasgi did not at first assign any name to their divinities, but merely applied to them the general appellation of gods, according to the order of the different parts which constituted the universe, and the manner in which they had organized them. It was not till a late period that they came to know their names, which were introduced from Egypt; and they learnt that of Bacchus long after those of the other gods. In process of time they went to consult the oracle of Dodona upon this very point; and having received for answer that they might adopt the names taken from foreigners, the Pelasgi thenceforth used them in their sacrifices, and the Greeks borrowed them from the Pelasgi.' If the ceremonies and worship of Bacchus were introduced into Greece by Melampus,³ and if some trifling changes were made in them, it was only done in order to suit the tastes of the new votaries; and it is evident, says Herodotus, from the great variance that exists between their rites and Greek manners, and from their resemblance to those of the Egyptians, that they were derived from that people. Other religious ceremonies introduced from Egypt also underwent certain changes, as in the case of the phallic Mercury above alluded to; and though Herodotus⁴ derives the form of that deity from a Samothracian custom, there is great reason to suppose that it was borrowed from the figure of the Pan of Chemmis.⁵ The ancient oracle of Dodona was allowed, even by the priestesses themselves, to have been of Egyptian

¹ But surely they were not strangers even to the *name* of Themis, being so closely allied to the *Thmei* of Egypt.

² Herodot. ii. 52.

³ *Ibid.* ii. 49.

⁴ Herodot. ii. 51.

⁵ Both from the office of Mercury, and from what he says of the mysteries of the Cabiri.

origin,¹ as well as that of the Libyan Ammon; and the oracles of Diospolis, or Egyptian Thebes,² bore a strong resemblance to the former of those two. The principal oracles in Egypt were of the Theban Jupiter, of Hercules, Apollo, Minerva, Diana, Mars, and above all of Latona, in the city of Buto, which the Egyptians held in the highest veneration, but the mode of divining differed in all of them, and the power of giving oracular answers was confined to certain deities.³

There was also an oracle of Besa, according to Ammianus Marcellinus,⁴ in Abydus, a city of the Thebaïd,⁵ where that deity was worshipped with long-established honors; though others assign a different position to his celebrated temple, in the vicinity of Antinoë, which place is supposed to have usurped the site of the old town of Besa, said to have been called Besantinopolis.⁶ The mode of obtaining answers was here, as at Heliopolis,⁷ through the medium of persons deputed for the purpose, who carried the questions in writing, according to a proper formula,⁸ and deposited them sealed in the temple, the answers being retained in the same secret and ceremonious manner. Zosimus relates that, in the time of Constantius, some of the sealed answers, which as usual had been left in the temple, were sent to the Emperor, and the discovery of their contents subjected many persons to imprisonment and exile; apparently in consequence of the oracle having been applied to respecting the fate of the empire, or the success of some design against his life. Different forms were required in consulting different oracles. At Aphaca, a town between Heliopolis and Byblus, where Venus had a temple, was a lake, into which those who went to consult the oracle of the goddess threw presents, of whatever kind they chose, and derived omens from their sinking, or swimming on the surface. If agreeable to the goddess, they sank — if not, they floated; and Zosimus states that, in the year preceding their ruin, the offerings of the Palmyrenes sank, and the following year a contrary result predicted the calamity which befell them.⁹

¹ Herodot. ii. 55

² Ibid. ii. 58.

³ Ibid. ii. 83, 152.

⁴ Ammian. Marcell. lib. xix. 12.

⁵ [Ammianus Marcellinus says, 'at the extremity of the Thebaïd,' which was not the situation of Abydus. I am inclined to think he should have said Antinoë. Herodotus, i. 182, mentions it. — G. W.]

⁶ [In an old Egyptian writer, quoted by Photius A.D. 173. — G. W.]

⁷ Macrob. Saturn. lib. i. 30.

⁸ Pliny (xxviii. 2), speaking of consulting oracles, says the greatest care was taken lest a word should be omitted, or even pronounced wrong, and all was according to a set form. (Juvenal, Sat. vi. 390.)

⁹ Banier, Mytholog. tom. ii. liv. iv. c. i. p. 40.

'On consulting the god at the Oasis of Ammon, it was customary,' says Quintus Curtius, 'for the priests to carry a gilded boat, ornamented with numerous silver *patera* hanging from both its sides, behind which followed a train of matrons and virgins singing a certain uncouth hymn, in the manner of their country, with a view to propitiate the deity, and induce him to return a satisfactory answer.' The oracle of Ammon enjoyed for ages the highest celebrity, and was looked upon by foreigners, as well as Egyptians, with the most profound respect, missions from all countries being sent to consult it, and learn its infallible answers: but in Strabo's¹ time it began to lose its former renown; the sibyls of Rome and the soothsayers of Etruria having substituted omens drawn from the flight of birds, the inspection of victims, and warnings, from heaven, for the longer process of oracular consultation; though, according to Juvenal,² the answers of Ammon continued in his time to be esteemed in the solution of difficult questions, after 'the cessation of the oracle of Delphi.' Oracles were resorted to on all occasions of importance; and sometimes messengers were sent from them spontaneously to those whom they intended to advise, in the form of warnings against an approaching calamity, or as an indication of the divine will.³ Mycerinus was censured for not having accomplished the intentions of the gods, and received intimation of his approaching death; Sabaco retired from the kingdom in consequence of the predictions and promises of an oracle;⁴ and Necho was warned not to continue the canal from the Nile to the Red Sea, lest he should expose his country to foreign invasion.⁵ Oracles were also consulted, like the magicians of the present day, in cases of theft; and Amasis is reported to have bestowed presents on those which he found capable of returning true answers, and remarkable for discrimination.

They predicted future events, both relative to private occurrences and natural phenomena; for which purpose, Diodorus⁶ tells us, they took advantage of their skill in arithmetical calculations; this last being of the highest importance to them in the study of astrology. 'For the Egyptians most accurately

¹ Strabo, xvii. p. 559.

² Juv. Sat. vi. 554.

³ One of the principal modes of augury was by dreams, and amongst the most remarkable recorded in the inscriptions are the dream of Menephtah before the battle of Prosopis ('Records of the Past,' vi. p. 43); that of Nutneiamen, prior to his invasion

of Egypt (ibid. p. 81; Mariette-Bey, 'Revue Arch.' 1865, tom. ii. p. 161); and that of Pasherienptah, in the temple of Imouthos ('Archæologia,' xxxix. pp. 315-348). — S. B.

⁴ Herodot. ii. 133, 139.

⁵ Ibid. ii. 158.

⁶ Diodor. i. 81.

observe the order and movement of the stars, preserving their remarks upon each for an incredible number of years; that study having been followed by them from the earliest times. They most carefully note the movements, revolutions, and positions of the planets, as well as the influences possessed by each upon the birth of animals, whether productive of good or evil. And they frequently foretell what is about to happen to mankind with the greatest accuracy, showing the failure and abundance of crops, or the epidemic diseases about to befall men or cattle: and earthquakes, deluges, the rising of comets, and all those phenomena the knowledge of which appears impossible to vulgar comprehensions, they foresee by means of their long-continued observations. It is, indeed, supposed that the Chaldeans of Babylon, being an Egyptian colony, arrived at their celebrity in astrology in consequence of what they derived from the priests of Egypt.'

'The art of predicting future events, as practised in the Greek temples,' says Herodotus, 'came also from the Egyptians; and it is certain that they were the first people who established festivals, public assemblies, processions, and the proper mode of approaching or communing with the divinity.'¹ The manner of doing this depended on the object of the votary, and a proper offering was required for each service.

Meat and drink offerings, and oblations of different kinds, made by the Jews, were in like manner established by law, and varied according to the occasion. 'Some were free-will offerings,² others of obligation. The first fruits, the tenths, and the sin-offerings were of obligation; the peace-offerings, vows, offerings of wine, oil, bread, salt, and other things made to the temple, or the ministers of the Lord, were of devotion. The Hebrews called offerings in general *Corban*; but those of bread, salt, fruits, and liquors, as wine and oil, presented to the temple, they termed *Mincha*. Sacrifices, not being properly offerings, were not generally included under this name. Offerings of grain, meal, bread, cakes, fruits, wine, salt, oil, were common in the temple. These were sometimes presented alone; sometimes they accompanied the sacrifices: but honey was never offered with sacrifices; though it might be presented alone, as first fruits.³ There were five sorts of offerings called *Mincha*, *Minkheh*, or *Corban Mincha*:⁴

1. Fine flour or meal.
2. Cakes of several sorts baked in the oven.
3. Cakes baked on a plate.
4. Another sort of cakes,

¹ Herodot. ii. 58.² Calmet.³ Levit. ii. 11. 12.⁴ Levit. ii. 1.

baked on a plate with holes in it. 5. The first fruits of the new corn; which were offered either pure and without mixture, roasted, or parched, either in the ear or out of the ear. The cakes were kneaded with olive oil, fried in a pan, or only dipped in oil after they were baked. The bread offered to the altar was without leaven, for leaven was never offered on the altar, nor with the sacrifices;¹ but they might make presents of common bread to the priests and ministers of the temple. These offerings were appointed in favor of the poor, who could not afford the charge of sacrificing animals; though, when living victims were offered, they were not excused from giving meal, wine, and salt, as an accompaniment to the greater sacrifices. Those who made oblations of bread or of meal presented also oil, incense, salt, and wine, which were in a manner their seasoning. The priest in waiting received the offerings from the hand of him who brought them, laid a part on the altar, and reserved the rest for his own subsistence, as a minister of the Lord. Nothing was wholly burnt up but the incense, of which the priest retained none.² When an Israelite offered a loaf to the priest, or a whole cake, the priest divided it into two parts; and having set aside the portion reserved for himself, he broke the other into crumbs, poured on it oil, salt, wine, and incense, and spread the whole on the fire of the altar. If these offerings were accompanied by an animal for a sacrifice, this portion was all thrown on the victim, to be consumed with it. If the offerings were ears of new corn (wheat or barley), they were parched at the fire, or in the flame, and rubbed in the hand, and then offered to the priest in a vessel; who put oil, incense, wine, and salt over the grain, and burnt it on the altar, first having taken his own portion.³ The greater part of these offerings were voluntary, and of pure devotion. But when an animal was offered in sacrifice they were not at liberty to omit them. Every thing proper was to accompany the sacrifice, and serve as seasoning to the victim. In some cases, the law required only offerings of corn, or bread: as when they offered the first fruits of harvest, whether on the part of the nation, or as a mark of devotion from private persons. As to the quantity of meal, oil, wine, or salt, to accompany the sacrifices, we cannot see that the law determined it. Generally, the priest threw a handful of meal or crumbs on the fire of the altar, with wine, oil, and salt in proportion, and all the incense; the rest belonging to

¹ Levit. ii. 11.

² Levit. ii. 2, 16 Numb. xv. 4, 5.

³ Levit. ii. 14, 15.

himself, and the quantity depending on the liberality of the offerer. Moses appointed¹ an *assaron*,² or the tenth part of an *ephah*, of fine flour, for those who could not bring two turtle-doves, or two young pigeons, and had not wherewith to offer the appointed sin-offerings. In the solemn offerings of the first fruits for the whole nation, they offered an entire sheaf of corn, a lamb of a year old, two tenths of fine meal mixed with oil, and a quarter of a *hin* of wine for the libation.³ In the sacrifice of jealousy, when a husband accused his wife of infidelity, the husband offered a tenth part of an ephah of barley meal, without oil or incense, because it was “an offering of jealousy,” “an offering of memorial;”⁴ and the priest pronounced a curse upon the woman, in the event of her having committed a sin, making her drink a cup of bitter water to prove her innocence or her guilt. In like manner, among the Egyptians, a peculiar mode of addressing a prayer, or of offering a sacrifice, was required for different occasions, as well as for different deities; numerous instances of which occur in the sculptured representations of sacrifices in their temples. Nor do ancient authors fail to inform us of this fact; and it was forbidden, says Herodotus,⁵ to immolate the pig to any deity except the Moon and Bacchus.

That different animals were chosen for sacrifice in various parts of Egypt is evident from the recorded customs of some of the nomes and cities, where they abstained from offering such as were sacred; and consequently, the same animal which was revered and forbidden to be slaughtered for the altar or the table, in one part of the country, was sacrificed and eaten in another. Thus the Mendesians, who offered up sheep, abstained from goats, which they held in particular veneration; and the Thebans, who permitted no sheep to be slain, immolated goats on the altar of their gods.⁶ On the *fête* of Jupiter, a ram was slain; and the statue of the deity being clad in the skin, the people assembled about the temple to make a solemn lamentation, and inflict numerous stripes upon their persons, in token of their regret for the death of the sacred animal, whose corpse was afterwards deposited in a consecrated case. Plutarch affirms⁷ that, ‘of all the Egyptians, none eat sheep except the Lycopolites; and that because the wolf does so, which they revere as a deity;’ and thus

¹ Levit. viii. 11, and xiv. 21.

² אֶשְׂרֵי־רֹחֶלֶת, *ashíreth* or *gasíruth*.

³ Levit. xxiii. 10, *et seq.* Numb. v. 15.

⁴ Numb. v. 15. Calmet.

⁵ Herodot. ii. 47.

⁶ Ibid. ii. 42, 46.

⁷ Plut. *de Isid.* s. 72.

it was that in one part of the country certain rites were performed which differed totally from those of the rest of Egypt. This, however, did not extend to the worship of the great gods of their religion, as Osiris,¹ Amen, Ptah, and others, who were universally looked upon with becoming reverence, and treated, not as arbitrary emblems, but as the mysterious representations of some abstract qualities of the divinity itself; and if one or other of them was more peculiarly worshipped in certain cities or provinces of Egypt, it was from his being considered the immediate patron and presiding deity. But though his protection and assistance were particularly invoked by the inhabitants, other deities shared with him the honors of the sanctuary, under the name of contemplar gods, whose united favors they did not fail to implore. With this feeling, the dedication and votive prayers put up in the temples were addressed to the presiding deity and the contemplar gods;² and if the former held the most conspicuous post in the adytum and other parts of the temple, the latter received all the respect due to them as equally sacred, though not enjoying the same external honors in that building. And thus, again, we find that separate temples were raised to various deities in the same city.

In the worship of sacred animals the case was different; and it frequently happened that those which were adored in some parts of Egypt were abhorred and treated as the enemies of mankind in other provinces; deadly conflicts occasionally resulting from this worship or detestation of the same animal. The arbitrary choice of peculiar emblems, and the adoration paid to animals and inanimate objects, frequently depended upon accident, or some peculiar local reason; and though great respect was shown to the ichneumon, from its destroying the eggs of the crocodile, in places where that animal was considered an enemy of man, it obtained no honors in those where the crocodile was a sacred animal, as the type of a beneficent deity. This remark applies equally to other sacred emblems, as I shall have occasion to show in describing the sacred animals. But if, in most instances, the motives assigned for their choice appear capricious and unsatisfactory, we frequently discover some plausible pretext derived from a sanitary notion, as in the case of their abstinence

¹ If Osiris was not nominally one of the eight great gods, he in reality held a rank equal to any.

² For instance, at Ombos, where the presiding deity was Aroeris, the dedication

says that the 'infantry and cavalry and others stationed in the Ombite nome, dedicated the adytum to Aroeris, the great god Apollo, and to the contemplar deities, for their benevolence towards them.'

from the meat of swine, from beans and ‘most sorts of pulse,’¹ and from certain fish of the Nile; or connected with some advantage to mankind: and in order to command the observance of these injunctions, and to prevent the possibility of their being disregarded, many forbidden things were denominated sacred, or reputed to partake of the nature of the gods. ‘For,’ says Porphyry, ‘the Egyptians either considered animals to be really deities, or represented their gods with the heads of oxen, birds, and other creatures, in order that the people might abstain from eating them, as they did from using human flesh, or for some other more mysterious reason;’ and religious prejudice commanded respect for them as for ‘their melodies, which were preserved through successive ages as the actual poems of the goddess Isis.’² In process of time the original motive was forgotten, and mere blind adoration took its place; but Plutarch says,³ ‘It is evident that the religious rites and ceremonies of the Egyptians were never instituted on irrational grounds, or built on mere fable and superstition; all being founded with a view to promote the morality and happiness of those whose duty it was to observe them.’ The Greeks frequently delighted in deriding the religious notions of the Egyptians: and, indeed, considering the strange animals, the fish, and even vegetables, admitted to a participation of divine honors, and the lamentations they uttered when death or any accident befell them, we may readily conceive that the lively wit of a Greek, who looked upon this superstitious custom in a literal point of view, would not fail to seize the points most open to ridicule. Antiphanes,⁴ in his ‘Lyeon,’ speaking jestingly of the Egyptians, says, ‘Besides, clever as they are reputed in other things, they show themselves doubly so in thinking the eel equal to the gods; for surely it is more worthy of honor than any deity, since we have only to give prayers to the gods; but we must spend upon the eel at least twelve drachmas, or more, merely to smell it — so perfectly holy is this animal!’ Anaxandrides,⁵ in his play of the ‘Cities,’ addressing the same people, observes: ‘I cannot agree with you; our customs and laws differ so widely: you adore the ox; I sacrifice it to the gods; you think the eel a very great deity; we look upon it as the most delicious dainty; you abstain from the flesh of swine; I delight in it above all things; you adore the dog; I give him a good beating whenever

¹ These and fish were forbidden to the priests. (Plut. de Isid. s. 5.)

² Plato, Second Book of Laws, p. 790.

³ Plut. de Isid. s. 8.

⁴ Athen. Deipn. vii. p. 299, ed. Cas.

⁵ Idem. *loc. cit.*

I catch him stealing any meat. Here a priest is required to be whole in every part: with you, it appears, they are mutilated. If you see a cat indisposed, you weep; I am delighted to kill it, and take its skin: the mygale, with you, has great influence; with us none.' Timocles,¹ also, in his 'Egyptians,' says, 'How could the ibis or the dog have preserved me? for when persons irreverent towards those who are really confessed to be gods, escape immediate punishment, whose offences shall be visited by the altar of a cat?' The favorable opportunity of indulging in satire, presented by the superstitions of Egypt, could not escape the severe lash of Juvenal, who thus commences his Fifteenth Satire:—

'Who knows not, Bithynian Volusius, what monsters
Mad Egypt can worship? This place adores a crocodile;
That fears an ibis saturated with serpents.
A golden image of a sacred Ceropithecus shines
Where the magic chords resound from the half Memnon,
And ancient Thebes lies overthrown with its hundred gates.
There a sea-fish, here a river-fish, there
Whole towns worship a dog, nobody Diana.
It is a sin to violate a leek or an onion, or to break them with a bite.
O holy nation, for whom are born in gardens
These deities! Every table abstains from animals bearing
Wool; it is there unlawful to kill the offspring of a she-goat,
But lawful to be fed with human flesh.'²

The animal worship of the Egyptians naturally struck all people as a ludicrous and gross superstition; but when Xenophanes and others deride their religious ceremonies by observing, 'If your gods are really gods, weep not for them; if men, do not offer them sacrifices,' the objection comes badly from a Greek; and, as Clemens justly remarks, that people had little reason to criticise the religion of the Egyptians: for into the Pantheon of Greece a greater number of deified men were admitted than into that of any ancient people; and the legendary tales of the deities degraded their nature by attributing to them the most inconsistent and disgusting vices.

On the superstition of the Egyptians in considering animals or herbs to be gods, and in lamenting their death, Plutarch observes:³ 'Struck with the manifest absurdity of these things, Xenophanes the Colophonian, and other philosophers who followed him, might not only have said to the Egyptians, "If ye believe them to be gods, why do ye weep for them? if they deserve your lamentations, why do ye repute them gods?"'

¹ Athen. *loc. cit.*

² This is an exaggeration and a license of satire.

³ Plut. de Isid. s. 71.

but they might have added, that it was still more ridiculous to weep for the fruits of the earth, and at the same time to pray for them that they would appear again and bring themselves to maturity, to be again consumed and again lamented: and nothing could be more open to censure than the folly of the Egyptians in paying divine honors to the brute creation. For whatever may have been their original motive, the natural consequence of its introduction ought to have been foreseen: they may have deified some to insure their preservation, because they were useful to the country; others may have been called sacred, to prevent their unwholesome meat becoming an article of food; and some may have been selected as emblems of certain deities, from various reasons: but the result ought to have been anticipated, and an enlightened priesthood should have guarded men's minds against so dangerous a fallacy. For, as Plutarch observes,¹ 'The Egyptians — at least, the greater part of them — by adoring the animals themselves, and reverencing them as gods, have not only filled their religious worship with many contemptible and ridiculous rites, but have even given occasion to notions of the most dangerous consequence, driving the weak and simple-minded into all the extravagance of superstition.'

It was likewise unjust and inconsistent that the priesthood should have a creed peculiar to themselves, and the people be left in utter ignorance of the fundamental doctrines of their religion; that in proportion as their ideas were raised towards the contemplation of the nature of a god, the other classes, tyrannically forbidden to participate in those exalted studies, should be degraded by a belief totally at variance with the truths imparted to the initiated: and whilst these last were acquainted with the existence of one Deity in unity, and the operations of the Creative Power, that the uninstructed should be left and even taught to worship a multiplicity of deities, whose only claims to adoration were grounded upon fable. The office of the gods was, perhaps, in early times more simply defined, their numbers smaller, their attributes less complicated; but the weakness of men's minds, when untutored on religious subjects, soon paved the way for idle superstition: the belief in genii and spirits pervading the universe, led to the adoration of fanciful beings; and perverted notions respecting the Deity, obliterating every trace of the simple original, effectually prevented the uninitiated from

¹ Plut. de Isid. s. 71.

suspecting the real nature of their religion. And so gross at length became their ideas that the character of the gods they worshipped was degraded, their supposed actions censured, or their non-interference avenged by an insult to their statues or their names. It is not, then, surprising that foreigners should be struck with the absurdities which, from outward appearances, the religion of Egypt presented; and the animals chosen as emblems of the gods, or as substitutes for the divine rulers of the world, were frequently calculated to give a very low opinion of the exalted personages of whom they were thought to be proper representatives; and however appropriately the hieroglyphics might indicate a child by a goose,¹ the god of learning could scarcely be flattered by being figured under the form of an ape, or the Creator of the world, who made all things perfect, under the deformed character of the pigmy Ptah.

An Egyptian priest, it is true, might object to his religion being judged by the standard of our ideas; he might insist upon the necessity of secrecy in the mysteries, in order to prevent the dangerous speculations of those who were not subject to the oaths of initiation; and he might suggest that, in the most simple and pure religions, many expressions had secret meanings, and that a literal interpretation of them would offend against the spirit of the religion itself. In justice, therefore, some allowance should be made for the allegorical religion of the Egyptians: and when we reflect that it contained many important truths, founded upon early revelations made to mankind, and treasured up in secret to prevent their perversion, we may be disposed to look more favorably on the doctrines they entertained, and to understand why it was considered worthy of the divine legislator to be 'learned in all the wisdom of the Egyptians.' That the reasons assigned for the worship of certain objects are highly ridiculous cannot be doubted, and no satisfactory motive can be discovered for many of the religious customs established in Egypt; but we may be satisfied that ancient authors were not sufficiently acquainted with the subject to place these points in their proper light—much less to give any satisfactory explanation; and their origin and tendency, becoming at length enveloped in a cloud of fanciful speculation, few even of the Egyptians themselves were capable of understanding the intricacies of their own religion. It is evident, indeed, that no Egyptian who was not

¹ In fact, merely in consequence of its phonetic or alphabetic value.

initiated into the mysteries understood the purport of the ceremonies he witnessed, or obtained any notion of the nature of the theology, beyond that usually obtained by the votaries of a polytheism: and the fabulous existence of the gods on earth supplied, among the uninstructed, the place of abstract notions, which the initiated were taught to apply to the external forms they worshipped. It was this ignorance of the nature of the gods which led the Greeks to believe their positive existence upon earth in a human form, and to receive all the legendary tales of their actions as literal truths; bringing down the deities, as Cicero observes, to the level of men, instead of raising men to the level of the gods. But we find that Plutarch¹ was so far acquainted with those secrets (to a participation of which he had in a certain degree been admitted), as to deride the idea of the deities having been once human, or having² lived among men; and a remark made by the Egyptians themselves to Herodotus and Hecataeus shows how ignorant they considered the Greeks on this subject. 'For many,' says Origen, 'listening to accounts they do not understand, relative to the sacred doctrines of the Egyptian philosophers, fancy that they are acquainted with all the wisdom of Egypt, though they have never conversed with any of the priests, nor received any information from persons initiated into their mysteries.' 'Greece,' observes the Abbé Banier,³ 'never had but a confused idea of the history of her religion. Devoted without reserve on this important point to her ancient poets, she looked upon them as her first theologians; though these poets, as Strabo⁴ judiciously remarks, either through ignorance of antiquity or to flatter the princes of Greece, had arranged in their favor all the genealogies of the gods, in order to show that they were descended from them. Whenever, therefore, any heroes are mentioned in their writings, we are sure to find Hercules, Jupiter, or some other god at the head of their

¹ Plut. de Isid. s. 22, 23.

² Cicero, de Nat. Deor. i. The only appearance of a man having the character of a deity occurs in the temple built by Thothmes III. at Samneh, where Usertes III. is represented performing the same offices as a god, but we do not know how far he was assimilated to a deity, and he merely wears a *royal* cap. There are also offerings of kings, as of other persons, to their deceased parents; but these are only made to them in the character they assumed after death, when they received the

name of Osiris, from being supposed to return, after a virtuous life, to the great origin from which they were emanations. Sometimes the king even offers to a figure of himself and his queen, seated on thrones, before whom he stands as an officiating priest. [Usertes III. is called there the *Tat-un*, or 'young *Tat*,' assimilated to Osiris. The reason is unknown: it was a strictly local worship. — S. B.]

³ 'La Mythologie expliquée par l'histoire,' vol. i. liv. ii. c. 5.

⁴ Strabo, lib. x.

genealogies; and if the desire to pass for very ancient is common to nearly all people, the Greeks were, of all others, the most conspicuous for this folly. It is, in leed, surprising that they, who could not possibly be ignorant of their having received many colonies from Egypt and Phœnicia, and with them the gods and ceremonies of their religion, should venture to assert that those same deities were of Greek, or Thracian, or Phrygian origin; for it is to this conclusion that their poets pretend to lead us. But two words of Herodotus, who says that the gods of Greece came from Egypt, are preferable to all that their poets have put forth on this subject; and Plato tells us that ‘when Solon inquired of the priests of Egypt about ancient affairs, he perceived that neither he nor any one of the Greeks (as he himself declared) had any knowledge of very remote antiquity.’ ‘And as soon as he began to discourse about the most ancient events which happened among the Greeks, as the traditions concerning the first Phoroneus and Niobe, and the deluge of Deucalion and Pyrrha,¹ one of the more ancient priests exclaimed, “Solon, Solon, you Greeks are always children, nor is there such a thing as an aged Grecian among you: all your souls are juvenile; neither containing any ancient opinion derived from remote tradition, nor any discipline hoary from its existence in former periods of time.”² Justly did the priests deride the ridiculous vanity and ignorance of the Greeks, in deriving their origin from gods; and they assured Herodotus,³ that during the long period which elapsed from the commencement of the Egyptian monarchy to the reign of Sethos (comprising 341 generations), ‘no deity had appeared on earth, in a human form, nor even before, nor since that time;’ and when ‘Hecateus,’ says the historian, ‘boasted of his genealogy to the priests of Jupiter at Thebes, claiming for his family the honor of being descended from a god,⁴ whom he reckoned as his 16th ancestor, they made the same observation to him as to me, though I had said nothing respecting my ancestry. Having taken me into a large consecrated chamber, they showed me a series of as many wooden statues as there had been high priests during the above-mentioned period: for each high priest, while yet living, had his image placed there; and having counted them all before me, they proved that every one had

¹ The priests said to Solon, ‘You mention one deluge only, whereas many happened.’ (Plat. in Tim. p. 466, trans. Taylor.)

² Plat. in Tim. p. 467.

³ Herodot. ii. 142.

⁴ [The title ‘god,’ given to the kings, was merely honorary. — G. W.]

succeeded his father at his demise, beginning from the oldest, and coming down to the last. The same had been done before Hecateus, when he boasted of his genealogy; and in opposing his pretensions by the number of their high priests, they denied that any man was descended from a deity. Each statue, they argued, represented a *Pirómis* begotten by a *Pirómis*¹ (a man engendered by a man); and having gone through the whole number of 345, they showed that every one was the son of his predecessor, without a single instance of any being descended from a god, or even a hero.²

Of their idea respecting the manifestation of the Deity on earth, which the Egyptians entertained in common with the Hindoos, but which is far more remarkable in their mode of treating it, I shall not speak at present. This question is totally different from that of the existence of the gods on earth,³ alluded to by Herodotus, and must be looked upon under a very different aspect, as the most curious mystery which has been traced in the religion of Egypt. That the images of the Egyptian deities were not supposed to indicate real beings,⁴ who had actually existed on earth, is abundantly evident from the forms under which they were represented; and the very fact of a god being figured with a human body and the head of an ibis, might sufficiently prove the allegorical character of Thoth, or Mercury, the emblem of the communicating medium of the divine intellect, and suggest the impossibility of any other than an imaginary or emblematic existence; in the same manner as the sphinx, with a lion's body and human head, indicative of physical and intellectual power, under which the kings of Egypt were figured, could only be looked upon as an emblematic representation of the qualities of the monarch. But even this evident and well-known symbol did not escape perversion; and the credulous bestowed upon the

¹ *Pirómi* is the Egyptian word signifying 'the man,' which Herodotus, from his ignorance of the language, has translated 'good and virtuous.' The sense itself ought to have pointed out the meaning of the word *romi*, 'man.'

² Against this must be set the fact that the Theban kings were called sons of Amen, of the blood or substance of that god, and supposed to be the direct descendants of the deity — a legend subsequently adopted by Alexander the Great, in his supposed mysterious descent from the god. — S. B.

³ In the lists of Manetho certain gods reigned an assigned number of years on

earth, showing their existence on it. The romance of the Two Brothers represents the gods coming on earth to see the woman they had made. — S. B.

⁴ At a later period, perhaps, the idea of a single god, personated by the different local types, prevailed; but the original conception of each group of deities was anthropomorphic, consisting of the principal god, his wife, her sister, and his child or children, all purely humanized idols of the god. The whole myth of Osiris is pre-eminently anthropomorphic, as all original notions of gods are. — S. B.

sphinx the character of a real animal. It signified little, in the choice of a mere emblem, whether it was authorized by good and plausible reasons; and if, in process of time, the symbol was looked upon with the same veneration as the deity of whom it was the representative, the cause of this corruption is to be ascribed to the same kind of superstition which, in all times and in many religions, has invested a relic with a multiplicity of supposed virtues, and obtained for it as high a veneration as the person to whom it belonged, or of whom it was the type.

This substitution of an emblem, as an animal,¹ or any other object, for the deity, was not the only corruption which took place in the religion of the Egyptians: many of the deities themselves were mere emblematic representations of attributes of the one and sole God: for the priests who were initiated into, and who understood the mysteries of, their religion, believed in one deity alone; and, in performing their adorations to any particular member of their Pantheon, addressed themselves directly to the sole ruler of the universe, through that particular form. Each form (whether called Ptah, Amen, or any other of the figures representing various characters of the Deity) was one of His attributes; in the same manner as our expressions 'the Creator,' 'the Omniscient,' 'the Almighty,' or any other title, indicate one and the same Being: hence arose the distinction between the great gods and those of an inferior grade which were physical objects, as the sun and moon; or abstract notions of various kinds, as 'valor,' 'strength,' 'intellectual gifts,' and the like, personified under different forms: and it is evident that no one who understood the principles on which the groundwork of the Egyptian Pantheon was based could suppose that the god of valor, of strength, or of intellect had ever lived on earth; and we may readily conceive how the Egyptian priests derided the absurd notions of the Greeks, who gave a real existence to abstract ideas, and claimed a lineal descent from '*strength*,' or any deified attribute of the Divinity. Upon this principle it is probable that gods were made of the virtues, the senses, and, in short, every abstract idea which had reference to the deity or man; and we may therefore expect to find, in this catalogue, intellect, might, wisdom, creative power, the generative and

¹ The animal head placed on the deity showed and alluded to the animal worship; the peculiar animal being that in which the

soul of the deity was supposed to be incarnate. — S. B.

productive principles, thought, will, goodness, mercy, compassion,¹ divine vengeance, prudence, temperance, fortitude, fate, love, *πῶθος*, hope, charity, joy, time, space, infinity, as well as sleep, harmony,² and even divisions of time, as the year, month, day, and hours, and an innumerable host of abstract notions. These, in like manner, were admitted into the Pantheon of Greece and Rome, with the addition of some not very delicate or elegant personages; who were frequently permitted to supersede and usurp the place of the more respectable divinities of earlier times. There were also numerous physical deities in the Egyptian Pantheon, as earth, heaven, the sun and moon, and others, revered for the benefits they conferred on man; though the view they took of the elements mentioned by Seneca appears rather to have been a metaphysical than a religious doctrine: and if they divided each of the four elements into two, making one masculine, the other feminine, it was in order to establish a distinction which appeared to correspond to a difference in their nature, as between the active wind and the passive mist, or inert atmosphere; between sea and fresh water; between fire which burns and light which shines; between stone and rock, as part of earth and as cultivable land; the former of all these being masculine, the latter feminine.³

Different people have devised various modes of representing the personages connected with their religion. The Egyptians adopted a distinguishing mark for their gods, by giving them the heads of animals, or a peculiar dress and form, which generally, even without the hieroglyphic legends, sufficed to particularize them; but they had not *arrived* at that refinement in sculpture which enabled the Greeks to assign a peculiar face and character to each deity. This was an effort of art to which none but the most consummate masters could attain: and even the Greeks sometimes deviated from these conventional forms;

¹ The *rahman* and *rahim* of the Arabs.

² Plutarch says Harmony was the offspring of Mars and Venus (de Isid. s. 48). This, as the idea of Minerva springing from the head of Jove and other similar fables, shows that many of the Greek gods were, in like manner, personifications of ideas, and attributes of the deity.

³ Seneca, Nat. Quæst. iii. 14, p. 870.

The gods of the four elements are found personified at various places, as Edfu, Karnak, Medinat Habu, Derr el Medenet, and Philæ. They form groups of eight

gods, each god having a god and goddess personifying it. Their heads are generally that of the frog or uræus. Water, as the first element, was represented by the god Nut or Ilan, and a goddess of the same name personifying the same. Fire, the second element, is called Hehu and Hehut, apparently in the sense of 'day' or 'ages.' Earth has the names of Kak or Kaket. Darkness and Air have that of N., or 'breath.' (Lepsius, 'Die Götter d. vier Elementen,' Abh. d. K. Akad. d. Berlin, 1856, p. 181, and foll.)—S. B.

the Apollo, or the Bacchus, of one age, differing from those of another; and the lion-skin, the dolphin, the crescent, or the eagle, were generally required to identify the figures of a Hercules, a Venus, a Diana, or a Jove. Indeed, in so extensive a Pantheon as that of Egypt, it would be impossible to maintain the peculiarities of features, even if adopted for the principal gods; and the Christians have found it necessary to distinguish the apostles and saints by various accompanying devices, as the eagle, the lion, a wheel, or other symbols.

Though the priests were aware of the nature of their gods, and all those who understood the mysteries of the religion looked upon the Divinity as a sole and undivided Being, the people, as I have already observed, not admitted to a participation of those important secrets, were left in perfect ignorance respecting the objects they were taught to adore; and every one was not only permitted, but encouraged, to believe in the real sanctity of the idol, and the actual existence of the god whose figure he beheld. The bull Apis was by them deemed as sacred and as worthy of actual worship as the Divinity of which it was the type; and in like manner were other emblems substituted for the deities they represented. But however the ignorance of the uninstructed may have misinterpreted the nature of the gods, they did not commit the same gross error as the Greeks, who brought down the character of the creative power, the demiurge who made the world, to the level of a blacksmith; this abstract idea of the Egyptians being to the Greeks the working Vulcan, with the hammer, anvil, and other implements of an ordinary forge. The Egyptians may have committed great absurdities in their admission of emblems in lieu of the gods; they were guilty of the folly of figuring the deities under the forms of animals; but they did not put them on an equality with earthly beings by giving them the ordinary offices of men: they allowed them still to be gods; and their fault was rather the elevation of animals and emblems to the rank of deities, than the bringing down, of the gods to the level of mankind. In noticing the religion of the Egyptians, it is not my intention to enter into a detailed account of the offices and attributes of the numerous gods who composed their Pantheon, nor, indeed, have we as yet sufficient data to enable us to penetrate into all the intricacies of this curious question; I shall therefore confine myself to the general forms and characters of the deities, and endeavor to explain the principle on which the superstructure

of their theogony was based. In the early ages of mankind, the existence of a sole and omnipotent Deity, who created all things, seems to have been the universal belief; and tradition taught men the same notions on this subject which in later times have been adopted by all civilized people. Whether the Egyptians arrived at this conclusion from mere tradition, or from the conviction resulting from a careful consideration of the question, I will not pretend to decide; suffice it to know that such was their belief, and the same which was entertained by many philosophers of other nations of antiquity. Some of the Greeks, in early times, had the same notions respecting their theogony, as we learn from a very old author, 'if it be true,' as the Abbé Banier¹ observes, 'that Pronapides adopted them, who was the preceptor of Homer, as Boccaccio² affirms, on the authority of a fragment of Theodontius. According to this ancient theogony, the most rational of all, there was only one eternal God, from whom all the other deities were produced. It was not permitted to give any name to this first Being,³ and no one could say who he was. Anaxagoras thought to have defined him, by saying that he was *νοῦς*; "understanding." However, as the most simple ideas have been altered in after-times, Lactantius, the scholiast of Statius, calls this Sovereign Being Daimogorgon, as does the author above alluded to, in imitation of Theodontius. His name signifies the Genius of the Earth; but, from the description given of this god, it scarcely agrees with the idea that the first philosophers entertained of him; for it is right to observe that the poets, who were the earliest theologians of Greece, have, as it were, personified their ideas, and made out theogonies according to their fancy, though they appear always to suppose a Being really independent. Most of them agree in an eternity, an ontogony, or generation of beings, some of whom are heavenly, others earthly or infernal; but Daimogorgon and Achlys, according to their system, were before the world, even anterior to chaos. Their Acmon, their Hypsistus, existed before the heavens, which the Latins called Cœlus, and the Greeks Ouranos. According to them, the Earth, Tartarus, and Love preceded Cœlus, since we find in Hesiod that this last was son of the Earth;⁴ and some considered Acmon to be the father of Cœlus, and the son of Manes. Cœlus also was the parent of Saturn,

¹ Mytholog. vol. i. lib. ii. c. 5.

² Généalog. of the Gods, i. c. 3.

³ Statius, Thebais, lib. iv. ver. 316

⁴ Though Saturn was said to be son of Cœlus and Terra.

who was himself the father of the gods. The giants, sons of the earth, came afterwards, and Typhon was the last of them; after whom were the demigods, engendered by an intercourse between the gods and the inhabitants of the earth.'

It is still doubtful if the Egyptians really represented, under any form, their idea of the unity of the Deity; it is not improbable that his name, as with the Jews, was regarded with such profound respect as never to be uttered; and the Being of Beings, 'who is, and was, and will be,' was perhaps not even referred to in the sculptures, nor supposed so be approachable, unless under the name and form of some deified attribute, indicative of His power and connection with mankind.

Many allegorical figures are supposed to have been adopted for this purpose; and Greek writers have imagined that the snake curled into the form of a circle, with its tail in its mouth, and other similar emblems, were used by the Egyptians to indicate the unutterable name of the eternal Ruler of the universe; but these are merely symbols of His deified attributes (if, indeed, the snake in that form can be admitted among the number¹); and neither the snake, the emblem of Neph, the hawk, nor any other emblem, can be considered in any way connected with the unity of the Deity. Even Osiris himself cannot be looked upon as the Deity in unity; though his character of judge of the dead in the region of Amenti, and his mysterious nature as an Avatar, give him a higher and more comprehensive rank than any other god; and it is not a little remarkable that he there appears as one of two members of a separate triad, though he had returned, after performing his duties on earth during his manifestation, to that state from which he was supposed to proceed. One of the most perplexing parts of the Egyptian system is the varied character of the same deity; and the many names of Osiris, as the title *Myrionymus* ('with ten thousand names') given to Isis, show the difficulty of ascertaining their office on different occasions. It appears, then, that the Divinity himself was not represented in the Egyptian sculptures, and that the figures of the gods were deified attributes indicative of the intellect, power, goodness, might, and other qualities of the eternal Being; which, in some measure, accords with the opinion of Damascius, who observes that 'nearly all philosophers prior to Iamblichus asserted that there was one

¹ It does not appear to be met with singly in the ancient temples as the representative of any Egyptian deity.

superessential God, but that the other deities had an *essential* subsistence, and were deified by illuminations from *the One*.¹ Some, which belonged to the Divinity himself, were considered the great gods of the Egyptian Pantheon; the next class of deities were emanations from the same source; and the minor divinities of various grades were the representatives of inferior powers, of physical objects connected with the Creator, and of different abstract ideas, whose relative rank depended on the near or distant connection they were deemed to possess with a divine origin. Some, again, were mere deifications of physical objects; and superstition raised to a sacred rank a useful animal or an unwholesome plant. The same may be observed in the religion of the Greeks and Romans; and to such an extent was this carried by the latter, and so degraded did the office of a deity become, that one was chosen to preside over the common sewers of the city, and a god of coughing¹ was invented as a suitable companion to the goddess Fever.²

The Egyptians, like the Greeks and Romans, divided their gods into different classes or grades. Among the latter, they consisted of the twelve great gods, — the *Dii majorum gentium* or *Dii Consentes*, and the *Dii minorum gentium*; and the Egyptians, in the same manner, distinguished their eight great gods from those of an inferior rank. The names of the twelve great gods of the Greeks have been preserved by Ennius in the following couplet:—

‘Juno, Vesta, Minerva, Ceres, Diana, Venus, Mars,
Mercurius, Jovis, Neptunus, Vulcanus, Apollo;’

each of whom presided over one of the months of the year: and one of the follies of which Alexander was guilty, according to Arrian, was his wishing to be enrolled among these, and to become the thirteenth of the first class of deities.

To the twelve great gods the Romans added eight others, called *selecti*, or chosen deities, who were Janus, Saturn, Genius, the Sun, the Moon, Pluto, Bacchus, and the ancient Vesta, or the Earth. After these ranked the *Dii Semones* or *Semihomines*, the demigods; and then the *Indigetes*, and those who were attached to certain localities, the household gods, the *genii* of

¹ It must be allowed that *Tussis* is not mentioned by any Latin writer, and rests on mere local tradition.

² Cicero, *de Nat. Deor.* v. 2: ‘We see a temple to Fever on the Palatine Hill.’ [It

is to be remembered that by the Orientals many diseases were attributed to possession, and in Egyptian practice were exorcised as actual demons. — S. B.]

woods or rivers, nymphs, and other inferior beings. ‘Cicero¹ arranges the gods in three classes: first, the *Dii cœlestes*, who are the same as the *Dii majorum gentium*; then the demigods and the *Indigetes*: and, thirdly, the virtues, which raise man to heaven, and have been themselves deified.’ ‘Varro maintained,’ says the Abbé Banier, ‘that there were known and unknown gods, and reduced all the Gentile deities to two classes. In the first were those whose names and offices were defined, as the Sun, Moon, Jupiter, Apollo, and others; and in the second were placed those of whom nothing positive was known, and to whom it was not lawful to raise altars or offer sacrifices. The philosopher Albricus considers the seven planets as the seven first gods of the heathen, whom he arranges in this order: Saturn, Jupiter, Mars, Apollo, Venus, Mercury, and the Moon. Pausanias,² Cicero, Hesychius, and many others, speak of altars raised to unknown deities; and, in the Acts of the Apostles, St. Paul mentions an altar to the Unknown God. Epimenides, the great prophet of the Cretans, was the author of this notion. Clemens of Alexandria endeavored to include all the pagan deities under seven classes. In the first he placed the stars or heavenly bodies; in the second, the fruits of the earth and the gods who presided over them, as Ceres, Pomona, Vertumnus, Bacchus, and others; the third comprehended the Furies and other gods of punishment; in the fourth he placed those of the passions and affections, as love, modesty, and others; the virtues, as concord, peace, and the rest, forming, according to him, the fifth class. The great gods, or *Dii majorum gentium*, occupied the sixth; and those of health, as Æsculapius, Hygieia, Telesphore, and some more, constituted the seventh.

‘Iamblichus,³ a Platonic philosopher, divided the gods into eight classes. In the first he placed the great gods, who, invisible by their nature, pervaded the whole universe: that is, doubtless, the Universal Spirit. The higher order of spirits, whom he called archangels, occupied the second rank; and others of an inferior grade, or angels, formed the third. In the fourth were the *dæmons*:⁴ those whom he names greater Archontes — that is, genii who presided over this sublunary world and over the elements — constituted the fifth; and the sixth was composed of the minor Archontes, whose power ex-

¹ De Legib. lib. ii. Banier, Myth. l. v.
c. 5.

² In Eliacis.

³ Iamblichus, de Mysteriis, sect. ii. c. 1.
⁴ δαίμονες.

tended over the gross and terrestrial matter. Heroes formed the seventh; and the souls of men admitted to the order of gods, occupied the eighth and last class. Other philosophers of the same sect included all the deities, or, we may say, all the genii, in two classes: those called *anhylloi*, immaterial, and *hylaioi*, material, occupying the first; and the mundane and supra-mundane the second. Mercury, or Hermes Trismegistus, is said to have admitted three classes of gods. In the first were those whom he called heavenly; in the second, the empyrean; and in the third, the etherean. The gods were also divided into public and private: the former being those whose worship was established and authorized by law; the latter those who were chosen by individuals to be the peculiar object of their worship, as the gods Lares, the Penates,¹ and the souls of ancestors. The most general division is that which classed the gods under the two heads of the natural and the living deities: the former consisting of the stars and other physical objects: the latter, of men who had received divine honors. But these did not comprehend all the deities, since the genii of different kinds were there omitted. Finally, the system which we should prefer in treating of the deities of Greece and Rome divides them into gods of heaven, of earth, and of the lower regions.'

These do not seem to accord with the divisions of the Egyptian Pantheon; and we may find in the Phœnician Cabiri a stronger analogy to the great gods of Egypt,—being, like them, eight in number, and their name implying that they were the *great*² gods of the country. The belief of their being the offspring of one great father, called Sydik, 'the just,' may also accord with the presumed notion of the Egyptians respecting the indivisible *One* mentioned in the books of Hermes.

Herodotus describes the Cabiri in Egypt as sons of Ptah, or Vulcan, whose statues³ resembled those of the Egyptian Creator, and speaks of their temple at Memphis, which no one but the priest was allowed to enter; but the mystery observed respecting them, and the slight information obtained by the historian

¹ This word might be derived from *Pi-noute*, 'the god,' but that we have a difficulty in accounting for the use of an Egyptian name at Rome. The origin of the Penates is doubtful; some attributing their introduction to Æneas, which is an idle fable: and a difference of opinion exists about their names; some supposing them to be Neptune and Apollo; others,

Jove, Juno, and Minerva; and others, Cœlus and Terra.

² *Kabir*, or *Kebir*, 'great,' the common Hebrew and Arabic word, in use to the present day; as is *Sadek*, or *Sedeck*, the 'just.'

³ Their statues were of wood, as were those of old times in Egypt, and in Greece, according to Pausanias (Corinth. ii. 19).

on the subject, render his statement of little use in forming an opinion of their character and office.

Though the Egyptians may have admitted two general divisions of the gods, which were adopted by Pythagoras and Plato, under the head of *noetoi*, *intelligibles*, and *aisthetoi*, *sensibles*, or metaphysical and physical deities, yet many other distinctions subsisted in the members of their Pantheon; and the gradations, even among those of the first-mentioned class, were marked and numerous. The *aisthetoi*, or *sensibles*, were also distinctly separated from the emblematic types of their divinities.

The great gods of the Egyptians¹ were Chnumis, Amen. Ptah, Khem, Sati, Mut, or perhaps Buto, Bubastis, and Neith, one of whom generally formed, in conjunction with other two, a triad, which was worshipped by a particular city, or district, with peculiar veneration. In these triads the third member proceeded from the other two; that is, from the first by the second, thus: the intellect of the Deity, having operated on matter, produced the result of these two, under the form and name of the world, or created things, called by the Greeks *kosmos*;² and on a similar principle appear to have been formed most of these speculative combinations. The third member of a triad, as might be supposed, was not of equal rank with the two from whom it proceeded; and we therefore find that Khonsu, the third person in the Theban triad, was not one of the great gods, as were the other two, Amen and Mut: Horus, in the triad of Phikæ, was inferior to Osiris and Isis; and Anouke to Chnumis and Sati, in the triad of Elephantine and the Cataracts. I do not pretend to decide respecting the origin of the notions entertained by the Egyptians of the triad into which the Deity, as an agent, was divided; nor can I attempt to account for their belief in His manifestation upon earth: similar ideas had been handed down from a very early period, and, having been imparted to the immediate descendants of Noah and the Patriarchs, may have reached the Egyptians through that channel, and have been preserved and embodied in their religious system. And this appears to be confirmed by the fact of our finding the Creative Power, *whilst* in operation upon matter, represented by Moses as a *Trinity*, and not under the name indicative of unity until *after*

¹ Diodorus (lib. i. s. 13) mentions eight names, but fails to inform us if they were the eight great deities of Egypt. They are, 'Sol, Saturn, Rhea, Jupiter, Juno,

Vulcan, Vesta, Mercury. Evander says the eight gods of Egypt were Saturn, Rhea, Osiris, *Spiritus*, Heaven, Earth, Night, and Day. ² Plut. de Isid. s. 56.

that action had ceased. For the name given to the Deity by the divine legislator, when engaged in the creation of material objects, is not *Ihôah*¹ ('who is, and will be'), but *Elohim*,² 'the Gods;' and this plural expression is used until the seventh day, when the creation was completed.³

That the name *Elohim* is not intended to refer really to a plurality of Gods,⁴ is shown by the use of the singular verbs, *bara*, 'created,' *ira*, 'saw,' *iamer*, 'said,' and others, following the plural *Elohim*, as may be seen throughout the first chapter of Genesis: and the first verse of that chapter bears the literal translation, 'In the beginning *He* the *Gods* created the heavens and the earth;' or more intelligibly and more closely in the Latin, 'In principio, *Dii* creavit⁵ cœlum et terram,' where the plural substantive is followed by a singular verb. Thus, the very first verse of the Bible inculcates the doctrine of the Trinity; but under the title of 'He the Gods,' or 'Gods Almighty,' alone was the Deity known to the Patriarchs before the time of Moses: and the name of *Ihôah* was not revealed to the Hebrew lawgiver until the future deliverance of the Israelites from the hand of Pharaoh was promised, when the Deity made a covenant with him under that sacred name; God saying to Moses,⁶ 'I am the Lord [*Ihôah*], and I appeared unto Abraham, unto Isaac, and unto Jacob, by the name of God [Gods] Almighty [*Elohim* *Shadai*];⁷ but by my name *Jehovah*⁸ was I not known to them.

It may appear singular that the principle of a Trinity should be so obscurely noticed in the Old Testament; but the wise caution of the divine legislator foresaw the danger likely to result from too marked an allusion to what a people, surrounded

¹ Written by us *Jehovah*, and translated in our version 'the Lord,' or when combined with *Elohim*, 'the Lord God.' (Clemens, Strom. lib. v. p. 240.) Many are of opinion that the Phœnician *Ienô*, the Greek *Iaô*, *Iakchos* or *Iobakchos*, and *Javo*, whence *Jovis* (the ancient name of Jupiter), *Janus*, *Diana*, and others, are derived from this name (Hofmann's Lexicon).

² That this word *Elohim* exactly answers to our word 'gods,' as applied to all gods generally, is evident from Exodus xxii. 20, and other parts of Scripture.

³ It has been supposed that the Deity then returned to His unity under the name of *Ihôah*, and under that of *Ihôah-Elohim* He appears in connection with Man as an intellectual being; man as a material animal having been already noticed, 'male and female,' among the creations of the

first chapter of Genesis (ver. 27), where the Deity only occurs as *Elohim*; and being mentioned in the next as an intellectual being, when God for the first time has the name of *Ihôah* added to the previous *Elohim*, under which He appeared as the Creative Power.

⁴ Some have thought to trace in this an analogy to the notion of Plato, mentioned at the end of this chapter.

⁵ Or, in French, 'Les Dieux créa.'

⁶ Exod. vi. 3.

⁷ Or *Shidéc*.

⁸ Calmet observes, that when Moses uses the name (*Ihôah*), in speaking of times prior to this appearance (Gen. iv. 26, &c.), he adopts it by way of anticipation, and because at the time he wrote the Jews were acquainted with it; that is, he followed the custom of his own day, and not that of the Patriarchs.

by idolatrous polytheists might readily construe into the existence of a plurality of gods: the knowledge, therefore, of this mystery was confined to such as were thought fit to receive so important a secret; and thus dangerous speculations and perversions were obviated, of which the fancies of an ignorant people, predisposed to idolatry, would not have failed to take advantage. It is unnecessary to enter into the question respecting the connection between the name of *Ihôah* and the nature of man, as represented in the second chapter of Genesis; but I have considered it proper, in noticing the adoption of the two, *Elohim* and *Ihôah*, to show the possibility of the Egyptian notions of a Trinity having been derived from early revelation, handed down through the posterity of Noah; and I now proceed to mention some other remarkable coincidences of Scriptural data.

Of these the most singular are the character of Osiris, and the connection between *truth* and the *Creative Power*. In the latter we trace the notion, which occurs in the Christian belief, that the Deity 'of his own will begat us with the word of *truth*;'¹ and not only do the sculptures of the earliest periods express the same, and connect the goddess of truth with Ptah, the Creative Power, but Iamblichus also, in treating of the ancient mysteries, asserts it in these words: 'Whereas he makes all things in a perfect manner, not deceptively, but artificially, *together with truth*, he is called Ptah; but the Greeks denominate him Hephæstus, considering him merely as a physical or artificial agent,' and not looking upon him, as they ought, in an abstract or metaphysical light. But the discloser of truth and goodness on earth was Osiris; and it is remarkable that, in this character of the manifestation of the Deity, he was said to be 'full of goodness (grace) and truth,' and after having performed his duties on earth, and fallen a sacrifice to the machinations of (Typho) the Evil One, to have assumed the office in a future state of judge of mankind. At Philæ, where Osiris was particularly worshipped, and which was one of the places where they supposed him to have been buried, his mysterious history is curiously illustrated² in the sculptures of a small retired chamber, lying nearly over the western adytum of the temple. His death and removal from this world are there described; the number of

¹ Gen. Epistle of James, i. 18. Orpheus says, 'I call to witness the word of the Father, which He first spoke, when He established the universe by His will.' (Justin Martyr, Orat. ad Genies.)

² A copy of these sculptures is given in the plates of the Royal Society of Literature (Young, Hieroglyphics), pl. 66, 67, 68, and 69.

twenty-eight lotus plants points out the period of years he was thought to have lived on earth, and his passage from this life to a future state is indicated by the usual attendance of the deities and genii, who presided over the funeral rites of ordinary mortals.¹ He is then represented with the feathered cap, which he wore in his capacity of judge of Amenti; and this attribute shows the final office he held after his resurrection, and continued to exercise towards the dead, at their last ordeal in a future state. I have already stated that the Monad, or single Deity, was placed above and apart from the Triads, and that the great gods of the Egyptian Pantheon were the deified attributes of the 'One.' The same idea of a Monad, and even of a triple Deity, was admitted by some of the Greeks into their system of philosophy; and 'Amelius,' according to Proclus, 'says, the Demiurgos or Creator is triple, and the three Intellects are the three Kings — He who exists, He who possesses, He who beholds. And these are different; therefore the First Intellect exists essentially, as *that which exists*. But the Second exists as the Intelligible in him, though possessing that which is before him, and partaking altogether of that, wherefore it is the Second: but the Third exists as the Intelligible in the Second, as did the Second in the First; for every Intellect is the same with its conjoined Intelligible; and it possesses that which is in the Second, and beholds or regards that which is in the First: for by how much greater the remove, by so much the less intimate is that which possesses. These three Intellects, therefore, he supposes to be the Demiurgi, the same with the three Kings of Plato, and with the three whom Orpheus celebrates under the names of Phanes, Ouranos, and Kronos, though, according to him, the Demiurgos is more particularly Phanes.'² Several others also mention the triple nature of the Deity; and 'from the different Orphic fragments, we find,' as Mr. Cory³ observes, that 'the Orphic trinity'⁴ consisted of

Metis	Phanes or Eros,	Ericapæus:
which are interpreted,		
Will or Counsel,	Light or Love,	Life or Life-giver.
From Acusilaus:		
Metis,	Eros,	Ether.

¹ Plut. de Isid. s. 35: 'the rising again of Osiris, and his new life.'

² Procl. in Tim. ii. 93. Cory, p. 305.

³ Cory, 'Ancient Fragments,' p. 355.

⁴ The Orphic ceremonies, according to Herodotus, were the same as those of the Pythagoreans and Egyptians.

From Hesiod, according to Damascius :

Earth,	Eros,	Tartarus.
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From Pherecydes of Syros :

Fire,	Water,	Spirit or Air.
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From the Sidonians :

Kronos,	Love,	Cloudy Darkness.
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From the Phœnicians :

Ulomus,	Chusorus.	The Egg.
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From the Chaldaean and Persian oracles of Zoroaster :

Fire,	Sun,	Ether.
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Fire,	Light,	Ether.
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From the later Platonists :

Power,	Intellect,	Father.
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Power,	Intellect,	Soul or Spirit.
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‘By the ancient theologists, according to Macrobius, the sun was invoked in the mysteries, as

Power of the world,	}	Light of the world, Spirit of the world :

and to this may, perhaps, be added, from Sanchoniatho, the three sons of Genus,

Fire,	Light,	Flame.’
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Plutarch¹ gives

Intelligence,	Matter,	<i>Kosmos</i> , beauty, order, or the world ;
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the first being the
same as Plato’s

Idea,	the second,	and the third,
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Exemplar,	Mother,	Offspring,
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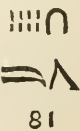
or Father,	Nurse.	} Production.
	Receptacle of generation,	

‘Of these three, intelligence, matter, and *kosmos*,’ he says, ‘universal nature may be considered to be made up, and there is reason to conclude that the Egyptians were wont to liken this *nature* to what they called the most beautiful and perfect triangle, the same as Plato himself does in that nuptial diagram he has introduced into his *Commonwealth*. Now in his triangle, which is rectangular, the perpendicular is imagined equal to 3, the base to 4, and the hypotenuse to 5. In which scheme the perpendicular is designed to represent the masculine nature, the base the feminine, and the hypotenuse the offspring of both :

¹ Plut. de Isid. s. 56.

and accordingly, the first will apply to Osiris, or the prime cause; the second, to Isis, the receptive power; and the last to Orus, or the effect of the other two. For three is the first number composed of even and odd; 4 is a square, whose side is equal to the even number 2; but 5, being generated, as it were, out of both the preceding numbers, two and three, may be said to bear an equal relation to both, as to its common parents. So, again, the mere word which signifies the universe of beings is of a similar sound with this number,¹ as *to count five*² is made use of for counting in general.' Plato³ says the Egyptians taught numbers to children in their play, by distributing amongst them a certain number of fruits, or other things, the same number to be given to many or to few children, so that by dividing them amongst themselves they learnt lessons in arithmetic; and all sorts of numbers were given to them in their games of play as arithmetical exercises.

The Egyptians wrote from right to left in the hieratic and demotic (or enchorial), which are the two modes of *writing* here mentioned. The Greeks also in old times wrote from right to left, like the Phœnicians, from whom they borrowed their alphabet. This seems the natural mode of writing; for though we have always been accustomed to write from left to right, we invariably use our pencil, in shading a drawing, from right to left, in spite of all our previous habit; and even our down-strokes in writing are all from right to left. The Arabs say, 'It is more reasonable to see where the pen is coming, than not to see where it is going.' It was continued by the Etruscans, the early imitators of the Greeks, to a very late period. Dr. Brugsch very ingeniously observes⁴ that though in demotic, the general direction of the writing was from right to left, each individual letter was formed from left to right, as is evident in the unfinished ends of horizontal letters when the ink failed in the pen. In writing numbers in hieratic and enchorial they placed the units to the left—that is, last—according to their mode of writing from right to left. Thus 1851 would stand 1581. In 18 they would first come to the ten, and in 13,422 they would begin with the thousands. The same mode of beginning with the largest number



¹ πάντα, πέντε.

² The word *πεντάσθαι* is taken from counting by the five fingers—an ordinary method in early times. (See *Athenæum*, No. 2606.) The Egyptians sometimes

represented the number 5 by a star, having, as usual, five rays; because, as Horapollo pretends, that is the number of the planets (Horapollo, i 13.) ³ Laws, book 57.

⁴ Gram. Demot. pp. 15, 16.

is followed in hieroglyphics (224,31), whether written from right to left, or from left to right. This is like our arrangement of the thousand first and the unit last, in our writing from left to right. The Arabs, from whom we borrowed this, think we ought to have changed the arrangement, as we write in an opposite direction. But they borrowed their numerals from India (hence called by them *Hindee*, 'Indian'), and there the arrangement is as in our own, 133 of our notation, for ex-

ample, being thus written ۱۳۳ by the scribes of the

Indian continent.

On the subject of numbers, the same author makes the following remarks: 'It is my opinion, when the Pythagoreans appropriate the names of several of the gods to particular numbers, as that of Apollo to the unit, of Diana to the duad, of Minerva to the seven, and of Neptune to the first cube,¹ that they allude to something which the founder of their sect saw in the Egyptian temples, to some ceremonies performed in them, or to some symbols there exhibited;² the same 'Pythagoreans also look upon Typho to have been of the order of dæmons, as, according to them, "he was produced in the even number fifty-six." For as the power of the triangle is expressive of the nature of Pluto, Bacchus, and Mars; the properties of the square of Rhea, Venus, Ceres, Vesta, and Juno; and of the dodecagon of Jupiter; so (we are informed by Eudoxus) is the figure of 56 angles expressive of the nature of Typho.'³ They have likewise 'a great detestation for the number 17,'⁴ and 'call the 17th day of the month the day of obstruction; for the middle number 17, falling in between the square 16 and the parallelogram 18 (the only two plain numbers whose circumferences are equal to their areas), stops up the way between them, divides them from each other, and hinders them from uniting.' In another place,⁵ he says, 'The Pythagoreans honor numbers and geometrical diagrams with the names of the gods: thus they call the equilateral triangle head-born Minerva and Tritogeneia, because it may be equally divided by three perpendicular lines, drawn from each of the angles; the

¹ Simplicius, in his Commentary on Aristotle's Treatise *de Cælo*, tells us that a cube was called by the Pythagoreans harmony, because it consists of twelve bounding lines, eight angles, and six sides; and

twelve, eight, and six are in harmonic proportion.' (Taylor's *Theoretic Arithmetic*, p. 155.)

² Plut. *de Isid.* s. 10.

³ *Ibid.* s. 30.

⁴ *Ibid.* s. 42.

⁵ *Ibid.* s. 76.

unit they term Apollo, as to the number two they have affixed the name of Strife and Audaciousness, and to that of three, Justice; in like manner the number 36, their *tetrakys*, or sacred quaternion, being composed of the first four odd numbers added to the first four even ones, as is commonly reported, is looked upon by them as the most solemn oath they can take, and called *Kosmos*, the *world* or *order*. 'To the *good principle* they give the names of "the unit, the definite, the fixed, the straight, the odd, the square, the equal, the dexterous, and the lucid:" whilst to the *evil one* they give the appellation of "the duad, the indefinite, the movable, the crooked, the even, the oblong, the unequal, the sinistrous, and the dark."¹

Without entering into all the abstruse speculations respecting numbers, I shall add a few observations, principally in reference to the opinions entertained by the Egyptians. 'According to their doctrine, Thales defined numbers to be a collection of monads; and some of the Pythagoreans said that the monad was the confine of number and parts; for from it, as from a seed and an eternal root, ratios are contrarily increased and diminished; some through a division to infinity being always diminished by a greater number, while others being increased to infinity are again augmented.² They also called the monad intellect,³ male and female, God, chaos, *darkness*, Tartarus, Lethe, the axis, the sun, and Pyralios, Morpho, the tower of Jupiter, Apollo, the prophet,' and many other names; and Damascius, in his treatise *Περὶ Ἀρχῶν*, informs us that 'the Egyptians asserted nothing of the first principle of things, but celebrated it as a thrice unknown *darkness* transcending all intellectual perception.' To the duad they gave the appellation 'audacity, matter, the cause of dissimilitude, the interval between multitude and the monad,' ascribing it to Diana and some other deities, to Fate and Death; and the triad⁴ was considered by them to be intellect, the origin of virtue, and to belong to Justice, Saturn, and many other divinities. According to Servius, 'they assigned the perfect number three to the Great God;' and the tetrad they looked

¹ Plut. de Isid. s. 48.

² Taylor's Theoretic Arith. ætic, p. 4; and Aristotle.

³ [Somn. Scrip. c. 6. His (Macrobius') monad; beginning and end of all. — G. W.]

⁴ This number is observable in the 'Tria virginis ora Dianæ,' the trident of Neptune, the 'trifidum fulmen Jovis,' the three sons of Saturn, the three-headed

Cerberus, the three Fates, the Graces, the Furies, the three judges of Hades, and others. The expression of Virgil (Ecl. viii. 75), 'Numero Deus impari gaudet,' applies to the same number, as is shown by the preceding verses, and by the 'Necte tribus nodis ternos, . . . colores. Conf. Æn. vi. 229, et alib.)

upon as the greatest miracle, a god after another manner than the triad, a manifold, or rather every divinity; peculiarly applied to Mercury, Vulcan, Hercules, and Bacchus; and they held that the power of the duad subsisted in the four. Thus Pythagoras asks, 'How do you count?'—Mercury: 'One, two, three, four.—Pyth.: 'Do you not see that what are four to you, are ten and our oath?' those 1, 2, 3, 4, added together, forming ten, and four containing every number within it. Four was particularly connected with Mercury, as the deity who imparted intellectual gifts to man; to Vulcan it was assimilated as the Demiurgos, whence the *Tetraktys* was the mystic name of the Creative Power; and three they looked upon as 'embracing all human things.' 'Know God,' says Pythagoras, 'who is number and harmony; "the human soul," according to that philosopher, was 'number moving itself;' and some styled *number* 'the father of gods and men.' Many were the fanciful meanings attached to numbers by the Pythagoreans, which it is unnecessary here to introduce: I shall therefore only observe that the opinion respecting the 9 was, that 'there could be no number beyond it, and that it circulates all numbers within itself, as is evident from the retrogression of numbers. For their natural progression is as far as 9; after which their retrogression takes place, 10 becoming once more the monad. Again, 9 being added to each of the numbers 1, 2, 3, 4, and the rest, it will produce 10, 11, 12, 13, 14, etc.: no elementary number can therefore be beyond the ennead;' whence the Pythagoreans called it 'ocean and the horizon, all numbers being comprehended by, and revolving within, it;' but the 'decad was called heaven, being the most perfect boundary of number;' and some characterized numbers as the envelopes of being.

That Pythagoras borrowed from Egypt his ideas on this subject, is highly probable: such appears to have been the opinion of the ancients themselves; and it would be curious to ascertain if our common multiplication table, for which we are indebted to that philosopher, was of Egyptian origin. It is however evident from modern discoveries in the language and writing of that people, that the numerical system of the Pythagoreans tallies with the formation of the Egyptian numbers, according to that mode of representing them in the hieratic character, which is applied to the days of the month, in the sense of the 1st, 2d, 3d, etc., where 1, 2, 3, and 4 alone are perfect numbers; 5, 6, 7, and 8 being composed of 3 + 2, 3 + 3, 3 + 4, and 4 + 4; 9, from its completing the series, being a single

Nº	HIEYPHIC	HIERATIC		HIERATIC
1 st	1 e		$\frac{2}{3}$	1, 2
2 ^d	2 ee		$\frac{1}{2}$	3, 4
3 ^d	3 eee		$\frac{1}{3}$	✓
4 th	1 eee		$\frac{1}{4}$	x, x x
5 th	2 ee		$\frac{1}{5}$	5
6 th	3 ee		$\frac{1}{6}$	6, 6 6
7 th	3 eee		$\frac{1}{7}$	7
8 th	1		$\frac{1}{8}$	8, 8
9 th	2		$\frac{1}{9}$	9
10 th	1		$\frac{1}{10}$	10
11 th	2		$\frac{1}{11}$	11
12 th	3 fff		$\frac{1}{100}$	12
15 th	4 ffff		$\frac{1}{600}$	15
20 th	5 fffff		$\frac{1}{1000}$	20
27 th	3 fff		$\frac{1}{1358}$	27 = 7
28 th	7 fff		1 st	28
29 th	3 ee		2 nd	29

Nº	HIERO	eeee nnnnn		
$\frac{1}{3}$	1		3	3
$\frac{1}{4}$	1		4	4
$\frac{1}{6}$	1		6	6
$\frac{1}{11}$	1		11	11

and perfect number, 'circulating,' as the Pythagoreans say, 'all numbers within itself,' and 10 commencing a new series, and 'becoming again the monad.'

The hieroglyphic numbers¹ are different, being arranged in units, tens, hundreds, and thousands; and the ordinary hieratic are partly formed from the hieroglyphic units, the 5, 6, 7, 8, and 9 being ciphers, as is also one form of the 4. For an illustration of which and the former statement, I refer the reader to the accompanying Plate.

The speculations of later times have ascribed the same and some other significations to the numbers, as to

- Equal to 10. {
1. Unity. Divine thought. Wisdom. Divinity. The universal principle, and centre of all.
 2. Will. Water. The two natures of man. Perversity.
 3. Action. Matter. Temporal immaterial agents who do not think.
 4. Intellect. Intellectual man. Wisdom. All that is active. Religion. Immaterial agents who think.
 5. The evil being. Idolatry. Self-sufficiency. $3 + 2$.
 6. Formation of the world. Radius, and the natural division of circle. Piety. $3 + 3$.
 7. Source of man's intellectual and sensible properties. Relating to the end of the world. Love of esteem. Intellectual agents (having taken the place of man). $4 + 3$.
 8. Intellectuality both in body and soul. The divine united with the human nature. Love. Good will. Justice. $4 + 4$.
 9. Man not purified from sin. Physical envelope of man. Creation of the body, and its nature. Curiosity. The number of every spiritual limit. Intellect united with sin. $4 + 5$.
 10. Limit of all. Man purified from sin, returning by a new birth to unity, whence he proceeded. Decomposition of the circle, or the world.

Having now mentioned some of the numerous meanings attached to the numbers,² I return from this digression to the consideration of the religious doctrines of the Egyptians.

¹ For further accounts of the Egyptian numbers, see the Grammar of Champollion, by whom the numerical system commenced by Dr. Young was very fully demonstrated and carried out. [A fuller table, with fractions, is given by Professor Eiseulohr,

'Mathematische Papyrus,' pp. 8, 9. — S. B.

² It is unnecessary to point out those which so frequently occur in the Bible, and every one must perceive that the constant occurrence of 4, 7, and other numbers is not accidental.

The manifestation of the Deity, His coming upon earth for the benefit of mankind, and His expected interposition, were ideas which, even in the patriarchal times, had always been entertained, having been revealed to man from the earliest periods, and handed down through successive ages, even to the time when that event took place; we are therefore less surprised to find it introduced into the religion of the Egyptians, and forming one of the most important tenets of their belief. Indeed, nothing can be more satisfactory than this additional proof of its having been a tradition among the early inhabitants of the earth; and it was natural that the Egyptians should anticipate the fulfilment of this promise, and found thereon the great mystery of the relative connection between the Deity and mankind. The fact of this, and the doctrine of a Trinity being entertained by so many distant nations, naturally leads to the inference that they had a common origin, and most persons will admit that they appear to have been derived from immediate revelation, or from the knowledge imparted to the early inhabitants of the world, rather than from accidental speculation in distant parts of the globe, — a remark which applies equally to the creation of man, the deluge, the ark or boat, and numerous mysterious doctrines common to different people. From whatever source the Egyptians originally borrowed their ideas on these subjects, it is evident that they refined upon them, and rendered their metaphysical speculations so complicated, that it required great care and attention on the part of the initiated to avoid confusion, and to obtain a perfect understanding of their purport. Hence it happened that those who had only obtained a limited insight into this intricate subject, speedily perverted the meaning of the very groundwork itself, and the Greeks and Romans, who were admitted to participate in a portion of those secrets, fell into a labyrinth of error, which gave to the whole system the character of an absurd fable. Indeed, they went still further, and, taking literally certain enigmatical ceremonies, they converted speculative and abstract notions into physical realities, and debased the rites they borrowed from Egypt by the most revolting and profane excesses, tending to make religion ridiculous, and to obviate all the purposes for which it had been instituted. For, however erroneous the notions of the ancients were, however mistaken in the nature of the Deity, and however much truth was obscured by the worship of a plurality of gods, still the morality inculcated by religion and practised by good men was deserving of commendation; and

we cannot but censure those who degraded what was good, and added to error by the misapplication of mysterious secrets.

This perversion of certain allegorical rites, and the misinterpretations given by the Greeks and Romans to some religious customs of the Egyptians, have, in many instances, led to the idea that the priesthood of Thebes and Memphis, under the plea of religion, were guilty of enormities which would shock the most depraved; and an erroneous judgment has been formed from the mode in which the worship of Osiris was conducted by his votaries at Rome. I will not pretend to say that the Romans did not find the ceremonies of that worship already degraded, in the Græco-Egyptian city of Alexandria: this is highly probable; but the reason of its perversion there resulted from the same cause as at Rome — the misapplication by foreign votaries of tenets they failed to comprehend; for it may be doubted if such rites were at any time known to the Egyptians; and if any external ceremonies carried with them an appearance of indelicacy, they were merely emblematic representations, as in the case of the phallic figures, indicating the generative principle of nature. Here, as usual with the Egyptians, it was the abstract idea which alone occurred to the mind of those who understood the religion they professed; but the Greeks and Romans, owing to the grossness of their imaginations, saw nothing beyond the external form that presented itself to the eye, and instead of the power, or abstract cause, they merely thought of its physical character. Hence the absurd worship of the mere agent in lieu of a first cause, and hence, in consequence, all those revolting scenes by which religion was degraded and the human mind corrupted; the more deplorable, since mankind is ever prone to commit the greatest excesses when their acts are believed to have the sanction of religion. Indeed, even at a time when speculative doctrines have not yet suffered any gross perversion of their principles, the ignorance and credulity of man frequently distort what is reasonable; and some minds are not possessed of sufficient judgment to separate the really religious from the superstitious part of their creed, or to discriminate between the mysterious or metaphysical, the fabulous, and the moral. A remarkable instance of the perverted meaning of a religious custom, by the ignorance of Greek and Roman writers, occurs in the Pallakides or Pellices of Amen, mentioned by Diodorus¹ and Strabo. The former, it is true,

¹ Diodor. i. 47.

only describes them under the name of Pallakides of Jupiter, in noticing their tombs; but Strabo¹ asserts that, at Thebes, 'a virgin, conspicuous for birth and beauty, was sacrificed to Jupiter, the deity of that city, and that a class of persons, called *pellices*, "harlots," dedicated to his service, were permitted to cohabit with anyone they chose.'

That certain women, of the first families of the country, were devoted to the service of the god of Thebes, is perfectly true, as I have had occasion already to remark; and they were the same whom Herodotus mentions under the name of *gynaikes hieresai*,² or 'sacred women, consecrated to the Theban Jove.' The statement of Diodorus, that their sepulchres were distant from the tomb of Osymandyas ten stadia, or little more than 6000 feet, agrees perfectly with the position of those where the queens and princesses were buried,³ in the Necropolis of Thebes; and is highly satisfactory, from its confirming the opinion formed from the sculptures, respecting the office they held. For though we are unable to ascertain the exact duties they performed, it is evident that they assisted in the most important ceremonies of the temple, in company with the monarch himself, holding the sacred emblems which were the badge of their office; and the importance of the post is sufficiently evinced by the fact that the wives and daughters of the noblest families of the country, of the high-priests, and of the kings themselves, were proud to enjoy the honor it conferred. Such being the case, shall we not reject with contempt so ridiculous a story, and learn from it how little reliance is to be placed on the Greek and Roman accounts of the rites of Egypt? And, indeed, if this absurd tale were not refuted by the sculptures of Thebes, mere reason would tell the most credulous that a custom so revolting to human nature, and so directly at variance with the habits of a civilized nation, could not possibly have existed in any country where morality was protected by severe laws, or have been tolerated by the Egyptians, who were unquestionably the most pious of all the heathen nations of antiquity.

To depend, therefore, upon the Greek theogony for the nature and character of the Egyptian deities, is equally useless; and though in some we may trace the same origin, and perceive the same primitive idea which suggested their attributes, so little reliance can be placed upon the resemblance, and so little certainty

¹ Strabo, xvii. p. 561.

² Herodot. i. 182, and ii. 54.

³ 'Egypt and Thebes,' p. 80.

is there of their not having been altered by the Greeks, that the information obtained from this source can seldom be admitted, unless confirmed in some degree by the Egyptian monuments. No stronger instance of this is required than in the case of the god Anubis, who is repeatedly stated by Greek and Roman writers to have borne the head of a dog, and who is invariably represented by the Egyptians with that of a jackal, or even under the form of the entire animal; and this, with several similar misconceptions, may serve to give some idea of the confusion into which they would lead us respecting the theogony of the Egyptians. However, as is sometimes the case, amidst this confusion slight traces may be observed of the original system from which the Greeks derived their notions; and as Amen, the principal member of the Theban trinity and king of the gods,¹ was distinct from the Monad, or sole Deity in Unity, so Jupiter, though considered by the Greeks to be king of the gods, was merely a deified attribute of the Deity.

It is evident that the philosophers of Greece were constantly guilty of misconceptions respecting the very principles of the Egyptian religion, and some² believed that 'the Egyptians ignorantly employed material fables, considering and calling corporeal natures divinities—such as Isis, earth; Osiris, humidity: or Typho, heat;' without distinguishing between the different conditions of metaphysical, physical, and other objects of worship.

In Greek mythology, some of the fables are allegorical, some moral, some physical, some historical, and some again are mere metaphysical speculations. This, however, seems only in part to apply to the theogony of the Egyptians, whose religion was founded on a different basis, or who, at all events, made the physical and historical portions subservient to, rather than a part of, their system; and if they had even in early times interwoven any events of history in their religion, they expunged them at a subsequent period, and gave to their religion a metaphysical character, totally unconnected with the tales of their origin, or the colonization of their country. Indeed, history seems so entirely excluded from their mythological system, and so completely a thing apart from it, that we may doubt if it was admitted into it even at the earliest periods; and if, in the

¹ I have shown the error of making Saturn, the father of Jupiter, the same as the Egyptian Seb.

² Sallust on the Gods and the World, chap. iv., quoted by Taylor, *Introd. to Plato*, p. 39.

chronicles of Egypt. mention is made of the reign of certain gods upon earth. we may be persuaded that these are merely an allegorical mode of stating facts which really happened. and are totally unconnected with the tenets of their religion. For. independent of the positive assurances of the Egyptians themselves that no deity ever lived on earth. we are relieved from the difficulty this appears to present. by the simple suggestion¹ that the rule of the gods refers to that of the different colleges of priests of those deities. which successively held the sovereign power, when Egypt was ruled by a hierarchy, previous to the election of a king.

That the periods assigned for the duration of these reigns are totally inadmissible, is evident; but dates in the early history of many people are equally vague and arbitrary. even where there is no reason to doubt the truth of the events to which they are affixed. In the history of ancient nations. the early portion usually consists of mere fable. either from real events having been clothed in an allegorical garb. or from the substitution of purely fanciful tales for facts, in consequence of the deficiency of real data: to this succeeds an era when. as manners and habits become settled. amidst fable and allegory. some descriptions of actual events are introduced; and at length history. assuming the exalted character that becomes it. is contented with the simple narration of fact. and fable is totally discarded. But such is the disposition in the human mind to believe the miraculous. that. even at a period when no one would dare to introduce a tale of wonder unsupported by experience. credit still continues to be attached to the traditions of early history. as though the sanction of antiquity were sufficient to entitle impossibilities to implicit belief. A pure fable is credited. allegories are taken as real events. and no one dares to withdraw the veil which clothes substantial facts in an almost transparent allegory: as few Romans in the Augustan age would venture to doubt the miraculous kindness of their founder's wolf. or the real existence of the Egerian nymph. The religion of the Greeks bears the evidence of having been formed upon popular legends. or fairy tales. to which a superstructure derived from metaphysical speculation was afterwards added. and though many of their deities were of Egyptian origin.² the office and character

¹ This was also the opinion of the learned Larcher. 66, 67, 76, 80, 83, 84, 115, 118, 121, 189, 303, &c.

² Banier, *Mythol.* vol. i. pp. 25, 28, 44,

of some seem rather attributable to accidental analogy, discovered at a subsequent period with those of the Egyptians, and other people whose religion had been long modelled into a systematic form, than to any positive notions they previously had upon the subject. And thus we may account for the inconsistency of Jupiter being considered the same as Amen, one of the eight great gods of Egypt, and Saturn his father as one of the second order of deities: an error which originated in Seb being the parent of Osiris and Isis, and having in Egypt the title of 'Father of the Gods.'

Many of their popular legends may have been the offspring of foreign notions, accidentally received from other people, and altered by time or local prejudices; and when we recollect that the mythology of Greece was chiefly invented, or at least arranged, by the poets, we may readily account for the unsubstantial texture of its construction.

In the history of Greece, the admission of mythological tales was much more resorted to than in that of Rome, where events may be more readily traced than in the fabulous accounts of Greek writers; and though the Romans sacrificed truth to their excessive vanity in many statements put forth in their early history, they did not permit the adventures of the gods to form part of the actions of men, in order to account for ordinary occurrences, or to ennoble the pedigree of simple individuals. The same remark applies to the history of the Egyptians, and, however they may have clothed the mysteries of their religion in allegorical fable, they neither derived their origin from deities, nor degraded the nature of the Divinity by bringing it down to the level of mankind. But if historical fable did not form part of the belief of the Egyptians, and if their religious system was distinct from the records of past events, allegory and moral fable were admitted without reserve, and physical emblems were used as the representatives of abstract notions. Indeed, though the main feature of their religion was metaphysical speculation, we find that physical objects entered into the system; and it is probable that the worship of external objects, as the sun and other heavenly bodies, formed at an early period a principal part of their religious worship. The two main principles on which the religion of Egypt was based, appear to be, the existence of an Omnipotent Being, whose various attributes being deified, formed a series of divinities, each worshipped under its own peculiar form, and supposed to possess its

particular office; and the deification of the sun and moon, from which it might appear that a sort of Sabæan worship had once formed part of the Egyptian creed.

The sun, being the chief of heavenly bodies, was considered a fit type of dominion and power: and the idea of an intellectual sun was merely the union of the abstract notion of a primary agent with the apparent and visible object.¹ For the sun was both a physical and metaphysical deity, and under these two characters were worshipped Ra and Amen-ra, the real sun, the ruler of the world, in the firmament, and the ideal ruler of the universe as king of the gods. Of the allegorical portion² of their religion we have frequent instances, as in the story of Isis and Osiris, whose supposed adventures, according to one interpretation, represented the Nile and its inundation: and numerous other natural phenomena were in like manner typified by figurative or emblematical conceits. The gods had also their peculiar symbols, which frequently stood not only for name, but also for the figure, of the deity they indicated; as the Cynocephalus ape was the sign and substitute for Thoth; the hawk and globe indicated the Sun, and the crocodile was the representative of the god Sebak. Nor were moral emblems wanting in the religion of the Egyptians; the figure of Justice with her eyes closed purported that men were to be guided by impartiality in their duties towards their neighbors; the rat in the hand of the statue of Sethos at Memphis recorded a supposed miracle, and urged men to confide in the deity; and the tender solicitude of Isis for her husband was held up as an example worthy the emulation of every wife. Many were the allegorical and symbolical beings who formed part of their

¹ According to the later mythology, Nu, the primordial water, was that out of which the gods and all things sprang. In that primeval chaos he formed himself. he was the only one, he who exists by his essence; the only one who lives in matter, the only generator in heaven and earth who has not been engendered, 'the father of fathers and mother of mothers.' It has been supposed that the gods sprang or emanated from him, and that he represented in himself a kind of trinity of father, mother, and son. He created his own limbs, which were the gods, and from him proceeded the local triads. Hence proceeded the inferior deities or demurgii: Ptah, the creator of the sun and moon; Tum, or Atum, the creator of things visible and invisible; and Chronomis, the creator or

builder of mankind. As the attractor of light and the hidden forces of nature, he becomes Amen the Occult, and as the beneficent being of the world, Osiris. The same deity said to the sun, 'Come to me,' and at his orders Shu separated the earth and waters into two masses, the celestial and terrestrial, and excited the hostility of the powers of evil. There was consequently the celestial and terrestrial Nile struggling against the desert, the assimilation and identity with the sun, which was associated with the principal deities of the Pantheon in its diurnal and nocturnal course. (Maspero, 'Hist. Ancienne des Peuples de l'Orient,' p. 62.) — S. B.

