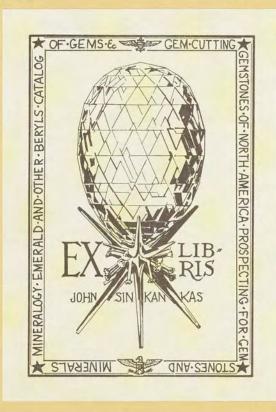
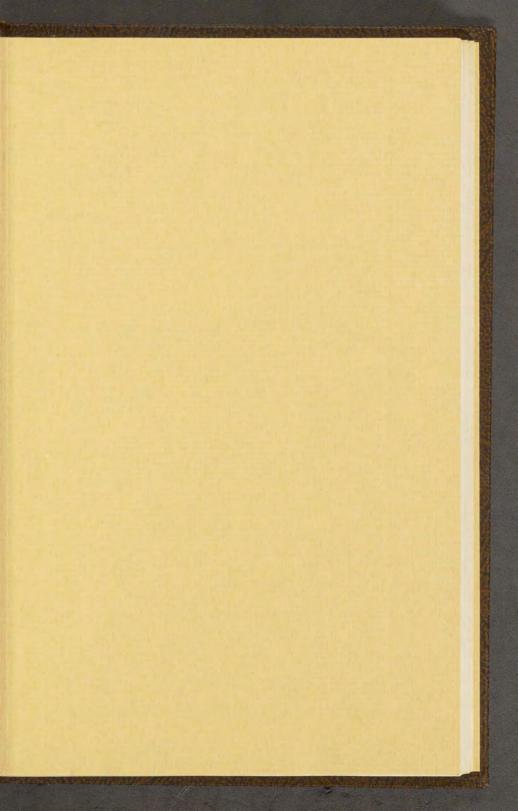


car got Metabell hondar







MINERALOGICAL SYNONYMES.

#### MINERALOGICAL

## NOMENCLATURE,

ALPHABETICALLY ARRANGED;

WITH

## SYNOPTIC TABLES

OF THE

## CHEMICAL ANALYSES

OF

## MINERALS.



#### EDINBURGH:

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CALEDONIAN MERCURY PRESS, EDINBURGH.

#### ERRATA.

Notwithstanding my anxiety to avoid inaccuracies, I have had the mortification to observe several typographical errors. As these, however, do not affect the sense, I shall not here enumerate them, but only request attention to the following alterations.

In the alphabet, after Argent noir, read Méth. 108 iii. a. b, 108 iii. b

after Augustit Reuss, read 94 a

after Bohnerz w, read 64 v. l

In article 38. ii. for vitreous ore, read vitreous copper ore

50. a for Silex read Selce

60. delete Schiller spar

64. vi. delete spath fusible Delisle

In alphabet, after White vitriol—122 h, for Weisenerz read Wiesenerz

after Zeolithe à 24 facettes b 5. a, for Zeigelerz read

Ziegelerz

#### IN THE TABLES.

In No. V. analyses of sul. of soda after 49. let the dagger be reversed. In No. XLVIII. in the last column, corresponding with the analyses of Asbestous actinolite, for An. ch. 212. read Annals, No. 21.

### INTRODUCTION.

The idea of this little Work originated in the difficulty I experienced when the study of Mineralogy first engaged my attention. I was then so perplexed with the variety of Synonymous Terms which were indiscriminately made use of, that I was induced to frame a small manuscript nocabulary to assist my memory. This was afterwards committed to the press; and since that time so great an addition has been made, not only to the number of known minerals, but to the original stock of names, that a work of this kind requires to be renewed, were it only to keep pace with the alterations which time has introduced.

The very imperfect state in which this work formerly appeared, was another inducement to attempt some improvement; which, it occurred to me, might be accomplished by adopting a specific system, and arranging all the leading articles in alphabetical order in the list of names, while the chemical tables might be contrived to exhibit a synoptic arrangement of the system, in place of

taking them at random, as they happened to occur alphabetically in English, French, or German.

The systematic arrangement I have adopted is nearly similar to that of HAUY, in which, for the sake of convenience, a few alterations have been made. venience here alluded to, is simply that of cabinet arrangement, which has induced almost every Mineralogist to take some liberty of the same kind, and is quite allowable when we consider how very little there is to control the distribution of minerals. For although every method be essentially founded on chemical composition, as deduced by analysis, without which no unknown mineral can be determined; yet analysis must still be conjoined with external character; for, of itself it is by no means so precise, as in all cases, to establish the nature of minerals. There are many instances in which we should be as much perplexed to determine a mineral, by knowing only its component parts, as we invariably are to class a newly discovered substance before it has been investigated by the chemist. For example, in the Annals of Philosophy for August last, the result of an analysis by John, of a mineral from Kozemutz, is given, singularly named Razoumoffskin, containing 50. Silex, 16.88 Alumine, 2. Magnesia, 10.37 Potash, 20. Water, .75 Nickel, with traces of Lime and Iron. Here, although we know the name, the locality, and the analysis, other data are still required before we can place it in the system. Again, the errors which have arisen from attempting to place minerals before they have been analysed, are numerous; Uranium, before it underwent chemical examination, was

taken by Sage for Green Heavy Spar, and by Leske for Green Mica. The Saxon Carbonate of Strontites was long considered at Freyberg as Igloït and the Needleore of Bismuth to be an alloy of Chrome. Sphène, Anatase, and Dioptase, all metallic fossils, were arranged by Haux among his earthy minerals, where they would probably have remained, had they not since been analysed.

It is, however, not very satisfactory to observe how widely the results of the most skilful analysts sometimes differ; particularly if any attention is to be paid to the theory of definite proportions, or that we are to allow with BERZELIUS, that the influence of the Electrochemical theory, can be extended to the arrangement of minerals, and mineralogy considered as a subordinate branch of chemistry. Although we cannot refuse to believe with him, that as the same nature operated every where, so the operations must have been governed by the same laws; still these laws may have been susceptible of an infinity of modifications, which are far beyond the feeble power of man to unravel; and although Berzelius may be able to select, from the fruits of that industry and labour which have already afforded so many accurate results, a few examples where the theory of definite proportions may be found applicable, (and it were wonderful if he did not); still it is to be feared, that even with all the means of accuracy the chemist is now possessed of, the heterogeneous nature of almost all mineral bodies, and the consequent impossibility of obtaining them in a perfectly simple state, is of itself an effectual bar to that

purity of system which he contemplates. It would indeed be delightful were it possible to clothe mineralogy in the true garb of science. As it is, however, we must not repine because we find the subjects of the inanimate kingdom incapable of the same perfection of arrangement as those of the animal and vegetable.

In imitation of HAUY the four great classes of Aci-DIFEROUS, EARTHY, COMBUSTIBLE, and METALLIC have been selected. But in place of dividing the first into four orders, I have adopted only two of the most simple kind, namely, Soluble and Insoluble Salts. Of the Soluble Salts, the acid is considered as the type of the genus, with which the various alkaline or metallic combinations constitute the different species; thus the Carbonic, Boracic, Nitric, Muriatic, and Sulphuric Acids, which are found either native or compounds of Soluble Salts, form the genera, and their various combinations, so long as they are soluble in water, the species. By this means all the Salts are brought together, in place of being dispersed over the first and last classes of the system. This will no doubt appear to many persons an improper classification; in its defence I have only to plead convenience, which, in the cabinet of an individual, is an object of no small importance. Among the Insoluble Salts, I cannot prevail upon myself to place Topaz; its external characters certainly entitle it to remain with the harder substances, even though it should contain more than a fifth part of acid. With as much reason might we remove those which contain a notable proportion of alkali, some so high as 25 per cent. from among the earthy minerals;

but this would lead us to abandon the only principle of arrangement which, in the present state of the science, can be adopted with safety.

In the second class, I have not only rejected some of the alterations recently proposed by HAUY, but have also suggested others; conceiving it right to embrace as much as possible, and to place in the system every mineral we can, so long as we preserve distinct specific characters. Instead therefore of considering Calcedony, Opal, &c. as sub-species of Quartz, I see no inconvenience in regarding them as separate species. After them, I have introduced, also as species, Pitchstone, Pearlstone, Obsidian, Lava, Basalt, Basalt tuff, Greenstone and Clinkstone. These substances, in well characterised specimens, are all very distinct; yet gradations may be found whereby they may be traced so completely into each other, that it is nearly impossible to draw the line. Analysis too has been somewhat more successful in showing their mutual connections, than in most other parts of the system; and if we consider the close alliance which subsists between these and the Opals, through the medium of Pitchstone, we can scarcely refuse a place in the system, even to the aggregated rocks of Greenstone and Clinkstone. I have likewise adopted as species, Chlorite, Steatite, and Serpentine, in place of considering them as varieties of Talc; and to these are added Green earth, Bole, Fullers earth, Lithomarga, Potters clay, Whet slate, and Drawing slate, which have been uniformly left out in the arrangement of HAUY, although

in that of WERNER, they have always been considered as species of different families.