² Banier, *Mytholog.* vol. i. c. iii. p. 52, on the fables of the Greeks; and p. 175, on the theogony of Egypt.

Pantheon; and not only was every attribute of the Divinity made into a separate deity, but genii, or imaginary gods, were invented to assume some office, either in relation to the duties or future state of mankind. Even the genius of a town, a river, or a district, was created in imagination, and worshipped as a god; and every month and day, says Herodotus,¹ were consecrated to a particular deity. It may reasonably be supposed that in early times the religion of Egypt was more simple, and free from the complicated host of fanciful beings who at a later period filled a station in the catalogue of their gods; and that the only objects of worship in the valley of the Nile were, 1st, the deified attributes of the Creative Power, and of the divine intellect; 2d, the sun and moon, whose visible power has so generally been an object of veneration among mankind in the early ages of the world; and, 3d, we may add, the president of that future state to which the souls of the dead were supposed to pass after they had left their earthly envelope. It is difficult to decide whether the Egyptians had originally the belief in a future state, or if the immortality of the soul was a doctrine suggested at a later period, when philosophy had remodelled their religious notions; suffice it to say that the oldest monuments which remain bear ample evidence of its having been their belief at the earliest periods of which any records exist, and Osiris the judge and president of Amenti is mentioned in tombs belonging to contemporaries of the kings who erected the Pyramids, upwards of 2,000 years before our era. Indeed, if at any early period the religion of Egypt bore a different character, or if any great change took place in its doctrines, this must have been long before the foundation of the monuments that remain; and, with the exception of some addition to the catalogue of minor deities, and an alteration in the name of Amen,² we perceive no change in the religion from the earliest times to the reigns of the Ptolemies and Cæsars.³ That several genii, or minor gods, particularly those who were supposed to perform inferior functions in a future state, and some local divinities, were added at various periods, is highly probable, but no change appears to have taken place in the form of worship, or in the main tenets of the religion: the ceremonies of the temple may have become more splendid, the offerings more

¹ Herodot. ii. 82.

² I shall have occasion to mention this afterwards in chapter xiii.

³ [There is, however, reason to believe

that in very early times the Egyptians had a sort of sylvan worship long before the religion was formed of which we see the existing records. — G. W.]

rich, or the increased dimensions of the temples may have admitted a larger number of contemplar gods; and in the times of the Ptolemies and Cæsars the rites of Osiris may have become more generally preferred; but no change was effected in the religion itself,¹ and the preference given to any peculiar deity was only what had always happened in Egypt, where each town or district paid the greatest honors to the god who was supposed immediately to preside over it. Even the alteration which took place in the name of Amen, and the introduction of the worship of the sun with rays, represented at Tel el Amarna and some other places, about the time of the 18th Dynasty, cannot be looked upon as changes in the religion; and Sarapis, of foreign introduction, was obliged to conform to the customs of the Pantheon, to which he was rather attached than admitted, by the caprice of a foreign monarch. Unfortunately, an impenetrable veil, concealing from our view the earliest periods of Egyptian history, forbids us to ascertain the original character of the religion; we are introduced to it as to the civilization of that people, when already fully perfected; and we can only speculate on its previous condition, before metaphysical theories had modelled it into the form in which we now behold it in the sculptures of the existing monuments. Before we proceed to inquire into the nature and attributes of the gods, it may not be improper to examine the opinions of Greek writers respecting the theogony of Egypt. Diodorus,² who seems to borrow his ideas respecting the creation of the world from the Egyptians, says, that in the beginning the heavens and earth had only one form, being united in their nature; but having become separated afterwards, the world took the character we now behold. By the movement of the atmosphere the igneous parts rose, which gave to the sun and other heavenly bodies their rotary movement; and a solid matter was precipitated to form the sea and earth, from which fish and animals were produced, nearly in the same manner as we still see in Egypt, where an infinity of insects and other creatures come forth from the mud, after it has been inundated by the waters of the Nile.³ ‘Eusebius,’ as the Abbé Banier remarks, ‘has justly observed that this system, as well as

¹ In general terms, but the following extension of the Osiris worship took place by degrees; the dead were associated with him, and had his name preferred to theirs, which does not appear till the 18th Dynasty in general use; and the terms ‘truth-

speaking’ or ‘justified,’ which involve the judgment of the dead, come in at the same time. — S. B.

² Diodor. ii. 7.

³ Ovid. Met. i. 8, v. 422; and Plin. ix. 58.

that of the Phœnicians, which is derived from the same source, gives to the Creator no part in the formation of the universe. To confirm his opinion, he quotes a passage of Porphyry, who, in his epistle to Anebo, an Egyptian priest, writes,¹ that Chæremon and others had thought that nothing was anterior to this visible world: that the planets and stars were the real gods of the Egyptians, and that the sun ought to be looked upon as the guardian of the universe; and it may be remarked that the summary of Egyptian theology given by Diogenes Laertius from Manetho and Hecatæus is in the same spirit, which considers that matter was the first principle, and the sun and moon the first deities, of that people. It has, however, been shown from Eusebius, that the Egyptians believed in an intelligent Being called Kneph, who presided over the formation of the world. Porphyry states that they represented him under the figure of a man holding a girdle and a sceptre, with large feathers on his head, from whose mouth an egg proceeded, out of which another deity came, called by them Phtha, and by the Greeks Vulcan: and according to their explanation of this mysterious figure, the feathers denoted the hidden and invisible nature of this intelligence, the power it had of giving life, the dominion over all things, and the spirituality of its movements; and the egg which came from his mouth indicated the world, of which he was the maker. This opinion is confirmed by the testimony of Iamblichus, who, in the time of Eusebius, applied himself to the study of Egyptian theology, and who endeavors to prove what Chæremon had stated, that the general belief of the Egyptians was not that an inanimate being was the cause of all things, but that in the world, as well as in ourselves, they recognized the soul superior to nature, and the intelligence which created the world superior to the soul.

But I have already shown how unsatisfactory are the opinions of Greek writers respecting the religion of the Egyptians: and, with the exception of a few notions, which may be gleaned from the tenets of those who had studied and were initiated into the mysteries of Egypt, little can be learnt of their philosophy, or their religious system. Iamblichus, Plato, and some others, indeed, have contributed to throw some light on the subject, and the former gives the following account of the cosmogony of Egypt from the ancient Hermetic books: 'Before all things that essentially exist,² and before the total principles,

¹ Cory, 'Fragments, p. 237.

valuable collection of 'Ancient Fragments,' p. 283.

² This is the translation given in Cory's

there is one God, prior to the first god and king, remaining immovable in the solitude of his Unity; for neither is the Intelligible inmixed with him, nor is any other thing. He is established, the exemplar of the God who is the father of himself, self-begotten, the only father, who is truly good. For he is something greater, and the first, the fountain of all things, and the root of all primary intelligible existing forms. But out of this one, the self-ruling God made himself shine forth; wherefore he is the father of himself, and self-ruling: for he is the first Principle, and God of gods. He is the Monad from the One, before essence, yet the first principle of essence, for from him is entity and essence; on which account he is celebrated as the chief of the Intelligibles. These are the most ancient principles of all things, which Hermes places first in order, before the ethereal and empyrean gods, and the celestial. But, according to another division, he (Hermes) places the god Emeph¹ as the ruler of the celestial gods; and says that he is Intellect, understanding himself, and converting other intelligences to himself. And before this he places the indivisible One, which he calls the first Effigies, denominating him Eicton; in whom, indeed, is the first Intellect, and the first Intelligible; and *this One is venerated in Silence*. Besides these, other rulers are imagined to exist, which govern the fabrication of things apparent; for the Demiurgos, Intellect, which properly presides over truth and wisdom, when it proceeds to generation, and leads forth *into light* the inapparent power of the secret reasons, is called Amôn, according to the Egyptian tongue; and when it perfects all things not deceptively, but artificially according to truth, Phtha: but the Greeks change the word Phtha into Hephæstus, looking only to the artificial; regarded as the producer of good things, it is called Osiris; and, according to its other powers and attributes, it has different appellations. There is also, according to them, another certain principle presiding over all the elements in a state of generation, and over the powers inherent in them, four of which are male and four female; and this principle they attribute to the sun. There is yet another principle of all nature, regarded as the ruler over generation, and this they assign to the moon. They divide the heavens also into two parts, or into four, twelve, or thirty-six, or the doubles of these; they attribute to them leaders more or less in number, and over them they place one whom they consider superior to

¹ Generally supposed to be a mistake for Kneph.

them all. Hence, from the highest to the last, the doctrine of the Egyptians concerning the principles inculcates the origin of all things from One,¹ with different gradations to the many; which (the many) are again held to be under the supreme government of the One; and the nature of the Boundless is considered entirely subservient to the nature of the Bounded, and the Supreme Unity the cause of all things. And God produced matter from the materiality of the separated essence, which, being of a vivific nature, the Demiurgos took it, and fabricated from it the harmonious and imperturbable spheres; but the dregs of it he employed in the fabrication of generated and perishable bodies.² Another idea of the origin of things is thus explained in what are termed the modern Hermetic books: 'The glory of all things is God, and Deity, and divine Nature. The principle of all things existing is God, and the intellect, and nature, and matter, and energy, and Fate and *conclusion* and *renovation*. For these were boundless darkness in the abyss, and water, and a subtile Spirit, intellectual in power, existing in Chaos. But the holy light broke forth, and the Elements were produced from among the sand of a watery Essence.'³

Iamblichus says,⁴ that 'Chæremon and some others, who treat of the first causes of the phenomena of the world, enumerate in reality *only the lowest principles*; and those who mention the planets, the zodiac, the dreams, and horoscopes, and the stars termed mighty chiefs, confine themselves to particular departments of the productive causes. Such topics, indeed, as are contained in the Almanacs, constitute but a very small part of the institutions of Hermes; and all that relates to the apparitions or occultations of the stars, or the increasings or wanings of the moon, has the *lowest place* in the Egyptian doctrine of *causes*. *Nor do the Egyptians resolve all things into physical qualities*; but they distinguish both the animal and intellectual life from nature itself, not only in the universe, but in man. They consider intellect and reason in the first place, as existing by themselves, and on this principle they account for the creation of the world.' He also states, that 'they rank first the Demiurgos, as the parent of all things which are produced, and acknowledge that vital energy which is γ ior to, and subsists in, the heavens, placing

¹ 'Homer even exempts the demiurgic monad from all the multitude of gods.' (Taylor's *Introduct. to Plato's Republic*, p. 147.)

² Iamblichus, sect. viii. c. 2, 3.

³ *Serm. Sac. lib. iii. Cory*, p. 286.

⁴ Iamblichus, sect. viii. c. 4.

pure intellect at the head of the universe : and they allot one invisible soul to the whole world, and another divided one to all the spheres.'

I now extract a few observations respecting the outlines of the principal dogmas of Plato, from the Introductory Essay of his translator.¹ According to Plato, the highest God, whom in the Republic he calls *good*, and in the Parmenides *the one*, is not only above soul and intellect, but is even superior to being itself. Hence, since everything which can in any respect be known, or of which anything can be asserted, must be connected with the universality of things, but the first cause being above all things, it is very properly said by Plato to be perfectly ineffable. The first hypothesis, therefore, of his Parmenides, in which all things are denied of this immense principle, concludes as follows: — The one, therefore, *is* in no respect. So it seems. Hence it is not in such a manner as *to be* one, for thus it would be *being*, and participate of *essence*; but as it appears, *the one* neither *is one*, nor *is*, if it be proper to believe in reasoning of this kind. It appears so. But can anything either belong to, or be affirmed of, that which is not? How can it? Neither, therefore, does any *name* belong to it, nor *discourse*, nor any *science*, nor *sense*, nor *opinion*. It does not appear that there can. Hence it can neither be *named*, nor *spoken of*, nor *conceived by opinion*, nor be *known*, nor *perceived* by any being. So it seems. . . . Prior to *the one*, therefore, is that which is simply and perfectly ineffable, without position, uncoordinated, and incapable of being apprehended. . . . From this truly ineffable principle, exempt from all essence, power, and energy, a multitude of divine natures, according to Plato, immediately proceed. . . . He affirms (in the sixth book of his Republic), that *the good*, or the ineffable principle of things, is superessential, and shows the analogy of the sun to *the good*; that what *light* and *sight* are in the visible, *truth* and *intelligence* are in the intelligible world. As light, therefore, immediately proceeds from the sun, and wholly subsists according to a solar idiom or property, so *truth*, or the immediate progeny of *the good*, must subsist according to a superessential idiom. And as *the good*, according to Plato, is the same with *the one*, the immediate progeny of *the one* will be the same as that of *the good*. . . . Self-subsistent superessential natures are the immediate progeny of *the one*, if it be lawful thus to denominate things which ought rather to be called ineffable

¹ Taylor's Trans. of Plato, Introd. p. v

unfoldings into light, from the ineffable; for progeny implies a producing cause, and *the one* must be conceived as something even more excellent than this. From this divine self perfect and self-producing multitude, a series of self-perfect natures, viz. of beings, lives, intellects, and souls, proceeds, according to Plato, in the last link of which luminous series he also classes the human soul,¹ proximately suspended from the demoniacal order; for this order, he clearly asserts in the Banquet,² ‘stands in the middle rank between the divine and human, fills up the vacant space and links together all intelligent nature.’

According to Plato,³ the Egyptians supposed the world to be subject to occasional deluges and conflagrations, as a punishment for the wickedness of mankind; and the returns of the great catastrophe were fixed by them according to the period of their *great year*, ‘which Aristotle calls the greatest, rather than the great,’ when the sun and moon and all the planets returned to the same sign whence they started: ‘the winter of which year was the deluge, and its summer the conflagration of the world.’⁴ The notion of the deterioration of man, and the fables of the golden and iron ages, were also of Egyptian origin; and the story of the Atlantic Island⁵ having been submerged, was said to have been derived by Solon from the same source. Plato supposed that the Deity delegated the power of creating to beings inferior to himself, de. . . minated demons; perhaps, with the notion that man alone, who was exclusively gifted with intellect, was the work of the Deity himself; and Plutarch,⁶ in speaking of these intermediate beings, observes, ‘that some suppose what is related of Isis, Osiris, and Typho, to be the adventures of the grand demons or genii; an order of beings which some of the wisest of the Greek philosophers, as Plato, Pythagoras, Xenocrates, and Chrysippus, agreeably to what they learnt from the ancient theologians, believed to be much more powerful than mankind, and of a nature superior to them, though inferior to the pure nature of the gods, as partaking of the sensations of the body as well as of the perceptions of the soul, and consequently liable to pain or pleasure, and to all other appetites and affections; which affections were supposed to have a greater influence over some than others, different degrees of virtue and vice being found in these.

¹ Plato, *Timæus*, p. 508 *et seq.*

² See also a copious account of the nature of demons, in the note at the beginning of the first Alcibiades

³ Plato, *Critias*.

⁴ Censorin. de *Die Nat.*

⁵ Plato, *Tim.* p. 469, Taylor's Transl.; and *Critias*.

⁶ Plut. de *Isid.* s. 25.

genii, as in man.' According to Plato, they were 'a middle order of beings between gods and men interpreters of the will of the former to mankind, ministering to their wants, carrying their prayers to heaven, and bringing down from thence, in return, oracles and all other blessings of life ;' and, as Empedocles supposed, 'obnoxious to punishment for whatever crimes they committed, until, having undergone their distinct punishment, and thereby become pure, they were again admitted to their primitive situation, in the region originally designed for them.'

Of the Pythagorean doctrines, which were principally borrowed from Egypt, a summary account is given by Timæus the Locrian.¹ 'The causes of all things are two — intellect, of those which are produced according to reason: and necessity, of those which necessarily exist according to the powers of bodies. Of these, the first is of the nature of good, and is called God, the principle of such things as are most excellent. Those which are consequent, and concauses, rather than causes, may be referred to necessity, and they consist of Idea, or Form, and Matter, to which may be added the sensible world, which is, as it were, the offspring of these two. The first of these is an essence ungenerated, immovable, and stable, of the nature of Sameness, and the intelligible exemplar of things generated, which are in a state of perpetual change; this is called Idea or Form, and is to be comprehended only by Mind. But Matter is the receptacle of Form, the mother and female principle of the generation of the third Essence; for by receiving the likenesses upon itself, and being stamped with Form, it perfects all things, partaking of the nature of generation. And this matter, he says, is eternal, movable, and of its own proper nature, without form or figure, yet susceptible of receiving every form; it is divisible also about bodies, and is of the nature of Different. They also call matter "Place and Situation." These two, therefore, are contrary principles: Idea or Form is of the nature of male and father; but Matter, of the nature of female and mother; and things which are of the third nature, are the offspring of the two. Since, then, there are three natures, they are comprehended in three different ways: Idea, which is the object of science, by Intellect; Matter, which is not properly an object of comprehension, but only of analogy, by a spurious kind of reasoning; but things compounded of the two are the objects of sensation and opinion, or appearance.

¹ Cory, p. 301.

Therefore, before the heaven was made, there existed in reality Idea, and Matter, and God, the demiurgos of the better nature: and since the nature of Elder (continuance) is more worthy than that of Younger (novelty), and order than of disorder; God in his Goodness, seeing that Matter was continually receiving form, and changing in an omnifarious and disordered manner, undertook to reduce it to order, and put a stop to its indefinite changes by circumscribing it with a determinate figure: that there might be corresponding distinctions of bodies, and that it might not be subject to continual variations of its own accord. Therefore he fabricated this world out of all the matter, and constituted it the boundary of essential nature, comprising all things within itself, one, only-begotten, perfect, with a soul and intellect (for an animal so constituted is superior to one devoid of soul and intellect): he gave it also a spherical body, for such of all other forms is the most perfect. Since, therefore, it was God's pleasure to render this his production most perfect, he constituted it a god, generated indeed, but indestructible by any other cause than by the God who made it, in case it should be his pleasure to dissolve it.'

From the statement of Iamblichus we perceive that the Monad or deity in Unity preceded the Trinity or Triad by which all things were created, and that what was denominated the first God, or King of the Gods, also existed, like the Monad, before the formation of the world. These deities are, therefore, 1st, The God, the Monad, or deity in Unity; 2d, The first God, or first principle, chief of Intelligibles: or, 1st, Eicton, the first effigies, the indivisible one; 2d, Emeph (Kneph?) the ruler of the gods, Intellect, understanding himself. This Intellect, when it proceeds to generation, is called Amen, the demiurgic Intellect; Ptah, when it perfects all things with truth; or Osiris, when regarded as the author of good; or other names according to its different offices and powers. There are also the principles presiding over the elements in a state of generation, and over the powers in them, four of which are male and four female; one of them being the *sun*, and another the *moon*. Then follows another class of the rulers of the heavens, which is divided into two parts.

Prichard thinks that Ptah 'is the masculo-feminine Being of the Orphic philosophy, produced in the Chaotic Egg and acting upon its elements;' and quotes this passage of Horapollo in support of his opinion. 'The world seems to the Egyptians

to consist of a masculine and feminine nature, and they designate Minerva by a vulture (and a beetle), and Vulcan by a beetle (and a vulture); for these are the only gods which are represented by the Egyptians as having a double nature, or as being both masculine and feminine.¹ He thence concludes with Jablonski, that 'the goddess whom the Greeks call Minerva, and who was worshipped at Saïs, was the counterpart of Phthas, or the same Being in his feminine character.' But this is not supported by the evidence of the monuments, nor is there any relation between Ptah and the Egyptian Minerva.

I have here, and in other places, introduced several theories of Greek and Roman writers on the subject of mythology, and have mentioned some of the speculations of philosophers who studied in or visited Egypt. But I must not omit to observe that the opinions of late writers, as Porphyry, Iamblichus, Proclus, and all the Neo-Platonists of the Alexandrian school, should be admitted with considerable caution. Though many of their speculations were derived from an Egyptian source, the original was often even more than *parcè distorta*; and no doctrine of theirs can be accepted as illustrative of Egyptian notions, which is not confirmed by the monuments, or expressly stated to be taken from the philosophy, of Egypt.

The works of Plato and other more ancient writers evidently contain much that owes its origin to the knowledge they acquired from the Egyptians, and Pythagoras imitated many notions of his instructors with scrupulous precision. Such authorities are of the greatest use in the examination of the dogmas of this people, and they had the advantage of studying them at a time and place in which religion was not exposed to fanciful innovations. But when it had been encumbered with the superstructure of arbitrary fancy which the schools of Alexandria heaped upon it, the original form became distorted, meanings were attached to various symbols which they never possessed, and the attributes of one deity were ignorantly assigned to another of a totally different character. I have already had occasion to notice the misconceptions of the Greeks and Romans on the most ordinary subjects connected with the religion of Egypt; and little reliance can be placed upon their information respecting the abstruse and recondite speculations of the Egyptian philosophers, when they changed the very forms of well-known deities, and mistook the

¹ Horapollo, lib. i c. 12.

attributes of those which were presented to them on every monument.

I now proceed to compare the statements of Herodotus and others with data derived from the monuments. If it be true that the number of the great gods of the Egyptians was limited to eight, we may suppose them to be —

- | | |
|----------------------------|---------------------------|
| 1. Neph, or Kneph. | 5. Sati. |
| 2. Amen, or Amen-ra. | 6. Mut (or perhaps Buto). |
| 3. Phthah, Pthah, or Ptah. | 7. Bubastis. |
| 4. Khem. | 8. Neith. |

Ra, the physical sun, might also appear to enjoy an equal claim to a rank among the great gods of Egypt: and in a former work¹ I have introduced that deity instead of Bubastis: but it is more probable that Amen-ra and Ra were not of the same class of deities, as the intellectual was of a more exalted nature than the physical sun. From Ra proceeded a number of other deities, and the most remarkable of those styled the offspring of the sun are the goddess of truth or justice, Shu, Tafnut, Selk, and Nahamua.

Herodotus mentions the eight great gods, but without giving their names. He states, however, that Pan² (Khem) and Latona³ (Buto) were among the number, and that to the eight great gods succeeded twelve others of inferior rank, who were followed by the minor deities. These last consisted of many different grades, according to their character and office; and besides the heavenly and infernal deities, were genii of various kinds, as well as inferior divinities, worshipped in particular places, or by certain individuals. Diodorus⁴ seems to agree in the *number* of eight great gods;⁵ giving the names of 'the Sun, Saturn, Rhea, Jupiter (called by some Ammon), Juno, Vulcan, Vesta, and Mercury.' Chæremon thinks they were ten. Twelve and eight were the numbers applied to the *Dii Consentes* and *Selecti* of the Romans; but of these the twelve held the first rank.

From Seb also, who was confounded by the Greeks with Saturn, other gods proceeded, and the offspring of this deity and Nut were Osiris, Isis, Aroeris, Typho, and Nephthys. According to Manetho's Chronology, given by Syncellus, two dynasties

¹ 'Materia Hieroglyphica,' p. 2.

² Herodot. ii. 145.

³ Ibid. ii. 156.

⁴ Diodor. i. 13.

⁵ Though not directly stated, he evidently means the gods of Egypt.

of sixteen deities preceded the first kings of Egypt; one consisting of seven gods, the other of nine demigods.

GODS.			DEMIGODS.		
	Years.	Days.		Years.	
Vulcan, who reigned	. 72½	and 4	Horus, who reigned	. . . . .	25
The Sun	. . . . .	86	Mars	. . . . .	23
Agathodæmon	. . . . .	56½ and 10	Anubis	. . . . .	17
Chronus, Saturn	. . . . .	40½	Hercules	. . . . .	15
Osiris } . . . . .	. . . . .	35	Apollo	. . . . .	25
Isis } . . . . .	. . . . .	35	Ammon	. . . . .	30
Typho.	. . . . .	29	Tithoes	. . . . .	27
			Zosus	. . . . .	32
			Zeus	. . . . .	20

The usual mode of accounting for this reign of the gods is by referring it to the time during which the priests of each deity held the supreme authority, when Egypt was governed by a hierarchy, previous to the election of a king; but great doubts are thrown on the accuracy of this list of deities from its inconsistency, the names of some of the great gods being classed in the order of demigods.

It were to be wished that more dependence could be placed on the accounts of Herodotus and other Greek writers; but when they so erroneously suppose that the statues of the Theban Jupiter, Amen, ‘represented him with the head of a ram,’¹ and that ‘Pan was called Mendes² by the Egyptians,’ and ‘figured by them, as by the Greeks, with the head and legs of a goat,’ we must despair of obtaining correct information upon the subject before us, and only receive their evidence after cautious investigation. That Neptune and the Dioscuri were not known³ to the Egyptians is very probable; and another remark of Herodotus is equally consistent, that ‘Isis was the greatest of all the deities,’⁴ and that she enjoyed with Osiris the same honors throughout every part of Egypt, a privilege not granted to the other gods.⁵ But he has confounded Pan, whom he allows to be one of the eight gods,⁶ with Mentu,⁷ an inferior deity; and Bubastis, Diana, was not, as he affirms, the daughter of Isis and Osiris.⁸ These instances of inaccuracy suffice to make us careful in taking so dubious an authority; and we cannot even be certain that Buto held the rank he gives her among the first class of deities.⁹

If in every town or district of Egypt the principal temple

¹ Herodot. ii. 42.

² Ibid. ii. 46. [Mendes is now recognized as the goat-headed Ba-en-tattu, owing to the interchange of the M and the B; Ma-en-tattu approaching the Greek Mendes. — S. B.]

³ Herodot. ii. 43 and 50.

⁴ Ibid. ii. 40.

⁶ Ibid. ii. 145.

⁸ Ibid. ii. 156.

⁵ Ibid. ii. 42.

⁷ Ibid. ii. 46.

⁹ Ibid.

had been preserved, we might discover the nature of the triad worshipped there, as well as the name of the chief deity who presided in it, and thus become better acquainted with the character of the great gods, and of most of the persons composing the numerous Egyptian triads. Few, however, can now be ascertained; and in Lower Egypt and the Delta little information is offered by the imperfect remnants of isolated monuments.

At Thebes,

The great triad consisted of Amen or Amen-ra, Mut, and Khonsu.

The smaller triad, of Amen the Generator, Tamen, and the young Harka.

At Syene, Elephantine, and the Cataracts,

Kneph, Satis (Juno), and Anoukis (Vesta).

At Philæ,

Osiris, Isis, and Horus or Harpocrates.

At Edfoo or Apollinopolis Magna,

Har-hat, Athor, and Har-semt-ta.

At Esneh or Latopolis,

Chnoumis, Nebuu (a form of Neith), and Hak.t.

At Silsilis,

Ra, Ptah, and Nilus: where also are *Typho*, Thoth, and Nut; and Amen-ra, Ra, and Sebak.

At the quarries of the *Troici lapidis*, near Maasara,

Thoth, Nahamua, and Horus or Aroeris.

At Ombos,

The great triad consisted of Sebak, Athor, and Khonsu.

The lesser triad, of Horus or Aroeris, Sen-t-nofre, and the young Pnêb-ta.

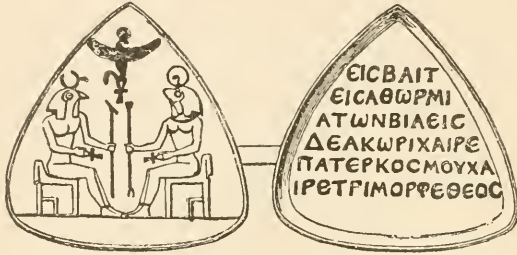
At Hermonthis,

Mentu, Ra-ta, and their child, Har-para.

The funeral triad, composed of Osiris, Isis, and Nephthys, occurs in all the tombs throughout the country; and many others, variously combined, in different towns and provinces of Egypt. I have also seen a triad represented on a stone, consisting of Ra, Agathodæmon or a winged asp, and a goddess apparently with a frog's head; in a Greek inscription upon the reverse of which mention is made of Bait, Athor, and Akori.

Bait seems to be the Baieth of Horapollo; but it is not easy to assign the Greek names to each figure on the obverse; and as it is of late time, the authority both of these and of the Greek

names is of very little weight. The inscription, however, is curious, from the analogy it bears to some of those ascribed to the early Christian Gnostics, and serves to show the idea entertained by the pagan Egyptians of a 'triformous deity,' 'the father of the world,' who assumed different names according to the triad under which he was represented.



No. 494. Stone representing a triad in these words: 'One Bait, one Athor (one of the Bia), and one Akori. Hail, father of the world! hail, triformous god!' in elegaic verse.¹
British Museum.

The great triads were composed of the principal deities, the first two members being frequently of equal rank, and the third, which proceeded from the first by the second, being subordinate to the others; as in the case of Osiris, Isis, and Horus, or Amen, Mut, and Khonsu. Other triads were formed of deities of an inferior class; and it sometimes happened that, with the unworthy feeling of paying a high compliment to the ruling monarch, a sort of triad was composed of two deities and the king, as at Thebes, where Rameses III. is placed between Osiris and Ptah; at Aboukeshayd,² where the Great Rameses occurs between Ra and Atmu; and others in other places. At Silsilis, the King Ptahmen, Meneptah, offers to a triad composed of Osiris, Isis, and Rameses the Great, the latter taking the place of Horus, to whom the Egyptian kings were frequently likened; and to such a point was this degradation of religion carried in the time of the Ptolemies, that at Hermonthis a triad composed of Julius Cæsar, Cleopatra, and Neocæsar, their illegitimate son, took the place³

¹ [Others think it is, 'Thou art Bait (the soul); thou art Athor, one of the Bia; and thou art Akori (the viper). Hail, father of the world! hail, triform god!'] and they think that the Greek inscription may be of later time, when the stone was used as an Abraxis. Col. Leake was of opinion that the trinity named BIA consisted of Buto, Isis, and Athor = Lato, Demeter, and Aphrodite = Latona, Ceres, and Venus,

the words *μία τῶν ΒΙΑ* implying that the trinity were all females.—G. W.]

² On the Suez canal. A copy of the stone containing these three figures is given in 'Materia Hieroglyphica,' Appendix No. 4.

³ Champollion, *Lettres* viii. and xii., pp. 106 and 206 [who was the first to notice the triads.—G. W.]

of the three deities, Mentu, Ra-ta, and Har-para, worshipped in that city.

With regard to the former of these combinations, in which a king is represented as proceeding from two deities and forming the third person of a triad, some excuse may be offered, upon the plea of their selecting the most important result of the power of the Deity, upon this principle: the influence of *intellect on matter* producing the *created being* in the king; and *this the noblest work* of the Creator being put forth in lieu of the *whole creation*. But the same apology cannot be offered for the latter; and to the servile flattery of some members of the priesthood, and to the abuses introduced under the Ptolemies, is to be attributed this great profanation of the religious customs of the Egyptians.

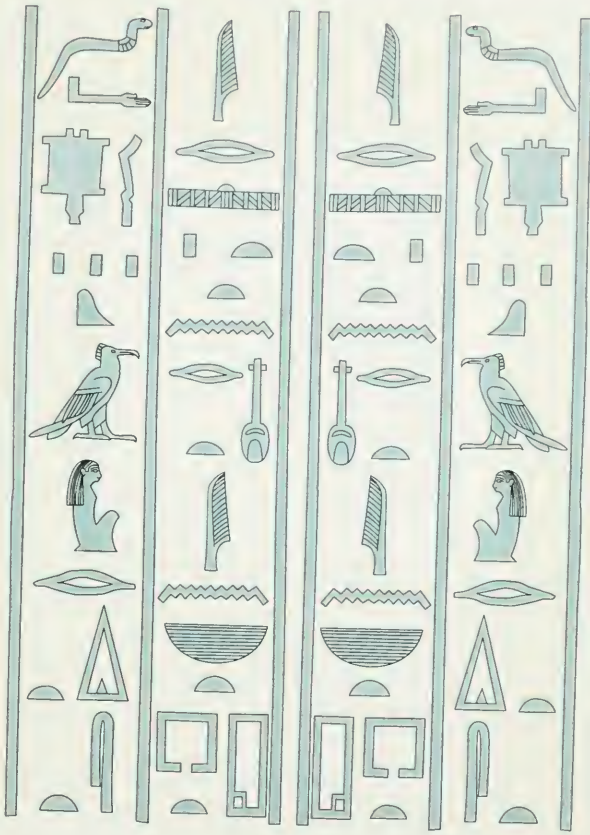


No. 495. Offerings of onions made by a priest to his deceased parents.

The inscriptions are as follows: The seated male figure is 'his brother, priest of Amen, Har-a, surnamed Kairu, truth-speaking,' deceased, and at his side is 'his sister, the lady of the house,' a married woman, 'Ta-ari, truth-speaking.' The priest offering the bunch of onions is 'his son, a chancellor of Amen, Bak eu amen.' This is taken from a tablet where other figures appear. —S. B.

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Fig. 1

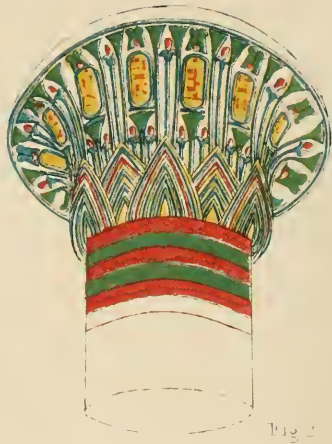


Fig. 2



Fig. 5

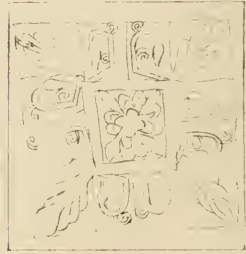


Fig. 7



Fig. 6

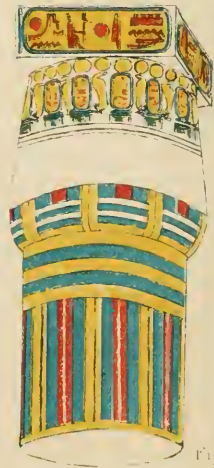


Fig. 8

CAPITALS of COLUMNS
and a Piece of coloured Glass (Fig. 5, 6, 7)

MANNERS AND CUSTOMS
OF
THE ANCIENT EGYPTIANS,

INCLUDING

THEIR PRIVATE LIFE,
GOVERNMENT, LAWS, ARTS, MANUFACTURES,
RELIGION, AND EARLY HISTORY ;

DERIVED FROM A COMPARISON OF
THE PAINTINGS, SCULPTURES, AND MONUMENTS STILL EXISTING
WITH THE ACCOUNTS OF ANCIENT AUTHORS.

Illustrated by Drawings of those Subjects.

By J. G. WILKINSON, F.R.S. M.R.S.L. &c.

AUTHOR OF "A GENERAL VIEW OF EGYPT, AND
TOPOGRAPHY OF THEBES," &c.

IN THREE VOLUMES.

VOL. III.

LONDON:
JOHN MURRAY, ALBEMARLE STREET.

MDCCCXXXVII.

LONDON :
Printed by A. SPOTTISWOODE,
New-Street-Square.

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LIST AND EXPLANATION

OF THE

PLATES, WOOD-CUTS, AND VIGNETTES OF VOL. III.

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282. No. 382. Figures of kings wearing the crowns of Upper and Lower Egypt; either two distinct persons, or the same king, with his *prænomen* and *nomen*.
309. No. 383. Section of one of the southern grottoes of Beni Hassan.
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311. No. 385. Artists painting on board, and colouring a figure.
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ERRATA IN VOL. III.

- Page 62. note 1. for "grown there, which is evidently," read "grown there, which (however erroneous) is evidently."
68. note § for "Fa as" read "Faras."
104. line 5. from the bottom, for "same process," read "same means."
237. note 5. for "tom. i. l. i. c. 1." read "tom. i. l. ii. c. 4."
238. one line from bottom, after "their use" put inverted commas.
264. line 15. for "Pluto," read "Plato."

IN THE WOOD-CUTS.

263. Vignette. The stones forming the arch are made too thin.

XXIV LIST AND EXPLANATION OF PLATES, ETC.

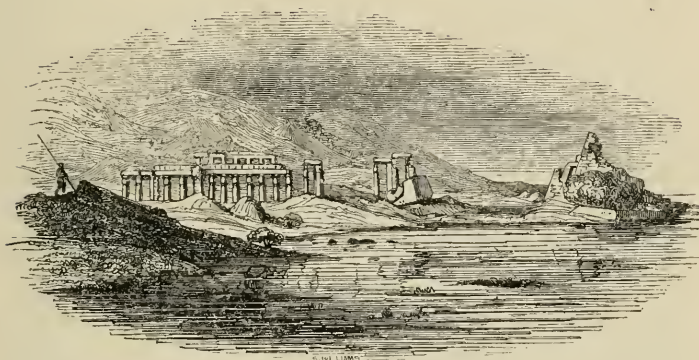
Page

336. Wood-cut, No. 392. Large granite colossus, which men are sculpturing, polishing, and painting.
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MANNERS AND CUSTOMS
OF THE
ANCIENT EGYPTIANS.

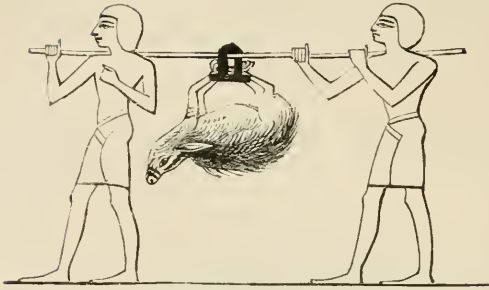


VIGNETTE G. The palace-temple of Remeses the Great, generally called the Memnonium, at Thebes, during the inundation.

CHAPTER VIII.

The Chase. — Animals. — Dogs. — Fowlers — Fishermen. — Hippopotamus. — Crocodile. — The Tentyrites.

ALL classes of the Egyptians delighted in the sports of the field, and the peasants deemed it a duty as well as an amusement, to hunt and destroy the hyæna, and those animals which were enemies of the fields or flocks, and they shot them with the bow, caught them in traps, or by whatever means their dexterity and ingenuity could suggest. For though the hyæna is a carnivorous animal, it is not



No. 318.

Hyæna caught in a trap.

Thebes.

less hostile to the crops than to the flocks, when pressed with hunger*, and the ravages they are known to commit in the fields among the Indian corn and other produce, make the peasants of modern Egypt as anxious as their predecessors to destroy them, whenever they have an opportunity, or the courage to attack them.

CHASE.

Plato† reckons the huntsmen as one of the castes of the Egyptians; and though, as I have already observed, persons who followed this occupation may have constituted a particular body, or a minor subdivision of one of the castes, we are not to suppose, that the sports of the field were confined to those who gained their livelihood by the chase; or that the wealthy classes of Egyptians were averse to an amusement so generally welcomed in all countries. Indeed, the sculptures of

* I have already noticed this in *Egypt and Thebes*, p. 243, note.

† Plato in *Timæo*, near the beginning.

Thebes, Beni Hassan, and other places, assure us, that they took particular delight in chasing the wild animals, kept in their preserves for this purpose, and even in the more laborious task of following them in the extensive tracts of the wide desert, which stretch to the east and west of the valley of the Nile. On these occasions they were attended by several huntsmen, whom they kept in their service, to attend upon the hounds, to direct the hunt, to assist in catching the larger animals with a noose, to carry darts and hunting poles*, to arrange the nets†, and, in short, to manage all matters connected with the chase.

When the chasseur was a person of consequence, numerous attendants accompanied him, not merely in the capacity of beaters, to rouse and turn the game, or to carry it when killed, but for various purposes connected with his immediate wants or comforts while in the field; some brought with them a fresh supply of arrows, a spare bow, or other requisites for remedying accidents; and some carried a stock of provisions for his use. These were borne upon the usual yoke, across the shoulders, and consisted of a skin of water, and jars placed

* The Roman *venabula* were of the thickness of a spear, armed with a sharp iron point, of moderate length, and used as a defensive weapon against the attack of a wild beast, being held in a slanting direction to receive it. J. Pollux, v. 4.

† Virg. *Æn.* iv. 131.:

“Retia rara, plagæ, lato venabula ferro,
Massylique ruunt equites, et odora canum vis.”

And Hor. 1 Ep. vi. 58. :—

“Plagas, venabula, servos.”

This person was called by the Greeks, *δικτυαγωγος*. J. Pollux, v. 4.

in wicker baskets, probably containing bread, meats, or other provisions. The skins used for carrying water were precisely the same as those of the present day, being of a goat, or a gazelle, stripped from the body by a longitudinal opening at the throat; the legs serving as handles, to which ropes for slinging them were attached; and a soft pendent tube of leather sewed to the throat, in the place of the head, formed the mouth of the water-skin, which was secured by a thong fastened round it.

Sometimes a space of ground, of considerable extent, was enclosed with nets, into which the animals were driven by beaters; and as this is frequently shown by the sculptures to have been in a hilly country, it is evident that the scenes of those amusements were in the desert, where they probably extended nets across the narrow vallies, or torrent beds, which lie between the rocky hills, difficult of ascent to animals closely pressed by dogs. This is indeed the only way in which a person, mounted on horseback* or in a chariot, could follow, or get within reach of them with the bow; and that some animals, particularly antelopes, when closely pressed, fear to take a steep ascent, is a fact well known to the Arabs; and I have myself,

* As in Virgil, *Æn.* iv. 151. :—

“ Postquam altos ventum in montes, atque in via lustra;
 Ecce feræ, saxi dejectæ vertice, capræ
 Decurrere jugis: alia de parte patentes
 Transmittunt cursu campos, atque agmina cervi
 Pulverulenta fuga glomerant, montesque relinquunt.
 At puer Ascanius *mediis in vallibus acri*
 Gaudet equo: jamque hos cursu, jam præterit illos.”

when following them with dromedaries in the same valleys, observed that gazelles preferred doubling, and swiftly passing between their pursuers, to the risk of slowly ascending the eminence to which they had been driven.

The spots thus enclosed were usually in the vicinity of the water brooks*, to which they were in the habit of repairing in the morning and evening: and having awaited the time when they went to drink, and ascertained it by their recent tracks on the accustomed path†, the hunters disposed the nets, occupied proper positions for observing them unseen‡, and gradually closed in upon them. Such are the scenes partially portrayed in the Egyptian paintings, where long nets are represented surrounding the space, wherein the chasseur and his attendants pursue the game, either on foot or mounted in a chariot: and the presence of hyænas, jackals, and various wild beasts unconnected with the sport, is intended to show that they have been accidentally enclosed within the line of nets, which, from embracing an extensive tract, necessarily included within its range the resort of these, as well as of the antelopes and other animals, of which they were in quest.

* "As the hart panteth after the water brooks." Ps. xlii. i. The Hebrew name is אֵיל Ail, evidently the same as the Egyptian $\Theta\iota\omicron\gamma\lambda$ and the Arabic أيل , which I believe to be the Oryx.

† My long sojourn with the Arabs in the desert, and my frequent visits to the springs for the same purpose, have explained to me the methods adopted by the ancient Egyptian chasseurs.

‡ The person whose business it was to watch the nets, was called by the Greeks $\lambda\iota\omicron\pi\tau\eta\varsigma$, ο τα εμπιπτοντα επισκουμενος. J. Pollux, v. 4.

The same custom of surrounding a spot, which they intended to beat, seems to have been adopted by the Romans; and Virgil* represents Æneas and Dido repairing to a wood at break of day, after the attendants had surrounded it with a temporary fence, to enclose the game. This is further confirmed by the description, given by Julius Pollux, of the various contrivances employed in hunting; and he makes an evident distinction between the nets for enclosing a large space, and those for stopping gaps or openings, and other purposes.

The long net, called *δικτυς*, was furnished with several ropes, and was supported on forked poles, varying in length, to correspond with the inequalities of the ground over which it extended, and this was so contrived as to enclose any space, by crossing hills, valleys, or streams, and encircling woods, or whatever might present itself; a description fully applicable to those exhibited in the Egyptian paintings†; smaller nets, called *ενοδια*, for stopping gaps, are also described by the same author; and a circular snare *ποδαγρα*, set round with wooden and iron nails, and attached by a rope to a log of wood, which was used for catching deer, so nearly resembles one still made by the Arabs, and supposed to be an old Egyptian invention, that we

* “ Venatum Æneas, unaque miserrima Dido,
In nemus ire parant, ubi primos crastinus ortus
Extulerit Titan, radiisque retexerit orbem.
His ego nigrantem cominista grandine nimum,
Dum trepidant alæ, saltusque indagine cingunt,
Desuper infundam.” Virg. Æn. iv. 117.

† Vide J. Poll. Onom. v. 4.

may conclude it was common to several ancient people.

In many instances, the dresses of the attendants and huntsmen were, as Julius Pollux recommends, “not white, nor of a brilliant hue, lest they should be seen at a distance by the animals,” but of a suppressed colour, and reaching only a short way down the thigh* ; being shorter even than those he mentions, which extended to the knee ; and the horses of the chariots were divested of the feathers and showy ornaments used on other occasions.

Besides the portions of the open desert and the vallies, above alluded to, which were enclosed by the Egyptians, during their hunting excursions, the parks and preserves on their own domains in the valley of the Nile, though of comparatively limited dimensions, offered ample space and opportunity for indulging in the amusement of the chase ; and there, as in the *theriotrophia* of the Romans, a quantity of game was kept, among which may be enumerated the wild goat, oryx, and gazelle. They had also fishponds and spacious *vivaria*, set apart for keeping geese and other wild fowl, which they fattened for the table.

It was the duty of the huntsmen or the gamekeepers they employed, to superintend the preserves ; and at proper periods of the year, when the young animals could be obtained, they sought them, and added to the stock, which continued also to increase.

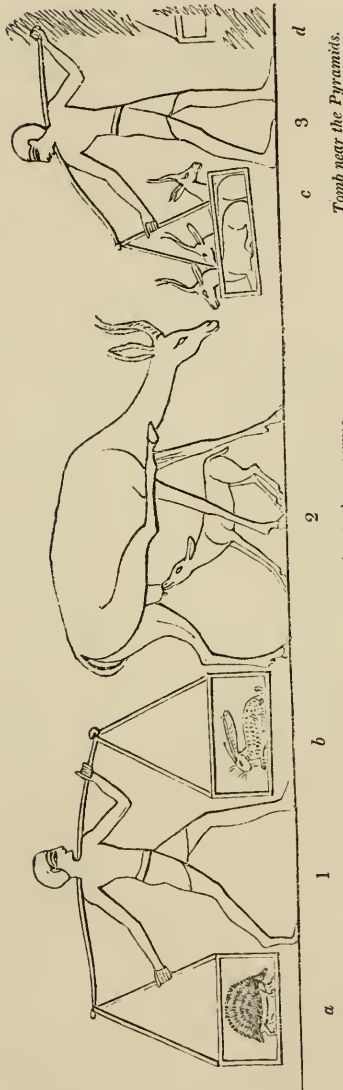
* *Vide* woodcut, No. 319. It was customary with the Egyptians, on ordinary occasions, to wear a kelt reaching to the knee.



No. 319. Bringing young animals to stock the preserves. *Tomb near the Pyramids.*

independent of those occasional additions, through the care taken in encouraging their propagation, by a judicious regard to their habits. And this is confirmed by the numerous flocks of gazelles and other wild animals, represented in the tombs, among the possessions of the deceased, of which the scribes are seen writing an account, at the command of the steward, who waits to present it, with an annual census of his property, to the owner of the estate.

Being fed within pastures enclosed with fences, they were not marked in any particular way like the cattle, which, being let loose, in open meadows, and frequently allowed to mix with the herds of the neighbours, required some distinguishing sign by which they might be recognised; and were, therefore, branded on the shoulder with a hot iron, probably engraved with the owner's name. This is distinctly shown in the paintings of Thebes, where the cattle are represented lying on the ground with their feet tied, while one person heats an iron on



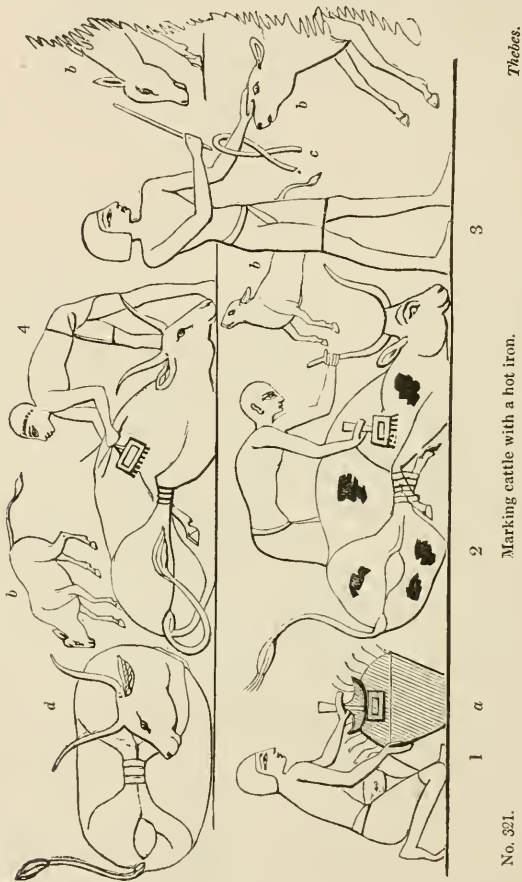
Tomb near the Pyramids.

Gazelles and other animals belonging to the preserves.

No. 320.

the fire, and another applies it to the shoulder of the prostrate animal.

In primitive ages, the chase was not an amusement, but a necessary occupation among those people, who did not follow agricultural pursuits, or



No. 321.
 Fig. 1. Heating the iron on the fire, *a*.
 2. and 4. Employed in marking the cattle.
 3. Holds a tethering cord on his left arm, and keeps away the calves.

lead a pastoral life, and who depended for their subsistence upon the sports of the field: and in some instances the shepherd was obliged to hunt

and destroy the wild beasts, for the security of his flocks and herds: and sometimes even for his own safety.* In after times, when population increased, and each community began to adopt the habits of civilised life, the injuries apprehended from them decreased; and the fear of man having compelled them to remove their haunts to a greater distance, their pursuit was no longer required; and those who hunted followed the occupation as an amusement, to supply the table, or in the employ of other persons: as among the Egyptians, Babylonians, Persians, and Medes.

In the East, indeed, it was always looked upon as a manly exercise, requiring courage and dexterity, and tending to invigorate the body, and to instil into the mind a taste for active pursuits; it was held in such repute, that the founders of empires were represented in the character of renowned hunters; and the Babylonians were so fond of the chase, that the walls of their rooms presented a repetition of subjects connected with it †; and they even ornamented their dresses and the furniture of their houses with the animals they hunted.‡ The Medes and Persians were equally noted for their love of field sports; and, like the Egyptians, they had spacious preserves § where the game was enclosed; the grounds of the royal palaces containing antelopes and other animals,

* Whence in Exodus xxiii. 29.: "I will not drive them out from before thee in one year, lest the land become desolate, and the beast of the field multiply against thee."

† Ammian. Marcell. lib. xxvi. c. 6. Diod. 2. ‡ Athen. lib. xii. 9.

§ Xenoph. Cyr. lib. i. "εν παραδείσοις." Dio. Chrysost. in Orat. 3.

pheasants, peacocks, and abundance of birds, as well as lions, tigers, and wild boars.*

The Egyptians frequently coursed with dogs in the open plains, the chasseur following in his chariot, and the huntsmen on foot. Sometimes he only drove to cover in his car, and having alighted, shared in the toil of searching for the game, his attendants keeping the dogs in slips, ready to start them as soon as it appeared. The more usual custom, when the dogs threw off in a level plain of great extent, was for him to remain in his chariot, and, urging his horses to their full speed, endeavour to turn or intercept them as they doubled, discharging a well directed arrow whenever they came within its range.

The dogs were taken to the ground by persons expressly employed for that purpose, and for all the duties connected with the kennel, the *κυναγωγοί* † of the Greeks, and were either started one by one, or in pairs, in the narrow vallies or open plains: and when coursing on foot, the chasseur and his attendant huntsmen, acquainted with the direction and sinuosities of the torrent beds, shortened the road, as they followed across the intervening hills, and sought a favourable opportunity for using the bow: or marked with a watchful eye the progress of the course in the level space before them.‡ For not only was the chasseur provided with a bow, but many

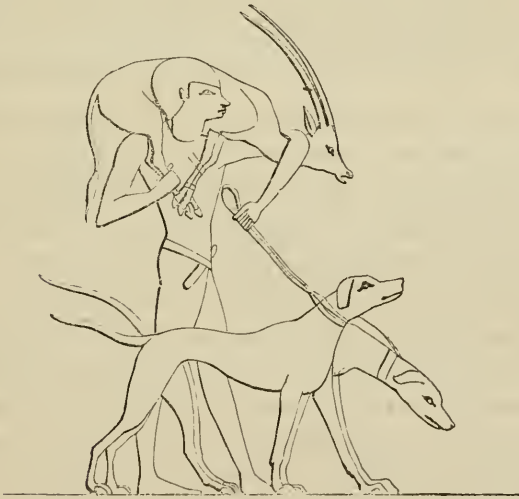
* Cartius, lib. 7 and 8. Xenoph. Cyrop. lib. i.

† J. Pollux, iv. 5.

‡ As the Arabs of the present day, in the same districts.

of those also who accompanied him ; and the number of head brought home was naturally looked upon as the criterion of *his* good day's sport.

Having with eager haste pursued on foot, and arrived at the spot where the dogs had caught their prey, the huntsman, if alone, took up the game, tied its legs together, and hanging it over his shoulders, once more led by his hand the coupled dogs, precisely in the same manner as the Arabs are wont to do at the present day ; this, however, was generally the office of persons who followed expressly for the purpose, carrying cages and baskets on the usual wooden yoke, and who



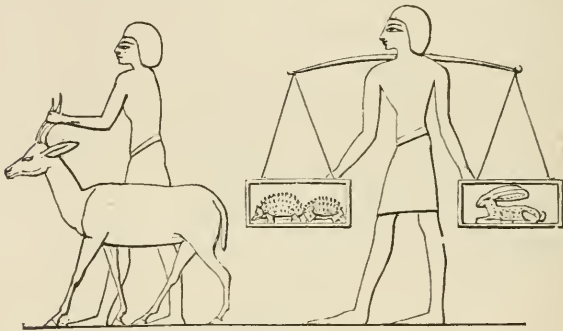
No. 322.

A huntsman carrying home the game, with his coupled dogs.

Thebes.

took charge of the game as soon as it was caught ; the number of these substitutes for our game cart depending of course on the proposed range of the

chase, and the abundance they expected to find. Sometimes an ibex*, oryx, or wild ox, being closely pressed by the hounds, and driven to an eminence of difficult ascent, faced round and kept them at bay, with its formidable horns†, and the spear of



No. 323. Bringing home the game: a gazelle, porcupines, and hare. *Beni Hassan.*

the huntsman, as he came up, was required to decide the success of the chase.

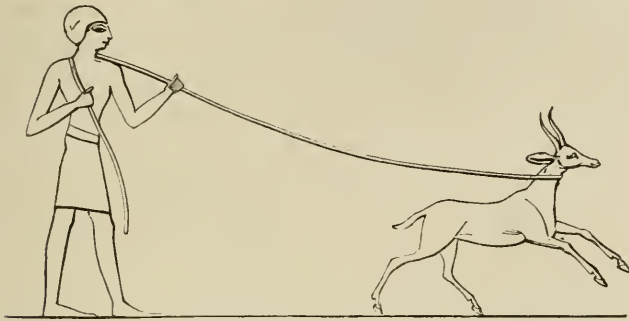
It frequently happened, when the chasseur had many attendants, and the district to be hunted was extensive, that they divided into parties, each taking one or more dogs, and starting them on whatever animal broke cover; sometimes they went without hounds, merely having a small dog for searching the bushes, or laid in wait for the larger and more formidable animals, and attacked them with the lance.

The noose was also employed to catch the wild

* The wild goat of the desert, the *beddan*, or *taytal*, of the Arabs, which are still common in the desert between the Nile and Red Sea.

† I have occasionally witnessed instances of this in the desert.

ox, the antelope, and other animals ; and as they are always represented on foot, when throwing it, we

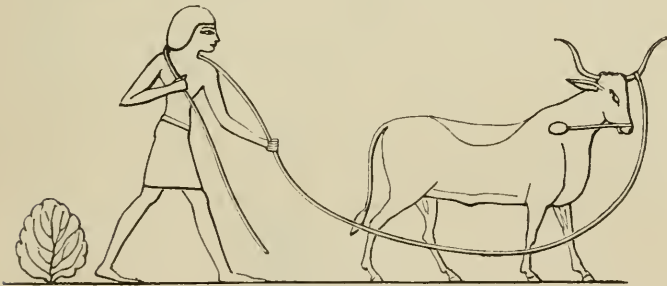


No. 324.

Catching a gazelle with the noose.

Beni Hassan.

may suppose they lay in ambush for this purpose, and that it was principally adopted when they wished to secure them alive: since we find they frequently



No. 325.

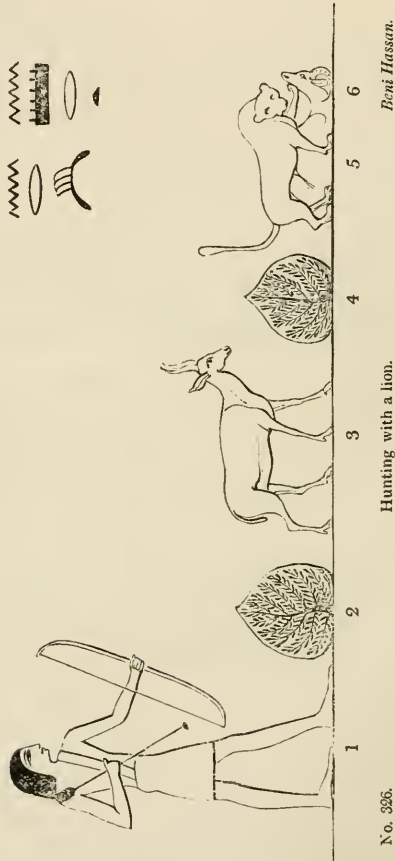
Catching a wild ox with the noose or lasso.

Beni Hassan.

chased the same animals with dogs, and with the bow. The noose was very similar to the *lasso* of South America, but it does not appear that the Egyptians had the custom of riding on horse-back when they used it ; and from the introduction of a bush immediately behind the man who has

thrown it, we may suppose the artist intended to convey the notion of his previous concealment.

Besides the bow, the hounds, and the noose, they hunted with lions, which were trained expressly for the chase, like the *cheeta* or hunting leopard of



No. 386.

Fig. 5. The lion which has seized an ibex.

India: but there is no appearance of the leopard* or the panther having been employed for this purpose; and the lion was always the animal they preferred. It was frequently brought up in a tame state†, and many Egyptian monarchs are said to have been accompanied in battle by a favourite lion,—as we learn from the sculptures of Thebes and other places, and from the authority of Diodorus.‡

The bow used for the chase was very similar to that employed in war; the arrows were frequently the same, with metal heads, but some were tipped with stone, which are represented in the hunting scenes of Beni Hassan, and in many of those at Thebes. The mode of drawing the bow was also the same, though, as I have already observed, the chasseurs sometimes pulled the string only to the breast, instead of the more perfect and more usual method of raising it, and bringing the arrow to the ear; and occasionally, one or more spare arrows were held in the hand§, to give greater facility in discharging them with rapidity on the swift antelopes and wild oxen.

ANIMALS.

The animals they chiefly hunted, were the gazelle, wild goat or *ibex*, the oryx, wild ox,

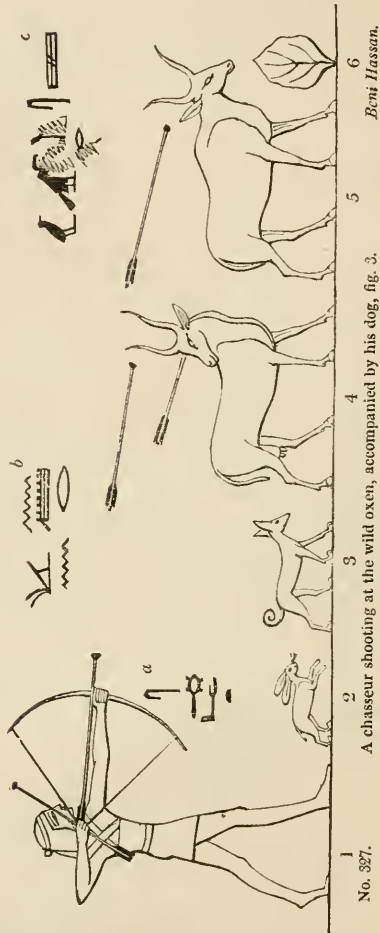
* Bagajet I. (Byazeéd) had 12,000 officers and servants of the chase. Besides hounds of various breeds, he had leopards, whose collars were set with jewels. Gibbon, xi. 64.

† I have seen two or three tame lions in Cairo. Animals are more easily tamed in those climates than in Europe.

‡ Diod. i. 48. And the sculptures of Dayr, Medeenet Haboo Kalabshi, &c.

§ *Vide* wood-cut, No. 327.; and No. 30., in Vol. I.

stag*, *kebsh* or wild sheep, hare, and porcupine†;



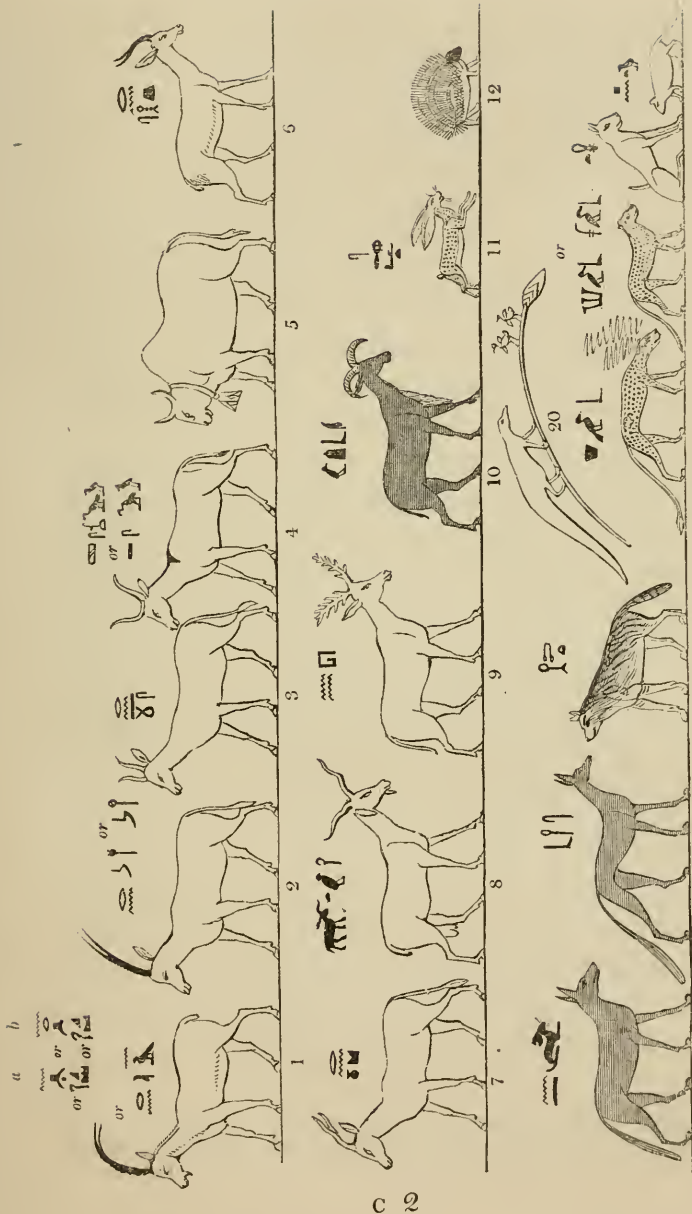
No. 327. A chasseur shooting at the wild oxen, accompanied by his dog, fig. 3.

Beni Hassan.

of all of which the meat was highly esteemed among

* Probably the same as the *Cervus barbarus*.

† I have not found this animal in Egypt. It is eaten in Italy, and sold in the markets of Rome and other places.



No. 328.

14
15
16
17
18
19

Animals from the Sculptures. 5, 15, 20. from *Thebes*; the rest from *Beni Hassan*.

1. The ibex. 2. The oryx. 3, 4. Wild oxen. 5. Humped or Indian ox. 6. Gazelle. 7. Probably the antelope addax. 8. Goat. 9. Stag.
 10. The kebsh. 11. Hare. 12. Porcupine. 13. Wolf. 14. Fox. 15. Hyena. 16, 17. Species of Leopard. 18. Cat. 19. Rat. 20. Ibbrennon.
 10. Is coloured red in the paintings; the kebsh is of a sandy colour.

the delicacies of the table. Others, as the fox, jackal, wolf, hyæna, and leopard, were chased as an amusement, for the sake of their skins, or as enemies of the farm-yard; and the ostrich held out a great temptation to the hunter from the value of its plumes. These were in great request among the Egyptians for ornamental purposes; a religious veneration for them, as the symbol of truth, enhanced their value; and the members of the court on grand occasions failed not to deck themselves with the feathers of the ostrich. The labour endured during the chase of this swift-footed bird was amply repaid; even its eggs were required for some ornamental or religious use, and these, with the plumes, formed part of the tribute imposed by the Egyptians on the conquered countries where it abounded. The purposes to which the eggs were applied are unknown; but we may infer, from a religious prejudice in their favour among the Christians of Egypt, that some superstition was connected with them, and that they were suspended in the temples of the ancient Egyptians, as they still are in the churches of the Copts.*

The subjects of the chase in the sculptures are frequently represented with great spirit. The character of the animals is maintained with wonderful truth, and, though time and the hand of man have done much to injure them, sufficient re-

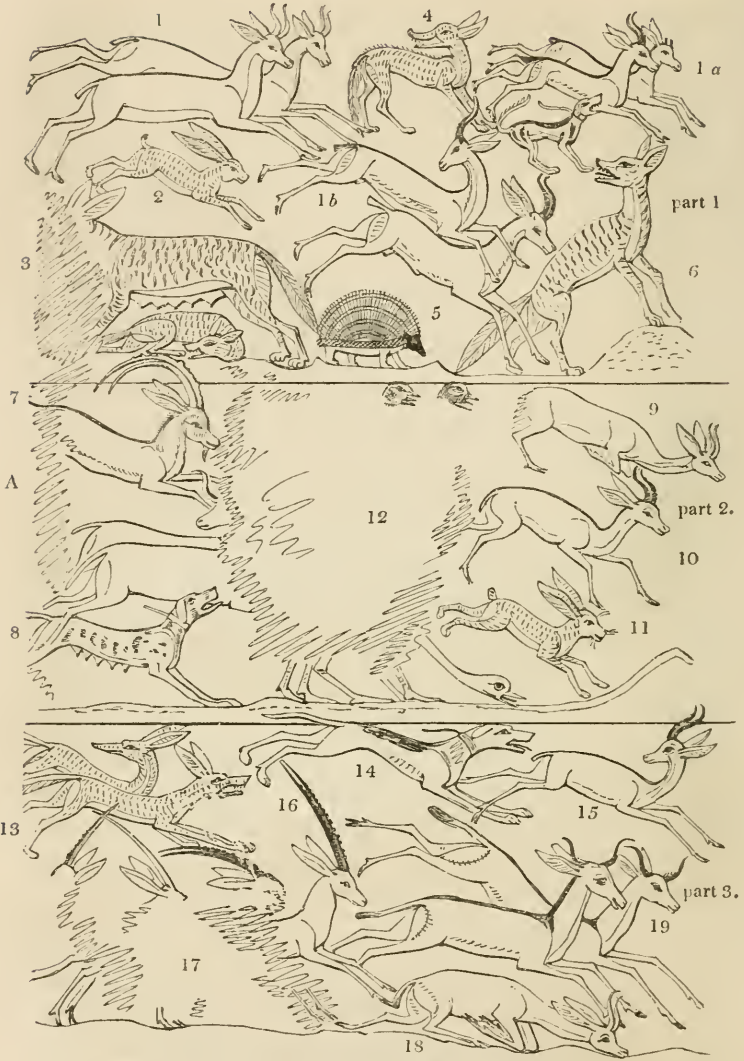
* They consider them the emblems of watchfulness. Sometimes they use them with a different view: the rope of their lamps is passed through the egg, in order to prevent the rats coming down and drinking the oil, as we were assured by the monks of Dayr Antonios.

mains to evince the skill of the Egyptian draughtsmen. Distance and locality are not so well defined, and the archer, like all Egyptian figures, offends against every rule of drawing and perspective ; but the action of the dogs and of the flying antelopes is spirited, and shows how successfully the effect was given by simple outline.

It is singular that the wild boar is never represented among the animals of Egypt, since it is a native of the country ;—and is even eaten at the present day, in spite of the religious prejudices of the Moslems*, by many of the inhabitants of the districts where it lives :—nor can I suggest any reason for this omission, except from its not frequenting those parts where the scenes of the chase are laid, being confined to the low marshy spots about the north of the Delta, and the banks of the Lake Mœris. In the Thebaid it was unknown ; the sculptures or paintings of Diospolis relate principally to the vicinity of Upper Egypt, and the monuments of the Delta and the lower country are too few to enable us to say if it was omitted there. Nor is the wild ass met with in the paintings, either of Upper or Lower Egypt, though it is common in the deserts of the Thebaid.

Many other animals are introduced in the sculptures, besides those already noticed, some of which are purely the offspring of disordered imagination : and the winged quadrupeds, sphinxes, or lions, with the head of a hawk, or of a snake,

* That is, followers of Islâm. Need I add, they never call themselves Mahometans, which is an European misnomer ?



No. 329.

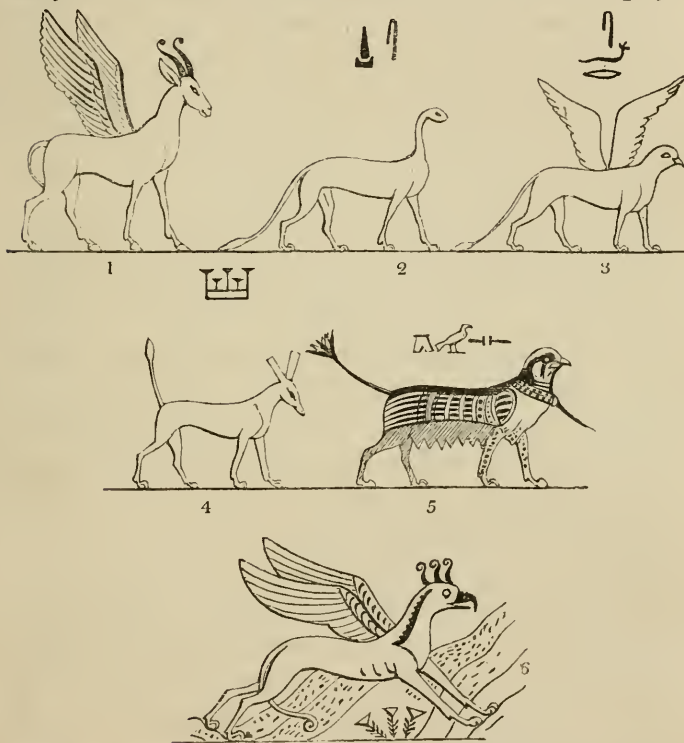
A chase in the desert of the Thebaid.

Thebes.

To the left of A was the chasseur in his chariot shooting with the bow, now defaced.
 Figs. 1, 9, 15, 18, Gazelles. 2, 11, Hares. 3, Female hyæna, with its young. 4, 13, Foxes.
 5, Porcupine. 6, Hyæna arrived at the top of a hill and looking towards the chasseur. 7, The ibex. 8, 14, Hounds. 12, Ostriches (defaced). 16, The oryx.
 19, Wild oxen.

and some others equally fanciful and unnatural, can only be compared to the creations of heraldry*, or serve as companions to the monsters of Pliny. †

The Egyptian sphinx was usually an emblematic figure, representative of the king, and may be considered, when with the head of a man and the body of a lion, as the union of intellect and phy-



No. 330.

Monsters, in the paintings of Beni Hassan and Thebes.

sical force: it is therefore scarcely necessary to

* An Austrian nobleman asked an English ambassador at Vienna, whose arms presented a griffin and other monsters, "in what forest they were met with?" "In the same," said the ambassador, "where you find eagles with two heads."

† Plin. viii. 21.

observe that they are never female, as those of the Greeks. Besides the ordinary sphinx, compounded of a lion and a man, and denominated androsphinx, were the criosphinx, with the head of a ram, and the hieracosphinx, with the hawk's head and lion's body,—all which are representatives of the king: but the asp-headed and the hawk-headed sphinx with wings, do not appear to have been adopted as the same symbol.

Those of the above mentioned animals which are still found in Egypt, either in the Valley of the Nile, or in the desert, are the gazelle *, ibex, *kebs*, hare, fox, jackal, wolf, and hyæna.

The *oryx* † is a native of Ethiopia, as is the spotted hyæna ‡ or *maraféén*; which last is once represented in the Egyptian sculptures. The oryx has long annulated horns, tapering to a sharp point, and nearly straight, with a slight curve or inclination backwards. It frequently occurs in the sculptures, being among the animals tamed by the Egyptians, and kept in great numbers in the preserves of their villas.

The *beïsa* § is very like the oryx, except in the black marks upon its face, and a few other points; and the *addax* ||, another antelope, inhabiting Upper Ethiopia, differs principally from the oryx in its horns, which have a waving or spiral form: but these do not appear in the sculptures, unless the Egyptian artists, by an imperfect representation of

* Wood-cut, No. 328. *fig.* 6. and No. 329. *figs.* 1, 9, 10, 15, 18.

† The antelope leucoryx. *V.* wood-cut, No. 323. *fig.* 2. & No. 329. *fig.* 16.

‡ The *canis crocutus*, which appears to be the *chaus* of Pliny, or, as some editions have it, *chama*: “*effigie lupi, pardorum maculis.*” Lib. viii. 19.

§ Antelope *beïsa*.

|| Antelope *addax*.

them, and an inattention to their distinguishing peculiarities, have confounded them * with the oryx or the wild ox.

This last, which is also of the genus *antilope* †, the *defassa* of modern zoologists, though not a native of Egypt, is found in the African desert, and I believe in Eastern Ethiopia; it is of a reddish sandy and grey colour, with a black tuft terminating its tail, and stands about four feet high at the shoulder. Though made too much to resemble a common ox in some of the paintings, it is sufficiently evident that the Egyptians had in view the *defassa*, in their representations of this animal: and the Theban sculptors ‡, who had a better opportunity of becoming acquainted with it, have succeeded in giving its character far more satisfactorily than the painters § of Beni Hassan.

The stag with branching horns ||, figured at Beni Hassan, is also unknown in the Valley of the Nile; but I have been assured that it is still seen in the vicinity of the Natron Lakes, though not a native of the desert between the river and the Red Sea.

The *ibex* ¶, which is common in the Eastern desert, as far north as the range of the Qalalla and Gebel Aboo-Dúrrag, or latitude 29° 30', is very similar to the bouquetin of the Alps, and is called in Arabic *Beddan* or *Táytal*. The former appellation is exclusively applied to the male, which is readily distinguished by a beard and large knotted horns, curving backwards over its body, the female

* Fig. 7 of wood-cut, No. 328. appears to be the addax.

† Antilope defassa.

‡ Vide wood-cut, No. 329. fig. 19.

§ Vide wood-cut, No. 327. figs. 4. & 5.

|| Wood-cut, No. 328. fig. 9.

¶ Wood-cut, No. 328. fig. 1.

having short erect horns, scarcely larger than those of the gazelle, and being of a much smaller and lighter structure.

The *kebsh*, or wild sheep, is found in the Eastern desert, principally in the ranges of primitive mountains, which, commencing about latitude $28^{\circ} 40'$, at the back of the limestone hills of the Valley of the Nile, extend thence into Ethiopia and Abyssinia. The female *kebsh* is between two and three feet high at the shoulder, and its total length from the tail to the end of the nose is a little more than four feet: but the male is larger, and is provided with stronger horns, which are about five inches in diameter at the roots, and are curved down towards the neck. The whole body is covered with hair, like many of the Ethiopian sheep, and the throat and thighs of the fore legs are furnished with a long pendent mane; a peculiarity not omitted in the sculptures, and which suffices to prove the identity of the *kebsh**, wherever its figure is represented.

The porcupine is not a native of Egypt; nor is the leopard met with on this side of Upper Ethiopia. Bears are altogether unknown, and if they occur twice in the paintings of the Theban tombs, the manner in which they are introduced sufficiently proves them not to have been among the animals of Egypt, since they are brought by foreigners, together with the productions of their country, which were deemed rare and curious to the Egyptians. Herodotus is therefore in error

* Wood-cut, No. 328. *fig.* 10.

respecting the bear* as well as the otter†; but the Greek name of this last is so ambiguous, that it may apply to any “animal inhabiting the water,” which is the signification of the word *ενοδῶγος*.

With regard to the Egyptian wolf, which he says‡ is small, and “scarcely larger than a fox,” his statement is fully borne out by fact, and Pliny’s remark§, that “those of Egypt and Africa are small and inactive,” is equally just. But it is still more remarkable that in Egypt their habits differ, in one of the principal characteristics of the species, from those of other countries, being so little gregarious; for, though so often in pursuit of them, I never met with more than two together, and generally found them prowling singly over the plain.

M. Sonnini’s conclusions, respecting the existence of the wolf in Egypt, are hasty and erroneous; and he has perverted the meaning of Herodotus, when he says that the sacred animal of Lycopolis “was not the wolf, for there are none in Egypt, but the jackal, which seems clearly shown by Herodotus, when he says the wolves in that country are scarcely larger than foxes.” The tombs in the mountain above Lycopolis, the modern E’Sioot||, contain the mummies of wolves, many of which I have examined, and ascertained to be of the sacred animals of the place;

* Herod. ii. 67. “Bears being rare.”

† Herod. ii. 72. “*Γίνονται δὲ καὶ ἐνοδῶγες ἐν τῷ ποταμῷ, τὰς ἰσας ἡγῆνται εἶναι.*” May he mean the “Woiran of the river,” the large lacerta Nilotica?

‡ Herod. ii. 67.

§ Plin. 8. 22. “*Inertes hos (lupos) parvosque Africa et Egyptus gignunt.*” Aristot. Hist. An. l. 8. c. xxviii.

|| I have shown that Aboolfeda, and others, were wrong in writing this name Osioot, in my Egypt and Thebes, p. 389.

the ancient sculptures represent them as natives of the country in the earliest times ; and the coins of the Lycopolite nome bear a wolf on their reverse, with the word *lyco* (λυκο), signifying “ a wolf.” It is, therefore, evident, that M. Sonnini is in error, as to their not having been natives of Egypt in the time of Herodotus ; and since we find them on both sides of the Nile, those now met with there are shown to be indigenous in the country, and not derived from any which may have accidentally strayed from the borders of Syria.

The Egyptian hare is a native of the Valley of the Nile as well as the two deserts. It is remarkable for the length of its ears, which the Egyptians have not failed to indicate in their sculptures ; but it is much smaller than those of Europe.

The intelligent Denon has made a just remark on the comparative size of animals common to Egypt and Europe, that the former are always smaller than our own species ; and this is exemplified by none more strongly than the hare and wolf.

The *wabber** or *hyrax*, though a native of the eastern desert of Egypt, is not represented in the sculptures ; but this is probably owing to its habits, and to their hunting principally in the vallies of the secondary mountains ; the wabber only venturing a short distance from its burrow in the evening, and living in the primitive ranges, where the *seâleh*† or acacia grows. It was probably the *saphan* of the

* By a singular inadvertency, this has been called a gazelle, in M. Léon Delaborde's *Petra*. *Vide* the translation, p. 106, 107.

† The acacia, or mimosa seyâl.

Bible, as Bruce has remarked, and that enterprising traveller is perfectly correct in placing it among ruminating animals.

In enumerating the wild beasts of the desert, it may not be irrelevant to observe that the hyæna and wolf are seldom met with in unfrequented districts, or any great distance from the Nile, where they would suffer from want of food, and are therefore principally confined to the mountains lying at most a few miles from the edge of the cultivated land. Once only I have met with the wolf on the coast of the Red Sea; and few even of the watering places of the interior of the desert are infested by it, or the hyæna.

The lion is now unknown to the north of Upper Ethiopia: there, however, it is common, as well as the leopard, the *aboomungár**, and other carnivorous beasts; and the abundance of sheep in those districts amply supplies them with food, and has the happy tendency of rendering them less dangerous to man. In ancient times, however, the lion inhabited the deserts of Egypt, and Athenæus mentions one killed by the emperor Adrian, while hunting near Alexandria.† They are even said, in former times, to have been found in Syria ‡, and in Greece.

* The *aboomungar* is said to be in the Egyptian deserts as well as the *sheeb*. I have not been able to discover what these two animals really are; the former was described to me by the Arabs with a pointed nose, like a wolf, with the power of springing like a leopard, or rather like a dog, and attacking cattle: the latter was said to have a round head and shaggy neck.

† Athen. lib. xv. c. 6.

‡ Sam. xvii. 34. 2 Sam. xxiii. 20. 1 Kings, xiii. 24.

Among the animals confined to the Valley of the Nile, and its immediate vicinity, may be mentioned the ichneumon*, which lives principally in Lower Egypt and the Fyoom, and which, from its enmity to serpents, was looked upon by the Egyptians with great respect. Its dexterity in attacking the snake is truly surprising. It seizes the enemy at the back of the neck, as soon as it perceives it rising to the attack, one firm bite sufficing to destroy it; and when wounded by the venomous fangs of its opponent, it is said by the Arabs to have recourse to some herb, which checks the effect of the deadly poison.

Of the truth, however, of this commonly credited assertion†, I can say nothing; an Arab assured me he had witnessed a fight between a large venomous snake and an ichneumon, which last, whenever it received a bite, ran to a small plant, of which it eat a part, rubbing the wound against the leaves, and then returned to renew the combat; and in order to ascertain the reality of its effect, he plucked up and removed the plant, and having waited to see the wounded animal return in vain to seek it, he became convinced, by its death, that the herb alone had previously saved its life. The Arabs, however, frequently consult their imagination more than their love of truth, and, like many authors of amusing tales, they tell their stories till they believe them true.

* In Arabic, "nims," or "got Pharaon," Pharaoh's cat. It is the *viverra ichneumon*.

† They have the same notion in India.

The ichneumon* is easily tamed, and is sometimes seen in the houses of Cairo, where, in its hostility to rats, it performs all the duties of a cat; but, from its indiscriminate fondness for eggs, poultry, and many other requisites for the kitchen, it is generally reckoned troublesome, and I have often found reason to complain of those I kept.

Eggs are its favourite food, and it is said to have been greatly venerated by those who held the crocodile in abhorrence, in consequence of its destroying the eggs of that hateful animal†: but it is now rarely met with in places where the crocodile abounds; and we may conclude that at all periods its principal recommendation was its hostility to serpents. It is frequently seen in the paintings, where its habits are distinctly alluded to by the Egyptian artists, who represent it in search of eggs, among the bushes, and the usual resorts of the feathered tribe.

The wild cat, the *felis chaus* of Linnæus, is common in the vicinity of the pyramids and Heliopolis, but it does not occur among the pictured animals of ancient Egypt. Nor is the *jerboa* ‡, so frequently met with both in the upper and lower country, represented in the sculptures.

The giraffe § was not a native of Egypt, but of

* It is often introduced in the sculptures. *Vide* wood-cut, No. 328. *fig.* 20. ; and in wood-cut No. 336. it is represented carrying away a young bird from the nest.

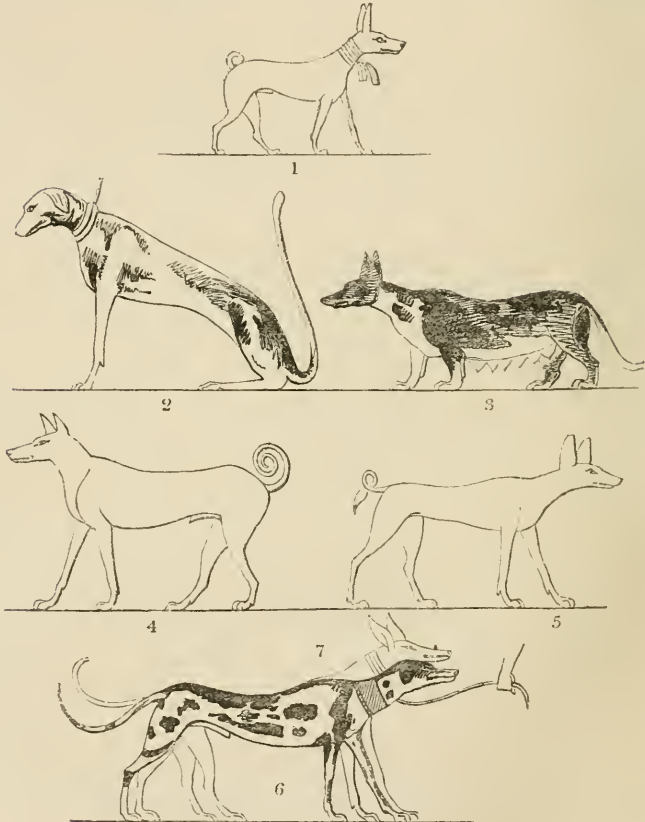
† Diod. i. 35.

‡ *Dipus jaculus*. It is eaten by the Arabs of Africa. Bruce with great reason supposes it to be the mouse mentioned in Isaiah, lxvi. 17.

§ *Vide* plate 4.

Ethiopia, and is only introduced in subjects which relate to that country, where it is brought with apes, rare woods, and other native productions, as part of the tribute annually paid to the Pharaohs.

The Egyptians had several breeds of dogs*,



No. 331.

Various kinds of dogs, from the sculptures.

some solely used for the chase, others admitted

* *Vide* also plate 4., at end of Vol. I.

into the parlour, or selected as the companions of their walks ; and some, as at the present day, selected for their peculiar ugliness. All were looked upon with veneration, and the death of a dog was not only lamented as a misfortune, but was mourned by every member of the house in which it occurred.*

The most common kinds were a sort of fox dog, and a hound ; they had also a short-legged dog, not unlike our turnspit, which was a great favourite in the house, especially, it appears, in the time of Osirtasen ; and it is possible that, as in later days, the choice of a monarch led the taste, or fashion, of the time, to fix upon a particular breed. Of the fox dog, I have found several mummies in Upper Egypt, and it is reasonable to conclude that this was the parent stock of the modern red wild dog of Egypt, which is so common at Cairo, and other towns of the lower country.

Herds of cattle, and flocks of sheep† and goats were numerous ; and pigs, though unclean‡, and an abomination to the Egyptians, frequently formed part of the stock of the farm-yard ; but they are more rarely represented in the sculptures than other animals. Their cattle were of different kinds, of which three principal distinctions are most deserving of notice, the short, the long horned cattle, and the Indian, or humped ox : and the two

* *Vide infra*, p. 42.

† I have already observed, on the authority of Diodorus, that sheep in Egypt were twice shorn, and twice brought forth lambs in the year ; as at the present day. Homer says those of Libya had lambs thrice in a year. *Od.* iv. 86.

‡ *Herod.* ii. 47.

last, though no longer natives of Egypt, are common to this day in Abyssinia and Upper Ethiopia.

Horses and asses were abundant in Egypt, and



No. 332.

Pigs; rarely seen in the sculptures.

Thebes.

1. Sows with young pigs. 2. Young pigs. 3. Boars.

a is a whip, knotted like some of our own. *b* a *gayd*, or noose.

the latter were employed as beasts of burden, for treading out corn, particularly in Lower Egypt, and for many other purposes. Like those of the present day, it is probable that they were small, active, and capable of bearing great fatigue; and, considering the trifling expense at which these hardy animals were maintained, we are not surprised to find that they were kept in great numbers in the agricultural districts, or that one individual had as many as seven hundred and sixty employed in different parts of his estate.

Egyptian horses were greatly esteemed; they were even exported to the neighbouring coun-

tries, and Solomon bought them at a hundred and fifty shekels of silver*, from the merchants who traded with Egypt by the Syrian desert.

It is remarkable that the camel, though known to have been used in, and probably a native of, Egypt, as early at least as the time of Abraham (the Bible distinctly stating it to have been among the presents given by Pharaoh to the patriarch†), has never yet been met with in the paintings or hieroglyphics. We cannot however infer, from our finding no representation, or notice of it‡, that it was rare in any part of the country, since the same would apply to poultry, which, it is scarcely necessary to observe, was always abundant in Egypt: for no instance occurs in the sculptures of fowls or pigeons, among the stock of the farm-yard, though geese are repeatedly introduced, and numbered in the presence of the stewards.

The mode of rearing poultry, and the artificial process of hatching the eggs of fowls and geese, I have already mentioned in a former work§, where I have shown the method adopted by the Copts, from their predecessors.||

Many birds, which frequented the interior and skirts of the desert, and were highly prized for the table, were caught in nets and traps, by the fowlers,

* 1 Kings, x. 28, 29.

† Gen. xii. 16. The name in Hebrew is the same by which the animal is known in Arabic, Gemel, gemelin, "גמלים." Vide also Exod. ix. 3.

‡ I have a stone seal found in Nubia, on which two camels are rudely engraved, but it is of uncertain date.

§ Egypt and Thebes, p. 245, 246.

|| Diod. i. s. 74. Pliny, x. c. 54.

as the partridge, *gutta**, bustard†, and quail‡; and waterfowl of different descriptions, which abounded in the Valley of the Nile, afforded endless diversion to the sportsman, and profit to those who gained a livelihood by their sale.

FOWLING.

Fowling was a favourite amusement of all classes; and the fowlers and fishermen, as I have already observed, were subdivisions of one of the castes. They either caught the birds in large clap-nets§, or in traps; and they sometimes shot them with arrows, or felled them with a throw-stick, as they flew in the thickets.

The trap|| was generally made of network, strained over a frame. It consisted of two semi-circular sides or flaps, of equal sizes, one or both moving on the common bar, or axis, upon which they rested. When the trap was set, the two flaps were kept open by means of strings, probably of catgut, which, the moment the bait that stood in the centre of the bar was touched, slipped aside, and allowed the two flaps to collapse, and thus secured the bird.

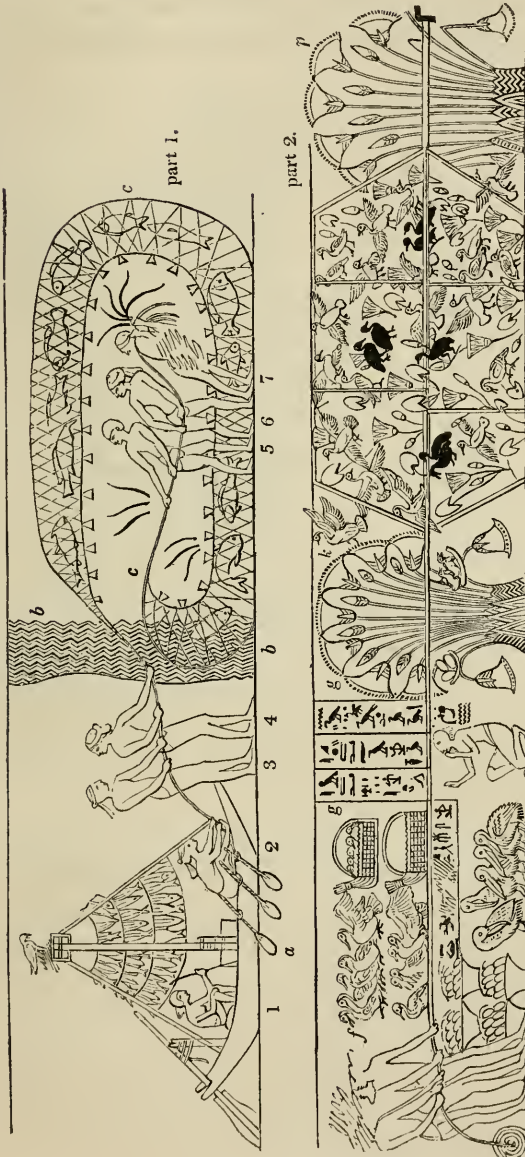
Another kind, which was square, appears to have closed in the same manner; but its construction was different, the framework running across the centre, and not, as in the others, round the edges of the trap.

* The *Pterocles melanogaster*. *Vide* Egypt and Thebes, p. 245.

† The *Otis hebara*.

‡ Herod. ii. 77.; Diod. i. 60.; and the sculptures.

§ *V.* wood-cut, No. 333. part ii. || *V.* wood-cut, No. 335.



No. 333.

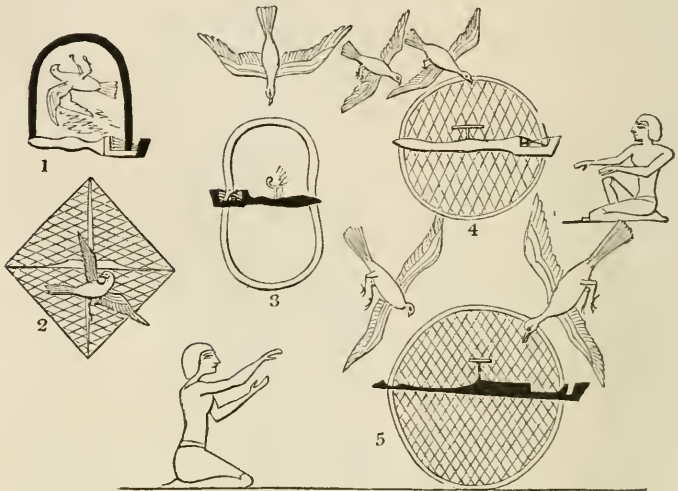
Fishing and fowling scenes.

Part 1. *a* The boat with the fish hanging up to dry in the sun and wind; on the top of the mast sits a kite. The manner in which it shrieks, while waiting for the entrails of the fish, as they are thrown out, is very characteristically shown in the original painting. The boat is supposed to be close to the shelving bank to which they are dragging the net. The water is represented by zigzag lines at *b*, which, to prevent confusion, I have not continued over the net.

Part 2. Figs. 8, 9, 10, pull the rope that the net may collapse; 1, makes a sign with his hand to keep silence and pull; at *p* the rope is fixed; at *f*, *g*, *e*, are geese and baskets of their young and eggs; *h*, are pelicans; *i*, and *n*, plants, probably the papyrus.

Thebes.

If their skill in making traps is not proved in those used by the fowlers, it may at least be in-



No. 334.

Bird traps.

Beni Hassan.

Fig. 1. Trap closed and the bird caught in it; the net work of it has been effaced, as also in fig. 3. The other traps are open.

ferred from that in which the robber was caught in the treasury of Rhampsinitus * ; since the power of the spring, or the mechanism of the catch, was so great that his brother was unable to open it or release him.

They do not seem to have used the bow very generally to shoot birds, nor was the sling adopted, except by gardeners and peasants to frighten them from the vineyards † and fields. The use of the throw-stick ‡ was very general, every amateur chasseur priding himself on the dexterity he displayed with this missile : and being made of heavy wood, flat, and offering little surface to the

* *Vide* Vol. I. p. 123. † *V.* woodcut, No. 136. Vol. II. p. 149.

‡ The Irish frequently use it for the same purpose.

air in the direction of its flight, the distance to which an expert arm could throw it was consider-



No. 335.

A sportsman using the throw-stick.

Thebes.

Figs. 2. and 3. his sister and daughter. 4. A decoy bird. 5. 5. Birds struck with the stick.

able; though they always endeavoured to approach the birds as near as possible, under the cover of the bushes or reeds. It was from one foot and a quarter to two feet in length, and about one inch and a half in breadth, slightly curved at the upper end; and its general form may be inferred from one found at Thebes by Mr. Burton, from those of the Berlin Museum, and from the sculptures.

On their fowling excursions, they usually pro-

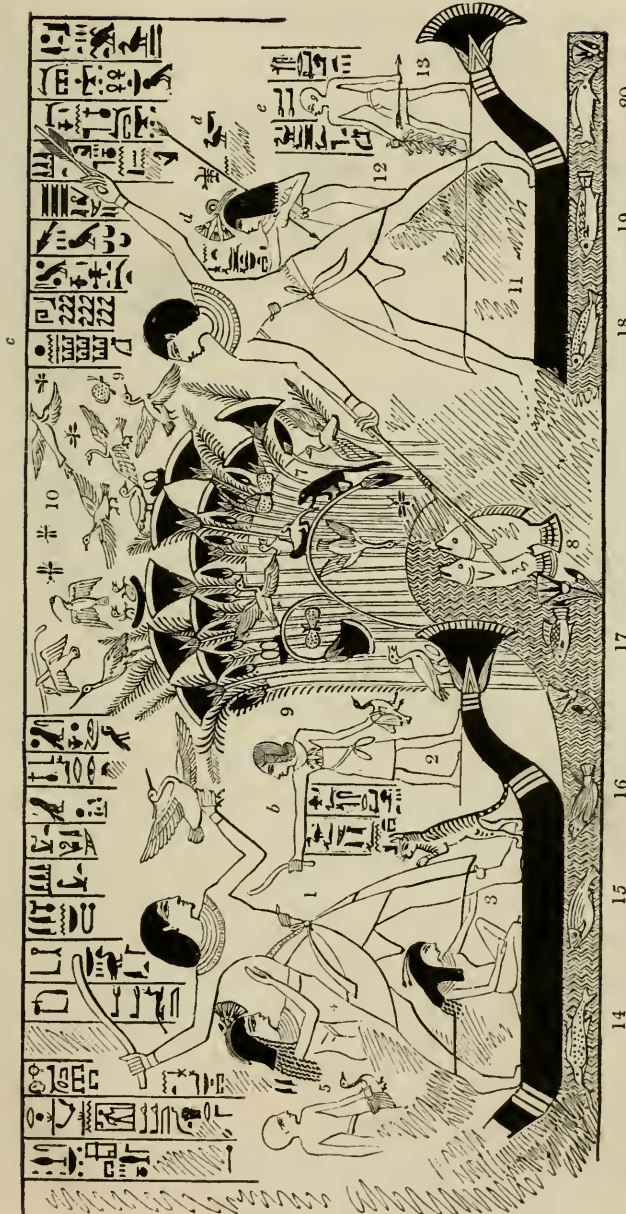
ceeded with a party of friends and attendants, sometimes accompanied by the members of their family, and even their young children, to the jungles or thickets of the marsh lands, or to the lakes of their own grounds, formed by the waters of the overflowing Nile, at the period of the inundation, when wild fowl was more abundant than at any other season of the year; and seated in punts made of the papyrus*, or rushes of various kinds, they passed without disturbing the birds, amidst the lofty reeds which grew in the water, and masked their approach. This sort of boat was either towed, pushed by a pole, or propelled by paddles; and a religious prejudice induced the Egyptians to believe that persons who used it were secure from the attacks of crocodiles†; a story which can be more readily believed and explained, when we remember that they principally used these boats in the lakes and inland canals, where crocodiles were seldom seen.

The attendants collected the game as it fell, and one of them was always ready to present a fresh stick to the chasseur, as soon as he had thrown. They frequently took with them a decoy bird, which was posted in a convenient place; and in order more effectually to prevent its quitting the post assigned to it, a female was selected for the purpose, whose nest, containing eggs, was brought with it and deposited in the boat.

* Conf. Lucan, iv. 136. : —

“ Conseritur bibula Memphitis cymba papyro.” and Plin. xiii. 11.

† Plut. de Is. s. 18. “ Isis . . . made use of a boat constructed of the reed papyrus, in order to pass more easily through the fenny parts of the country, whence, they say, the crocodile never touches any persons who go in this sort of vessel.”



1. An amateur sportsman throwing the stick.
 2. His son holding a fresh stick ready, and carrying the game.
 3. His daughter, or sisters. 4. Another son carrying the game.
 5. A decoy bird, with its nest in the boat.
 6. The ichneumon carrying away a young bird from a nest.
 Part 1. Fowling scene. Part 2. Spearing fish with the bident.
 8. Two bulli fish speared with the bident of fig. 11.
 9, 10. Butterflies and dragon flies.
 11. His sister holding a spear.
 12. His son holding a spear, and carrying the fish strung upon a water plant.
 13. The cat appears as if begging to be let out of the boat into the thicket.
 Thebes.

A favourite cat sometimes attended them on these occasions, and from the readiness with which



No. 337. Sportsman using the throw-stick. *British Museum.*
Fig. 2. keeps the boat steady by holding the stalks of a lotus. 4. A cat seizing the game in the thicket. 5. A decoy bird.

it is represented to have seized the game, the artist has intended to show that those animals acted as retrievers, or were trained to catch the birds; being let out of the boat into the thickets which grew at the water's edge: though making every allowance for the great skill attributed to the Egyptians in taming and training animals, it is difficult to persuade us that the cat could be induced, on any consideration, to take the water, in quest of a fallen bird.

That cats, as well as dogs, were looked upon with great esteem by the Egyptians, is evident

from the care they took to preserve and embalm them, and from the express statements of ancient writers. Herodotus* mentions the concern they felt at their loss, and the general mourning that ensued in a house, even if they died a natural death; every inmate being obliged to shave his eyebrows, in token of sorrow, for the loss of a cat, and the head and whole body for the death of a dog. When ill, they watched and attended them with the greatest solicitude; and, if any person purposely, or even involuntarily†, killed one of these revered animals, it was deemed a capital offence; nor could all the influence of the magistrates, nor even the dread of the Roman name prevent the people from sacrificing to their resentment an incautious Roman who had killed a cat, though it was evident that he had done it unintentionally.

“So deeply rooted in their minds,” says Diodorus, “was the superstitious regard for the sacred animals, and so strongly were the passions of every one bent upon their honour, that, even at this time, when Ptolemy had not yet been called a king by the Romans, and the people were using every possible effort to flatter the Italians, who visited the country as strangers, and studiously avoided any thing which could excite disputes, or lead to war, on account of their dread of the consequences, they positively refused to restrain their anger, or to spare the offender.”

Some remains of this prejudice in favour of the

* Herod. ii. 66.

† Diod. i. 83.

cat * may still be traced among the modern Egyptians, who even allow it to eat from the same dish †, and to be the constant companion of their children ; though the reputed reason of their predilection for this animal is its utility in watching and destroying scorpions, and other reptiles, which infest the houses.

Dogs are not regarded by them with the same feelings ; they are considered unclean, and are seldom admitted into the house, except by some persons of the Málekee sect, who do not, like the Shaffaees, and Hanefees, consider themselves defiled by their touch. But though they draw this marked distinction between them, the character given to the two animals appears to be in favour of the dog ; which they represent, in the true spirit of oriental fable, when asked hereafter respecting the treatment it received from man, concealing all the numerous injuries it has received, and magnifying the few benefits, while the cat is supposed to deny the obligations conferred upon it, and to endeavour to detract from the merits of its benefactor.

Though the death of a cat is not attended with lamentations or funeral honours, it is looked upon by many of the modern Egyptians to be wrong to kill, or even to illtreat them : and some have carried their humanity so far as to bequeath by will a fund for their support, in compliance with which

* They are much more tractable and attached in Egypt than in Europe. The cat and dog are not there the emblems of discord.

† This is a general custom with the Moslems.

these animals are daily fed in Cairo at the Cadi's court, and the *bazár* of Khan Khaleel.

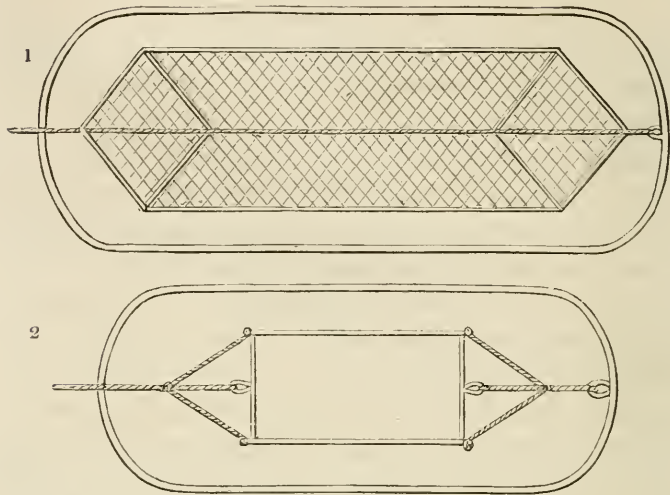
The clap net was of different forms, though on the same general principle as the traps already mentioned. It consisted of two sides or frames, over which the network was strained; at one end was a short rope, which they fastened to a bush, or a cluster of reeds, and at the other was one of considerable length, which, as soon as the birds were seen feeding in the area within the net, was pulled by the fowlers, causing the instantaneous collapion of the two sides.* The Egyptian nets were very similar to those used in Europe at the present day, but probably larger, and requiring a greater number of persons to manage them than our own; this, however, may be attributed to an imperfection in their contrivance for closing them.

As soon as they had selected a convenient spot for laying down the net, in a field or on the surface of a pond, the known resort of numerous wild fowl, they spread open the two sides or flaps, and secured them in such a manner that they remained flat upon the ground, until pulled by the rope. A man, crouched behind some reeds, growing at a convenient distance from the spot, from which he could observe the birds as they came down, watched the net†, and enjoining silence by placing his hand over his mouth, beckoned to those holding the rope to keep themselves in readiness, till he saw them assembled in sufficient numbers,

* *Vide* wood-cut, No. 333. part 2.

† He was styled *λιποπτης* by the Grecks. J. Pollux, v. 4.

when a wave of his hand gave the signal for closing the net.



No. 338.

Clap nets, from the sculptures.

The sign adopted by the Egyptians to indicate silence is evidently shown, from these scenes, to have been given by placing the hand over the mouth; not, as generally supposed*, by approaching the forefinger to the lips; and the Greeks erroneously concluded, that the youthful Harpocrates was the deity of silence, from his appearing in this attitude; which, however humiliating to the character of a deity, was only illustrative of his extreme youth, and of a habit common to children in every country, whether of ancient or modern times.

Some nets were of a single piece, stretched over a frame; others were furnished with addi-

* And by Plutarch, De Isid. s. 68.

tional sections of a diamond shape*, and in some the interior portion was surrounded by an outer circuit of an oval form, to which the ring of the rope was attached.

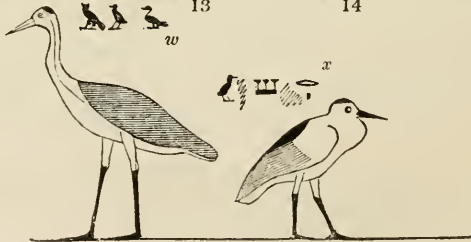
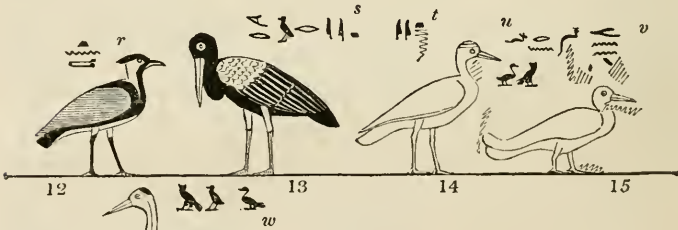
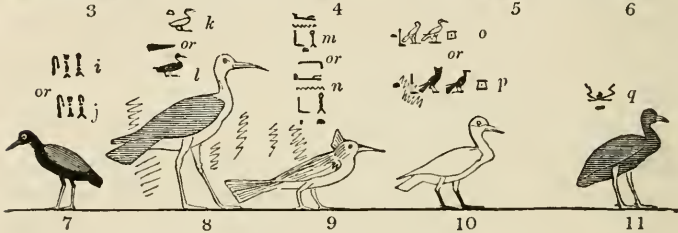
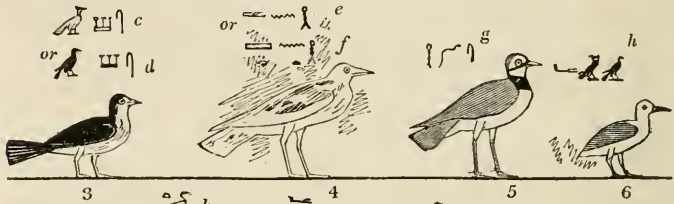
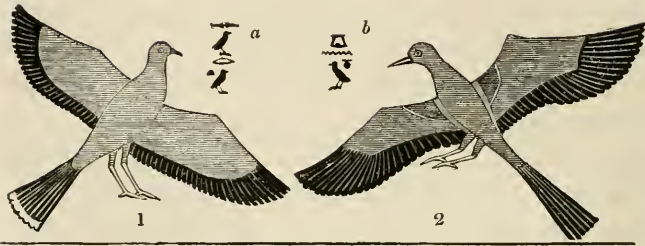
It is probable that the ancient Egyptians adopted the same ingenious method of catching ducks, wildgeons, and other water fowl, as the modern inhabitants of Lower Egypt †; who, when the inundation covers the lands, creep unperceived to the water's edge, and placing a gourd upon their head, with two holes cut in front, through which they look, swim towards the unsuspecting birds, and taking them one after the other by the legs, suddenly pull them under the water, and tie them to their girdle; thus, in a short space of time, securing great numbers, without alarming the rest.

The birds taken in nets were principally geese, ducks, quails, and some small kinds which they were in the habit of salting, especially in Lower Egypt, where Herodotus ‡ tells us they “ate quails, ducks, and small birds undressed, having merely preserved them in salt, living at the same time on all sorts of birds and fish, not reckoned sacred, which were eaten either roasted or boiled.” For though geese constituted a very great portion of the food of the Egyptians, both in the upper and lower country, and are more frequently represented in the sculptures than any bird, it is not to be supposed that they were preferred to the

* This calls to mind the nets mentioned by J. Pollux, v. 4., of which a square part termed the βροχος became ῥομβοειδες, of a rhomboidal figure, as soon as the net (αρκυς) was stretched.

† The same is done in India.

‡ Herod. ii. 77.



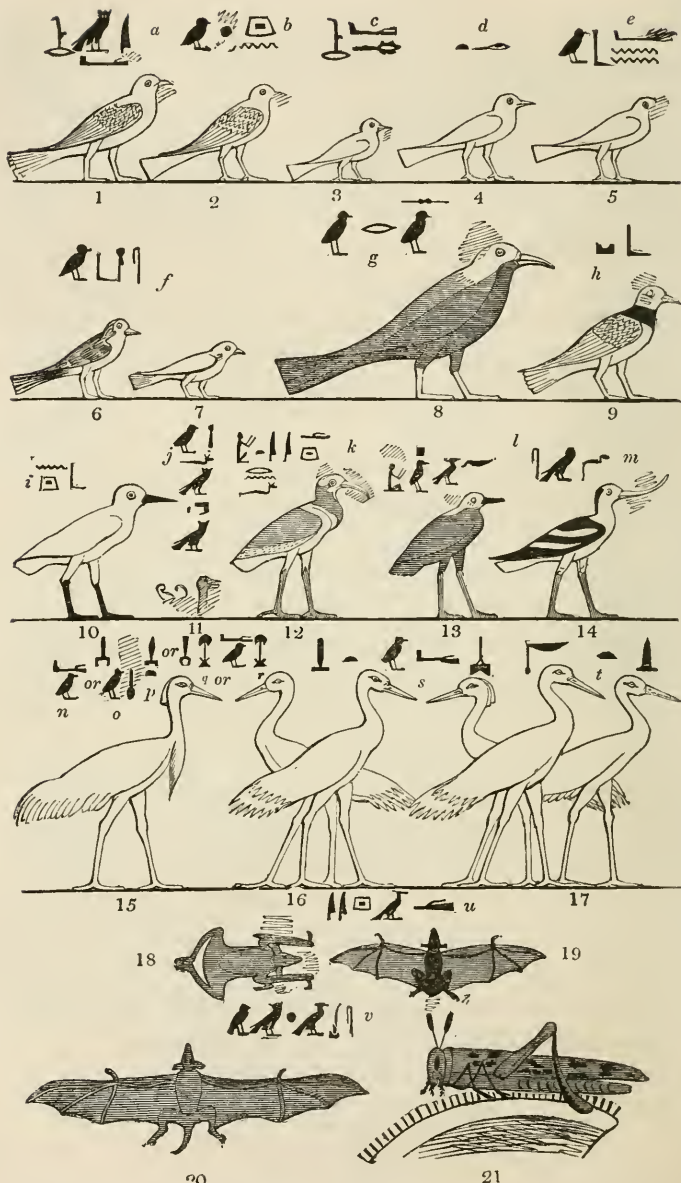
exclusion of others; and besides poultry and pigeons, which abounded in Egypt, many of the wading tribe, the curlew, the *ardea*, and several others were esteemed for the table, and even introduced among the choice offerings presented to the gods. The practice of salting birds, in a country like Egypt, may, perhaps, be considered singular; but confirmation of the statement of Herodotus is derived from the sculptures, where some poulterers appear to be in the act of preserving them in this manner, and depositing them in jars.*

Independent of the birds taken in nets, and by other means, the Egyptian poulterers supplied the market with the eggs of those most in request; they also reared the young after the eggs were hatched, (which was frequently done, as already observed, by an artificial process,) and these were sold to supply the poultry-yards of the rich, whose stock of wild fowl was often numerous.

The various birds represented in the Egyptian sculptures, cannot always be recognised with certainty, in consequence of the loss of the colours, or a want of skill in their artists, who, disregarding the intermediate hues, adopted certain fixed colours, in a conventional manner, as an approximation; and unless the character of the birds is so marked as to be readily distinguished by a simple outline, it is often difficult to identify them.

In some, however, there is sufficient to guide us without the necessity of conjecture, and these I

* *Vide* wood-cut, No. 80.



No. 340 Some of the birds of Egypt. Beni Hassan, and the Tombs near the Pyramids.
 Figs. 18, 19, 20, Bats. 21, The locust. From Thebes.

shall notice in their proper order, without distinguishing between such as were forbidden, or admitted at an Egyptian table.

BIRDS OCCURRING IN THE SCULPTURES.

1. Raptores.

Vultur Nubicus.	}	The large vulture of Egypt and Nubia, which occurs frequently on the ceilings and sculptures of the temples.
Vultur percnopterus.		
Aquila.	}	The eagle.
Falco cinereo-ferrugineus.		
<i>Fors.</i>	}	The kite, or Miluus. Falco arda of Savigny.
Falco ——— ?		
Falco tenunculoïdes.		The sacred hawk.
Bubo maximus.		The common brown hawk.
Strix flammea.		Horned owl.
Strix passerina.		White owl.
		Small owl.

2. Inessores.

Lanius excubitor ?	Great shrike, or butcher bird ?
Corvus corax.	The raven.
Corvus cornix.	The Royston crow.
Turdus viscivorus.	Missel thrush.
Alauda cristata.	Crested lark.
Alauda arenaria.	Sand-coloured-lark.
Upupa eops.	Hoopoe.
Hirundo rustica.	The swallow.
Alcedo ispida.	Common king-fisher.
Fringilla ; several species.	Finches.

3. Rasores, or Gallinaceous.

Columba turtur.	Turtle-dove.
Pterocles melanogaster.	The <i>Gutta</i> .*
Perdix coturnix.	The quail.
Otis Hebara ?	Ruffed bustard ?
Struthio camelus.	The ostrich.

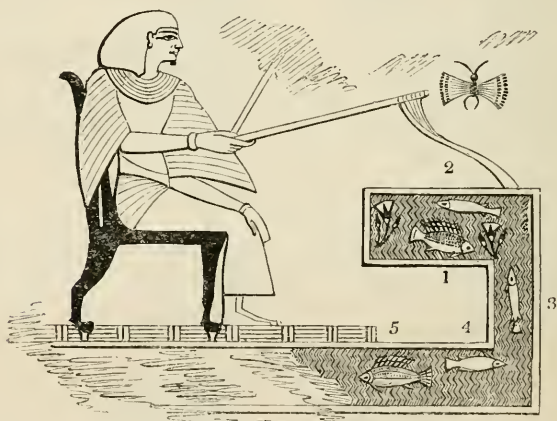
4. Gallatores, wading birds.

Ardea garzetta.	}	Small white stork : the Ar. Virgo of Hasselquitz.
Ardea cinerea.		
Ardea ciconia ; and some other species.		Grey heron.
Tantalus, or Numenius, Ibis.		White stork.
Platalea.		The ibis.
		Spoonbill.

* This name has been given it in Arabic from the noise it makes when alarmed and flying.

Charadrius armatus.	Spur-winged plover.
Scolopax gallinago.	Snipe.
Fulica atra ?	The common coot ?
5. Natatores, swimming birds.	
Anser Ægyptius ; and other species.	Egyptian goose.
Anas ; various species.	Ducks.
Anas creca.	Teal.
Recurvirostra avosetta.	Avoset.
Pelicanus onocratulus.	The pelican.

Many other birds are figured in the sculptures ; but as it is difficult to determine the exact species to which they belong, I shall not hazard any conjecture upon their names, having noticed those which most commonly occur. In the tombs of Thebes and Beni Hassan the Egyptians have not omitted to notice bats, and even some of the



No. 341.

An Egyptian gentleman fishing.

Thebes.

insects, which abound in the Valley of the Nile ; and the well known locust*, the butterfly †, and the

* *Vide* wood-cut, No. 340. fig. 21.

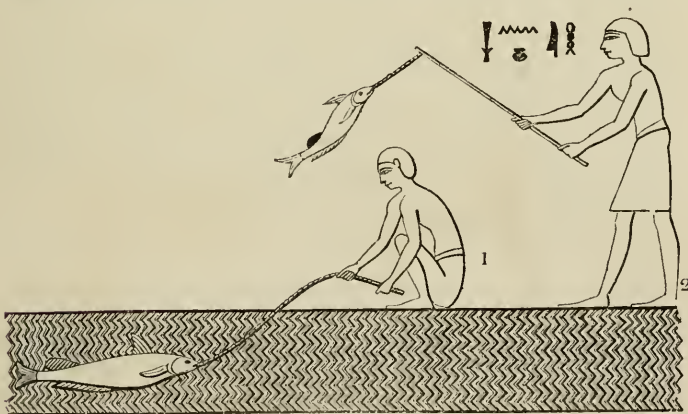
† *Vide* wood-cuts, Nos. 336, 337, and 341.

beetle are occasionally introduced in the fowling scenes, and in sacred subjects.

FISHING.

Fishing was an amusement in which the Egyptians particularly delighted; and not contented with the abundance afforded by the Nile, they constructed within their grounds spacious “sluices or ponds for fish*,” like the *vivaria* of the Romans, where they fed them for the table, and where they amused themselves by angling†, and the dexterous use of the *bident*.

These favourite occupations were not confined to young persons, nor thought unworthy of men of serious habits; and an Egyptian of conse-



No. 342.

Fishing with ground bait.

Beni Hassan.

These fish are the *Shilbeh*, or rather the *Arábrab*.

quence is frequently represented in the sculptures, catching fish in a canal or lake with the line, or

* Isaiah, xix. 10.

† Isaiah, xix. 8.

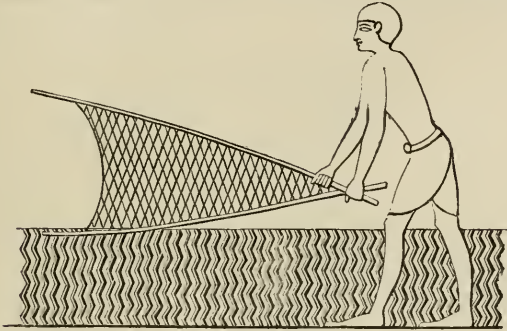
spearling them, as they glided past the bank. Sometimes the angler posted himself in a shady spot at the water's edge, and having ordered his servants to spread a mat upon the ground, he sat upon it as he threw the line ; and some with higher notions of comfort used a chair for the same purpose. The rod was short, and apparently of one piece ; the line usually single, though instances occur of a double line, each furnished with its own hook, which, judging from those I have found, was of bronze.

The fishermen, who, as I have observed, composed one of the subdivisions of the Egyptian castes, and who gained their livelihood by fishing, generally used the net in preference to the line, but on some occasions they employed the latter, seated or standing on the bank. It is, however, probable, that these were people who could not afford the expence of nets ; and the use of the line is generally confined, in like manner, at the present day, to the poorer classes*, who depend upon skill, or good fortune, for their subsistence.

In all cases they adopted a ground bait, as is still the custom in Egypt, without any float ; and though several winged insects are represented in the paintings hovering over the water, it does not appear that they ever put them to the hook, and still less that they had devised any method similar to our artificial fly-fishing ; which is still unknown to the Egyptians, though the fish of the Nile are occasionally seen to rise to insects on the water's surface.

* *Vide vignette D.*, at the head of chap. iv. Vol. II.

The ordinary Egyptian net has been already mentioned*, as well as the mode of dragging it to



No. 343.

A sort of landing net.

Thebes.

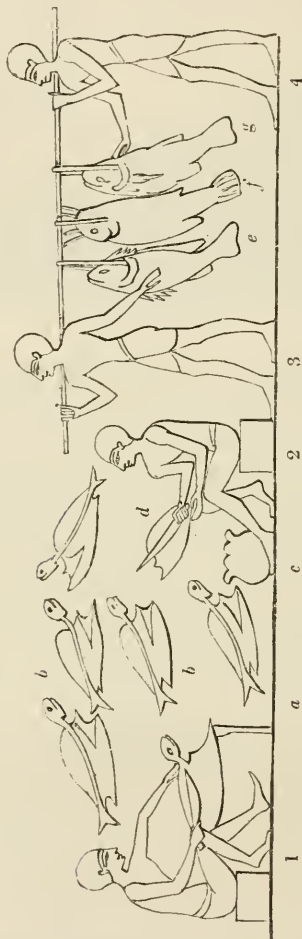
the shore; but it sometimes happened that they used a smaller kind, for catching fish in shallow water, furnished with a pole on either side, to which it was attached; and the fisherman holding one of the poles in either hand, thrust it below the surface of the water, and awaited the moment when a shoal of fish passed over it; the same being probably used for landing those which had been wounded with the spear, or entangled with the hook.†

When they employed the drag-net, and even when they pulled it to the shore, a boat sometimes attended, in which the fish were deposited as soon as they were caught; those intended for immediate use, to be eaten fresh, being sent off to market when the day's sport was finished; and the others being opened, salted, and hung up to dry in the sun.

* Vol. II. p. 21.

† *Vide* wood-cut, No. 343.

Some were cut in half, and suspended on ropes for this purpose, the passing current of air being found to accelerate the process; sometimes the



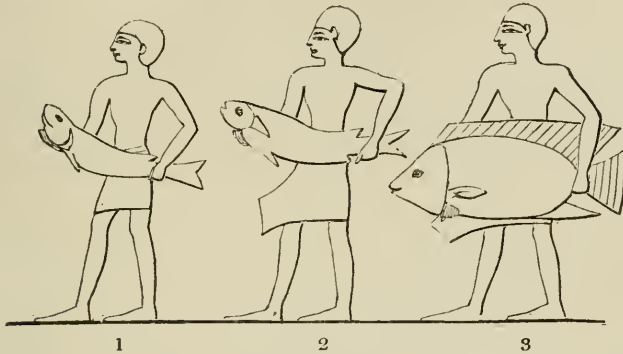
In a tomb near the Pyramids.

Bringing in fish and opening them, preparatory to their being salted.

No. 244.

body was simply laid open with a knife from the head to the tail, the two sides being divided as

far as the back bone; and many were contented with taking out the intestines, and removing the head, and tip of the tail, and exposing them, when salted, to the sun.



No. 345. Another mode of carrying large fish. *Tomb near the Pyramids*

When caught, the small fish were generally put into baskets, but those of a larger kind were suspended to a pole, borne by two or more men over their shoulders; or were carried singly in the hand, slung at their back, or under the arm; all which methods I have seen adopted by the modern fishermen, at the Cataracts of E'Sooan, and in other parts of Egypt.

Salted, as well as fresh fish, were much eaten* in Egypt, both in the Thebaid and the lower country, as the sculptures and ancient authors inform us; and at a particular period of the year, on the 9th day of the first month (Thoth)†, every

* Conf. Herod. ii. 92. Diod. i. 36. Perhaps the *ταρικη Αιγυπτια* of Julius Pollux, Onom. vi. 9.

† The first of Thoth corresponded with the 29th of August. *Vide* Vol. I. p. 275.

person was obliged, by a religious ordinance, to eat a fried fish before the door of his house, with the exception of the priests, who were contented to burn it on that occasion.*

Some fish were particularly prized for the table, and preferred as being more wholesome, as well as superior in flavour to others; among which we may mention the *búlti* †, the *gisher* ‡, the *benni* §, the *shall* ||, the *shilbeh* ¶ and *arábrab*, the *byad* **, the *garmoot* ††, and a few others; but it was unlawful to touch those which were sacred, as the oxyrinchus, the phagrus, and the lepidotus: and the inhabitants of the city of Oxyrinchus objected even to eat any fish caught by a hook, lest it should have been defiled by the blood of one they held so sacred. ††

The oxyrinchus, I have elsewhere observed §§, was probably the *mizdeh*, a mormyrus remarkable among the fish of the Nile for its pointed nose |||, as the word oxyrinchus implies; and, the resemblance of the Coptic name of that city, which was called Míge, to that of the fish, strongly favours this opinion.

The phagrus was the eel, and the reason of its sanctity, like that of the former, was probably owing to its unwholesome qualities; the most effectual method of forbidding its use being to assign it a place among the sacred animals of the country.

The lepidotus is still uncertain; its name proves it to have been a scaly fish, but the various

* Plut. De Is. s. 7.

† Perca Nilotica.

|| Silurus Shall.

** Silurus Bajad.

†† Plut. de Isid. s. 7.

||| V. wood-cut, No. 366. figs. 14, 20., and No. 81. fig. 1. p. 20. Vol. II.

† Or *booltee*, Labrus Niloticus.

§ Cyprinus Benni.

¶ The Silurus Schilbe Niloticus.

†† Silurus Carmuth.

§§ Egypt and Thebes, p. 366.

conjectures of naturalists have led to nothing satisfactory respecting it. Linnæus believed it to be a carp, the *cyprinus rubescens Niloticus*; Sicard preferred the *benni*, and others the *bulti*, or the *gisher*; but if I may be pardoned for venturing a conjecture, there appears to be more reason to suppose it the *kelb el bahr**, called the dogfish of the Nile; which, though a wholesome fish†, might, from its appearance, create a prejudice in the minds of a superstitious people, sufficient to forbid its introduction at table, and obtain for it a place among their sacred fish: nor do I know of an instance of its introduction in the Egyptian sculptures.

Like the sacred quadrupeds, they were not all regarded with the same reverence in different parts of the country‡; Plutarch even states that these three fish were generally held in aversion§ by the Egyptians; and the people of Cynopolis, according to the same author||, were in the habit of eating the *oxyrinchus*, which, he adds, “was the origin of a civil war between the two cities, till both sides, after doing each other great mischief, were severely punished by the Romans.”

Of all fish the *bulti* ¶ was evidently preferred, and not, indeed, without reason, being still considered

* *Salmo Dentex*, which has very large scales.

† The fish, in Egypt, are considered better after October than in the summer months: they think that fish with scales are the only kind wholesome even in winter.

‡ Another fish, the *latus*, was worshipped at Latopolis in the Thebaïd.

§ Plut. De Isid. s. 18.

|| Plut. De Isid. s. 72.

¶ It is represented in wood-cut, No. 341. figs. 1. & 5. No. 81. *c.* and *g.* No. 336. fig. 8., &c.

inferior to none produced in the Nile. Many others, not readily ascertained from the mode of representing them, occur in the sculptures of Upper and Lower Egypt, and we even find the eel and the *mizdeh* introduced among those at Beni Hassan and other places; but the difficulty, which this at first sight appears to present, is readily explained by the observation I have already made, of their having been held sacred in some, and not in other, cities, or districts of Egypt.

The favourite mode of fishing, among those who took a pleasure in it, and prided themselves on their skill, was with the bident spear. They sometimes stood on the bank of a canal, but generally used a punt, or boat made of papyrus*, in which they glided smoothly over the lakes, and canals, within their own grounds, without disturbing the fish as they lay beneath the broad leaves of the lotus plant. The custom of angling for amusement, and spearing with the bident, may be considered peculiar to the higher orders, and while the poorer classes employed the net and hook, as already stated, the use of the spear was confined to the sportsman.

The bident was a spear with two barbed points, which was either thrust at the fish with one, or both hands, as they passed by; or was darted to a short distance, a long line fastened to it preventing its being lost, and serving to secure the fish when struck. It was occasionally furnished with feathers at the upper extremity, like an arrow, to assist

* The name of papyrus, or byblus, was applied to more than one plant of the genus cyperus, as I shall have occasion to show.

in its distant flight, and sometimes a common spear was used for the purpose; but in most cases, it was provided with a line, whose end was held by the left hand, or wound upon a reel. The same mode of fishing is still adopted by many people who live on the sea-coasts; and the fish spears of the South Sea islanders have two, three, and four points, and are used nearly in the same manner, and with the same dexterity, as the bident by the ancient Egyptians.

On these occasions they were usually accompanied by a friend, or some of their children, and by one or two attendants, who assisted in securing the fish, and who, taking them off the barbed point of the spear, passed the stalk of a rush through the gills, and thus attached them together, in order more conveniently to carry them home.*

I have frequently had occasion to mention boats made of the byblus or papyrus. It is evident that this plant, from its great value and from its exclusive cultivation in certain districts, where it was a government monopoly, could not have been applied to the many purposes mentioned in ancient authors; we may therefore conclude, that several plants of the genus *cyperus* were comprehended under the head of byblus or papyrus. This is not only in accordance with probability, from their general resemblance, but is expressly stated by Strabo†, who says, that “much grows in the lower part of the Delta, where one kind is of an inferior, the other of a superior quality, and this last is

* *Vide* wood-cut, No. 336. fig. 13.

† Strabo, lib. xvii. p. 550. ed. Cas.

known by the distinctive appellation of Hieratic Byblus. That the profits arising from its sale may be increased, they have adopted the same plan which was devised in Judæa, regarding the date tree and balsam, permitting it to grow only in certain places; so that its rarity increasing its value, they benefit themselves at the expense of the community." And that under the name "papyrus" he includes other kinds of cyperus produced spontaneously in the marshy lands, is evident from his observing that, "the papyrus does not grow in great quantity about Alexandria, because it is *not cultivated* there:" and Pliny*, and other writers, show that the plant to which they frequently applied this name was wild in many parts of Egypt.

There is therefore reason to believe, that several species were comprehended under the general appellation of byblus or papyrus; the *cyperus* dives, which grows to the height of five or six feet, is still cultivated in Egypt for many of the purposes to which the papyrus plant is said to have been applied; and I have no doubt, that this was the species commonly employed in former times for making mats, baskets, parts of sandals, papyrus boats, and for other ordinary uses; the *cyperus papyrus*, or papyrus (byblus) hieraticus of Strabo, being confined to the manufacture of paper.

The great abundance of fish † produced in the

* Plin. xiii. 11. According to one reading Pliny says, "All the paper is grown in the Sebennytic nome;" but another gives, "nothing but paper is grown" there, which is evidently the sense required; "non nisi charta," for "omnis charta," as he afterwards mentions its being found in other parts of Egypt. *V. infra* on the manufacture of paper.

† Strabo, xvii. p. 566. Diod. i. 36. 43. and 52.

Nile was an invaluable provision of nature, in a country which had neither extensive pasture lands, nor large herds of cattle, and where corn was the principal production. When the Nile inundated the country and filled the lakes and canals with its overflowing waters, these precious gifts were extended to the most remote villages in the interior of the Valley, and the plentiful supply of fish, they then obtained, was an additional benefit conferred upon them at this season of the year. The quantity is said* to have been immense, as indeed it is at the present day †; and the shoals of small fish, which then appear in the canals and ponds, call to mind, and confirm, a remark of Herodotus, respecting their numbers at the rising Nile. His explanation of the cause of their apparently sudden production is inadmissible and unnecessary, as the ponds were always filled by artificial or natural ducts; and the same species of young fry which are found there, appear at the same time in the river; nor are they of any particular kind ‡, but the young of the various fish inhabiting the Nile. §

Herodotus mentions a large sum annually produced by the fisheries of the lake Mæris. “During six months,” says the historian ||, “the water of

* Herodot. ii. 93. Strabo, loc. cit.

† Michaud says that the lake Menzaleh now yields an annual revenue of 800 purses, (5,600*l.*). *V. Correspond. de l’Orient. tom. vi. let. 156.*

‡ *Vide* De Sacy’s *Abd-al-latif*, note 141., in lib. i. c. 4.

§ I have caught a small net full of them, and on examination found them to be of the *silurus shall* and other common species; and no one who has eaten them at table can have failed to observe that they are of different kinds, from the greater or less quantity of bones they contain.

|| Herodot. ii. 49.

the river flows into it, and during the remaining half of the year, it returns from the lake into the Nile. At this time, while the water is retiring, the profits derived from the fisheries, and paid daily into the royal treasury, amount to a talent of silver* (193*l.* 15*s.* English†); and during the other six months, when the water flows from the Nile into the lake, they do not exceed twenty minæ‡” (about 64*l.* 12*s.*). Diodorus says, that when Mœris, from whom the lake derived its name, and who was supposed to have made the canal, had arranged the sluices for the introduction of the water, and established every thing connected with it, he assigned the sum annually derived from this source as a dowry to the queen, for the purchase of jewels, ointments, and other objects connected with the toilet. The provision was certainly very liberal, being a talent every day, or upwards of 70,700*l.* a year§; and when this formed only a portion of the pin-money of the Egyptian queens, to whom the revenues of the city of Anthylla, famous for its wines, were given for their dress||, it is certain they had no reason to complain of the allowance they enjoyed.

I have frequently had occasion¶ to notice the

* Reckoning the talent at 60 minæ.

† Some compute it to be 225*l.*

‡ The mina was 3*l.* 4*s.* 7*d.*

§ Diodor. i. 52. From all the fisheries of Egypt would have been less improbable. The lake Mœris is now farmed for 30 purses (210*l.*) annually. Of 90 piastres, from the sale of the fish, 10 are paid for the boat, 40 to the fishermen, and 40 to the farmers of the fish. There are only now six boats on the lake.

|| Herodot. (ii. 98.) says, “for their sandals;” Athenæus (Deipn. i. 25.) “for their dress;” a privilege continued to the queens of Persia, after Egypt was conquered by Cambyses.

¶ *Vide* Egypt and Thebes, p. 354; and *suprà*, Vol. I. p. 93.

error of Herodotus, in confounding the lake Mœris with the canal, and have proved from Pliny*, that the name was also applied to the canal which conducted the water from the Nile, to what is now called the Birket el Qorn; and in order to show the impossibility of the return of the waters from the lake itself to the higher level of the Nile, and that Herodotus did not judge from his own observation, but mistook the facts detailed to him by his Egyptian informants, who had in view the canal alone, when speaking of the return of the water to the river, I shall repeat what I before remarked on this subject.†

“ Herodotus’s account of the water returning from the lake to the Nile, on the subsiding of the inundation, is totally inapplicable to the lake Mœris, the level of its surface being about 100, or 120 feet lower than the bank of the Nile at Benisooef; which, making every allowance for the rise of the bed of the river, and the proportionate elevation of its banks, could never have been on a level, even in Herodotus’s time, with the lake Mœris; and consequently no return of the water could have taken place from the lake to the Nile. From the canal, however, it could, as at the present day; and the fish caught at the mouth of this and other canals, at that season, still afford a considerable revenue to the government, and are farmed by certain villages on the banks. That the level of the lake Mœris must be now about the same as formerly, is

* Plin. xxxvi. 12. “ Ubi fuit Mœridis lacus, hoc est fossa grandis.”

† Egypt and Thebes, p. 358.

evident from our finding ruins of baths on its borders; and the accidental and temporary rise of its waters, which happened some years since, was merely owing to the bursting of the great dyke at Tomééh. As to the Bathen of the great geographer D'Anville, it is quite Utopian."

The quantity of fish now caught in the lake Mœris itself, or Birket el Qorn, is very great, and supplies the markets of the Fyoom with abundance and variety of the finest kind — superior, certainly, in flavour to those of the Nile, though of the same species; but it is probable that the saline quality of the water may effect the slight change observable in the lake fish. I do not believe it produces any species, or even varieties, differing from those of the Nile, from whence, doubtless, it derived its original stock; and the twenty-two kinds it produced, according to the information of Diodorus*, do not appear to have been at any time considered different from those of the parent stream.

Like that of the canals, the lake fishing is farmed by the government to some rich inhabitants of the district †, who are usually Copt Christians; and the fish, as in former times, are either taken fresh to the market, or are dried and salted, as Diodorus observes in his notice of the lake; though the number of persons ‡ engaged in this occupation bears a very small proportion to that of former times.

* Diod. i. 52. *Vide* Strabo, lib. xvii. p. 566., on the Nile fish.

† The small village of Agaltch, at Thebes, pays annually 1500 piastres, about 21*l.*, to government for the fish of its canal.

‡ Diod. loc. cit. "They say that 22 kinds of fish are found in it (the lake Mœris), and so large a number is caught, that the numerous salters who are constantly employed there, can with difficulty get through the work imposed upon them."

This custom of farming the fisheries was probably derived by the Arab government from their predecessors; it does not, however, seem to have been adopted by them at their first occupation of the country, but was introduced subsequently, since the Arab historian El Makrisi mentions it as a new idea. The method employed was doubtless similar to that of ancient times, which continues to the present day; and the passage is so curious, that I shall introduce it from the translation given by the learned M. Silvestre de Sacy.*

“ Quant à la pêche, c’est-à-dire, aux alimens que Dieu procure aux hommes par la pêche du fleuve, le premier administrateur qui en a fait un objet de revenu pour le fisc, c’est encore Ebn-Modabbir: il établit un bureau exprès pour cela; mais ne voulant pas donner à ce bureau la dénomination de bureau des pêches, qui lui paroissoit ignoble, il le nomma le bureau pour la plantation des pieux, et l’établissement des filets. Cette nouvelle invention fiscale se soutint. On députoit pour la recette de ce droit un inspecteur, des notaires, et un *cateb*, en divers cantons de l’Egypte, tels que le canal d’Alexandrie, le lac d’Alexandrie, celui de Nestarawa, Damiette, les cataractes d’Oswan, et plusieurs autres étangs et lacs. Ces commissaires partoient pour leur mission, au moment où le Nil commençoit à décroître, et les eaux à se retirer dedessus les terres qu’elles avoient couvertes, pour rentrer dans le lit du fleuve. Antérieurement à cela, on avoit fermé les ouvertures pratiquées dans

* In his *Rélation de l’Egypte* of Abd-al-Jatif, p. 283. note.

les chaussées, et les arches des ponts, au moment où le Nil avoit cessé de croître, afin d'empêcher les eaux de se retirer dans le fleuve, et de les forcer à s'accumuler du côté voisin des terres. Alors on plaçoit des filets, et on laissoit l'eau prendre son cours; le poisson, entraîné par le courant de l'eau, arrivoit aux filets, qui l'empêchoient d'aller plus loin, et de redescendre avec l'eau; il s'amassoit donc dans les filets. On le tiroit ensuite à terre, on le déposoit sur des tapis, on le saloit, et on le mettoit dans des vases; et, lorsqu'il étoit suffisamment fait, on le vendoit sous le nom de *salaisons*, et de *sir*. On ne préparoit ainsi que le poisson qui étoit de la taille du doigt et au-dessous. Cette même espèce, quand elle est fraîche, se nomme *absaria*; on la mange rôtie et frite."

The great consumption of fish in ancient Egypt is not only attested by Herodotus and other writers, but by the sculptures of the upper and lower country; and the Bible makes allusion to the "fishers"* of the Nile, "the sluices and ponds"† where they were preserved, and the regret with which the Israelites remembered the fish they ate so "freely" in Egypt.‡

The chase of the hippopotamus§, was a favourite amusement of the sportsman, in those parts of the upper country where it was found. It was probably always rare in Lower Egypt||, though Pliny¶ says

* Isaiah, xix. 8.

† Ibid. xix. 10.

‡ Exod. xi. 5. "We remember the fish which we did eat in Egypt freely."

§ In Arabia it has the same name, Fa as el bahr, "river horse" (mare); and in the language of Ethiopia, Yasimt.

|| It is not met with in Upper Egypt, or, indeed, on this side the second cataract, at the present day.

¶ Pliny, xxviii. 8.

it abounded in the Saïte nome : but in Upper Ethiopia this amphibious animal was common in the Nile, as at the present day. Though not so hostile to man as the voracious crocodile, it was looked upon as an enemy, which they willingly destroyed, since the ravages it committed at night in the fields occasioned heavy losses to the farmer * ; and an additional inducement to kill it was the value attached to its hide, of which they made shields, whips †, javelins ‡, and helmets. § To the two former purposes it is still applied ; and as Pliny observes, it retains its hardness perfectly, if preserved from moisture.

The whips are known by the name of corbág (corbaj), and are in very general use in Egypt and Ethiopia, for riding the dromedary, or for chastising the delinquent peasants ; and it is probable that it was also applied to the latter purpose by the ancient Egyptians, since we find an attendant following the steward of an estate, with this implement of punishment in his hand. ||

The mode of attacking and securing the hippopotamus appears, from the sculptures of Thebes, to have been very similar to that now adopted about Sennar ; where, like the ancient Egyptians,

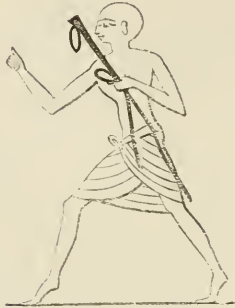
* Pliny and Diodorus are correct in saying “ it feeds on the corn-fields : ” but the modern hippopotamus has not retained the dexterity or the cunning of his ancestors, in walking backwards to deceive his pursuers ; mentioned by Plin. viii. 25. :—

“ *Ætas parentum, pejor avis, tulit
(Hos) nequiores, mox daturos
Progeniem vitiosiore.* ”

Hor. iii. Od. vi. 38.

† Plin. viii. 25. “ *Tergoris ad scuta galeasque impenetrabilis.* ”

‡ Herod. ii. 71. § *Vide* Diod. i. 35. || Wood-cut, No. 346.



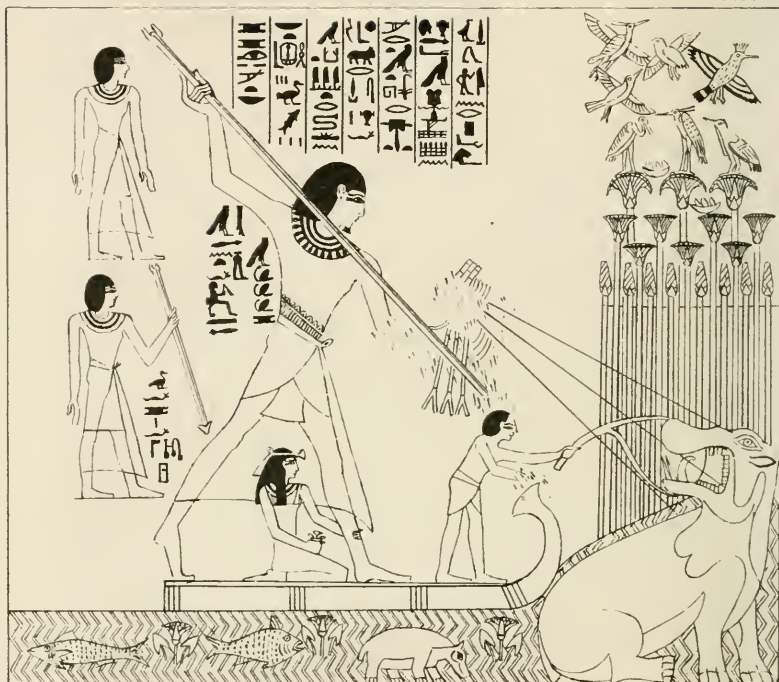
No. 346.

Attendant carrying a whip, or *corbâg*.*Thebes.*

they prefer chasing it in the river, to an open attack on shore: and the modern Ethiopians are contented to frighten it from the corn-fields by the sound of drums, and other noisy instruments.

I have already had occasion * to explain the method of taking this animal: it was entangled by a running noose, at the extremity of a long line wound upon a reel, at the same time that it was struck by the spear of the chasseur. “ This weapon consisted of a broad flat blade, furnished with a deep tooth or barb at the side, having a strong rope of considerable length attached to its upper end, and running over the notched summit of a wooden shaft, which was inserted into the head or blade, like a common javelin. It was thrown in the same manner, but on striking, the shaft fell, and the iron head alone remained in the body of the animal, which, on receiving a wound, plunged into deep water, the rope having been immediately let out. When fatigued by exertion, the hippopotamus was dragged to the boat, from which it again plunged, and the

* Egypt and Thebes, p. 226.



CHASE of the HIPPOPOTAMUS.

The hunter is accompanied by his children; an attendant throws a noose over the wounded animal.

same was repeated till it became perfectly exhausted ; frequently receiving additional wounds, and being entangled by other nooses, which, the attendants held in readiness, as it was brought within their reach."

Several representations of this subject have been found at Thebes, but the destructive thoughtlessness of the peasants, or the appropriating inclinations of travellers have, unfortunately, destroyed them, and few vestiges now remain beyond the figure of the man, his spear, and a few minor details. I should, therefore, have been unable to introduce a copy of this interesting subject, had not the kindness of Mr. Humphreys, who was fortunate enough to obtain a sketch of one of them, furnished me with it for the accompanying plate.*

The chasseur is here in the act of throwing the spear at the hippopotamus, which he has already wounded with three other blades, indicated by the ropes he holds in his left hand ; and having pulled the animal towards the surface of the water, an attendant endeavours to throw a noose over its head, as he strikes it for the fourth time. Behind him is his son, holding a fresh spear in readiness : and in order that there should be no question about the ropes belonging to the blades, the fourth is seen to extend from his hand to the shaft of the spear he is throwing. The upupa, heron, and other birds are frightened from the rushes as the boat approaches ; and the fish, with a young hippopotamus, seen at the bottom of

* Plate 15.

the water are intended to show the communication of the fenny lake with the Nile.

The mode of attacking the hippopotamus is thus described by Diodorus* :—"It is chased," says the historian, "by many persons, each armed with iron javelins. As soon as it makes its appearance at the surface of the water, they surround it with boats, and closing in on all sides they wound it with blades, furnished with iron barbs, and having hempen ropes fastened to them, in order that, when wounded, it may be let out, until its strength fails it from loss of blood."

The spear they used on these occasions, was evidently of a different construction from that intended for ordinary purposes, and was furnished, as Diodorus observes, with a rope for letting out the wounded animal, in the same manner as practised by the modern Ethiopians : there was sometimes



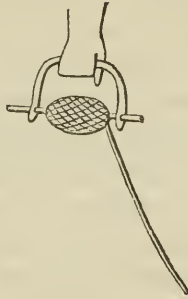
No. 317.

Spear used in the chase of the hippopotamus.

Thebes.

* Diod. i. 35.

another line fastened to the shaft, and passing over a notch at its upper end; which was probably intended to give the weapon a greater impetus, as well as to retain the shaft when it left the blade. The rope attached to the blade was wound upon a reel, generally carried by some of the attendants. It was of very simple construction, consisting of a half ring of metal, by which it was held, and a bar turning in it, on which the line or string was wound.



No. 348.

A reel held by an attendant.

Beni Hassan.

Besides the fish cured, or sent to market for the table, a very great quantity was set apart expressly for feeding the sacred animals and birds, — as the cats, crocodiles, ibises, and others; and it is probable that some of the large reservoirs, attached to the temples, were used as well for preserves or *piscinæ*, where the fish were kept, as to afford a supply of water for the necessary ablutions of the devout, and for various purposes connected with religion.

With regard to the number of fish in the river of Egypt, and the many species said to have been known there, it may be conjectured that some formerly common to the lower parts of the Nile are no

longer met with to the north of the first and second cataracts : or varieties of the same species may have been enumerated in the twenty-two mentioned by Diodorus ; and we even find that the Ethiopians sometimes brought fish, perhaps of a rare kind unknown in Egypt, as part of their tribute to the Egyptians.

That some animals, both aquatic and terrestrial, as well as several botanical productions, once common in Egypt, are now confined to the latitudes of Ethiopia, is well known ; the crocodile, formerly an inhabitant of Lower Egypt and the Delta*, now limits the extent of its visits northward, to the districts about Manfaloot ; and the hippopotamus is no longer seen in Lower Ethiopia. And if one was known, some years ago, to wander downwards into Nubia, below the second cataract, and another even as far as Damietta, these were accidental occurrences, which occasioned as much astonishment to the people who witnessed their unexpected visit, as to the bewildered animals themselves.

As usual on such occasions, their unintentional intrusion, where they could not be objects of terror, was punished with a readiness, which the same persons would not have displayed in places where they are really obnoxious ; and every Turk, or peasant, who could procure a weapon, was fired with the proud desire of destroying the intruder, and showed the same *chivalrous* feeling, usually called

* Seneca, *Nat. Quæst.* iv. 2., says, “ at the Heraeotic mouth of the Nile, which is the largest, a battle occurred between the dolphins of the sea and the crocodiles of the river, the former being victorious ! ”

forth against an imprudent porpoise, who has ventured to pass the bridges of the English capital.

But the hippopotamus once lived in Lower Egypt, and the city of Papremis, in the Delta, worshipped it as a sacred animal, worthy of the Egyptian Mars.

Neither the hippopotamus nor the crocodile appear to have been eaten by the ancient Egyptians. Pliny indeed mentions the medicinal properties of both of them* ; and Plutarch affirms† that the people of Apollinopolis used to eat the crocodile ; this, however, was not a general custom, but merely upon a certain occasion connected with religious superstition, and intended to show their abhorrence of Typhon the evil genius, of whom it was an emblem. “They have likewise,” he continues, “a solemn hunt of this animal upon a particular day, set apart for the purpose, at which time they kill as many of them as they can, and afterwards throw their dead bodies before the temple of their god, assigning this reason for their practice, that it was in the shape of a crocodile Typhon eluded the pursuit of Orus.”

This is one of many instances of the different feelings with which the sacred animals were regarded in various parts of Egypt : and as Herodotus‡ observes, “some of the Egyptians consider the crocodile sacred, while others make war upon it ; and those who live about Thebes and the Lake Mœris (in the Arsinoïte nome) hold it in great veneration.”

* Plin. xxviii. 8.

† Plut. de Isid. s. 50.

‡ Herod. ii. 69.

In some places it was treated with the most marked respect, and kept at a considerable expense ; it was fed and attended with the most scrupulous care ; geese, fish, and various meats were dressed purposely for it ; they ornamented its head with ear-rings, and its feet with bracelets and necklaces of gold or artificial stones * ; it was rendered perfectly tame by kind treatment ; and after death the body was embalmed in a most sumptuous manner. This was particularly the case in the Theban, Ombite, and Arsinoïte nomes ; and at a place now called Maabdeb, opposite the modern town of Manfaloot, are extensive grottoes, cut far into the limestone mountain, where numerous crocodile mummies have been found, perfectly preserved, and evidently embalmed with great care.

The people of Apollinopolis, Tentyris, Heracléopolis, and other places, on the contrary, held this animal in abhorrence, and lost no opportunity of destroying it ; and the Tentyrites were so expert, from long habit, in catching, and even in engaging, this powerful animal in its native element, that they were known to follow it into the Nile, and bring it by force to the shore. Pliny and other ancient authors mention the wonderful feats performed by them not only in their own country, but in the presence of the Roman people : and Strabo† says that on the occasion of some crocodiles being exhibited at Rome, the Tentyrites who had followed them, fully confirmed the truth of the report of their power over those animals ; for, having put them

* Herod. ii. 69.

† Strabo, xvii. p. 560., ed. Cas.

into a spacious tank of water, with a shelving bank artificially constructed at one side, the men boldly entered the water, and entangling them in a net, dragged them to the bank, and back again into the water, in the presence of numerous spectators.

Pliny observes, "that though the Tentyrites are small men, they have the greatest presence of mind in their encounters with the crocodile, which is an animal most dangerous to those who fear it, but timid when pursued. They even dare to follow it singly, and swimming after it in the river spring upon its back, and thrust a bar into its open mouth, which, being held at the two extremities, serves as a bit, and enables them to force it to the shore." Pliny even goes so far as to state that, frightening them with the voice alone, they compelled them to render the bodies they had devoured to the (disappointed) embalmers*; but as crocodiles show themselves much greater epicures in their mode of eating, and tear their food to pieces before they swallow it, we may take the liberty of suggesting the probability that, in these cases, the animal *abandoned the body* on their approach: its usual habit being to bring it to the shore, and there to tear it up, the clothes having been stripped off while in the water.

Seneca† accounts for the power possessed by the Tentyrites over the crocodile from their intrepidity, and in accordance with Pliny, and with modern experience, he states it to be "timid before the bold,

* Plin. (viii. 25.) "Voce etiam solâ territos, cogunt evomere recentia corpora ad sepulturam", and xxviii 3.

† Seneca, Nat. Quæst. iv. 2.

and most ready to attack those who fear it: the Tentyrites excelling neither in their nature nor constitution, but in their fearless contempt of it; for they follow, and by means of a snare, stop it in its flight; nor are any killed except those who are wanting in presence of mind."

"The crocodile is in fact," as I have elsewhere remarked*, "a timid animal, flying on the approach of man, and generally speaking, only venturing to attack its prey on a sudden; for which reason we seldom or never hear of persons devoured by it, unless incautiously standing at the bank of the river, where its approach is concealed by the water; and where, by the immense power of its tail, it is enabled to throw down and overcome the strongest man, who, being carried instantaneously to the bottom of the river, has neither the time nor the means to resist.

"Pliny, like other authors †, has been led into a common error, that the sight of the crocodile is defective under water, which a moment's consideration, without the necessity of *personal* experience, should have corrected; for it is at least reasonable to suppose that an animal, living chiefly on fish, should, in order to secure its prey, be gifted with an equal power of sight; and that of fish cannot be considered defective: but Herodotus, the *father* of history, and of these errors, affirms‡ that it is totally 'blind under water.'

* Egypt and Thebes, p. 409.

† Aristot. Hist. An. ii. 10. "They see imperfectly in the water."

‡ Herod. ii. 68.

“ Egypt produces two varieties of this animal*, distinguished by the number and position of the scales on the neck. One has the front row composed of six scales, behind which is a cluster of four large central scales in two lines, with two smaller ones on each side of the uppermost of these lines; the other has in the front row four only, and the disposition of the other eight is thus: four central scales in two lines, with one smaller one on each side of the upper line, and two behind the second and lower line. The first row of the body consists of six scales, the former variety having only four. The other scales of the body are nearly alike in both. They do not exceed eighteen or nineteen feet, though travellers have mentioned some of stupendous size.”

Herodotus enters into a detail of the habits of the crocodile, and relates the frequently repeated story of the trochilus† entering the animal’s mouth, during its sleep on the sand banks of the Nile, and relieving it of the leeches which adhere to its throat. The truth of this assertion is seriously impugned, when we recollect that leeches do not abound in the Nile; and the polite understanding supposed to exist, between the crocodile and the bird, becomes more improbable, when we examine the manner in which the throat of the animal is formed; for having no tongue, nature has given it the means of closing it entirely, except when in the

* Egypt and Thebes, p. 225. note. Conf. Plin. xxviii. 8.

† Herod. ii. 68. Plin. viii. 25.

act of swallowing ; and during sleep, the throat is constantly shut, though the mouth is open.

The hostile intrusion of the ichneumon, related by other writers*, is equally destitute of probability.

That birds living on flies frequently flit about the crocodile, while lying on the sand, we can readily believe ; and this circumstance as well as the presence of a small *running* bird (a species of *charadrius*†), which is often seen on the same bank, and which, loudly chirping on the approach of man may be supposed to warn the crocodile of danger, very possibly led to the fable of those visits of the *trochilus*‡, and the friendly services it rendered the sleeping crocodile.

Its eggs, as Herodotus and Pliny observe, are small, considering the size which it afterwards attains, and are deposited by the female in the sand, or in the light loose earth of the river side ; and its constant desire to enjoy the fresh air, during the summer, is shown by its lying for a length of time asleep on the sand banks, with its open mouth turned to the prevailing wind.

“They had many different modes of catching it,” says Herodotus§ ; “that most worthy of notice is as follows :— They fasten a piece of pork to a hook, and throw it into the middle of the stream, as a bait ; then, standing near the water’s edge, they beat a young pig, and the crocodile, being enticed to the spot by its cries, finds the bait on its way, and swallowing it is caught by the hook. They

* Plin. viii. 25.

† The name *Trochilus* signifies running.

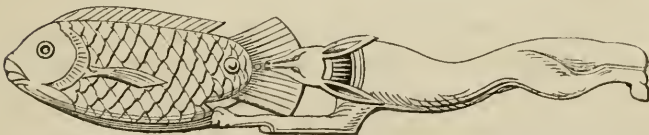
‡ Called *sicsac* in Arabic

§ Herod. ii. 70.

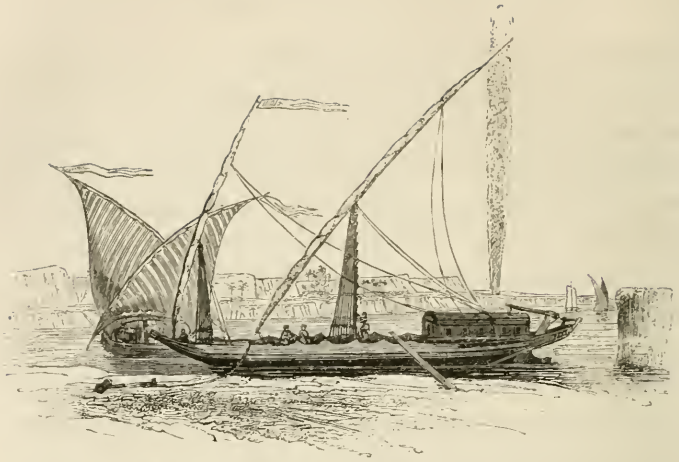
then pull it ashore, and the first step is to cover its eyes with mud, and thus being deprived of sight it is unable to offer an effectual resistance." We also find from the sculptures that they attacked the crocodile with a spear, transfixing it as it passed beneath the boat in shallow water.

The hatred borne by some of the Egyptians against the crocodile frequently gave rise to serious disputes, and the inhabitants of Tentyris, who had killed and eaten the sacred animal of Ombos, were attacked with all the fury of religious feud. On one occasion, after many had been wounded on both sides, and the Tentyrites were worsted and compelled to fly, the Ombites secured a prisoner of the opposing party, and if we may believe Juvenal *, satiated their revenge by eating his body. The statement, however, is questionable, nor is it probable even in that depraved age, when Egypt had passed under the dominion of the Romans, that such a scene actually occurred; and great licence is always allowed to poets, and still more is taken by the severity of satire.

* Juv. Sat. xv. 33. 80.



Box in the form of a fish with turning lid, and handle in the shape of a fox.
Mr. Salt's Collection.



VIGNETTE H. Modern Boats of the Nile. On the opposite bank is a whirlwind of sand.

CHAP. IX.

Arts and Manufactures. — Glass. — Linen. — Dyeing. — Rope-making. — The Papyrus. — Leather-cutters. — Potters. — Cabinet-makers and Carpenters. — Makers of Chariots and Coffins. — Coopers. — Boats and War Galleys. — Tin and other Metals. — Gold Mines. — Gold Working and Gilding.

OF the progress of the ancient Egyptians in many useful branches of art, we have unquestionable proofs in the monuments that remain, and from the evidence of ancient writers. The sculptures inform us that many inventions were known to them at the early periods when most other nations were still in their infancy, which, though generally ascribed to a much later epoch, are, from the facility we now have of fixing the chronology of Egyptian monuments, ascertained to be coeval with the Exodus, or the bondage of the Israelites.

The scientific skill they possessed in architecture, is always a matter of surprise to the traveller who beholds the stupendous monuments of Egypt; whose solid masonry would have defied the ravages of time, and have remained unimpaired to the present day, had not the destructive hand of man been employed against them. The invasion of Cambyses, and the subsequent wars with the Persians; the three years' siege of Thebes, by Ptolemy Lathyrus, which laid several of her buildings in ruins, and so completely reduced that ancient capital, that it was no longer worthy to be considered an Egyptian city; the inveteracy of the Christians against their Pagan predecessors, and the abhorrence of the Moslems for the monuments of the idolatrous infidels; and, lastly, the position of the temples, which presented themselves to the mason as a convenient quarry, supplying, at little labour and expense, abundance of stones for the erection of new edifices, were the baneful causes of the downfall of the Egyptian monuments; but, though great portions of the finest buildings were destroyed, sufficient remains to attest their former grandeur, and to proclaim the wonderful skill and mechanical knowledge of their founders.

At the period of the Persian invasion, Egypt was looked upon as the great school of science, and the repository of all kinds of learning; but the arts had fallen from the degree of excellence to which they attained, under the Augustan age of the 18th dynasty, and though luxury and private wealth increased, taste in sculpture and archi-

ecture had long since been on the decline, and minute and highly finished details were substituted for the simple and dignified forms of an earlier period. The arts, however, continued to flourish under the succeeding dynasties, and in the reigns of Psamaticus and Amasis, the encouragement given to architecture, sculpture, and painting, seemed to promise an improvement, if not the revival, of taste, and arrested for a time their downfall: but an unexpected event was destined to bring about their sudden decadence, and the Persian conquest dealt a blow, from which they vainly strove to recover in the succeeding reigns of the Macedonian dynasty; for not only were the finest monuments destroyed or mutilated, statues*, works of art, and all the wealth † of the country carried off to Persia, but the artists themselves were compelled to leave their homes to follow the conquerors to their capital, and to commemorate the victories obtained over Egypt, by the authors of their own captivity and misfortunes. Thus deprived of the finest models, humbled by the lengthened occupation of the country, and losing the only persons capable of directing taste, or encouraging art, Egypt, already beginning to sink, vainly endeavoured to struggle with the overwhelming current of events; and while Persia was benefited, Egyptian art received its death blow from the invasion of Cambyses.

* Ptolemy Euergetes is said to have brought back 2500 statues, when he invaded the Persian dominions, which had been taken from Egypt by Cambyses.

† Conf. Diodor. i. 46. "The silver and gold, the abundance of ivory and precious stones, carried away by the Persians," and i. 49.

The Egyptians had long been renowned for mathematical science ; but it was not till the power and wealth of the country were at their zenith, that full scope was given for its display in the grand style of public monuments ; a fact, sufficiently indicated by their increase of scale and vastness of size at that period ; the buildings of olden time being generally of much smaller dimensions than those of the advanced age of the 18th dynasty. I particularly allude to the temples and to the colossal statues erected at the latter epoch, which far exceed in their scale, and the size of the blocks themselves, the ordinary monuments of an earlier era, as may be observed in the increased proportions of the grand hall of Karnak, added by Remeses the Great, and the dimensions of the sitting colossi of Amunoph, in the plain of Thebes ; or that of Remeses, at the Memnonium, which weighed about 886 tons, and was brought over land from the quarries at the cataracts of Syene, a distance of more than 120 miles.*

Many obelisks, each of a single block of granite, had already been hewn, and transported from the same quarries, as early at least as the reign of Osirtasen I., whom I suppose to have been the contemporary of Joseph ; and the same mechanical skill had already existed even before that period, as is shown from the construction of those wonderful monuments the pyramids, near Memphis, which in the size of the blocks, and

* I shall have occasion to notice this hereafter.

their style of building, evince a degree of architectural knowledge, perhaps inferior to none possessed at a subsequent epoch. But it was not generally called forth in early times; they were then contented with monuments of an inferior scale, and their ordinary buildings were not of the same gigantic dimensions. A grand work was then seldom undertaken without an adequate motive, and the knowledge they possessed was reserved for particular and extraordinary occasions: but when riches and the love of show increased, they extended the size of their temples, and constant practice having made the means familiar to them, artisans and engineers vied with each other in hewing and transporting colossal statues, monoliths, and other ponderous monuments, which served for ornament, and the display of their mechanical knowledge.

It was not in this branch of science alone that the Egyptians excelled: the wonderful skill they evinced in sculpturing or engraving hard stones is still more surprising; and we wonder at the means employed for cutting hieroglyphics, frequently to the depth of more than two inches, on basalt, on syenite, and other stones of the hardest quality. Nor were they deficient in taste,—a taste too not acquired by imitating approved models, but claiming for itself the praise of originality, and universally allowed to have been the parent of much that was afterwards perfected, with such wonderful success, by the most highly gifted of nations, the ancient Greeks: and no one can look

upon the elegant forms of many of the Egyptian vases, the ornamental designs of their architecture, or the furniture of their rooms, without conceding to them due praise on this point, and admitting, that however whimsical some of the figures may be in sacred subjects, they often showed considerable taste, where the regulations of the priesthood and religious scruples ceased to interfere.

In their temples they were obliged to conform to rules established in the early infancy of art, which custom and prejudice had rendered sacred: the ancient style was always looked upon with the highest veneration, and it is probable that from the same feeling of respect, the formulas and diction of their books of law or religion continued the same as in early times; a custom prevalent among many people, whatever improvements language undergoes; for neither would the Turkish Moslem dare to translate the Arabic Qorán, nor the Cairene to alter it to his own dialect; and we might ourselves object to a Bible written in the style of Robertson or Hume.

Plato and Synesius both mention the stern regulations which forbade their artists to introduce innovations in religious subjects; and the more effectually to prevent this, “the profession of artist was not allowed to be exercised by common or illiterate persons, lest they should attempt any thing contrary to the laws established, regarding the figures of the deities.”

In their household furniture, and the ornamental objects used in their dwelling houses, they were

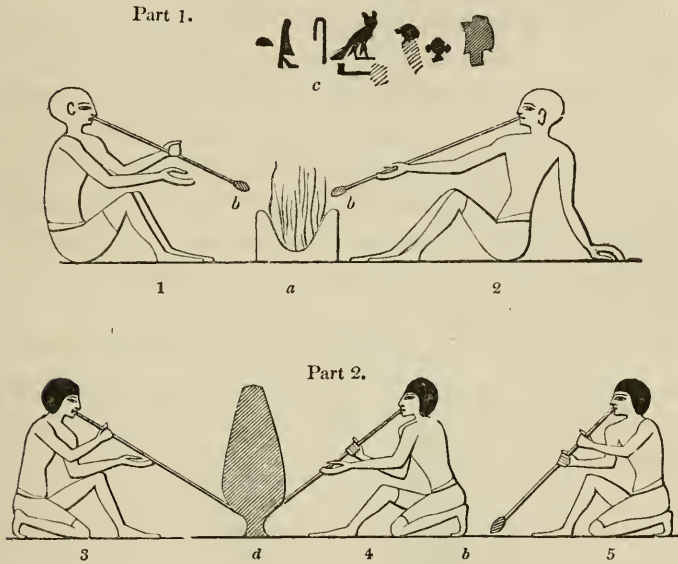
not restricted by any established rules ; here, as I have observed, much taste was displayed, and their vases frequently bear so strong a resemblance to those of Greece, that we might feel disposed to consider them borrowed from Greek models, did not their known antiquity forbid such a conclusion ; and many have mistaken the ornamental devices, attached to them, and to other fancy works of Egyptian art, for the productions of Greek sculptors. Now, that we are acquainted with the dates of the Egyptian monuments, the square border and scrolls, so common on Athenian, Sicilian, Etruscan, and Græco-Italian vases, are shown to be, from the most remote time, among the ordinary devices on cups, and the ceilings of tombs, at Thebes and other places ; and the graceful curve * of the Egyptian cornice, which, not confined to architecture, is repeated on vases, and numerous articles of furniture, was evidently adopted, for the same ornamental purpose, by the Greeks.

GLASS, PORCELAIN, AND FALSE STONES.

One of the most remarkable inventions of a remote era, and one with which the Egyptians appear to have been acquainted, at least as early as the reign of the first Osirtasen, upwards of 3500 years ago, is that of glass-blowing. The process is represented in the paintings of Beni Hassan, execu-

* *Vide* vases, woodcut, No. 244, and doorways, woodcuts, Nos. 101, 102, and 104.

ted during the reign of that monarch, and his immediate successors ; and the same is again repeated, in other parts of Egypt, in tombs of various epochs.



No. 349.

Part 1. Glass-blowers.

Beni Hassan.

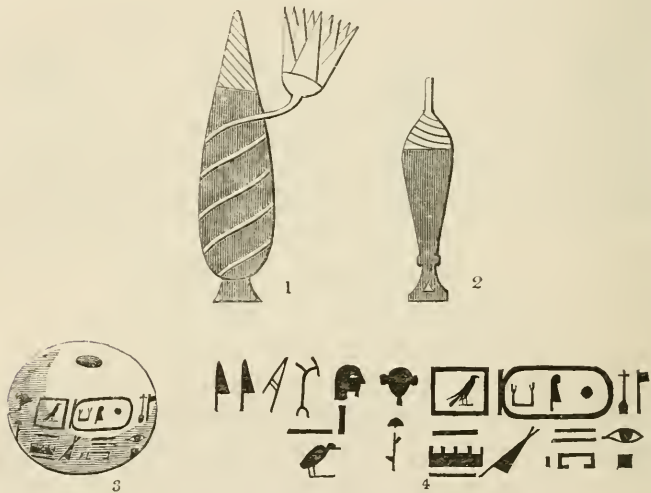
2. The same.

Thebes.

The glass at the end of the blowpipe *b b*, is coloured green.
a is the fire. *d* a glass bottle.

The form of the bottle and the use of the blow-pipe are unequivocally indicated in those subjects ; and the green hue of the fused material, taken from the fire at the point of the pipe, cannot fail to show the intention of the artist. But if the sceptic should feel disposed to withhold his belief on the authority of a painted representation, and deny that the use of glass could be proved on such evidence, it may be well to remind him that images of glazed

pottery were common at the same period, that the vitrified substance with which they are covered is of the same quality as glass, and that therefore the mode of fusing, and the proper proportions of the ingredients for making glass, were already known to them; and we can positively state, that 200 years after, or, about 1500 B.C., they made ornaments of glass; a bead bearing a king's name who lived at that period, having been found at Thebes, by my friend Captain Henvey, R. N., the specific gravity of which, $25^{\circ} 23'$, is precisely the same as of crown glass, now manufactured in England.



No. 349. a.

Figs. 1. 2. Glass bottles represented in the sculptures of Thebes.

3. Captain Henvey's glass bead. About the real size.

4. The hieroglyphics on the bead, containing the name of a monarch who lived 1500. B. C.

Many glass bottles and objects of various forms have been met with in the tombs of Upper and Lower

Egypt, some unquestionably of very remote antiquity, though not readily ascribed to any fixed epoch, owing to the absence of royal names, indicative of their date; and glass vases, if we may trust to the representations in the Theban paintings, are frequently shown to have been used for holding wine, at least as early as the Exodus, 1490 years before our era.