In the distribution of the minerals belonging to the second class, some alterations are also made. After Felspar I have placed Sodalite, a situation pointed out by its external characters; and next to it Natrolite, from its similarity in composition, although perhaps it might have been better to adopt the opinion of other mineralogists, and to have considered it as a variety of Zeolite. The Apophyllite is removed from immediately after Felspar to a situation among the Zeolites, to which it is now known to belong. Hyperstène I have placed before Augite, and made some other changes of less importance.

With respect to the recent alterations proposed by HAUY, such as classing Tremolite with Amphibole, and Sahlite with Augite, I do not think it necessary to adopt them, particularly as his analogies appear in some respects to be overstrained.

From the appendix of HAUY, I have removed into the system as many minerals as there was any apology for so doing, and some of them perhaps on too slender authority; still, however, I think it right to curtail this department as much as possible, even with the chance of error, particularly as future corrections will be attended with very little inconvenience. In an Appendix are included a variety of different minerals, some of which are but little known, except as existing in the cabinets of those to whom they are indebted for their denominations.

The combustible bodies I have arranged somewhat differently from HAUY; after Sulphur is placed Amber, and then Mellite, to appearance at least, the purest in succession. Then the Bitumens, Coal, Anthracite, and Plumbago, the last as being the most imperfect of the combustible substances.

In the arrangement of the metallic class of minerals there has been little left to desire. I have taken them in the same progression as HAUY; beginning with the precious metals, and ending with those which have been latest discovered.

In the system I have thus presumed to publish, I hope no very material errors will be detected; and if there should, I beg it may be considered, that although our opportunities for study have in this quarter been of late years highly improved, under the auspices of our present Professor of Natural History, mineralogy has but very recently attracted any considerable attention in this quarter. Our means are therefore still very limited, when compared with other capitals; and it must also be remembered, that this is not the work of a professional man, but the result of considerable assiduity, bestowed when avocations of a very different nature would permit; and I trust not unprofitably so, to some of those into whose hands this volume may happen to fall. I therefore hope it will not be considered as soliciting more than I deserve, when I beg that inaccuracies may not be too scrupulously criticised.

With regard to the synonymes of Geological Nomenclature, I am still of opinion that it is impossible to reduce them to the same kind of arrangement with the Mineralogical; men of science being as yet undecided what ought to be considered primary or transition. Besides, as the name very often depends, not on the characters of the substance, but on the position in which it occurs, it is quite impossible to embody the ideas of all geological writers in a work of this sort.

I cannot, however, help expressing very great regret at the desire which prevails among the French authors, (I do not name a recent geological work of this country, which, from its eccentricity, I trust will be harmless, ) to introduce new names upon every new occasion. HAUY, who has done so much in this way in mineralogy, seems to have resolved not to be less bold in geology, and, with the assistance of Mons. Tondi, has introduced a set of terms, among which scarcely one old acquaintance is to be recognised. Nor would this rage be so mischievous were it confined to one or two philosophers, but unfortunately, like other fashions of a more frivolous nature, it does not fail to obtain imitators. Thus we find, in a very interesting memoir of BRONGNIART, in the Journal des Mines for February last, such names as Trappites, Eurites, Roche Clastique, &c. of which, it may be presumed, many, like myself, never before heard. The observations, however, in that memoir, strongly corroborate my opinion upon the subject of geological nomenclature, namely, that the time is not yet arrived when any thing stable, which shall be generally acceptable to geologists, can possibly be proposed. There are many errors to correct, and many prejudices to overcome, -and, when

we observe such a remark as the following, made by a man of Brongniari's character, we have reason to hope that the period is approaching when accurate investigation, and philosophic induction, will take place of theory and hypothesis:

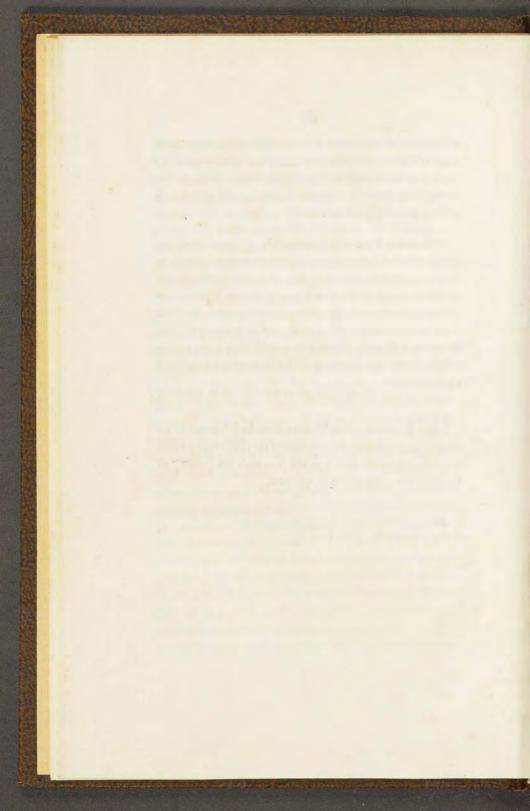
"Ne serait-il pas fort remarquable qu'après avoir regardé pendant si long-tems, et sans le moindre doute, le Granite comme la plus ancienne, et la plus profonde des roches connues, il fût prouvé que c'est aux Schistes Argileux portant certaines empreintes végétales, au Calcaire noirâtre ou bleuâtre renfermant certaines petrifications, et à d'autres roches non cristallisées, à des roches même formées de debris, qu'il fallût attribuer la prierité de formation."

Brongniart sur le Geologie de la Cotentin.

I may be permitted to observe that, had BRONGNIART been acquainted with the writings of Dr Hurton, he could not have supposed this was the first time the priority of Granite had been called in question.

THOMAS ALLAN.

CHARLOTTE SQUARE, Edinburgh, 24th Dec. 1814.



## SYNOPSIS

OF THE

#### SYSTEM ADOPTED IN THIS WORK.

- 1. CLASS. SALINE SUBSTANCES.
- 2. EARTHY COMPOUNDS.
- 3. ---- INFLAMMABLE BODIES.
- 4. METALLIC MINERALS.

## 1st CLASS.—SALINE SUBSTANCES.

## 1st ORDER, SOLUBLE SALTS.

- 1. GEN. CARBONIC.
  - a. Native
  - b. Carbonate of soda
- 2. GEN. BORACIC.
  - a. Native
  - b. Borate of soda
- 3. GEN. NITRIC.
  - a. Nitrate of potash b. Nitrate of lime
- 4. GEN. MURIATIC.
  - a. Native
  - b. Muriate of soda
  - e. Muriate of ammonia

- 5. GEN. SULPHURIC.
  a. Native

  - b. Sulph. of ammonia
  - c. ——— of soda d. ——— of alumine
  - e. ---- of magnesia
  - f. of iron
  - g. ---- of copper
  - h. ---- of zine
  - i. ---- of cobalt

1st CLASS.

#### 1st CLASS.—SALINE SUBSTANCES:

#### 2d ORDER, INSOLUBLE SALTS .- 1. GENUS, LIME.

- 1. Sp. CARBONATE.
  - a. Cristallised
  - b. Stalactitical
  - c. Fibrous
  - d. Foliated
  - e. Oviform
  - f. Earthy
  - g. Granular
  - h. Compact
  - i. Argillaceous
  - k. Bituminous
  - 1. Magnesian
  - m. Quartzose
  - n. Ferro-manganesian
- 2. Sp. ARRAGONITE.
  - a. Cristallised
  - b. Coralliform

- 3. Sp. Phosphate.
  - a. Cristallised
  - b. Green
  - c. Earthy
- 4. Sp. Fluate.
  a. Cristallised
  - b. Compact
  - c. Earthy
- 5. Sp. Sulphate.
  a. Cristallised
  - b. Fibrous
  - c. Compact
  - d. Earthy
  - e. Anhydrous
- 6. Sp. NITRATE.
- 7. Sp. ARSENIATE.
- S. Sp. BORATE.

#### 2. GENUS, BARYTES.

- 1. Sp. SULPHATE.
- 2. Sp. CARBONATE.

#### 3. GENUS, STRONTITES.

- 1. Sp. SULPHATE.
- 1 2. Sp. CARBONATE.

#### 5. GENUS, MAGNESIA.

- 1. Sp. NATIVE.
- 2. Sp. CARBONATE.
- 3- SP. BORATE.

#### 5. GENUS, ALUMINE.

- 1. Sp. SULPHATE.
- 1 2. Sp. ALKALINE FLUATE.

#### 2d CLASS .- EARTHY COMPOUNDS.

- 1. Sp. QUARTZ.
  - a. Cristallised
    - b. Purple
    - c. Blue
    - d. Green

- e. Yellow
- f. Rose
- g. Resplendent
- h. Hematitic
- i. Flinty slate

- k. Scaly
- 1. Granular
- m. Fibrous
- n. Amorphous
- o. Pseudo 2. Sp. CALCEDONY.
  - a. Stalatitical
  - b. White
  - c. Coloured
  - d. Variegated
  - e. Green
  - f. Chrysoprase
  - g. Massive
- 3. SP. OPAL.
  - a. Precious
  - b. Hydrophaneous
  - c. Common
  - d. Brown
  - e. Blue
    - f. Stalactitical
- 4. Sp. FLINT.
  - a. Compact
    - b. Decomposed e. Brown.
- 5. Sp. JASPER.
  - a. Common
  - b. Opal jasper
  - c. Porcellaine jasper
- 6. SP. PITCHSTONE.
- 7. Sp. PEARLSTONE.
- S. SP. OBSIDIAN.
- 9. Sp. LAVA.
  - a. Compact
  - b. Vesicular
  - c. Earthy
- 10. Sp. BASALT.
- 11. Sp. BASALT TUFF.
- 12. Sp. GREENSTONE. 13. Sp. CLINKSTONE.
- 14. Sp. ZIRCON.
- 15. Sp. CORUNDUM.
  - a. Perfect
    - b. Imperfect
    - c. Granular
    - d. Amorphous

- 16. Sp. CHRYSOBERIL.
- 17. Sp. SPINEL.
- 18. Sp. TOPAZ.

  - 1 App. Pycnite 2 App. Pyrophysallite
- 19. Sp. EMERALD.
  - a. Precious
  - b. Beril
- 20. SP. EUCLASE.
- 21. Sp. GARNET.
  - a. Precious
    - b. Common
    - c. Black
    - d. Olive green
    - e. Granular
    - f. Manganesian
- 22. Sp. LEUCITE.
- 23. SP. VESUVIAN.
- 24. Sp. MEIONITE.
- 25. Sp. FELSPAR.
  - a. Common
    - b. Resplendent
    - c. Opalescent
    - d. Green
    - e. Blue
    - f. Compact
  - g. Tough
  - h. Decomposed
- 26. Sp. SODALITE.
- 27. Sp. NATROLITE.
- 28. Sp. SPODUMENE.
- 29. Sp. AXINITE. 30. Sp. TOURMALINE.
  - a. Black
  - b. Green
  - c. Blue
  - d. Red
- 31. Sp. AMPHIBOLE.
  - a. Cristallised
  - b. Radiated
  - s. Acicular
- 32. Sp. HYPERSTÈNE.
- 33. Sp. AUGITE.
  - a. Cristallised
  - b. Granular
  - c. Compact
- 34. Sp. JENITE.
- 35. Sp. GADOLINITE.

36. Sp. SAHLITE.

37. SP. STAUROLITE.

38. Sp. EPIDOTE.

a. Cristallised

b. Granular

39. Sp. DIALLAGE.

40. SP. WERNERITE.

a. Cristallised

b. Prismatic

c. Compact

41. Sp. LAZULITE.

42. Sp. MESOTYPE.

43. Sr. LAUMONITE.

44. Sp. APOPHYLLITE.

45. Sp. STILBITE.

46. Sp. CHABASIE.

47. Sp. ANALCIME.

48. Sp. PREHNITE.

49. Sp. WAVELLITE.

50. Sp. SOMMITE.

51. Sp. HARMOTOME.

52. Sp. PERIDOT.

a. Cristallised

b. Granular

53. Sp. LEPIDOLITE.

54. Sp. MICA.

55. Sp. PINITE.

56. Sp. DIPYRE.

57. Sp. CHIASTOLITE.

58. Sp. SAPPARE.

59. Sp. TREMOLITE.

60. Sp. ASBEST.

a. Flexible

b. Hard

c. Suberiform

d. Ligniform

61. Sp. TALC.

a. Indurated

b. Laminated

c. Foliated

d. Earthy

62. Sp. CHLORITE.

a. Cristallised

b. Foliated

c. Earthy

63. Sp. STEATITE.

64. SP. SERPENTINE. 65. Sp. GREEN EARTH.

66. Sp. BOLE.

67. Sp. FULLERS EARTH.

68. Sp. LITHOMARGA.

69. Sp. POTTERS CLAY. 70. SP. WHET SLATE.

71. Sr. DRAWING SLATE.

#### APPENDIX.

1. ADHESIVE SLATE.

2. ANDALOUSITE.

3. CEREOLITE.

4. CHUSITE.

5. DESMINES.

6. FIBROLITE.

7. FREISLEBEN.

8. IOLITHE.

9. KEFFEKILITHE.

10. LATIALITE.

11. LIMBELITE. 12. MELILITE.

13. PICOLITHE.

14. POLISHING SLATE,

15. SIDERO CLEPT.

16. SPATH DE GLACE.

17. SPINELLANE.

18. SPINTHERE. 19. TABULAR SPAR.

20. TRICKLASITE.

21. TURQUOISE.

#### 3d CLASS.—INFLAMMABLE BODIES.

1. Sp. DIAMOND.

2. Sp. SULPHUR.

3. Sp. AMBER.

4. Sp. MELLITE.

5. SP. BITUMEN.

a. Liquid

b. Viscid

d. Solid

6. Sp. COAL.

a. Compact

b. Foliated

c. Brown coal

7. Sp. ANTHRACITE.

8. Sp. PLUMBAGO. .

#### 4th CLASS.-METALLIC MINERALS.

1. GEN. PLATINA

2. — GOLD. 3. — SILVER.

1. SP. NATIVE

2. - ANTIMONIAL

3. - SULPH. ANTIM. SILVER

4. — SULPHURATED

5. - CARBONATE

6. - MURIATE 4. GEN. MERCURY.

1. Sp. NATIVE

2. - ARGENTIFEROUS

3. - SULPHURET

4. - MURIATE

5. GEN. LEAD.

1. Sp. NATIVE

2. — SULPHURET 3. — Oxide

4. - CARBONATE

5. - PHOSPHATE

6. - ARSENIATE

7. - CHROMATE

8. - MOLYBDATE

9. - SULPHATE

10. - MURIATE

6. GEN. NICKEL.

1. Sp. NATIVE

2. — ARSENICAL 3. — OXIDE

4. - ANTIMONIAL

7. GEN. COPPER.

1. Sp. NATIVE

2. - BLACK SULPHURET

3. - YELLOW SULPHURET

4. - GREY SULPHURET

5. - OXIDE

6. - BLUE CARBONATE

7. - GREEN CARBONATE

8. - MURIATE 9. — Риозриате

10. - ARSENIATE

8. GEN. IRON.

1. Sp. NATIVE

2. - MAGNETIC

3. - SPECULAR

4. - SULPHURET

5. - OXIDE

6. - CARBONATE

7. - PHOSPHATE

8. - ARSENIATE

9. - CHROMATE

10. - MURIATE

9. GEN. TIN.

1. Sp. Oxide

2. - SULPHURET

10. GEN. ZINC.

1. Sp. Oxide

2. - SULPHURET

3. - CARBONATE

11. GEN. BISMUTH.

1. Sp. NATIVE

2. - SULPHURET

3. Sp. Oxide

4. - CARBONATE 12. GEN. COBALT.

1. Sp. ARSENICAL

2. - OXIDE

3. - ARSENIATE 4. - SULPHURET

13. GEN. ARSENIC.

1. SP. NATIVE 2. - OXIDE

3. - SULPHURET

4. - MARTIAL SULPH.