Till within a few years, prejudice forbade the belief that the ancients were acquainted with the manufacture of glass, and many persons could not be persuaded that the Romans used it, though represented in the paintings of Pompeii with the most unquestionable truth, and a pane of glass and numerous fragments of broken bottles had been discovered in that excavated city. The fact, however, became established, and these doubts were silenced; still it was questioned whether the invention dated before the destruction of that city; the glass was much condemned as of inferior quality; and the authority of Pliny*, previously disbelieved, was now welcomed as an old friend, and called forth to prove that glass was a late discovery of some Phœnician mariners, who having lighted a fire on the sea shore, and supported their cooking utensils on blocks of nitre, were taught by the union of the fused substances the secret of this useful invention. The Roman naturalist had fixed no time for this event, and if he spoke of improvements in the art, introduced in the reign of Tiberius, it was presumed

* Plin. xxxvi. c. 26.

that, though a vitrified substance was known, its qualities were not properly understood, and that its discovery only dated about the Augustan age. They even objected that under the first emperors, windows were made of a transparent stone, brought from Spain and other countries, called *Lapis specularis*; and they hence inferred the imperfect knowledge of glass.

This stone is now well known under the name of talc; it was only used in the houses of the rich, in litters, or as an ornament to the best apartments: other persons being content with linen, horn, or paper.

Such were the feeble arguments brought forward to disprove the use of glass for vases and for ornamental purposes, among the Romans; but with much less reason did they apply to its invention in other countries: and though the Egyptians never knew the necessity, or rather the annoyance, of glass windows, under a burning sun, they were well acquainted with vases of that material; and the workmen of Thebes and Memphis, and subsequently Alexandria, were famed for the excellent qualities of glass ware they produced, with which Rome continued to be supplied, long after Egypt became a province of the empire. Strabo was informed by a glassmaker of Alexandria* that a peculiar earth was found in Egypt, without which it was impossible to manufacture certain kinds of glass of a brilliant and valuable quality; and some

* Strabo, lib. xvii.

vases, presented by an Egyptian priest to the emperor Hadrian*, were considered so curious and valuable, that they were only used on grand occasions.

Such too was the skill of the Egyptians in the manufacture of glass, and in the mode of staining it of various hues, that they counterfeited with success the amethyst and other precious stones, and even arrived at an excellence in the art which their successors have been unable to retain, and which our European workmen, in spite of their improvements in other branches of this manufacture, are still unable to imitate; for not only do the colours of some Egyptian opaque glass offer the most varied devices on the exterior, distributed with the regularity of a studied design, but the same hue and the same device pass in right lines directly through the substance; so that in whatever part it is broken, or wherever a section may chance to be made of it, the same appearance, the same colours, and the same device present themselves, without being found ever to deviate from the direction of a straight line, from the external surface to the interior.

This quality of glass, of which I have seen several specimens, has been already noticed by the learned Winkelmann, who is decidedly of opinion that “the ancients carried the art of glass making to a higher degree of perfection than ourselves, though it may appear a paradox to those who have

* Vopiscus in Vita Saturnini, c. 8.

not seen their works in this material.”* He describes two pieces of glass, found at Rome, a few years before he wrote, which were of the quality above mentioned.† “One of them,” he says, “though not quite an inch in length, and a third of an inch in breadth, exhibits on a dark and variegated ground, a bird resembling a duck, in very bright and varied colours, rather in the manner of a Chinese painting than a copy of nature. The outlines are bold and decided, the colours beautiful and pure, and the effect very pleasing; in consequence of the artist having alternately introduced an opaque and a transparent glass. The most delicate pencil of a miniature painter could not have traced with greater sharpness the circle of the eyeball, or the plumage of the neck and wings; at which part this specimen has been broken. But the most surprising thing is, that the reverse exhibits the same bird, in which it is impossible to discover any difference in the smallest details; whence it may be concluded that the figure of the bird continues through its entire thickness. The picture has a granular appearance on both sides, and seems to have been formed of single pieces, like mosaic work, united with so much skill, that the most powerful magnifying glass is unable to discover their junction.

“From the condition of this fragment, it was at first difficult to form any idea of the process employed in its manufacture: and we should have

* Winkelmann, *Orig. de l'Art.*, lib. i. 2. 19.

† Winkelmann, *Ibid.*

remained entirely ignorant of it, had not the fracture shown that filaments of the same colours, as on the surface of the glass, and throughout its whole diameter, passed from one side to the other; whence it has been concluded that the picture was composed of different cylinders of coloured glass, which being subjected to a proper degree of heat, united by (partial) fusion. I cannot suppose they would have taken so much trouble, and have been contented to make a picture only the sixth of an inch thick, while, by employing longer filaments, they might have produced one many inches in thickness, without occupying any additional time in the process; it is therefore probable this was cut from a larger or thicker piece, and the number of the pictures taken from the same depended on the length of the filaments, and the consequent thickness of the original mass.

“The other specimen, also broken, and about the size of the preceding one, is made in the same manner. It exhibits ornaments of a green, yellow, and white colour, on a blue ground, which consist in volutes, strings of beads, and flowers, ending in pyramidical points. All the details are perfectly distinct and unconfused, and yet so very minute, that the keenest eye is unable to follow the delicate lines in which the volutes terminate; the ornaments, however, are all continued, without interruption, through the entire thickness of the piece.”

Sometimes, when the specimens were very thin, they applied and cemented them to a small slab of

stone of their own size*, which served as a support at the back; and by this means they were enabled to cut them much thinner, and consequently to increase their number.

Two of the most curious specimens I have seen, of this kind of glass, have been brought to England. One is in the possession of my friend, Capt. Henvey, R. N., to whose kindness I am indebted for the copy I have given of it, and of the bead before mentioned. The other was found in Egypt by Dr. Hogg.

The quality and the distribution of the colours in Captain Henvey's specimen are strikingly beautiful: the total size is about $1\frac{0}{10}$ inch square; and the ground is of an amethyst hue. In the centre is a device consisting of a yellow circle, surrounded by light blue with a bright red border, and on the four sides shoot forth light blue rays edged with white. Around this, which is isolated, runs a square ornament of bright yellow, divided into distinct parts, formed by openings in each of the sides, and at the four corners a beautiful device projects, like a leaf, formed of a succession of minute lines, green, red, and white, the two last encircling the green nucleus, which meet in a common point towards the base, and terminate in almost imperceptible tenuity. The delicacy of some of the lines is truly surprising, and not less the accuracy with which the patterns are executed; and the brilliancy of the colours is as remarkable

* Mr. Rogers has a specimen applied in this manner.

as the harmony maintained in their disposition : an art then much more studiously attended to, and far better understood than at the present day.

The secret of making these glass ornaments is more readily explained from this specimen than any I have met with. It consists of separate squares, whose original division is readily discovered in a bright light, as well as the manner of adjusting the different parts, and of uniting them in one mass ; and here and there we find that the heat applied to cement the squares has caused the colours to run between them, in consequence of partial fusion from too strong a fire. This fact, and the disposition of the separate squares, will be better understood from a reference to the plate*, from which too some idea may be obtained of the fineness of the lines composing the devices.

Not only were these various parts made at different times, and afterwards united by heat, rendered effective on their surfaces, by means of a flux applied to them, but each coloured line was at first separate, and, when adjusted in its proper place, was connected with those around it by the same process : and these, as Winkelmann very properly suggests, were cylinders, or laminae, according to the pattern proposed, which passed in direct lines through the substance, or ground, in which they were imbedded.

Paw, Goguet, and other antiquaries had long ago been convinced that glass was known to the

* *Vide*, plate 17. — Frontispiece.

Egyptians, as well as the Phœnicians, at a very remote period, and the immense emeralds mentioned by ancient authors were considered glass imitations of those precious stones; a conjecture rendered still more plausible by the experience of modern times, which shows that the most noted jewels of Christian churches are frequently formed of the same materials. Such were the colossal statue of Serapis*, in the Egyptian labyrinth, nine cubits, or thirteen feet and a half, in height; an emerald presented by the king of Babylon to an Egyptian Pharaoh†, which was four cubits, or six feet, long, and three cubits broad; and an obelisk‡ in the temple of Jupiter, which was forty cubits, or sixty feet, in height, and four cubits broad, composed of four emeralds.§

The opinion of those writers, respecting the early invention of glass is now fully confirmed; and whether the first idea originated with the Phœnicians, or their neighbours the Egyptians, we have satisfactory evidence of its use 3300, or perhaps 3500 years ago.

Of the different purposes to which glass was applied by the ancients, Winkelmann gives a further account in the same chapter, where he pronounces his opinion that, “generally speaking, it was employed more frequently in ancient than in modern times;” and cites, as another proof of

* Plin. lib. xxxvii. 5. on the authority of Apion, surnamed Plistonices.

† Plin. loc. cit. on the authority of Theophrastus.

‡ Plin. loc. cit. See also Theophrastus on stones, s. 44.

§ To have made them of glass required extraordinary skill.

their great skill in its manufacture, the vase preserved in the Palazzo Barberini, at Rome, which, from the manner in which the layers of colour were united “had been mistaken for a real sardonyx.” It is the same that is now in the British Museum, and known by the name of the Portland vase.*

That the Egyptians, at the early period of the 18th dynasty, were well acquainted not only with the manufacture of common glass, for beads and bottles of ordinary quality, but with the art of staining it of divers colours, is sufficiently proved by the fragments found in the tombs of Thebes; and so skilful were they in this complicated process, that they imitated the most fanciful devices, and succeeded in counterfeiting the rich hues, and brilliancy of precious stones.† The green emerald, the purple amethyst, and other expensive gems were successfully imitated; a necklace of false stones could be purchased at a Theban jeweller’s, to please the wearer, or deceive a stranger, by the appearance of reality; and the feelings of envy might be partially allayed, and the love of show be gratified by these specious substitutes for real jewels.

Pliny states‡ that the emerald was more easily counterfeited than any other gem, and considers the

* Some imitations of it were made by Wedgewood.

† Seneca says that Democritus first showed the method of polishing ivory, and of imitating precious stones (Epist. 90.); but this was long after the art was common in Egypt. *Vide* Plin. (xxxvi. 26.), “Fit et album et murrinum, aut hyacinthos sapphirosque imitatum (vitrum);” and Herodot. ii. 69., who calls them *λιθίνα χυττα*, or melted composition of stone.

‡ Non est smaragdo alia imitabilior gemma mendacio vitri;” and “ex crystallo tingentur smaragdi, neque est ulla fraus vitæ lucrosior,” lib. xxvii. c. 12.

art of imitating precious stones a far more lucrative piece of deceit than any devised by the ingenuity of man; Egypt was, as usual, the country most noted for its skill in this manufacture *, and Strabo † says, “that an earth found there was the only kind which would answer for certain rich and variegated compositions.” The emeralds mentioned by Apion and Theophrastus, which, as before observed, are supposed to have been of glass, might also be cited to show that the art was known in a Pharaonic age, if we had not abundant and far more satisfactory proofs from specimens found in the ruins of Thebes: and we can readily believe the assertion of Pliny, that in his time they succeeded so completely in the imitation as to render it “difficult to distinguish false from real stones.” ‡

Many, in the form of beads, have been met with in different parts of Egypt, particularly at Thebes; and so far did the Egyptians carry this spirit of imitation, that even small figures, scarabæi, and objects made of ordinary porcelain, were counterfeited, being composed of still cheaper materials. A figure, which was entirely of earthenware, with a glazed exterior, underwent a somewhat more complicated process than when cut out of stone, and simply covered with a vitrified coating; this last could therefore be sold at a low price: it offered

* *Vide* the memoir of M. Boudet, “Sur l’Art de la Verrerie, né en Egypte,” in that valuable work the Description de l’Egypte, vol. ix. p. 213. I cannot agree with M. B. respecting the trees and the water at the Natron Lakes, p. 239. note c.

† Strabo, lib. xvi. p. 521. ed. Cas.

‡ Plin. xxxvii. 12.

all the brilliancy of the former, and its weight alone betrayed its inferiority; by which means, whatever was novel, or pleasing from its external appearance, was placed within reach of all classes; or at least the possessor had the satisfaction of appearing to partake in each fashionable novelty.

Such inventions, and successful endeavours to imitate costly ornaments by humbler materials, not only show the progress of art among the Egyptians, but strongly argue the great advancement they had made in the customs of civilised life; since it is certain, that until society has arrived at a high degree of luxury and refinement, artificial wants of this nature are not created, and the lower classes do not yet feel the desire of imitating their wealthier superiors, in the adoption of objects dependent on taste or accidental caprice.

Glass bugles and beads were much used by the Egyptians for necklaces, and for a sort of network, with which they covered the wrappers and cartouge of mummies, arranged so as to form, by their varied hues, numerous devices and figures, in the manner of our bead purses; and the ladies sometimes amused themselves by stringing them for ornamental purposes, as at the present day.

The principal use to which glass was applied by the Egyptians, (besides the beads and fancy work already noticed,) was for the manufacture of bottles, vases, and other utensils*; wine was fre-

* The lamps mentioned by Herodotus (ii. 62.), at the festival of lamps at Saïs, were probably glass. *Vide infra*, p. 112.

quently brought to table in a bottle, or handed to a guest in a cup * of this material, and a body was sometimes buried in a glass coffin. † Occasionally a granite sarcophagus was covered with a coating of vitrified matter, usually of a deep green colour, which displayed, by its transparency, the sculptures or hieroglyphic legends engraved upon the stone ; a process well understood by the Egyptians, and the same they employed in many of the blue figures of pottery and stone, commonly found in their tombs ; the stone, in one case, being covered with a composition capable of vitrifying, and then exposed to a certain degree of heat, until properly melted and diffused over the surface, and, in the other, dipped into a mixture, which was vitrified in the same manner.

Like the Romans, they used glass for mosaic work, and pieces of various colours were employed in fancy ornaments, in the figures of deities, in sacred emblems, and in the different objects for which inlaid work was particularly adapted, the quality there used being generally of an opaque kind. In some of these vitrified compositions, the colours have a brilliancy which is truly surprising ; the blues which are given by copper are vivid and beautifully clear ; and one of the reds, which is probably derived from minium, has all the intenseness of rosso antico with the brightness of the

* In Rome the use of glass vases superseded that of gold and silver. Plin. xxxvi. 26. " Usus ad potandum argenti metalli et auri pepulit (vitrum)."

† Alexander the Great was said to have been buried in a glass coffin at Alexandria.

glassy material in which it is found; thus combining the qualities of a rich enamel.

Many of the cups discovered at Thebes, present a tasteful arrangement of varied hues, and evince the great skill of the Egyptians in the manufacture of porcelain; and no one can examine similar specimens without feeling convinced of the great experience they possessed in this branch of art. The manner in which the colours are blended and arranged; the minuteness of the lines, frequently tapering off to an almost imperceptible fineness; and the varied directions of tortuous curves, traversing the substance, but strictly conforming to the pattern designed by the artist, display no ordinary skill, and show that they were perfect masters of the means employed to produce the effect proposed.

The Egyptian porcelain should perhaps be denominated glass-porcelain, as partaking of the quality of the two, and not being altogether unlike the porcelain-glass invented by the celebrated Réaumur; who discovered, during his curious experiments on different qualities of porcelain, the method of converting glass into a substance very similar to chinaware.

The ground of Egyptian porcelain is generally of one homogeneous quality and hue, either blue or green, traversed in every direction by lines or devices of other colours—red, white, yellow, black, light or dark blue, and green, or whatever the artist chose to introduce; and these are not always confined to the surface, but frequently penetrate

considerably into the ground, sometimes having passed half, at others entirely through, the fused substance ; in which respect they differ from the porcelain of China, where the flowers or patterns are applied to the surface, and perhaps justify the use of the term glass-porcelain, which I have adopted. In some instances, the yellows were put on after the other colours, upon the surface of the vase, which was then again subjected to a proper degree of heat ; and after this, the handles, the rim, and the base, were added, and fixed by a repetition of the same process. It was not without considerable risk that these additions were made, and many vases were broken during the operation ; to which Martial alludes, in an epigram on the glass cups of the Egyptians.*

That the Egyptians possessed considerable knowledge of chemistry and the use of metallic oxides, is evident from the nature of the colours applied to their glass and porcelain ; and they were even acquainted with the influence of acids upon colour, being able, in the process of dyeing or staining cloth, to bring about certain changes in the hues †, by the same process adopted in our own cotton works, as I shall show in describing the manufactures of the Egyptians.

It is evident that the art of cutting glass was known to the Egyptians at the most remote

* Martial, Epig. lib. xiv. 115. Calices vitrei : —

“ Adspicis ingenium Nili, quibus addere plura
Dum cupit, ah, quoties perdidit auctor opus.”

† Plin. xxxv. 11.

periods, hieroglyphics and various devices being engraved upon vases and beads, made in the time of the 18th dynasty; and some glass, particularly that which bears figures or ornaments in relief, was cast in a mould. Some have supposed that the method of cutting glass was unknown to the ancients, and have limited the period of its invention to the commencement of the seventeenth century of our era, when Gaspar Lehmann, at Prague, first succeeded in it, and obtained a patent from the emperor Rodolph II.; but we may infer from the authority of Pliny, that glass-cutting was known to the ancients, and that the diamond was used for the purpose as at the present day, even if they were ignorant of the art of cutting this stone with its own dust. "Diamonds," says that author *, "are eagerly sought by lapidaries, who set them in iron handles, for they have the power of penetrating any thing, however hard it may be." He also states that emeralds and other hard stones were engraved, though in early times it was "considered wrong to violate gems with any figures or devices †;" and the diamond was found capable of cutting those of the hardest quality, "for all gems," he observes, "may be engraved by the diamond." ‡

It is difficult to decide upon the precise method

* Plin. xxxvii. 4. "Expetuntur (adamantis crustæ) a sculptoribus, ferroque includuntur, nullam non duritiam ex facili cavantes."

† Plin. xxxvii. Proem. and xxxiii. 1. He thinks the stone of Poly-crates' ring was a sardonyx. xxxvii. c. 1.

‡ Plin. xxxvii. 13. "Verum omnes (gemmæ) adamante (scalpi possunt)."

adopted by the Egyptians for cutting glass and hard stones; but if nothing remains to show the process they employed, there is sufficient evidence of its effect; and their early intercourse with India may have led them to the knowledge of the diamond, and of its great utility in engraving those materials. It is also probable that emery powder, as I shall hereafter have occasion to observe, and the lapidary's wheel were used in Egypt; and there is little doubt that the Israelites learnt the art of cutting and engraving stones in that country.*

Some glass bottles were enclosed in wicker work†, very nearly resembling what is now called by the Egyptians a *damagán*: they were generally of considerable size, holding from one to two gallons of fluid; and some of a smaller size, from six to nine inches in height, were protected by a covering made of the stalks of the papyrus or *cyperus* rush, like the modern bottles containing Florence oil ‡: others again appear to have been partly cased in leather, sewed over them, much in the same manner as some now made for carrying liquids on a journey.§

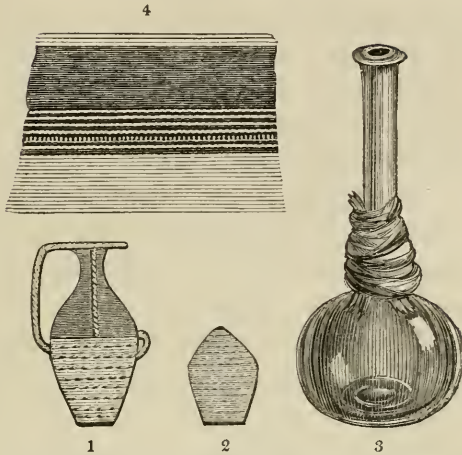
Among the many bottles found in the tombs of Thebes, none have excited greater curiosity and surprise, than those of Chinese manufacture,

* The stones engraved by the Israelites were the "sardius, topaz, and carbuncle; the emerald, sapphire, and *diamond*; the ligure, agate, and amethyst; the beryl, onyx, and jasper." Exod. xxviii. 17, 18, 19, 20. and xxxix. 6.

† Wood-cut, 350. *fig.* 2.

‡ Wood-cut, 350. *fig.* 3.

§ Wood-cut, 350. *fig.* 1.



No. 350. Fig. 1, has apparently leather sewed over the glass.
 2, glass *damagán* enclosed in wicker work.
 3, glass bottle covered with papyrus rush, like the Florence oil flasks. *In the possession of S. Rogers, Esq.*
 4, a piece of cloth with a border of a blue colour. *In my possession.*

presenting inscriptions in that language. The accidental discovery of a single bottle of this kind would naturally pass unheeded, and if we felt surprised that it should be deposited in an Egyptian sepulchre, conjecture would reasonably suggest that an accidental visiter in later times might have dropped it there, while searching for ancient treasures of a more valuable kind. But this explanation ceases to be admissible, when we find the same have been discovered in various Theban tombs. I myself have seen several, two of which I brought to England* ; another is described by the learned Professor Rosellini†, and found by him “in a previously unopened

* One is in the British Museum, the other in my possession.

† In his extensive work on the Egyptian monuments, part 2. vol. ii. p. 337.

tomb, of uncertain date, which," he refers, "from the style of the sculptures, to a Pharaonic period, not much later than the 18th dynasty;" a fourth is in the museum at Jersey; another was purchased by Lord Prudhoe, at Coptos, and is now in the museum at Alnwick Castle; two others are in the possession of Mrs. Bowen; and another belongs to Mr. W. Hamilton. They are about two inches in height: one side presents a flower, and the other an inscription, containing, according to the valuable authority of Mr. Davis,



fig. 1.

2.

No. 351.

Chinese bottles found in the Egyptian tombs.

Fig. 1, in the Museum of Alnwick Castle.

2, brought by me from Thebes.

3, belonging to Mr. W. Hamilton.

4, in my possession. From Thebes.

(in three out of the eight*,) the following legend — “The flower opens, and lo! another year.”

The quality of these bottles is very inferior, and they appear to have been made before the manufacture of porcelain had attained the same degree of perfection in China as in after times; they were probably brought to Egypt, through India, with which country I believe the Egyptians to have traded at a very remote period, and contained some precious ingredient, whose value may be inferred from the size of the vase. It cannot be supposed that the Egyptians, who manufactured porcelain of far better quality, would have sought or imported these as articles of value; we can therefore only suppose that they were prized for their contents: and after they were exhausted, the valueless bottle was applied to the ordinary purpose of holding the *Kohl*, or Collyrium, used by women for staining their eyelids.

It has been questioned, if the Egyptians understood the art of enamelling upon gold or silver, though, even in the absence of further evidence, we might infer it from an expression of Pliny†, who says: “The Egyptians paint their silver vases, representing Anubis upon them, the silver being painted and not engraved.” Small gold figures are frequently found with ornamented wings, and bodies, whose feathers, faces, or other coloured parts are composed of a vitrified com-

* I am happy to find that Mr. Davis is preparing an account of these interesting curiosities.

† Plin. xxxiii. 9.

tribute annually paid to the conquerors consisted of glass vases, from the manufactories of Memphis and Alexandria.

The intercourse between Egypt and Greece had been constantly kept up after the accession of Psamaticus and Amasis ; and the former, the parent of the arts at that period, supplied the Greeks and some of the Syrian tribes with the manufactures they required.

The Etruscans, a commercial people, appear to have traded with Egypt, about, or a little after the same period, and we repeatedly find small alabaster and porcelain bottles in their tombs, which have all the character of the Egyptian ; and not only does the stone of the former proclaim by its quality the quarries from which it was taken, but the form and style of the workmanship leave no doubt of the bottles themselves being the productions of Egyptian artists.

It is uncertain of what stone the murrhine vases, mentioned by Pliny*, Martial, and other writers, were made ; it was of various colours, beautifully blended, and even iridescent, and was obtained in greater quantity in Carmania than in any country. It was also found in Parthia and other districts of Asia, but unknown in Egypt ; a fact quite consistent with the notion of its being fluor-spar, which is not met with in the valley of the Nile ; and explaining the reason why the Egyptians imitated it with the composition known under the

* Plin. xxxvii. 2.

name of false murrhine, said to have been made at Thebes*, and Memphis. The description given by Pliny certainly bears a stronger resemblance to the fluor-spar, than to any other stone, and the only objection to this having been murrhine, arises from our not finding any vases, or fragments, of it; and some may still be disposed to doubt if the stone is known to which the naturalist alludes. But the fluor-spar appears to have the strongest claim; and the porcelain of Egypt, whose various colours are disposed in waving lines, as if to imitate the natural undulations of that crystallised substance†, may perhaps be looked upon with reason as the false murrhine of the ancients.

It is difficult to say whether the Egyptians employed glass for the purpose of making lamps or lanterns: ancient authors give us no direct information on the subject; and the paintings offer no representation which can be proved to indicate a lamp, a torch, or any other kind of light.‡

Herodotus § mentions a “fête of burning lamps,” which took place at Saïs, and indeed throughout

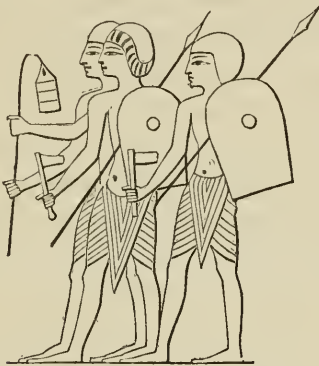
* Arrian, in his *Periplus of the Red Sea* (p. 3.), mentions “λιθιας δαλης πλειονα γενη, και αλλης μορβινης της γενομενης εν Διοσπολει.” At Medeenet Haboo are numerous agatised pebbles, which were evidently brought there (the nearest known spot where they are found being Nubia), but at what period is uncertain. Were they not for some purpose connected with art? If so, it is not probable they were brought there by the Christians, though generally found upon the surface of the mounds.

† *Vide* wood-cut, No. 256. *fig.* 2, 257. *fig.* 5, and 411. *fig.* 1, *a.*

‡ In the funeral processions, one person carries what seems to be a candle or torch.

§ Herodot. ii. 62.

the country, at a certain period of the year, and describes the lamps used on this occasion as “small vases filled with salt and olive oil, on which the wick floated, and burnt during the whole night ;” but it does not appear of what materials those vases were made, though we may reasonably suppose them to have been of glass.



No. 352.

A guard apparently with a lantern.

Alabastron.

The sculptures of Alabastron, again, represent a guard of soldiers, one of whom holds before him what resembles, and may be considered, a lantern ; but here too there is great uncertainty, and neither of these are sufficient to decide the question.

MANUFACTURE OF LINEN.

The Egyptians, from a most remote era, were celebrated for their manufacture of linen and other cloths, and the produce of their looms was exported to, and eagerly purchased by, foreign nations. The fine linen, and embroidered work, the yarn,

and woollen stuffs, of the upper and lower country are frequently mentioned, and were highly esteemed. Solomon purchased many of those commodities, as well as chariots and horses, from Egypt; and Chemmis, the city of Pan, retained * the credit it had acquired in making woollen stuffs, nearly till the period of the Roman conquest.

Woollen garments were chiefly used by the lower orders; sometimes also by the rich, and even by the priests, who were permitted to wear an upper robe in the form of a cloak of this material: but under garments of wool were strictly forbidden them, upon a principle of cleanliness; and as they took so much pains to cleanse and shave the body, they considered it inconsistent to adopt clothes made of the hair of animals. No one was allowed to be buried in a woollen garment, in consequence, as I have already observed †, of its engendering worms, which would injure the body; nor could any priest enter a temple without taking off this part of his dress.

The quantity of linen manufactured and used in Egypt was truly surprising, and independent of that made up into articles of dress, the great abundance used for enveloping the mummies, both of men and animals, shows how large a supply must have been kept ready for the constant demand at home, as well as for that of the foreign market.

That the bandages employed in wrapping the dead are of linen, and not, as some have imagined,

* Strabo, xvii. p. 559.

† Vol. I. p. 280., *vide* Herodot. ii. 81.

of cotton, has been already ascertained by the most satisfactory tests; and though no one, even among the unscientific inhabitants of modern Egypt, ever thought of questioning the fact, received opinion in Europe had till lately decided that they were cotton; and it was forbidden to doubt that "the bands of *byssine* linen" said by Herodotus* to have been used for enveloping the mummies, were cotton. My own impression had certainly been that the mummy cloths were invariably linen, but positive experience had not then confirmed my opinion, and I reluctantly yielded to the universal belief, and concluded that some at least might be cotton.

The accurate experiments made, with the aid of powerful microscopes, by Dr. Ure†, Mr. Bauer, Mr. Thompson, and others, on the nature of the fibres of linen and cotton threads‡, have shown that the former invariably present a cylindrical form, transparent, and articulated, or jointed like a cane, while the latter offer the appearance of a flat ribbon, with a hem or border at each edge; so that there is no possibility of mistaking the fibres of either, except perhaps, when the cotton is in an unripe state, and the flattened shape of the centre is less apparent. The results having been found similar in every instance, and the structure of the fibres thus unquestionably determined, the threads of mummy cloths were submitted to the same test,

* Herodot. ii. 86. "Σινδωνος βυσσινης τελαμωσι."

† Vide Dr. Ure's Philosophy of Manufactures, p. 95.

‡ Vide Mr. Thompson on the Mummy cloth of Egypt.

and no exception was found to their being linen, nor were they even a mixture of linen and cotton thread.

The fact of the mummy cloths being linen is therefore decided. It now remains to inquire into the nature of the *byssus*, in which I confess considerable difficulty presents itself, owing to the Hebrew *shash* being translated *byssus* in the Septuagint version, and, in our own, “fine linen* ;” and to *shash* being the name applied at this day by the Arabs to fine muslin, which is of cotton and not of linen ; for the similarity of the words in these cognate languages argues in favour † of the same meaning. On the other hand, Herodotus says the mummy cloths were “of *byssine sindon* ‡,” and they are found to be invariably linen : he uses the expression “tree wool” to denote cotton § ; and Julius Pollux adopts the same name ||, distinguishing it also from *byssus*, which he calls a species of Indian flax. The use of the two words *byssus* and *linon* present no difficulty, since they might be employed, like our flax and linen, to signify the plant, and the substance made from it.

Cotton cloth, however, was among the manufactures of Egypt, and dresses of this material were worn by all classes. Pliny states that the Egyptian priests, though they used linen, were

* In Exodus, xxv. 4. “βυσσον κεκλωσμενην ;” in Coptic “shens.”

† There are instances to the contrary, as *kussuf* “silver,” in Hebrew, and *kussub* “gold lace,” in Arabic, and others.

‡ Herodot. loc. cit. *Sindon* is unquestionably linen.

§ Herodot. iii. 47. “Ειριοισι απο ξυλον.”

|| J. Poll. Onom. vii. 17.

particularly partial to cotton robes*, and “cotton garments,” supplied by the government for the use of the temples†, are distinctly mentioned in the Rosetta stone. Herodotus and Plutarch‡ affirm that linen was preferred, owing as well to its freshness in a hot climate, as to its great tendency to keep the body clean, and that a religious prejudice forbade the priests to wear vestments of any other quality§; we may, however, conclude that this refers to the inner portion of the dress; and the prohibition of entering a temple with cotton or woollen garments, may have led to the notion that none but linen were worn by them at any time. The same custom was adopted by the votaries of Isis, when her rites were introduced by the Greeks and Romans||; and linen dresses were appropriated to those who had been initiated¶ in the sacred mysteries.

Whatever restrictions may have been in force respecting the use of cotton among the priesthood, it is probable that other individuals were permitted to consult their own choice on this point; and it was immaterial whether they preferred, during life, the coolness of flax, or the softness of cotton raiment, provided the body, after death, was en-

* Plin. xix. 8.

† “The sacred robes with which the statues of the gods are adorned.”
Plut. de Is. s. 78.

‡ Plut. de Is. s. 4.

§ Herodot. ii. 37. “The priests . . . wear only one robe of linen, and sandals of the byblus. They are not allowed to have any other vestment, or covering to the feet.”

|| Plut. de Is. s. 3.

¶ Apul. Metam. lib. xi.

veloped in bandages of linen* ; and this regulation accounts for the mummy cloths of the poorest individuals being invariably found of that material.

It was not only for articles of dress that cotton was manufactured by the Egyptians : a great quantity was used for the furniture of their houses, the coverings of chairs and couches, and various other purposes ; and a sort of cloth was made of the united filaments of flax and cotton. This is mentioned by Julius Pollux, who, after describing the cotton plant as an Egyptian production, and stating that cloth was manufactured of the “wool of its nut,” says they sometimes “make the woof of it, and the warp of linen † ;” a quality of cloth still manufactured by the modern Egyptians.

From the few representations which occur in the tombs of Thebes, it has been supposed that the Egyptian looms were of rude construction, and totally incapable of producing the fine linen so much admired by the ancients ; and as the paintings in which they occur were executed at a very early period, it has been conjectured that, in after times, great improvements took place in their construction. But when we consider with what simple means oriental nations are in the habit of executing the most delicate and complicated work, we cease to feel surprised at the apparent imperfection of the mechanism, or instruments used by the Egyptians ; and it is probable that their far-

* In England woollen cloth has been chosen for this purpose, in order to encourage the staple commodity of the country.

† J. Poll. Onom. vii. 17. •

famed "fine linen" mentioned in scripture, and by ancient writers *, was produced from looms of the same construction as those represented in the paintings of Thebes and Eilethyas. Nor was the praise bestowed upon that manufacture unmerited †; and as I have already observed, the quality of some linen in my possession fully justifies it, and excites equal admiration at the present day, being, to the touch comparable to silk, and not inferior in texture to our finest cambric.

The mummy cloths are generally of a very coarse quality; and little attention was bestowed on the disposition of the threads, in the cloths of ordinary manufacture. Mr. Thomson, who examined many specimens of them, is of opinion that the number of threads in the warp invariably exceeded those of the woof, occasionally even by four times the quantity; and as his observations are highly interesting, I shall introduce an extract from his pamphlet on the subject.

"Of the products of the Egyptian loom, we know scarcely more than the mummy pits have disclosed to us; and it would be as unreasonable to look through modern sepulchres for specimens and proofs of the state of manufacturing art amongst ourselves, as to deduce an opinion of the skill of the Egyptians, from those fragments of cloth, which envelope their dead, and have come down, almost unchanged, to our own time. The

* Pliny allows that the Egyptians invented the art of weaving, vii. 56.; and Athenæus ascribes it to Pathymias the Egyptian. Deipn. lib. ii.

† Some was so fine that it obtained the appellation of "woven air."

curious or costly fabrics which adorned the living, and were the pride of the industry and skill of Thebes, have perished ages ago. There are, however, amongst these remains, some which are not unworthy of notice, which carry us back into the workshops of former times, and exhibit to us the actual labours of weavers and dyers of Egypt, more than 2000 years ago.

“The great mass of the mummy cloth, employed in bandages and coverings, whether of birds, animals, or the human species, is of coarse texture, especially that more immediately in contact with the body, which is generally impregnated with resinous or bituminous matter. The upper bandages, nearer the surface, are finer. Sometimes the whole is enveloped in a covering coarse and thick, and very like the sacking of the present day: sometimes in cloth coarse and open, like that used in our cheese-presses, for which it might easily be mistaken. In the college of surgeons are various specimens of these cloths, some of which are very curious.

“The beauty of the texture, and peculiarity in the structure of a mummy cloth given to me by Mr. Belzoni, was very striking. It was free from gum, or resin, or impregnation of any kind, and had evidently been originally white. It was close and firm, yet very elastic. The yarn of both warp and woof was remarkably even and well spun. The thread of the warp was *double*, consisting of two fine threads twisted together. The woof was single. The warp contained 90 threads in an

inch; the woof, or weft, only 44. The fineness of these materials, estimated after the manner of cotton yarn, was about thirty hanks in the pound.

“The subsequent examination of a great variety of mummy cloths showed, that the disparity between the warp and woof belonged to the system of manufacture, and that the warp generally had twice or thrice, and not seldom four times, the number of threads in an inch, that the woof had: thus, a cloth containing 80 threads of warp in the inch, of a fineness about 24 hanks in the pound, had 40 threads in the woof: another with 120 threads of warp, of 30 hanks, had 40; and a third specimen only 30 threads in the woof. These have each respectively double, treble, and quadruple the number of threads in the warp that they have in the woof. This structure, so different from modern cloth, which has the proportions nearly equal, originated, probably, in the difficulty and tediousness of getting in the woof, when the shuttle was thrown by hand, which is the practice in India at the present day, and which there are weavers still living old enough to remember the universal practice in this country.”

Mr. Thomson then mentions some fragments of mummy cloths, sent to England by the late Mr. Salt, which he saw in the British Museum. They were “of different degrees of fineness; some fringed at the ends, and some striped at the edges.” “My first impression,” he continues “on seeing these cloths, was that the finest kinds were *muslin*, and of Indian manufacture, since

we learn from the "Periplus of the Erythrean Sea," ascribed to Arrian, but more probably the work of some Greek merchant himself engaged in the trade, that muslins from the Ganges were an article of export from India to the Arabian gulf: but this suspicion of their being cotton was soon removed by the microscope of Mr. Bauer, which showed that they were all, without exception, linen. Some were thin and transparent, and of very delicate texture. The finest appeared to be made of yarns of near 100 hanks in the pound, with 140 threads in the inch in the warp, and about 64 in the woof. A specimen of muslin in the museum of the East India house, the finest production of the Dacca loom, has only 100 threads in an inch in the warp, and 84 in the woof; but the surprising fineness of the yarns, which, though spun by hand, is not less than 250 hanks in the pound, gives to this fabric its unrivalled tenuity and lightness.

"Some of the cloths were fringed at the ends, and one, a sort of scarf, about four feet long, and twenty inches wide, was fringed at both ends. Three or four threads twisted together with the fingers to form a strong one, and two of these again twisted together, and knotted at the middle and at the end to prevent unravelling, formed the fringe, precisely like the silk shawls of the present day.

"The selvages of the Egyptian cloths are generally formed with the greatest care, and are well calculated by their strength to protect the cloth from accident. Fillets of strong cloth or tape also

secure the ends of the pieces from injury, showing a knowledge of all the little resources of modern manufacture. Several of the specimens, both of fine and coarse cloth, were bordered with blue stripes of various patterns, and in some alternating with narrow lines of another colour. The width of the patterns varied from half an inch to an inch and a quarter. In the latter were seven blue stripes, the broadest about half an inch wide nearest the selvage, followed by five very narrow ones, and terminated by one an eighth¹ of an inch broad. Had this pattern, instead of being confined to the edge of the cloth, been repeated across its whole breadth, it would have formed a modern gingham, which we can scarcely doubt was one of the articles of Egyptian industry.

“A small pattern about half an inch broad formed the edging of one of the finest of these cloths, and was composed of a stripe of blue, alternating with three lines of a fawn colour, forming a simple and elegant border. These stripes were produced in the loom by coloured threads previously dyed in the yarn. The nature of the fawn colour I was unable to determine. It was too much degraded by age, and the quantity too small to enable me to arrive at any satisfactory conclusion. Though I had no doubt the colouring matter of the blue stripes was indigo, I subjected the cloth to the following examination. Boiled in water for some time, the colour did not yield in the least; nor was it at all affected by soap, nor by strong alkalis: sulphuric acid, diluted only so

far as not to destroy the cloth, had no action on the colour. Chloride of lime gradually reduced, and at last destroyed it. Strong nitric acid, dropped upon the blue, turned it orange, and in the same instant destroyed it. These tests prove the colouring matter of the stripes to be indigo.

“This dye was unknown to Herodotus, for he makes no mention of it. It was known to Pliny, who, though ignorant of its true nature, and the history of its production, has correctly described the most characteristic of its properties, the emission of a beautiful purple vapour when exposed to heat. Had his commentators been acquainted with the sublimation of indigo, it would have saved many learned doubts. We learn from the *Periplus*, that it was an article of export from Barbarike on the Indus, to Egypt, where its employment by the manufacturers of that country, probably from a remote period, is clearly established by the specimens here described.”

I have a piece of cloth, brought from Thebes by Mr. Arundel, which offers a very good instance of the coloured border mentioned by Mr. Thomson. It is of ordinary quality, the number of threads in the inch are ninety-six in the warp, and thirty-four in the woof; and the border consists of one broad band and six narrow stripes, of a blue colour, evidently dyed with indigo; the band which is nearest the selvage is one inch and two tenths in breadth, the others consist each of two threads, in the direction of the warp, with the exception of the innermost one, which is of five threads; and the dividing

line between the fourth and fifth is varied by the introduction of a blue thread down the centre.* The rest of the cloth has the usual yellowish tinge, "supposed to arise from some astringent preparation employed for its preservation," which, according to Mr. Thomson, imparts to water a similar colour, but offers no trace of tannin. "In none of the specimens I have examined," he adds, "did either gelatine or albumen, or solution of iron, afford any precipitate; but the subacetate of lead produced a cloud, indicating the presence of extractive matter."

It is evident that the colour was imparted to the threads previous to the cloth being made†, as the blue remains unaltered; and the cloths with broad coloured borders are the more curious, as they illustrate the representations in the paintings, and show that they were similar to those made by the looms used in the age of the Pharaohs of the 16th and 18th dynasties, which occur in the tombs at Eilethyas and Thebes; and it is curious to see the Nubians wearing shawls with the same blue borders, manufactured in the valley of the Nile, at the present day.

Another piece of linen, which I obtained at Thebes, has 152 threads in the warp, and 71 in the woof, to each inch; it is of a much darker hue than the cloth just mentioned, and was perhaps

* *Vide* woodcut, No. 350. *fig.* 4.

† As was the case with the threads used by the Israelites, Exod. xxxv. 25. "And all the women that were wise-hearted did spin with their hands, and brought that which they had spun, both of blue, and of purple, and of scarlet, and of fine linen."

dyed with the *carthamus tinctorius* *, or saff-flower, which Mr. Thomson supposes to have been used for this purpose. The piece of fine linen, previously alluded to, is of the same light brown colour. Some idea may be given of its texture, from the number of threads in the inch †, which is 540 (or 270 double threads) ‡ in the warp; and the limited proportion of 110 in the woof §, shows the justness of Mr. Thomson's observation, that this disparity belonged to their "system of manufacture," since it is observable even in the finest quality of cloth.

Another very remarkable circumstance in this specimen is, that it is covered with small figures and hieroglyphics, so finely drawn, that here and there the lines are with difficulty followed by the eye; and as there is no appearance of the ink having run in any part of the cloth, it is evident they had previously prepared it for this purpose.

Pliny cites four qualities of linen, particularly noted in Egypt: the Tanitic, and Pelusiatic, the Butine, and the Tentyritic; and mentions in the same place || the cotton tree of Egypt, which he confines to the upper country. He also states that the quantity of flax, cultivated in Egypt, was accounted for, by their exporting linen to Arabia and

* I am still doubtful if it was indigenous in Egypt.

† Some of our cambric has only 160 in an inch of the warp, and 140 of the woof.

‡ *Vide supra*, p. 120. and 121.

§ The Egyptians, instead of throwing the shuttle, appear to have put in the threads by means of a rod with a hook at either end. *Vide* wood-cuts, No. 91. and 354.

|| Plin. xix. c. 1. "Superior pars Ægypti in Arabiam vergens gignit fruticem, quem aliqui gossipion vocant, plures xylon, et ideo lina inde facta xylina."

India; and the quality of that produced by the Egyptian looms is shown to have been far superior to any other.

The threads used for nets were remarkable for their fineness; “and so delicate were some of them,” says Pliny*, “that they would pass through a man’s ring, and a single person could carry a sufficient number of them to surround a whole wood. Julius Lupus, who died while governor of Egypt, had some of these nets, each string of which consisted of 150 threads; a fact perfectly surprising to those who are not aware, that the Rhodians preserve to this day, in the Temple of Minerva, the remains of a linen corslet, presented to them by Amasis, king of Egypt, whose threads are composed each of 365 fibres; and in proof of the truth of this, Mutianus, who was thrice consul, lately affirmed at Rome, that he had examined it; and the reason of so few fragments remaining was attributable to the curiosity of those who had frequently subjected it to the same scrutiny.”

Herodotus mentions this corslet †, and another, presented by Amasis to the Lacedæmonians, which had been carried off by the Samians; “it was of linen, ornamented with numerous figures or animals, worked in gold and cotton. Each thread of the corslet was worthy of admiration. ‡ For, though very fine, every one was composed of 360 other threads, all distinct; the quality being similar to that dedicated to Minerva, at Lindus, by the same monarch.”

* Plin. xix. 1.

‡ Herodot. iii. 47.

† Herodot. ii. 182., and iii. 47.

Many of the Egyptian stuffs presented various patterns worked in colours by the loom, independent of those produced by the dyeing or printing process, and so richly composed, that they vied with cloths embroidered with the needle.* The art of embroidery† was commonly practised in Egypt. We find that the Hebrews, on leaving the country, took advantage of the knowledge they had there acquired to make a rich “ hanging for the door of the tent, of blue, and purple, and scarlet, and fine twined linen, wrought with needlework‡ ;” a coat of fine linen was embroidered for Aaron ; and his girdle was “ of fine twined linen, and blue, and purple, and scarlet, of needlework.”§

The gold thread used for these purposes is supposed to have been beaten out with the hammer ||, and afterwards rounded ; and even the delicate net made by Vulcan, which was so fine that the gods themselves were unable to see it, is represented to have been forged on his anvil with the hammer. ¶ Pliny mentions cloth woven with gold threads, sometimes entirely of those materials, without any woollen or linen ground, as were the

* Martial, xiv. Epigr. 50.

“ Hæc tibi Memphis tellus dat munera ; victa est
Pectine Niliaco jam Babylonis acus.”

† *Vide* Ezekiel, xxvii. 7. “ Fine linen, with broidered work from Egypt.”

‡ Exod. xxvi. 36., xxvii. 16., xxxvi. 37., and xxxviii. 18.

§ Exod. xxviii. 39., and xxxix. 29.

|| Conf. Exod. xxxix. 3. “ And they did beat the gold into thin plates, and cut it into wires, to work it in the blue, and in the purple, and in the scarlet, and in the fine linen.”

¶ Hom. Od. viii. 274.

garment of Agrippina*, the tunic of Heliogabalus†, and that worn by Tarquinius Priscus, mentioned by Verrius.‡

“Coloured dresses,” says Pliny§, “were known in the time of Homer, from which the robes of triumph were borrowed: and from the Phrygians having been the first to devise the method of giving the same effect with the needle, they have been called *Phrygiones*. But to weave cloth with gold thread was the invention of an Asiatic king, Attalus||, from whom the name Attalic was derived: and the Babylonians were most noted for their skill in weaving cloths of various colours.”

The question still remains undecided respecting the time when silver thread came into use; and as no mention of silver stuffs occurs in the writings of ancient authors, it has been supposed that its introduction was of late date. Silver wire, however, was already known in Egypt at the remote epoch of the 18th dynasty, as is proved by being found at Thebes of the time of the third Thothmes: nor is there any reason to suppose it was then a novel invention; and it was probably known and used as early as gold wire, which we find attached to rings bearing the date of Osirtasen the First.

This wire is supposed not to have been drawn, like our own, through holes in metal plates, but to have been beaten out, and rounded with the

* Plin. xxxiii. 3. “Auro textili sine alia materie.”

† Lamprid. Vit. Heliog. c. 23.

‡ Plin. loc. cit.

§ Plin. viii. 48.

|| Attalus, king of Pergamus.

file: but the appearance of some found at Thebes almost justifies the conclusion that a mode of drawing it was not unknown to them; and the omission of every representation of the process in the paintings cannot be adduced as an argument against it, since they have also failed to introduce the casting of metals, and various other arts, with which they were undoubtedly acquainted.

It is reasonable to suppose that wire-drawing was first attempted with the most ductile metals, that gold and silver were first used, and brass and iron at a much later period; and this is further argued by the probability of wire having been originally employed for ornamental purposes. Gold thread and wire were always made entirely of that metal, even to the time of the latter Roman emperors*: nor are there any instances of flattened wire wound round silk or linen threads, or of silver or other wire gilt, in the ruins of Herculaneum and Pompeii. That the Egyptians had arrived at great perfection in the art of making the thread is evident, from its being sufficiently fine for weaving into cloth, and for embroidery; and the exceeding delicacy of the linen corslet of Amasis †, on which numerous figures of animals were worked in gold, required a proportionate degree of fineness in the gold thread used for the purpose.

The coloured dresses represented in the Egyptian paintings, worn by women of rank, and by the deities, much resemble our modern chintzes, in the

* Probably till the reign of Aurelian.

† Herod. iii. 47.

style of their patterns, though it is probable that they were generally of linen instead of calico: some were probably worked with the needle*, and others woven with gold threads.

I have already observed that the Egyptians possessed a knowledge of the effect of acids on colour, and submitted the cloth they dyed to one of the same processes adopted in our modern manufactories; as is plainly pointed out by Pliny in the following passage †: — “*Pingunt et vestes in Ægypto inter pauca mirabili genere, candida vel postquam attrivere illinentes non coloribus, sed colorem sorbentibus medicamentis. Hoc cum fecere, non apparet in velis: sed in cortinam pigmenti serventis mersa, post momentum extrahuntur picta. Mirumque, cum sit unus in cortina colos, ex illo alius atque alius fit in veste, accipientis medicamenti qualitate mutatus, nec postea ablui potest: ita cortina non dubie confusura colores si pictos acciperet.*” “Moreover in Egypt they stain cloths in a wonderful manner. They take them in their original state, quite white, and imbue them, not with a dye, but with certain drugs which have the power of absorbing and taking colour. When this is done, there is still no appearance of change in the cloths; but so soon as they are dipped into a bath of the pigment, which has been prepared for the purpose, they are taken out properly coloured. The singular thing is, that though the bath con-

* “*Candida Sidonio perlucet pectora filo,
Quod Nilotis acus percussum pectine Serum
Solvit.*” Lucan. Phars. x. 141.

† Plin. xxxv. 11.

tains only one colour, several hues are imparted to the piece, these changes depending on the nature of the drug employed: nor can the colour be afterwards washed off; and surely if the bath had many colours in it, they must have presented a confused appearance on the cloth."

From this it is evident that the cloth was prepared before steeping; the *momentary* effect he mentions could only be produced by the powerful agency of mordants; and they not only used them to make the cloth take the colour equally, but also to change the hues.

Whether the Egyptians really understood the principle, on which the salts and acids of the mordants acted, or calculated their effects solely from the experience they had acquired, it is difficult to decide. They had long been used in Europe, before their chemical agency was properly explained; and when the term mordant was first applied by the French dyers, they imagined "that the intention of passing the substances, which were to be dyed, through certain saline liquors, was to corrode something that opposed the entering of the colouring principle, and to enlarge the pores of the substances;" (the effect of acids in changing the hues being a later discovery;) we cannot therefore positively prove that the Egyptians had a knowledge of chemistry, though from their long experience, and from their skill in the employment of the metallic oxides, we may find strong reasons to infer it. For if at first ignorant of the reason of such changes, it is probable that in

process of time they were led to investigate the causes, by which they were effected.

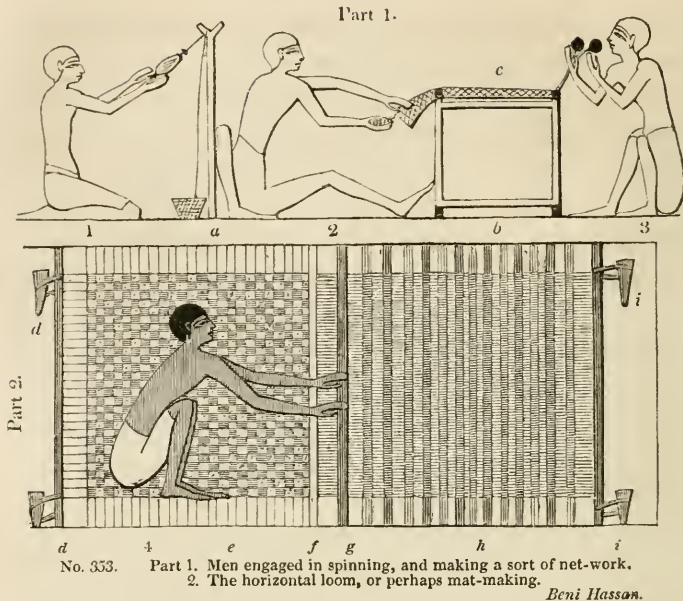
Many discoveries, and even inventions, are more the effect of chance than of studious reflection, and the principle is often the last to be understood. In discoveries this is generally the case, in inventions frequently. But when men have observed, from long practice, a fixed and undeviating result, their curiosity naturally becomes excited, the thirst for knowledge, and above all the desire of benefiting by the discovery, prompt them to scrutinise the causes to which they are so much indebted; and few people, who have made any advance in the arts of civilised life, long remain ignorant of the means of improving their knowledge.

We may therefore suppose, some general notions of chemistry, or at least of chemical agency, were known to the Egyptians; and the beautiful colours they obtained from copper, the composition of various metals, and their knowledge of the effects produced on different substances by the salts of the earth, tend to confirm this opinion.

The Egyptian yarn seems all to have been spun with the hand, and the spindle is seen in all the pictures representing the manufacture of cloth. Spinning was principally the occupation of women*; but men also used the spindle, and were engaged in the loom; though not as Herodotus† would lead us to suppose, to the exclusion of women,

* *Vide* wood-cut, No. 91. Vol. II. p. 60.

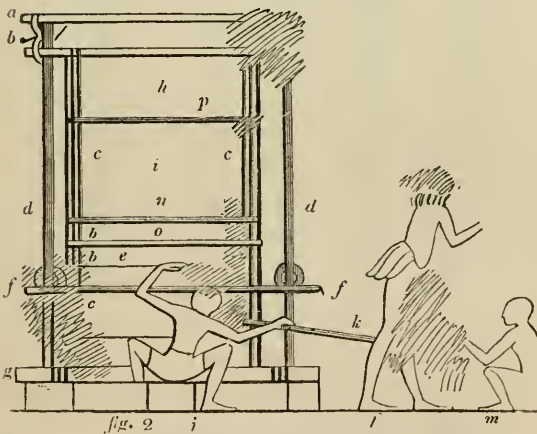
† Herodot. ii. 35. Sophocles, *Œdip.* Col. v. 352. makes the same remark.



who he pretends undertook the duties of men in other countries, “by going to market, and engaging in business, while the men, shut up in the house, worked at the loom.” Men, to this day, are employed in making cloth, in Egypt and in other countries, but it cannot be said that they have relinquished their habits for those of women; and we find from the paintings executed by the Egyptians themselves, far more authentic and credible than the casual remarks of a Greek, that both men and women were employed in manufacturing cloth.

“Other nations,” continues the historian, “make cloth by pushing the woof upwards, the Egyptians, on the contrary, press it down;” and this is con-

firmed by the paintings * which represent the process of making cloth ; but at Thebes, a man who is engaged in making a piece of cloth, with a coloured border or selvage, appears to push the woof upwards, the cloth being fixed above him, to the upper part of the frame. They had also the horizontal loom, which occurs at Beni Hassan and other places.



No. 35f.

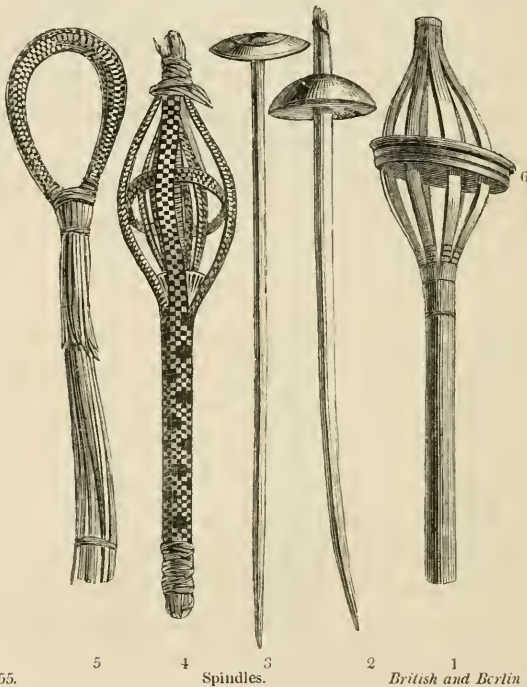
Fig. 1. A piece of cloth on a frame.
2. A loom.

Eitethyas.
Thebes.

k is a shuttle, not thrown, but put in with the hand. It had a hook at each end. *Vide* woodcut, No. 91. fig. 2.

* In woodcut, No. 91. fig. 2. Vol. II. p. 60.

In the hieroglyphics over persons employed with the spindle, it is remarkable that the word *saht*, which in Coptic signifies to twist, constantly occurs. The spindles were generally small, being about one foot three inches in length, and several have been found at Thebes, and are now preserved in the museums of Europe.* They were generally of wood, and in order to increase



No 355.

Spindles.

British and Berlin Museums.

Fig. 1 is a sort of cane split at the top to give it a globular shape.

2 has the head of gypsum.

3 entirely of wood.

4 of plaited or basket work.

5 the loop to put over the twine.

6 a ring of wood for securing the twine.

* One of those in the British Museum, which I found at Thebes," had some of the linen thread with it. *Vide* wood-cut, No. 355. *fig.* 2.

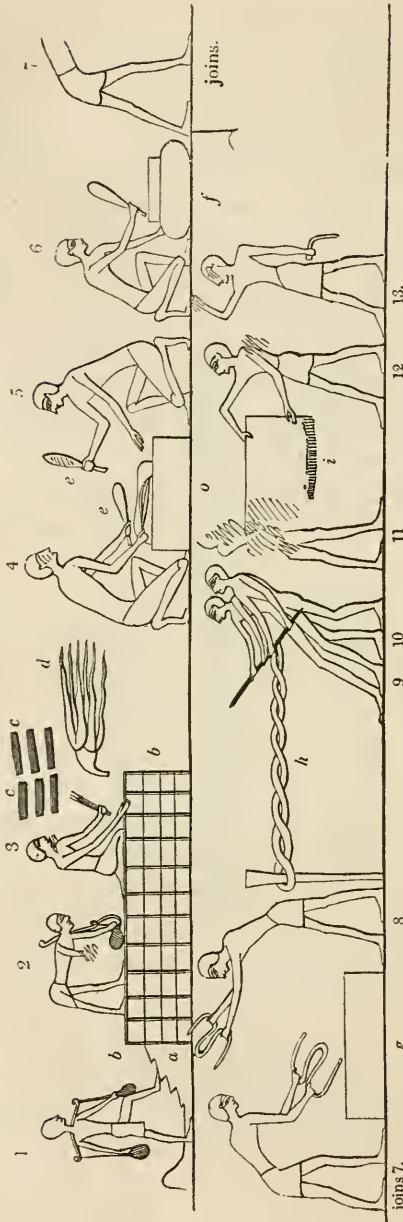
their impetus in turning, the circular head was occasionally of gypsum, or composition: some, however, were of a light plaited work, made of rushes, or palm leaves, stained of various colours, and furnished with a loop of the same materials, for securing the twine after it was wound.*

Besides the use of the spindle†, and the form of the loom, we find the two principal purposes, to which flax was applied, represented in the paintings of the tombs: and at Beni Hassan the mode of cultivating the plant, in the same square beds now met with throughout Egypt, (much resembling our salt-pans,) the process of beating the stalks, and making them into ropes, and the manufacture of a piece of cloth, are distinctly pointed out.

It is, however, possible that the part of the picture, where men are represented pouring water from earthen pots, may refer to the process of steeping the stalks of the plant, after they were cut; the square spaces would then indicate the different pits in which they were immersed, containing some less, some more, water, according to the state in which they were required; and this is rendered more probable by the flight of steps, for ascending to the top of the raised sides of the pits, which would not have been introduced if the level ground were intended.

* *Vide* wood-cut, No. 355. *fig.* 5. Another of wood, *fig.* 6.

† The ordinary distaff does not occur in these subjects, but we may conclude they had it; and Homer mentions one of gold, given to Helen by "Alcandra, the wife of Polybus," who lived in Egyptian Thebes. *Od.* iv. 131.



Preparing the flax, beating it, and making it into twine and cloth. Beni Hassan.

a steps leading up to the top of the pits. *b b*, where the flax was steeped.
c c the flax taken by fig. 3, to dry, previous to beating.
d the stalks fresh cut.
 Fig. 1 brings water in earthen-pots.
 4 and 5 are engaged in beating it with mallets, *c c*.
 7 and 8 striking it, after it is made into yarn, on a stone, *r*.
 9 and 10 twisting the yarn into a rope.
 11 and 12 show that a piece of cloth, *t*, has been made of the yarn.
 13 a superintendent.

No. 356.

The steeping, and the subsequent process of beating the stalks with mallets, illustrate the following passage of Pliny* upon the same subject: — “ The stalks themselves are immersed in water, warmed by the heat of the sun, and are kept down by weights placed upon them; for nothing is lighter than flax. The membrane, or rind, becoming loose is a sign of their being sufficiently macerated. They are then taken out, and repeatedly turned over in the sun, until perfectly dried; and afterwards beaten by mallets on stone slabs. That which is nearest the rind is called *stupa*, ‘tow,’ inferior to the inner fibres, and fit only for the wicks of lamps. It is combed out with iron hooks, until all the rind is removed. The inner part is of a whiter and finer quality. Men are not ashamed to prepare it. After it is made into yarn, it is polished by striking it frequently on a hard stone, moistened with water; and when woven into cloth it is again beaten with clubs, being always improved in proportion as it is beaten.”

They also parted and cleansed the fibres of the flax with a sort of comb, probably answering to the iron hooks mentioned by Pliny; two of which, found with some tow at Thebes, are preserved in the Berlin museum; one having twenty-nine, the other forty-six, teeth.†

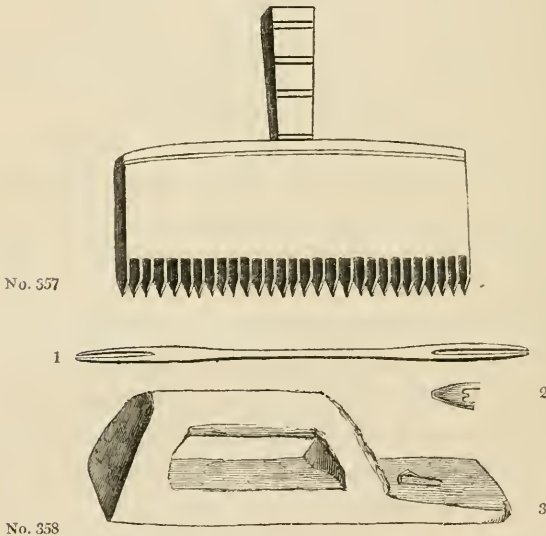
The border of some of their cloths consists of long fringes, formed by the projecting threads of

* Plin. xix. 1.

† *Vide* wood-cut, No. 357.

the warp, twisted together, and tied at the end in one or more knots, to prevent their unravelling, “precisely,” as Mr. Thomson observes, “like the silk shawls of the present day;” and specimens of the same borders, in pieces of cloth found in the tombs, may be seen in the British Museum, and other collections.*

The sculptures, as well as the cloths which have been discovered, perfectly bear out Herodotus in his statement that they had the custom of leaving a fringe to their pieces of linen†, which, when the dresses were made up, formed a border round the legs; but they do not appear to have



No. 357 wooden comb found with some tow. *Berlin Museum.*
 No. 358 fig. 1 netting needle of wood in Mr. Salt's collection.
 2 part of another of bronze, of later date, found by me at Berenice.
 3 wooden plane for smoothing or pressing cloth. *From Thebes.*

* *Vide* woodcut, No. 350.

† Herodot. ii. 81.

been universally worn. This kind of dress he calls *calasiris*. When the fringe was wanting, the border was hemmed, which had the same effect of preventing the unravelling of the cloth. The Jews wore a similar kind of fringed dress, and Moses* commanded the children of Israel to “make them fringes in the borders of their garments, . . . and . . . put upon the fringe of the borders a ribband of blue.”

Besides the process of making cloth, that of smoothing, or calendering, is represented in the paintings; which appears to have been done by means of wooden rods, passed to and fro over the surface; but from the appearance of some of the fine linen found in the tombs, we may conjecture that much greater pressure was sometimes used for this purpose, and such as could only be applied by a press, or cylinders of metal.

For smoothing linen after washing, a wooden substitute for what we call an *iron* was used by the Egyptian washerwomen, some of which have been found at Thebes, six inches in length, made of athul or tamarisk wood.†

I have had occasion to observe‡ that the Egyptians had carpets, which, according to Diodorus§, were spread for the sacred animals, and are noticed by Homer||, as a very early invention; they were of wool¶, but of their quality we are unable to form

* Numbers, xv. 38.

† Vide wood-cut, No. 358. *fig.* 3.

‡ Vol. II. p. 201.

§ Diodor. i. 34.

|| Hom. Od. iv. 124., and called *tapéta*, the modern name of a carpet.

¶ As in Homer, “*Ταπητα . . . μαλακον εριωιο,*” loc. cit.

any opinion, the fragments discovered in the tombs being very imperfectly preserved. Some portions of woollen work have been found at Thebes, which presented the appearance of a carpet; and a small rug was lately brought to England, and is now in the possession of Mr. Hay, whose valuable collection of drawings from Thebes and other parts of Egypt, I have already noticed.

This rug is eleven inches long by nine broad. It is made like many carpets of the present day, with woollen threads on linen string. In the centre is the figure of a boy in white, with a goose above it, the hieroglyphic of "child," upon a green ground; around which is a border composed of red and blue lines; the remainder is a ground of yellow, with four white figures above and below, and one at each side, with blue outlines and red ornaments; and the outer border is made up of red, white, and blue lines, with a fancy device projecting from it, with a triangular summit, which extends entirely round the edge of the carpet. Its date is uncertain; but from the child, the combination of the colours, and the ornament of the border, I am inclined to think it really Egyptian.

I have also been informed by Lord Prudhoe, that in the Turin museum he met with "some specimens of worked worsted upon linen, in which the linen threads of the weft had been picked out, and the coloured worsted sewed on the warp."

ROPE-MAKING.

I have noticed the use of flax for making ropes, string, and various kinds of twine; for large ropes, however, of ordinary quality, and for common purposes, the *leaf*, or fibres of the date tree, were employed, as at the present day; and many specimens of these durable materials have been found in the excavations of Upper and Lower Egypt.

In a tomb at Thebes, of the time of Thothmes III., is represented the process of twisting thongs of leather, which, as it is probably the same as that adopted in rope-making, may be properly introduced here.

The ends of four thongs were inserted and fastened into a hollow tube, from the side of which a bar projected, surmounted by a heavy metal ball; and the man, who twisted them, held the tube in his right hand, whirling it round, as he walked backwards, by means of the impetus given by the ball. A band, attached to a ring at the other end of the tube, went round his body, in order to support it and give it a free action, and the ring turned upon a nut, to prevent the band itself from twisting.

At the other extremity of the walk, a man, seated on the ground, or on a low three-legged stool, let out the separate thongs, and kept them from becoming entangled. Behind him sat another, who, with the usual semicircular knife, cut the skin into strips, as he turned it round; showing that what

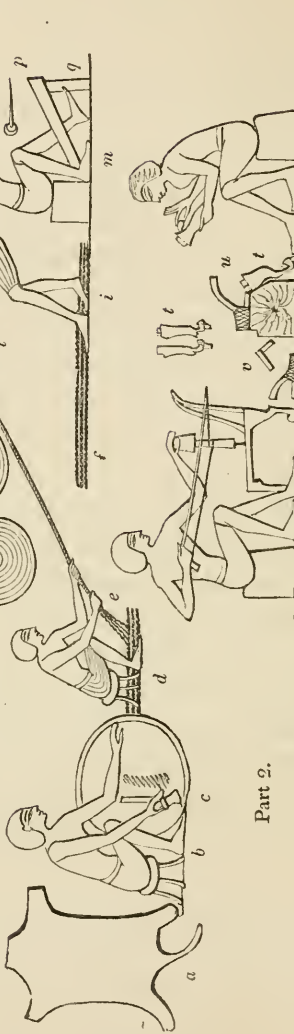
No. 559.

Part 1. Cutting and twisting thongs of leather.

a a skin hanging up in the shop, indicating the trade of leather cutter.
d arranges the separate thongs, which are twisted by *i*, and when finished are bound together and hung up in the shop *g h*.
k a weight, which gives a greater impetus to the tube *l* when thrown round.
m cobbler, perforating the sole of a sandal to receive the thong.
o pieces of leather, ready for cutting into soles.

n n thongs ready for fixing to the sole.
p an awl.
q a stand.

Part 1.



Part 2.

Part 2. Carpenters.

r drills a hole in the seat of a chair *s*.
t a right angle.
t t legs of chairs.
u n hatchets.
w man planing or polishing the leg of a chair.

we term the circular cut was known to the ancient Egyptians at this early period, and that they had already adopted this mode of obtaining the longest thongs from a single piece of leather.* When finished, the twisted thongs were wound round a hollow centre, through which the end was passed, and repeatedly bound over the concentric coils in the same manner as ropes.

Some, indeed, have supposed the present subject to represent rope-making; but the presence of the skin on the left, and the shoemakers on the right, forming a continuation of the picture, sufficiently prove that they are engaged in preparing leathern thongs for sandals, and other similar purposes.

Their nets were made of flax-string †, both for fishing and fowling: and portions of them have been discovered at Thebes, and are preserved in our European museums. The netting needles ‡ were of wood, very like our own, split at each end, and between ten and eleven inches in length, and others were of bronze, with the point closed.

Sieves were often made of string, but some of an inferior quality, and, for coarse work, were constructed of small thin rushes or reeds (very similar to those used by the Egyptians for writing, and frequently found in the tablets of the scribes); a specimen of which kind of sieve is preserved in

* This calls to mind the fable of Dido's purchasing as much land in Africa, as could be covered by a bull's hide, upon which she built Byrsa, the origin of Carthage. Vir. Æn. i. 368.

† Conf. Isaiah, xvii. 9. "They that work in fine flax, and they that weave networks." Vide Plin. 19. 1., and *suprà*, p. 127.

‡ Vide wood-cut, No. 358. *figs.* 1, 2.

the Paris museum. The paintings also represent them made of the same materials ; and indeed it is probable that the first they used were all of this humble quality, since the hieroglyphic indicating a sieve is evidently borrowed from them.

THE PAPYRUS.

The Egyptians were not less famed for their manufacture of paper, than for the delicate texture of their linen. The plant from which it was made, the *Cyperus papyrus* of modern botanists, mostly grew in Lower Egypt, in marshy land, or in shallow brooks*, and ponds, formed by the inundation of the Nile, where they bestowed much pains on its cultivation.

The right of growing, and selling it, belonged, as I have already observed, to the government, who made a great profit by its monopoly ; and though we frequently find mention of the use of the byblus or papyrus, for constructing canoes or rude punts, for making baskets, parts of sandals, sails, and for numerous other common purposes, it is evident, that we are to understand, in these instances, some other species of the numerous family of *Cyperus* ; which too is unequivocally shown by Strabo, when he distinguishes the ordinary from “ the hieratic byblus.”

The papyrus, or byblus hieraticus, of the geographer, our *Cyperus papyrus*, was particularly

* Isaiah, xix. 7. “ The paper reeds by the brooks, by the mouth of the brooks.”

cultivated in the Sebennytic nome * : other parts of the Delta also produced it, and probably even some districts in Upper Egypt. The paper made from it differed in quality ; being dependent upon the growth of the plant, and the part of the stalk whence it was taken ; and we find many of the papyri which have been preserved vary greatly in their texture and appearance. They are generally fragile, and difficult to unrol, until rendered pliant by gradual exposure to steam, or the damp of our climates ; and some are so brittle that they appear to have been dried by artificial means.

We are however less surprised at the effect of the parched climate of Upper Egypt, when we consider the length of time they have been kept beyond the reach of moisture, and observe that our drawing paper, after a very few years, becomes so dry in that country, that it is too brittle to fold without breaking. Indeed, those papyri which have not been exposed to the same heat, being preserved in the less arid climate of Lower Egypt, still preserve their pliability ; and a remarkable proof of this is shown in one brought by me from Memphis, which may be bent, and even twisted in any way, without breaking, or without being more injured than a piece of common paper. The hieroglyphics from their style show it to be of an ancient Pharaonic age, and, what is remarkable, they present the name of the city, where the papyrus was found, Menofre, or Memphis.

* Plin. xiii. 11.

The mode of making papyri, was this :— The interior of the stalks of the plant, after the rind had been removed, was cut into thin slices in the direction of their length, and these being laid on a flat board, in succession, similar slices were placed over them at right angles* ; and their surfaces being cemented together by a sort of glue, and subjected to a proper degree of pressure, and well dried, the papyrus was completed. The length of the slices depended of course on the breadth of the intended sheet, as that of the sheet on the number of slices placed in succession beside each other, so that though the breadth was limited, the papyrus might be extended to an indefinite length.

The papyrus is now no longer used, paper from linen rags and other materials having superseded it ; but some few individuals, following the example of the Cavaliere Saverio Landolina Nava, of Syracuse, continue to make it ; and sheets from the plant, which still grows in the small rivulet formed by the fountain of Cyane, near Syracuse, are offered to travellers, as curious specimens of an obsolete manufacture. I have seen some of these small sheets of papyrus ; the manner of placing the pieces is the same as that practised in former times ; but the quality of the paper is very inferior to that of ancient Egypt, owing either to the preparation of the slices of the stalk, before they are glued together, or to the coarser texture of the

* The slices which were placed longways were called by the Romans *stamen*, the others crossing them *subtemen*, like the warp and the woof in cloth.

plant itself, certain spots occurring here and there throughout the surface, which are never seen on those discovered in the Egyptian tombs.

Pliny thus describes * the plant and the mode of making paper : —“ The papyrus grows in the marsh lands of Egypt, or in the stagnant pools left inland by the Nile, after it has returned to its bed, which have not more than two cubits in depth. The root of the plant is the thickness of a man's arm ; it has a triangular stalk, growing not higher than ten cubits (fifteen feet), and decreasing in breadth towards the summit, which is crowned as with a thyrsus, containing no seeds, and of no use except to deck the statues of the gods. They employ the roots as fire-wood, and for making various utensils. They even construct small boats of the plant ; and out of the rind, sails, mats, clothes, bedding, and ropes ; they eat it either crude or cooked †, swallowing only the juice ; and when they manufacture paper from it, they divide the stem, by means of a kind of needle, into thin plates, or laminæ, each of which is as large as the plant will admit”

“ All the paper is woven upon a table ‡, and is continually moistened with Nile water, which being thick and slimy, furnishes an effectual species of glue.§ In the first place, they form upon a table, perfectly horizontal, a layer the whole length of the papyrus ; which is crossed by another placed

* Plin. xiii. 11.

† Conf. Diod. i. 80.

‡ Plin. xiii. 12.

§ It is scarcely necessary to correct this misconception of Pliny, or to suggest the necessity of something more tenacious than Nile water.

transversely, and afterwards inclosed within a press. The different sheets are then hung in a situation exposed to the sun, in order to dry, and the process is finally completed by joining them together, beginning with the best. There are seldom more than twenty* slips, or stripes, produced from one stem of the plant.

“Different kinds of broad paper vary in breadth. The best is thirteen digits broad; the hieratic only eleven; the Fannian† ten, and the amphitheatric nine. The Saitic is still narrower, being only the breadth of the mallet; and the paper used for business is only six digits broad. Besides the breadth, the fineness, thickness, whiteness, and smoothness are particularly regarded; . . . when it is coarse it is polished with a (boar’s) tooth, or a shell; but then the writing is more readily effaced, as it does not take the ink so well.”‡

Pliny is greatly in error when he supposes that the papyrus was not used for making paper, before the time of Alexander the Great, since we meet with papyri of the most remote Pharaonic periods; and the same mode of writing on them is shown from the sculptures to have been common in the age of Suphis, or Cheops, the builder of the Great Pyramid, more than 2000 years before our era.

It is uncertain until what period paper made of the papyrus continued in general use—but there is

* Some read “vicinæ,” not “viginti.”

† So called from Fannius, who had a manufactory at Rome for preparing paper. Plin. xiii. 12.

‡ *Vide* Plin. xiii. 12., where he makes other observations on the quality of paper.

evidence of its having been occasionally employed, to the end of the seventh century, when it was superseded by parchment. All public documents, under Charlemagne and his dynasty, were written on this last, and the papyrus was then entirely given up.

Parchment, indeed, had been invented long before, and was used for writing, as early as the year 250 before our era, by Eumenes, king of Pergamus; who being desirous of collecting a library which should vie with that of Alexandria, and being prevented by the jealousy of the Ptolemies from obtaining a sufficient quantity of papyrus, had recourse to this substitute; and its invention at Pergamus claimed, and secured to it, the lasting name of Pergamena.* It was made of the skins of sheep and calves; but to the former the name of parchment is more correctly applied, as to the latter that of vellum.†

The monopoly of the papyrus in Egypt so increased the price of the commodity, that persons in humble life could not afford to purchase it for ordinary purposes; few documents, therefore, are met with written on papyrus, except funeral rituals, the sales of estates, and official papers, which were absolutely required: and so valuable was it, that they frequently obliterated the old writing, and inscribed another document on the same sheet.

For common purposes, pieces of broken pottery,

* Called also membrana by the Romans.

† From vellus, "a skin," or vitulinum, "of calf."

stone, board, and leather were used; an order to visit some monument, a soldier's leave of absence, accounts, and various memoranda, were often written on the fragments of an earthenware vase; an artist sketched a picture, which he was about to introduce in a temple or a sepulchre, on a large flat slab of limestone, or on a wooden panel prepared with a thin coating of stucco: and even parts of funeral rituals were inscribed on square pieces of stone, on stuccoed cloth, or on leather. Sometimes leather rolls were substituted for papyri, and buried in the same manner with the deceased; they are of an early period, and probably adopted in consequence of the high price of the papyrus; but few have hitherto been found at Thebes.

In the infancy of society, various materials were employed for writing, as stones, bricks, tiles, plates of bronze, lead and other metals, wooden tables*, the leaves and bark of trees, and the shoulder bones of animals. Wooden tablets covered with wax, were long in use among the Romans, as well as the papyrus†; and the inner bark of trees‡, and pieces of linen§, had been previously adopted by them.

Many Eastern people still write on the leaves of trees, or on wooden tablets, and *waraka* con-

* These wooden tablets, which are covered with a glazed composition capable of receiving ink, were used by the Egyptians long after they had papyri, and they are still common in schools at Cairo in lieu of our slates. One is represented in wood-cut, No. 90. *fig. 5.*

† Whence the word "paper;" as in byblus, or biblus, originated the name bible or book.

‡ Called liber, whence the Latin name liber, "a book."

§ Liv. iv. 7. xiii. 20. "Liuteis libris," about the year 440 B. C.

tinues to signify, in Arabic, both “ a leaf ” and “ paper.”

The early Arabs committed their poetry and compositions to the shoulder-bones of sheep : they afterwards obtained the papyrus paper from Egypt, on which the poems called *Moallaqât* were written, in gold letters ; and after their conquests in Asia and Africa, these people so speedily profited by, and improved the inventions of the nations they had subdued, that parchment was manufactured in Syria, Arabia, and Egypt, which in colour and delicacy might vie with our modern paper. It speedily superseded the use of the papyrus, and continued to be employed until the discovery of the method of making paper from cotton and silk, called *Carta bombycina*, which is proved by Montfaucon to have been known at least as early as A. D. 1100 ; and is supposed to have been invented about the beginning of the ninth century. Being introduced into Spain from Syria, it was denominated *Carta Damascena* ; and some manuscripts on cotton paper are said to exist in the Escorial, written in the eleventh century.

It is a matter of doubt to what nation, and period, the invention of paper manufactured from linen ought to be ascribed. The Chinese were acquainted with the secret of making it from various vegetable substances long before it was known in Europe ; the perfection to which they have carried this branch of art continues to excite our admiration ; and “ the librarian Casiri relates,” according to Gibbon, “ from credible testimony, that paper was

first imported from China to Samarcand A. H. 30 (A. D. 652), and *invented*, or rather introduced, at Mecca A. H. 88 (A. D. 710).” *

It may, however, be questioned whether it was made from linen at that early period, and we have no positive proof of linen paper being known even by the Saracens, prior to the eleventh century. The Moors, as might be expected, soon introduced it into Spain, and the Escorial library is said to contain manuscripts written on this kind of paper, as old as the twelfth century. †

But paper of mixed cotton and linen, which was made at the same time, appears to have been in more general use; and linen paper continued to be rare in most European countries till the fifteenth century. That it was known in Germany as early as the year 1312, has been satisfactorily ascertained by existing documents, and a letter on linen paper, written from Germany to Hugh Despencer, about the year 1315, is preserved in the Chapter-house at Westminster; which, even to the water-mark, resembles that made at the present day.

It was not till the close of the sixteenth century that paper was manufactured in England. The first was merely of a coarse brown quality, very similar to that of the modern Arabs, whose skill in this, as in many arts and sciences, has been transferred to people once scarcely known to them, and then greatly their inferiors; and writing or printing

* Gibbon, vol. ix. c. 51. p. 379.

† Some doubt the existence of any MS. on linen paper before the year 1270; but an Arabic version of the Aphorisms of Hippocrates, in the Escorial, dates in the beginning of the 13th century.

paper was not made in London before 1690 ; France and Holland having, till that time, supplied us with an annual importation, to the amount of nearly 100,000 pounds.

TANNERS AND LEATHER CUTTERS.

The tanning and preparation of leather was also a branch of art, in which the Egyptians evinced considerable skill ; the leather-cutters, as I have already observed, constituted one of the principal subdivisions of the third caste ; and a district of the city was exclusively appropriated to them, in the Libyan part of Thebes.

Leather is little capable of resisting the action of damp, the salts of the earth, or excessive dryness, so that we cannot reasonably expect to find it sufficiently well preserved, to enable us to judge of its quality ; but the fineness of that employed for making the straps, placed across the bodies of mummies, discovered at Thebes, and the beauty of the figures stamped upon them, satisfactorily prove the skill of “the leather cutters*,” and the antiquity of embossing : some of these bearing the names of kings, who ruled Egypt about the period of the Exodus, or 3300 years ago.

Many of the occupations of their trade are portrayed on the painted walls of the tombs at Thebes. They made shoes, sandals, the coverings and seats of chairs or sofas, bow-cases, and most of the orna-

* *Vide* Vol. II. p. 7.

mental furniture of the chariot; harps were also adorned with coloured leather, and shields and numerous other things were covered with skin prepared in various ways. They also made skins for carrying water, wine, and other liquids; and the custom of coating them within with a resinous substance was the origin, as I have already observed*, of that acquired taste, which led the Egyptians to imitate the flavour it imparted to wine, even in their earthen amphoræ.

Part of the process of curing the skins is introduced in the sculptures; and that of dyeing them is mentioned in the Bible†, being doubtless borrowed by the Jews from Egypt. In one instance, a man is represented dipping the hide into a vase, probably containing water, in which it was suffered to soak, preparatory to the lime being applied to remove the hair; a process very similar to that adopted at the present day in Egypt and other countries. The Arabs prefer the acrid juice of a plant growing in the desert, for the purpose, as its effect is still more rapid, and as it has the advantage of making the skin better and more durable.

This plant is the *Periploca Secamone*; its stalks contain a white milky juice, which exudes from it when bruised, and which is so acrid as to be highly injurious to the eye, or to the wounded skin. It supports itself by winding around every neighbouring shrub, and its not ungraceful stalks appear to have been occasionally used by the ancient Egyp-

* Vol. II. p. 158.

† Exod. xxv. 5. "And rams' skins dyed red."

tians, for the same ornamental purpose as the ivy, in forming festoons. But there is no evidence of its having been employed by them in curing skins, though they seem to have been well acquainted with the properties of the plants which grew in the deserts, as well as in the valley of the Nile; and however we might be inclined to suppose that, in the sculptures of Thebes representing the occupations of curriers, they are pounding something of the kind for this purpose, the absence of every indication of the contents of the vase, or mortar, leaves it undecided if it be the *periploca*, or lime, salt, or other substance.

According to the Arabs, the method of preparing skins with the periploca, or *Ghulga*, is as follows: — “The skins are first put into flour and salt for three days, and are cleansed of all the fat and impurities of the inside. The stalks of the plant being pounded between large stones, are then put into water, applied to the inner side of the skin for one day, and the hair having fallen off, the skin is left to dry for two or three days, and the process is completed.”

The mode of stretching or bending leather over a form is frequently represented at Thebes; and it is curious to observe, that the semicircular knife*, used by the ancient Egyptians between 3000 and 4000 years ago, is precisely similar to that of our modern curriers.

As in other trades, the tools they employed were

* *Vide* wood-cut, No. 55. *fig. c*, Vol. I. p. 350.

neither numerous nor complex, and their means might sometimes appear inadequate, did we not see the beautiful work performed at the present day, in China, India, and other countries, where the implements are equally simple. The semicircular knife, a sort of chisel, the common awl, (specimens of which have been found at Thebes, similar to our own,) a stone for polishing the leather, the cutting table, the bending form, the horn, and a few other utensils, were all that occurred in the shop of the shoemaker, or the currier; and a prepared skin, the emblem of their trade, was suspended, together with ready-made shoes and other articles, to indicate their skill, and to invite a customer.