14. GEN. MANGANESE.

1. Sr. OXIDE

2. - CARBONATE

3. - SULPHURET

4. — РНОЅРНАТЕ

15. GEN. ANTIMONY.

1. Sp. NATIVE

2. - SULPHURET

3. - OXIDE 4. - SULPHURATED OXIDE

16. GEN. URANIUM.

17. GEN. MOLYBDENA.

18. GEN. TITANIUM.

1. Sp. Oxide

2. - SIL. CAL. OXIDE

19. GEN. WOLFRAM.

1. Sr. FERRUGINOUS

2. - CALCAREOUS

20. GEN. TELLURIUM. 21. GEN. TANTALUM.

22. GEN. CERIUM.

1. Sr. SILICEOUS OXIDE

2. - BROWN OXIDE

23. GEN. CHROMIUM.

#### METEORIC MINERALS.

1. METEOROLITES.

2. METEORIC IRON-

#### EXPLANATION

OF THE

## LIST OF SYNONYMES.

WHEN this Little Work formerly appeared, the list of names was confined principally to those used by HAUY, BROCHANT, KIRWAN, and JAMESON, with one German name, and such as appeared useful in the works of Lucas and BRONGNIART. To these, very considerable additions are now made, and the terms given, which are used by all the mineralogists of any note whose works I could procure, or whose nomenclature is to be found in the new edition of Lucas. In general, all that were not mere translations have been selected, although even these have, in many instances, been found indispensable. Some local terms and old names, which are almost obsolete, are likewise inserted; by the former, this work may be rendered useful to individuals who know nothing of mineralogy; and by the latter, the progress and improvement of the science will be remarked.

All the leading articles begin with the name employed in the synoptic arrangement, which is followed by the word Tables, and a No. in Roman numerals, referring to the place where it may be found in the tables of chemical analyses. It is then followed by the synonymes of the name; and if the name be that of a mineral which presents different varieties, such as Amphibole, or Antimony, it is followed in regular succession by these varieties, with all their synonymes; each preceded by a small a. b. c., &c. or i. ii. iii. &c.; the latter, as a kind of distinction, I have used only in the metallic class. When these have sub-varieties, as Columnar or Acicular Sulphate of Barytes, they are marked i. ii. iii., &c.: so that Säulenspath, when it occurs under the letter S, is referred by the No. 16. to Barytes,—by a. to the first species Sulphate,—and by i. to the sub-variety Columnar.

The names used by Haux, Brochant, Kirwan, Werner, and Jameson, are distinguished by their respective initials, subjoined to the word by a small capital letter. The names of other authors are either given at length, or so abbreviated as not to be mistaken.

It is with regret that this volume is sent to the press before I could reap the benefit of Professor Jameson's new edition of his System of Mineralogy. Anxious, however, to embrace the opportunity of leisure, which might not again occur, I could not venture to delay my publication, even for the short interval which is expected to elapse, before that valuable work makes its appearance.

## MINERALOGICAL SYNONYMES.

Achar w, 24 d
Achirite Sewergin, 38 vii. b
Acicular barytes—16 a ii.
Acid boracique libre u, 22 a
Acid carbonique u, 26 a
Acid muriatique Lucas, 85 a
Acid méphitique Bewly, 26 a
Acid suffurique libre u, 122 a
Acid vitriolique—122
Acido muriatico Petrini, 85 a
Acier natif De la Métherie, 64.1 b
Acier natif, pseudo volcanique u,

Actinolite J, Actinote H, 4 b Adamantine spar—39 b

#### 1. ADHESIVE SLATE, TAB. LXXXIX-

Adhesive slate J, Klebschiefer w, Polierschiefer B, Schiste à polir H, Argile feuilletée Brong: Schiste happant Tondi.

Adulaire B, 48 b
Adular w, Adularia J, 48 b
Ædelite B, 81 b
Ædelite E, 81 b
Aërolithe—82
Agalmatholithe Klap. 117 b
Agaric mineral K, 25 f i.
Agate J, 24 d
Agathe Delisle 24 a
Agathe verte-pomme Deborn 24 f
Agathine chatoyante Méth. 103 g
Aiguemarine 45 b
Akanticone Dandrada, 46 a
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- g. Massive. Hornstone й, Quarz agathe grossier н, Néopetre Saussure, Petrosilex Deborn, Keratite Méth. Splittriger hornstein

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b. STALACTITICAL. Calc sinter J, Chaux carbonnatée concretionnée n, Kalksinter w, Inolite Gallizin, Alabaster of the ancients J.

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f. Earthy. Solid. Chalk s, Chaux carb. crayeuse н, Kreide w, Craie в, Creta coherens solida Wall.

i. Pulverulent. Rock milk J., Agaric mineral K., Chaux carb. spongieuse u, Lait de montagne R., Bergmilch W., Creta farinacea spongiosa Wall. Lac luna—

g. Granular. Chaux carb. saccaroïde n, Pierre calcaire grenut, n, Körniger kalkstein w, Primitive limestone, Statuary marble, Saline marble, &c. Ganil κ, a name given to the arenaceous limestone of Antrim, which fritters with the pressure of the fingers. It contains 47.

h. Compact. Compact limestone J, κ, Chaux carb. compacte κ, Dichter kalkstein w. Mehlbaz a name given to an impure limestone of Thuringia.

of c. acid according to Kirwan,

and possesses a sp. gr. of 2.74.

i. Argillaceous. Marle earth J,
Earthy marle R, Argille calcarifére H, Marne argilleuse Brong.
Mergel erde W, Marne terreuse
B, Leuttrite Lucas, a phosphorescent marle from Leuttra in
Saxony.

k. Βιτυπίκους. Bituminous marlite κ, Chaux carbonatée bituminière n, Schiste marno bitumineux ε, Bituminöser mergelschiefer w.

i. Swine stone K, Stinkstone J, Chaux carb. fétide H, Pierre puante B, Stinkstein W.

 MAGNESIAN. Cristallised. Rhomb spar J, Cristallised muricalcite K, Bitterspath B, Picrite Brong. Ch. carb. magnesifère cristallisée u, Rautenspath-w, Kristallisirter dolomit Kars. Talkspath Estner, Miemite Reuss. Spath composé Woulfe, Chaux magnesiée Deborn.

i. Prismatic. Stänglicher bitterspath Klap.

ii. Granular. Dolomite s, w, Chaux carb. magnesifère granulaire н, Chaux carb. lente Brong. Common dolomite—

iii. Compact. Gurofian Klap. Gurhosian Lucas, Ch. carb. mag. compacte u-found between Gurhos and Aggsbach in Lower Austria.

m. Quartzose. Cristallised. Chaux carb. quarzifere H, Grès cristallisé de Fontainebleau B, Cristallised sandstone. The workmen denominate the sandstone of Fontainebleau pif, paf, pouf, according to its hardness; the first resists the stroke of the hammer; the second is remarkable for its facility in breaking; and the third is reduced to powder by a very gentle stroke.—Mittelstein Hacquet, a lamellated var. from Moustiers, Lucas.

i. Conite Reuss. Quarz agathe calcifère u, Silex silicicalce Brong. ii. Calp Kirwan, Chaux carb.

calp Brong.

iii. Madreporite и, в, Madreporstein Kars. Anthrakonit Beurard.

n. Ferro-Manganesian. Brown spar J, sidero calcite K, Chaux carb. ferro manganesière B, Spath brunnissant B, Brunispato Nap. Chaux manganesiée Deborn, Braunspath W, Pearl spar—

Carbonate of magnesia—75 b
Carbonate de nickel Daub. 87 iii
Carbonate of soda—26 b
Carbonate of silver—108 v
Carbonate of strontites Hope, 119 a

Carbonate of zinc—140 if Carbone pur *Tondi*, 42

# 26. CARBONIC SALTS. TABLES, I.

- a. Native. Acid carbonique H, Spiritus lethalis Anc. Spiritus sylvestris Van Hell. Acid méphitique Bewly, Kohlenstoffsäure Germ. Fixed air—
- b. Carbonate of soda. Natural soda J, Soude carbonatée H, Alkali mineral B, Alkali mineral aéré Berg. Natron Kars. Natron ou nitre des anciens Lucas, Soude blanche d'Egypte Delisle.

Carbon with 1-10th iron K, 99 Carbonated wood K, 36 c i Carbone oxydulé Tondi, 7 a Carbone oxydulé ferruginé Tondi,99 Carbunculus-55 a Carnelian K, J, 24 c Carniola Herrg. 24 c Carpenters chalk-44 Cats eye s, k, 103 g Cawk-16 a Ceilanite Reuss. 112 a Celestine J, B, w, 119 Cellular quartz s, 103 n i Céraunite-82, 48 g ii Cererit Kars. 28 a Cererium Kars. 28

# 27. CEREOLITE. TABLES, XCL.

Céréolite, de Drée, named from its similarity to wax, found in Corsica, Provence, Saxony, &c. and improperly considered as Steatite—Musée mineralogique.

# 28. CERIUM. Tables, CXXXIX. CEREIUM Kars. CERIUM H.

- Cérium oxydé silicifère n, Cererit Kars. Cerit His. Cérium oxydé rouge Méth. Tungstene de Bastnæs Crons.
- Brown oxide of cerium—Cerin His. Allanite Thoms. Cérium allanite Méth.

Cerin His. 28 b Cerit His. 28 a Cérium allanite Méth. 28 b Cérium oxydé rouge Méth. 28 a Cérium oxydé silicifere н, 28 a Cériuse native к, 70 iii Ceilanite Reuss. 112 a Ceylanite J, 112 a

# 29. CHABASIE. TABLES, LXIII.

Chabasie н, Tiré d'un mot grec, qui désigne une certaine espèce de pierre. Zeolithe cubique в, Cubic zeolite к, Schabasit w, Chabasin Kars. var. du Würfel zeolithe Reuss.

Chabasin Kars. 29
Chalk J, 25 f
Chalkolite w, 134 i
Chalcedon gemeiner. Kars. 24 a
Charbon de terre—36
Charbon schisteux p, 36 b
Charlo volcanico Herrg. 135
Chaux anhydro-sulfatée u, 120 e
Chaux d'antimoine native Mongez,
8 iii

8 m Chaux arseniatée в, 11 Chaux boracique *Deborn*, 75 c Chaux boratée concretionnée в, 23 в Chaux boratée siliceuse в, 23 в Chaux carbonatée bituminifère в, 25 k

Chaux carbonatée bituminifere н, 25 k
Chaux carbonatée compacte н, 25 h
Chaux carbonatée calp Brong. 25 m ii
Chaux carb. concretionnée н, 25 b
Chaux carb. coralloïde н, 10 b
Chaux carb. crayeuse н, 25 f
Chaux carb. crayeuse н, 25 g
Chaux carb. depressée Bourn. 25 d
Chaux carb. depressée Bourn. 25 d
Chaux carb. depressée Bourn. 10 a
Chaux carb. ferrifère н, 64 vi
Chaux carb. à fibres soyeuses н, 25 c
Chaux carb. ferro manganesifère н, 25 n

Chaux carb. fétide  $\mathfrak{n},\,25\,k$  i Chaux carb. globulitorme  $\mathfrak{n},\,25\,e$ Chaux carb. glob. testacée  $\mathfrak{n},\,25\,e$  i Chaux carb, lente Brong. 25 l ii Chaux carbonatée magnesifère cristallisée H, 25 l Chaux carb. mag. compacte и,25 liii Chaux carb. mag. granulaire H, 25 lii Chaux carb. nacrée H, 25 d Chaux carb. quartzifère н, 25 m Chaux carb. saccaroïde и, 25 g Chaux carb. spongieuse н, 25 f Chaux de cobalt noire Delisle, 37 ii Chaux datholite Brong. 23 a Chaux fluatée amorphe H, 51 c Chaux flustée compacte n, 51 b Chaux fluatée cristallisée u, 51 a Chaux magnesiée Deborn 25 l Chaux manganesiée Deborn 25 n Chaux nitratée н, 88 Chaux phosphatée cristallisée u, 94 a Chaux phos. chrysolite Brong. 94 b Chaux phos. terreuse a, 94 c Chaux sulfatée compacte n, 120 c Chaux sulfatée cristallisée u, 120 a Chaux sulfatée calcarifère n, 120 ci Chaux sulfatée fibreuse н, 120 b Chaux sulfatée niviforme и, 120 d

30. CHIASTOLITE. Tables, LXXIV. Hollowspar J, Macle II, c'est à dire Rhombe évidé parallélement à ses bords. Pierre de croix Delisle, Crucite Méth. Holespath w, Chiastolith Kars.

Chaux sulfatine Brong. 120 c

Chert Kidd, 50 a i

### 31. CHLORITE. TABLES, LXXIX.

- a. CRISTALLISED. Chlorite 3, Talc chlorite π, Chlorit w, Schisto chloritico Nap. Chlorite slate Thoms. Slaty chlorite J, Talc schisteux gris verdatre Deborn, Chlorit schiefer w.
- b. Foliated. Foliated chlorite J, Blättricher chlorit w.
- c. Earthy. Earthy chlorite s, Terre verte Méth. Erdiger chlorit Kars. Peach of Cornwall Kidd.

Chlorite blanche—124 q Chlorite zographique n, 57 Chlorophane—51 a Chriolite Méth. 2 b Chromate of iron s, 64 ix Chromate of lead—70 vii

# \$2. CHROMIUM. TABLES, CXL.

Chrome oxydé Bournon, from Ecouchets in Burgundy.

#### 33. CHRYSOBERIL. TAB. XXXIII.

Chrysoberil J, R, B, Cymophane B, c'est à dire lumière flottante— Krysoberyll W, Chrysopale Méth. Crisoberillo Nap. Beril de oro Herrg. Chrysolite opalisante Nonnul, Oriental chrysolite of the lapidaries.

Chrysocolle Brong. 38 vii. Chrysocolle bleue Bucquet, 38 vi. Chrysopal Mélh. 33 Chrysolite 9, 93 a Chrysolite opalisante Non. 33 Chrysoprase 5, 5. 24 f Chrysoprasium 8, 24 f

#### 34. CHUSITE. TABLES, XCH.

Chusite Saussure, a mineral found in the cavities of porphyry near Limbourg, and supposed by Brard to be decomposed Olivin.

Cimolithe B, 53 a
Cinuabar J, 80 iii.
Cinnabar black friable J, 80 iii. c
Cinnabre B, 80 iii.
Cinnabre B, 80 iii.
Cinnamite Poggi, 55 a ii.
Cinnamon stone J, 55 a ii.
Clay iron stone common J, 64 vi. a
Clay iron stone lenticular J, 64 vi. d

#### 35. CLINKSTONE. TABLES, XXX.

Clinkstone J, K. Pierre sonnante B, Klingstein w, Phonolite H, Echodolite Klap. SG. COAL. TABLES, CXV.

HOUILLE, CHARBON DE TERRE Fr. KOHLE Ger. ANTHRACE Ital. JUL-LA; Span. ANTHRAX OF CARBO Lat.

 а. Сомраст. Jet к, Jayet н, Lignite jayet Brong. Petrole compacte Deborn, Succin noire—Gagate Petr. Azabache Span.

i. Pitch coal J, Pech kohle w, Houille piciforme B, Houille seche Brong. according to Prof. Jameson, Jet is a var. of Pitch coal.

ii, Cannel coal J, Kännel kohle w, Houille compacte Brong. Houille de Kilkenny (improperly) B, Parret coal of Scotland—

b. Foliated. Foliated coal and slate coal J, Blätter kohle and Schiefer kohle w, Houille, ou charbon schisteux B, Houille grasse Brong.

i. Dysodile Cordier, Houille papyracée H, Terre bitumineuse feuilletée Bomare, Tourbe papyracée Tondi, Merda de Diavola dés Siciliens.

c. Brown. Brown coal J, Houille brune B, Braunkohle W, Gemeine braun kohle Reuss.

i. Fibrous. Bituminous wood σ. Carbonated wood κ, Bituminoses holz w, Bois bitumineux κ, Ligno bituminoso Petr. Suturbrand of Iceland——Bovey coal—

ii. Columnar. Columnar coal 1, Stängen kohle w, Houille bacillaire 4, Houille scapiforme 8.

iii. Friable. Moor coal s, Houille limoneuse Broch. Moor kohle w, Lignite friable Brong.

iv. Earthy. Earth coal J, Lignite terreux Brong. Erd kohle w, Bituminöse holzerde—Terre de cologne—

Coalblend- 7 a

### 37. COBALT. TABLES, CXXIX.

KOBALT Ger. COBALTO Ital.

i. Arsenical. White cobalt ore J, Cobalt arsenical H, Cobalt blanc E, Weisser speiskobalt W, Cobalto blanco Herrg.

a. Grey cobalt ore s, Dull grey cobalt ore к, Cobalt gris noirâtre н, Cobalt arsenical ferrifère Tondi, Grauer speiskobalt

w.

b. Cobalt glance s, Bright white cobalt ore κ, Cobalt gris n, Cobalt éclatant ε, Cobalt arsenical Daub. Kobalt glanz Kars.

ii. Oxide. Black and brown cobalt other s, Cobalt oxydé noir n, Cobalt terreux B, Chaux de cobalt noire Deliste, Erd kobalt Kars.— Earthy var. Kobalt mulm w.

iii. ARSENIATE. Cobalt bloom J, Cobalt Arseniaté H, Rother erd kobalt w, Kobalt blüthe Kars. Fleurs de cobalt B, Oxyde de cobalt rouge Deborn.

 a. Cobalt arseniaté argentifère н, Argent merde d'óie в, Gänseköthiges silber Reuss.