The shops of an Egyptian town were probably similar to those of Cairo*, and other Eastern cities: which consist of a square room, open in front, with falling or sliding shutters, to close it at night; and the goods ranged in shelves, or suspended against the walls, are exposed to the view of those who pass. In front is generally a raised seat, where the owner of the shop and his customers sit, during the long process of concluding a bargain, previous to the sale and purchase of the smallest article; and here an idle loungee frequently passes whole hours, less intent on benefiting the shopkeeper, than in amusing himself with the busy scene of the passing crowd.

Among the many curious customs introduced in

* *Vide* Lane's *Modern Egyptians*, vol. ii. p. 9. and 10., wood-cuts.

the paintings, and still retained in the East, is that of holding a strap of leather, or other substance, with the toes, which from their being always free, and unincumbered with tight shoes, retain their full power and pliability; and the singular, I



No. 360. Currier holding a strap of leather with his toes, while cutting it. *Thebes.*
bb are straps tied up, and deposited in the shop.

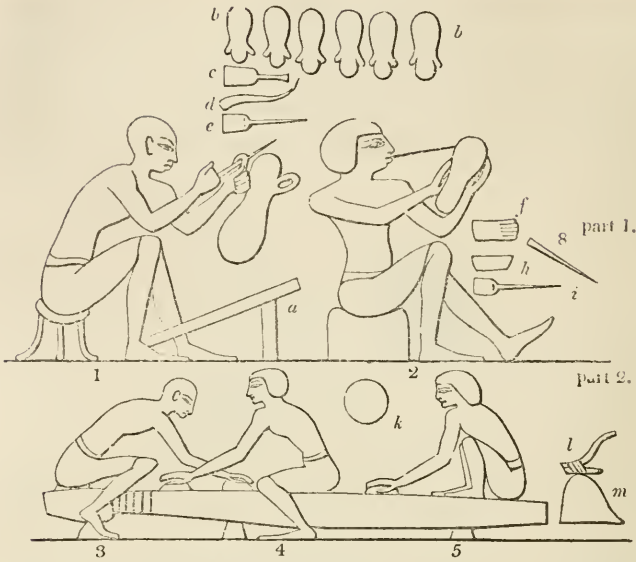
may say, primitive, mode of tightening a thong with the teeth, while sewing a shoe, is also portrayed in the paintings of the time of the third Thothmes.

It is probable that as at the present day, they ate in the open front of their shops, exposed to the view of every one who passed; and to this custom Herodotus may allude, when he says “the Egyptians eat in the street.”*

In Eastern towns, no regal arms, or gilded inscription, proclaim the patronage† of “his Majesty,” and no picture or description, affixed to the shop, announce the trade of the owner; being

* Herodot. ii. 35.

† A Turk in London once observed, “How very changeable your king must be, if all the shops having royal arms have been successively tried by him.”



No. 361. Part 1. Shoemakers. Part 2. Men employed in polishing a column. Thebes.

Fig. 1. making a hole with an awl. 2. tightening a thong with his teeth. b b sandals hanging up in the shop. c to i various tools.

thought sufficiently shown by the goods exposed for sale; but this does not prevent the inconsistency, perhaps profanation, of attaching a religious sentence, or the name of the Deity, to walls, which hourly witness an attempt to defraud the inexperienced customer. Nor is there any direct evidence that the ancient Egyptians affixed the name and trade of the owner of the shop, though the presence of hieroglyphics, denoting this last, together with the emblem which indicated it, may seem to argue in favour of the custom; and the absence of many individuals' names in the sculptures is readily accounted for by the fact, that these scenes refer

to the occupation of the whole trade, and not to any particular person.

Of all people, we may suppose Egyptian shopkeepers most likely to display the patronage received from royalty; the name of a monarch being so often introduced in the most conspicuous manner on the coffins of private individuals, and in the paintings of the tombs; many of the scarabæi they wore presenting the name of a king; and the most ordinary devices being formed to resemble a royal oval. But whether or not they had this custom, or that of affixing the name and occupation of the tradesman, it is difficult to determine; and indeed in those cities where certain districts were set apart for particular trades, the latter distinction was evidently uncalled for, and superfluous.

The great consumption of leather in Egypt, and the various purposes to which skins*, both in the tanned and raw state, were applied, created a demand far greater than could be satisfied by the produce of the country: they therefore imported skins from foreign countries, and part of the tribute, levied on the conquered tribes of Asia and Africa, consisted of hides, and the skins of wild animals, as the leopard, fox, and others; which are frequently represented in the paintings of Thebes, laid before the throne of the Egyptian monarch, together with gold, silver, ivory, rare

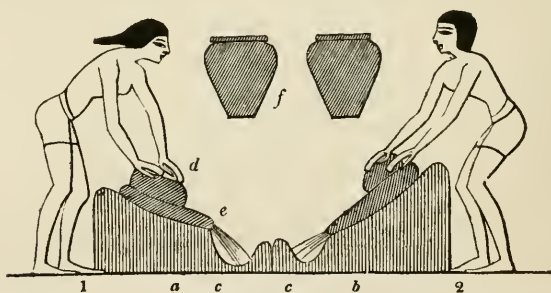
* Skins were considered of great value by many ancient people: the rewards in the games at Chemmis in Upper Egypt, were skins, cattle and cloaks, and we find the same custom among the Greeks. *Vide* Hom. Il. xxii. 159. Herodot. ii. 91.

woods, and the various productions * of each vanquished country.

For tanning they used the pods of the *Sont*, or *Acacia* (*Acacia* or *Mimosa Nilotica*), the *acanthus* of Strabo and other writers; which was cultivated in many parts of Egypt, being also prized for its timber, and gum; and it is probable that the bark and wood of the *Rhus oxyocanthoïdes*, a native of the desert, were employed for the same purpose.†

FULLERS.

Many persons, both men and women, were engaged in cleaning cloth, and stuffs of various kinds; and the occupations of the fuller form some of the numerous subjects of the sculptures. It is, however, probable that they were only a subdivision of



No. 362.‡

Fullers.

Beni Hassan.

a b inclined tables. *c c* the water running off into the trough below.

* Some of these tributes put us in mind of the objects which came in Solomon's ships: "gold, and silver, ivory, and apes, and peacocks," 1 Kings, x. 22.; see also Athenæus (lib. v.), where he mentions the presents brought to Ptolemy Philadelphus.

† The Arabs also use the bark of the *Acacia Sayal* for tanning; it grows in the desert, but not in the valley of the Nile.

the dyers, whose skill in colouring cloth I have already noticed.

POTTERS.

A far more numerous class were the potters ; and all the processes of mixing the clay, and of turning, baking, and polishing the vases, are represented in the tombs of Thebes and Beni Hassan.

They frequently kneaded the clay with their feet, and after it had been properly worked up, they formed it into a mass of convenient size with the hand, and placed it on the wheel *, which, to judge from that represented in the paintings, was of very simple construction, and turned with the hand. The various forms of the vases were made out by the finger during their revolution ; the handles, if they had any, were afterwards affixed to them ; and the devices and other ornamental parts were traced with a wooden or metal instrument, previous to their being baked. They were then suffered to dry, and for this purpose were placed on planks of wood ; they were afterwards arranged with great care in trays, and carried, by means of the usual yoke, borne on men's shoulders, to the oven.

Many of the vases, bottles, and pans of ordinary quality were very similar to those made in Egypt at the present day, as we learn from the

* Some supposed the potter's wheel to have been invented by Anacharsis, but, as Strabo observes, it was already known to Homer Strabo, vii. p. 209. Seneca Epist. 90. Plin. vii. 56.

representations in the paintings, and from those found in the tombs, or in the ruins of old towns; and judging from the number of Coptic words applied to the different kinds, their names were as varied as their forms. Coptos and its vicinity were always noted for this manufacture; the clays found there were peculiarly suited for porous vases to cool water; and their qualities are fully manifested, at the present day, in the *goolleh* or *bardak* bottles, of Qeneh.

That the forms of the modern *goollehs* are borrowed from those of an ancient time is evident, from the fragments found amidst the mounds, which mark the sites of ancient towns and villages, as well as from the many preserved entire; and a local tradition affirms that the modern manufacture is borrowed from, and has succeeded without interruption to, that of former days.

It is impossible to fix the period of the invention of the potter's wheel, and the assertion of Pliny, who attributes it to Corœbus the Athenian*, is not only disproved by probability, but by the positive fact that it was known at the earliest epoch of Egyptian history, of which the sculptures have been preserved, previous to the arrival of Joseph, and consequently long before the foundation of Athens.

But Pliny's chapter of inventions abounds with errors of this kind, and serves to show how commonly the Greeks adopted the discoveries of other

* Plin. vii. 56.

nations, particularly of Egypt and Phœnicia, and claimed them as their own : even the art of cutting stones is attributed to Cadmus, of Thebes ; and Thales of Miletus was said to have enlightened the Egyptians, under whom he had long been studying*, by teaching them to measure the altitude of a pyramid, or other body, by its shadow†, at the late period of 600 B. C. Though we may pardon, we must smile at, the vanity of the Greeks, who pretended to the merit of pointing out to their instructors a discovery‡, of which men so skilful in astronomy and mathematics could not have been ignorant ; but we must express our surprise at the simplicity of modern writers, who believe and repeat so improbable a story.

The Egyptians displayed much taste in their gold, silver, porcelain, and glass vases, but when made of earthenware, for ordinary purposes, they were sometimes devoid of elegance, and scarcely superior to those of England, before the classic taste of Wedgewood substituted the graceful forms of Greek models, for the unseemly productions of our old potteries. Though the clay of Upper Egypt was particularly suited to porous bottles, it could not be obtained of a sufficiently fine quality for the manufacture of vases like those of Greece and Italy ; in Egypt too, good taste did not extend to

* The Greeks went to study in Egypt, as modern artists in Italy.

† Plin. xxxvi. 12. "When the shadow was equal to its height," at an angle of 45°.

‡ On a par with this is their deriving foreign names from their own language, as Isis from the Greek word signifying "knowledge."—
"Ελληνικον γαρ η Ισις εστι." Plut. de Is. s. 2.: and many others.

all classes, as in Greece ; and vases used for fetching water from a well, or from the Nile, were frequently of a very ordinary kind, far inferior to those carried by the Athenian women to the fountain of Kallirhoë.*

The Greeks, it is true, were indebted to Egypt for much useful knowledge, and for many early hints in art, but they speedily surpassed their instructors in taste, and improved on the information they had acquired ; and in nothing, perhaps, is this more strikingly manifested than in the productions of the potter.

CARPENTERS AND CABINET-MAKERS.

Carpenters and cabinet-makers were a very numerous class of workmen : and their occupations generally form one of the most important subjects in the paintings which represent the Egyptian trades.

Egypt produced little wood ; and with the exception of the date and dôm palms, the sycomore, tamarisk, and acacias, few trees of native growth afforded timber either for building, or for ornamental purposes.

The principal uses of the date and dôm trees I have already mentioned.†

For coffins, boxes, tables, doors, and other objects, which required large and thick planks, for idols and wooden statues, the sycomore was principally em-

* In Mr. Rogers's choice collection is a vase, on which this subject is represented.

† In Vol. II. p. 177, 178.

ployed; and from the great quantity discovered in the tombs alone, it is evident that the tree was cultivated to a great extent. It had the additional recommendation of bearing a fruit, to which the Egyptians were very partial; and a religious prejudice claimed for it, and the *Persea*, the name and rank of sacred fruit trees.

The tamarisk was preferred for the handles of tools, wooden hoes, and other things requiring a hard and compact wood; and of the acacia were made the planks and masts of boats, the handles of offensive weapons of war, and various articles of furniture. Large groves of this tree were cultivated in many parts of Egypt; especially in the vicinity of Memphis and Abydus, where they still exist; and besides its timber, the acacia was highly valued for the pods it produced, so useful for tanning, and for the gum, which exudes from the trunk and branches, now known under the name of gum Arabic.* This tree is not less prized by the modern Egyptians, who have retained its name as well as its uses; *sont* being applied to this species of acacia, both in Arabic and the ancient Egyptian language.

Besides the *Sont*, or Acacia (*Mimosa*) *Nilotica*, the *Sellem*, *Sumr*, *Tulh*, *Fitneh*, *Lebbekh*, and other acacias, which grew in Egypt, were also adapted to various purposes; and some instances are met with of the wood of the *Egleeq*, or *Balanites Ægyptiaca*, and of different desert trees having been used by the Egyptian carpenters.

* Other acacias produce this gum. The *Tulh* has, *par excellence*, the specific title of gummifera. *Vide* Vol. II. p. 182.

For ornamental purposes, and sometimes even for coffins, doors, and boxes, foreign woods were employed; deal and cedar were imported from Syria; and part of the contributions, exacted from the conquered tribes of Ethiopia, and Asia, consisted in ebony and other rare woods, which were annually brought by the chiefs, deputed to present their country's tribute to the Egyptian monarchs.

Boxes, chairs, tables, sofas, and other pieces of furniture were frequently made of ebony, inlaid with ivory; sycamore and acacia were veneered with thin layers, or ornamented with carved devices, of rare wood, applied, or let into them; and a fondness for this display suggested to the Egyptians the art of painting common boards, to imitate foreign varieties, so generally adopted at the present day.

The colours were usually applied on a thin coating of stucco, laid smoothly upon the previously prepared wood, and the various knots and grains, painted upon this ground, indicated the quality of the wood they intended to counterfeit.

The usual tools* of the carpenter were the axe, adze, hand-saw, chisels of various kinds (which were struck with a wooden mallet), the drill, and two sorts of planes, (one resembling a chisel †, the other apparently of stone, acting as a rasp on the surface of the wood, which was afterwards polished by a smooth body, probably also of stone ‡;) and these

* *Vide supra*, woodcut, No. 151. Vol. II. c. 5. p. 181.

† *Vide* woodcut, No. 89. *fig.* 3. Vol. II. p. 42.

‡ *Vide* woodcut, No. 89. *fig.* 2. Vol. II. p. 42.

with the ruler*, plummet, and right angle †, a leather bag containing nails, the hone, and horn of oil, constituted the principal, and perhaps the only, implements he used.

Some of the furniture of their rooms, the work of the cabinet-maker, I have already noticed ‡, and have observed § the perfection to which they had arrived in the construction of the chairs and ottomans of their saloons; nor can I omit the mention of the art of dovetailing, already practised in the earliest Pharaonic ages, or the mode of applying two planks together in the same plane, by means of broad pins, or tongues, of hard wood. Of the former numerous instances occur, both in large and small objects, and no illustration of it is required; the latter is peculiar, and shows the great care taken to make every thing durable, which characterizes all the works of the Egyptians.

When two boards are joined together by our modern carpenters, they insert small round pins horizontally, into corresponding parts of the edges, and then apply them together, so as to form as it were a single piece; but the Egyptian carpenter was not content with this precaution, and having used flat pins for this purpose about two inches in breadth, he secured these again, after the boards had been applied to each other, by round pins or wooden nails, driven vertically through the boards, into each of the flat pins; and thus the possibility of the joint opening

* *Vide* woodcut, No. 364. *f*.

† *Vide* woodcut, No. 359. part ii. *fig. v.*; and No. 364. *e*.

‡ At the beginning of chapter vi.

§ Vol. II. ch. vi. p. 195.

was effectually prevented, even should the glue, which was added as in our modern boxes, fail to hold them.

After the wood had been reduced to a proper size by the saw, the adze was the principal tool employed for fashioning it; and from the precision with which even the smallest objects are worked with it at the present day, by the unskilful carpenters of modern Egypt, we may form some idea of its use in the hands of their expert predecessors; and we are less surprised to meet with it so frequently represented in the sculptures.

Many of them, together with saws and chisels, have been found at Thebes: the blades are all of bronze, the handles of the acacia or the tamarisk; and, which is very singular, the general mode of fastening the blade to the handle, appears to have been by thongs of hide. It is probable that some of those discovered in the tombs are only models, or unfinished specimens; and it may have been thought sufficient to show their external appearance, without the necessity of nailing them, beneath the thongs*; for those which they used were bound in the same manner, though I believe them to have been also secured with nails. Some, however, evidently belonged to the individuals in whose tombs they were buried, and like the chisels appear to have been used: for these last often bear

* It is probable that the stone and bronze celts found in Britain were fastened to their handles in the same manner. *Vide* wood-cut, No. 364. c. and No. 359. u. part 2.

the signs of having been beaten with the hammer or mallet.

The drill is frequently exhibited in the sculptures. Like all the other tools, it was of the earliest date, and precisely similar to that of modern Egypt, even to the nut of the dom* in which it turned, and the form of its bow with a leathern thong.

The chisel was employed for the same purposes, and in the same manner, as at the present day, and was struck with a wooden mallet, sometimes flat at the two ends, sometimes of circular or oval form; several of which last have been found at Thebes, and are preserved in our European museums. The handles of the chisel were of acacia, tamarisk, or other compact wood; the blades of bronze; and the form of the points varied in breadth, according to the work for which they were intended.

The hatchet was principally used by boat-builders, and those who made large pieces of framework; and trees were felled with the same instrument.

The mode of sawing timber was primitive and imperfect, owing to their not having adopted the double saw; and they were obliged to cut every piece of wood, however large, single-handed. In order, therefore, to divide a beam into planks, they placed it, if not of very great length, upright between two posts, firmly fixed in the ground, and

* *Vide* woodcut, No. 359. part 2., and Vol. II. p. 180, 181.

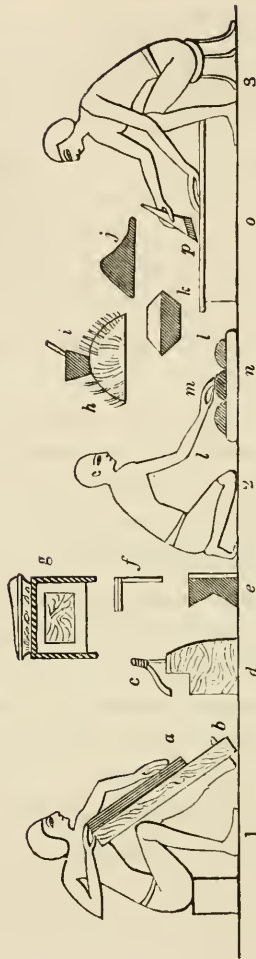
being lashed to them with cords, or secured with pins, it was held as in a vice.*

Among the many occupations of the carpenter, that of veneering is noticed in the sculptures of Thebes, as early as the time of the third Thothmes, whom I suppose to be the Pharaoh of the Exodus; and the application of a piece of rare wood of a red colour, to a yellow plank of sycamore, or other ordinary kind, is clearly pointed out. And in order to show that the yellow wood is of inferior quality, the workman is represented to have fixed his adze carelessly in a block of the same colour, while engaged in applying them together. Near him are some of his tools, with a box or small chest, made of inlaid and veneered wood, of various hues; and in the same part of the shop are two other men, one of whom is employed in grinding something with a stone on a slab, and the other in spreading glue with a brush.

It might, perhaps, be conjectured that varnish was intended to be here represented; but the appearance of the pot on the fire, the piece of glue with its concave fracture, and the workman before mentioned, applying the two pieces of wood together, satisfactorily decide the question, and attest the invention of glue † 3300 years ago. This is not, however, the only proof of its use at an early

* *Vide* woodcut, No. 368. *a*.

† Professor Rosellini seems to think that the application of colour is here represented; but the presence of the pot, containing the brush, upon the fire, (Wood-cut, No. 364. 8.) will scarcely admit of this, though the figure (*fig.* 2.) grinding something on the slab, might appear to strengthen his conjecture. He has placed this subject with the



No. 354.

a a piece of dark wood applied to one of ordinary quality *b*.
e a ruler : and *f* a right angle, similar to those used by our carpenters.
g a box.
h glue pot on the fire.
i a piece of glue.

Veneering and the use of glue.

Thebes.

c adze, fixed into a block of wood of the same colour as *b*.
g a box.
j a piece of glue.

Fig. 3 applying the glue with a brush *p*.

painters of Beni Hassan, but it is at Thebes. Pliny ascribes the invention of glue to Dædalus, as well as of the saw, the axe, the plumb-line, and the auger. Plin. vii. 56.

period, and several wooden boxes have been found, in which glue was employed to fasten the joints.

Various boxes, shrines, articles of furniture, and other works of the cabinet-maker are frequently portrayed in the paintings of Thebes, many of which present not inelegant forms, and are beautifully made. I have already noticed* several of the smaller objects, as boxes for trinkets and ointment, wooden spoons, and the like; and have described † a curious substitute for a hinge, in some of those discovered at Thebes.

Many boxes had lids resembling the curved summit of a royal canopy ‡, and were ornamented with the usual cornice §; others had a simple flat cover; and some few a pointed summit, resembling the shelving roof of a house. || This last kind of lid was divided into two parts, one of which alone opened, turning on two small pins at the base, on the principle of the doors of their houses and temples; and when necessary, the two knobs at the top ¶ could be tied together and sealed, in the same manner as in that previously mentioned.**

When not veneered, or inlaid with rare wood, the sides and lid were painted, and those intended for the tombs, to be deposited there in honour of the deceased, had usually a funereal inscription, or a religious subject painted upon

* In Vol. II. p. 355. to 362.

‡ Woodcut, No. 365. *figs.* 1, 2, 3, 6.

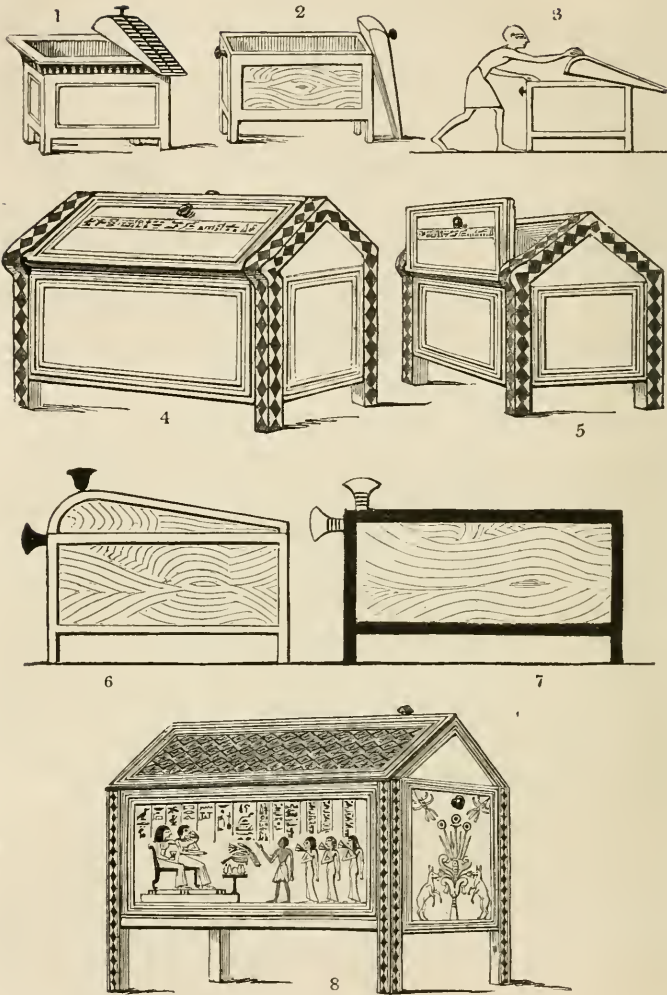
|| Woodcut, No. 365. *figs.* 4, 8.

** In Vol. II. p. 362.

† In p. 361, 362.

§ *Fig.* 1.

¶ *Fig.* 4.



No. 365.

Different boxes.

Figs. 1. and 2. Mode of placing the lid when the box was opened.

3. Man opening a box, from a painting at Thebes.

4. and 5. A painted box of Mr. Salt's collection, showing how the lid opened.

6. and 7. Boxes from the paintings of Thebes.

8. Another box with a shelving lid, from a tomb at Thebes, in Mr. Salt's collection.

them, representing offerings presented by members of his family.*

Several boxes have been found at Thebes; and the British Museum possesses some formerly belonging to M. Salt, one of which is remarkable for the brilliancy of the colours imparted to the pieces of ivory with which it is inlaid. The box is of ebony; the ivory, painted red and blue, is let into the sides and edges, and the lid is ornamented in the same manner. There is in this a substitute for a hinge, similar to the one before mentioned, except that here the back of the cross bar, cut to a sharp edge along its whole extent, fits into a corresponding groove at the end of the box: the two knobs are fixed in their usual place at the top and front.

The lids of many boxes were made to slide in a groove, like our small colour boxes, as that given in a preceding wood-cut †; others fitted into the body, being cut away at the edges for this purpose; and some turned on a pin at the back, as I have shown in the long-handled boxes before mentioned. ‡

In opening a large box they frequently pushed back the lid, and then either turned it sideways § and left it standing across the breadth of the box, or suffered it to go to the ground; but in those of still larger dimensions, it was removed altogether and laid upon the floor.

* *Figs.* 4. and 8.

† Woodcut, No. 269. p. 361. Vol. II.

‡ *Vide* woodcuts, Nos. 258. 259. and 263.

§ Woodcut, No. 365. *figs.* 1, 2, 3.

With the carpenters may be mentioned the wheelwrights, the makers of coffins, and the coopers; and this subdivision of one class of artisans, showing a systematic partition of labour, is one of many proofs of the advancement of this civilised people.

I have already shown that the Egyptian chariot was of wood*, and have pointed out what portion of it was the province of the carpenter and the currier†; and having described the war chariot, and the curricule of the towns, it only remains to notice the travelling car, or light *plaustrum*, which was drawn by oxen.

Though so frequently used in Egypt, it is singular that one instance alone occurs of this kind of car, in a tomb I opened at Thebes in 1827; and this ought to show how wrong it is to infer the non-existence of a custom from its not being met with in the sculptures. The same remark also applies to the camel, which, in consequence of its not being found either in the paintings or hieroglyphics‡, is conjectured by some to have been unknown in Egypt at an early period; though, as I have already observed§, it is distinctly mentioned in the Bible among the presents given to Abraham by the king of Egypt.

* Vol. I. p. 342. I have observed that the Egyptian chariot had only two wheels, and one instance is alone met with of a four wheeled carriage. Pliny says waggons with four wheels were an invention of the Phrygians, lib. vii. 56.

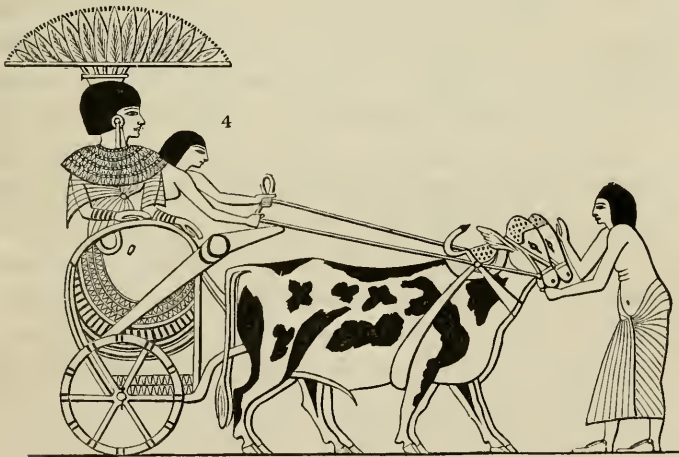
† Vol. I. p. 348.

‡ I have noticed an instance of it on a seal I found in Nubia, of uncertain date.

§ In chap. viii.

The *plastrum* was very similar to the war chariot* and the curricl, but the sides appear to have been closed, and it was drawn by a pair of oxen instead of horses. The harness was much the same, and the wheels had six spokes. In a journey it was occasionally furnished with a sort of umbrella, fixed upon a rod rising from the centre, or back part of the car: the reins were the same as those used for horses, and apparently furnished with a bit; and besides the driver, a groom sometimes attended on foot, at the head of the animals, perhaps feeding them as they went.

The accompanying wood-cut represents an Ethiopian princess, who is on her journey through



No. 366. An Ethiopian princess travelling in a *plastrum*, or car drawn by oxen. Over her is a sort of umbrella. *Thebes*.
 3 an attendant. 4 the charioteer or driver.

* It has been always a matter of surprise how the ancients could traverse hilly countries, where no roads were made, with so much facility, in chariots.

Upper Egypt to Thebes, where the court then resided; but whether it was on the occasion of her projected marriage with the king, the brother of the third Amunoph, or merely to present her homage to him, is uncertain. A large tribute is brought at the same time from her countrymen, the "Cush," or "Ethiopians;" which seems to show that it merely relates to a visit of ceremony from the queen or princess of that country; and the fact of the charioteer and some other of the attendants being Egyptians, suggests that the *plaustrum* was also provided from Egypt, as was the case when Pharaoh* sent for Jacob, and his family, to bring them to Egypt. The *plaustra* are called in Genesis† "waggons:" they were commonly used in Egypt for travelling; and Strabo performed the journey from Syene, to the spot, where he crossed the river to visit Philæ, in one of those carriages.‡

Besides the *plaustrum*, they had a sort of palanquin§, and a canopy or frame-work, answering the purpose of a sedan chair, in which they sometimes sat or stood, in their open pleasure boats, or in situations where they wished to avoid the sun; and these were also the work of the cabinet-maker.

Certain persons were constantly employed in the towns of Egypt, as at the present day in Cairo and other places, to pound various substances in large stone mortars; and salt, seeds, and other things were probably taken, in the same manner, by

* Genes. xlv. 19.

† They are termed *ageloot* אגלוות, *wheeled carriages*. Gen. loc. cit.

‡ Strabo, lib. xvii. p. 562. ed. Cas. "απηνη."

§ *Vide supra*, Vol. II. p. 228. Woodcut, No. 174.

a servant to these shops, whenever it was inconvenient to have it done in the house. The pestles they used, as well as the mortars themselves, were precisely similar to those of the modern Egyptians; and, their mode of pounding was the same; two men alternately raising ponderous metal pestles with both hands, and directing their falling point to the centre of the mortar; which is now



No. 367. Pounding various substances in stone mortars, with metal pestles. *Thebes.*
ag i mortars. *dd* pestles. Figs. 1 and 2 alternately raising and letting fall the pestles into the mortar.
 Fig. 3 and 4 sifting the substance after it is pounded; the coarser parts *h*, being returned into the mortar to be again pounded.

generally made of a large piece of granite, or other hard stone, scooped out into a long narrow tube, to little more than half its depth. When the substance was well pounded, it was taken out, and passed through a sieve, and the larger particles were again returned to the mortar, until it was sufficiently and equally levigated; and this, and the whole process here represented, so strongly resemble the occupation of the public pounders at Cairo, that no one, who has been in the habit of walking in the streets of that town, can fail to

recognise the custom, or doubt of its having been handed down from the early Egyptians, and retained without the slightest alteration, to the present day.

In a country where water and other liquids were carried, or kept, in skins and earthenware jars, there was little necessity for the employment of wooden barrels, which too are little suited to a climate like the hot and arid Egypt; and modern experience there shows how ill adapted barrels are for such purposes, and how soon they fall to pieces, if neglected or left empty for a very short period. We cannot, therefore, expect that they should be in common use among the ancient Egyptians; and the skill of the cooper* was only required to make wooden measures for grain†, which were bound with hoops either of wood or metal, and resembled in principle those now used in Egypt for the same purpose; though in form they approached nearer to the small barrels‡, or kegs, of modern Europe.

In an agricultural scene, painted at Beni Hasan, a small barrel is represented, placed upon a stand, apparently at the end of the field, which I at first supposed to have been intended to hold water for the use of the husbandmen, one of whom is approaching the spot; calling to mind the cup of wine presented to the ploughman on reaching the end of the furrow, mentioned by Homer, in

* The coopers of Cairo are generally Greeks.

† One of these is represented in woodcut, No. 90. fig. 2.

‡ In Europe, barrels were said by Pliny to have been invented by the Gauls, who inhabited the banks of the Po. Varro and Columella mention them in their time. They were pitched within.

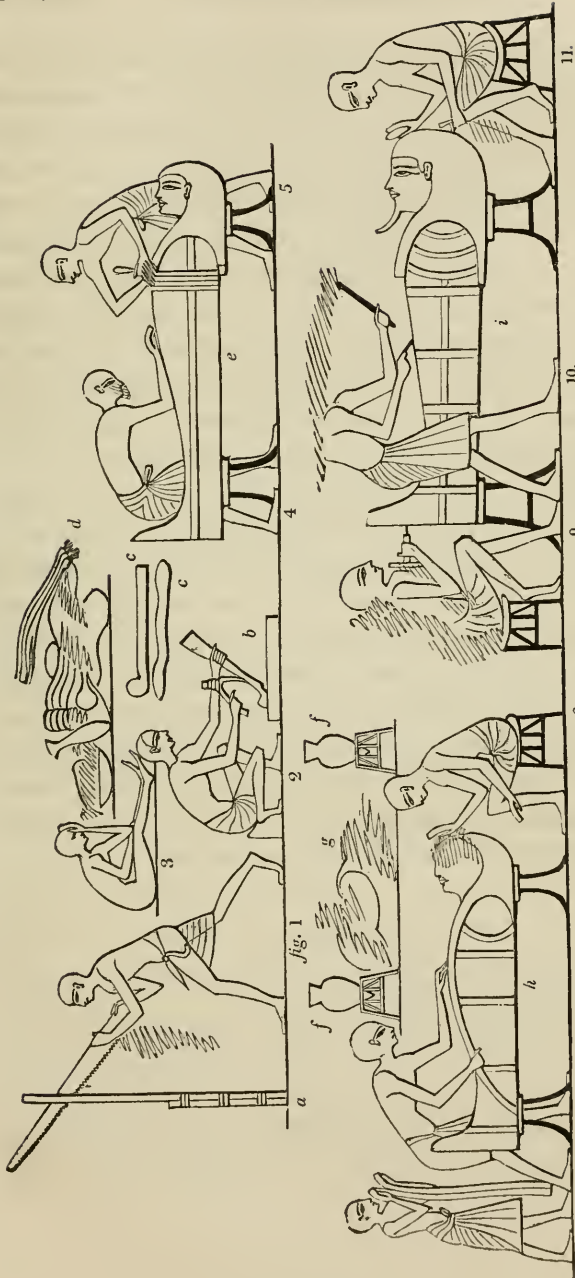


Fig. 1
 No. 363.
 1 sawing wood.
 2 cutting the leg of a chair, indicating the trade of the carpenter.
 3 a man fallen asleep.
 4, 5, and 7, binding mummies.
 6 wood ready for cutting.
 8, 10, and 11 painting and polishing the case.
 9 using the drill.
 Bandaging mummies and making the cases. *Thebes.*

his description of the shield of Achilles* ; but it is probable that in this instance, also, it is intended to indicate the measure of grain, with which the land was to be sown after the plough had passed.

A great number of persons were constantly employed in making coffins, as well as the numerous boxes, wooden figures, and other objects connected with funerals, who may be comprehended under the general head of carpenters ; the undertakers, properly so called, being a different class of people, attached to and even forming part of the sacerdotal order, though of an inferior grade. Indeed the ceremonies of the dead were so numerous, and so many persons were engaged in performing the several duties connected with them, that no particular class of people can be said to have had the sole direction in these matters ; and we find that the highest orders of priests officiated in some, and in others those of a very subordinate station. Thus the embalmers were held in the highest consideration, while those who cut open the body, when the intestines were removed, are said to have been treated with ignominy and contempt.†

BOAT-BUILDERS AND SHIPS.

The boat-builders may be divided into two separate and distinct classes ; one of which formed a subdivision of the carpenters, the other of the basket-makers, or the weavers of rushes and osiers ; another very numerous class of workmen.

* Homer, *Il.* *σ.* 545.

† Diod. *i.* 91.

The boats made by these last were a sort of canoe or punt, used for fishing, and consisted merely of water plants or osiers, bound together with bands made of the stalks of the papyrus or cyperus.* They were very light, and some so small that they could easily be carried from one place to another †; and the Ethiopian boats, mentioned by Pliny ‡, which were taken out of the water, and carried on men's shoulders past the rapids of the cataracts, were probably of a similar kind.

Strabo §, on the other hand, describes the boats at the cataracts of Syene passing the falls in perfect security, and exciting the surprise of the beholders, before whom the boatmen delighted in displaying their skill; and Celsius affirms that they were made of the papyrus.

Papyrus boats are frequently noticed by ancient writers. Plutarch describes Isis going, in search of the body of Osiris, "through the fenny country, in a bark made of the papyrus ||; whence it is supposed that persons using boats of this description ¶ are never attacked by crocodiles, out of fear and respect to the goddess;" and Moses is said to have been exposed in "an ark (or boat) of bulrushes, daubed with slime and with pitch."** From this last we derive additional proof that the

* Not the same species as that used for making paper. *Vide supra*, p. 146.

† Achilles Tatius, lib. iv.

‡ Plin. v. 9.

§ Strabo, xvii. p. 562.

|| Plut. de Is. s. 18. "Εν βαριδι παπυρινη."

¶ "Εν παπυρινοις σκαφεσι πλειοντας." Plut. loc. cit.

** Exod. ii. 3. The bulrush is called *סבנא*; the paper reeds in Isaiah, xix. 7. are *ערוה*.

body of such boats was composed of rushes, which, as I have observed, were bound together with the papyrus; and the mode of rendering them impervious to water is satisfactorily pointed out by the coating of pitch, with which they were covered. Nor can there be any doubt that pitch was known in Egypt at that time, since we find it on objects which have been preserved of the same early date; and the Hebrew word **זִפְת** (*zift*) is precisely the same as that used for pitch by the Arabs, to the present day.

Pliny mentions boats “woven of the papyrus*,” the rind being made into sails, curtains, matting, ropes, and even into cloth; and observes elsewhere that the papyrus, the rush, and the reed were all used for making boats in Egypt.†

“Vessels of bulrushes” are again mentioned in Isaiah‡: Lucan alludes to the mode of binding or sewing them with bands of papyrus§; and Theophrastus|| notices boats made of the papyrus, and sails and ropes of the rind of the same plant. That small boats were made of these materials is very probable; and the sculptures of Thebes, Memphis, and other places abundantly show that they were employed as punts or canoes for fishing, in all parts of Egypt, during the inundation of the Nile; particularly in the lakes and canals of the Delta.

* Plin. xiii. 11. “Ex ipso quidem papyro navigia texunt.”

† Plin. vii. 16. and vi. 22. ‡ Isaiah, xviii. 2.

§ “Conseritur bibula Memphitis cymba papyro.”

Lucan, iv. 136.

|| Theophr. iv. 9.

There was another kind, called by Strabo *pécton*, in one of which he crossed the Nile to the Island of Philæ, “made of thongs, so as to resemble wicker-work* ;” but it does not appear from his account whether it was formed of reeds bound together with thongs, or was like those made in Armenia, and used for going down the river to Babylon, which Herodotus describes, of osiers covered with hides. †

The Armenian boats were merely employed for transporting goods down the current of the Euphrates, and on reaching Babylon were broken up; the hides being put upon the asses which had been brought on board for this purpose, and the traders returning home by land. “They were round, in form of a shield, without either head or stern; the hollow part of the centre being filled with straw.” “Some were large, others small, and the largest were capable of bearing 5000 talents weight.” They were therefore very different from the boats, reported by the same historian to have been made in Egypt for transporting goods up the Nile, which he describes as being built in the form of ordinary boats, with a keel, and a mast and sails.

“The Egyptian boats of burden,” he says, “are made of a thorn wood, very similar to the lotus of Cyrene, from which a tear exudes, called gum. Of this tree they cut planks measuring about two cubits,

* Strabo, xvii. p. 562.

† Herodot. i. 194. Those of the ancient Britons were made of wickerwork covered with hides. Cæs. B.C. i. 54.

and having arranged them like bricks, they build the boat in the following manner:—They fasten the planks round firm long pegs, and, after this, stretch over the surface a series of girths, but without any ribs, and the whole is bound within by bands of papyrus. A single rudder is then put through the keel, and a mast of thorn-wood, and sails of the papyrus (rind) complete the rigging. These boats can only ascend the stream with a strong wind, unless they are towed by ropes from the shore; and when coming down the river, they are provided with a hurdle made of tamarisk*, sewed together with reeds, and a stone, about two talents weight, with a hole in the centre. The hurdle is fastened to the head of the boat, and allowed to float on the water; the stone is attached to the stern; so that the former, carried down the river by the rapidity of the stream, draws after it the *baris* (for such is the name of these vessels), and the latter, dragged behind, and sinking into the water, serves to direct its course. They have many of these boats; some of which carry several thousand talents weight.” †

That boats of the peculiar construction he here describes were really used in Egypt, is very probable; they may have been employed to carry goods from one town to another, and navigated in the manner he mentions: but we may be allowed to doubt their carrying several thousand talents, or many tons, weight; and we have the evidence of the

* *Fide* Plin. xiii. 21. “Myricen, quam alii tamaricen vocant.”

† Herod. ii. 96.

paintings of Upper and Lower Egypt to show that the large boats of burthen were made of wooden planks, which men are seen cutting with saws and hatchets, and afterwards fastening together with nails and pins; and they were furnished with spacious cabins, like those of modern Egypt.

Pliny even goes farther than Herodotus, and speaks of papyrus vessels crossing the sea, and visiting the Isle of Taprobane* (Ceylon); unless, indeed, he alludes to their sails, made of the rind of that plant.

We are not, however, reduced to the necessity of crediting these statements of Pliny and Herodotus; and though punts and canoes of osiers, and papyrus, or reeds, may have been used on some occasions, as they still are †, on the Nile and the lakes of Egypt, we may be certain that the Egyptians had strong and well built vessels for the purposes of trade by sea, and for carrying merchandise, corn, and other heavy commodities on the Nile; and that, even if they had been very bold and skilful navigators, they would not have ventured to India ‡, nor have defeated the fleets of Phœnicia §, in their paper vessels.

The sails, when made of the rind of the papyrus, have been supposed similar to those of the

* Plin. vi. 22. "Quia papyraceis navibus armamentisque Nili peteretur (Taprobane)."

† They are very rude, and much smaller than those of ancient times.

‡ Among the numerous productions of India met with in Egypt, which tend to prove an intercourse with that country, may be mentioned the pine apple, models of which are found in the tombs, of glazed pottery. One is in the possession of Sir Richard Westmacott.

§ In the reign of Apries. *Vide* Vol. I. p. 169.

Chinese, which fold up like our Venetian blinds ; but there is only one boat represented in the paintings, which appears to have sails of this kind, though so many are introduced there ; nor can we believe that a people, noted for their manufactures of linen and other cloths, would have preferred so imperfect a substitute as the rind of a plant, especially as they exported sail cloth to Phœnicia for that very purpose. *

Diodorus † and Herodotus ‡ both mention the fleet of long vessels, or ships of war, fitted out by Sesostris in the Arabian Gulf. The former states that they were four hundred in number, and that Sesostris was the *first* Egyptian monarch, who *built* similar vessels ; but Herodotus merely says he was the first who passed into the ocean ; and the necessity of previously having ships of war to protect the trade and coasts of Egypt, disproves his statement, and suggests that they were used at the early period, when the port of Philoteris traded with the Arabian, and, perhaps, even the Indian shore. §

Pliny supposes that ships were first built by Danaus ||, and taken from Egypt to Greece when he migrated to that country ; rafts only having been previously known ; and he states that some attributed their invention to the Trojans and Mysians, who crossed the Hellespont, in their wars with Thrace. The sculptures, however, of ancient Egypt

* *Vide* Ezekiel, xxvii. 7. In the lamentation of Tyre, “ Fine linen, with brodered work from Egypt, was that which thou spreadest forth to be thy sail.”

† Diodor. i. 55.

‡ Herodot. ii. 102.

§ *Vide* Vol. I. p. 46.

|| Plin. vii. 56.

still remain to decide the question, and their dates being now ascertained, we are enabled to form our own opinions on the subject, without the necessity of trusting to the uncertain accounts of ancient writers. From the sculptures of the eighteenth dynasty, it appears that the same kind of boats for carrying heavy burdens were then employed in Egypt, as in the later days of Psamaticus and Amasis; they are found at Eilethyas and Beni Hassan of the age of Amosis*, and of Osirtasen the contemporary of Joseph; and in the tombs near the pyramids they again occur, of an epoch previous to the sixteenth dynasty, and the reign of Osirtasen.

The ingenious Champollion conjectured that some hieroglyphics at Eilethyas proved † the inmate of one of the tombs there, called—“Ahmosis, the son of Obschne,” to have been “chief of the mariners, or rather of the pilots,” who “entered the naval career in the time of King Ahmosis,” and “accompanied that monarch, when he went up by water to Ethiopia, to impose tribute upon it,” and “commanded ships under Thoutmosis the First.” If this be true, it confirms what I have before stated, respecting the early existence of an Egyptian fleet; and whatever improvement may have been afterwards made in the ships of war, fitted out by Sesostris and other monarchs, in the Arabian Gulf and Mediterra-

* These two names are both written Ames in the hieroglyphics, but I use them thus by way of distinction, and in accordance with Manetho. *Vide* Vol. I. p. 47. and 150.

† Champollion's twelfth letter from Egypt. *Vide* Lit. Gazette, p. 617.

nean*, we have sufficient evidence from the paintings of the tombs at Eilethyas, that in the time of the same Amosis, the ordinary travelling boats of the Nile were of a construction far superior to those mentioned by Herodotus.

To have had frequent occasion to introduce the name of Champollion, to whom we are so deeply indebted, without paying a just tribute to his talents, is to me a reproach, which I cannot suffer to remain unremoved. I do not wish to enter into the question respecting the discovery of the proper mode of reading the hieroglyphics: suffice it to say that Dr. Young gave the first idea and proof of their alphabetic force, which was even for some time after doubted by Champollion. And that the merit of originality in this point is due to our distinguished countryman I can bear a satisfactory testimony, having, with my much regretted friend Sir William Gell, as early as the summer of 1821, so far profited by Dr. Young's opinions on the subject, as to be enabled to suggest the supposed value of two or three other characters, besides those he had already ascertained; our taking this view of the question being solely in consequence of his discovery *that they were the representatives of letters*. But it remained for the genius of Champollion to kindle the spark thus obtained into a flame, and to display by its light, the path which led to a clear insight into the subject, to perfect the discovery, and to lay down

* Herodot. ii. 159. and 102. Diodor. i. 68.

certain rules, applicable in individual as well as in general cases; and in justice to him be it confessed, that if our knowledge of hieroglyphics were confined to the limited extent to which it was carried by Dr. Young, we should have no regular system to guide us, in the interpretation of them, and should know little more than the alphabetic value of a few letters, without the means of affixing a positive construction to a single sentence on any Egyptian monument.

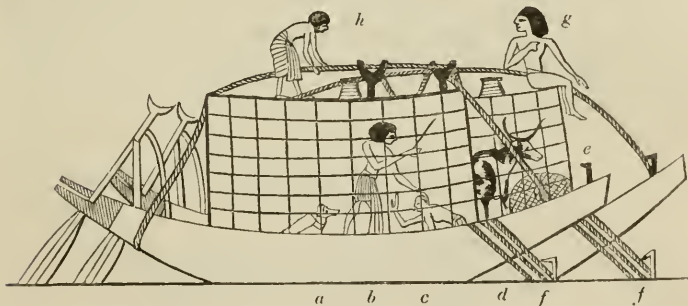
Had Champollion been disposed to give more credit to the value and originality of Dr. Young's researches, and to admit that the real discovery of the *key* to the hieroglyphics, which in his dexterous hand proved so useful in unlocking those treasures, was the result of his labours, he would unquestionably have increased his own reputation, without making any sacrifice. In this, as in the case of Mr. Burton's trilinguar (or rather trigrammatic) stone, and in a few other points, he may have shown a want of ingenuousness: all have their faults and vanities; but this is not a reason that the memory of one so respectable as Champollion should be aspersed, or due praise refused him; and we cannot forgive the ungenerous conduct of those who, from private pique, summon up and misapply talents, to pervert truth; denying the merit of labours which, every one acquainted with the subject, knows to have been crowned with unexampled and wonderful success. This is not an era, when we could believe men capable of lending themselves to the unworthy office of maligning one no

longer living to defend himself, and one, who present, or absent, merits and possesses the respect and admiration of every unprejudiced person. Yet have some been found, in more than one country, prompted to this malicious act by personal enmity, envy of his superior talents and success, or by that affectation of scepticism, which, while it endeavours to conceal ignorance, often hopes to acquire credit for discernment and superior knowledge.

When the subject of hieroglyphics becomes better understood, and the world is capable of judging how much we owe to him, the wonderful ingenuity of Champollion will be appreciated, and the greatest praise we can bestow on him is confidently to pronounce, that time will do justice to his merits, and experience prove the truth of what inexperience now calls in question.

In the mean time, his last labours, when in Egypt, are not lost to us ; and though we deeply regret that his life was not spared to complete the task he so ably commenced, it is satisfactory to find his powerful aid still benefits and guides us, by the publication of his grammar of hieroglyphics ; and some of the valuable materials collected by him and Professor Rosellini are already before us. It is indeed fortunate, that one, so talented and so persevering as the Italian Professor, should have presided over that part of the scientific expedition sent to Egypt by the Tuscan government ; and those who follow in the field of hieroglyphic enquiry will re-echo the praises we so willingly bestow on the liberality of governments, whose patronage is given to such a worthy object.

The construction of the various boats used on the Nile varied, according to the purposes for which they were intended. The punts or canoes were either pushed with a pole, or propelled with a paddle* ; they had no mast, nor even rudder ; and many of the small boats, intended merely for rowing, were unprovided with a mast or sails. They were also destitute of the raised cabin, common in large sailing boats, and the rowers appear to have been seated on the flat deck, which covered the interior from the head to the stern, pushing instead of pulling the oars, contrary to the usual custom in boats of larger dimensions. The absence of a mast did not altogether depend on the size of the boat, since those belonging to fishermen, which were very small, were often furnished with a sail, besides three or four oars † ; and some large boats, intended for carrying cattle and heavy goods, were sometimes without a mast.



No. 369.

Boats for carrying cattle and goods on the Nile.

Thebes.

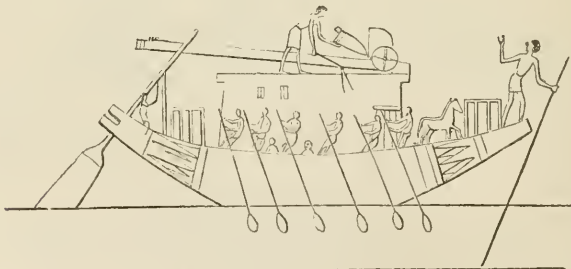
a b two boats, fastened to the bank by the ropes and pegs *ff*; in the cabin of one, a man inflicts the bastinado on a boatman. He is one of the stewards of the estate, and is accompanied by his dog. In the other boat is a cow, and a net of hay or chopped straw *e*, precisely the same as the *shenf* now used in Egypt.

* *Vide* Contest of boatmen, woodcut, No. 313. *fig.* 1.

† *Vide* Fishing scene, woodcut, No. 333. part 1. *a*.

In going up the Nile, they used the sail, whenever the wind was favourable, occasionally rowing, in those parts where the sinuosities of the river brought it too much upon the bows; for it is probable that, like the modern Egyptians, they did not tack in navigating the river; and when the wind was contrary, or during a calm, they generally employed the tow-line, which was pulled by men on shore.

After they had reached the southernmost point of their journey up the stream, the sail was no longer considered necessary; and the mast and yards being taken down, were laid over the top of the cabin, or on a short temporary mast, with a forked summit; precisely in the same way, and with the same view, as at the present day, on board the *cangias*, and other masted rowing boats of Egypt. For as the wind generally blows from the N. W., it seldom happens that the sail can be used in going down the Nile, and in a strong wind the mast and rigging are so great an incumbrance, that the boat is unable to make any way against it, with oars.



No. 370.—A boat with the mast and sail taken down, having a chariot and horses on board.
Eiethyas.

The heavy boats of burden, which from their

great size cannot be propelled by oars, are suffered to retain their masts and sails, and float down the river sideways at the rate of the stream, advantage being taken of the wind whenever the bends of the river allow of it; and the large *germs*, used for carrying corn during the inundation, are only employed when the water is very deep, and are laid up the rest of the year, and covered with matting from the sun. These, therefore, form exceptions to the ordinary boats of the Nile, and may be considered similar to some represented in the sculptures of Alabastron, which are fastened to the shore by several large ropes, and are shown from the size of their cabins, the large awning in front for covering the goods they carried, and the absence of oars, to have been of unusual dimensions.

In a boat given in the preceding woodcut from a tomb at Eilethyas, an error has frequently been made respecting the wheel upon the top of the cabin, which some have supposed to be connected with the sail*, in order to enable the yard to traverse with greater facility, or for some such purpose; but on a careful examination of the subject it proves to be part of a chariot, too much defaced by time to be easily perceived at first sight, and the horses belonging to it are seen below in front of the cabin. This circumstance not only shows the comforts with which the Egyptian grandees travelled, when going from one part of the country to the other, but affords additional proof of the size of the boats used upon the Nile.

* The other boat represented in this subject has the sail up, and the same chariot on board. It is, indeed, the same boat, with and without the sail.

Large boats had generally one, small pleasure boats two rudders, at the stern. The former traversed upon a beam, between two projecting heads, a short pillar or mast supporting it and acting as the centre on which it moved; the latter were nearly the same in principle except that they turned on a bar, or in a ring, by which they were suspended to the gunnel at either side; and in both instances the steersman directed them, by means of a rope fastened to the upper extremity. The rudders consisted of a long broad blade and still longer handle, evidently made in imitation of the oars, by which they originally steered their boats, before they had so far improved them as to adopt a fixed rudder; and in order to facilitate its motion upon the mast or pillar, and to avoid the friction of the wood, a piece of bull's hide was introduced, as is the custom in the modern boats, between the mast and yard.

The oars were a long round wooden shaft, to which a flat board, of oval or circular form, was fastened, and it is remarkable that the same oar is used to this day on the Ganges, and in the Arabian Gulf. They turned either on toll-pins, or in rings, fastened to the gunnel of the boat, and the rowers sat on the deck, on benches, or on low seats, or stood or knelt to the oar, sometimes pushing it forwards, sometimes, and indeed more generally, pulling it, as is the modern custom in Egypt, and most other countries.

At the head of the boat a man* usually stood,

* The "Custos et tutela proræ." Ovid, Met. iii. 617.

with a long pole* in his hand, by which he tried at intervals the depth of the water, lest they should run upon any of the numerous sandbanks with which the river abounds, and which, from their often changing at the time of the inundation, could not always be known to the most skilful pilot; a precaution still adopted by the modern boatmen of the Nile.

That the ancient Egyptian boats were built with ribs, like those of the present day, is sufficiently proved by the rude models discovered in the tombs of Thebes. It is probable that they had very little keel, in order to enable them to avoid the sandbanks, and to facilitate their removal from them when they struck; and indeed if we may judge from the models, they appear to have been flat-bottomed. The boats now used on the Nile have a very small keel, particularly at the centre, where it is concave; so that when the head strikes, they put to the helm, and the hollow part clears the bank; except in those cases where the impetus is too great, or the first warning is neglected.

The sails of the ancient boats appear to have been always square, with a yard above and below; in which they differ from those now adopted in Egypt. The only modern boats with square sails are a sort of lighter, employed for conveying stones from the quarries to Cairo and other places; and these have only a yard at the top. All other boats have *latine* or triangular-shaped sails, which, in

* The *middree* of the Arabs, the *contus*, or *pertica*, of the Romans.

order to catch the wind when the Nile is low, are made of immense size : for unless they reach above its lofty banks they are often prevented from benefiting by a side wind at that season of the year ; but the number of accidents which occur are a great objection to the use of such disproportionate sails.

The cabins of the Egyptian boats were lofty and spacious ; they did not, however, always extend over the whole breadth of the boat, as in the modern cangias, but merely occupied the centre ; the rowers sitting on either side, generally on a bench or stool. They were made of wood, with a door in front, or sometimes on one side, and they were painted within and without with numerous devices, in brilliant and lively colours.* The same custom continued to the latest times, long after the conquest of the country by the Romans ; and when the Arabs invaded Egypt in 638, under Amer the general of the Caliph Omer, one of the objects which struck them with surprise was the gay appearance of the painted boats of the Nile.

The lotus was one of their favourite devices, as on their furniture, the ceilings of rooms, and other places, and it was very common on the blade of the rudder, where it was frequently repeated at both ends, together with the eye. But the place considered peculiarly suited to the latter emblem was the head or bow of the boat ; and the custom is still retained in some countries to the present day. In India it is very generally adopted ; and we even

* *Fide* plate 16.—*Conf.* Plin. 357.

see the small barks which ply in the harbour of Malta bearing the eye on their bows, in the same manner as the boats of ancient Egypt.

They do not appear to have had any thing like the *aplustre* of the Romans, an ornament fixed to the stern, and sometimes to the prow, on which a staff was erected, bearing a ribbon or flag; but streamers were occasionally attached to the pole of the rudder, and a standard was erected near the head of the vessel.* The latter was generally a sacred animal †; a sphinx, or some emblem connected with religion or royalty, like those belonging to the infantry before described ‡; and sometimes the top of the mast bore a shrine or feathers, the symbol of the deity to whose protection they committed themselves during their voyage.

There is a striking resemblance, in some points, between the boats of the ancient Egyptians and those of India; and the form of the stern, the principle and construction of the rudder, the cabins, the square sail, the copper eye on each side of the head, the line of small squares at the side, like false windows §, and the shape of the oars of boats used on the Ganges, forcibly call to mind those of the Nile, represented in the paintings of the Theban tombs.

The head and stern of the Egyptian pleasure-boats were usually ornamented with, or terminated in the shape of, a flower richly painted; in the

* *Vide* plate 16. boats with coloured sails.

† Perhaps answering to the *παρασημον* of the Greeks, though not at the prow itself.

‡ Vol. I. p. 294.

§ *Vide* woodcut, No. 373.

boats of burden they were destitute of ornament, and simply rounded off; and I have met with two only in which there was any resemblance to a beak. But as this was in Nile boats, and at the stern*, it could not have been intended for an offensive purpose. Nor are the ships of war, represented at Medeenet Haboo, furnished with beaks.

At the head, a forecastle frequently projected above the deck, which was assigned to the man who held the fathoming pole, above mentioned, and at the stern another of similar form was sometimes added, where the steersman sat; reminding us of the poop of Roman vessels.† They were very generally adopted, and found of great service in the war gallies‡; the archers profiting by these commanding positions to rake the enemy's decks, as they bore down upon a hostile galley, and to disable the rowers. In the pleasure-boats they served also as hatches for going below deck, and were similar to what the Nile boatmen now call the *hón*.

The gallies or ships of war differed in their construction from the boats of the Nile. They were less raised at the head and stern, and on each side, throughout the whole length of the vessel, a wooden bulwark, rising considerably above the gunnel, sheltered the rowers, who sat behind it, from the missiles of the enemy; the handles of the oars

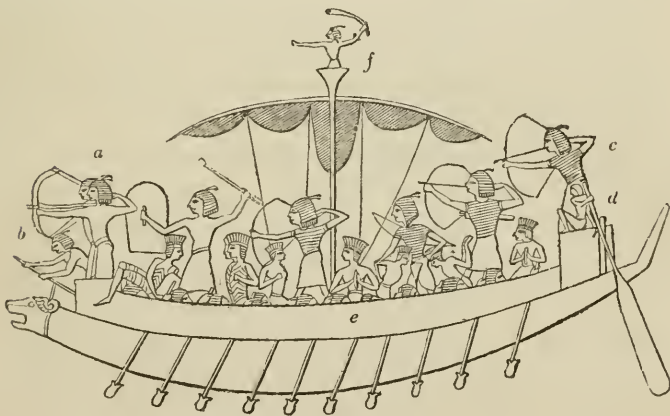
* The remainder of the boat is destroyed, I cannot therefore say if the head was of the same form.

† "Ipse gubernator puppi Palinurus ab alta." Virg. *Æn.* v. 12. and 175.

‡ In the Roman gallies the fighting men were placed in a similar manner at the head and stern, Liv. xxx. 43. and xxxvi. 42., in towers, called propugnacula. Hor. *Epod.* i. 2.

passing through an aperture at the lower part. Besides the archers in the raised poop and fore-castle, a body of slingers was stationed in the tops, where they could with more facility manage that weapon, and employ it with effect on the enemy.

On advancing to engage a hostile fleet, the sail was used till they came within a certain distance, when the signal or order being given to clear for action, it was reefed by means of ropes running in pullies, or loops, upon the yard. The ends of these ropes, which were usually four in number, dividing the sail as it rose into five folds, descended and were attached to the lower part of the mast, so as to be readily worked, when the sail required to be pulled up, at a moment's notice, either in a squall of wind or on any other occasion; and in this respect, and in the absence of a lower yard, the sail



No. 371. War galley; the sail being pulled up during the action.

Thebes.

a raised fore-castle, in which the archers were posted. *c* another post for the archers, and the pilot *d*. *e* a bulwark, to protect the rowers. *f* slingers, in the top.

of the war galley greatly differed from that of the

boats on the Nile. Having prepared for the attack, the rowers, whose strength had been hitherto reserved, plied their oars; the head was directed towards an enemy's vessel, and showers of missiles were thrown from the forecastle and tops as they advanced. It was of great importance to strike their opponent on the side; and when the steersman, by a skilful manœuvre, could succeed in this, the shock was so great that they sank it, or obtained a considerable advantage by crippling the oars; and greater facility was given for boarding in this part, being distant from the fighting men, and occupied only by the rowers.

The small* Egyptian galleys do not appear, as already observed, to have been furnished with a beak, like those of the Romans, which being of brass sharply pointed, and sometimes below the water's surface, did great damage to an enemy's vessel, and exposed it to the danger of sinking, by forcing in the planks of the bottom; but a lion's head fixed to the prow, supplied its place, and being probably covered with metal, was capable of doing great execution, when the galley was impelled by the force of 16 or 20 oars.† This head occasionally varied in form, and perhaps served to indicate the rank of the commander, the name of the vessel, or the deity under whose protection they sailed, like the sign (*παρασημιον*,) of the Greeks, Romans, and other people‡; unless indeed the lion was always chosen

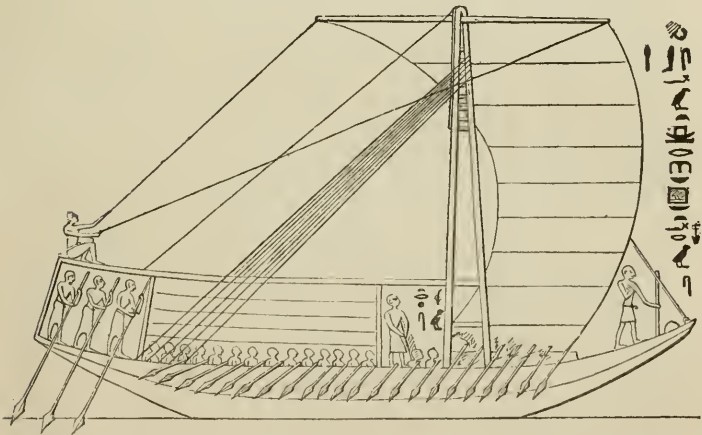
* We have no representation of their large ships of war.

† They are represented with eight and ten oars on each side.

‡ Herodot. viii. 88. Act. Apost. xxviii. 11. Virgil (*Æn.* v. 116.), shows that ships had names given them, like our own at the present day, as the *Chimæra*, the *Centaur*, and others.

for their war gallies, and the ram, oryx, and others, confined to the boats connected with the service of religion.

Some of the boats on the Nile were furnished with 44 oars, 22 being represented on one side; which, allowing for the steerage and prow, would require their total length to be about 120 feet. They were furnished, like all the others, with one large square sail; but the mast, instead of being single, was made of two limbs of equal length, sufficiently open at the top to admit the yard between them, and secured by several strong stays, one of which extended to the prow, and others to the steerage of the boat. Over the top of the mast a light rope was passed, probably intended for furling the sail, which last, from the horizontal lines represented upon it, appears to have been like



No. 372. — Large boat with sail, apparently made of the papyrus, a double mast, and many rowers. In a tomb at Kom Ahmar, above Minich.

those of the Chinese ; and this, as already observed, is the only instance of a sail which has the appearance of being made of the papyrus.

At the extremity of the yard were braces, which being held by a man seated in the steerage, or upon the cabin, served to turn the sail to the right and left ; they were common to all boats, as with the Romans, by whom they were called *pedes**, and managed in the same manner. The mode of steering the boat is also different from that usually described in the Egyptian paintings ; and instead of a rudder in the centre of the stern, or at either side, it is furnished with three on the same side : all which peculiarities suffice to show that it was of unusual construction, perhaps of a very early period, and afterwards abandoned as cumbrous and imperfect. The only satisfactory point it indicates is the mode of arranging the oars, while not required during a favourable wind. It is evident that they were drawn up, through the ring or band in which they turned, and they were probably held in that position by a thong or loop passing over the handle †, which the artist has failed to insert, or which is no longer seen, in consequence of the imperfect preservation of the painting.

There is no instance of a boat with a rudder at both ends, said to have been used by some ancient nations ‡, nor do we find them provided with more than one mast, and a single sail ; in which respect they resembled those of the Greeks, at the period

* Whence " *facere pedem*," to adjust the sail.

† *Vide* also woodcut, No. 343. fishing scene.

‡ Tacit. de Mor. Germ. 44. and Ann. ii. 6.

of the Trojan war.* Sometimes the single rudder, instead of traversing in a groove, or hollow space, merely rested on the exterior of the curved stern, and was suspended by a rope, or bands; but that imperfect method was confined to boats used in religious ceremonies on the river, an instance of which may be seen in the model preserved at Berlin, as well as in the paintings of Thebes.

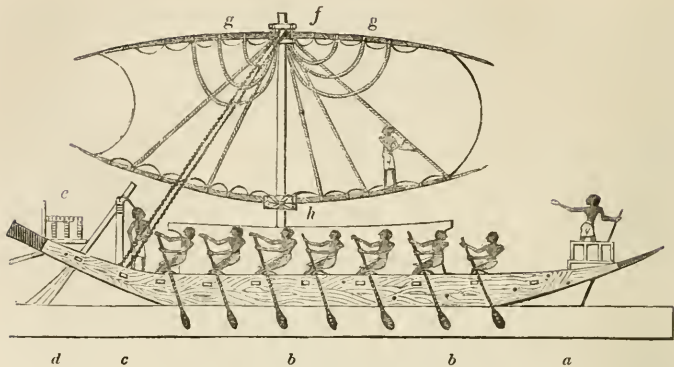
This model, which is very curious, shows the position of the rowers, the arrangement of the mast and yard when taken down, the place of the pegs and mallet for fastening the boat to the shore, and of the landing plank; which were always kept in readiness, as at the present day, in the bows, and were under the surveillance of the man stationed at the prow to report and fathom the depth of the water; it also shows that the boat was decked, and that the cabin did not extend over the whole breadth; which is in perfect accordance with the sculptures, representing the pleasure boats of the Nile, and those of their funeral ceremonies.

In some boats of burden, the cabin, or raised magazine, was broader, reaching probably from one side to the other, and sufficiently large to contain cattle, horses, and numerous stores.†

Unlike the modern Egyptians, they paid great attention to the cleanliness of their boats, the cabins and decks being frequently washed and swept, and we find the Theban artists thought it of sufficient importance to be indicated in the sculptures.

* Homer, Od. v. 254. “*Ἐν δ' ἴστων ποιεῖ, καὶ ἐπικριὼν ἀρμενὸν αὐτῆς.*”

† *Vide* wood-cut, No. 369.



No. 373. — Boat of the Nile; showing how the sail was fastened to the yards, and the nature of the rigging. *Thebes.*

Herodotus states that the mast was made of the acanthus (*Acacia*, or *Mimosa Nilotica*); but as the trunk and limbs of this tree are not sufficiently long or straight, it is evident that the historian was misinformed; and we may readily conceive that they preferred the fir, with which they were well acquainted*, great quantity of the wood being annually imported into Egypt from Syria. The planks, the ribs, and the keel were of the acacia, which from its resisting the effect of water for a length of time, was found, says Pliny †, well adapted for this purpose, as is fully proved by modern experience. The foot of the mast was let into a strong beam, which crossed the whole breadth of the boat; it was supported by and lashed to a knee, rising to a considerable height before it;

* *Vide* Plin. xvi. 40.

† Plin. xiii. 9. “*Spina nigra . . . quoniam incorrupta etiam in aquis durat, ob id utilissima navium costis.*” In lib. xvi. 40. he mentions cedar being used in Syria and Egypt for building ships, when fir wood was scarce.

and the many stout stays, fastened at the head, stern, and sides, sufficiently secured it, and compensated for the great pressure of the heavy yards and sail it carried.

I have observed that in ships of war, the yard was allowed to remain aloft after the sail had been reefed; but in the boats of the Nile, which had a yard at the top and bottom of the sail, as soon as it was furled, they lowered the upper yard, and in this position it remained until they again prepared for their departure. To loosen the sail from the lower yard must have been a tedious operation, if it was bound to it with the many lacings represented in some of the paintings; but in these cases it may have been folded up between the two yards, as soon as the upper one was lowered; the whole being lashed together by an outer rope.

It is uncertain whether they used pullies for raising and lowering the yards, or if the halliards merely passed through a smooth dead-sheave-hole at the top of the mast. The yards were evidently of very great size, and of two separate pieces, scarfed or joined together at the middle*, sometimes supported by five or six lifts, and so firmly secured that men could stand or sit upon them, while engaged in arranging the sail; and from the upper yard were suspended several ropes, resembling the *horses* of our square-rigged ships †, and perhaps intended for the same purpose when they furled the sail. The Egyptians, however, were

* *Vide* wood-cut, No. 373. *h.*

† *Vide* wood-cut, No. 373. *gg.*

not ignorant of the pulley; and I am inclined to believe they introduced it in the rigging of their boats: though owing to their imperfect style of drawing, it is not indicated; and one has actually been found in Egypt, and is now in the museum of Leyden. It is, however, of uncertain date, and was apparently intended for drawing water from a well. The sides are of *athul* or tamarisk wood*, the roller of fir; and the rope, of *leaf* or fibres of the date tree, which belonged to it, was found at the same time.

Many of the sails were painted with rich colours †, or embroidered with fanciful devices, representing the phœnix, flowers, and various emblems; some were adorned with cheques, and others were striped, like those of the present day. This kind of cloth, of embroidered linen, appears to have been made in Egypt expressly for sails, and was bought by the Tyrians ‡ for that purpose; but its use was confined to the pleasure boats of the grandees, or of the king himself, ordinary sails being white; and the ship, says Pliny §, in which Antony and Cleopatra went to the battle of Actium, was distinguished from the rest of the fleet by its purple sails, which were the peculiar privilege of the admiral's vessel. The same writer states that the custom of dyeing the sails of ships was first adopted in the fleet of Alexander the

* *Tamarix orientalis*.

† The sails of our own vessels in the time of Edward the Fourth, had coats of arms emblazoned upon them.

‡ Ezek. xxvii. 7. *Vide supra*, p. 185., note 3.

§ Plin. xix. 1.



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Fig.

BOATS WITH COLOURED SAILS, FROM THE TOMB OF REMESEUS III AT THEBES

Remeseus

Great, when navigating the Indus ; but that it was practised long before, in Egypt, is evident from the paintings at Thebes, which represent sails richly ornamented with various colours, in the time of the third Remeses, nine hundred years previous to the age of Alexander.

The devices with which they were painted or embroidered depended on fancy, and the same monarch had ships with sails of different patterns. Of all these the phœnix appears to have been the most appropriate emblem, if, as is stated by Horapollo*, it indicated “the return of a traveller, who had long been absent from his country ;” and it is probable that the boats used in sacred festivals upon the Nile were decorated with appropriate symbols, according to the nature of the ceremony, or the deity in whose service they were engaged. The edges of the sail were furnished with a strong hem or border, also neatly coloured, serving to strengthen it, and prevent an injury, and a light rope was generally sewed round it for the same purpose.

Some of the Egyptian vessels appear to have been of very great size.† Diodorus‡ mentions one of cedar wood, dedicated by Sesostris to the god of Thebes, 280 cubits, or 420 feet, long ; another built by Caligula in Egypt, to transport one of the obelisks to Rome, carried 120,000 *modii* (pecks) of lentils as ballast § ; and Ptolemy Philo-

* Horapoll. Hierogl. lib. i. c. 35.

† Conf. Hor. 1 Epod. i. 1. referring to the large ships of M. Antony, “alta navium . . . propugnacula.”

‡ Diodor. i. 57.

§ Plin. xvi. 40. ; and xxxvi. 9.

pator built one of forty benches of oars, which was 420 feet long, and 72 from the keel to the top of the poop, and carried four hundred sailors, besides four thousand rowers, and near three thousand soldiers.*

NAVIGATION.

Of the origin of navigation no satisfactory conjecture can be offered, nor do we know to what nation to ascribe the merit of having conferred so important a benefit on mankind.

It is evident that the first steps were slow and gradual, and that the earliest attempts to construct vessels on the sea were rude and imperfect.

Ships of burden were originally mere rafts, made of the trunks of trees bound together, over which planks were fastened; which Pliny states to have been first used on the Red Sea†; but he is wrong in limiting the era of ship-building to the age of Danaus, and in supposing that rafts alone were employed until that period. Rafts were adopted, even to carry goods, long after the invention of ships, as they still are for some purposes on rivers and other inland waters; but boats, made of hollow trees and various materials, covered with hides or pitch, were also of very early date, and to these may be ascribed the origin of planked vessels. Improvement followed improvement, and

* Plut. Life of Demetrius. Pliny (vii. 56.) says it had fifty benches; and he mentions another of Ptolemy Philadelphus with forty.

† Plin. vii. 57. The Phœnicians were supposed to have come from the Red Sea, and to have settled on the coast of the Mediterranean. Herodot. i. 1. *Vide* Strabo, lib. i. p. 29.

in proportion as civilisation advanced, the inventive genius of man was called forth to push on an invention, so essential to those communities, where the advantages of commerce were understood, and numerous causes contributed to the origin of navigation, and the construction of vessels for traversing the sea.

Curiosity may have prompted those who lived on the coast to visit a neighbouring island; or the desire of conquest, to cross a narrow channel, to invade a foreign land, as Pliny observes in the case of the Trojans; but it is more probable that the occupation of the fisherman was the principal cause and promoter of this useful art: those who at first employed themselves merely on a sheltered river, venturing at length in the same boat upon the sea, and having acquired confidence from habit, extending their excursions along the coast; for it was long, before the art of navigation was so far improved, that the boldest mariner * dared to trust his vessel out of sight of land.

The first sea voyages, of which we have any direct notice, are those undertaken by the Egyptians at the early period when they led colonies into Greece; but the people to whom the art of navigation was most indebted, who excelled all others in nautical skill, and who carried the spirit of ad-

* " Illi robur et æs triplex
 Circa pectus erat, qui fragilem truci
 Commisit pelago ratem
 Primus, nec timuit præcipitem Africum
 Decertantem Aquilonibus."

Hor. i. Od. iii. 9

venture far beyond any contemporary nation, were the Phœnicians; and those bold navigators even visited the coast of Britain, in quest of tin.

The fleets of Sesostris and the third Remeses certainly date at a very remote age, and some Phœnician sailors, sent by Neco * on a voyage of discovery, to ascertain the form of the African continent, actually doubled the Cape of Good Hope, about twenty-one centuries before the time of Bartholomew Diaz, and Vasco de Gama; but it was not till the discovery of the compass † that navigation became perfected, and the uncertain method of ascertaining the course by the stars ‡ gave place to the more accurate calculations of modern times.

After the fall of Tyre, and the building of Alexandria, Egypt became famous as a commercial country, and the emporium of the East; the riches of India, brought to Berenice, Myos-Hormos, and other ports on the Red Sea, passed through it, to be distributed over various parts of the Roman empire; and it continued to benefit by these advantages, until a new route was opened to India by the Portuguese, round the Cape of Good Hope.

* *Vide* Vol. I. p. 158. Pliny mentions others who performed this voyage, lib. ii. 67.

† The Chinese used the compass at a very early period; and Marco Polo probably introduced it from China, about 1290 A.D., 12 years before Gioia of Amalfi, its supposed inventor. The loadstone (Heraclius lapis) was different from the Magnetis of Theophrastus, (on stones, 73.) as is explained by Hesychius, “*Μαγνητις λιθος . . . αργυρω εμφορης ουσια, η δε Ηρακλειωτις τον σιδηρον επισταται.*” Plutarch says the loadstone was mentioned by Manetho, de Is. s. 62.

‡ *Vide* Hom. Odyss. v. 272.

THE USE OF TIN AND OTHER METALS.

It is difficult to explain how, at that early period, so great a value came to be attached to tin, that the Phœnicians should have thought it worth while to undertake a voyage of such a length, and attended with so much risk, in order to obtain it; even allowing that a high price was paid for this commodity in Egypt, and other countries, where the different branches of metallurgy were carried to great perfection. It was mixed with other metals, particularly copper, which was hardened by an alloy of tin; and was employed, according to Homer, for the raised work on the exterior of shields *, as in that of Achilles; for making greaves †; and binding various parts of defensive armour ‡; as well as for household § and ornamental purposes; and, which is very remarkable, the word *kassitéros*, used by the poet to designate it, is the same as the Arabic name *kasdeer* ||, by which the metal is still known in the East, being probably derived from the ancient Phœnician.

* Hom. Il. xviii. 565. 574.

† Hom. Il. xviii. 612. “Τευξε δε οι κνημιδας εανου κασσιτεροιο.”

‡ Hom. Il. xviii. 474. “Χαλκον δ’εν πυρι βαλλεν απειρεα, κασσιτερον τε
Και χρυσον τιμηνητα, και αργυρον.”

§ No copper vessels have yet been found, even of Roman time, washed with tin, and few only with silver. Several gilt have been met with in Egypt, Greece, and Italy. Dioscorides mentions tinned boilers, “εις λεβητα κεκασσιτερωμενον βαλλει,” lib. i. c. 38. He is supposed to have been physician to Antony and Cleopatra, or to have lived in the time of Nero. *Vide* also Plin. xxxiv. 17., on the tinning of copper vessels.

|| It will be observed that the accent in the Greek is over the same part of the word, *κασσιτέρος*. It is, I trust, unnecessary to observe that the ancient Greeks pronounced according to accent, as they now do in Greece, or to point out the origin of those marks.

We have no means of ascertaining the exact period when the Phœnicians first visited our coasts in search of tin; some have supposed about the year 400 or 450 before our era: but that this metal was employed many ages previously, is shown from the bronze vessels* and implements discovered at Thebes, and other parts of Egypt. It cannot, however, be inferred that the mines of Britain were known at that remote period, since the intercourse with India may have furnished the Egyptians with tin; and the Phœnicians probably obtained it from Spain† and India, long before they visited those distant coasts, and discovered the richness of our productive mines.‡ Ezekiel, indeed, expressly says that the Tyrians received tin, as well as other metals, from Tarshish; which, whether it was situated, as some suppose, in Arabia§ or on the Indian coast, traded in the productions of the latter country; and the lamentation|| of the prophet on the fall of Tyre, though written as late as the year 588 before our era, relates to a commercial intercourse with that place, which had been established, and continued to exist, from a much earlier period.¶

* Bronze is made of copper and tin; brass of copper and zinc.

† The mines of Spain and Portugal produce very little tin. There are some in Saxony and Bohemia. Those of Malacca are very productive.

‡ In the year 1791 about 3000 tons of tin were taken from the mines of Cornwall, of which 2200 tons were sold in the European market for 72*l.* each, the remaining 800 being sent to India and China at 62*l.* a ton. Univ. Dict. of Arts and Sciences, Tin.

§ Bruce supposed it to be Mokha.

|| Ezek. xxvii. 12. "Tarshish was thy merchant by reason of the multitude of all kind of riches; with silver, iron, tin, and lead, they traded in thy fairs."

¶ The gold of Ophir being mentioned by Job is one of many proofs of an early intercourse with India. Job xxii. 24.

It is probable that the Phœnicians supplied the Egyptians with this article, even before it was brought from Spain and Britain. The commercial intercourse of the two nations dated at a most remote epoch*; the produce and coasts of Arabia and India appear to have been known to the Phœnicians, long before any other people; and some have even supposed that they migrated from the Red Sea to the shores of Syria.†

That the productions of India already came to Egypt, at the early period of Joseph's arrival in that country, is evident from the spices which the Ishmaelites‡ were carrying to sell there; and the amethysts, hæmatite§, lapis lazzuli, and other objects|| found at Thebes of the time of the third Thothmes, and succeeding Pharaohs, argue that the intercourse was constantly kept up.

The first mention of tin, though not the earliest proof of its use, is in connection with the spoils taken by the Israelites from the people of Midian, in the year 1452 B.C., where they are commanded by Moses to purify “the gold and the silver, the brass, the *iron*, the *tin*, and the lead,” by passing it through the fire.¶ Its combination with other metals is noticed by Isaiah, in the year 760 before our era, who alludes to it as an alloy mixed with

* Herodot. i. 1.

† Herodot. loc. cit.

‡ Gen. xxxvii. 25.

§ This kind of iron ore is found also in Spain, Italy, Germany, and England.

|| I might, perhaps, add siderite.

¶ Numb. xxxi. 22. Tin in Hebrew is called *bedeel*, *בדיל*.

a more valuable substance* ; and Ezekiel† shows that it was used for this purpose in connection with silver.

Strabo, Diodorus, Pliny and other writers, mention certain islands discovered by the Phœnicians, which, from the quantity of tin they produced, obtained the name *Cassiterides*; and are supposed to have been the cluster now known as the Scilly Isles, and to have included part of the coast of Cornwall itself.‡ The secret of their discovery was carefully concealed, says Strabo§, from all other persons, and the Phœnician vessels continued to sail from Gades (Cadiz) in quest of this commodity, without its being known from whence they obtained it; though many endeavours were made by the Romans at a subsequent period to ascertain the secret, and to share the benefits of this lucrative trade.

So anxious, indeed, were the Phœnicians to retain their monopoly, that on one occasion when a Roman vessel pursued a trader bound to the spot, the latter purposely steered his vessel on a shoal, preferring to suffer shipwreck, provided he involved his pursuers in the same fate, to the disclosure of his country's secret. His artifice succeeded; the Roman crew, exposed to additional risk in consequence of being unprepared for the

* Isaiah, i. 25. "I will . . . purge away thy dross, and take away all thy tin."

† Ezek. xxii. 18. 20. "They are brass, and tin, and iron, and lead, in the midst of the furnace; they are even the dross of silver."

‡ Beckmann and Borlase are also of this opinion.

§ Strabo, lib. iii. ad fin. p. 121.

sudden catastrophe, were all lost with their foundered vessel, and the Phœnician, having the good fortune to escape with his life, was rewarded from the public treasury for his devotion, and the sacrifice he had made.*

Pliny mentions a report of “white lead,” or tin, being brought from certain islands of the Atlantic ; yet he treats it as a “fable,” and proceeds to state that it was found in Lusitania and Gallicia, and was the same metal † known to the Greeks in the days of Homer by the name *cassiteron* ‡ ; but Diodorus and Strabo, after noticing the tin of Spain and the Cassiterides, affirm that it was also brought to Massilia (Marseilles) from the coast of Britain.§

Spain, in early times, was to the Phœnicians what America, at a later period, was to the Spaniards ; and no one can read the accounts of the immense wealth derived from the mines of that country, in the writings of Diodorus and other authors, without being struck by the relative situation of the Phœnicians and ancient Spaniards, and the followers of Cortes or Pizarro and the inhabitants of Mexico or Peru.

“The whole of Spain,” says Strabo, “abounds with mines . . . and in no country are gold, silver, copper, and iron in such abundance or of such

* Strabo, loc. cit.

† Beckmann, in his *History of Inventions* (vol. iv. p. 10. 20.), doubts the *Stannum* of Pliny, or the *Cassiteron* of Homer, being tin. Pliny’s account of *Stannum* is obscure.

‡ Plin. xxxv. 16. He places the Cassiterides off the coast of Celtiberia, lib. iv. 22.

§ Strabo, lib. iii. p. 101. and Diodor. v. 38.

good quality: even the rivers and torrents bring down gold in their beds, and some is found in the sand:" and the fanciful assertion of Posidonius, regarding the richness of the country in precious metals, surpassed the phantoms created in the minds of the conquerors of America.

The Phœnicians purchased gold, silver, tin, and other metals from the inhabitants of Spain and the Cassiterides, by giving in exchange earthenware vessels, oil, salt, bronze instruments, and other objects of little value, in the same manner as the Spaniards on their arrival at Hispaniola; and such was the abundance of silver, that after loading their ships with full cargoes, they stripped the lead from their anchors, and substituted the same weight of silver.*

METALLURGY.

A strong evidence of the skill of the Egyptians in working metals, and of the early advancement they made in this art, is derived from their success in the management of different alloys; which, as M. Goguet† observes‡, is further argued from the casting of the golden calf, and still more from Moses being able to burn the metal and reduce it to powder; a secret which he could only

* Diodor. lib. v. 35.

† Goguet, *Origine des Lois, des Arts, et des Sciences*, tome ii. liv. 2. ch. iv. p. 145.

‡ Goguet is wrong in supposing that the smelting of tin is one of the most difficult operations in metallurgy, tome ii. liv. ii. ch. iv. p. 146. Tin melts more readily than lead: the latter requires a heat of 550° Fahr., the former only of 420°.

have learnt in Egypt. It is said in Exodus *, that “ Moses took the calf which they had made, and burnt it in the fire, and ground it to powder, and strewed it upon the water, and made the children of Israel drink of it;” an operation which, according to the French *savant*, “ is known by all who work in metals to be very difficult.”

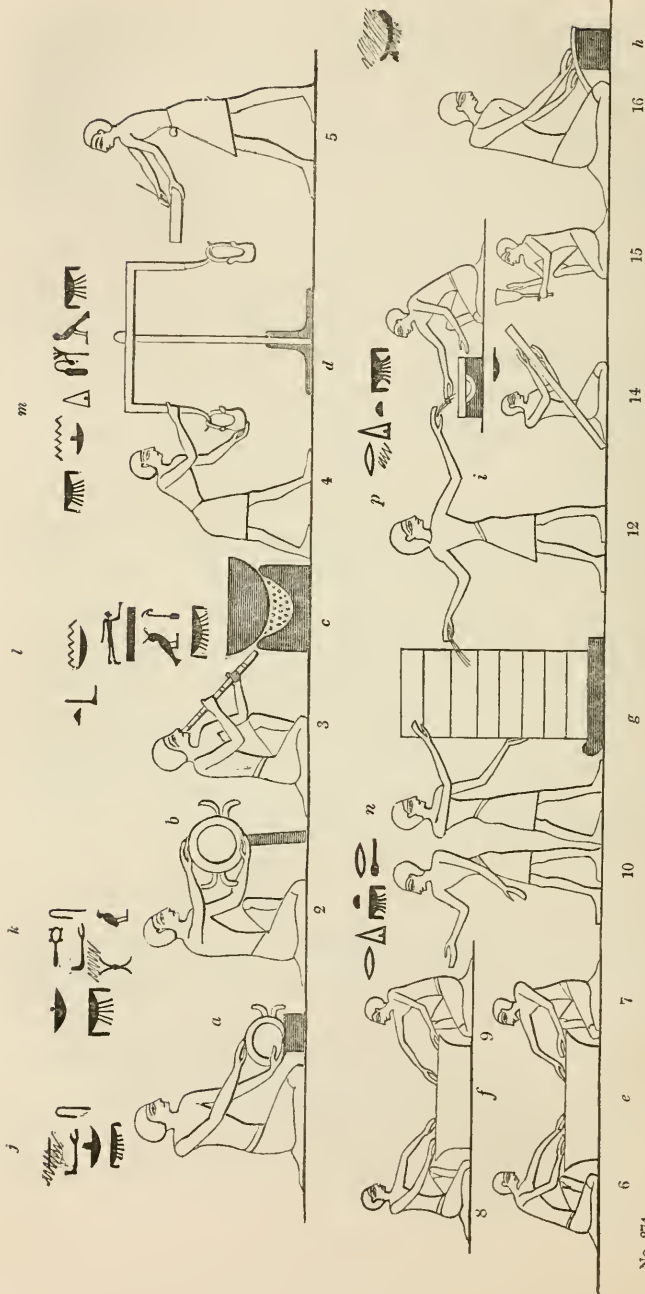
“ Commentators’ heads,” he adds, “ have been much perplexed to explain how Moses burnt and reduced the gold to powder. Many have offered vain and improbable conjectures, but an experienced chemist has removed every difficulty upon the subject, and has suggested this simple process. In the place of tartaric acid, which we employ, the Hebrew legislator used natron, which is common in the East. What follows, respecting his making the Israelites drink this powder, proves that he was perfectly acquainted with the whole effect of the operation. He wished to increase the punishment of their disobedience, and nothing could have been more suitable; for gold reduced and made into a draught, in the manner I have mentioned, has a most disagreeable taste.”

GOLD WORKING — GILDING.

The use of gold, for jewellery and various articles of luxury, dates from the most remote ages. Pharaoh having “ arrayed” † Joseph “ in vestures of fine linen, put a gold chain about his neck;” and the jewels of silver and gold borrowed from

* Exod. xxxii. 20.

† This custom, of conferring rank by presenting a suitable dress (or *kisweh*), still continues in the East.



No. 374.

Fig. 1, 2, making jewellery.
10 superintendent.

Goldsmiths,

3 blowing the fire for melting the gold.
4 weighing the gold.
The remaining part relates to the preparation of the metal before it was worked.

5 clerk or scribe.

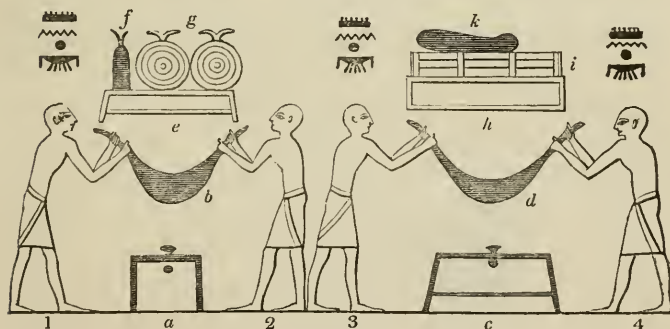
16 *Heni Itassen.*

6, 7, 8, 9, washing gold.

the Egyptians by the Israelites* at the time of their leaving Egypt, (out of which the golden calf was afterwards made†,) suffice to prove the great quantity of precious metals wrought at that time into female ornaments. It is not from the Scriptures alone that the skill of the Egyptian goldsmiths may be inferred; the sculptures of Thebes and Beni Hassan afford their additional testimony; and the numerous gold and silver vases, inlaid work, and jewellery, represented in common use, show the great advancement they had already made, at a remote period, in this branch of art.

The engraving of gold, the mode of casting it, and inlaying it with stones, were evidently known at the same time; they are mentioned in the Bible‡, and numerous specimens of this kind of work have been found in Egypt.

The origin of the sign signifying gold has been



No. 374 a. Goldsmiths. Thebes.
f g are articles of jewellery. The hieroglyphics read "goldsmith," or "worker in gold."

* Exod. iii. 22. and xii. 35.

† Exod. xxxii. 2, 3.

‡ Exod. xxxii. 4. Aaron "fashioned it with a graving tool, after he had made it a molten calf." On engraving and setting stones, *vide* Exod. xxviii. 9. and 11.

happily explained by the ingenious Champollion ; as the *bowl** in which the metal was washed, the *cloth* through which it was strained, and the *dropping of the water*, united into one character, at once indicative of the process and the metal.

Much cannot, of course, be expected from the objects found in the excavated tombs, to illustrate the means employed in smelting the ore, or to disclose any of the secrets they possessed in metallurgy ; and little is given in the paintings, beyond the use of the blow-pipe, the forceps†, and their mode of concentrating heat, by raising cheeks of metal round three sides of the fire, in which the crucibles were placed. Of the latter, indeed, there is no indication in these subjects, unless it be in the preceding woodcut‡ ; but their use is readily suggested, and some which have been found in Egypt are preserved in the museum of Berlin. They are nearly five inches in diameter at the mouth, and about the same in depth, and present



No. 375. Blowpipe, and small fireplace with cheeks to confine and reflect the heat. *Thebes*.

* Or the frame over which the cloth was laid. *Vide* woodcut, No. 374. *a. fig. a.*

† Bronze forceps, tongs, and tweezers have been found, retaining their spring perfectly.

‡ Woodcut, No. 374. *c.*

the ordinary form and appearance of those used at the present day.

From the mention* of earrings and bracelets, and jewels of silver and gold, in the days of Abraham, it is evident that in Asia, as well as in Egypt, the art of metallurgy was known at a very remote period; and workmen of the same countries are noticed by Homer † as excelling in the manufacture of arms, rich vases, and other objects inlaid or ornamented with metals. His account of the shield of Achilles ‡ proves the art of working the various substances of which it was made, copper, tin, gold, and silver, to have been well understood at that time; and the skill required to represent the infinity of subjects he mentions, was such as no ordinary artisan could possess; and unless similar works had been already made, the poet would not have ventured on the description he has given.

The ornaments in gold, found in Egypt, consist of rings, bracelets, armlets, necklaces, earrings, and numerous trinkets belonging to the toilet; many of which are of the early times of Osirtasen I. and Thothmes III., the contemporaries of Joseph and of Moses. Gold and silver vases, statues, and other objects of gold and silver, of silver inlaid with gold, and of bronze inlaid with the precious metals, were also common at the same time; and besides those manufactured in the country from the pro-

* Gen. xxiv. 47. 53.

† Hom. Il. xxiii. 741. A silver cup, the work of the Sidonians, Od. iv. 618., &c. *Vide* Il. ii. 872. vi. 236., the armour of Glaucus.

‡ Hom. Il. xviii. 474.

duce of their own mines*, the Egyptians exacted an annual tribute from the conquered provinces of Asia and Africa, in gold and silver, and in vases made of those materials.

I have frequently had occasion to notice the elegance of the Egyptian vases, whether of gold or other materials. Many other objects were equally graceful in their form, and the devices which ornamented them; and among these I may cite the golden baskets in the tomb of Remeses, which in



No. 376. — Golden baskets represented in the tomb of king Rameses III. *Thebes.*

their shape call to mind our European bread baskets.

At Beni Hassan, the process of washing the ore, smelting, or fusing the metal with the help of the blow-pipe, and fashioning it for ornamental purposes, weighing it and taking an account of the quantity so made up, and other occupations of the goldsmith, are represented; but, as might be supposed, these subjects merely suffice, as they were intended, to give a general indication of the goldsmith's trade, without attempting to describe the means employed. †

* Diodorus mentions the silver mines of Egypt which produced 3,200 myriads of minæ, but I am not aware of their position. *Vide* Diodor. i. 49., and *suprà*, Vol. I. p. 113. and 234.

† *Vide* wood-cut, No. 374.

The gold mines of Egypt, though mentioned by Agatharcides and later writers, and worked even by the Arab Caliphs, long remained unknown, and their position has only been ascertained a few years since, by M. Linant and Mr. Bonomi. They lie in the Bisháree desert, or, as Edrésee and Aboolfeda call it, the land of Bigá * or Bojá, about seventeen or eighteen days' journey to the south-eastward from Derow; which is situated on the Nile, a little above Kom Ombo, the ancient Ombos.

Those two travellers met with some Cufic funereal inscriptions there, which from their dates show that the mines were worked in the years 339 A.H. (951 A.D.), and 378 A.H. (989 A.D.); the former being in the fifth year of the Caliph Mostukfee Billah, a short time before the arrival of the Fatemites in Egypt, the latter in the fourteenth of El Azeéz, the second of the Fatemite dynasty.

They continued to be worked till a much later period, and were afterwards abandoned, the value of the gold, as Aboolfeda states †, barely covering the expences; nor has Mohammed Ali, who sent to examine them and obtain specimens of the ore, found it worth while to re-open them.

The matrix is quartz; and so diligent a search did the Egyptians establish, throughout the whole of the deserts east of the Nile, for this precious metal, that I never remember to have seen a vein

* Bigah بج: or Begga is the name which the Bisháreeh Arabs give themselves.

† Aboolfeda's Description of Egypt, s. 68.

of quartz in any of the primitive ranges there, which had not been carefully examined by their miners; certain portions having been invariably picked out from the fissures in which it lay, and broken into small fragments. At a spot near the quarries of *Breccia Verde*, on the road from Coptos to Kossayr, the working of quartz veins has been carried on to such an extent, and on so grand a scale; the houses of the miners are so numerous; the consequence of the place so strongly argued, by the presence of a small stone temple bearing the name and sculptures of Ptolemy Evergetes I.; and the length of time the workmen inhabited it, so distinctly proved by the large mounds of broken pottery found there, (from which the valley has derived the name of Wadee Foäkheer), that I cannot suppose their labours to have been confined to the mere cutting of *tazzi*, sarcophagi, fonts, vases, columns, and similar objects from the breccia quarries, which, too, are distant three miles from this spot; and the number of one thousand three hundred and twenty huts, which I counted in the different windings of the Wadee Foäkheer, containing far more workmen than the quarries would require, appears conclusive respecting the object they had in view, and suggests that they had succeeded in finding gold here also, though probably in far less quantities than in the mines of the more southerly district.

The gold mines are said by Aboolfeda to be situated at El Allaga (or Ollagee); but Eshuranib (or Eshuanib), the principal place, is about three

days' journey beyond Wadée Allaga, according to Mr. Bonomi, to whom I am indebted for the following account of the mines. "The direction of the excavations depends," as Diodorus states, "on that of the strata in which the ore is found, and the position of the various shafts differ accordingly. As to the manner of extracting the metal, some notion may be given by a description of the ruins at Eshuranib, the largest station, where sufficient remains to explain the process they adopted. The principal excavation, according to M. Linant's measurement, is about 180 feet deep: it is a narrow oblique chasm, reaching a considerable way down the rock. In the valley, near the most accessible part of the excavation, are several huts, built of the unhewn fragments of the surrounding hills, their walls not more than breast high, perhaps the houses * of the excavators or the guardians of the mine; and separated from them by the ravine or course of the torrent, is a group of houses, about three hundred in number, laid out very regularly in straight lines. In those nearest the mines lived the workmen who were employed to break the quartz into small fragments, the size of a bean, from whose hands the pounded stone passed to the persons who ground it in hand-mills, similar to those now used for corn in the valley of the Nile, made of a granitic stone; one of which is to be found in almost every house at these mines, either entire or broken.

* Similar huts are met with at all the quarries and mines of these deserts.

“ The quartz thus reduced to powder was washed on inclined tables, furnished with two cisterns, all built of fragments of stone collected there ; and near these inclined planes are generally found little white mounds, the residue of the operation. Besides the numerous remains of houses in this station, are two large buildings, with towers at the angles, built of the hard blackish granitic, yet luminous rock, that prevails in the district. The valley has many trees, and in a high part of the torrent bed is a sort of island, or isolated bank on which we found many tomb-stones, some written in the ancient Cufic character, very similar to those at E’Souán.”

Such is the description Mr. Bonomi has been kind enough to send me of the gold mines of Allaga ; and as Diodorus’s account of the mining operations, and the mode of extracting the gold, is highly interesting, I shall introduce some extracts from his work.

The historian states that those who worked in the mines were principally captives taken in war, and men condemned to hard labour for crimes, or in consequence of offences against the government. They were bound in fetters, and obliged to work night and day ; every chance of escape being carefully obviated by the watchfulness of the guards, who, in order that persuasion might not be used to induce them to relax in their duty, or feelings of compassion be excited for the sufferings of their fellow-countrymen, were foreign soldiers, ignorant of the Egyptian language.

Whether this system was introduced by the

Ptolemies and the latter Pharaohs, or was always carried on in the earliest times, it is difficult to say, Diodorus confining his remarks to the state of the mines during his own time. “The soil,” says the historian, “naturally black*, is traversed with veins of marble† of excessive whiteness, surpassing in brilliancy the most shining substances; out of which the overseers cause the gold to be dug, by the labour of a vast multitude of people; for the kings of Egypt condemn to the mines notorious criminals, prisoners of war, persons convicted by false accusations‡, or the victims of resentment. And not only the individuals themselves, but sometimes even their whole family are doomed to this labour; with the view of punishing the guilty, and profiting by their toil.

“The vast numbers employed in these mines are bound in fetters, and compelled to work day and night without intermission, and without the least hope of escape; for they set over them barbarian soldiers, who speak a foreign language, so that there is no possibility of conciliating them by persuasion, or the kind feelings which result from familiar converse.

“When the earth containing the gold is hard, they soften it by the application of fire, and when it has been reduced to such a state that it yields

* The rock in which the veins of quartz run is an argillaceous schist.

† Diodor. iii. 11. He evidently alludes to the quartz, which is the matrix of the ore, by the expressions “μαρμαρον,” “την μαρμαριζουσαν πετραν,” and “αποστιλθουσης πετρας.”

‡ More probably of false accusations.

to moderate labour, several thousands (myriads) of these unfortunate people break it up with iron picks. Over the whole work presides an engineer, who views and selects the stone, and points it out to the labourers. The strongest of them, provided with iron chisels, cleave the marble-shining rock by mere force, without any attempt at skill; and in excavating the shafts below ground they follow the direction of the shining stratum, without keeping to a straight line.

“In order to see in these dark windings, they fasten lamps to their foreheads, having their bodies painted, sometimes of one and sometimes of another colour, according to the nature of the rock; and as they cut the stone it falls in masses on the floor, the overseers urging them to the work with commands and blows. They are followed by little boys, who take away the fragments as they fall and carry them out into the open air. Those who are above thirty years of age are employed to pound pieces of the stone, of certain dimensions, with iron pestles in stone mortars, until reduced to the size of a lentil. It is then transferred to women and old men, who put it into mills arranged in a long row, two or three persons being employed at the same mill, and it is ground until reduced to a fine powder.

“No attention is paid to their persons, they have not even a piece of rag to cover themselves; and, so wretched is their condition, that every one who witnesses it deplores the excessive misery they endure. No rest, no intermission from toil,

are given either to the sick or maimed : neither the weakness of age nor women's infirmities are regarded ; all are driven to their work with the lash, till, at last, overcome with the intolerable weight of their afflictions, they die in the midst of their toil. So that these unhappy creatures always expect worse to come than what they endure at the present, and long for death as far preferable to life.

“ At length the masters take the stone thus ground to powder, and carry it away to undergo the final process. They spread it upon a broad table a little inclined ; and, pouring water upon it, rub the pulverised stone until all the earthy matter is separated, which, flowing away with the water, leaves the heavier particles behind on the board. This operation is often repeated, the stone being rubbed lightly with the hand : they then draw up the useless and earthy substance with fine sponges, gently applied, until the gold comes out quite pure. Other workmen then take it away by weight and measure, and putting it with a fixed proportion of lead, salt, a little tin, and barley bran, into earthen crucibles well closed with clay, leave it in a furnace for five successive days and nights ; after which it is suffered to cool. The crucibles are then opened, and nothing is found in them but the pure gold, a little diminished in quantity.

“ Such is the method of extracting the gold on the confines of Egypt, the result of so many and such great toils. Nature indeed, I think, teaches

that as gold is obtained with immense labour, so it is kept with difficulty, creating great anxiety, and attended in its use both with pleasure and grief."

GILDING.

In the early stages of society when gold first began to be used, idols, ornaments, or other objects, were made of the metal in its pure state, till being found too soft, and too easily worn away, an alloy was added to harden it, at the same time that it increased the bulk of the valuable material. As men advanced in experience, they found that the great ductility of gold enabled them to cover substances of all kinds with thin plates of the metal, giving all the effect of the richness and brilliancy they admired in solid gold ornaments; and the gilding of bronze, stone, silver, and wood, was speedily adopted.

The leaves so used were at first thick, but skill, resulting from experience, soon showed to what a degree of fineness they could be reduced; and we find that in Egypt substances of various kinds were overlaid with fine gold leaf, at the earliest periods of which the monuments remain, even in the time of the first Osirtasen. Some things still continued to be covered with thick leaf, but this was from choice, and not in consequence of any want of skill in the workmen; and in the early age of Thothmes III., they were already acquainted with all the various methods of applying gold; whether in leaf: or by inlay-

ing : or by beating it into other metals, previously tooled with devices to receive it.

That their knowledge of gilding* was coeval with the sojourn of the Israelites in the country is evident from the direct mention of it in the Bible, the ark of shittim wood made by Moses being overlaid with pure gold; and the casting of the metal is noticed on the same occasion † : nor can we doubt that the art was derived by the Jews from Egypt, or that the Egyptians had long before been acquainted with all those secrets of metallurgy, in which the specimens that remain prove them to have so eminently excelled.

The method devised by the Egyptians for beating out the leaf is unknown to us, but from the extreme fineness of some of that covering wooden and other ornaments, found at Thebes, we may conclude it was done nearly in the same way as formerly in Europe, between parchment; and perhaps some membrane taken from the intestines of animals was also employed by them.

In Europe the skin of an unborn calf was at first substituted for the parchment previously used, but in the beginning of the 17th century, the German gold-beaters having obtained a fine pellicle from the entrails of cattle ‡, found that they could beat

* Pliny mentions the lycophoron, a composition used for attaching gold to wood. Plin. xxxv. 6. "Sinopidis Ponticæ selibra, silis lucidi libris x., et melini Græciensis duabus mixtis tritisque una, per dies xii., leucophoron fit, hoc est, glutinum auri, cum inducitur ligno." Vide Theophrast. on stones. s. 46.

† Exod. xxv. 11, 12.

‡ This "pelle del budello," is mentioned by Lancellotti, who wrote in the year 1636.

gold much thinner than before, and this still continues to be used, and is known to us under the name of gold-beaters' skin. "About the year 1621," says Beckmann*, "Merunne excited general astonishment, when he showed that the Parisian gold-beaters could beat an ounce of gold into sixteen hundred leaves, which together covered a surface of one hundred and five square feet. But in 1711, when the pellicles discovered by the Germans came to be used in Paris, Réaumur found that an ounce of gold in the form of a cube, five and a quarter lines at most in length, breadth and thickness, and which covered only a surface of about 27 square lines, could be so extended by the gold-beaters, as to cover a surface of more than $1466\frac{1}{2}$ square feet. This extension, therefore, is nearly one half more than was possible about a century before."

Many gilt bronze vases, implements of various kinds, trinkets, statues, toys, and other objects, in metal and wood, have been discovered in the tombs of Thebes: the faces of mummies are frequently found overlaid with thick gold leaf; the painted cloth, the wooden coffin, were also profusely ornamented in this manner; and the whole body itself of the deceased was sometimes gilded, previous to its being enveloped in the bandages. Not only were small objects appertaining to the service of the gods, and connected with religion, or articles of luxury and show, in the temples, tombs, or private houses, so decorated; the sculptures on

* *Vide* Beckmann's valuable work, the History of Inventions, vol. iv. on Gilding.

the lofty walls of an adytum, the ornaments of a colossus, the doorways of the temples, and parts of numerous large monuments were likewise covered with gilding; of which the wooden heifer which served as a sepulchre to the body of king Mycerinus's daughter*, the sculptures at the temple of Kalabshi in Nubia, the statue of Minerva sent to Cyrene by Amasis †, and the Sphinx at the pyramids may be cited as instances.

Gold is supposed by many to have been used ‡ some time before silver, but the earliest authority, which is that of the Bible, mentions both these metals at the most remote age. The Egyptian sculptures represent silver as well as gold in the time of the third Thothmes, and silver rings have been found of the same epoch. § Abraham was said to have been “very rich, in cattle, in silver, and in gold ||;” and the use of silver as money ¶ is distinctly pointed out in the purchase of the field of Ephron, with its cave **, which Abraham bought for “four hundred shekels of silver, current money with the merchant.”

On this occasion, as usual, the price paid was settled by weight, a custom retained among the

* Herodot. ii. 129. 132.

† Herodot. ii. 182.

‡ Pliny attributes the art of working gold to Cadmus, vii. 56.

§ In the museum of Alnwick Castle is a silver ring of Amunoph III. Silver rings and ornaments are less common of every epoch than gold.

|| Gen. xiii. 2. But no mention is made of it as money, till after Abraham's return from Egypt, as Goguet has justly observed, tom. i. l. i. c. 1.

¶ The word silver, כסף, is commonly used in Hebrew to signify money, as *argent* in French.

** Gen. xxiii. 16, 17.

Egyptians, Hebrews*, and other eastern people, till a late period; and, indeed, until a government stamp, or some fixed value was given to money, this could be the only method of ascertaining the price paid, and of giving satisfaction to both parties. Thus Joseph's brethren, when they discovered the money returned into their sacks, brought it back to Egypt, observing that it was "in full weight;" and the paintings of Thebes frequently represent persons in the act of weighing† gold, on the purchase of articles in the market. This continued to be the custom when rings‡ of gold and silver were used in Egypt for money, and even to the time of the Ptolemies, who established a coinage of gold, silver, and copper, in the country.

These princes were not the first who introduced coined money into Egypt: it had been current there during the Persian occupation of the country; and Aryandes, who was governor of Egypt, under Cambyses and Darius, struck silver coins, in imitation of the gold Darics of his sovereign, for which act of presumption he was condemned to death.§

It is uncertain, as Pliny observes, when and where the art of stamping money originated. Herodotus attributes it to the Lydians, "the first people who coined gold and silver for their use||; Servius Tullius made¶ copper money, about the

* *Vide* Vol. II. p. 11. note.

† *Vide* woodcut, No. 78. p. 10. Vol. II.

‡ The Chinese and Japanese have a sort of ring money, or at least round coins with a hole in the centre, which are strung together. *Vide* Plin. xxxiii. 1.

§ Herodot. iv. 166.

|| Herodot. i. 93. *V. Jul. Poll. onom.* 9; vi. 83, Lucan. Phars. vi. 402.

¶ Plin. liii. 3.

year 560 B. C., and impressed upon it the figure of a sheep, "pecus," whence it obtained the name "pecunia"; silver was coined at Athens* 512 years before our era, and at Rome, five years before the first Punic war†, or 269 B. C.‡, and some suppose Phidon, King of Argos, to have invented weights and measures, and silver coinage§, in the year 895 B. C.||

Though stamped money was not used by the ancient Egyptians, we have evidence of weights and measures having been invented by them long before the Greeks existed as a nation; and it is probable that they were known even in Greece previous to the time of Phidon.

The balance used for weighing gold differed slightly from those of ordinary construction, and was probably more delicately formed. It was made, as usual, with an upright pole, rising from a broad base or stand, and a cross beam turning on a pin at its summit; but instead of strings suspending the scales, was an arm on either side, terminating in a hook, to which the gold was attached in small bags.¶

Large scales were generally a flat wooden board, with four ropes, attached to a ring at the extremity

* Aristot. Œconom. lib. ii.

† Plin. loc. cit.

‡ Livy however mentions the Denarius (a silver coin), much earlier. B. C. 337, (viii. 11.). Gold was not struck at Rome till B. C. 207.

§ "In Ægina." Strabo lib. viii. p. 259; on the authority of Ephorus.

|| Pausanias says, gold and silver money was unknown in the age of Polydorus, king of Sparta, who died B. C. 724, (lib. iii. c. 12.). That it was not in use at the time of the Trojan war, is shown by Homer. *Vide* Il. vii. 473., their mode of buying wine.

¶ *Vide* woodcut, No. 374.

of the beam; and those of smaller size were of bronze, one of which I found in Upper Egypt, one and a half inch in diameter, pierced near the edge in three places, for the strings.

The principle of the common balance was simple and ingenious; the beam passed through a ring suspended from a horizontal rod, immediately above and parallel to it, and when equally balanced, the ring, which was large enough to allow the beam to play freely, showed when the scales were equally poised, and had the additional effect of preventing the beam tilting, when the goods were taken out of one, and the weights suffered to remain in the other.* To the lower part of the ring a small plummet was fixed, and this being touched by the hand, and found to hang freely, indicated, without the necessity of looking at the beam, that the weight was just. The figure of a baboon, sometimes placed upon the top, was not connected in any way with the balance, but was the emblem of the god Thoth, the regulator of measures, of time, and of writing, in his character of the moon; but I do not find any notion of the goddess of Justice being connected with the balance, except in the judgment scenes of the dead.

The pair of scales was the ordinary and, apparently, only kind of balance used by the Egyptians; no instance of the steel-yard being met with in the paintings of Thebes, or of Beni Hassan: and I conclude that the introduction of the latter is confined to a Roman era.

* *Vide* woodcut, No. 78. Vol. II. p. 10.

The Egyptians had another kind of balance, in which the equalisation of the opposite weights was ascertained by the plummet; and this last, whose invention has been ascribed by Pliny to Dædalus, is shown to have been known and applied in Egypt at least as early as the time of Osirtasen, the contemporary of Joseph.

COPPER, BRONZE, IRON.

For ordinary purposes copper was most commonly used; arms, vases, statues, instruments, and implements of every kind, articles of furniture, and numerous other objects, were made of this metal hardened by an alloy of tin, and even chisels for cutting stone, as well as carpenters' tools, and knives, were of bronze. It is generally allowed that copper or bronze, was known long before iron*, and though Tubal-Cain is said to have been "the instructor of every artificer in brass and iron†," no direct mention is made of iron arms ‡ or tools § till after the Exodus; and some are even inclined to doubt the *barzel* of the Hebrews being really that metal.

According to the Arundelian marbles, iron was known one hundred and eighty-eight years before the Trojan war, about 1370 years B. C., but Hesiod, Plutarch ||, and others, limit its discovery to a much

* Thus Lucretius, "Sed prius æris erat quam ferri cognitus usus," lib. v. 1292.

† Gen. iv. 22.

§ Deut. xxvii. 5.

‡ Numb. xxxv. 16.

|| Paus. Grec. lib. iii. c. 3. Lacon.

later period, after the capture of Troy. Homer, however, distinctly mentions its use* ; and that there is little reason to doubt the *sideros* of the poet being iron, is shown by the simile†, derived from the quenching of iron in water, which he applies to the hissing noise produced on piercing the eye of Polyphemus with the pointed stake, thus rendered by Pope :

“ And as when armourers temper in the ford
The keen-edg'd poleaxe, or the shining sword,
The red hot metal hisses in the lake,
Thus in his eyeball hiss'd the plunging stake.”

Among the earliest authorities for the use of iron, may be cited the bedstead of Og the king of Bashan‡, who is said to have lived about the year 1450, before our era ; and Thrasyllus§ agrees with the Arundelian marbles in supposing iron to have been known before the Trojan war, or indeed one hundred and fourteen years previous to the foundation of Troy||, 1537 before our era. On the other hand it has been argued, that offerings of iron in the temples of Greece distinctly showed the value attached to that metal, as well as its limited use for ordinary purposes, and rings of iron were worn by the ancients, some of which have been found in the tombs of Egypt. But these last are of very late date, long after iron was commonly used, and I possess

* Hom. Il. xxiii. 261, &c.

† Hom. Od. ix. 391.

“ Ως ὅσ' ἀνὴρ χαλκεὺς πέλεκυν μέγαν, ἢ σκεπαρνον,
Ἐν ὕδατι ψυχρῷ βαπτει μέγαρα ἰαχοντα,
Φαρμασσῶν (το γὰρ αὐτὲ σιδήρου τε κρατος ἐστιν)
Ὡς τοῦ σιζ' ὀφθαλμὸς ελαίνειν περι μοχλῶ.”

‡ Deut. iii. 11.

§ Clem. Alex. Strom. i.

|| Founded B. C. 1423.

one of them, engraved with the figure of Harpocrates, which is undoubtedly of a Ptolemaic or Roman era, and which only claims some degree of interest, from its bearing a device noticed by Pliny as becoming fashionable at Rome in his time.*

That iron, as early as the days of Lycurgus, was held in little estimation, is shown by that legislator forbidding the introduction of gold and silver in his republic, and restricting the Spartans to the use of iron; and some notion may be formed of its value at that time by the assertion of Plutarch †, that it required a cart drawn by two oxen to carry the small sum of ten minæ.

The Jews appear to have been acquainted with two kinds of iron, previous to the Babylonish captivity, the *barzel* which was in common use, and the northern iron, as well as steel ‡: even as early as the days of Job § iron was known; and Moses mentions an iron furnace. ||

One of the arguments against the early use of iron ¶ is the difficulty of smelting the ore, and of reducing it to a malleable state; and the various processes required to discover all its most useful properties, render it less likely to be employed than a more ductile metal. Gold, silver, and

* Plin. xxxiii. 3. "Jam vero Harpocratem, statuasque Ægyptiorum numinum, in digitis viri quoque portare incipiunt."

† Plut. in Lycurgo.

‡ Jerem. xv. 12.

§ Job, xxviii. 2. "Iron is taken out of the earth, and brass is molten out of the stone."

|| Deut. iv. 20.

¶ Pliny says the fabulous Cyclopes were the inventors of the iron-smith's forge, and the Idæi Dactyli of Crete, according to Hesiod, the first to introduce the use of iron. Plin. vii. 56.

copper, were easily fused, and a single process sufficed to make them available for every purpose; the principal art required for fabricating implements of copper depending on the proper proportions and qualities of alloy introduced.

“Those three metals,” as Robinson has observed *, “are found in their perfect state in the clefts of rocks, in the sides of mountains, or the channels of rivers. They were accordingly first known, and first applied to use. But iron, the most serviceable of all, and to which man is most indebted †, is never discovered in its perfect form; its gross and stubborn ore must feel twice the force of fire, and go through two laborious processes, before it becomes fit for use. Man was long acquainted with the other metals before he acquired the art of fabricating iron, or attained such ingenuity as to perfect an invention, to which he is indebted for those instruments wherewith he subdues the earth and commands all its inhabitants.”

In the infancy of the arts and sciences, the difficulty of working iron might long withhold the secret of its superiority over copper and bronze; but it cannot reasonably be supposed that a nation so advanced, and so eminently skilled in the art of working metals as the Egyptians, should have remained ignorant of its use, even if we had no evidence of its having been known to the Greeks and other people; and the constant employment

* Robertson, America, book iv. p. 125.

† *Vide* Herodot. i. 68.

of bronze arms and implements is not a sufficient argument against their knowledge of iron, since we find the Greeks and Romans made the same things of bronze long after the period when iron was universally known.

Another argument, to show that bronze was used in Greece before iron, is derived from the word *χαλκευς* (smith) in Greek, having the signification of “coppersmith,” whether applied to a worker of copper or iron.* In Latin, on the contrary, *ferrum* †, “an iron,” is the word frequently applied to a sword; and some have hence argued the use of iron for those weapons, at the earliest period, among the Romans. Yet we find that their swords were constantly made of bronze, as well as their defensive armour. The Etruscans almost invariably used iron for swords, daggers, spear heads, and other offensive weapons, and confined bronze to defensive armour; a much more reasonable custom, inasmuch as the iron is more capable of perforating the softer metal: and if the early Romans did make their swords of iron, it is probable they adopted the custom from their Italian neighbours.

After examining numerous authorities, some of which assert that nations of antiquity were confined to the use of copper and bronze, while others affirm that iron was known at a most remote epoch, we

* Hom. Od. ix. 391. Herodot. i. 68.

† Those who derive *barzel* from “bers” the Chaldee and Syriac word signifying “to perforate,” might perhaps suppose *ferrum* “iron” taken from “*ferire*” “to strike.”

may still remain in uncertainty respecting the question. But to conclude, from the want of iron instruments, or arms, bearing the names of early monarchs of a Pharaonic age, that bronze was alone used, is neither just nor satisfactory; since the decomposition of that metal, especially when buried for ages in the nitrous soil of Egypt, is so speedy as to preclude the possibility of its preservation. Until we know in what manner, and for what sort of stone, the Egyptians employed bronze tools, the discovery of them affords no additional light, nor even argument; since, as I before observed, the Greeks and Romans continued to make bronze instruments of various kinds long after iron was known to them*; and the general use of bronze may have arisen from the greater facility of working the metal, remelting and casting it afresh, as well as from its being easier to find than iron: for though this last, in its various combinations, is more universally diffused over the face of the globe†, it does not always occur in a state of which the miner can easily avail himself, and I only know of one mine in Egypt worked by the ancients. It lies in the eastern desert, between the Nile and the Red Sea, at a place called Hammámi, and was discovered by my friend Mr. Burton, who visited it in 1822, and found the metal to be in the form of specular and red iron ore.

In Ethiopia iron was much more abundant than

* *Vide* Beckmann's History of Inventions, on the early use of steel, vol. iv.

† As Pliny observes, "Metallorum omnium vena ferri largissima est," xxxiv. c. 14.

in Egypt, and Herodotus may be correct in stating that copper was there a rare metal* ; though we are not disposed to believe his assertion of prisoners in that country being bound with golden fetters.

In the sepulchres of Thebes, I have had occasion to remark butchers represented sharpening their knives on a round bar of metal attached to their apron ; and the blue colour of the blades and the distinction maintained between the bronze and steel weapons in the tomb of Remeses III., one being painted red and the other blue, leave little doubt that the Egyptians of an early Pharaonic age were acquainted with the use of iron.

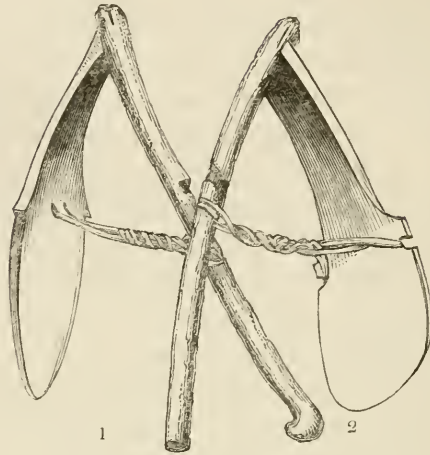
Many implements of husbandry, the plough, the hoe, and the fork, were frequently of wood, as simple in their form as in the materials of which they were made ; the ploughshare was probably sometimes sheathed with, or the blade of a hoe formed of, metal ; but it is uncertain whether iron was employed for this purpose, or if, like the tools of earlier days mentioned by Hesiod †, they were confined to bronze.

Several wooden hoes have been found in Egypt, and are now preserved in the museums of Europe : the blades and handles are simply inserted the one into the other, and bound together in the middle with a twisted rope ; and their general appearance, according exactly with those represented in the agricultural scenes of the tombs, shows them to

* Herodot. iii. 23.

† Hesiod, *Oper. et Dies.* v. 151. "Men tilled the ground with bronze, iron not being as yet known."

have been the kind most commonly used*, even to the latest times.



No. 377.

Wooden hoes.

Berlin Museum.

It is true that the Berlin Museum has the head of a small hoe, of iron, but of what date is uncertain ; and no inference can be drawn from it, especially as its form differs essentially from those of the paintings.

I have already stated that the speedy decomposition of iron would be sufficient to prevent our finding implements of that metal of an early period, and that the greater opportunities of obtaining copper ore, added to the facility of working it, were a reason for preferring the latter whenever it answered the purpose instead of iron. I shall presently endeavour to show how bronze tools might be made available for sculpturing and engraving

* *Vide* wood-cut, No. 93. Vol. II. p. 99.

stone ; though there is great difficulty in accounting for their use in mines and quarries, where the stone was frequently hewn with them ; as Agatharcides * informs us in his account of the gold mines, and as I have reason to believe was done in cutting the limestone rock of the tombs at Thebes ; having found a bronze chisel amidst the chippings of the stone, where it had been accidentally left by the workmen.

The hieroglyphics on obelisks and other granitic monuments are sculptured with a minuteness and finish which, even if they used steel as highly tempered as our own, cannot fail to surprise the beholder, and to elicit from him the confession that our modern sculptors are unable to vie with them in this branch of art.

Some are cut to the depth of more than two inches, the edges and all the most minute parts of the intaglio presenting the same sharpness and accuracy ; and I have seen the figure of a king in high relief, reposing on the lid of a granite coffin, which was raised to the height of nine inches above the level of the surface. What can be said, if we deny to men who executed such works as these the aid of steel, and confine them to bronze implements ? Then, indeed, we exalt their skill in metallurgy far beyond our own, and indirectly confess that they had devised a method of sculpturing stone of which we are ignorant. In vain should we attempt to render copper, by the addition of certain

* He says *λατομίεις χαλκαι*, “ *wedges of bronze are found,*” and infers that they were not then acquainted with iron.

alloys, sufficiently hard to sculpture granite, basalt, and stones of similar quality. No one who has tried to perforate or cut a block of Egyptian granite will scruple to acknowledge that our best steel tools are turned in a very short time *, and require to be retempered: and the labour experienced by the French engineers, who removed the obelisk of Luxor from Thebes, in cutting a space less than two feet deep, along the face of its partially decomposed pedestal, suffices to show that, even with our excellent modern implements, we find considerable difficulty in doing what to the Egyptians would have been one of the least arduous tasks.

Some have imagined that the granite being somewhat softer, at the time it is taken from the quarry, was more easily sculptured when the Egyptians put up the obelisks than at present, and thus satisfy themselves that the labour was considerably less; but this argument is entirely overthrown by the fact of other sculptures having been fre-

* I am indebted to Sir R. Westmacott for the following observations on this subject:—"Granite, as most hard materials of that nature, being generally worked with a pick of various strength, until reduced to a surface, the duration of the tool depends on its form; the more obtuse the longer it will work, remaining longer cold. In *jumping* (as it is termed) holes for the admission of bolts into fractured parts of granite, the tools are usually of strong tempered iron, about three quarters of an inch in diameter, which resist the heat sometimes half an hour, seldom longer. One man holds, and turns, or moves the tool, whilst the other strikes it with a heavy hammer, the hole being supplied with water. Tools of less diameter are formed of steel, but these will not resist more than 300 strokes, when the points fly, and require to be fresh battered. Sculptors generally use tools formed of blistered steel, or of cast steel, the finer sort, highly tempered, by immersing them when heated to a proper degree, into cold water. Carpenters' tools again, and saws, are of the best cast steel, and are tempered in oil."

quently added, one hundred and one hundred and fifty years after the erection of the monument, as in the lateral lines of hieroglyphics on obelisks; which are sometimes found more deeply cut and more beautifully executed than those previously sculptured. Others have suggested that the stone being stunned, as it is termed, in those places where it was to be sculptured, yielded more readily to the blow of the chisel; but neither is this sufficient to produce the effect proposed, nor an advantage exclusively enjoyed by the ancient Egyptians.

Thus, then, we find that the facility they possessed of sculpturing granite is neither attributable to any process for bruising the crystals, nor to its softer state on coming from the quarry: we must therefore account for it in the skill they had acquired, and endeavour to discover the means they employed with such wonderful success.

The hieroglyphics on the obelisks are rather engraved than sculptured; and, judging from the minute manner in which they are executed, we may suppose they adopted the same process as engravers, and even in some instances employed the wheel and drill. That they were acquainted with the use of emery powder* is not at all improbable, since, being found in the islands of the Archipelago, it was within their reach; and if this be admitted, we can account for the admirable

* It is probable that this powder was used in sawing granite, a process not uncommonly resorted to by the Egyptians, and the presence of oxyde of copper in the part where the rock was cut, which surprised De Rozière and others, may thus be more readily accounted for.

finish and sharpness of the hieroglyphics on granitic and basaltic monuments, and explain the reason of their preferring tools of bronze to those of harder and more compact steel: for it is evident the powder enters more readily into the former, and its action upon the stone is increased in proportion to the quantity retained by the point of the chisel; whence we now prefer tools of soft iron to hard steel for the same purpose.

As far as the sculpture or engraving of hieroglyphics, this explanation might suffice for their preference of bronze implements; but when we find tools used in quarries made of the same metal, we are unable to account for it, and readily express our surprise how they could render a bronze chisel capable of hewing stone. We know of no means of tempering copper, under any form or united with any alloys, for such a purpose. The addition of tin or other metals to harden it, if exceeding certain proportions, renders it too brittle for use; and that such is not the case is evident from the chisel I found at Thebes, which, though it contains an alloy apparently of tin, is far from being brittle, and is easily turned by striking it against the very stone it was once used to cut. Had it depended on the proportions of its alloys, it ought still to possess the same power as formerly, and its point should act in the same manner upon the stone; for, what is very remarkable, the summit was turned over by the blows it had received from the mallet, while the point was intact, as if it had recently left the hands of the smith who made it.

What, then, gave it the power of cutting the stone, and of resisting in this manner? for unless some medium was employed, as a sheath of steel or other protection to its point, we must confess that the Egyptians appear to have possessed certain secrets in hardening or tempering bronze, with which we are totally unacquainted. The size of this chisel is $9\frac{1}{4}$ inches in length; its diameter at the summit is 1 inch, and the point is $\frac{1}{10}$ ths of an inch in its greatest width: its weight is 1 lb. 12 ozs., and in general form it resembles those now used by the masons of modern Europe.

The skill of the Egyptians in compounding metals is abundantly proved by the vases, mirrors, arms, and implements of bronze, discovered at Thebes, and other parts of Egypt; and the numerous methods* they adopted for varying the composition of bronze, by a judicious admixture of alloys†, are shown in the many qualities of the metal. They had even the secret of giving to bronze or brass‡ blades a certain degree of elasticity; as may be seen in the dagger of the Berlin Museum already noticed§, which probably depended on the mode of hammering the metal, and the just proportions of peculiar alloys.

Another remarkable feature in their bronze is the

* Greek bronzes of the earliest and latest times have all the same proportion of alloy. A little silver sometimes occurs, but this is supposed to have entered accidentally with the tin.

† In almost all the bronzes hitherto analysed, the proportion is about twelve parts of tin in a hundred.

‡ There is no direct proof of brass being known to the ancients, and no analysis has yet shown the presence of zinc. I have a ring apparently of brass, but it is possible that gold is there used instead of zinc.

§ In Vol. I. p. 320.

resistance it offers to the effect of the atmosphere ; some continuing smooth and bright, though buried for ages, and since exposed to the damp of European climates, and some presenting the appearance of *previous* oxidation purposely induced.*

It is not known at what period they began to cast statues and other objects in bronze, or if the use of beaten copper long preceded the art of casting in that metal. No light is thrown on this point by the paintings of Beni Hassan, and Thebes, or by the tombs in the vicinity of the pyramids, which, from their early date, would be an authority highly satisfactory and important. It is, indeed, singular that at no period do we find any representation, among the many subjects connected with the trades, arts, and occupations of the Egyptians, which relate to this process ; even in tombs or on monuments made at a time when we know, from positive evidence, that they were acquainted with it :—another convincing proof that no argument against the existence of a custom ought to be derived from the circumstance of its not being indicated on the monuments.

Many bronze statues have been found, evidently, from their style, of a very early period ; but in the absence of a king's name, it is impossible to fix their exact date, though I feel persuaded that the art of casting metal was known before the commencement of the 18th dynasty, and it is probable

* I suppose the metal was then coated with some substance which filled the pores. This is done at the present day.

that many specimens exist of the age of Osirtasen and Thothmes.

Pausanias*, in speaking of the art of casting metal, observes that the people of Pheneum in Arcadia, pretended that Ulysses dedicated a statue of bronze to Neptune Hippius, in order that he might recover the horses he had lost, through the intervention of the Deity; "and indeed," he adds, "they showed me an inscription on the pedestal of the statue offering a reward to any person who should find and take care of the animals; but I do not give credit to the whole of their statement, and no one can persuade me that Ulysses erected a *bronze* statue to Neptune. The art of fusing metal and casting it in a mould was not yet known; a statue was made in those times like a dress, successively, and in pieces, not at one time, or in a single mass, as I have already shown† in speaking of the statue of Jupiter, surnamed the Most High. In fact, the first who cast statues were Rhœcus the son of Philæus, and Theodorus‡ the son of Telecles, both natives of Samos; the latter the same who engraved§ the beautiful emerald in the ring of Polycrates."

The Samians were noted at an early period for their skill in this branch of art; and before the foundation of Cyrene, or B. C. 630., they made a bronze

* Paus. Grec. lib. viii. c. 14. Arcad.

† Lib. iii.

‡ Pliny (vii. 56.) says "Theodorus invented the rule, the level, the turner's instrument, and the key."

§ Herodot. iii. 41. Plin. xxxvii. 1.

vase, ornamented with griffins, supported on three colossal figures of the same metal, for the temple of Juno.* The art was also known at a very remote period in Italy. Among the Etruscans bronze statues were common before the foundation of Rome; and Romulus is said to have placed a statue of himself, crowned by Victory, in a four-horsed car of bronze, which had been captured at the taking of Camerium.†

Pliny attributes the discovery of gold and the secret of smelting it to Cadmus‡, who is supposed to have gone to Greece 1493 years before our era; but this, like most of the inventions mentioned by him, was long before known to the Egyptians; and we may apply the same remark to the supposed discovery of Rhœcus and Theodorus.

It is uncertain whether the Egyptians possessed the art of damaskeening or inlaying iron with gold, since, owing to the speedy decomposition of that metal, nothing made of iron has been preserved of a remote era; but we may conclude, from their inlaying bronze in this manner, that it was not unknown to them.

Some have supposed that Glaucus of Chios was the inventor of this art, and that the stand of his silver vase presented to the temple of Delphi by Alyattes king of Lydia, which, according to Herodotus§, was the most beautiful of all the offerings there, was made of iron inlaid with gold. But the

* Herodot. iv. 152.

† Dionys. Hal. Ant. Rom. l. ii. Plut. in Rom.

‡ Plin. vii. 56.

§ Herod. i. 25.

description given of it by Pausanias * will not sanction this opinion, as he expressly states “ it consisted of several plates of iron, adjusted one over the other in the form of steps, the last, that is, those of the summit, curving a little outwards. It had the form of a tower, large at the base and decreasing upwards, and the pieces of which it was composed were not fastened either with nails or pins, but simply soldered together.”

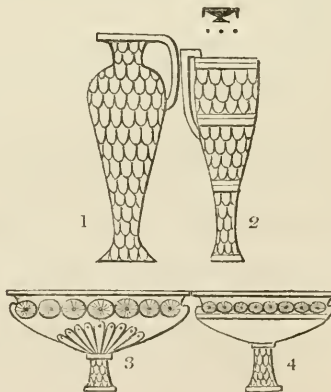
The Greeks, however, were not ignorant of damaskeening, and though the stand of Alyattes' vase was not so inlaid, it is certain they possessed the art, and ornamented goblets and other objects in that manner. The process was very simple : the iron was carved with various devices, and the narrow lines thus hollowed out were filled with gold, or with silver, which in some instances were probably soldered, and in others simply beaten in with the hammer, the surface being afterwards filed and polished.

The term damaskeening, though generally confined to iron or steel so inlaid (owing to its having been borrowed from the specimens of this work in the modern sword blades of Damascus), may with equal propriety be extended to any metal ; and numerous instances of bronze inlaid with gold and silver occur in statues, scarabæi, and various ornamental objects discovered at Thebes and other places. Hard stones were also engraved in the same manner, and the intaglio filled with gold or silver beaten into it ;

* Paus. lib. x. 16. Phoc.

a process commonly adopted at the present day by the Turks, and other Eastern people in their *hookahs* or *nârgilehs*, and in the stone ornaments of their amber mouth-pieces; but at what time this was first done it is needless to conjecture.

The art of soldering metals had long been practised in Egypt before the time of Glaucus; and it is curious to find gold and bronze vases, made apparently in the same manner as the stand of that mentioned by Pausanias, represented at Thebes in sculptures executed during the reign of the third Thothmes, 1490 years before our era, and consequently many centuries previous to the Chian artist. They are shown to have been composed of plates of metal, imbricated, or overlapping each other, as Pausanias describes, and sometimes bound at intervals with bands of metal. Instances occur in the same sculptures of gold vases with



No. 378. — Vases of the time of Thothmes III., imbricated, or ornamented with plates of metal. *Thebes.*

stands formed of similar plates ; which are interesting also from the elegance of their forms.

In coarser work, or in those parts which were out of sight, the Egyptians soldered with lead, but we are ignorant of the time when it was first used for that purpose, though it could only have been after the discovery of tin ; for, as Pliny* justly observes, “ lead can only be united by the addition of tin, nor is this last efficient without the application of oil.”† The oldest specimen of metal soldered with lead, with which I am acquainted, is the sistrum of Mr. Burton : its date, however, is uncertain ; and though, from the style of the figures engraved upon it, we may venture to ascribe it to a Pharaonic age, the exact period when it was made cannot be fixed.

In early ages, before men had acquired the art of smelting ore, and of making arms and implements of metal, stones of various kinds were used, and the chasseur was contented with the pointed flint with which nature had provided him. The only effort of his ingenuity was to fix it in some kind of handle, or at the extremity of a reed, in order to make the knife, or the arrow ; and we still witness the skill which some savage people of the present day display in constructing those rude weapons.

The Egyptians, at a remote period, before civilisation dawned upon them, probably adopted the same ; since we find that stone-tipped arrows

* Plin. xxxiv. 16.

† Or resin, which we now use.

continued to be occasionally used for hunting, even after they had improved every species of weapon, and after the arts had arrived at the state of perfection in which they appear subsequently to the accession of the 18th dynasty. Long habit had reconciled them to the original reed shaft, with its head of flint, and even to arrows made with a point of hard wood inserted into them, which were also the remnant of a primæval custom.

Those, however, who preferred them of a stronger kind, adopted arrows of wood tipped with bronze heads ; and these were considered more serviceable, and were almost invariably used in war. But when this improvement took place in the construction of their arms it is impossible to conjecture, being coeval with the early stages of a civilisation, which is concealed by the veil of ages, and dates long before the period of which any monuments remain.

It is, indeed, a remarkable fact that the first glimpse we obtain of the history and manners of the Egyptians shows us a nation already advanced in all the arts of civilised life, and the same customs and inventions that prevailed in the Augustan era of that people, after the accession of the 18th dynasty, are found in the remote age of Osirtasen, the contemporary of Joseph ; nor can there be any doubt that they were in the same civilised state when Abraham visited the country.

I have observed that the fact of private citizens going unarmed, and of the soldier laying aside his sword and other weapons when not on service, may

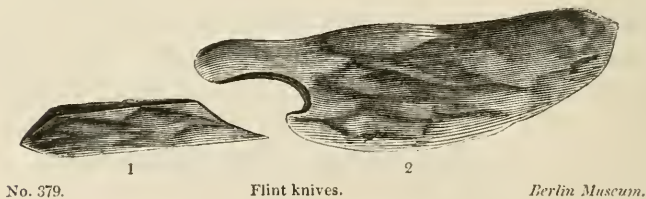
be considered a strong proof of refinement, and of their advancement in the habits of social life. The same custom was already adopted at the time to which I allude; and many circumstances unite in proclaiming the civilisation of Egypt, at least as early as the 18th century before our era. How far does this throw us back into the infancy of the world! at least, of the world peopled by the descendants of Noah — and, when we recollect that the pyramids of Memphis were erected within three hundred years after the era assigned to the deluge; and that the tombs of Beni Hassan were hewn and painted with subjects describing the arts and manners of a highly civilised people, about six hundred years after that event; it may occur that the distance between the deluge and the construction of those pyramids and tombs is not greater than from the present day to the reign of our own Elizabeth, and Henry III.

The same prejudice in favour of an ancient and primitive custom retained the use of stone knives for certain purposes connected with religion among the Egyptians; and Herodotus tells us it was usual to make an incision in the body of the deceased, when brought to be embalmed, with an Ethiopic stone.* This name, though very indefinite, seems here, as in all instances where the stone is said to be applied to a similar purpose, to signify flint; and this conjecture is not only confirmed by probability, and by the frequent use of it by many people as a cutting instrument, but by

* Herodot. ii. 86.

the fact of our finding several knives of that stone in the tombs of Thebes. In other cases, the Ethiopic stone, mentioned by Herodotus, is evidently granite, so called from being common in Ethiopia; and it is possible that the flint received that name from its black colour.

The knives found in the excavations and tombs, many of which are preserved in our European museums, are generally of two kinds; one broad and flat like the blade of a knife, the other narrow and pointed at the summit, several of which are preserved in the Berlin museum. These last * are supposed to have been used for making the incision in the side of the body, for the purpose of removing the intestines, preparatory to the embalming process already mentioned; and, considering how strongly men's minds are prepossessed in favour of early habits connected with religion, and how scrupulous the Egyptians were, above all people, in permitting the introduction of new customs in matters relating to the gods, we are not surprised that they should have retained the use of these primitive instruments in a ceremony of so sacred a nature as the embalming of the dead.



No. 379.

Flint knives.

Berlin Museum.

* *Vide* wood-cut 379. fig. 1.



Vignette I. — Tomb at Saqqara, arched with stone, of the time of Psamaticus II. whose name occurs on the roof to the left, and other places.

CHAP. X.

Style of Art among the Egyptians. — Names of early Kings : Cheops, or Suphis, and others. — Some of the Subjects of the Sculptures in the Temples. — Colours. — Relief and Intaglio. — Painting. — Brick Pyramids. — The Arch. — Quarries. — Large Blocks of Stone moved. — Bellows, Siphons, Inventions. — Dresses. — Wigs. — Women's Dresses and Jewellery. — Eyes painted. — Baths. — Medical Men. — Exvotos.

STYLE OF ART AMONG THE EGYPTIANS.

THE same veneration for ancient usage and the stern regulations of the priesthood, which forbade

any innovation in the form of the human figure, particularly in subjects connected with religion, fettered the genius of the Egyptian artists, and prevented its developement. The same formal outline, the same attitudes and postures of the body, the same conventional mode of representing the different parts were adhered to, at the latest as at the earliest periods; no improvements, resulting from experience and observation, were admitted in the mode of drawing the figure, no attempt was made to copy nature, or to give proper action to the limbs. Certain rules, certain models, had been established by law, and the faulty conceptions of early times were copied and perpetuated by every successive artist. For, as Pluto and Synesius inform us, sculptors were not suffered to attempt any thing contrary to the regulations laid down regarding the figures of the gods; they were forbidden to introduce any change, or to invent new subjects and habits; and thus the art, and the rules which bound it, always remained the same.

Egyptian bas-relief appears to have been, in its origin, a mere copy of painting, its predecessor. The first attempt to represent the figures of gods, sacred emblems, and other subjects, consisted in painting simple outlines of them on a flat surface, the details being afterwards put in with colour; but in process of time these forms were traced on stone with a tool, and the intermediate space between the various figures being afterwards cut away, the once level surface assumed the appearance of a bas-relief. It was, in fact, a pic-

torial representation on stone, which is evidently the character of all the bas-reliefs on Egyptian monuments; and which readily accounts for the imperfect arrangement of their figures.

Deficient in conception, and above all in a proper knowledge of grouping, they were unable to form those combinations which give true expression; every picture was made up of isolated parts, put together according to some general notions, but without harmony, or preconceived effect. The human face, the whole body, and every thing they introduced, were composed in the same manner, of separate members placed together one by one, according to their relative situations: the eye, the nose, and other features composed a face; but the expression of feelings and passions was entirely wanting; and the countenance of the king, whether charging an enemy's phalanx in the heat of battle, or peaceably offering incense in a sombre temple, presented the same outline and the same inanimate look. The peculiarity of the front view of an eye, introduced in a profile, is thus accounted for: it was the ordinary representation of that feature added to a profile, and no allowance was made for any change in the position of the head.

It was the same with drapery: the figure was first drawn, and the drapery then added, not as part of the whole, but as an accessory; they had no general conception, no previous idea of the effect required to distinguish the warrior or the priest, beyond the impressions received from costume, or from the subject of which they formed a part; and the

same figure was dressed according to the character it was intended to perform. Every portion of a picture was conceived by itself, and inserted as it was wanted to complete the scene; and when the walls of the building, where a subject was to be drawn, had been accurately ruled with squares, the figures were introduced, and fitted to this mechanical arrangement. The members were appended to the body, and these squares regulated their form and distribution, in whatever posture they might be placed.

Thus then, as Diodorus observes * of Egyptian statues, various portions of the same figure might be made by several artists in different places, the style and attitude having been previously agreed upon, which when brought together, would necessarily agree, and form a complete whole.

As long as this conventional system continued, no great change could take place, beyond a slight variation in the proportions, which at one period became more elongated, particularly in the reign of the second Remeses; but still the general form and character of the figures continued the same, which led to the remark of Plato, "that the pictures and statues made ten thousand years ago are in no one particular better or worse than what they now make." † And that they were still bound by the same regulations, which prohibited all change in these matters, even to the latest times, is evident

* Diod. i. 98. This, I believe, never to have been done by the Egyptians, because their statues were all of one piece. He mentions a Greek statue of Apollo of Samos, made in two pieces, by Telecles and Theodorus, at Samos and Ephesus.

† Plato, 2d Book of Laws.

from the sculptures of the monuments erected when Egypt had long been a Roman province. All was still Egyptian, though of a bad style; and if they then attempted to finish the details with more precision, it was only substituting ornament for simplicity; and this love of minuteness plainly indicated a deficiency of taste, the natural consequence of the decadence of art.

In the composition of modern paintings three objects are required, one main action: one point of view: and one instant of time: and the proportions and harmony of the parts are regulated by perspective; but in Egyptian sculpture these essentials were disregarded: every thing was sacrificed to the principal figure; its colossal dimensions pointed it out as a centre to which all the rest was a mere accessory; and, if any other was made equally conspicuous, or of equal size, it was still in a subordinate station, and only intended to illustrate the scene connected with the hero of the piece.

In the paintings of the tombs greater licence was allowed in the representation of subjects relating to private life, the trades, or the manners and occupations of the people; and some indication of perspective in the position of the figures may occasionally be observed: but the attempt was imperfect, and, probably, to an Egyptian eye, unpleasing; for such is the force of habit, that even where nature is copied, a conventional style is sometimes preferred to a more accurate representation.

In the battle scenes on the temples of Thebes,

some of the figures representing the monarch pursuing the flying enemy, despatching a hostile chief with his sword, and drawing his bow, as his horses carry his car over the prostrate bodies of the slain, are drawn with much spirit, and the position of the arms gives a perfect idea of the action which the artist intended to portray; still, the same imperfections of style, and want of truth are observed; there is action, but no sentiment, expression of the passions, or life in the features; it is a figure ready formed, and mechanically *varied* into movement; and whatever position it is made to assume, the point of view is the same: the same profile of the human body with the anomaly of the shoulders seen in front, and attached as a separate though component part of the whole figure.

Limited to such a conventional mode of drawing, it was in vain for the Egyptian artists to aspire to that degree of excellence attained by the Greeks, unfettered by prejudice, and allowed to imitate the beauties of nature; much less could they arrive at that degree of feeling which formed taste, and called forth the poetry of the mind: their imaginative powers were checked; they were forced to remain contented with the models already before them; and no new conceptions were elicited, or required.

In the representation of animals, they appear not to have been restricted to the same rigid style; but genius once cramped can scarcely be expected to make any great effort to rise, or to succeed in the attempt; and the same union of parts

into a whole, the same preference for profile are observable in these as in the human figure. Seldom did they attempt to draw the face in front, either of men or animals; and when this was done, it fell far short of the profile, and was composed of the same juxtaposition of parts. It must, however, be allowed, that in general the character and form of animals, were admirably portrayed; the parts were put together with greater truth; and the same licence was not resorted to as in the shoulders and other portions of the human body. Nor will I deny that great life and animation are given to the antelope, and many wild beasts, in the hunting scenes of the Theban tombs, or refuse my assent to the observation of Madame de Staël*, “*Les sculpteurs Egyptiens saisissaient avec bien plus de génie la figure des animaux que celle des hommes.*”

The mode of representing men and animals in profile is primitive, and characteristic of the commencement of art: the first attempts made by an uncivilised people are confined to it; and until the genius of artists bursts forth, this style continues to hold its ground. From its simplicity it is readily understood; the most inexperienced perceive the object intended to be represented; and no effort is required to comprehend it. Hence it is that, though few combinations can be made under such restrictions, those few are perfectly intelligible, the eye being aware of the resemblance to the simple exterior; and the modern uninstructed peasant of

* *Corinne*, vol. i. p. 127.

Egypt who is immediately struck with and understands the paintings of the Theban tombs, if shown an European drawing, is seldom able to distinguish men from animals; and no argument will induce him to tolerate foreshortening, the omission of those parts of the body concealed from his view by the perspective of the picture, or the introduction of shadows, particularly on the human flesh.

Bas relief may be considered the earliest style of sculpture. It originated in those pictorial representations, which were the primeval records of a people anxious to commemorate their victories, the accession or the virtues of a king, and other events connected with their history. These were the first purposes to which the imitative powers of the mind were applied; but the progress was slow, and the infant art (if it may be so called) passed through several stages, ere it had the power of portraying real occurrences, and imitating living scenes. The rude drawing of a spear, a sword, a bow, or other weapon, supplied at first the place of the action itself, of which it was a species of hieroglyphic; but in process of time, the outlines of a warrior and a prostrate foe were attempted, and the valour of the prince who had led them to victory was recorded by this simple group.

As their skill increased, the mere allegorical representation was extended to that of a descriptive kind, and some resemblance of the hero's person was attempted; his car, the army he commanded, and the flying enemies, were introduced; and what was

at first scarcely more than a symbol, assumed the more exalted form and character of a picture. Of a similar nature were all their historical records, and these pictorial illustrations were a substitute for written documents. Sculpture, indeed, long preceded letters, and we find that even in Greece, to describe, draw, engrave, and write, were expressed by the same word, *γραφειν*.

The want of letters, and the inability to describe an individual, his occupations, or his glorious actions, led them in early ages to bury with the body some object which might indicate the character of the deceased. Thus, warriors were interred with their arms*; artisans with the implements they had used; the oar was placed over the sailor; and pateræ, and other utensils connected with his office, or the emblems of the deity in whose service he had been employed, were deposited in the sepulchre of a priest. In those times we find no inscription mentioned; a simple mound was raised over a chief, sometimes with a *στυλος* or rough stone pillar, placed upon it, but no writing: and when, at a later period, any allusion to the occupations of the deceased was attempted, a rude allegorical emblem, of the same nature as the early historical records before alluded to, was engraved on the levelled surface of the stone.

Pœtry and songs also supplied the want of writing, to record the details of events; and tradition handed down the glorious achievements of a

* Virgil *Æn.*vi. 233., at the tomb of Misenus :

“ ——— Suaque arma viro, remumque, tubamque.”

conqueror, and the history of past years, with the precision and enthusiasm of national pride. The poetry was recited to the sound of music, whence the same expression often implied the ode and the song; and as laws were recorded in a similar manner, the word *νομος* signified, as Aristotle observes, both a law and a song.

Sculpture dates long before architecture. A simple hut, or a rude house, answer every purpose as a place of abode, and a long time elapses before man seeks to invent what is not demanded by necessity.

Architecture is a creation of the mind: it has no model in nature, and it requires great imaginative powers to conceive its ideal beauties; to make a proper combination of parts; and to judge of the harmony of forms altogether new, and beyond the reach of experience. But the desire in man to imitate, and to record what has passed before his eyes, in short, to transfer the impression from his own mind to another, is natural in every stage of society: and however imperfectly he may succeed in representing the objects themselves, his attempts to indicate their relative position, and to embody the expression of his own ideas, are a source of the highest satisfaction.

As the wish to record events gave the first, religion gave the second impulse to sculpture. The simple pillar of wood or stone*, which was originally

* Lucan mentioning the statues of the gods of Massilia, says,
 " Simulacra mista deorum

Arte carent, cœcisque extant infornia truncis."

And Tacitus describes those of the Germans as " *è stipitibus et imposito robore.*" De Mor. Germ.

chosen to represent the deity, afterwards assumed the human form, the noblest image of the power that created it; and the memorial of the primitive substitute for a statue is curiously preserved in the Greek name *κίον*, implying a column and an idol. Pausanias * thinks that "all statues were in ancient times of wood, particularly those made in Egypt;" but this must have been at a period so remote as to be far beyond the known history of that country; though it is probable that when the arts were in their infancy, the Egyptians were confined to statues of that kind; and they occasionally erected wooden figures in their temples, even till the times of the latter Pharaohs.

Long after men had attempted to make out the parts of the figure, statues continued to be very rude; the arms were placed directly down the side to the thighs, and the legs were united together; nor did they pass beyond this imperfect state in Greece, until the age of Dædalus. The Egyptians, at the latest periods, continued to follow the imperfect models of their early artists, and grace and feeling were for ever prevented from forming a feature of their sculpture: and though they made great progress in other branches of art, though they evinced considerable taste in the forms of their vases, their furniture, and even in some architectural details, they were for ever deficient in the combination of ideal beauty with the natural position of parts in the human figure.

One great impediment to the advancement of the

* Pausanias, lib. ii. c. xix.

statuary's art in Egypt, was the unvarying posture of the figures, which were always in a state of repose, or in a position that only required the limbs to be straight, without any attempt at action, or, indeed, any indication of life: they were really *statues* of the person they represented, not the person "living in marble," in which they differed entirely from those of Greece. No statue of a warrior was sculptured in the varied attitudes of attack and defence, no wrestlers, no *discobolus*, no pugilist exhibited the grace, the vigour, or the muscular action of a man; nor were the beauties, the feeling, and the elegance of female forms displayed in stone: all was made to conform to the same invariable model, which confined the human figure to a few conventional postures.

A sitting statue, whether of a man or woman, was represented with the hands placed upon the knees, or held across the breast; a kneeling figure sometimes supported a small shrine or sacred emblem; and when standing, the arms were placed directly down the sides to the thighs, one foot being advanced beyond the other, as if in the attitude of walking, but without any attempt to separate the legs.

"The feet," says Winkelmann*, "of the Egyptian differ from those of the Greek statues, in being more flat and broad, and in having the toes perfectly straight, with the joints as little indicated as in the fingers, and a gradual diminution in their length; nor is the little toe curved or bent under,

* Winkelmann, i. p. 110.

as in those of the Greeks." This last remark is just, and their mode of representing it accords with what they saw in nature; but the length of the toes of an Egyptian foot do not undergo a gradual diminution, the second being invariably made longer than any other, which too agrees with the natural form.

The reason of this uniformity I have already explained; and it is probable that, if their genius had not been cramped by superstitious prejudice, the Egyptians would have excelled in painting and sculpture; and the imitation of the human figure have kept pace with their advancement in other points.

No accidents, arising from the consequences of invasion, or from any other cause, were ever capable of changing their fixed reverence for prescribed forms; nor do we find, after the Greek, and Roman conquests, that any deviation from established custom was tolerated; or that any innovation was introduced from communication with those foreigners, however superior their art, and however evident its resemblance to the originals which nature daily presented to their eyes. After the accession of the Ptolemies, Greek art became well known in Egypt, and every opportunity was given to their artists to improve from the best models: but no change was effected by this intercourse with the Greeks; and when Adrian wished divine honours to be paid to his favourite Antinoüs, and statues to be erected to his memory, no form was admitted but that which religious usage had established, and Egyptian models prescribed.

Though the general character of painting and sculpture continued the same, and a certain conventional mode of representing the human figure was universally adopted throughout the country, which was followed by every artist through successive ages, from the earliest Pharaonic era until the religion of Egypt was supplanted by the final establishment of Christianity, it is reasonable to suppose that several styles were introduced, and that the genius of artists varied considerably during that lengthened period. Plato's assertion is therefore to be taken in a limited and general sense, signifying that the Egyptians followed the same conventional forms, and that no nearer approach to the beau ideal of the human figure was made at one period than another. This is perfectly true; but every eye accustomed to Egyptian drawing readily perceives the difference between subjects executed during the Augustan age of art, the reigns of Remeses the Great and his father Osirei, and those of a Ptolemaic epoch. Truth may be wanting, as it necessarily must be where nature is not copied; but there are a grace and a boldness in the outline, as well as in the execution of the sculptures of the former period, which at once indicate the work of superior genius.

The hieroglyphics on the obelisks of that epoch proclaim the same fact, and, in architecture, the temples erected by the great Remeses, far surpass in elegance and grandeur, in harmony of proportion and simplicity of style, the monuments of any previous or subsequent era. It cannot, however, be denied that, in the time of Osirtasen and at

the commencement of the 18th dynasty, Egyptian art flourished greatly, and monuments of that age, also, claim our admiration for taste, simplicity, and symmetry of details. And if some fanciful innovations were introduced in the buildings of the third Thothmes, they are attributable to momentary caprice, and not to be looked upon as a change in the architecture of that period. This I shall have occasion to mention hereafter.

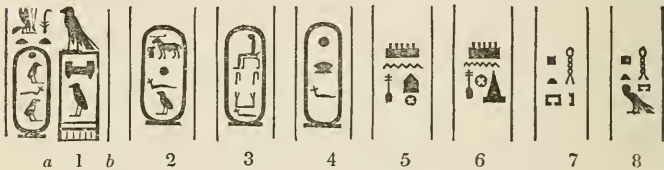
The paintings at Beni Hassan are certainly far inferior to those of the age of Remeses, or of the early part of the 18th dynasty; but the style of the hieroglyphics on some other monuments of the Osirtasen epoch, as the obelisk of Heliopolis, show that sculpture had greatly advanced at that remote period: and if historical bas-reliefs had been preserved, we might discover still more to prove the skill of the artists of the same era.

Few paintings or sculptures remain of an age prior to the accession of Osirtasen I., whom I suppose to have been the contemporary of Joseph, and to have ascended the throne about the year 1740. The tombs in the vicinity of the pyramids, and those I discovered hewn in the rock near Qasr e'Syád, the ancient Chenoboscion, are certainly anterior to the grottoes of Beni Hassan; and the style of the masonry as well as the names of the kings found there, show that the former were the places of sepulture of individuals, who lived in the time of Suphis, and his immediate successors. They, therefore, date about the year 2090 and 2050, B. C., upwards of a century before the arrival

of Abraham in Egypt, if, as I suppose, the patriarch came to that country during the reign of Apappus.

It is evident that the tombs, built of stone, which stand in the area before and behind the great pyramid*, were erected after it had been commenced, if not completed, as their position is made to conform to that monument; and that those hewn in the rock at the same place were not of an older period, is shown by the style of the sculptures, and the names of the same kings.

Among these we evidently perceive Suphis, or as



a, the name of Shofu, or Suphis.

5, 6, the name of Memphis; 7, 8, (Memphis, or) Pthah-ēi, the abode of Pthah.

No. 380.

From the Tombs near the Pyramids.

the hieroglyphics write it, Shofu, or Khof, a name easily converted into Suphis or Cheops, by adding s, the Greek termination.† But it is difficult, as I have already observed‡, to refer them to their proper epoch, or to fix their relative position in the list of kings. Nor can we decide whether the two first names here introduced, are both of Suphis, or if the second is of the founder of the other

* It is remarkable that Memphis is styled the land of the pyramid. Its Egyptian name in the hieroglyphics is Menofri, in Coptic Memfi, Manfi, Membe, Panoufi, or Mefi, being probably corrupted from Man-nofri, "the abode of good," or as Plutarch calls it, "the haven of good men." It was also called Pthah-ēi, the abode of Pthah. *Vide* wood-cut, No. 328., *figs.* 5, 6, 7, 8.

† As I have observed in Vol. I. p. 41. note 4.

‡ Vol. I. p. 19.

pyramid, whose name *Sen-Suphis* signifies the *brother* of Suphis; though they certainly appear to be of different kings, who lived about the same epoch.

They occur again at Mount Sinai, and the former has the banner or square title, given in the wood-cut *, which would satisfactorily decide this question, if it should ever be found with the other name. For these square banners, as I have already shown in a former work †, relate to the kings and not to the deities: and though the learned and ingenious Champollion expressed a different opinion in his “*Précis*,” ‡ he was afterwards convinced of this fact, which is now universally admitted.

The other names in these tombs are of the same remote period; and though there is no positive proof of their relative antiquity, we may conclude they belonged to the immediate successors of Suphis and his brother. It is remarkable that in some

* *Vide* wood-cut, No. 380. *fig.* 1. *b.*

† *Materia Hierog.* Extracts from Hieroglyphical Subjects, p. 7. : — “One more remark I have to offer, which, I confess, is not at all consonant with the ideas of Dr. Young and M. Champollion; that the square beneath the hawk, containing sometimes a bull and arm, sometimes other devices, does not refer to the god in whose honour the monument was raised, but to the king, whose name *always* follows it; and to this I have been led by the following circumstance: — wherever a king has erased the name of a predecessor, and inscribed his own in its stead, the hieroglyphics in this square have also been erased and changed: they cannot, therefore, refer to the god to whom the building was erected; otherwise the dedication, and other sculptures containing his name would *also* be altered throughout the same monument; we should likewise find all the different names of kings in the same temple, preceded by a square containing the same devices, as relating to the deity of that temple, which is *not* the case.” I have also shown (in p. 8.) that the *κρατερος Απολλων* is Phrah, or Pharaoh, the king in the character of the sun. *Vide* Egypt and Thebes, p. 5.

‡ *Précis du Système Hieroglyphique*, p. 152.

instances they are preceded by, and in others destitute of, regal titles, and sometimes they appear to have the word 'priest' prefixed to them, like those at Chenoboscion. Three of the names, however, are so arranged, that we may suppose they indicate the order in which the kings ruled, though the arrangement is different in another part of the same tomb, where the name of Suphis, or of Sensuphis, intervenes between two of them.*

At Saqqara other tombs of the same early period occur, and some of the grottoes of E'Sioot probably date long before the accession of Osirtasen. The former have a name, which, like most of these, bears in its simplicity the character of great antiquity, and in the latter is that of another ancient monarch; but neither of them† can be traced in the chamber of kings at Karnak.

The most interesting, after those at the pyramids, are the names in the grottoes of Chenoboscion, not only from their antiquity "which," as I have observed‡, "may vie with that of any other catacomb or monument in Egypt, if we except the pyramids and the tombs in their vicinity," but from their being placed in chronological order, and from the circumstance of a king having erased one of them, and introduced his own name in its stead.§ The title applied to them is not 'king,' 'but priest,' though the name is enclosed in an oval, the symbol

* Wood-cut, No. 381., *fig. 1. a and c*, and *fig. 2.*, where *b* comes between *a* and *c*.

† *Figs. 3 a and 4.*

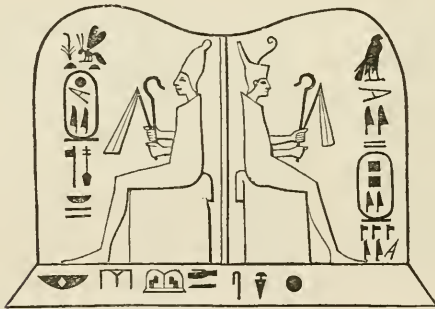
‡ Egypt and Thebes, p. 401, 402.

§ *Fig. 5.*, *a and c*, and *d* cut over by *a*.

of royalty; and that they really had the rank and appellation of king is shown by the same names occurring elsewhere with the usual royal prefix, and even the square title.

The first* of these is the name to which I alluded as having been erased to admit that of another monarch: it reads Remai, or "the beloved of the sun." The other is Papi†, a name which occurs in Egyptian history, being borne, according to Manetho, by the father of the priest Amenophis who lived in the time of the shepherds.‡

Several tablets§ and monumental records of king Papi have been preserved; and on the rocks of the Kossayr road, his name occurs in the same inscription with that of Remai, who is elsewhere shown to have reigned sixteen years. It is remark-



No. 382. — Figures of kings wearing the crown of Upper and of Lower Egypt, with the names Remai and Papi. *Kossayr Road.*

* *Vide* Wood-cut No. 381. *fig. 5 a.*

† *Vide* Wood-cut, No. 381. *fig. 5 d.*

‡ Joseph. *contra* Ap. i. 26. *Vide* Cory's valuable collection of "Ancient Fragments," p. 176.

§ There is one in the British Museum.

able, that the two princes appear seated on their thrones in the hall of assembly, wearing, one the crown of the upper, the other that of the lower country *; showing either that they were contemporary sovereigns, one ruling at Thebes, and the other at Memphis, or that Papi was the phonetic nomen of Remai, and that they were the same monarch.

The former is a point which has been long contested in Egyptian history. Manetho evidently alludes to contemporary dynasties, when he speaks of the kings of the Thebaid and the rest of Egypt uniting in a common cause against the shepherds †; and some chronologers have endeavoured to account for the long list of Egyptian kings, by supposing that they ruled at the same time in different parts of the country. This opinion was suggested by the learned Sir John Marsham; but, though correct, as far as it applies to the early epochs of their history, there is sufficient evidence to prove that from the time of Osirtasen, the sovereignty of Upper and Lower Egypt continued to be vested in one person, whether the royal residence was at Thebes, Memphis, or Saïs; and even if Papi has erased the name of his contemporary Remai, he may only have reunited the two crowns, which had been previously separated; for that Menes was sole monarch of all Egypt appears to have been universally allowed; and the division of the kingdom was

* *Vide* wood-cut, No. 382.; also wood-cut, No. 381., *figs.* 5 and 8.

† *Vide* Cory, p. 171.

perhaps owing to the preference of his son Athothes for the new capital founded by his father, which caused the court to be transferred to Memphis.

In noticing these ancient names, it is necessary to repeat a remark I have previously had occasion to make*, that the custom of affixing a *prænomen* to the phonetic *nomen* was not introduced in early times, and that Menes and many other kings had merely one oval, containing their name, preceded by the title 'king,' 'lord of the world,' or other regal prefix. Remai and Papi might therefore be different kings, each with a single oval; and, if they really are the same person, we have probably here the first instance of the introduction of a *nomen*; for there can be no doubt of the great antiquity of these names, from the appearance of the grottoes and monuments, where they occur, and the many collateral facts connected with the succeeding monarchs.

It may not be irrelevant to suggest that the hieroglyphics forming the name of Papi may also read Apap, or Aphoph†, the Apophis, or Apappus, of Manetho and Eratosthenes. The era at which he lived, about a century after the time of Suphis, well accords with that of Papi; and if this be admitted, we have evidence of the style of sculpture at another fixed period, the arrival of Abraham in Egypt.

Both the names of Papi and Remeren are found in the chamber of kings at Karnak.

* *Vide* Mater. Hierogl. Extracts, p. 9.

† Aphôph is "a giant" in Coptic. It is translated "Maximus." *Vide* Vol. I. p. 28, 30, 37, 42.

I have entered thus into detail upon the antiquity of these kings, with a view to ascertain a period, when the art of painting and sculpture was in a less advanced state than under the kings of the 18th dynasty. In the tombs near the pyramids, and those of Chenoboscion, we find the same agricultural and other scenes represented, which usually occur in the sepulchral chambers of the Theban necropolis, and this gives an opportunity of judging of the comparative state of art at those two periods, which are separated by an interval of from five to six hundred years. The mode of treating those subjects is certainly very inferior even to that of the Osirtasen era, particularly at Chenoboscion ; but some allowance must be made for sculptures executed by provincial artists, who had not attained the excellence of those of Thebes and Memphis. And the same apology may be offered for the paintings of Beni Hassan.

At the tombs of the pyramids we likewise observe an inferiority of style, compared with the elegance and taste of the 18th dynasty ; and the epochs of Suphis, of Osirtasen, of the early part of the 18th dynasty, and of Osirei and Remeses the Great, may be looked upon as the four known gradations, through which the arts passed from mediocrity to excellence.

After the reign of Remeses the Great the arts remained stationary ; the peaceful or inactive reigns of his successors offered little encouragement to sculpture, and few opportunities were

given to artists to improve, or even to exercise their talents. The ambition, the warlike spirit, or the indignation of the third Remeses, roused by the rebellion of the conquered provinces of Asia, which had been subdued and rendered tributary by his victorious predecessor, once more awakened the dormant genius of his country ; and, as it frequently happens that great military events, as well as internal convulsions, produce great development of talent, we are not surprised that the success which attended his arms should have benefited the arts. The same remark applies, and in a greater degree, to the glorious era of Osirei and his son ; and at no period of Egyptian history did the arms of the Pharaohs attain greater celebrity, or the arts reach a higher degree of perfection than in the reign of the Great Remeses.

As soon as the third Remeses had returned from his successful expedition into Asia, sculpture and painting were called upon to commemorate the triumphs he had gained, and to record the victories of his country on the walls of the splendid edifices of Thebes. The sculptures in the palace-temple of Medeenet Haboo, erected by this monarch, display a degree of spirit which is only surpassed in those of his great namesake and predecessor ; and so little do they fall short of the style of that period, that few who have not entered into the real feeling of Egyptian drawing, can observe in what their inferiority consists.

In order that the reader may form some idea of the nature of the subjects represented on the walls

of the Egyptian temples, and the profusion of painted sculptures with which they were ornamented, I shall introduce a description of the palace-temple of Remeses III. at Medeenet Haboo, from my 'Egypt and Thebes.'*

“ On the east, or north-east wall (of the inner area), Remeses is borne in his shrine or canopy, seated on a throne, ornamented with the figures of a lion and a sphinx, which is preceded by a hawk.† Behind him stand two figures of Truth‡ and Justice, with outspread wings. Twelve Egyptian princes, sons of the king§, bear the shrine; officers|| wave flabella around the monarch; and others, of the sacerdotal order, attend on either side, carrying his arms and insignia. Four others follow; then six of the sons of the king, behind whom are two scribes and eight attendants of the military class, bearing stools and the steps of the throne.

“ In another line are members of the sacerdotal order, four other of the king's sons, fan-bearers, and military scribes; a guard of soldiers bringing up the rear of the procession. Before the shrine, in one line, march six officers bearing sceptres and other insignia; in another, a scribe reads aloud the contents of a scroll he holds unfolded in

* Egypt and Thebes, p. 61. et seq.

† The emblem of the king as Phrah (Pharaoh).

‡ This refers to the double character of this goddess, my authority for whose name I have given in my *Materia Hierog.* p. 45.

§ They are always distinguished by a badge appended from their head-dress, inclosing, probably, the lock of hair, usually denoting son or child.

|| Probably the Pterophori.

his hand, preceded by two of the king's sons and two distinguished persons of the military and priestly orders. The rear of both these lines is closed by a pontiff*, who, turning round towards the shrine, burns incense before the monarch; and a band of music, composed of the trumpet, drum, double-pipe, and other instruments, with choristers, forms the van of the procession.

The king, alighted from his throne, officiates as priest before the statue of Amun Khem, or Amunre *generator*; and, still wearing his helmet†, he presents libations and incense before the altar, which is loaded with flowers, and other suitable offerings. The statue of the god, attended by officers bearing flabella‡, is carried on a palanquin, covered with rich drapery, by twenty-two priests; behind it follow others, bringing the table and the altar of the deity. Before the statue is the sacred bull, followed by the king on foot, wearing the cap of the "lower country." Apart from the procession itself stands the queen, as a spectator of the ceremony; and before her, a scribe reads a scroll he has unfolded. A priest turns round to offer incense to the white bull; and another, clapping his hands, brings up the rear of a long procession of hieraphori, carrying standards, images, and other sacred emblems; and the foremost bear the statue of the king's ancestors.