Cobalt arseniaté н, 37 ііі. Cobalt ar. argentifère и, 37 iii. а. Cobalt arsenical н, 37 і. Cobalt arsenical Daub. 37 i. b Cobalt arsenical ferrifère Tondi, 37 Cobalt blanc B, 37 i. Cobalt bloom J, 37 iii. Cobalt éclatant B, 37 L b Cobalt glance J, 37 i. b Cobalt gris H, 37 i. b Cobalt gris noirâtre и, 37 і. а Cobalt oxydé noir H, 37 ii. Cobalt sulfaté Brong. 122 i. Cobalt terreux B, 37 ii. Cobaltic manganese-66 i. d. Cobalto blanco Herrg. 37 i. Coccolit Andrada, 14 b

Cobre-38 Cobre nativo Herrg. 38 i. Cobre vidrioso Herrg. 38 ii. Colophonit Reuss. 55 e Columbite J, 125 Columbium Hatchet, 125 Columb eisen Reuss. 125 Columnar coal J, 36 c ii. Columnar clay iron stone s, 64 v. d Columnar heavy spar-16 a i. Columnar spar k, 16 a i. Common argillaceous iron ore K, 64 vi. a Common asbest J, 13 b Common calcedony J, K, 24 a Common clay iron stone J, 64 vi. a Common dolomite-25 / ii. Common feldspar K, 48 a Common garnet J, 55 b Common opal s, 91 c Common salt-85 ii. Common serpentine-106 b. Common schorl J, 130 a Common spar k, 25 a Common tinstone s, 127 i. Common tourmaline-130 a Compact clay ironstone-64 v. k Compact carbonate of lead-70 iv. b Compact coal-36 a Compact felspar J, 48 f Compact fluor J, 51 b Compact galena K, 70 ii. a Compact gypsum J, 120 b Compact lead glance J, 70 ii. a Compact limestone J, K, 25 h Compact mineral pitch s, 20 d Conchoidal glance coal J, 7 c Conite Reuss. 25 mi. Continuous feldspar K, 48 f

38. COPPER. Tables, CXXIV.

CUPRUM Lat. CUIVRE Fr. KUPFER. Ger. RAME Ital. COBRE Span.

 NATIVE. Native copper J, κ, Cuivre natif n, s, Gediegen kupfer w, Rame nativo Petr. Cobrenativo Herrg. Venus of the alchemists Brong. й. Выаск Sulphubet. Copper glance J, Vitreous ore к, Cuivre sulfuré н, Kupferglass w, Kupferglanz Kars. Cobre vidrioso Herrg. Cuivre vitreux в.

a. Copper black J, Black copper ore κ, Cuivre noir ε, Kupfer

schwarz w.

 b. Cuivre gris spiciforme n, Argent en épis—Koernerkrenerz des mineurs Hessois Lucas.

iii. Yellow Sulphuret. Copper pyrites J, Yellow copper ore κ, Cuivre pyriteux n, Pyrite cuivreuse n, Mine de cuivre jaune Deborn, Kupferkies w, Pirite gialla Petr.

a. Variegated copper ore σ, Purple copper ore κ, Cuivre pyriteux hepatique n, Cuivre p. panaché Breng. Cuivre sul. violet Deborn, Buntkupfererz w.

iv. Grev Sulphuret. Fahlore 1, Grey copper ore K, Cuivre gris H, B, Mine de cuivre antimonial Deborn, Mine d'argent grise Mon-

gez, Fahlerz w.

a. Cuivre gris platinifère Lucas, a var of the grey sulphuret of copper from Guadalcanal in Estramadura, occasionally containing 1-10th of Platina.

V. Oxide. Red copper ore s, Florid red copper ore κ, Cuivre oxydule H, Cuivre oxyde rouge B, Mine de cuivre vitreuse rouge Delisle.

a. Capillary. Cuivre oxydulé capillaire н, Haarformiges roth

kupfererz w, Kupfer blüthe Wid. b. Earthy. Tile ore σ, Brick red copper ore κ, cuivre oxydulé terreux H, Cuivre oxydulé ferrifère Brong. Ziegelerz w.

vi. Blue Carbonate. Copper azure

σ, Blue calciforme copper ore κ,
Cuivre carb. bleu π, Azure de
cuivre ε, Fleurs de cuivre bleues

Delisic, Chrysocolle bleue Bucquet, Azul de cobre Herrg. Kupfer lazur w.

a. Earthy. Bleu de montagne B, Erdige kupferlazur w, Azuro di montagna Petr. Arménite Méth.

vii. Green Carbonate. Malachite
J, K, B, Cuivre carbonaté vert B,
Fleurs de cuivre vertes Delisle,

Malachit w.

a. Earthy. Mountain green σ, Copper green κ, Cuivre carbvert pulverulent κ, Vert de montagne Delisle, Chrysocolle Brong. Verde de cobre Herrg. Kupfergrün w.

b. Copper emerald J, Dioptase B, c'est à dire visible au travers. Cuivre dioptase B, Emeraude de Siberie Ferba, Emeraudine Méth. Kupfersmaragd w, Cristallisertes Kupfergrün Estner, Achirite Sewergin.

viii. Muriate. Copper sand J, Cuivre muriaté n, Salzsaures kupfer w, Salzkupfer Kars. Atacamite—Greensand of Peru k.

ix. Риоѕриате. Phosphate of copper J, Cuivre phosphaté и, Cuigre phosphoré Méth. Phosphor kupfererz w.

х. Arseniate. Cuivre arseniaté н, Cuivre arsenical в.

d, Curvic arsemear a.

1. Sp. Lenticular Bournon, Linsenerz w.

2. Lamellar Bournon, Kupferglimmer w, Copper mica J, Cuivre arseniaté lamelliforme B.

3. Acicular Bournon, Olivenerz w, Olive copper ore κ, Olivin ore J.

a. Earthy. Cuivre arseniaté terreux jaune verdâtre n, Pharmacochalzit Leon.

Copparosa turchina Petr. 122 g Copper azure 1, 38 vi. Copper black 1, 38 ii. a Copper emerald J, 38 vii. b Copper glance J, 38 ii. Copper green k, 38 vii. a Copper mica J, 38 x. Copper nickel J, 87 ii. Copper pyrites J, 38 iii. Copper sand J, 38 viii. Cordierite Lucas, 62 Corindon adamantin Brong. 39 b Corindon granulaire я, 39 с Corindon harmophane н, 39 b Corindon har. opaque n, 39 b i. Corindon hyalin H, 39 a Corindon télésie Brong. 39 a Corindon zincifère Hisinger, 112 b Cornaline B, 24 c Corneous mercurial ore k, 80 iv. Corneous silver ore k, 108 vi. Corund J, 39 b

#### 39. CORUNDUM. TABLES, XXXII.

a. PERFECT. Sapphire J, Oriental ruby, sapphire, and topaz к, Соrindon hyalin formerly Télésie, c'est à dire corps parfait u, Corindon télésie Brong. Asteria of the ancients Kidd, Saphir w, Malabar name Sappira. Colorless var. Lux sapphir-

Corund J, Adab. IMPERFECT. mantine spar k, Corindon harmophane, formerly Corindon H, Spath adamantin B, Spato adamantino Nap. Gemeiner korund w, Corindon adamantin Brong.

i. Brown var. from China, Diamond spar J, Corindon harmophane opaque H, Demant spath W.

c. GRANULAR. Emery J, K, Corindon granulaire formerly Fer oxydé quartzifère u, Smeriglio Petr. Schmirgel w, Emeril B.

Cornish tin ore J, 127 i. a Cos Meth. 138 Coticula Wall. 138 Couperose vert Delisle, 122 f Craie B, 25 f Craie de Briançon-124 a

Craie d'Espagne Deliste, 117 Craitonite Bournon, 141 Crayon rouge в, 64 v. b Creta cimolia-53 Creta coherens solida Wall. 25 ) Creta farinacea spongiosa Walt. 25

Crisoberillo Nap. 33 Crisolito Nap. 94 b Crisolito nobile Nap. 93 a Crisolito commune Nap. 93 b Crisolito de vulcani Petr. 135 Crispite Méth. 128 i. b Cristal de Roche B, 103 a Crocalite Est. 81 b Croisette Daub. 116 Cross stone J, 59 Crusite Méth. 30 Cryolite J, 2 6 Crysolithe du cap Sage, 102 Cube ore J, 64 viii. a Cube spar J, 120 e Cubic zeolite J, 5 a-K, 29 Cuivre-38 Cuivre arseniaté n, 38 x. Cuivre ars. ferrifère B, 64 viii. Cuivre ars. lamelliforme B, 38 x.

Cuivre ars. terreux jaune verdâtre н, 38 х. а

Cuivre arsenical B, 38 x. Cuivre carbonaté bleu н, 38 vi. Cuivre carb. vert и, 38 vii. Cuivre carb. vert pulverulent n, 38 vii. a

Cuivre corné Deborn, 134 i. Cuivre dioptase Brong. 38 vii. b Cuivre gris u, B, 38 iv. Cuivre gris platinifère Lucas,38 iv.a Cuivre gris spiciforme н, 38 ii. b Cuivre muriaté B, 38 viii. Cuivre natif u, B, 38 i. Cuivre noir B, 38 ii. a Cuivre oxydé rouge B, 38 v. Cuivre oxydulé u, 28 v. Cuivre ox. capillaire n, 38 v. a Cuivre ox. terreux H, 38 v. b Cuivre ox. ferrifère Brong. 38 v. b

Cuivre phosphaté и, 38 ix. Cuivre phosphoré Méth. 38 ix. Cuivre pyriteux п, 38 iii.
Cuivre pyriteux hépatique п, 38 iii. а
Cuivre pyr. panaché Brong. 38 iii. а
Cuivre sulfaté п, 122 g
Cuivre sulfuré п, 38 ii.
Cuivre sul. violet Deborn, 38 iii. а
Cuivre vitreux п, 38 ii.
Cupreous antimonial sulphuret of lead—70 ii. е
Cupreous arseniate of iron Bournon, 64 viii.
Cuprum—38
Cyanite л, п, 105
Cymophane п, 33

DAOURITE Méth. 130 d'
Dapèche Lucas, 20 c
Datholite Esmark, 23 a
Decomposed flint—50 b
Delphinite Saus. 46 a
Demant w, 42
Demant spath—39 b i.
Déodalite Rose, 97

#### 40. DESMINE. TABLES, XCIII.

A name given by Nose to a substance cristallised in small silky tufts, accompanying Spinellane in the lavas of the extinct volcances of the Rhine.

#### 41. DIALLAGE. TABLES, LVI.

a. Green var. Diallage verte H, Granular actinolite J, Feldspath vert Delisle, Emeraudite Daub. Lotalalite Sewergin, Körniger strahlstein W, Smaragdit Kars.

b. Metallic var. Schiller stone s, Dialiage metalloïde u, Spath chatoyant u, Miroitante Meth. Diallage chatoyante Brong. Schillerstein w, Bronzit Kars. Labradorische hornblende Emm.

Haüy has given the name of Euphotide to the shining green Lamellar Diallage contained in the compact felspar of Corsica, known as the Verde di Corsica Duro in Italy—

Diallage chatoyante Brong. 41 b Diallage metalloïde u, 41 b Diallage verte u, 41 a

### 42. DIAMOND. TABLES, CX.

Diamond J, K, Diamant H, B, Demant w, Carbon pûr Tondi, Malabar name Virum—

Diamond spar J, 39 b i. Dichroïte Cord. 63—Bourn. 103 c Diaspore n, 136 Diaspero Petr. 61 Dichter fluss w, 51 b Dick faseriger amethyst w, 103 m Diopside Brong. 104 Dioptase n, 38 vii. b Diorite n, 58

# 43. DIPYRE. TABLES, LXXIII.

Dipyre c'est à dire Doublement susceptible de l'action du feu H, Schmelzstein W, J, Dipyr Kars. Leucolith de Mauléon Méth.

Disthène H, 105
Dolomite w 25 l ii.
Dolomite kristalliserter Kars. 25 l
Doppelspath—25 a
Dragée de Tivoli—25 c i.

#### 44. DRAWING SLATE. LXXXVIII.

Drawing slate J, Elack chalk K, Argile schisteuse graphique R, Schiste à dessiner B, Ampelite graphique Brong. Zeichenschiefer W, Nigrica Wall. Carpenters chalk—Melantherite Méth.

Dull grey cobalt ore K, 37 i. a Dysodile Cordier, 36 b i.

Earth Coal J, 36 c iv. Earthy carb. of lime—25 f Earthy green carb. of copper—38 vii Earthy blue carb. of copper—38 vi Earthy chlorite J, 31 c Earthy fluor J, 51 c Earthy gyps-120 d Earthy marle K, 25 i. Earthy phosphate of lime-94 c Earthy talc s, 124 e Echodolite Klap. 35 Ecume de mer-75 b i. Ecume de terre-25 d ii. Edelite B, 81 b Edler arsenik kies Kars. 12 iv. Edler beril w, 45 b Edler granat w, 55 a Edler opal w, 91 a Edler serpentin w, 106 Egyptian jasper s, 50 c Egyptian pebble к, 50 с Eisen-64 Eisen gediegen w, 64 i. Eisenblende-134 ii. Eisenblüthe-10 b Eisenchrome Kars. 64 ix. Eisenerde blaue w, 64 vii. a Eisenglanz w, 64 iii. Eisenglimmer w, 64 iii. a Eisenkiesel w, 103 h Eisenkolumb Kars. 125 Eisenokker w, 64 v. e Eisenpecherz 64 vii. c Eisenrham roxo Herrg. 64 v. c Eisenrham rouge B, 64 v. c Eisensand w, 64 ii. a Eisenschwärze Reuss. 64 v. h Eisenstein magnet w, 64 ii. Eisenstein rasen w, 64 vii. b Eisenstein spath w, 64 vi. Eisenvitriol Kars. 122 f Eispath w, 111 Elaeolith Kars. 137 d Elastic mineral pitch s, 20 c Elastic quartz и, 103 l іі. Elastic sandstone-103 / ii. Electric schorl—130 b Electrum Klap. 56

# 45. EMERALD. TABLES, XXXVI.

и. Emerald J, к, Emeraude c'est à dire corps Brillant и, Schmaragd w, Glatter smaragd Kars. Smaragdus Wall. Smeraldo Nap. Beril Emeraude Brong.

b. Beril. Precious beryll s, Emeraude limpide, verte bleuâtre, jaune verdatre n. Edler beril w. Gestriefter smaragd Kors. Beril aigmarine Brong. Beril noble s, Berillo Nap. Aquamarine-

Emerald of Brasil-130 b Emeraude и, 45 a Emeraude du cap Rochon, 102 Emeraude de Siberie Ferber, 38 vii.b Emeraude limpide, vert bleuatre, 80с. п, 45 б Emeraudine Méth. 38 vii. b Emeraudite Daub. 41 a Emeril B, 39 c Emery J, K, 39 c Endélion Bourn. 70 ii. e

#### 46. EPIDOTE. TABLES, LV.

a. CRISTALLISED. Pistazit J, w, Glassy actinolite k, Rayonnante vitreuse в, Epidote и, c'est à dire qui a reçu un accroisement. Delphinite Saus. Stralite vitriosa Nap. Thallit Kars. Akanticone Andrada, Arendalit Reuss. Grey shining var. Zoïsit w. b. Granular. Epidote arenace u,

Skorza Lucas.

Epsom salt k, 122 c Epsonite Méth. 122 e Erbsenstein w, 25 e i. Ercinite Nap. 59 Erdiger chlorite Kars. 31 c Erdiger fluss Kars. 51 c Erdiger phosphorit Kars. 94 c Erd kobolt Kars. 37 ii. Erd kobolt rother w, 37 iii Erd kohle w, 36 c 4 Erdőel w, 20 a Erdpech clastisches w, 20 c Erdpech schlackiges w, 20 d Erdpech zähes Kars. 20 b Espato de Bolonia Herrg. 16 a iii. Espuma de manganesa Herrg. 76 i.a. Estaño—127
Estaño vidrioso Herrg. 127 i.
Esteatita Herrg. 117
Etain—127
Etain—127
Etain limoneux Deborn, 127 i. a
Etain oxydé B, 127 i.
Etain oxydé concretionné B, 127 i. a
Etain ox. au maximum Méth. 127 i.
Etain pyriteux B, 127 ii.
Etain sulfuré B, 127 ii.
Etain stalactite Debisle, 127 i. a
Etain vitreux cristallisé Deb. 127 i.
Ethiops mineral natif B, 80 iii. c
Ethiops martial natif Deborn, 64 v. i
Euphotide B, 41 b

#### 47. EUCLASE. TABLES, XXXVII.

Euclase c'est à dire Facile à brisér n, Euklas w. Of this mineral, which is about the rarest we are acquainted with, and is found only in Peru and Brasil, there is a splendid collection in the cabinet of Mr Rundell.