This part of the picture refers to the *coronation*

* Not the "eldest son of the king," as M. Champollion supposes.

† *Vide* Herodot. ii. 151.

‡ The larger of these are, in fact, umbrellas; the smaller ones fans or fly-flaps. Flabella of a similar kind are carried before the pope at the present day.

of the king, who, in the hieroglyphics, is said to have ‘put on the crown of the upper and lower countries;’ which the birds, flying to the four sides of the world, are to announce to the gods of the south, north, east, and west.* Such appears to be the meaning of this ceremony †, rather than the *triumph* of the king; and the presence of Remeses, wearing for the *first time* the above mentioned crown, and the great analogy between this and part of the text of the Rosetta stone, fully justify this opinion.

“ In the next compartment, the president of the assembly reads a long invocation, the contents of which are contained in the hieroglyphic inscription above; and the six ears of corn ‡ which the king, once more wearing his helmet, has cut with a golden sickle, are held out by a priest towards the deity. The white bull and images of the king’s ancestors are deposited in his temple, in the presence of Amun Khem, the queen still witnessing the ceremony, which is concluded by an offering of incense and libation, made by Remeses to the statue of the god.

“ In the lower compartment, on this side of the temple, is a procession of the arks of Amunre, Maut, and Khonso (the Theban triad) which the king, whose ark is also carried § before him, comes

* I am indebted for the construction of this part of it to M. Champollion’s letter.

† I hope to have an opportunity, at some future period, of giving a copy of this interesting subject, which the contracted dimensions of this work prevent my doing.

‡ A fit emblem for an agricultural people.

§ Conf. Rosetta stone.

to meet. In another part, the gods Abtaut and Hat pour alternate emblems of life and power over the king; and, on the south wall, he is introduced by several divinities into the presence of the patron deities of the temple.

“ In the upper part of the west wall, Remeses makes offerings to Pthah Sokari and to Kneph; in another compartment, he burns incense to the ark of Sokari; and, near this, is a tablet relating to the offerings made to the same deity. The ark is then borne by sixteen priests, with a pontiff and another of the sacerdotal order in attendance.

“ The king afterwards joins in another procession, formed by eight of his sons and four chiefs, behind whom two priests turn round to offer incense to the monarch. The hawk, the emblem of the king, or of Horus, precedes them; and eighteen priests carry the sacred emblem of the god Nofri Atmoo, which usually accompanies the ark of Sokari.

“ On the south wall, marches a long procession composed of hieraphori, bearing different standards, thrones, arks, and insignia, with musicians who precede the king and his attendants. The figure of the deity is not introduced, perhaps intimating that this forms part of the religious pomp of the corresponding wall: and, from the circumstance of the king here wearing the *pshent*, it is not impossible it may also allude to his coronation.

“ The commencement of the interesting historical subjects of Medeenet Haboo is in the south-west corner of this court, on the inner face of the tower. Here Remeses standing in his car, which his horses

at full speed carry into the midst of the enemy's ranks, discharges his arrows on their flying infantry. The Egyptian chariots join in the pursuit; and a body of their allies assist* in slaughtering those who oppose them, or bind them as captives. The right hands of the slain are then cut off as trophies of victory.

“ The sculptures on the west wall are a continuation of the scene. The Egyptian princes and generals conduct the ‘ captive chiefs ’ into the presence of the king. He is seated at the back of his car, and the spirited horses are held by his attendants on foot. Large heaps of hands are placed before him, which an officer counts, one by one, as the other notes down their number on a scroll; each heap containing three thousand, and the total indicating the returns of the enemy's slain. The number of captives, reckoned 1000 in each line, is also mentioned in the hieroglyphics above, where the name of the Rebo points out the nation against whom this war was carried on. Their flowing dresses, striped horizontally with blue or green bands on a white ground, and their long hair and aquiline nose, give them the character of an Eastern nation in the vicinity of Assyria and Persia, as their name reminds us of the Rhibii of Ptolemy, whom he places near the Caspian, and the north bank of the Oxus. . . . A long hieroglyphic inscription is placed over the king; and a still longer tablet, oc-

* The same whom this monarch is represented as having vanquished in another battle scene of this temple.

cupying a great part of this wall, refers to the exploits of the Egyptian conqueror, and bears the date of his fifth year.

“ The suite of this historical subject continues on the south wall. The king, returning victorious to Egypt, proceeds slowly in his car*, conducting in triumph the prisoners he has made, who walk beside and before it, three others being bound to the axle. Two of his sons attend as fan-bearers, and the several *regiments* of Egyptian infantry, with a corps of their allies, under the command of three other of these princes, marching in regular step, and in the close array of disciplined troops accompany their king. He arrives at Thebes, and presents his captives to Amunre and Maut, the deities of the city, who *compliment* him as usual, on the victory he has gained, and the overthrow of the enemy he has ‘trampled beneath his feet.’

“ On the north wall the king presents offerings to different gods, and below is an ornamental kind of border ; composed of a procession of the king’s sons and daughters. Four of the former, his immediate successors, bear the asp or basilisk, the emblem of majesty, and have their kingly ovals added to their names.

“ If the sculptures of the area arrest the attention of the antiquary, or excite the admiration of the traveller, those of the exterior of this building are no less interesting in an historical point of view, and the north and east walls are covered with a profusion of the most varied and instructive subjects.

* *Vide* Plate 1. Vol. I. p. 106.

“ At the north east extremity of the end wall a trumpeter assembles the troops, who salute the king as he passes in his car. In the first compartment on the east side, Remeses advances at a slow pace in his chariot, attended by fan-bearers, and preceded by his troops. A lion, running at the side of the horses, reminds us of the account given of Osymandyas, who was said to have been accompanied in war by this animal: and another instance of it is met with at E'Dayr, in Nubia, among the sculptures of the second Remeses.

“ Second compartment. — He continues his march*, his troops leading the van, and a trumpeter summons them to form for the attack.

“ Third compartment. — The Rebo await the Egyptian invaders in the open field; the king presses forward in his car, and drawing his bow, gives the signal for the attack. Several regiments of Egyptian archers, in close array, advance on different points and harass them with showers of arrows. The chariots rush to the charge; and a body of Asiatic allies † maintain the combat hand to hand, with the Rebo, who are *at length* routed, and fly before their victorious aggressors. Some thousands are left dead on the field, whose tongues‡ and hands, being cut off, are brought by the Egyptian soldiers as proofs of their success. Three thousand five hundred and thirty-

* This evidently denotes the distance marched by the Egyptians before they reached the enemy's country.

† They are the Sha . . . a maritime people, whose features and high-furred caps particularly denote their Asiatic origin; and a large amulet, suspended from their neck, reminds us of a custom very usual among the nations of the east. *Vide* Vol. I. p. 287. wood-cut, No. 11. *fig.* 2. and p. 365. wood-cut, No. 62. *fig.* 3. *a*, *b*, and *c*.

‡ The Turks, at the present day, cut off the right ear.

five hands and tongues form part of the registered returns ; and two other heaps, and a third of tongues, containing each a somewhat larger number, are deposited under the superintendence of the chief officers, as trophies of victory. The monarch then alights from his chariot, and distributes rewards to his troops.

“ In the next compartment, the king’s military secretaries draw up an account of the number of spears, bows, swords, and other arms taken from the enemy, which are laid before them : and mention seems to be made in the hieroglyphics of the horses that have been captured.

“ Remeses then proceeds in his car, having his bow and sword in one hand, and his whip in the other, indicating that his march still lies through an enemy’s country. The van of his army is composed of a body of chariots ; the infantry in close order, preceding the royal car, constitute the centre ; and other similar corps form the flank and rear.

“ They are again summoned by sound of trumpet to the attack of another Asiatic enemy* ; and, in the next compartment, the Egyptian monarch gives orders for the charge of the hostile army, which is drawn up in the open plain. Assisted by their allies, the Shairetana, a maritime people armed with round bucklers and spears, they fall upon the undisciplined

* This people are called Fekkaros by M. Champollion. I am ignorant of the force of the first character, and of his reasons for adopting the F. May they not be the Tochari ? — “ a large tribe,” according to Ptolemy, on the north-east of Bactria, and at no great distance from the Rhibii. If any of the sculptures of Thebes refer to the rebellion of the Bactrians, they are here.

troops of the enemy, who, after a short conflict are routed, and retreat in great disorder. The women endeavour to escape with their children on the first approach of the Egyptians, and retire in *plaustra** drawn by oxen.† The flying chariots denote the greatness of the general panic, and the conquerors pursue them to the interior of the country. Here, while passing a large morass, the king is attacked by several lions‡, one of which, transfixed with darts and arrows, he lays breathless beneath his horse's feet; another attempts to fly towards the jungle, but, receiving a last and fatal wound, writhes in the agony of approaching death.§ A third springs up from behind his car, and the hero prepares to receive it and check its fury with his spear.

“ Below this group is represented the march of the Egyptian army, with their allies, the Shairetana, the Sha . . . , and a third corps, armed with clubs, whose form and character are but imperfectly preserved. ||

* They were used in Egypt from the earliest times, and are mentioned in Genesis xlv. 19., &c. Strabo also speaks of them, lib. xvii. They are the more remarkable here, as putting us in mind of a custom, very prevalent among some eastern nations, of posting their wagons in the rear when going to battle. The Tartars of later times were noted for this custom.

† With the hump of Indian cattle. They seem to have been formerly very common in Egypt also, as they are at present in Kordofán and Sennár.

‡ One modern author has supposed this to represent a lion chase, another has discovered in it the lion of Osymandyas, which *assisted* him in battle. We have frequently known sportsmen shoot their *own* dogs, but nothing justifies a similar opinion with regard to the king on this occasion.

§ The position of the lion is very characteristic of the impotent fury of the disabled animal. Of the third little is seen but part of the fore-paw : the attitude of the king supplies the rest.

|| *Vide suprâ*, Vol. I. p. 287.

“ The enemy, having continued their rapid retreat, take refuge in the ships of a maritime nation*, to whose country they have retired for shelter. The Egyptians attack them with a fleet of galleys and bearing down their opponents, succeed in boarding them and taking several prisoners. One of the hostile galleys is upset; and the slingers in the tops, with the archers and spearmen on the prows, spread dismay among the few who resist. The king, trampling on the prostrate bodies of the enemy, and aided by a corps of bowmen, discharges from the shore a continued shower of arrows; and his attendants stand at a short distance with his chariot and horses, and await his return. Below this scene, the conquering army leads in triumph the prisoners of the two nations they have captured in the naval fight, and the amputated hands of the slain are laid in heaps before the military chiefs. In the next compartment, the king distributes rewards to his victorious troops, and then proceeding to Egypt, he conducts in triumph the captive Rebo and Tokkari, whom he offers to the Theban triad, Amun, Maut, and Khonso.

“ In the compartments above these historical scenes, the king makes suitable offerings to the gods of Egypt; and, on the remaining part of the east wall, to the south of the second propylon, another war is represented.

“ In the first picture, the king alighted from his

* The Shairetana; part of the same people who joined the Egyptians as allies in this war. The expression ‘maritime people’ may imply merely that they lived near a large lake.

chariot, armed with his spear and shield, and trampling on the prostrate bodies of the slain, besieges the fort of an Asiatic enemy, whom he forces to sue for peace. In the next, he attacks a larger town surrounded by water. The Egyptians fell the trees in the woody country which surrounds it, probably to form testudos and ladders for the assault. Some are applied by their comrades to the walls; and, while they reach their summit, the gates are broken open, and the enemy are driven from the ramparts, or precipitated over the parapet by the victorious assailants, who announce by sound of trumpet the capture of the place.

“ In the third compartment, on the north face of the first propylon, Remeses attacks two large towns, the upper one of which is taken with but little resistance, the Egyptian troops having entered it and gained possession of the citadel. In the lower one, the terrified inhabitants are engaged in rescuing their children from the approaching danger, by raising them from the plain beneath to the ramparts of the outer wall. The last picture occupies the upper or north end of the east wall, where the king presents his prisoners to the gods of the temple. The western wall is covered by a large hieroglyphical tablet, recording offerings, made in the different months of the year, by Remeses III.”

This may serve to give an idea of the profusion of sculpture on the walls of an Egyptian temple. The whole was coloured; and this variety served as a relief to the otherwise sombre appearance of massive straight walls, which formed the exterior

of Egyptian temples. All the architectural details were likewise painted; and though a person unaccustomed to see the walls of a large building so decorated, might suppose the effect to be far from pleasing, no one who understands the harmony of colours will fail to admit that they perfectly understood their distribution and proper combinations, and that an Egyptian temple was greatly improved by the addition of painted sculptures.

In a work of so limited a scale as the present, it is impossible to give an adequate notion of a large temple, whose details are so made up, or to give the general effect of this kind of *clair-obscur*; but an idea may be conveyed of some of the parts, from the capitals of the columns, which I have introduced in the frontispiece of this volume.

The introduction of colour in architecture was not peculiar to the Egyptians: it was common to the Etrurians, and even to the Greeks. For though the writings of ancient authors afford no decided evidence of the practice in Greece, and the passages adduced in support of it from Vitruvius*, Pliny†, and Pausanias‡, are neither satisfactory, nor conclusive, the fact of colour having been found on the monuments of Attica and Sicily is so well

* Vitruv. iv. 2. "Tabellas ita formatas, uti nunc fiunt triglyphi, contra tignorū præcisiones in fronte fixerunt, et *cas cerâ cæruleâ depinæcrunt.*" *Vide* also lib. vii. c. 9. and c. 5., where he shows the bad taste of the Romans in their mode of painting their houses.

† Plin. xxxvi. 23. "In Elide ædes est Minervæ, in qua frater Phidiæ Pannæus, tectorium induxit lacte et croco subactum." *Vide* also lib. xxxv. c. 8. where he again mentions Pannæus; and, after saying Phidias was originally a painter, adds that Pannæus assisted in painting the figure of Olympian Jupiter.

‡ Pausan. lib. v. Elis. c. xi. He mentions the works of the brother of Phidias, whom he calls Panénus.

authenticated, that no doubt can be entertained of certain parts, at least, of Greek temples, of the oldest and even of the best periods, having been painted.

In the temple of Theseus at Athens, vestiges of colours are seen on the ground of the frieze, on the figures themselves, and on the ornamental details.* The Parthenon presents remains of painting on some members of the cornice, and the ground of the frieze, above the interior of the peristyle, containing the reliefs of the Panathenaic procession, was blue. The propylæa of the Acropolis, the Ionic temple on the Ilissus, and the Choragic monument of Lysicrates also offer traces of colour; and vestiges of red, blue, and green, have been discovered on the metopes of a temple at Selinus in Sicily, by Messrs. Angell and Harris, who excavated and examined the site of that ancient city in 1823. In one of these, the figure of Minerva has the eyes and eyebrows painted †; her drapery, and the girdle of Perseus are also ornamented with coloured devices, and the whole ground of this and two other of the metopes is red.

Red and blue seem to have been generally used for the ground; and these two, with green, were the principal colours introduced in Greek architecture, many members of which were also gilt, as the shields, guttæ, and other prominent details; but

* *Vide* Transactions of The Institute of British Architects, on the polychromy of Greek architecture, translated from the German of Kugler by W. R. Hamilton Esq. p. 85. et seq.

† *Vide* the Sculptured Metopes of Selinus, by Messrs. Harris and Angell, p. 49.

there is, as yet, no proof of the flesh of statues or bas-reliefs having been painted, and many suppose that the shafts of columns were always white, the coloured parts being confined to the entablature and pediment.

In Egyptian buildings, indeed, it sometimes happened, that the shafts of columns were merely covered with white stucco, without any ornament, and even without the usual line of hieroglyphics; and the same custom of coating certain kinds of stone with stucco was common in Greece. The Egyptians always put this layer of stucco, or paint, over stone, whatever its quality might be, and we are surprised to find the beautiful granite of obelisks and other monuments concealed in a similar manner; the sculptures engraved upon them being also tinted either green, blue, red, or other colour, and frequently one and the same throughout.

Whenever they employed sandstone, it was absolutely necessary to cover it with a surface of a smoother and less absorbent nature, to prevent the colour being too readily imbibed by so porous a stone; and a coat of calcareous composition was laid on before the paint was applied. When the subject was sculptured, either in relief or intaglio, the stone was coated, after the figures were cut, with the same substance, to receive the final colouring; and it had the additional advantage of enabling the artist to finish the figures and other objects, with a precision and delicacy in vain to be expected on the rough and absorbent surface of sandstone.

The Egyptians mixed their paint with water, and it is probable, that a little portion of gum was sometimes added, to render it more tenacious and adhesive. In most instances we find red, green, and blue adopted; an union which, for all subjects, and in all parts of Egypt, was a particular favourite: when black was introduced, yellow was added to counteract or harmonise with it; and in like manner they sought for every hue its congenial companion.

In the examination of the colours used for painting the walls, while at Thebes, I was led to the conjecture*, that the reds and yellows were ochres; the blues and greens metallic, and prepared from copper; the black, a lampblack; and the white a finely levigated and prepared lime. I have since been favoured with an analysis of those brought by me from Thebes, which my friend Dr. Ure has had the kindness to make, and which I am happy in being able to introduce.

“The colours are green, blue, red, black, yellow, and white: 1st. The green pigment, scraped from the painting in distemper, resists the solvent action of muriatic acid, but becomes thereby of a brilliant blue colour, in consequence of the abstraction of a small portion of yellow ochreous matter. The residuary blue powder has a sandy texture; and when viewed in the microscope is seen to consist of small particles of blue glass. On fusing this vitreous matter with potash, digesting the compound in diluted muriatic acid, and treating the solution with water of

* Egypt and Thebes, p. 443.

ammonia in excess, the presence of copper becomes manifest. A certain portion of precipitate fell, which being dissolved in muriatic acid, and tested, proved to be oxide of iron. We may hence conclude, that the green pigment is a mixture of a little ochre, with a pulverulent glass, made by vitrifying the oxides of copper and iron with sand and soda. The vitreous green coat upon the small Osiris figures, so numerous in the Egyptian tombs of the earliest times, is a similar composition.

“The green colour washed from the stone with a sponge, and afterwards evaporated, consists of blue glass in powder, mixed with a little ochre, and particles of colourless glass, to which it owes its brighter hue.

“2. The blue* pigment scraped from the stone is a pulverulent blue glass of like composition, without the ochreous admixture, brightened with a little of the chalky matter used in the distemper preparation.

“3. The red pigment obtained by washing the coloured stone in the tombs of the kings with a wet sponge, and evaporating the liquid to dryness, when treated with water, evinces the presence of glutinous gummy matter.† It dissolves readily, in a great measure, in muriatic acid, and affords muriates of iron and alumina. It is merely a red earthy bole.

* It is remarkable how much the Egyptian method of making this colour resembled in principle that of our smalt. It agrees with the false *cyanus* of Theophrastus (s. 98.), invented by an Egyptian king, which, he says, was laid on thicker than the native (or lapis lazuli). Pliny confounds the two, xxxvii. 9.

† The Egyptian colours contain gum; but the quantity in these specimens was owing to my having added it to form them into cakes.

“ 4. The black pigment washed off the stone in the same manner with a sponge, is not affected by digestion in rectified petroleum, and contains, therefore, no bitumen. It softens in hot water immediately, and dissolves readily into a black liquid, which evidently contains a gummy or mucilaginous matter. When exposed to a red heat, upon a slip of platinum, it takes fire, and burns with a fleeting white flame. The remaining matter is difficult to incinerate, even under the blowpipe, and then leaves a bulky grey ash. This residuum dissolves, with very little effervescence, in hot muriatic acid. When ammonia is dropped into this solution it causes a bulky precipitate, which does not re-dissolve in excess of solution of potash. These phenomena show the pigment in question to be bone black (mixed with a little gum). By another experiment, I found in it traces of iron.

“ 5. The white pigment scraped from the stone in the tombs of the kings, is nothing but a very pure chalk, containing hardly any alumina, and a mere trace of iron.

“ 6. The yellow pigment is a yellow iron ochre.”

SCULPTURES IN RELIEF AND IN INTAGLIO.

The oldest Egyptian sculptures on all large monuments were in low relief, and, as usual, at every period, painted; obelisks and every thing carved in hard stone*, some funereal tablets and other small objects, being in intaglio. This style continued in vogue until the time of Remeses II.,

* Some few granite monuments are in relief, but they are rare.

who began to introduce intaglio generally on large monuments, and even his battle scenes at Karnak and the Memnonium are executed in this manner. The reliefs were little raised above the level of the wall; they had generally a flat surface, the edges softly rounded off, in effect, far surpassing the intaglio; and it is to be regretted that the best epoch of art, when design and execution were in their zenith, should have abandoned a style so superior, which, too, would have improved in proportion to the advancement of that period.

Intaglio continued to be generally employed, until the accession of the 26th dynasty, when the low relief was again introduced; and in the monuments of Psamaticus and Amasis are numerous instances of the revival of the ancient style. This was afterwards universally adopted, and no return to intaglio on large monuments was attempted, either in the Ptolemaic or Roman periods.

The intaglio introduced by Remeses may, perhaps, be denominated *intaglio relieved*, or relieved intaglio. The sides of the *incavo*, which are perpendicular, are cut to a considerable depth, and from that part, to the centre of the figure (or whatever is represented) is a gradual swell, the centre being frequently on a level with the surface of the wall. On this all the parts of dress, features, or devices, are delineated and painted, and even the perpendicular sides are ornamented in a corresponding manner, by continuing upon them the adjoining details.

In the reign of Remeses III. a change was made in the mode of sculpturing the intaglios, which, as I have already observed*, consisted in carving the lower side to a great depth, while the upper face inclined gradually from the surface of the wall till it reached the innermost part of the intaglio; it was principally done in the hieroglyphics, in order to enable a person standing immediately beneath, and close to the wall on which they were sculptured, to distinguish and read them; and the details upon the perpendicular sides, above mentioned, had the same effect.

It was a peculiarity of style not generally imitated by the successors of Remeses III., and hieroglyphics bearing this character may serve to fix the date of monuments, wherever they are found, to the age of that monarch. After his reign no great encouragement appears to have been given to the arts; the subjects represented on the few monuments of the epoch intervening between his death, and the succession of the 26th dynasty, are principally confined to sacred subjects, in which no display of talent is shown; and the records of Sheshonk's victories at Karnak are far from partaking of the vigour of former times, either in style, or in the mode of treating the subject.

After the accession of the 26th dynasty some attempt was made to revive the arts, which had been long neglected; and independent of the patronage of government, the wealth of private individuals was liberally employed in their encouragement. Public

* *Vide* Vol. I. p. 85.; and *Materia Hierogl.* p. 95.

buildings were erected in many parts of Egypt, and beautified with rich sculpture; the city of Saïs, the royal residence of the Pharaohs of that dynasty, was adorned with the utmost magnificence; and extensive additions were made to the temples of Memphis, and even to those of the distant Thebes.

The fresh impulse thus given to art was not without effect; the sculptures of that period exhibit an elegance and beauty, which might even induce some to consider them equal to the productions of an earlier age; and in the tombs of the Asaseef, at Thebes, are many admirable specimens of Egyptian art. To those, however, who understand the true feeling of this peculiar school, it is evident, that though in minuteness and finish they are deserving of the highest commendation, yet, in grandeur of conception and in boldness of execution, they fall far short of the sculptures of Osirei, and the second Remeses.

In forming an opinion of the different styles of Egyptian sculpture, it is frequently difficult for an unpractised eye to decide upon their peculiar merits, or their respective ages; and in nothing, perhaps, has this been more fully demonstrated, than in the Isiac table, now at Turin. Every one, acquainted with Egyptian art, must be struck at first sight with the very modern date and Roman origin of this monument; and the position of the hieroglyphics shows that the maker of it was ignorant of the subject he was treating. I should, therefore, not have thought it necessary

to notice so palpable a forgery, had not the learned Winkelmann censured bishop Warburton for a judicious remark, in which he is borne out by fact, and for which he deserves great credit. "I cannot help," says Winkelmann*, "here noticing an error of Warburton, who advances, that the famous Isiac table of bronze, inlaid with figures in silver, is a work made at Rome. His opinion is destitute of foundation, and he only appears to have adopted it, because it suited his own system. Be it as it may, this monument has all the character of the most ancient Egyptian style."

Justice must be done to the judgment of Warburton, and a remark of this kind, made by a person of Winkelmann's reputation, is of too great weight to pass unnoticed.

The invasion of Cambyses, as I have already stated, struck a death blow to the arts in Egypt. Sculptors, painters, and artisans of every description, were taken from their country, and sent to Persia by the victors to embellish the monuments of their enemies with the records of their own misfortunes; and in spite of the encouragement afterwards given by the Ptolemies, the spark of genius, then so nearly extinguished, could not be rekindled, and Egypt was doomed to witness the total decadence of those arts for which she had been long renowned.

The sculptures of the Ptolemaic periods are coarse and heavy, deficient in grace and spirit, and totally wanting in the character of the true Egyptian school,

* Winkelmann, *Hist. de l'Art.* lib. ii. c. 1. s. 46.

at the same time that they partake of nothing Greek either in form or feeling ; for the Egyptians never borrowed any notions, on those points, from the foreigners with whom they had so long an intercourse, throughout the period of Greek and Roman rule. The sculptures executed in the time of the Cæsars are still more degraded in every respect ; and so low did they fall at this period, that many do not claim a rank above those of the humblest village tombstone. Still the architecture continued to be grand and majestic, and many of the monuments of a Ptolemaic and Roman era merit a better style of sculpture.

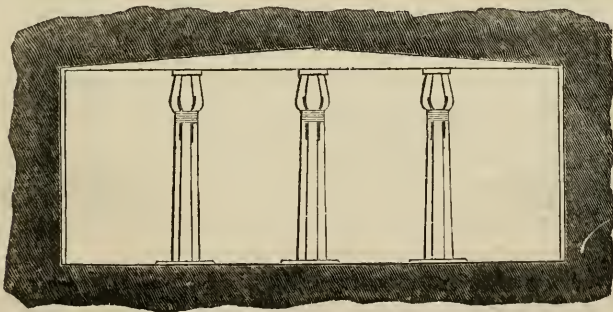
“ Architecture,” as I have elsewhere observed *, “ more dependent on adherence to certain rules than the sister art, was naturally less speedily affected by the decline of taste and ingenuity of its professors ; and as long as encouragement was held out to their exertions, the grandest edifices might be constructed from mere imitation, or from the knowledge of the means necessary for their execution. But this could never be the case with sculpture, which had so many more requisites than previous example or long established custom ; nor could success be attained by the routine of mechanism, or the servile imitation of former models.”

It is remarkable that the architecture, even of the early time of Osirtasen, far excelled the sculpture of that day ; and the grace and simplicity of the grottos at Beni Hassan, which call to mind in their elegant columns the Doric character, must

* Egypt and Thebes, p. 163.

be highly admired, even though seen amidst the grandeur of the monuments of Remeses. These columns are 3 ft. 4 in. in diameter, and 16 ft. 8½ in. high*; they have sixteen faces or grooves, each about eight inches wide, and so slight and elegant that their depth does not exceed half an inch. One of the faces, which is not hollowed into a groove, is left for the introduction of a column of hieroglyphics.

The roofs of some of the grottos of Beni Hassan, are cut into a slight segment of a circle, in imitation of the arch, which, as I have had occasion to observe, was probably known in Egypt at this early period; and it is remarkable, that the walls are stained and sprinkled with colour, to give them the appearance of red granite. This is the general character of the larger and northernmost grottos; the others differ, both in the form and style of the columns, and in their general appearance; but the transverse section of one of them will suffice to show the elegance of their depressed pediment, — which extends, in lieu of architrave,

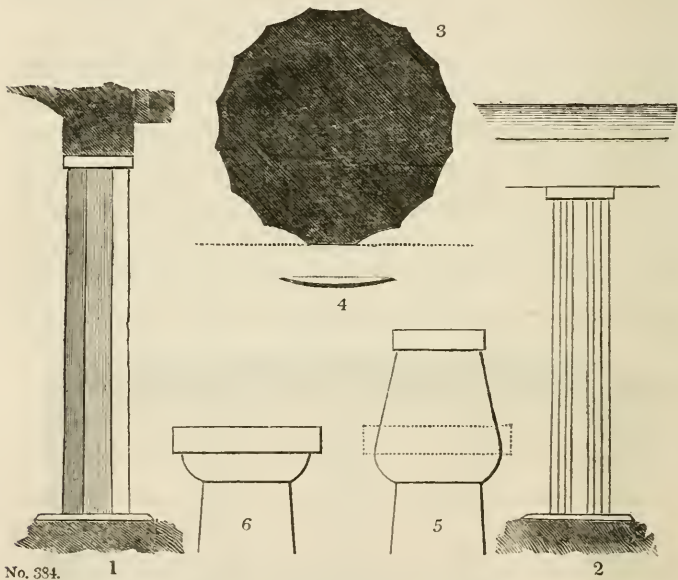


No. 383.

Section of one of the *southern* grottos of Beni Hassan.* *Vide* wood-cut, No. 384, *figs.* 2, 3.

over the columns of the interior,—and the simplicity of their general effect.

The most favourite Egyptian capitals were those in form of the full blown water plant, supposed by some to be the papyrus, which was emblematic of the lower country*, and the unopened bud of the same, or of the lotus; and that this last gave the original idea of the Doric capital is not improbable, since, by removing the upper part, and bringing down the abacus, it presents the same appearance as the early Greek style. †



No. 384.

Fig. 1. Columns in the portico of the *northern grotto* of Beni Hassan.

2. Columns of the interior.

3. Horizontal section of fig. 2, showing the grooves.

4. One of the grooves on a larger scale.

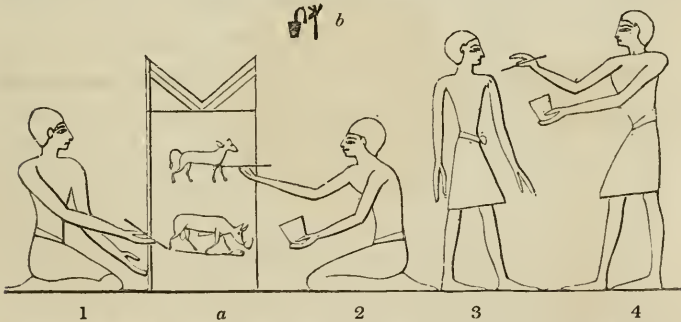
5. An Egyptian capital, which seems to have been the origin of the Doric: fig. 6.

* *Vide* Capitals of Columns, Frontispiece of this Volume.

† *Vide* wood-cut, No. 384. figs. 5, 6.

PAINTING.

Of painting, apart from sculpture, and of the excellence to which it attained in Egypt, we can form no accurate opinion, nothing having come down to us of a Pharaonic period, or of that epoch when the arts were at their zenith in Egypt; but that, already in the time of Osirtasen, they painted on board, is shown by one of the subjects at Beni Hassan, where two artists are engaged in a picture, representing a calf, and an antelope overtaken by a dog. The painter holds his brush in one hand, and his palette or saucer of colour in the other; but, though



No. 385.

Artists painting on a board, and colouring a figure.

Beni Hassan.

the boards stand upright, there is no indication of a contrivance to steady or support the hand.

Mention is made of an Egyptian painting by Herodotus, who tells us that Amasis sent a portrait of himself to Cyrene*, probably on wood; and some, of uncertain period, have been found in the tombs of Thebes. Two of these are preserved in the British Museum, but they are evidently of Greek time, and, perhaps, even after the conquest of

* Herod. ii. 182.

Egypt by the Romans. It is therefore vain to speculate on the nature of their painting, or their skill in this branch of art; and, though some of the portraits taken from the mummies may prove that encaustic painting with wax and naphtha was adopted in Egypt, the time when it was first known there is uncertain, nor can we conclude from a specimen of Greek time, that the same was practised in a Pharaonic age.

Pliny states, in his chapter on inventions*, that “Gyges, a Lydian, was the earliest painter, in Egypt; and Euchir, a cousin of Dædalus, according to Aristotle, the first in Greece; or, as Theophrastus thinks, Polygnotus the Athenian.” But the painting represented at Beni Hassan evidently dates before any of those artists. Pliny, in another place†, says, “the origin of painting is uncertain: the Egyptians pretend that it was invented by them 6000 years before it passed into Greece; a vain boast, as every one will allow.” It must, however, be admitted, that all the arts were cultivated in Egypt long before Greece existed as a nation; and the remark he afterwards makes‡, that painting was unknown at the period of the Trojan war, can only be applied to the Greeks; as is shown by the same unquestionable authority at Beni Hassan, of the remote era of Osirtasen, who lived upwards of 1700 years before our era, between five and six hundred years previous to the taking of Troy.

* Plin. vii. 56.

† Plin. xxxv. 3. He also mentions line drawings as an invention of the Egyptians.

‡ Plin. xxxv. 3., at the end.

STYLE OF THEIR DRAWING.

The skill of the Egyptian artists in drawing bold and clear outlines is, perhaps, more worthy of admiration than any thing connected with this branch of art; and I have had occasion to notice the freedom, with which the figures in the unfinished part of Belzoni's tomb at Thebes are sketched. I have also noticed* the manner in which they began those drawings previous to their being sculptured and painted.

The walls having been ruled in red squares "the position of the figures was decided by the artist, who traced them roughly with a red colour; and the draughtsman then carefully sketched the outlines in black, and submitted them to the inspection of the former, who altered (as appears in some few instances here) those parts which he deemed deficient in proportion or correctness of attitude; and in that state they were left for the chisel of the sculptor." Sometimes the squares were dispensed with, and the subjects were drawn by the eye, which appears to have been the case with many of those in the tomb here alluded to.

In some pictures, we observe certain conventional rules of drawing, which are singular, and perhaps confined to the Egyptians and Chinese, an instance of which may be seen in the frontispiece to my 'Materia Hieroglyphica.' The subject represents Amunra the god of Thebes seated on his throne, and presenting the emblem of life to Remeses the Great, who stands before him. The deities Khonso and Bubastis are also present. The god being con-

* Egypt and Thebes, p. 107.

sidered the principal figure, every means are used to prevent the intervention of any object, which might conceal or break through its outline: the leg therefore of the king, though in reality coming in front, is placed behind his foot; but as the base of the throne is of less importance than the leg of the king, the latter is continued in an unbroken line to the bottom of the picture; and the same is observed in his hand, which being an object of more consequence in the subject than the tail of the deity, is not subjected to any interruption.

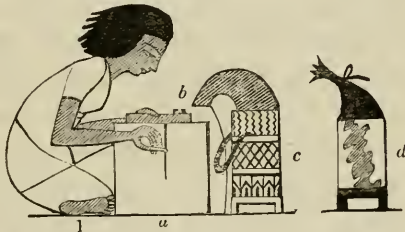
The Egyptians had no notion of perspective, either in figures, or in the representation of inanimate objects; and those on the same plane, instead of being shown one behind the other, were placed in succession one above the other, on the perpendicular wall.

Of the quality of the pencils they used, for drawing and painting, it is difficult to form any opinion. Those generally employed for writing were a reed or rush, many of which have been found with the tablets or inkstands belonging to the scribes; and with these, too, they probably sketched the figures in red and black upon the stone, or stucco of the walls. To put in the colour, we may suppose that brushes of some kind were used; but the minute scale on which the subjects are indicated in the sculptures prevents our deciding the question.

Habits among men of similar occupations are frequently alike, even in the most distant countries; and, we find it was not unusual for an Egyptian artist, or scribe, to put his reed pencil behind his ear,

when engaged in examining the effect of his painting, or listening to a person on business, as in the modern studio, or the counting-house of an European town.

Painters and scribes deposited their writing implements in a box with a pendent leather top, which was tied up with a loop or thong; and a handle, or strap was fastened to the side to enable them to carry it more conveniently. Their ordinary wooden tablet was furnished with two or more cavities for holding the colours, a tube in the



No. 386. — A scribe writing on a tablet. *c* and *d* are two cases for carrying writing materials. *Thebes.*



No. 387. — Scribe with his inkstand upon the table. One pen is put behind his ear, and he is writing with another. *Thebes.*

centre containing the pens or reeds; and certain memoranda were frequently written at the back of it, when a large piece of papyrus, or the wooden slab, were not required.

ARCHITECTURE.

Of the architecture, plans, and distribution of their dwelling-houses, I have already treated in a preceding volume*; and of the great use they made of crude brick for this purpose; those burnt in a kiln being rarely employed, except in damp situations.† The bricks were formed in a simple mould, frequently bearing a government stamp; and the number of persons employed in their manufacture is readily accounted for by the great demand for those materials in the construction of dwelling houses, and ordinary buildings; stone being confined principally to the temples, and other monuments connected with religion; but this has been already noticed; and I now merely introduce the subject of crude brick in connection with the arch.

I have frequently had occasion to mention the antiquity of the arch, and have shown that it existed of brick in the reign of Amunoph I., as early as the year 1540 before our era ‡, and of stone in the time of the second Psamaticus, B. C. 600.§ I have suggested the probability of its having owed its invention to the small quantity of wood in Egypt, and the consequent expence of roofing with timber, and have ventured to conclude, from the paintings at Beni Hassan, that vaulted buildings were made in Egypt as early as the reign of Osirtasen, the contemporary of Joseph, who lived between three and four thousand years ago. ||

* Vol. II. p. 95. *et seq.*

† The southern extremity of the quay, near the temple of Luqsor, at Thebes, is built of burnt brick. Crude bricks were common in many Eastern countries, as at Babylon, and other places.

‡ Egypt and Thebes, p. 81. and 126.

§ Ibid. p. 337.

|| *Suprà*, Vol. II., p. 117.

The age of the crude brick pyramids of Memphis, and the Arsinoïte nome is unknown. Herodotus tells us the first built of those materials was erected by Asychis, whom he makes the predecessor of Anysis the contemporary of Sabaco, thus limiting its date to the ninth century before our era; and, consequently, as I have observed*, making it posterior to those at Thebes, which were erected about the period of the 18th dynasty.

It is, however, far more probable, that a long period intervened between the reigns of Asychis and Anysis†; and that the former lived many ages before Bocchoris; which is confirmed by another passage in Herodotus, placing him as the immediate successor of Mycerinus the son of Cheops; and the ruinous and crumbled appearance of the brick pyramids of Dashoor, fully justifies the opinion that they were erected very soon after the stone ones, near which they stand, and to which the inscription of Asychis forbade the spectator to compare them.‡ They have had chambers, the lower part of whose side walls are still visible; and we may be permitted to conclude that they were arched, like those at Thebes.

If, then, the brick pyramids of Memphis were erected by the successor of the son of Cheops, and the chambers were, as I suppose, vaulted, the invention of the arch will be carried back nearly 700 years prior to the reign of Amunoph,

* *Suprà*, Vol. I. p. 132.

† To prevent further discussion on the reigns of those kings, I did not suggest this opinion in the historical notice taken from Herodotus (in Vol. I. p. 132.), and have reserved it for the present occasion, as it bears more particularly on the question respecting the antiquity of the arch.

‡ *Vide* Vol. I. p. 131.

about 2020 years before our era. This is a conjecture on which I do not wish to insist; we may, for the present, be satisfied with the fact that this style of building was in common use 3370 years ago, and rejoice that the name of Amunoph has been preserved on the stucco, coating the interior of a vaulted tomb at Thebes, to announce it, and to silence the incredulity of a sceptic.

The appearance and position of other tombs, in the vicinity of the Ptolemaic temple of Dayr el Medeenah at Thebes, had always convinced me that their vaulted roofs were of the time of Amunoph and his immediate successors; but, however satisfied on this point myself, I could find no name to sanction my opinion, or to justify me in its assertion, until accident threw in my way the building in question*, while prosecuting my researches there in 1827; and I have the satisfaction to learn that another tomb has since been discovered of similar construction, which presents the ovals of the third Thothmes.

The pyramids of Gebel Birkel (Napata), and Dunkalah (Meroë), are of uncertain date, but there is every reason to believe them, as well as the small temples attached to their front, of an age long anterior to the Ptolemies, or, as Mr. Hoskins thinks, “of a far more ancient date than Tirhaka;” and we there find stone arches, both round and *pointed* †, some of which are built with a keystone ‡, on the same principle as our own.

* *Materia Hierogl.* p. 80.

† *Vide* Hoskins's *Ethiopia*, p. 156.

‡ The keystone is mentioned by Seneca, *Epist.* 90. Many round and pointed arches of a late time have been built without it, and the principle of the arch does not depend upon it, but on the adjustment of *all* the stones.

At Memphis, too, near the modern village of Saqqara, is a tomb, with two large vaulted chambers, whose roofs display in every part the name and sculptures of the second Psamaticus. They are cut in the limestone rock; and in order to secure the roof, which is of a friable nature, they are lined, if I may so call it, with an arch, as our modern tunnels. The arch is of stone, and presents a small and graceful segment of a circle, having a span of seven feet ten inches, and a height of two feet eight inches and a half. *

Numerous crude brick arches, of different dates, exist in Thebest†, besides the small pyramids already alluded to, some of which are of very beautiful construction. The most remarkable are the doorways of the enclosures surrounding the tombs in the Assaseéf, which are composed of two or more concentric semicircles of brick‡, as well constructed as any of the present day. They are of the time of Psamaticus and other princes of the 26th dynasty, immediately before the invasion of Cambyses. All the bricks radiate to a common centre: they are occasionally pared off at the lower part, to allow for the curve of the arch, and sometimes the builders were contented to put in a piece of stone to fill up the increased space between the upper edges of the bricks. In those roofs of houses or tombs, which were made with less care, and required less solidity, the bricks were placed longitudinally, in the direction of the curve of the vault,

* *Vide* Vignette I. of this chapter.

† One is introduced into wood-cut No. 388. *fig.* 1.

‡ As of that in wood-cut, No. 119. p. 131. Vol. II.

and the lower ends were then cut away considerably, to allow for the greater opening between them ; and many were grooved at the sides, in order to retain a greater quantity of mortar between their united surfaces.

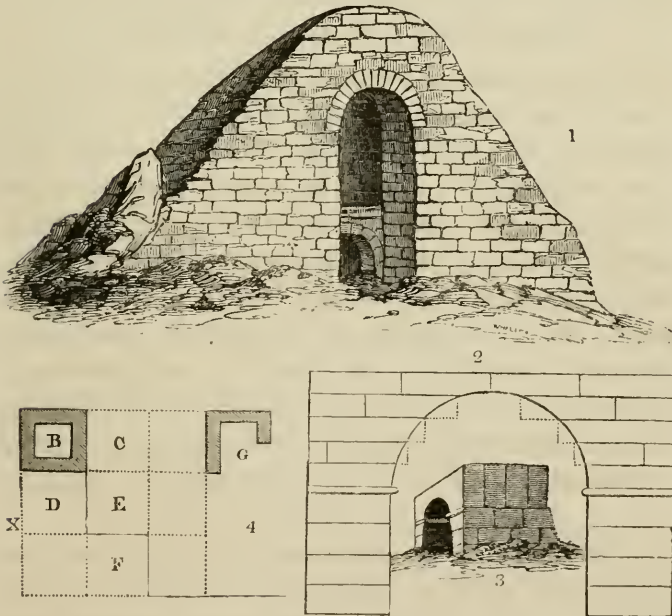
Though the oldest stone arch, whose age has been positively ascertained, dates only in the time of Psamaticus, we cannot suppose that the use of stone was not adopted by the Egyptians for that style of building, previous to his reign, even if the arches of the pyramids in Ethiopia should prove not to be anterior to the same era. Nor does the absence of the arch in temples and other large buildings excite our surprise, when we consider the style of Egyptian monuments ; and no one who understands the character of their architecture could wish for its introduction. In some of the small temples of the Oasis, the Romans attempted this innovation, but the appearance of the chambers so constructed fails to please ; and the whimsical caprice of Osirei, who introduced an imitation of the arch in a temple at Abydus, was not followed by any of his successors.* In this building the roof is formed of single blocks of stone reaching from one architrave to the other, which, instead of being placed in the usual manner, stand upon their edges, in order to allow room for hollowing out an arch in their thickness : but it has an effect of inconsistency, without the plea of advantage or utility.

Another imitation of the arch occurs in a building at Thebes. Here, however, a reason may perhaps

* *Vide* wood-cut, No. 388. *fig.* 3.

be given for its introduction, being in the style of a tomb, and not constructed as an Egyptian temple, nor bound to accord with the ordinary rules of architecture. The chambers, like those of the tomb of Saqqara, lie under a friable rock, and are cased with masonry, to prevent the fall of its crumbling stone; but instead of being roofed on the principle of the arch, they are covered with a number of large blocks placed horizontally, one projecting beyond that immediately below it, till the uppermost two meet in the centre, the interior angles being afterwards rounded off to form the appearance of a vault.

The date of this building is about 1500, B. C.,



No. 388.—Fig 1. Vaulted rooms and doorway of a crude brick pyramid at Thebes.
 2. An imitation of an arch at Thebes.
 3. Another at Abydos.
 4. Mode of commencing a quarry.

consequently many years after the Egyptians had been acquainted with the art of vaulting; and the reason of their preferring such a mode of construction probably arose from their calculating the great difficulty of repairing an injured arch, in this position, and the consequences attending the decay of a single block; nor can any one suppose, from the great superincumbent weight applied to the *haunches*, that this style of building is devoid of strength, and of the usual durability of an Egyptian fabric, or pronounce it ill suited to the purpose for which it was erected.*

STONES HEWN FROM QUARRIES FOR BUILDING, FOR
SCULPTURE, AND OTHER PURPOSES.

The most ancient buildings in Egypt were constructed of limestone, hewn from the mountains bordering the valley of the Nile to the east and west, extensive quarries of which may be seen at El Maasara†, Nesleh Shekh Hassan, El Maabdeh, and other places; and evidence of its being used long before sandstone is derived from the tombs near the pyramids, as well as those monuments themselves, and from the vestiges of old substructions at Thebes.‡ Limestone continued to be occasionally employed for building even after the succession of the 16th dynasty§; but so soon

* *Vide* wood-cut, No. 388. *fig.* 2.

† *Vide* Egypt and Thebes, p. 322. and 348., the Troici lapidis mons of Ptolemy and Strabo.

‡ Limestone blocks are sometimes found in the thickness of the walls of sandstone temples, of the time of Remeses II. and other kings, taken from older monuments.

§ Herodotus says, Amasis, even, used the stone of the quarries near Memphis, probably of the Maasara hills, for part of the temple of Minerva at Saïs, lib. ii. 175. *Vide* Egypt and Thebes, p. 442.

as the durability of sandstone was ascertained, the quarries of Silsilis* were opened, and those materials were universally adopted, and preferred for their even texture, and the ease with which they were wrought.

The extent of the quarries at Silsilis, is very great; and, as I have elsewhere observed, "it is not by the size and scale of the monuments of Upper Egypt alone that we are enabled to judge of the stupendous works executed by the ancient Egyptians: these would suffice to prove the character they bore, were the gigantic ruins of Thebes and other cities† no longer in existence. And safely may we apply the expression, used by Pliny in speaking of the porphyry quarries, to those of Silsilis, "they are of such extent, that masses of any dimensions might be hewn from them."

In opening a new quarry, when the stone could not be taken from the surface of the rock, and it was necessary to cut into the lower part of its perpendicular face, they pierced it with a horizontal shaft; beginning with a square trench, and then breaking away the stone left in the centre (as indicated in the wood-cut by the space B), its height and breadth depending of course on the size of the stones required. They then cut the same around c, and so on to any extent in a horizontal direction, after which they extended the work downwards, in steps, taking away E, and leaving D for the present, and thus descending as far as

* Egypt and Thebes, p. 439.

† Herodotus (ii. 177), and Pliny (v. 9.), reckon 20,000 cities in Egypt in the time of Amasis.

they found convenient, or the stone continued good. They then returned, and cut away the steps D, F, and all the others, reducing each time one step in depth, till at last there remained at x a perpendicular wall; and when the quarries were of very great horizontal extent, pillars were left at intervals to support the roof.

In one of the quarries at El Maasara, the mode of transporting the stone is represented. It is



No. 389.

Removing a stone from the quarries at El Maasara.

placed on a sledge, drawn by oxen, and is supposed to be on its way to the inclined plane that led to the river; vestiges of which may still be seen a little to the south of the modern village.

Sometimes, and particularly when the blocks were large and ponderous, men were employed to drag them, and those condemned to hard labour in the quarries as a punishment, appear to have been required to assist in moving a certain number of stones, according to the extent of their offence, ere they were liberated; and this expression, "I have dragged 110 stones for the building of Isis at Philæ," in an inscription at the quarries of Gertassy in Nubia, seems to confirm my conjecture. In order to keep an account of their progress, they frequently cut the initials of their name, or some private mark, with the number, on the rock whence the stone was taken, as

soon as it was removed : thus, C. XXXII., PD. XXXIII., PD. XXXIII., and numerous other signs occur at the quarries of Fateereh.

The blocks were taken from the quarry on sledges ; and in a grotto behind E'Dayr, a Christian village between Antinoë and El Bersheh, is the representation* of a colossus, which a number of men are employed in dragging with ropes ; a subject doubly interesting, from being of the early age of Osirtasen II., and one of the very few paintings which throw any light on the method employed by the Egyptians for moving weights. For it is singular, that we find no illustration of the mechanical means of a people who have left so many unquestionable proofs of skill in these matters.

It is not to be supposed that the colossus was hewn in the hill of El Bersheh. This picture, like the trades, fowling scenes, and other subjects, represented in similar grottoes, only refers to one of the occupations of the Egyptians† ; nor does it even follow, that the inmate of the tomb had any office connected with the superintendence of the quarries whence it was brought.

One hundred and seventy-two men‡, in four rows, of forty-three each, pull the ropes attached to the front of the sledge ; and a liquid, probably grease, is poured from a vase, by a person standing on the

* This curious subject was first discovered by captains Irby and Mangles. From the beard we see the statue is of a private individual.

† *Vide* Egypt and Thebes, p. 142.

‡ The number may be indefinite ; and it is probable that more were really employed than indicated in the painting.

pedestal of the statue, in order to facilitate its progress as it slides over the ground ; which was probably covered with a bed of planks, though they are not indicated in the painting.

Some of the persons employed in this laborious duty appear to be Egyptians, the others are foreign slaves, who are clad in the costume of their country ; and behind are four rows of men, who, though only twelve in number, may be intended to represent the set which relieved the others when fatigued.

Below are persons carrying vases of the liquid, or, perhaps water, for the use of the workmen, and some implements connected with the transport of the statue, followed by taskmasters with their wands of office. On the knee of the figure stands a man who claps his hands, to the measured cadence of a song, to mark the time and ensure their simultaneous draught ; for it is evident that, in order that the whole power might be applied at the same instant, a sign of this kind was necessary ; and the custom of singing at their work * was common to every occupation† among the Egyptians, as it now is in that country, in India, and many other places. Nor is it found a disadvantage among the modern sailors of Europe, when engaged in pulling a rope, or in any labour which requires a simultaneous effort.

* The custom of singing or shouting, while treading grapes in the winepress, is mentioned by Jeremiah, xxv. 30. " He shall give a shout as they that tread the grapes ;" and Isaiah, xvi. 10. " In the vineyard there shall be no singing," being common to other people as well as the Egyptians.

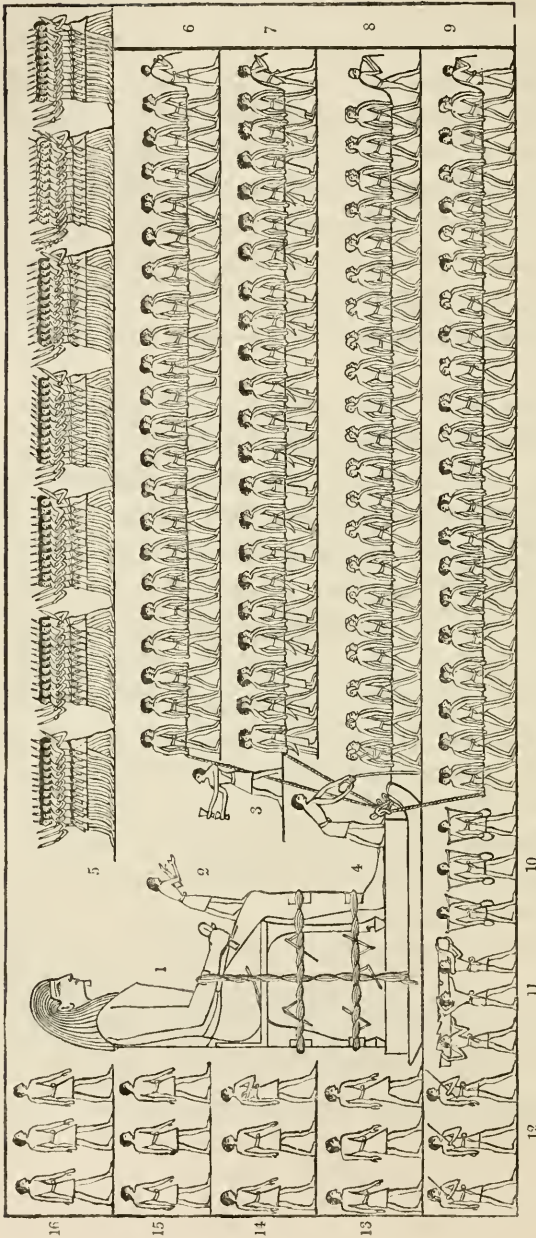
† Also during the dance. Conf. 1 Sam. xxi. 11. " Did they not sing one to another of him in dances ?"

The height of the statue appears to have been about twenty-four feet, including the pedestal, and it was of limestone*, as the colour and the hieroglyphics inform us. It was bound to the sledge by double ropes, which were tightened by means of long pegs inserted between them, and twisted round until completely braced; and, to prevent injury from the friction of the ropes upon the stone, a compress of leather or other substance was introduced at the part where they touched the statue.

It is singular that the position of the ring to which all the ropes were attached for moving the mass, was confined to one place at the front of the statue, and did not extend to the back part of the sledge, but this was owing to the shortness of the body; and, when of great length, it is probable that ropes were fixed at intervals along the sides in order to give an opportunity of applying a greater moving power. For this purpose, in blocks of very great length, (as the columns at Fateereh, which are about 60 ft. long, and $8\frac{1}{2}$ ft. in diameter,) certain pieces of stone were left, projecting from the sides, like the trunnions of a gun, to which several ropes were attached, each pulled by its own set of men.

Small blocks of stone were sent from the quarries by water to their different places of destination, either in boats or rafts; but those of very large dimensions were dragged by men, overland, in

* The word in the hieroglyphics signifies either limestone or sandstone.



No. 380.

- Mode of transporting a colossus from the quarries, from a lithographic drawing, by Mr. Bankes. *In a grotto at El Bersich.*
1. The statue bound upon a sledge with ropes. It is of a private individual, not of a king, or a deity.
 2. Man probably heaving time with his hands, and giving out the verse of a song, to which the men responded; though 3 appears as if about to throw something which 2 is preparing to catch.
 4. Pouring a liquid, perhaps grease, from a vase.
 5. Egyptian soldiers.
 - 6, 7, 8, 9. Men, probably captives and convicts, dragging the statue.
 10. Men carrying water, or grease.
 11. Some implements.
 12. Taskmasters.
 - 13, 14, 15, 16. Reliefs of men.

the manner, here represented; and the immense weight of some shows that the Egyptians were well acquainted with mechanical powers, and the mode of applying a locomotive force with the most wonderful success.

The obelisks transported from the quarries of Syene, at the first cataracts, in latitude $24^{\circ} 5' 23''$, to Thebes and Heliopolis, vary in size from seventy to ninety-three feet in length. They are of one single stone; and the largest in Egypt, which is that of the great temple at Karnak, I calculate to weigh about 297 tons. This was brought about 138 miles from the quarry to where it now stands, and those taken to Heliopolis passed over a space of more than 800 miles. The power, however, to move the mass was the same, whatever might be the distance, and the mechanical skill which transported it five, or even one, would suffice for any number of miles.

In examining the ruins of western Thebes, and reading the statements of ancient writers regarding the stupendous masses of granite conveyed by this people for several hundred miles, our surprise is greatly increased. We find in the plain of Qoorneh two colossi of Amunoph III., of a single block each*, forty-seven feet in height, which contain about 11,500 cubic feet, and are made of a stone not known within several days' journey of the place; and at the Memnonium, is another of Remeses II. which when entire weighed upwards

* One of these is the vocal Memnon. *Vide* Egypt and Thebes, p. 33. *et seq.* This was broken and repaired.

of 887 tons*, and was brought from E'Sooan to Thebes, a distance, as before stated, of 138 miles. This is certainly a surprising weight, and we cannot readily suggest the means adopted for its transport, or its passage of the river; but the monolithic temple, said by Herodotus to have been taken from Elephantine to Buto, in the Delta, was still larger, and far surpassed in weight the pedestal of Peter the Great's statue at St. Petersburg, which is calculated at about 1200 tons.

He also mentions a monolith at Saïs, of which he gives the following account: — “What I admire still more, is a monument of a single block of stone, which Amasis transported from the city of Elephantine.† Two thousand men, of the class of boatmen, were employed to bring it, and were occupied three years in this arduous task. The exterior length is twenty-one cubits ($31\frac{1}{2}$ ft.); the breadth fourteen (22 ft.); and the height eight (12 ft.); and, within, it measures eighteen cubits twenty digits (28 ft. 3 in.) in length; twelve (18 ft.) in breadth; and five ($7\frac{1}{2}$ ft.) in height. It *lies* near the entrance of the temple, not having been admitted into the building, in consequence, as they say, of the engineer, while superintending the operation of dragging it forward, having sighed aloud, as if exhausted with fatigue, and impatient of the time it had occupied; which being looked upon by Amasis as a bad

* Egypt and Thebes, p. 11.

† The island opposite Syene, immediately below the first cataract. The granite rocks stretch from the interior of the desert to the Nile in this part: the sandstone crosses the river more to the north, a little below Eilethyas. *Vide* Egypt and Thebes, p. 420. and p. 452.

omen, he forbade its being taken any further. Some, however, state that this was in consequence of a man having been crushed beneath it while moving it with levers.”*

Herodotus’s measurement is given as it lay on the ground ; his length is properly its height, and his height the depth, from the front to the back ; for, judging from the usual form of these monolithic monuments, it was doubtless like that of the same king at Tel-et-Mai, given in Mr. Burton’s Excerpta †, the dimensions of which are 21 ft. 9 in. high, 13 ft. broad, and 11 ft. 7 in. deep ; and internally 19 ft. 3 in., 8 ft. and 8 ft. 3 in.

The weight of the Saïte monolith cannot certainly be compared to that of the colossus of Remeses ; but when we calculate the solid contents of the temple of Latona at Buto, our astonishment is unbounded ; and we are perplexed to account for the means employed to move a mass which, supposing the walls to have been only 6 ft. thick (for Herodotus ‡ merely gives the external measurement of forty cubits, or 60 ft. in height, breadth, and thickness,) must have weighed upwards of 5000 tons. §

The skill of the Egyptians was not confined to the mere moving of immense weights ; their wonderful knowledge of mechanism is shown in the erection of obelisks, and in the position of large stones, raised to a considerable height, and adjusted with the utmost precision ; sometimes, too, in

* Herodot. ii. 175.

† Plate 41.

‡ Herodot. ii. 155.

§ This is supposing it to be granite, as these monolithic temples were.

situations where the space will not admit the introduction of the inclined plane. Some of the most remarkable are the lintels and roofing stones of the large temples; and the lofty doorway leading into the grand hall of assembly, at Karnak, is covered with sandstone blocks, 40 ft. 10 in. long, and 5 ft. 2 in. square.

In one of the quarries at E'Sooan (Syene) is a granite obelisk, which having been broken in the centre after it was finished, was left in the exact spot where it had been separated from the rock. The depth of the quarry is so small, and the entrance to it so narrow, that it was impossible for them to turn the stone, in order to remove it by that opening; it is, therefore, evident that they must have lifted it out of the hollow in which it had been cut; as was the case with all the other shafts previously hewn in the same quarry. Such instances as these suffice to prove the wonderful mechanical knowledge of the Egyptians; and we may question whether with the ingenuity and science of the present day our engineers are capable of raising weights with the same facility as that ancient people.*

Pliny mentions several obelisks of very large dimensions, some of which were removed to Rome, where they now stand as tokens of the empty vanity of man.

The Egyptians naturally looked on those monu-

* M. Lebas, well known in France as an eminent engineer, who removed the obelisk of Luxor now at Paris, has paid a just tribute to the skill of the Egyptians.

ments with feelings of veneration, being connected with their religion, and the glorious memory of their monarchs ; and at the same time perceived that, in buildings constructed as their temples were, the monotony of numerous horizontal lines required a relief of this kind ; but the same feelings did not influence others, and few motives can be assigned for their removal to Europe, beyond the desire of possessing what required great difficulty to obtain, and flattered the pride of a vain people.

I will not pretend to say that the ancient Romans committed the same strange outrage to taste as their modern successors, who have destroyed the effect of the most graceful part of these monuments, by crowning the apex, which should of course terminate in a point, with stars, rays, or other whimsical additions ; and, however habit may have reconciled the eye to such a monstrosity, every one who understands the beauty of form, and the harmony of lines, must observe and regret the incongruity of balls and weather-cocks on our own spires.

Pliny* says, that the first Egyptian king who erected an obelisk was Mitres, who held his court at Heliopolis, the city of the Sun, the deity to whom they were said to have been dedicated.† Many others were raised by different monarchs, and “Ramises” made one 99 feet in height, “on which he employed 20,000 workmen.” “And,

* Plin. xxxvi. 8.

† At Heliopolis ; but in other places to other deities, as at Thebes to Amun, the god of that city.

fearing lest the engineer should not take sufficient care to proportion the power of the machinery to the weight he had to raise, he ordered his own son to be bound to the apex, more effectually to guarantee the safety of the monument.”*

The same writer describes a method of transporting obelisks from the quarries down the river, by lashing two flat-bottomed boats together, side by side, which were admitted into a trench, cut from the Nile to the place where the stone lay, laden with a quantity of ballast exactly equal to the weight of the obelisk; which, so soon as they had been introduced beneath the transverse block, was all taken out; and the boats rising, as they were lightened, bore away the obelisk in lieu of their previous burden. But we are uncertain if this method was adopted by the Egyptians; and though he mentions it as the invention of one Phoenix, he fails to inform us at what period he lived.

No insight, as I have already observed, is given into the secrets of their mechanical knowledge, from the sculptures, or paintings of the tombs, though so many subjects are there introduced. Our information, connected with this point, is confined to the use of levers, and a sort of crane; which last is mentioned by Herodotus, in describing the mode of raising the stones from one tier to another, when they built the pyramids. He says it was made of short pieces of wood†; — an indefinite expression, conveying no notion

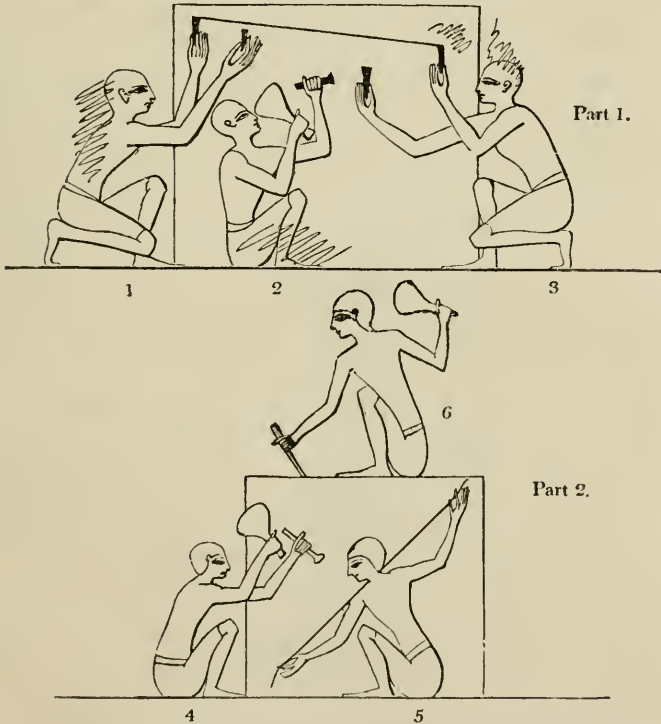
* Plin. xxxvi. 9.

† Herod. ii. 125.

either of its form or principle ; — and every stone was raised to the succeeding tier by a different machine.

Diodorus tells us*, that machines were not invented at that early period, and that the stone was raised by mounds or inclined planes ; but we may be excused for doubting his assertion, and thus be relieved from the effort of imagining an inclined plane five hundred feet in perpendicular height, with a proportionate base.

It is true, that the occupations of the mason and



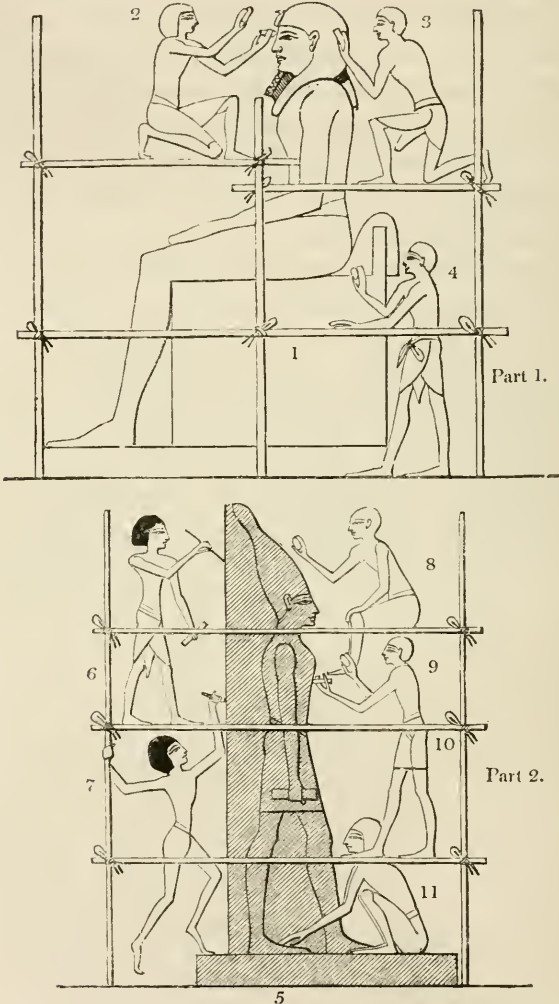
No. 391.

Part 1. levelling, and Part 2. squaring a stone.
Figs. 2, 4, 6, are using the chisel and mallet.

Thebes.

* Diodor. i. 63.

the statuary are sometimes alluded to in the paintings; the former, however, are almost confined to



No. 392. Part 1. Large sitting colossus of granite, which they are polishing.
 Part 2. Standing figure of a king, and, like the former, painted to represent granite.
 Figs. 8. 10. 11. are polishing it; and figs. 6. and 7. painting and sculpturing the hieroglyphics at the back.
Thebes.

the levelling or squaring a stone, and the use of the chisel. Some are represented polishing and painting statues of men, sphinxes, and small figures; and two instances occur of large granite colossi, surrounded with scaffolding*, on which men are engaged in chiseling and polishing the stone; the painter following the sculptor to colour the hieroglyphics he has engraved at the back of the statue.

The usual mode of cutting large blocks from the quarries was by a number of metal wedges, which were struck at the same instant along its whole length; sometimes, however, they seem to have been of highly dried wood, which being driven into holes previously cut for them by a chisel, and then saturated with water, split the stone by their expansion; and the troughs frequently found along the whole line of the holes, where the wedges were inserted, argue strongly in favour of this opinion.

Such a method could only be adopted when the wedges were in an horizontal position, upon the upper surface of the stone; but those put into the sides were impelled by the hammer only.

To separate the lower part of a ponderous mass from the rock, we may suppose they cut under it, leaving long pieces here and there to support it, like beams, which traversed its whole depth from the front to the back; and then having introduced wooden rafters into the open spaces which were cleared away, they removed the remainder of the stone, and the block rested on the wood.

* *Vide* wood-cut, No. 392.

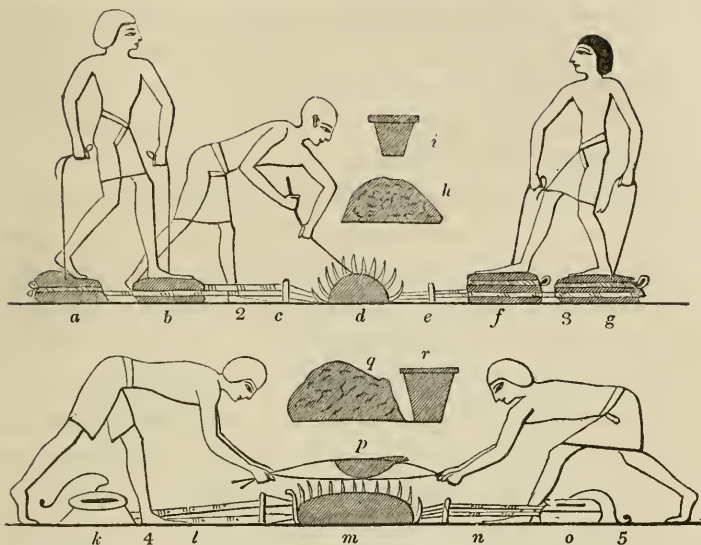
Some have imagined that they used the same means now practised in India, of lighting a fire along the whole length of the mass, in the direction where they intended it should split; and then pouring water upon it, cracked the stone in that part by its sudden action: but this is very doubtful, and the presence of the holes for the wedges sufficiently proves the method they usually employed.

INVENTIONS.

Among the remarkable inventions of a remote era among the Egyptians, may be mentioned bellows and siphons. The former were used at least as early as the reign of Thothmes III. the contemporary of Moses, being represented in a tomb bearing the name of that Pharaoh. They consisted of a leather bag, secured and fitted into a frame, from which a long pipe extended, for carrying the wind to the fire. They were worked by the feet, the operator standing upon them, with one under each foot, and pressing them alternately, while he pulled up each exhausted skin with a string he held in his hand. In one instance we observe from the painting, that when the man left the bellows, they were raised, as if full of air*; and this would imply a knowledge of the valve.

It is uncertain when bellows were first invented; the earliest contrivance of this kind was probably a mere reed or pipe; which we find used by

* *Vide* wood-cut, No. 393. *k, o.*



No. 393.

Bellows.

Thebes.

a, b, k, o, the leather case. c, e, l, n, the pipes conveying the wind to the fire. d, m, the fire. h, q, charcoal. k and o, are raised as if full of air.

goldsmiths in the age of Osirtasen*, and also at a late period, after the invention of bellows; and the tubes of these last appear even in the time of Thothmes III. to have been simply of reed, tipped with a metal point, to resist the action of the fire.

In process of time the sack containing the air was added, and various improvements succeeded each other in the form and principle of the bellows; there are, however, no means of ascertaining the period when they assumed their present form; and the merit of the late invention of *wooden* bellows is still disputed. Strabo ascribes the

* It does not follow from the use of the pipe at Beni Hassan, that bellows were unknown at that period, because it continued to be used long after the time of Thothmes. *Vide* wood-cut, No. 374.

bellows* to Anacharsis, but with the evident conviction that these, the double anchor, and the potter's wheel†, were of an age far anterior to the Scythian philosopher; which is fully proved by the paintings at Thebes.

The ordinary hand-bellows, now used for small fires in Egypt, are a sort of bag made of the skin of a kid, with an opening at one end (like the mouth of a common carpet bag), where the skin is sewed upon two pieces of wood; and these being pulled apart by the hands, and closed again, the bag is pressed down, and the air thus forced through the pipe at the other end. It is, perhaps, an ancient invention, but I find no indication of it in the paintings.

The bellows with sides of wood, made at the present day, are a more perfect construction than these last, or the foot-bellows of the time of Thothmes. They are supposed to have been known to the Greeks, though I confess, the

“————— taurinis follibus auras
Accipiunt redduntque”

of Virgil‡, is rather calculated to convey the idea of bellows made of ox leather§, without wooden sides.

Siphons are shown to have been invented in Egypt, at least, as early as the reign of Amunoph II. 1450 years before our era; and they again occur in the

* Strabo, vii. p. 209. “Ζωπυρα.” † Seneca, Ep. 90. Plin. vii. 56.

‡ Virg. Georg. iv. 171. *Vide* Herodot. i. 68.

§ Beckmann says “that bulls' leather,” which Virgil mentions, “is unfit for bellows, and that ox or cow leather can only be used for that purpose.” Vol. I. p. 104.

paintings of the third Remeses. In a tomb at Thebes bearing the name of Amunoph, their use is unequivocally pointed out, by one man pouring a liquid into some vases, and the other drawing it off, by applying the siphon to his mouth, and thence to a large vase; and it is not improbable



No. 394. Siphons used in the year 1450 B. C. Thebes.
 1 pours a liquid into vases from the cup *b*; and 2 draws it off by the siphons *a*.

that they owed their invention to the necessity of allowing the Nile water to deposit its thick sediment in vases, which could not be moved without again rendering it turbid, whether by inclining the vessel, or dipping a cup into it with the hand. -

Julius Pollux says they were used for tasting wine* ; and Heron of Alexandria, the first writer of consequence who mentions them, and who lived under Ptolemy Evergetes II., shows them to have been employed as hydraulic machines, on a grand scale, for draining lands, or conveying water over a

* Jul. Poll. Onom. vi. 2. and x. 20.

hill from one valley to another. Their name, siphon, is evidently oriental, and derived from the word *siph* or *sif*, to “imbibe,” or “draw up with the breath,” analogous to, and the origin of, our own expression “to sip.”

Of the numerous inventions to which the Egyptians may lay claim, we learn little from the works of ancient authors; but their skill in various branches of art are highly extolled by those* who visited, or were acquainted with, the country.

Herodotus† ascribes the origin of geometry to the necessity of ascertaining every successive year the quantity of land, increased, or diminished, by accidents arising from the inundation of the Nile; which is, indeed, not inconsistent with reason: but the historian is wrong in limiting the date of land surveying to the age of Sesostris, since it was evidently known long before his time; and so ancient did the Egyptians consider it, that they ascribed its invention to Thoth.‡

Anticlides pretends that Mœris was the first to lay down the elements of that science, which he says was perfected by Pythagoras; but the latter observation is merely the result of the vanity of the Greeks, which claimed for their countrymen, (as in the case of Thales, and many other instances,) the credit of enlightening a people on the very

* Diodorus (i. 74.) says that the arts were carried to a higher degree of perfection and excellence among the Egyptians than any other people; which he ascribes to the artisans being confined to their own occupations. The Chinese have shown that, like many other ideas, this is plausible in theory, but bad in practice.

† Herodot. ii. 102,

‡ Plato in Phædro.

subjects which they had visited Egypt for the purpose of studying.

The discovery of the pole, the sundial, and the division of the day into twelve hours, are said by Herodotus to have been derived by the Greeks from the Babylonians. Of the two former we have no indication in the sculptures, to prove the epoch when they were known in Egypt; but there is reason to believe, that the day and night were divided, each into twelve hours, by the Egyptians, some centuries before that idea could have been imparted to the Greeks from Babylon.*

Sufficient data cannot, of course, be expected from the sculptures of the tombs, and the accidental introduction of their occupations, to enable us to form an accurate opinion respecting the extent of their knowledge, the variety of their inventions, or the skill of their workmen in different branches of art. The objects buried with the dead were frequently mere models of those they used; and the pains taken in making them depended on the sums expended by the friends of the deceased, after his death. It was left to their good intentions, or their superstitious feelings, to decide of what quality they should be, or what labour should be bestowed upon them; and if the kind regards of a friend frequently induced some to incur considerable expense in providing such objects, many, on the other hand, were less scru-

* It is remarkable that no mention of hours is made in the Bible till the time of Daniel. Dan. iii. 6. The Hebrew word is שעה Sâh, as in Arabic.

pulous in the last duties to their departed relative. The former purchased ornaments of the most costly materials, as agate*, basalt, granite, alabaster, onyx, jasper, gold, and precious stones; the latter were contented with common porcelain, wax, limestone, or wood. But even the best which have been found in the tombs, are evidently of inferior quality; and like their vases, and chairs, none have been discovered equal in beauty to those represented in the paintings, with the exception of a few rings and some female ornaments, which had been actually worn by the deceased.

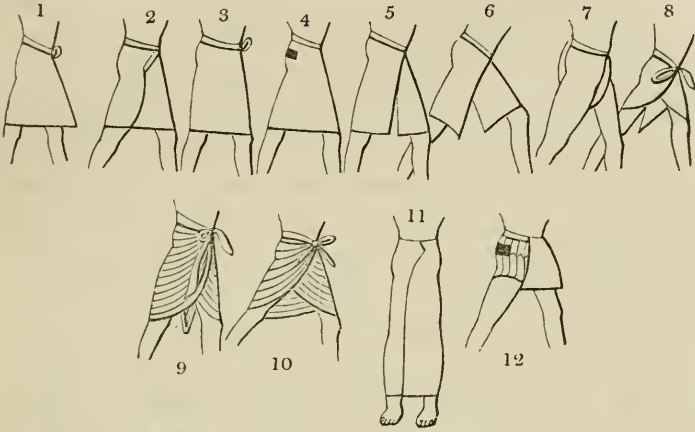
The paintings, again, indicate a very small portion of their inventions: many, with which we know they were acquainted, are omitted; and the same remark applies to some of their most common occupations, to the animals they kept, and to the ordinary productions of their country. No exact notion can even be formed of their costume and the dresses of various grades, either among men or women, though so frequently represented; partly owing to their conventional style of drawing figures, partly to their want of skill in depicting drapery; which, as I have observed, was merely added to the figure, without forming part of the subject described; it is therefore only the most simple portion of their dress which can be understood.

DRESSES.

Ordinary workmen, and indeed all the lower

* So called from Achate a river in Sicily. Theophr. § 58.

orders, were clad in a sort of apron, or kelt, sometimes simply bound round the loins, and lapping over in front*; and others had short drawers,



No. 395. Men's Dresses. 13 a shirt from the work of Prof. Rosellini.

extending halfway to the knee.† The same kind of apron was worn by the higher orders, under

* Vide wood-cut, No. 395.

† Vide wood-cut, No. 354. fig. 1. a. and fig. 2. a.

an ample dress of fine linen, reaching to the ankles*, and provided with large sleeves.† The apron was generally fastened by a girdle, or by a sort of sash, tied in front in a bow or knot‡: it was sometimes folded over, with a centre-piece falling down in front, beneath the part where it overlapped; and some of the poor classes, while engaged in laborious occupations, were contented with a roll of linen passed between the legs, from the back to the front of the girdle§; which is frequently used at this day by the peasants, when drawing water by the *shadoof*.

Herodotus mentions|| some Egyptian dresses, which he describes of linen, with a fringe on the border around the legs, called *calasiris*; over which they wore a cloak of white wool, similar, no doubt, to the *bornous*¶ of the present day, so common in Egypt and the coast of Barbary. I never remember seeing this cloak represented, except in the dresses worn by the captives of the Rot-ñ-no**, who appear to have something of the kind over their inner garments.

The same custom of edging their dresses with fringes was common to the Israelites, who were ordered†† to make them “in the borders of their garments;” “a blue riband” being “put upon the fringe.” These fringes, as already observed, were

* *Vide* wood-cut, No. 279. *figs.* 5, 6. and pl. 12. *fig.* 14.

† *Vide* wood-cut, No. 341. and 116. *fig.* 5.

‡ *Vide* wood-cut, No. 78. Vol. II. p. 10.

§ *Vide* wood-cut, No. 395. *fig.* 7.

|| Herodot. ii. 81.

¶ The *bornous* is a woollen cloak, open in front, and buttoned over the breast. It has a hood.

** *Vide* woodcut, No. 72. Vol. I. p. 403.

†† Numb. xv. 38.

only the ends of the threads composing the woof, left in order to prevent the cloth unravelling ; and the blue riband added by the Israelites, was intended to strengthen it, and prevent its tearing.

I have noticed the woollen cloak*, and the prohibition which Herodotus says was issued against their wearing it, when they entered a temple, or being buried in cloths of that quality ; and I have also observed, that though cotton garments were sometimes used, the preference was given to linen, which was considered more conducive to cleanliness and health. With regard to the calasiris mentioned by Herodotus, it does not appear that they were very generally used ; but dresses are occasionally represented in the paintings with a fringe †, and pieces of cloth have been found in the tombs with this kind of border.

Some wore a sort of shirt with loose or tight sleeves, open at the neck, where it was tied with strings ‡ ; and except that it was of linen, instead of wool, it was not unlike the *bisht* of the modern inhabitants of Upper Egypt.

The dresses of the priests and persons of rank consisted of an under garment, similar to the apron already mentioned, and a loose upper robe with full sleeves, secured by a girdle round the loins ; or of the apron, and a shirt with short tight sleeves, over which was thrown a loose robe, leaving the right arm exposed. § Sometimes a priest, when officiating in the temple, laid aside the upper

* Vol. I. p. 280.

† *Vide* wood-cut, No. 396. l. 7. 9. ; and 398. l.

‡ *Vide* woodcut, No. 90., *fig.* 5. Vol. II. p. 46., and No. 387.

§ *Vide* wood-cut, No. 417. *fig.* 1.



No. 396.

Dresses of Priests.

Thebes.

8, 9, hierogrammat, or sacred scribe.

vesture, and was satisfied to wear an ample robe bound round the waist, which descended over the apron to his ancles; and occasionally he put on a long full garment, reaching from below the arms to the feet, and supported over the neck with straps.* Others again, in the sacred processions, were entirely covered with a dress of this kind, reaching to the throat, and concealing even the hands and arms.†

The costume of the hierogrammat, or sacred scribe, consisted of a large kelt or apron, either tied in front, or wound round the lower part of the body; and the loose upper robe with full sleeves, which, in all cases, was of the finest linen: he had some-

* Wood-cut, No. 396. *fig.* 4. † *Vide* woodcut, No. 396. *fig.* 5.

times one or two feathers on his head, as described by Clement of Alexandria* and Diodorus.†

The hieraphori, when bearing the sacred emblems, wore a long full apron reaching to the ankles, tied in front with long bands, and a strap, also of linen, passed over the shoulder to support it ‡; but they had no upper robe on these occasions. Sometimes a priest who offered incense was clad in this long apron, and the full robe with sleeves; sometimes only in the former: and the



No. 397.

Princes and Children.

Thebes.

1, head-dress of a prince. 2, and 3, lock of hair worn by children. 4, dress of a son of Remeses III. 5, head-dress of a prince, Remeses.

dresses of the others in like manner varied on different occasions.

* "The Hierogrammat walks first, having feathers on his head, and a book in his hand." Clem. Alex. Str. 5, 6.

† Diodor. i. 87. "The sacred scribes wear a purple fillet and hawk's feather on their head." Vide woodcut, No. 396. fig. 9.

‡ Vide woodcut, No. 396. fig. 6.

The princes wore a dress very like that of the sacred scribe, the apron wound round the body, and divided into three different folds, over which was a garment with large sleeves; but their distinguishing mark was a peculiar badge at the side of the head, descending to the shoulder, and frequently adorned and terminated with a gold fringe. This, I suppose, to have contained the lock of hair, indicative of youth, which is seen in the statues of Harpocrates, and frequently represented on the heads of children. For though the Egyptians were shaved, and wore wigs and other coverings to the head, children were allowed to leave certain locks of hair*; and if the sons of the king, long before they arrived at the age of manhood, had abandoned this youthful custom, the badge was attached to their head-dress as an emblem of their rank as princes; or really to show they had not, during the life time of their father, arrived at *kinghood*; on the same principle that a Spanish prince, of whatever age, continues to be styled an “infant.”

I have already noticed † those priests who wore a leopard skin; which some have mistaken for that of the *nebris* or fawn, and improperly ascribed to Bacchus. It was generally thrown over their dress; its fore-legs sometimes made to form sleeves for the arms: and the robes worn beneath it varied at different times. It was usually confined to the high-priests, who superintended the sacrifices, and processions of the sacred boats or arks; who pre-

* *Vide* wood-cuts, No. 397. *fig.* 3. No. 402. and No. 195. *fig.* 2.

† Vol. I. p. 279.

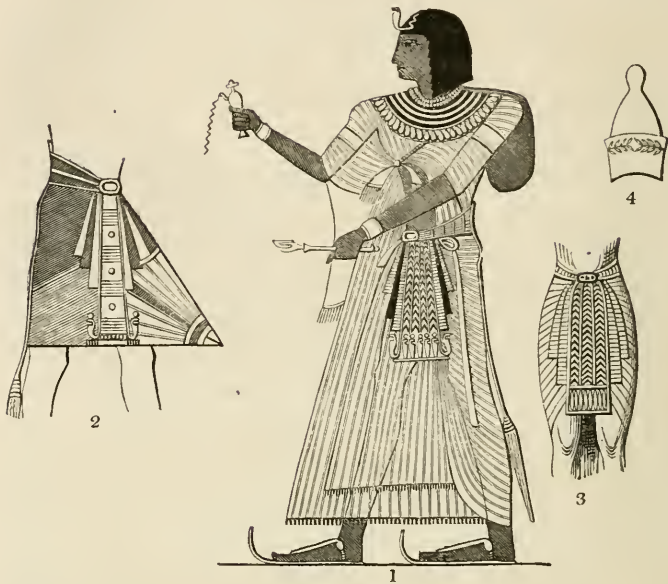
sented the offerings at the altar of the gods, and at the funerals of individuals; or who anointed the king at his coronation: and the same badge was assumed by the monarch when officiating on similar occasions.

The robes of the sovereign varied, of course, according to his immediate occupation. When engaged as high-priest, they much resembled those worn by the principal functionaries of the sacerdotal order, with the exception of the apron and head-dress, which were of peculiar form, and belonged exclusively to his rank as king.

This apron was richly ornamented in front with lions' heads, and other devices, probably of coloured leather; and the border was frequently formed of a row of asps, the emblems of royalty. Sometimes the royal name, with an asp on each side, as *supporters*, was embroidered upon it, the upper part being divided into square compartments of different colours; but it is not improbable, that this formed an appendage to the girdle, rather than to the apron; and several straps falling down at the side of the centre-piece, shōw that it was tied in front, and came over the folds of the apron, and even of the upper robes.

The headdress of the king, on state occasions, was the crown of the upper or of the lower country, or the *pshent*, the union of the two. Every king, after the sovereignty of the Thebaid and Lower Egypt* had become once more vested in the same person,

* *Vide suprà*, p. 283.



No. 398.

Dress of the King.

2, 3, the king's apron. 3, is from a statue of Amunoph III. in the museum at Alnwick Castle. 4, wreath of the crown of Sabaco's statue at the Isle of Argo.

put on this double crown at his coronation; and we find in the grand representation given of this ceremony at Medeenet Haboo, that the principal feature of the proclamation, on his ascension to the throne, was the announcement to the four sides of the world, that "Remeses had put on the crown of the upper and lower country."

I have already noticed this interesting subject*, and should not have failed to introduce a copy of it here, if the size of this work had not been too limited. I hope, however, to be able, at a future time, to present it with several other curious sculp-

* Egypt and Thebes, p. 63.; and *supra*, p. 288. 289.

tures, in a form better suited to them, to which I shall refer the reader.

He even wore his crown during the heat of battle*, like the kings of olden days in Europe; sometimes merely a wig; but a helmet† made apparently of woollen stuff with a thick nap, not very unlike the modern Persian cap, was generally preferred; and, in religious ceremonies, he put on a striped head-dress, probably of linen, which descended in front over the breast, and terminated behind in a sort of *queue* bound with riband.‡

When crowned, the king invariably put on the two crowns at the same time, though on other occasions he was permitted to wear each separately, whether in the temple, the city, or the field of battle; and he even appeared in his helmet§ during the ceremonies in honour of the gods. On some occasions he wore a short wig, on which a band was fastened, ornamented with an asp, the emblem of royalty.||

It may appear singular, that so warm a covering to the head should have been adopted in the climate of Egypt; but when we recollect that they

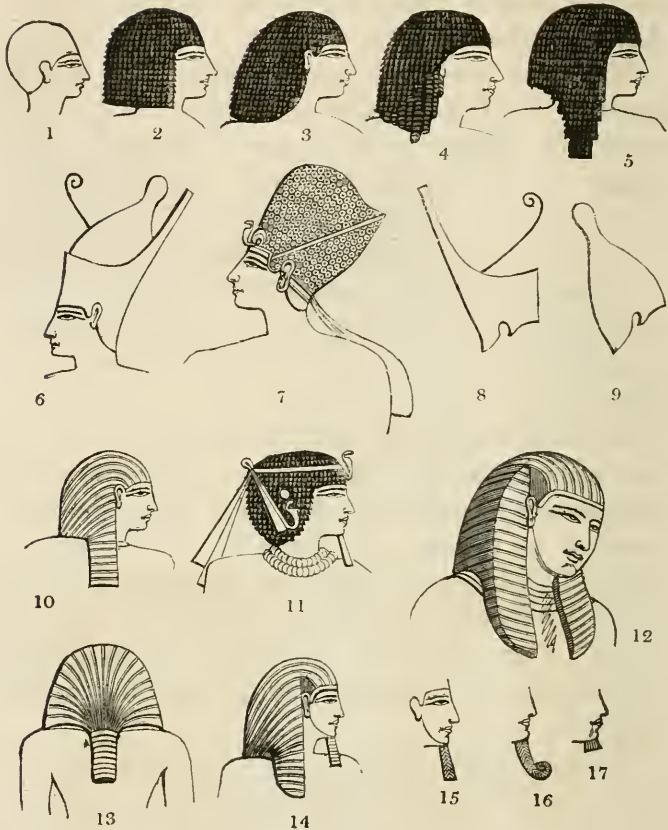
* For the head-dress and costumes of soldiers, *vide* Vol. I. p. 329. *et seq.*

† The Egyptian helmet had no crest. I have mentioned the origin of crests in Vol. I. p. 331. The Greek crest was copied from the mane of a horse; and in illustration of this we frequently find the scales or check-pieces of the helmet made to imitate the ears of that animal, which, when raised and turned up, project from the upper part on either side. Conf. Homer, i. 382., the helmet of Achilles with a horse's tail, "τπουρις τρυφαλεια;" and Virg. *Æn.* x. 369. "cristaque hirsutus equina."

‡ *Vide* wood-cut, No. 399. *fig.* 13.

§ Conf. Herodot. ii. 151. *vide* Vol. I. p. 144.

|| *Vide* woodcut, No. 399. *fig.* 11.



No. 399.

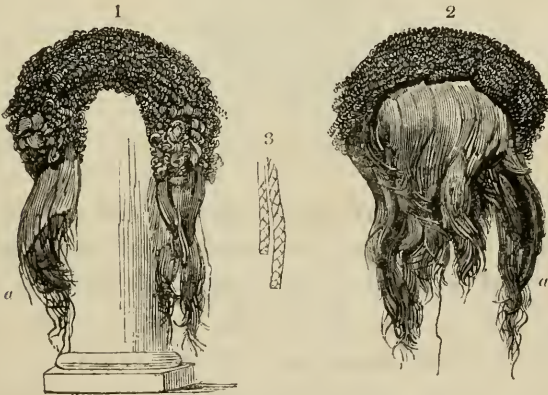
Head-dresses.

1, a close cap. 2, 3, 4, 5, wigs. 6, the crown of the upper and lower country, or 9 and 8 united. 10 to 14, royal head-dresses. 15, beard of a god. 16, of a king. 17, of a private individual of rank.

always shaved the head, and that the reticulated texture of the groundwork, on which the hair was fastened, allowed the heat of the head to escape, while the hair effectually protected it from the sun, it is evident that no better covering could have been devised, and that it far surpassed in

comfort and coolness the modern turban; which is always found by those who are in the habit of wearing it, to be very agreeable in hot weather, provided all the particulars are attended to, which the Turks find so essential, but which those Europeans who merely put it on for effect, too often neglect.

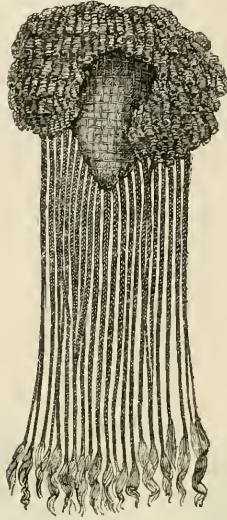
The upper portion of the wig was frequently made with curled, and not with plaited hair, this last being confined to the sides and lower part, as is the case in the wigs preserved in the British and Berlin museums; but the whole was sometimes composed of a succession of plaits, commencing from the centre of the crown, extending downwards, and increasing in length towards the bottom.



No. 400. Front and back of an Egyptian wig in the British Museum. 3, shows the appearance of the long plaits, *a. a.*

Some smaller wigs, worn by persons of rank, consisted of short locks of equal length, arranged in uniform lines; imitations of which appear to

have been made in woollen or other stuffs, under the denomination of false wigs, for the use of those who could not afford the more expensive quality of real hair.



No. 401.

Wig, about 2½ feet in length, seen in front.

Berlin Museum.

Wigs were worn both within the house and out of doors, like the turban of the present day; and a priest might even officiate on some occasions in his wig. At parties, the head-dress of every guest was bound with a chaplet of flowers, and ointment* was put upon the top of the wig, as if it had really been the hair of the head†; and one instance occurs of a wreath of leaves placed round the crown of a king, on a statue of

* *Vide* Athen. xv. 13. and Juvenal, Sat. xv. 50.

“Unguenta, et flores, multæque in fronte coronæ.”

† *Vide* Vol. II. p. 214. 218.

Sabaco, in Ethiopia, precisely similar to those worn by the Romans.*

The Egyptians, says Herodotus, “only let the hair of their head† and beard grow in mourning, being at all other times shaved‡;” which agrees perfectly with the authority of the Bible§, and of the sculptures. So particular, indeed, were they on this point, that to have neglected it was a subject of reproach and ridicule; and whenever they intended to convey the idea of a man of low condition, or a slovenly person, the artists represented him with a beard.|| It is amusing to find that their love of caricature was not confined to the lower orders, but extended even to the king; and the negligent habits of Remeses VII. are indicated in his tomb at Thebes, by the appearance of his chin, blackened by an unshorn beard of two or three days’ growth. But it was likewise given as the test of hardships undergone in a severe campaign; and the warlike character of Remeses the Great is pointed out in the same manner.

The Egyptians did not confine the privilege of shaving to freeborn citizens, like the Romans, who obliged slaves to wear their beards and hair long, and only permitted them the use of a cap¶

* *Vide supra*, p. 352. wood-cut, No. 398., *fig.* 4.

† Diodorus states, that they suffered the hair to grow when on a journey; but this was probably on accomplishing a vow. *Diod.* i. 18.

‡ Herodot. ii. 36. and iii. 12.

§ Gen. xli. 14. Joseph, when sent for by Pharaoh from prison, “shaved himself, and changed his raiment.”

|| *Vide* wood-cut, No. 115. Vol. II. p. 127.

¶ Livius, xlv. 44. “*Pileatum, capite raso libertum.*”

after they had been enfranchised: and though foreigners, who were brought to Egypt as slaves, had beards on their arrival in the country, we find that so soon as they were employed in the service of this civilised people, they were obliged to conform to the cleanly habits of their masters; their beards and heads were shaved; and they adopted a close cap.

The priests were remarkable for their love of cleanliness, which was carried so far, that they shaved the whole body every three days, and performed frequent daily ablutions, bathing twice a day and twice during the night.* It was not confined to their order; every Egyptian prided himself on the encouragement of habits, which it was considered a disgrace † to neglect: we can, therefore, readily account for the disgust they felt on seeing the squalid appearance and unrefined habits of their Asiatic neighbours, whose long beards were often the subject of ridicule to the Egyptian soldier; and for their abhorrence of the bearded and long-haired Greeks; which was so great, that, according to Herodotus ‡, “no Egyptian of either sex would on any account kiss the lips of a Greek, make use of his knife, his spit and cauldron, or taste the meat of an animal which had been slaughtered by his hand.” The same habits of cleanliness are also indicated by the “changes of raiment”

* Herod. ii. 37. Porphyry says thrice a day, and a nocturnal ablution occasionally.

† Herod. ii. 37. Plut. de Is. s. 3.

‡ Herod. ii. 41. and 91.

given by Joseph* to his brethren, when they set out to fetch their father to Egypt.

Barbers may be considered the offspring of civilisation; and as a Roman youth, when arrived at the age of manhood, cut off his beard, and consecrated it to some deity, as a token of his having emerged from a state of childhood, so a people, until they have adopted the custom of shaving, may be supposed to retain a remnant of their early barbarism.

The Romans, at first, like other people, allowed their beards to grow, until about 454 years after the building of the city (299 B. C.), when P. Ticinius Mena, having brought barbers from Sicily, introduced the custom at Rome; and, as Pliny states †, “Scipio Africanus was the first Roman who shaved every day.” They resembled the Egyptians rather than the Greeks in this respect, and in the habit of allowing the hair of the head ‡ and beard to grow in mourning; the Greeks, on the contrary, shaving themselves on those occasions.

The prejudice of these last in favour of long hair § seems to be retained to the present day; for though the modern Greeks have adopted a *moslem* custom, and wear the red *fuz* of the coast of Barbary, they have remained insensible to the comfort and cleanliness of shaving, and have preferred the incon-

* Gen. xlv. 22. “To all of them he gave each man changes of raiment; but to Benjamin he gave three hundred pieces of silver, and five changes of raiment.”

† Plin. vii. 59.

‡ And in youth: whence children are called “Capillatos” by Petronius Arbiter (Satyr.) *Vide* Martial. Epigr. lxii. lib. 10.

§ Conf. Homer, Il. ii. 11. “καρηκομωντας Αχαιους,” viii. 53, &c. Apollo was represented with long hair. *Vide* 1 Cor. xi. 14.

sistency of covering the head with a close cap*, and cherishing the growth of long hair.

With the Egyptians it was customary to shave the heads even of young children, leaving only certain locks† at the front, sides, and back; and those of the lower classes were allowed to go out in the sun with the head exposed, without the protection of a cap; which is the reason assigned by Herodotus‡ for the hardness of the Egyptian skulls, compared with those of other people. “I became acquainted,” says the historian, “with a remarkable fact, which was pointed out to me by the people living in the neighbourhood of the field of battle, where the Egyptians and the army of Cambyses fought; the bones of the killed being still scattered about, those of the Persians on one side, and of the Egyptians on the other. I observed that the skulls of the former were so soft, that you could perforate them with a small pebble; while those of the latter were so strong, that with difficulty you could break them with a large stone. The reason of which, as they told me, and I can readily believe it, is that, the Egyptians being in the habit of shaving their heads from early youth, the bone becomes thickened: and hence, too, they are never bald; for, certainly, of all countries, no where do you see fewer bald people than in Egypt. The Persians, on the contrary, have soft skulls, in consequence of their keeping the head covered from the sun, and enveloped in soft caps. I also

* The Greeks ridicule and abhor our unbecoming hats, but there is not the same objection to them on the score of cleanliness.

† As with the Chinese, and modern Egyptians. *Vide* wood-cut' No. 195. *fig.* 2.

‡ Herod. iii. 12.

observed the same of those who were killed in the battle between Achæmenes and Inarus the Libyan.”

It was usual for the lower orders to work in the sun without any covering to the head, as the modern peasants of Egypt, who appear to inherit from their predecessors skulls of uncommon hardness ; and we see the same class of persons represented in the paintings with and without a cap, whether in the house or in the open field.

Herodotus says*, when the Egyptians perform their vows, they shave the heads of their children, either entirely, or half, or only a third ; and putting the hair and some silver into a pair of scales, dedicate an equal weight of the latter to the animal which is sacred to the deity they invoke. This does not, however, imply that they left the whole head unshaven ; and the hair to which he refers was probably the long pendent locks represented in the Theban sculptures.

Persons of all classes occasionally wore caps, some of which were large, others fitting tight to the head ; but these last were considered far less becoming than the wig, and suited rather to the lower orders than to persons of rank. Women always wore their own hair†, and they were not shaved even in mourning, or after death.

The use of wigs was not confined to the Egyptians of all people of antiquity ; the Romans, under the emperors, also adopted a sort of peruke, called *capillamentum* or *galerus*, though it seems rather to have been worn by women than

* Herod. ii. 65.

† *Vide* 1 Cor. xi. 6.

men ; and Juvenal* describes Messalina putting on a wig of flaxen hair to conceal her own black locks, when she left the palace in disguise.

The most singular custom of the Egyptians was that of tying a false beard upon the chin, which was made of plaited hair, and of a peculiar form, according to the person by whom it was worn. Private individuals had a small beard, scarcely two inches long ; that of a king was of considerable length, square at the bottom ; and the figures of gods were distinguished by its turning up at the end. No man ventured to assume, or affix to his image, the beard of a deity ; but after their death, it was permitted to substitute this divine emblem on the statues of kings, and all other persons who were judged worthy of admittance to the Elysium of futurity ; in consequence of their having assumed the character of Osiris, to whom the souls of the pure returned, on quitting their earthly abode.

The form of the beard, therefore, readily distinguishes the figures of gods and kings, in the sacred subjects of the temples ; and the allegorical connection between the sphinx and the monarch is pointed out by its having the kingly beard, as well as the crown, and other symbols of royalty.

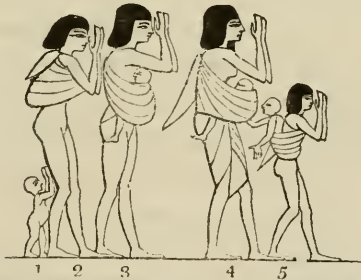
The dresses of children of the lower classes were very simple ; and as Diodorus † informs us, the expenses incurred in feeding and clothing them amounted to a mere trifle. “ They feed them,” he says, “ very lightly, and at an incredibly small cost ;

* Juven. Sat. vi. 120. “ Et nigrum flavo crinem abscondente galero.”

† Diodor. i. 80.

giving them a little meal of the coarsest and cheapest kind, the pith of the papyrus, baked under the ashes, with the roots and stalks of some marsh weeds, either raw, boiled, or roasted; and since most of them are brought up, on account of the mildness of the climate, without shoes, and, indeed, without any other clothing *, the whole expense incurred by the parents does not exceed 20 drachmæ (13 shillings) each; and this frugality is the true reason of the populousness † of Egypt.” But the children of the higher orders were often dressed like grown persons, with a loose robe, reaching to the ankles, and sandals. ‡

Infants do not appear to have been swaddled, as among the Jews, Greeks, and Romans. When too young to walk, if taken out by a mother or nurse, they were carried in a shawl, suspended at her back, or before her; a custom still retained



No. 402. Women carrying their children in a funeral procession.

Thebes.

by the women of the Moghrebin Arabs; and in Ethiopia they were carried in baskets, supported

* *Vide* wood-cut, No. 195. *fig.* 2. and No. 402.

† Pliny might attribute it to the Egyptian women having occasionally seven children at a birth. He gives his authority, Trogus (vii. 3.).

‡ *Vide* plate 12. *fig.* 1.

at the mother's back by a band passing over her forehead.*

Sometimes, though nearly or entirely naked, the neck of an Egyptian child was decorated with a string of beads; and occasionally a *bulla*, or charm, was suspended in the centre, representing the symbol of truth and justice, which has been supposed also to indicate the heart, and is usually found in the balance of the judgment scenes, as a representative of the good works of the deceased. A *bulla* of this kind was worn by the youthful deity Harpocrates.†

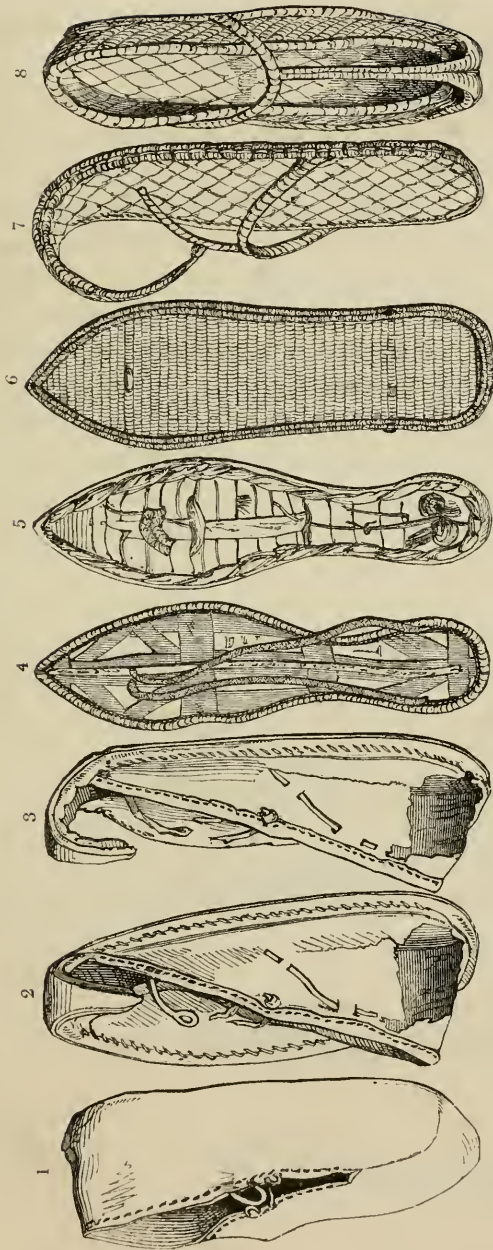
It was probably of gold, or hard stone, like those of the Romans‡; and others worn by the poorer classes, as at Rome, and in modern Egypt, were of leather. They were supposed to prompt the wearer to virtue and wisdom, to keep off the evil eye, or to avert misfortune; and superstition induced many to appeal to them in danger, and derive from them omens of forthcoming events. Sometimes a charm consisted of a written piece of papyrus tightly rolled up, and sewed into a covering of linen, or other substance, several of which have been found at Thebes; and emblems of various deities were appended to necklaces for the same purpose.

Ladies and men of rank paid great attention to the beauty of their sandals: but on some occasions

* *Vide* wood-cut, No. 73. Vol. I. p. 404.

† *Vide* my *Materia Hieroglyphica, Pantheon*, plate 17. *fig.* 3.

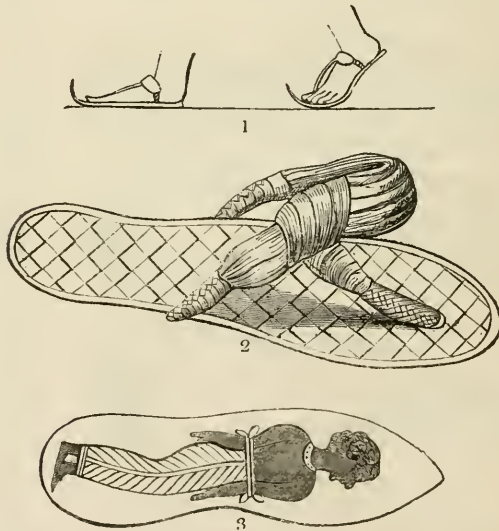
‡ The Roman and Etruscan children had sometimes three or four *bullas*, as we see from statues that have been found. *Conf. Virg. Æn.* xii. 942. *Plin.* (xxxiii. i.) explains who wore the golden *bulla*, and who the leathern *lorum*. *Vide* *Juv. Sat.* xiii. 33., and *Pers. Sat.* v. 31. &c.



No. 405. Sandals and shoes found in Egypt. Mr. Salt's collection. 4, 5, upper and lower side of a pair of sandals, made of palm leaves and the papyrus 11 inches long and 3 broad. In the museum of Alnwick Castle. 6, sole of a sandal 1 foot long, and $2\frac{1}{4}$ inches broad. Alnwick Castle. 7, a sandal, and 8, a sandal with sides like a shoe, both in the Berlin collection.

those of the middle classes who were in the habit of wearing them, preferred walking barefooted; and, in religious ceremonies, the priests frequently took them off, while performing their duties in the temple.

The sandals varied slightly in form; those worn by the upper classes, and by women, were usually pointed and turned up at the end, like our skaits, and many Eastern slippers of the present day. Some had a sharp flat point, others were nearly round. They were made of a sort of woven, or interlaced work, of palm leaves and papyrus stalks, or other similar materials; sometimes of leather; and were frequently lined within with cloth, on which the figure of a captive was painted; that



No. 404.

Sandals.

Berlin Museum.

1, from the sculptures.

2, in the Berlin Museum; made of the papyrus.

3, figure of a captive on the sole.

humiliating position being considered suited to the enemies of their country, whom they hated and despised. An idea agreeing perfectly with the expression which so often occurs in the hieroglyphic legends, accompanying a king's name, when his valour and victories are recorded on the sculptures: "You have trodden the impure Gentiles under your powerful feet." *

Shoes, or low boots, were also common in Egypt, many having been found at Thebest†; but these I believe to have been of late date, and to have belonged to Greeks; for, since no persons are represented in the paintings wearing them, except foreigners‡, we may conclude they were not adopted by the Egyptians, at least in a Pharaonic age. They were of leather, generally of a green colour; laced in front by thongs, which passed through small loops on either side; and were principally used, as in Greece and Etruria, by women.

The dresses of women consisted sometimes of a loose robe or shirt, reaching to the ankles, with tight, or full sleeves, and fastened at the neck like those of the men, with a string; over which they wore a sort of petticoat, secured at the waist by a girdle; and this, in mourning, while bewailing the death of a relative, was frequently their only dress.§

Such was the costume of the lower classes of women; and, sometimes indeed, as at the present

* *Vide* wood-cut, No. 404. *fig.* 3.

† *Vide* wood-cut, No. 403. *figs.* 1, 2, 3.

‡ *Vide* plate 14.; and wood-cut No. 64. *fig.* 1.

§ *Vide* wood-cut, No. 7., Vol. I. p. 256. and Herodot. ii. 85.



No. 405.

Dresses of women.

The sash in figs. 1, and 2, though represented at the side, is to be understood as tied in front. In fig. 3, the side hair appears to be fixed by a comb; and before it, on the cheek, the short hair is arranged in separate plaits. 4, shows the shirt tied at the neck: it is a terra cotta statue.

day it consisted merely of the loose shirt or robe, without shoes or sandals.

The higher orders wore a petticoat, or gown, secured at the waist by a coloured sash, or by straps over the shoulders; and above this was a large loose robe, made of the finest linen, with full sleeves*, and tied in front below the breast: and during some religious ceremonies† the right arm was taken out of the sleeve, and left exposed as in the funeral processions. The petticoat or gown was of richly coloured stuff, presenting a great variety of patterns, not unlike our modern chintzes, the

* *Vide* a group of women in plate 4. of my *Materia Hierog.* part 2.; and wood-cut, No. 8. fig. 5.

† *Vide* wood-cut, No. 8. figs. 1, 2, and 3., Vol. I. p. 260.

most elegant of which were selected for the robes of deities and the dresses of queens.

Slaves or servants were not allowed to wear the same costume as ladies, and their mode of dressing the hair was different. They generally bound it at the back part of the head, into a sort of loop, or ranged it in one or more long plaits at the back, and eight or nine similar ones were suffered to hang down at either side of the neck and face.* They wore a long tight gown, tied at the neck, with short close sleeves, reaching nearly to the elbow : and sometimes a long loose robe was thrown over it, when employed to dance, or to present themselves on festive occasions.

Ladies wore their hair long, and plaited. The back part was made to consist of a number of strings of hair, reaching to the bottom of the shoulder blades, and on each side other strings of the same length descended over the breast. The hair was plaited in the triple plait, the ends being left loose ; or, more usually, two or three plaits were fastened together at the ex-



No. 405.

Head-dress of a lady, from a mummy case.

* *Vide* wood-cuts, Nos. 236. and 280,

tremity by woollen string of corresponding colour. Around the head was bound an ornamental fillet, with a lotus bud, by way of *feronière*, falling over the forehead; and the strings of hair, at the sides, were separated and secured with a comb, or a band, ornamented in various ways according to the fancy of the wearer: and occasionally a round stud, or pin, was thrust into them at the front.

The short hair at the side of the face, which the ingenuity of ancient Roman*, and modern European ladies, has, by the aid of gum, compelled to lie in an immovable curve upon the cheek, was intervoven with several of its longer neighbours; and these, being bound together at the end with string, fell down before the earring which they partially concealed. Many of the mummies of women have been found with the hair perfectly preserved, plaited in the manner I have mentioned; the only alteration in its appearance being the change of its black hue, which became reddened by exposure to great heat, during the process of embalming.

The earrings, most usually worn by Egyptian ladies, were large, round, single hoops† of gold, from one inch and a half, to two inches and one-third, in diameter, and frequently of a still greater size; or made of six rings soldered together‡: sometimes an asp, whose body was of gold set with precious stones, was worn by persons of rank, as a

* This little *accroche cœur* appears in the busts of several Roman ladies, of the time of the empire.

† *Vide* wood-cut, No. 412., *fig.* 5. and 272.

‡ *Vide* wood-cut, No. 412., *figs.* 6 and 7.

fashionable caprice; but it is probable that this emblem of majesty was usually confined to members of the royal family.

Earrings of other forms have also been found at Thebes, but their date is uncertain; and it is difficult to say if they are of an ancient Egyptian age, or of Greek introduction. Of these, the most remarkable are a dragon*, and another of fancy shape which is not inelegant.† Some few were of silver, and plain hoops, like those made of gold already noticed, but less massive, being of the thickness of an ordinary ring: at one end was a small opening, into which the curved extremity of the other caught after it had been passed through the ear‡; and others were in the form of simple studs.§

Women wore many rings, sometimes two and three on the same finger: the left was considered the hand || peculiarly privileged to bear those ornaments; and it is remarkable, that its third finger was decorated with a greater number than any other, and was considered by them, as by us, *par excellence*, the ring finger ¶; though there is no evidence of its having been so honoured at the marriage ceremony.** They even wore a

* Wood-cut, No. 408. *fig.* 10. not unlike one of the Chinese dragons.

† *Vide* wood-cut, No. 408. *fig.* 21.

‡ *Vide* wood-cut, No. 412. *fig.* 5.

§ *Vide* woodcut, No. 397. *fig.* 4.

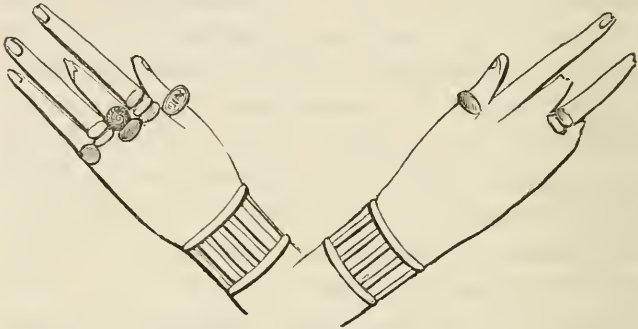
|| The same with the Romans (Plin. xxxiii. i.); they wore rings on all but the middle finger. This last was preferred by the Gauls and Britons.

¶ *Vide* Plin. xxxiii. 1. Of the fingers on which rings were worn.

“Singulis primo digitis geri mos fuerat, qui sunt minimis proximi.”

** Plin. (xxxiii. i.) mentions the iron ring worn by a person betrothed: “etiam nunc sponsæ annulus ferreus mittitur, isque sine gemmâ.” He thinks they had no rings in Homer’s time. But in Egypt they were used long before.

ring on the thumb ; and I have seen, upon the right hand of a wooden figure, a ring on the thumb, and two on the third finger ; and upon the left, one upon the thumb and little finger ; two on the fore and second finger ; and three on the third : as may be seen in the accompanying wood-cut.



No. 407. Hands of a wooden figure of a woman. On the lid of a mummy case in Mr. Salt's collection, now in the British Museum.

Some rings were simple ; others were made with a scarabæus, or an engraved stone ; and they were occasionally in the form of a snail, a knot, a snake, or some fancy device. They were mostly of gold ; and this metal seems to have been always preferred to silver, for rings, and other articles of jewellery. Silver rings, however, are occasionally met with ; and two in my possession, which were accidentally found in a temple at Thebes, are engraved with hieroglyphics, containing the name of the royal city.

Bronze was seldom used for rings. Some have been discovered of brass *, and iron, (of a Roman time, as I before observed) † ; but ivory and blue

* I am not sure if the alloy in them is zinc. I suspect it to be gold.

† Chap. ix. p. 236. *Vide* Plin. xxxiii. 3. and xxxiii. i. on iron rings.

porcelain were the materials of which those worn by the lower classes were usually made. The scarabæus was the favourite form both for rings, and the ordinary ornaments of necklaces; in some, the stone, flat on both faces, turned on pins, like many of our seals at the present day; and the ring itself was bound round at each end, where it was inserted into the stone, with gold wire. This was common not only to rings, but to signets, and was intended for ornament as well as security.

One of the largest signets I have seen, was in the possession of a French gentleman at Cairo, which contained twenty pounds' worth of gold.

It consisted of a massive ring, half an inch in its largest diameter, bearing an oblong plinth, on which the devices were engraved*, one inch long, $\frac{6}{10}$ ths in its greatest, and $\frac{1}{10}$ ths in its smallest breadth. On one face was the name of a king, the successor of Amunoph III., who lived about B. C., 1400; on the other a lion, with the legend "lord of strength," referring to the monarch: on one side a scorpion, and on the other a crocodile.

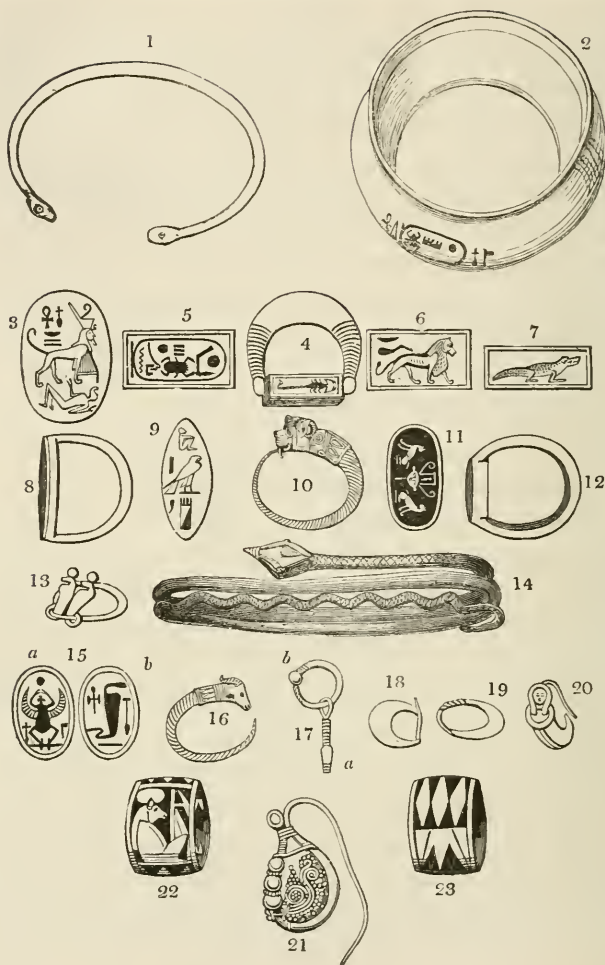
Two cats sitting back to back and looking round towards each other, with an emblem of the goddess Athor between them, seem to have been a favourite device on gold rings; and I have seen three or four of this pattern, one of which is in my possession. †

They also had large gold anklets or bangles ‡,

* Pliny is wrong in saying, "Non signat oriens, aut Ægyptus etiam nunc, literis contenta solis." xxxiii. i.

† Wood-cut, No. 412. *figs.* 11, 12.

‡ *Vide* Plin. xxxiii. 3.



No. 408.

Rings, signets, bracelets, and earrings.

Fig. 1. Bronze bracelet, or bangle, in the museum of Alnwick Castle.
 2. Gold bracelet in the Leyden Museum, bearing the name of Thothmes III., $1\frac{1}{2}$ inch high, and 3 inches in diameter. 3. Scarabæus of amethyst, with a sphinx, emblematic of the king, trampling on a prostrate enemy; over it is the expression "Good God, Lord of the world."
 4. A gold signet, mentioned in the last page. 5, 6, 7. The three other sides of the plinth.
 8. A gold ring. 9. The engraved face of it. 10. A gold earring, about $1\frac{1}{2}$ inch in diameter. 12. A gold ring in my possession four-fifths of an inch in diameter. 11. The face of it, of the real size. 13. Gold ring with two asps. 14. A snake bracelet of gold.
 15. A stone scarabæus. 16. Gold earring. 17. Gold earring with two pearls, *a* and *b*.
 18, 19, 20. Other gold earrings. 21. Gold earring, 1 inch high, and six-tenths broad.
 22, 23. Ring of porcelain, or blue-glazed pottery, Museum of Alnwick Castle.

armlets, and bracelets, frequently inlaid with precious stones, or enamel: some were in the shape of snakes, and others as simple rings: and worn by men as well as women. Kings are often represented with armlets and bracelets; and in the Leyden Museum is a gold one* bearing the name of the third Thothmes, which was doubtless once worn by that monarch; and, without any great licence of imagination we may suppose it to have been seen by Moses himself, if Thothmes was the Pharaoh who oppressed the Israelites, and into whose presence the Jewish legislator was so often summoned.

Handsome and richly ornamented necklaces were a principal part of the dress, both of men† and women; and some idea may be formed of the number of jewels they wore, from those borrowed by the Israelites at the time of the Exodus, and by the paintings of Thebes. They consisted of gold, or of beads of various qualities, and shapes, disposed according to fancy: generally with a large drop, or figure in the centre. Scarabæi, gold, and cornelian bottles, or the emblems of goodness and stability, lotus flowers in enamel, amethysts, pearls, false stones, imitations of fish, shells, and leaves, with numerous figures, and devices, were strung in all the variety which their taste could suggest; and the sole museum of Leyden possesses an infinite assortment of those objects,

* *Vide* wood-cut, No. 408. *fig.* 2.

† Necklaces and bracelets were worn by the Carthaginians, and by many Europeans, as the Gauls, Sabines and others. Judah's bracelets and signet are mentioned in Genesis, xxxviii. 18.

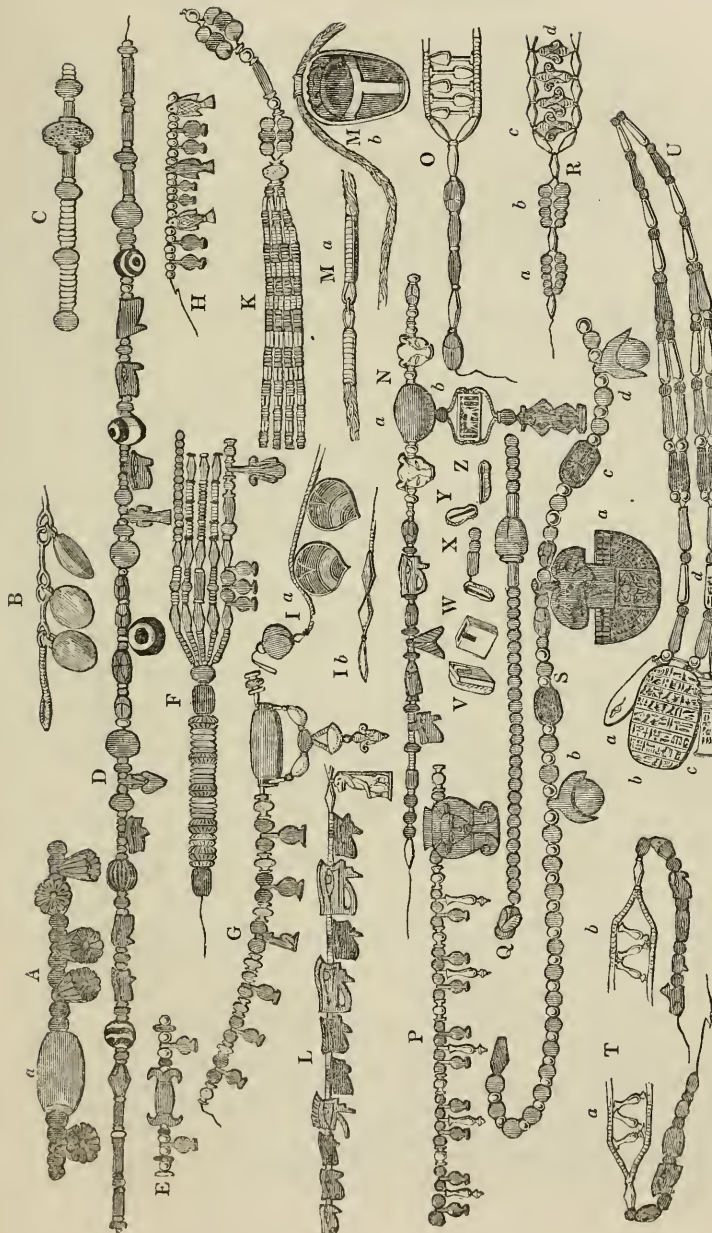
which were once the pride of the ladies of Thebes.

Some wore simple gold chains, in imitation of string, to which a stone scarabæus, set in the same precious metal, was appended; but these probably belonged to men, like the *torques* of the Romans.* A set of small cups, or covered saucers, of bronze gilt, hanging from a chain of the same materials, were sometimes worn by women; a necklace of which has been found, belonging to a Theban lady, — offering a striking contrast in their simplicity to the gold leaves inlaid with lapis lazuli †, red and green stones of another she wore: which served, with many more in her possession, to excite the admiration of her friends.

The devices engraved on scarabæi, rings, and other objects of ornamental *luxure*, varied according to the caprice of individuals. Rings frequently bore the name of the wearer; others of the monarch in whose reign he lived; others, again, the emblems of certain deities; and many were mere fanciful combinations. The greater number consisted of scarabæi, mounted upon a gold ring passing through them: the scarabæus itself was of green stone, cornelian, hæmatite, granite, serpentine, agate, lapis lazuli, root of emerald, amethyst, and other materials; and a cheaper kind was made of limestone, stained to imitate a harder and dearer quality; or of the ordinary blue pottery.

* Pharaoh “put a gold chain about (Joseph’s) neck,” Gen. xli. 42.: and “a ring upon Joseph’s hand.” *Vide* wood-cut, No. 409. *fig.* M.

† *Vide* wood-cut, No. 409. *figs.* B, 1a.



No. 409.

Various Necklaces, from the Leyden Museum.

B is composed of small covered cups, of bronze gilt.
 I b is the other end of I a. These leaves are of gold inlaid with lapis lazuli and green and red stones.
 M a a sort of gold torques or chain of which a stone scarabeus found in gold forms the centre ornament.
 U in the possession Mr. Madox.
 V W X Y Z gold catches of necklaces; one sliding into the other.

THE TOILET. OINTMENTS.

Of the various objects of the toilet, found at Thebes, and other places, the principal are bottles, or vases, for holding ointment, and *kohl** or collyrium for the eyes, mirrors, combs, and the small boxes, spoons, and saucers, already mentioned.† The ointment was scented in various ways, and I have had occasion to notice‡ some preserved in the museum at Alnwick Castle, which has retained its odour§ several centuries; and the great|| use of ointment by the Egyptians is sufficiently indicated in the paintings representing the reception of guests at their parties.

With the exception of the little found in the tombs, we have nothing to guide us respecting the nature of Egyptian ointments. Some appear to be made with a nut oil¶, but it is probable that animal, as well as vegetable, grease was employed for this purpose; the other ingredients depending on the taste of the maker, or the purchaser. Julius Pollux** mentions a black kind made in Egypt, and speaks of the *sagdas* as an ointment of that country. Theophrastus††, on the contrary, states

* It has the same name in Hebrew.

† Vol. II. p. 355. et seq.

‡ Vol. II. p. 214.

§ Theophrastus says, "The Egyptian ointment was not very strongly scented."

|| Athenæus says the revenues of Anthylla were given to the queens of Egypt for the purchase of ointments, another term for pin-money, lib. i. 25. *Vide* Corn. Nep. *in vitâ* Agesilai, and Juv. Sat. xv. 50.

¶ This agrees with the *βαλανον* of Theophrastus. *Vide* Plin. xiii. 1.

** J. Pollux, *Onom.* vi. xix.

†† Theophr. *De odoribus.*

that Egyptian ointments were colourless; but we can readily account for this variance of opinion, by supposing that they had in view two different qualities *: which is further proved, by the fact of our finding them both preserved at Thebes.

Ointment was frequently kept in alabaster† bottles, or vases, (whence these obtained, among the Greeks, the name of *alabastron*, even if made of other materials); sometimes in those of the onyx‡, or other stone, glass, ivory, bone, or shells§; specimens of all of which have been discovered in the tombs.

Strabo|| says that the common people used the oil of the *kikki*, or castor-berry for anointing themselves, both men and women; the general purpose to which it was applied being for lamps: and many oils, as from the *simsim*¶, olive, almond, flax, *selgam* (coleseed), *seemga*, lettuce, and other vegetable productions, were extracted in Egypt.**

The custom of anointing the body is usual in hot climates, and contributes greatly to comfort. Even the Greeks, Romans††, and others, whose limbs were mostly covered with clothes, and protected

* Plin. (xiii. 3.) says "Terrarum omnium Ægyptus accommodatissima unguentis." They adulterated their ointments. Plin. xiii. 1.

† Conf. Matt. xxvi. 7. "An alabaster box of very precious ointment."

‡ Conf. Hor. iv. Od. xi. 17. "Nardi parvus onyx."

§ Hor. ii. Od. v. 23. "Unguenta de conchis."

|| Strabo, lib. xvii. p. 567. Herod. ii. 94. Plin. xv. 7.

¶ *Sesamum orientale*.

** Plin. xiii. 1.

†† Ennius tells us that, even in the time of Tarquin they had this custom:—

"Tarquinii corpus bona fœmina lavit, et unxit."

Pliny doubts when it was introduced at Rome. xiii. 3.

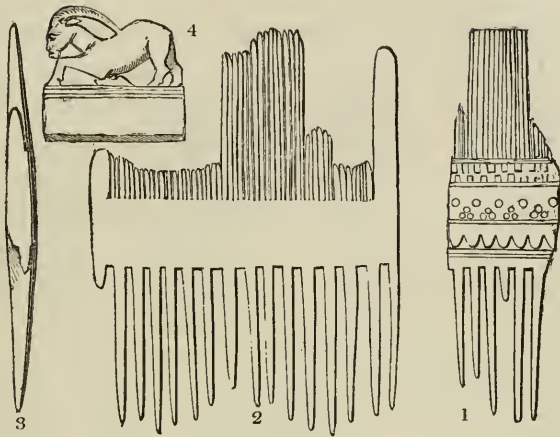
from the dryness of the air, found the advantage of its use; and those whose skin was much exposed, in consequence of their scanty clothing, as the Ethiopians, and other inhabitants of Africa, felt the necessity of softening and cooling the skin by the application of oils or ointments; and we find the custom most prevalent among the blacks who wear the least covering to their body.

Their principal care is bestowed upon the hair of the head, which they are not in the habit of shaving, except some of the upper classes among the inhabitants of the large towns; and the highest ambition of the Ethiopians is to obtain a sufficient quantity of grease, whatever kind it may be, to cover their head, and, to run down upon the shoulders, so as to give them a shining gloss, which they delight in displaying as they walk in the sun.*

The Egyptian combs were usually of wood, and double; one side having large, the other small teeth; the centre part was frequently ornamented with carved work, and, perhaps, inlaid. They were about four inches long, and six deep; and those with a single row of teeth were sometimes surmounted with the figure of an ibex, or other animal.

The custom of staining the eyelids and brows, with a moistened powder of a black colour, was common in Egypt from the earliest times; it was also introduced among the Jews and Romans, and

* Conf. Virg. *Æn.* v. 135. "juventus,
Nudatosque humeros oleo perfusa nitescit."



No. 410. Combs found at Thebes.
 1. Comb, with the centre part ornamented.
 3. Side view of fig. 2.
 4. An Ibex, supposed to have formed the top of a comb.

is retained in the East to the present day. It is thought to increase the beauty of the eye; which is made to appear larger by this external addition of a black ring; and many even suppose the stimulus its application gives to be beneficial to the sight. It is made in various ways. Some use antimony, black oxide of manganese, preparations of lead, and other mineral substances: others the powder, or the lamp black of burnt almonds, or frankincense; and many prefer a mixture of different ingredients.

Mr. Lane* is perfectly correct in stating that the expression “painted her face,” which Jezebel is said to have done, when Jehu came to Jezreel, is

* Modern Egyptians, vol. i. p. 43.

in the Hebrew, "painted her eyes* ;" the same is again mentioned in Jeremiah and Ezekiel† ; and the lengthened form of the ancient Egyptian eye, represented in the paintings, was probably produced, as Mr. Lane supposes, by this means.

Such is the effect described by Juvenal‡, Pliny § and other writers, who notice the custom among the Romans. At Rome it was considered disgraceful for men to adopt it, as at present in the East, except medicinally ; but, if we may judge from the similarity of the eyes of men and women in the paintings at Thebes, it appears to have been used by both sexes among the ancient Egyptians.

Many of these *Kohl* bottles have been found in the tombs, together with the bodkin used for applying the moistened powder. They are of various materials, usually stone, wood, or pottery, sometimes composed of two, sometimes of four and five separate cells, apparently containing each a mixture, differing slightly in its quality and hue, from the other three. Many were simple round tubes, vases, or small boxes : some were ornamented with the figure of an ape, or monster, supposed to

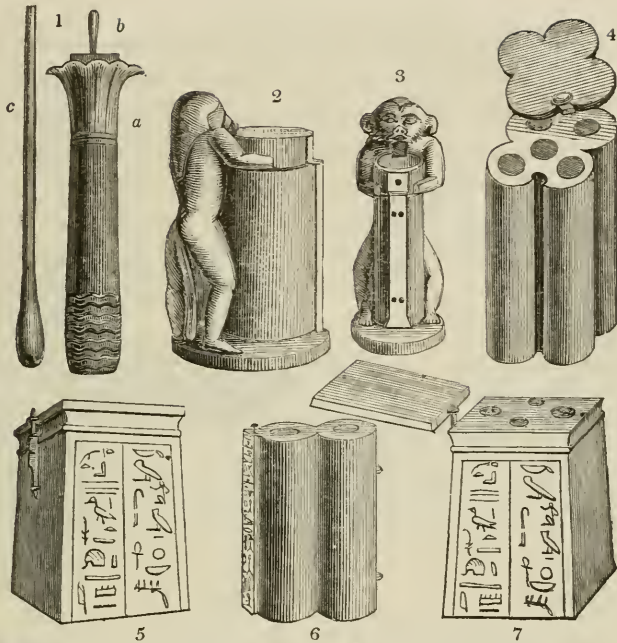
* 2 Kings, ix. 30. הַיָּיָי. In our translation, "She painted her face, and tired her head, and looked out at a window." In the margin "put her eyes in painting."

† Ezek. xxiii. 40. "For whom thou didst wash thyself, paintedst thine eyes, and deckedst thyself with ornaments." In Jeremiah (iv. 30.), it is in Hebrew "eyes."

‡ Juv. Sat. ii. 93. : —

"Ille supercilium madidâ fuligine tactum
Obliquâ producit acu, pingitque trementes
Attollens oculos."

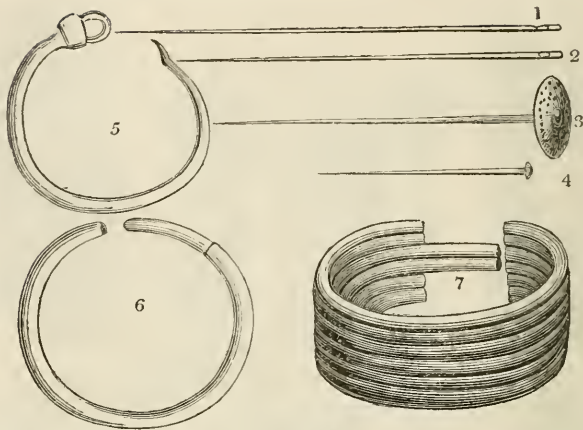
§ Plin. Ep. vi. 2.



No. 411. Boxes, or bottles, for holding the *Kohl*, for staining the eyelids.
 1. In Mr. Burton's collection. *c* is the bodkin for applying the *Kohl*. The others are in the museum of Alnwick Castle.

assist in holding the bottle between his arms, while the lady dipped into it the pin, with which she painted her eyes; and others were in imitation of a column made of stone, or rich porcelain of the choicest manufacture.

Pins and needles were also among the articles of the toilet, which have been occasionally found in the tombs. The former are frequently of considerable length, with large gold heads; and some, of a different form, tapering gradually to a point, merely bound with gold at the upper end, without any projecting head, seven or eight inches in length, appear to have been intended for arranging the plaits or curls of hair; like those used in Eng-



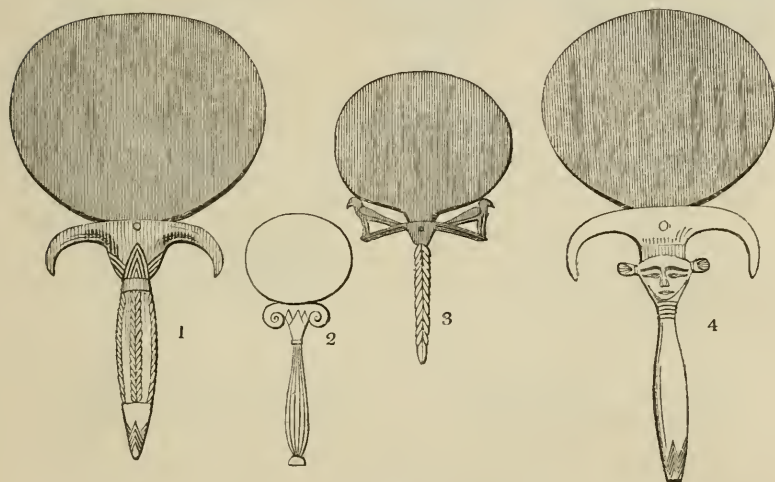
No. 412. Needles, Pins, and Earrings.
 1, 2, Bronze needles in the Museum of Alnwick Castle, 3 and $3\frac{1}{2}$ inches long. 3, Large gold-headed pin, in the Berlin collection. 4, Another of smaller size. 5, Silver earring in my possession, one and four tenths of an inch in diameter. 6, Gold earring in the Berlin Museum, one and one third of an inch in diameter. 7, Another, seen from above.

land, in the days of Elizabeth, for nearly the same purpose.

Some needles were of bronze, from three to three and a half inches in length; but as few have been found, we are not able to form any opinion respecting their general size and quality, particularly of those used for fine work, which must have been of a very minute kind.

One of the principal objects of the toilet was the mirror. It was of mixed metal, chiefly copper, most carefully wrought and highly polished; and so admirably did the skill of the Egyptians succeed in the composition of metals, that this substitute for our modern looking-glass was susceptible of a lustre, which has even been partially revived at the present day, in some of those discovered at Thebes, though buried in the earth for many centuries.

The mirror itself was nearly round, inserted into a handle of wood, stone, or metal, whose form varied according to the taste of the owner. Some presented the figure of a female, a flower, a column, or a rod ornamented with the head of Athor, a bird, or a fancy device; and sometimes the face of a typhonian monster was introduced to support the



No. 413.

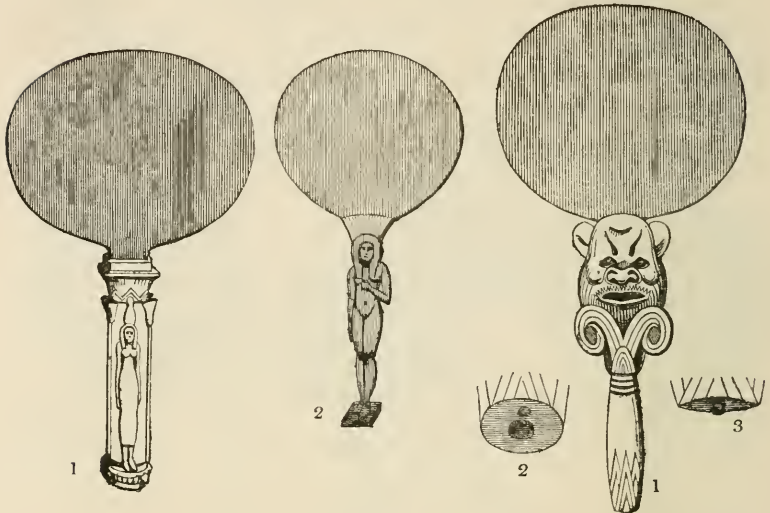
Metal Mirrors.

1, 3, 4, Mr. Salt's collection. 2, From a painting at Thebes. 4, is about 11 inches high.

mirror, serving as a contrast to the features whose beauty was displayed within it. The same kind of metal mirror was used by the Israelites, who doubtless brought them from Egypt; and the brazen laver made by Moses for the tabernacle, was composed "of the looking-glasses of the women, which assembled at the door of the tabernacle of the congregation."*

* Exod. xxviii. 8. "He made the laver of brass, and the foot of it of brass, of the looking-glasses." The word brass, "nahas," is used in

When walking from home, Egyptian gentlemen frequently carried sticks, varying from three

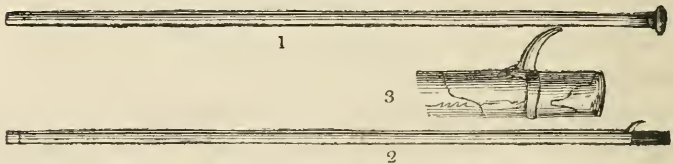


Other Metal Mirrors.

No. 414.—Fig. 1, In Mr. Salt's collection; with a wooden handle.—Fig. 2, in the Museum of Alnwick Castle.

No. 415.—In the possession of Dr. Hogg. 2, and 3, show the bottom of the handle, to which something has been fastened.

or four, to about six feet in length, some of which were surmounted with a knob, imitating



No 416. Walking sticks found at Thebes. 2, is of cherry-wood in Mr. Salt's collection. 3, shows the peg at the side.

a flower* ; and others with the more usual peg

Hebrew, as in Arabic, to denote copper in any form, or with any alloy. The "looking-glass," or mirror, is in Hebrew and Arabic, *miráth*, or *miráh*. The roots of these two words, and probably of the Coptic, are related.

* Wood-cut, No. 417. *fig. 4.* and No. 416 *a. fig. 1.*

projecting from one side*, some of which have been found at Thebes. One in the possession of Mr. Salt, of the latter form, was of *cherry*† wood, and only three feet three inches long; and those I have seen with the lotus head were generally about the same length. Others appear to have been much longer; the sculptures represent them at



No. 417.

1
Priests and other persons of rank walking with sticks.2
3
4
Thebes.

least six feet; and one brought to England by Mr. Madox was about five feet in length.

On entering a house they left their stick in the hall, or at the door; and poor men were sometimes employed to hold the sticks of the guests who had come to a party on foot, being rewarded by the master of the house, for their trouble, with a trifling compensation in money, with their dinner, or a piece of meat‡ to carry to their family. The name of each person was frequently written on

* Wood-cut, No. 417. *fig. 2.* and 416 *a. fig. 2.*

† According to Pliny, (xv. 25.) this tree was introduced into Italy by Lucullus, from Pontus, and thence went to Britain. He says it would not grow in Egypt, and it is not now found there; but is not a species *indigenous* in the north of our island?

‡ *Vide* Plate 12. *fig. 10.* Vol. II.

his stick*, in hieroglyphics (instances of which I have seen in those found at Thebes); for which reason a hard wood was preferred, as the acacia, which seems to have been more generally used than any other.

BATHS. DOCTORS.

We have little knowledge of the nature of their baths, but as they were forbidden in deep mourning to indulge in them†, we may conclude they were considered as a luxury, as well as a necessary comfort.

The only instance I have met with in the paintings is in a tomb at Thebes, where a lady is represented with four attendants, who wait upon her, and perform various duties.

One removes the jewellery and clothes she has taken off, or suspends them to a stand in the apartment; another pours water from a vase over her head, as the third rubs her arms and body with her open hands; and a fourth seated near her, holds a sweet scented flower to her nose, and supports her as she sits. The same subject is treated nearly in the same manner on some of the Greek vases, the water being poured over the bather who kneels, or is seated on the ground.

Warm‡ as well as cold baths were used by the Egyptians, though for ordinary ablutions cold water§ was preferred; and both were probably recommended and taken medicinally, when occasion required.

* Conf. Num. xvii. 2. "Write thou every man's name upon his rod." † Diod. i. 72.

‡ Diodorus (i. 84.) says they were even kept for the sacred animals
 § Herodot. ii. 37.



No. 417. ^a
 1. The lady seated on a mat or carpet.
 2. An attendant holding a flower, and supporting her.
 3. Rubs her arm with the hand, as in the modern Turkish bath.
 4. Pours water over her.
 5. Takes care of her clothes and ornaments.

Thebes.

The Egyptians paid great attention to health, and “so wisely,” says Herodotus*, “was medicine managed by them, that no doctor was per-

* Herodot. ii. 84.

mitted to practise any but his own peculiar branch. Some were oculists, who only studied diseases of the eye; others attended solely to complaints of the head; others to those of the teeth; some again confined themselves to complaints of the intestines; and others to secret and internal maladies: accoucheurs being usually, if not always, women.*

They received certain salaries from the public treasury; and after they had studied those precepts which had been laid down from the experience of their predecessors, they were permitted to practise; and, in order to ensure their attention to the prescribed rules, and to prevent dangerous experiments being made upon patients, they were punished if their treatment was contrary to the established system: and the death of a person entrusted to their care, under such circumstances, was adjudged to them as a capital offence.† If, however, every remedy had been administered according to the sanatory law, they were absolved from blame‡; and “these provisions,” says Diodorus, “were made with the persuasion that few persons could be capable of introducing any new treatment superior to what had been sanctioned and approved by the skill of old practitioners.”

Though paid by government as a body, it was

* As at present in Egypt. *Vide* Exod. i. 15.

† Pliny observes, there is no law to punish their ignorance at Rome, and that a physician is the only man who can kill another with impunity. “Nulla præterea lex, quæ puniat inscitiam capitale, nullum exemplum vindictæ. Discunt periculis nostris, et experimenta per mortes agunt: medicoque tantum hominem occidisse impunitas summa est.” Plin. xxix. 1.

‡ Diod. i. 82.

not illegal to receive fees for their advice and attendance; and demands could be made in every instance, except on a foreign journey, and on military service, when patients were visited free of expense.*

The principal mode adopted by the Egyptians for preventing illness was attention to regimen and diet; "being persuaded that the majority of diseases proceed from indigestion and excess of eating;" and they had frequent recourse to abstinence, emetics, slight doses of medicine, and other simple means of relieving the system†, which some persons were in the habit of repeating every two or three days. "Those who live in the corn country," as Herodotus terms it‡, were particular for their attention to health. "During three successive days, every month, they submitted to a regular course of medicine;" from the conviction that illness was wont to proceed from some irregularity in diet; and if preventives were ineffectual, they had recourse to suitable remedies, adopting a mode of treatment very similar to that mentioned by Diodorus.

The employment of numerous drugs in Egypt has been mentioned by sacred and profane writers; and the medicinal properties of many herbs which grow in the deserts, particularly between the Nile and Red Sea, are still known to the Arabs; though their application has been but imperfectly recorded

* Diod. loc. cit.

† "Θεραπειουσι τα σωματα κλυσμοις, και νηστειαις, και εμετοις." — Diod. loc. cit.

‡ Herodot. ii. 77.

and preserved. “O virgin, daughter of Egypt,” says Jeremiah*, “in vain shalt thou use many medicines, for thou shalt not be cured.” Homer, in the *Odyssey*†, describes the many valuable medicines given by Polydamna, the wife of Thonis, to Helen while in Egypt, “a country whose fertile soil produces an infinity of drugs, some salutary and some pernicious; where each physician, possesses knowledge above all other men;” and Pliny makes frequent mention of the productions of that country, and their use in medicine.

He also notices the physicians of Egypt‡; and as if their number § was indicative of the many maladies to which the inhabitants were subject, he observes, that it was a country productive of numerous diseases. In this, however, he does not agree with Herodotus||, who affirms that, “after the Libyans, there are no people so healthy as the Egyptians, which may be attributed to the invariable nature of the seasons in their country.” In Pliny’s time, the introduction of luxurious habits and excess had probably wrought a change in the people; and to the same cause may be attributed the numerous complaints among the Romans, “unknown to their fathers and ancestors.”¶

The same author tells us, that the Egyptians examined the bodies after death, to ascertain the nature of the diseases of which they had died** ; and we can

* Jerem. lxvi. 11.

† Homer, *Od.* iv. 229.

‡ Plin. xxvi. 1.

§ Herodotus says, “Every place is full of doctors,” in Egypt, ii. 84.

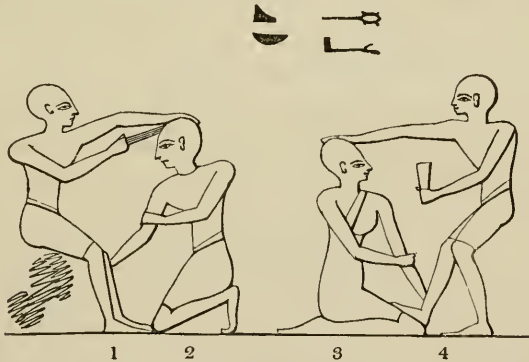
|| Herodot. i. 77.

¶ Plin. loc. cit.

** Plin. xix. 5. “In Ægypto, regibus corpora mortuorum ad scrutandos morbos insecantibus.”

readily believe that a people, so far advanced in civilisation and the principles of medicine, as to assign each physician his peculiar branch, would have resorted to this effectual method of acquiring knowledge and experience, for the benefit of the community.

It is evident that the medical skill of the Egyptians was well known even in foreign and distant countries; and we learn from Herodotus*, that Cyrus and Darius both sent to Egypt for medical men. But though their physicians are often mentioned by Herodotus and other writers, the only indication of medical attendance occurs in the paintings of Beni Hassan, where a doctor and a patient are twice represented.



No. 418.

Doctors and patients.

Beni Hassan.

Diodorus tells us†, that dreams were regarded in Egypt with religious reverence, and the prayers

* Herodot. iii. 1. and 132.

† Diodorus' account of learning remedies from dreams, is not quite consistent with the positive observations they took so much care to make. The advocates for animal magnetism may perhaps see it in this passage of the historian. . . . i. 25.

of the devout were often rewarded by the gods, with an indication of the remedies their sufferings required; but this and magic* were only a last resource, when the skill of the physician had been baffled, and all hopes of their recovery were lost: and a similar superstitious feeling induced them to offer *ex votos* in their temples for the same purpose.

They consisted of various kinds. Some persons promised a certain sum for the maintenance of the sacred animals, belonging to the deity whose interposition they solicited; which, in the case of children, was decided by weighing a certain portion of the hair of their head, "either all, or half, or a third†," shaved expressly for the purpose; and as soon as the cure had been effected, they accomplished their vow by giving an equal weight of silver to the curators.

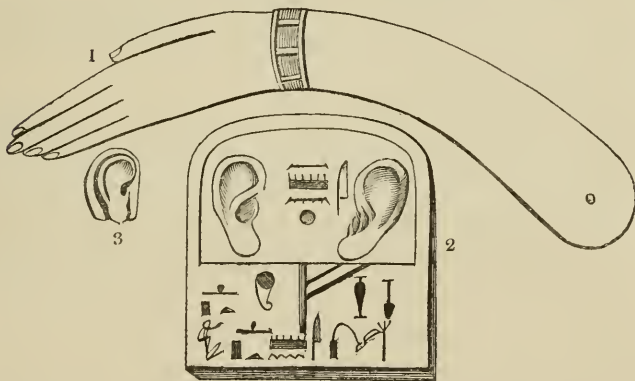
These persons occasionally visited different parts of the country, carrying with them the banners of their respective deities; and the credulity of the peasants being frequently induced to solicit their aid, and to barter the doubtful assistance of the god for the real rewards lavished on his artful servants, much money was collected by them. And so profitable was it, that neither the change of religion, nor the simplicity of Islám, have been able to discard the custom: and the guardians of the shekh's tombs, in like manner, send their emissaries with flags and drums to different parts of the

* Wisdom of Solomon, xvii. 8.

† Herodot. ii. 65.

country, to levy contributions from the credulous, in return for the promised assistance of their *wellee*, or patron saint.

After the cure was effected, they frequently suspended a model of the restored part, in the temple of the god, whose interposition they had invoked; precisely in the same manner as in the shekh's tombs of modern Egypt, and in the Roman catholic chapels of Italy and other countries, consecrated to the Virgin, or a saint; and ears, eyes, distorted arms, and other members, were dedicated as memorials of their gratitude and superstition.



No. 419.

Exvotos.

1, Ivory hand, in Mr. Salt's collection. 2, Stone tablet, dedicated to Amunre, for the recovery of a complaint in the ear: found at Thebes. 3, An ear of terra cotta in my possession, from Thebes.

Sometimes travellers, who happened to pass by a temple, inscribed a votive sentence on the walls, to indicate their respect for the deity, and solicit his protection during their journey; the complete formula of which contained the adoration (*proskunéma*) of the writer, with the assurance that he

had been mindful of his wife, his family, and friends ; and the reader of the inscription was sometimes included in a share of the blessings it solicited. The date of the king's reign, and the day of the month were also added, with the profession and parentage of the writer. The complete formula of the *proskunéma* was as follows : “ The adoration of Caius Capitolinus, son of Flavius Julius, of the fifth troop of Theban horse, to the goddess Isis, with ten thousand names. And I have been mindful of (or have made an adoration for) all those who love me, and my consort, and children, and all my household, and for him who reads this. In the year 12 of the emperor Tiberius Cæsar, the 15th of Paüni.

The Egyptians, according to Pliny *, claimed the honour of having invented the art of curing diseases. Indeed, the study of medicine and surgery appears to have commenced at a very early period in Egypt, since Athothes, the second king of the country, is stated to have written upon the subject of anatomy † ; and the schools of Alexandria continued till a late period to enjoy the reputation, and display the skill, they had inherited from their predecessors. Hermes ‡ was said to have written six books on medicine, the first of which related to anatomy § ; and the various recipes, known to have been beneficial, were re-

* Plin. vii. 56.

† *Vide* Vol. I. p. 25.

‡ Hermes and Athothes may have been confounded, or they may be in this instance the same person. The god Hermes, or Thoth, generally implied intellect.

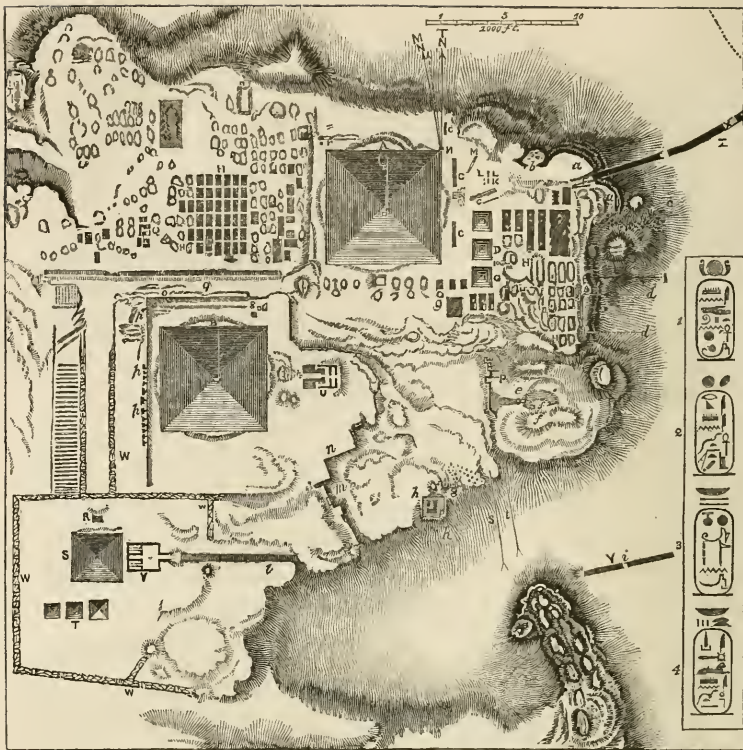
§ Clem. Alex. Strom. vi.

corded, with their peculiar cases, in the memoirs of physic, inscribed among the laws already alluded to ; which were deposited in the principal temple of the place, as at Memphis in that of Pthah, or Vulcan.

The embalmers were probably members of the medical profession, since the knowledge, required for that purpose, appears to be connected with their peculiar studies ; and the Bible expressly states, that “ the physicians* embalmed” Jacob. This part, however, belongs more properly to the funeral ceremonies of the Egyptians, into which I do not here intend to enter ; reserving that portion of my subject to a future opportunity, and to a work, whose less contracted dimensions will enable me to introduce the paintings connected with it, on a more suitable scale than these pages will permit ; I shall also take advantage of the same opportunity of entering more fully into the mythology of the Egyptians, and the ceremonies connected with their religion.

* Gen. l. 2.





TOPOGRAPHICAL PLAN OF THE PYRAMIDS OF GEEZER.

- A, Entrance to the great pyramid.
 B, Entrance to the second pyramid.
 C C, Long pits, by some supposed for mixing the mortar.
 D, Pyramid of the daughter of Cheops (Herodotus, ii, 126).
 E, Pavement of black stones (basaltic trap), the same as found on the causeways of the pyramids of Saqqâra.
 F, Remains of masonry.
 G, Round inclosures of crude brick, of Arab date, at n. e. angle of this pyramid.
 H, Tombs of individuals, with deep pits.
 I, The tomb of numbers.
 K, Two inclined passages, meeting under ground, apparently once belonging to a small pyramid that stood over them.
 L L, The rock is here cut to a level surface.
 M, A narrow and shallow trench cut in the rock.
 N, A square space cut in the rock, probably to receive and support the corner stone of the casing of the pyramid.
 P, Here stood a tomb which has received the title of the Temple of Osiris.
 Q, Tomb of trades, to west of tombs H.
 R, A pit cased with stone, of modern date.
 S, The third pyramid.
 T, Three small pyramids.
 U, V, Ruined buildings, whose original use it is now difficult to determine.

- W W W, Fragments of stone, arranged in the manner of a wall.
 X, A few palms and sycamores, with a well.
 Y, Southern stone causeway.
 Z, Northern causeway, repaired by the Caliphs.
 a, Tombs cut in the rock.
 b, Masonry.
 c, Black stones.
 d, Tombs cut in the rock.
 e, The sphinx.
 f, Pits, probably unopened.
 g, Pits.
 h, Stone ruin on a rock.
 i, Doorway, or passage, through the causeway.
 k, A grotto in the rock.
 l, Inclined causeway, part of Y.
 m, n, Tombs in the rock.
 o, Some hieroglyphics on the rock.
 p, Tombs cut in the scarp of the rock.
 q, Stone wall.
 r, Steps cut in the rock, near the n. w. angle of the great pyramid.
 s, t, Magnetic south, in 1832 and 1836, corresponding to M N; T N being "true north."
 The names 1. and 2. are of king Ergamenes, mentioned by Diodorus, lib. iii. s. 6., and another Ethiopian monarch, found at Dakkeh.

APPENDIX A.

PRINCIPAL OBJECTS TO BE VISITED IN A TOUR UP THE NILE.

IN order to render this book more useful to travellers in Egypt, I shall introduce the notes I had drawn up for some friends, who required a brief statement of the principal objects worthy of a visit, on the Nile, without having to seek their order and position in the numerous pages of voluminous books of travels; referring the reader, who wishes for a more detailed account of them, to my Egypt and Thebes.

At Alexandria are Pompey's pillar, with its inscription, of the time of Diocletian; the obelisks; some traces of the ancient streets; and, along the coast to the west, the catacombs, of Greek time; and, to the east, beyond the French lines, the ancient Roman station, where the English and French armies engaged.

Between Alexandria and Cairo, a journey of three days, the site of Saïs, now Sa-el-Hagar; its large walls, the lake mentioned by Herodotus, and brick houses.

Near Cairo, Heliopolis, now Mataréeh, its obelisk of Osirtasen I., remains of the walls and houses; the station of Egyptian Babylon, and the mosk of Amer, at old Cairo; the pyramids of Geezeh (*Vide* the plan), of Saqqára, and Dashoor. At Saqqára is a stone arch of the time of Psamaticus II., the oldest known. It is in a tomb, cut in the face of the rock, about east south east of the principal pyramid. At Mit-raheny, a large colossus of Remeses II.; mounds of Memphis; some fragments of statues, and remains of building.

On east bank, eight miles to the south of Cairo, quarries of Maasara, from which the stone used for part of the casing of the pyramids was taken. Some hieroglyphic tablets, in one of which oxen are represented drawing a stone placed on a sledge. (*Vide* wood-cut, No. 389.) A little beyond the modern village is an

inclined road, which leads from the quarries to the river. Thirty miles further to the south, on the same bank, is Atfééh; mounds of Aphroditopolis; no ruins. False pyramid on opposite bank. Three miles beyond, El Feshn, and on east bank, remains of crude brick; the walls of an ancient village, called El Héebee, and some hieroglyphics.

From Benisoef is the road to the Fyoom, which, when the Nile is low, may be visited conveniently. A brick pyramid at Illahoon, another at El Hawára, and vestiges of the labyrinth. Obelisk at Biggig. Ruins on and near the lake Mæris, and at Qasr Kharróon.

From Aboogirgeh is the shortest road to Bahnasa (Oxyrinchus); mounds; no ruins. Gebel e'Tayr, north end, grotto or rock temple, called Babáyn; convent further to the south. Eight miles below Mínyeh, is Tehneh (Acóris), on east bank. A Greek Ptolemaic inscription on the face of the cliff; tombs hewn in the rock, with small inscriptions at the doors: Roman figures in high relief, on the upper part of the rock; some hieroglyphic tablets; quarries on the top of the mountain; a tank, &c.

Same (east bank), seven miles above Mínyeh, Kom áhmar, some grottoes, and ruins of an old town. Nine miles further, east bank, Beni Hassan; very fine grottoes, with curious paintings; and about a mile and a half further, a grotto, or rock temple, of Pasht (Bubastis, or Diana); the Speos Artemidos. Cat mummies in the ravine.

Antinoë, now Shekh Abádeh, few remains of the town; a theatre, the principal streets, baths, &c.; outside the town, on the east, is the hippodrome. The grottoes in the mountain are unsculptured, and have some Christian inscriptions. A little to the north of Antinoë are the remains, apparently, of Besa, scarcely worthy of a visit.

At El Bersheh, a grotto on the mountain, in which a colossus is represented on a sledge, (*Vide* wood-cut, No. 390.) At Oshmoonayn, west bank, no longer any remains of Hermopolis Magna. At Gebel Toona, a mountain skirting the desert to the west, are mummy pits, a tablet of hieroglyphics, and statues in high relief. At Mellowee, and at Tanoof, (Tanis superior,)

mounds, but no ruins. At Sbayda, at corner of mountains on east bank, crude brick walls, and some grottoes.

At Shekh Saïd, the mountains recede to the eastward, leaving the river; and a little beyond is the village of Tel el Amarna, to the north of which are the remains of a small town, and to the south, the ruins of a city, which I suppose to be Alabastron. All the stone buildings have been quite destroyed, but some of the brick houses remain. Near the crude brick towers of the temple are the largest houses. (*Vide* plan, Plate VI. Vol. II. p. 106.) To the east are several fine grottoes in the face of the mountain, with curious sculptures; and on the summit of it is an ancient alabaster quarry.

Six miles below Manfaloot, at el Harýib, ruins of an old town, in a ravine of the Gebel Aboolfaydee; numerous dog and cat mummies. Near el Maabdeh, opposite Manfaloot, crocodile mummies in chambers of great extent in the mountain.

At E'Siot (Lycopolis), the capital of Upper Egypt, grottoes; wolf mummies: the modern cemetery is prettily laid out. Gow (Antæopolis), a few stones of the temple, close to the river; some grottoes at the corner of the mountain, to the north, below Gow, but not containing good sculpture. Shekh Heréedee, small grottoes; Roman statue at the base of the mountain, cut out of a piece of rock. The snake of Shekh Hereedee is still supposed to perform cures.

To the west of Soohâg, near the corner of mountains, old town of Athribis; a Greek inscription in the ruined temple; grottoes in the mountain, and to the north is the white monastery, or Dayr Amba Shnóodee. Nearly opposite Soohag is E'Khmin (Panopolis); Greek inscription of the temple of Pan; and some remains of other stone buildings.

Mensheëh (Ptolemaïs Hermii), west bank. Eight miles above E'Khmin, remains of a stone quay. From Girgeh go to Abydus (now Arábat el matfóon), three hours' ride, and send on the boat to Bellianeh, returning to the boat in the evening at Bellianeh, two hour's ride; or, coming down the river, stop at Bellianeh, and send on the boat to Girgeh. At Abydus, two temples, and many tombs.

How (Diospolis parva), has very few remains, of Ptolemaic or Roman time. In mounds at the edge of the desert, a mile

and a half south of How, some tombs; one, of a certain Dionysius, son of one Ptolemy, has some sculpture.

Qasr e'Syád (Chenoboscion), remains of a quay; about one mile beyond the eastern mouth of the canal of this village are some very ancient grottoes, with kings' names. (*Vide* wood-cut, No. 381.) Dendera (Tentyris), opposite Qeneh; two temples, inscriptions, zodiac, &c. Qeneh is famous for its manufacture of porous jars. From it roads lead to Kossayr on the Red Sea.

Qoft (Coptos); ruins of the old town, and of a temple; a Christian church; canals, &c.; at the village of el Qala, to the north, is a small Roman Egyptian temple.

Qoos (Apollinopolis parva); no more ruins left; at a well on the north of the town, is a Ptolemaic monolith, with hieroglyphics, converted into a tank; and a few stone remains of early time, in the plain to the west, near a Shekh's tomb. Thebes (Diospolis magna), on the east bank, Karnak and Luqsor; on the west, the tombs of the kings, private tombs, several temples, colossi of the plain, &c.; for these I refer the reader to my *Egypt and Thebes*.

Erment (Hermonthis), west bank; temple and early Christian church. Tuot, or E'Selemééh (Tuphium); on east bank Ptolemaic temple, much ruined, and concealed by the hovels of the peasants. Gebelayn, i. e. "the two hills," a small ancient town in ruins, and grottoes, not worthy of a visit. At Tofnéés and Asfoón, mounds of ancient towns, no ruins.

Esneh (Latopolis), fine portico, zodiac, and quay. At E'dayr, three miles to the north of Esneh, remains of a small temple of the Ptolemies and Cæsars, lately destroyed. Thirteen miles from Esneh, near El Qenan, ruins of a quay, on west bank; and three miles further, a small stone pyramid; opposite the quay is the junction of the limestone and sandstone. Four miles beyond, on east bank, is El Kab (Eilethyas); ruins of a very ancient town; the temples lately destroyed: curious grottoes in the mountain; and a short distance up the valley, are three small temples. In the bed of the ravine are ponds encrusted with natron.

Edfoo (Apollinopolis magna), two temples. Eleven miles above Edfoo, and on east bank, remains of an old town, on face of hill, fortified with towers of Arab construction. Silsilis (now Hagar

Silsili), quarries of sandstone, used for building the temples of Upper Egypt; tablets, and grottoes. Kom ombo (Ombos); two temples; ancient stone gateway in a crude brick wall on the east side of the enclosure of the temples; houses burnt.

At E'Sooan (Syene) ruins of small temple of Roman date; some columns; Saracen wall, and Cufic tombstones; granite quarries; in one of which is a broken obelisk; Latin inscription of Caracalla, near another quarry; road to Philæ, and wall; numerous hieroglyphic tablets on the rocks. Island of Elephantine; opposite the projecting rocks of E'Sooan, is the Nilometer, which is a staircase, with Greek inscriptions, relating to the rise of the Nile. Granite gateway, bearing the name of Alexander, the son of Alexander the Great.

At the northern end of the cataract is the island of SeháyI. Few vestiges of a temple; hieroglyphic tablets on the rocks. Go from E'Sooan to SeháyI in a boat, and ride to Philæ. At Philæ temples and ruins. Island of Biggeh, opposite Philæ, to the west, ruined temple, tablets, &c.

NUBIA.

Dabóde (Parebole), temple, west bank. Kerdássy, ruins and quarries. Tafa (Taphis), two small ruins, and stone enclosures. Kalabshee (Talmis), large temple; quarries; and, on hill behind it, to the northward, a small but interesting temple, called Bayt el Wellee, cut in the rock, of the time of Remeses II. Dandoor, temple. Gerf Hossayn (Tutzis), temple cut in the rock, of the time of Remeses II.

Dakkeh (Pselcis); temple of Ptolemaic and Roman date. It has also the names of two Ethiopian princes*, Ergamun, or Ergamenes (mentioned by Diodorus, iii. 6., as a contemporary of Ptolemy Philadelphus), and Ataramun?; many Greek inscriptions. Opposite Dakkeh, ruins of Contra Pselcis, or of Metacompo.

Corte (Corti); few remains. Maharraka, or Oofideena, ruins of *Hierasycaminon*; style bad, and all of late date: Isis is represented under the *sacred fig tree*. Sabooa; temple of the time of Remeses II., with avenue of sphinxes; the adytum is cut in the

* *Vide* the wood-cut in page 398. *figs.* 1. 2. 3. and 4.

rock, the rest built. Hassaia, or Amada, a temple of Thothmes, ancient; nearly opposite to it is Dayr or Dirr, on east bank, the capital of Nubia, which has a temple, cut in the rock, of the time of Remeses II.

Ibreem (Primis parva); part of the ancient wall on south side of town; remains of a stone building amidst the houses; some small grottoes below the town, near the river. Aboosimbel, two temples, cut in the rock, the finest Egyptian monuments out of Thebes: they are of the time of Remeses II.

At Ferayg, nearly opposite, on east bank, a small temple in the rock. Farras, on west bank, few remains; grottoes, with Coptic inscriptions, some distance from the river. Wadee Halfeh; remains of three buildings, on west bank; fine view of the second cataract from a rock on the same bank, a short walk to the south of Wadee Halfeh.

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From Rosetta to Cairo	-	-	about 110 miles.	148 2
Cairo to Benisooef	-	-	- 83	77
Benisooef to Minyeh	-	-	- 85	82 1/2
Minyeh to E'Sioot	-	-	- 106	94 1/2
E'Sioot to Girgeh	-	-	- 97	85
Girgeh to Qeneh	-	-	- 73	64
Qeneh to Thebes	-	-	- 49	48 1/2
Thebes to Esneh	-	-	38	32
Esneh to E'Sooan	-	-	- 100	92
E'Sooan to Wadee Halfeh	-	-	- 219	219 1/2

Total from Rosetta to Wadee Halfeh 960 miles.

946
according to
summary

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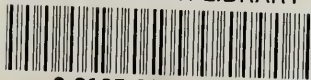
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