FAHLERZ W. 38 iv. Fahlore J, 38 iv. Fahlunite Kars. 112 b False amethyste-51 a False diamond—141 False saphire-103 c Farinaceous gypsum k, 120 d Farinaceous zeolite—81 a Farine fossile Mongez, 120 d Farine fossile de Fabroni Méth. 101d Farine volcanique Meth. 101 d Faser quarz Kars. 103 m Faser zeolith w, Kars. 81 Fassaït Lenz, 118 Faux lapis Stutz, 69 a Feather antimony J, 8 ii. a Federerz w, 8 ii. a Federsalz Kars. 122 d i. Feldispato commune Nap. 48 a Feldspath H, 48 a Feldspath apyre appen. н, 6 Feldspath blen appen. 11, 48 c

Feldspath bleu céleste Deborn, 48 c Feldspath comp. céroide н, 48 f Feldspath cubique w, 48 a i. Feldspath décomposé u, 48 h Feldspath du Forez Guyton, 6 Feldspath gemeiner w, 48 a Feldspath laminaire—48 a ii. Feldspath muschliger Link. 129 Feldspath nacré н, 48 b Feldspath opalin н, 48 с Feldspath opalisirender Kars. 48 b Feldspath tenace и, 48 g Feldspath vert н, 48 d Feldspath vert Delisle, 41 a Felsite k, 48 e Feldstein blättriger Estner, 48 a Feldstein dichter Estner, 48 f

#### 48. FELSPAR. TABLES, XLII.

a. Common. Fresh feldspar s, Common feldspar κ, Feldspath ou Orthose, (the latter) tirer d'un mot Grec qui signifie droit κ, Spath fusible d'Arcet, Spath fetincillant Daub. Feldspath commun κ, Gemeiner feldspath w, Feldispato commune Nap. Blättiger feldstein Estner, Petalite Andrada.

i. Wurflicher feldspath w, Feldspath cubique B, Petrilite K, var. of common felspar.

ii. Feldspath laminaire—Petunzé of the Chinese, the Sanidin of Nose is a var. of felspar disseminated in the argillaceous porphyry of Drechenfels.

The Indianite of *Bournon*, although containing an unusual proportion of alumine according to the analyses of Chenevix, is probably a var. of felspar.

b. Resplendent. Adularia J, Moonstone к, Feldspath nacré и, Adulaire в, Felspath adulaire Brong. Adular w, Opalisirender feldspath Kars.

c. OPALESCENT. Labradore stone J.

к, Feldspath opalin н, Pierre de Labrador в, Labradorite Méth.

d. Green. Feldspath vert H, Patrin states that this stone has been improperly called Pierre d'Amazone by Deborn, &c.—vulg. Amazon stone.

e. Blue. Azurite J, Feldspath bleu n, appen. var. of Dichter Feldspath w, Splittriger lazulite Kars. Feldspath bleu céleste Deborn, var. du Tyrolite Méth. Felsite K.

Siderite Moll, Mollite-Quartz résinite bleu grisâtre Lucas. In conformity with Klaproth, this substance is placed under Felspar, although there is a great disparity of opinion respecting it; Lucas describes it as a variety of opal; in the Journal des Mines, it is mentioned as a variety of Quartz; and Tromsdorff who analysed it, observed that its composition approaches nearer to that of Spinel than any other mineral. By reference to its analysis, it certainly docs not appear properly placed under Felspar.

f. Compact. Compact feidspar σ, Continuous feldspar κ, Dichter feldstein Estner, Feldspath compacte céroïde π, Petrosilex Mongez, Paläiopetre Saus. Petroselce commune Petr. Splittriger hornstein—Helleflinta of the Swedes, Gabbronite Schumacher.

g, Tovan. Feldspath tenace n, Jade Saus. Hornstone s, Pierre à corne n, Silex corné Brong. Saussaurit Kars. Lehmanite Méth. Magnelithe Hopfner.

i. Jade néphritique H, appen. Jade K, Nephrit Kars. Giada Petr. Pierre nephritique—Pierre des reins—Pierre des Amazons —Takourave—

ii. Jade ascien н, appen.—Axe stone J, Pierre de hache в, Beilstein Em. Punamu nephrite Reuss. Igida, Indian name, Cé-raunite—

h. Decomposed. Feldspath décomposé н, Porcelaine clay J, Kaolin к, Porzallenerde—

Felspath adulaire Brong. 48 b Fer-64

Fer argilleux grenu ou lenticulaire B, 64 v. m

Fer arg. jaspoïde в, 64 v. k Fer arg. scapiforme в, 64 v. d Fer arseniaté в, 64 viii.

Fer arsenical H, 12 iv. Fer arsenical argentifère 12 iv. Fer azuré *Méth*. 64 vii. a

Fer az. pulverulente n, 64 vii. a Fer carburé n, 99

Fer chromaté H, B, 64 ix. Fer chromé Laugier, 64 ix.

Fer de Framont Méth. 64 iii. Fer de l'Isle d'Elbe Méth. 64 iii. I er hépatique Deborn, 64 iv. a

Fer magnetique B, 64 ii. Fer mag. sabloneux B, 64 ii. a

Fer malléable natif *Delisle*, 64 i. Fer météorique—82

Fer micacé B, 64 iii. a Fer micacé rouge Daub. 64 v. c

Fer micacé rouge *Baub.* 64 v. Fer muriaté *Lucus*, 64 x.

Fer natif н, в, 64 i. Fer natif météorique н, 82

Fer noir Deborn, 64 v. i. Fer oligiste n. 64 iii.

Fer ol. argillifère compacte rouge н, 64 v. b

Fer ol. bacillaire conjoint H, 64 v. d Fer ol. concretionné H, 64 v.

Fer ol. écailleux B, 64 iii. a Fer ol. luisant H, 64 v. c

Fer ol. terreux H, 64 v. e

Fer oxydé argillifère massif u, 64 vi. a

Fer ox. carbonaté н, 64 vi.

Fer ox. brun fibreux Brong. 64 v. f Fer ox. brun granuleux Bron. 64 v. l

Fer ox. brun ocreux Brong. 64 v. g

Fer ox. globuliform н, 64 v. l Fer ox. graphique н, 64 v. b

Fer ox. hématite n, 64 v. f

Fer ox. de lacs Lucas, 64 vii. b Fer ox. au minimum Méth. 64 v. i. Fer ox. quarzifere n, 39 c Fer ox. resinite Lucas, 64 vii. c Fer oxydulé u, 64 ii. Fer ox. fuligineux n, 64 v. i Fer ox. titanifere n, 64 ii. a Fer phosphaté u, 64 vii.—B, 76 iv. Fer phos. azuré Brong. 64 vii. a Fer phos. laminaire Brong. 64 vii. Fer phos. au maximum Méth. 64 vii. Fer phos. terreux - 64 vii. a Fer spathique Meth. 64 vi. Fer spéculaire B, 64 iii. Fer sublimé des volcans Fauj. 64 iii. Fer sulfaté н, 122 f Fer sulfuré n, 64 iv. Fer sul. au maximum Méth. 64 iv. Fer terreux bleu B, 64 vii. a Fer titané Cordier, 64 ii. a Fer volcanique Méth. 64 iii. Ferricalcites Kirw. 64 vi. Ferruginous wolfram-139 i. Ferro-manganesian carbonate of lime-25 n Fettstein-137 d Fenerstein-50 Ferro aerato Petr. 64 vi. Ferro nativo Petr. 64 i. Ferrum-64 Fester uran ocher w, 134 i. a

# 49. FIBROLITE. TABLES, XCIV.

Fibrolite Bournon, u, Fibrolit Kars. Bournonite Lucas; a substance which accompanies Corundum, and is usually of a fibrous texture.

Fibrous gypsum σ, κ, 120 b Fibrous limestone σ, 25 c Fibrous quartz κ, 103 m Fibrous zeolite σ, 81 Figure stone σ, 117 b Fiorite Thomson, 91 f i. Fish eyestone σ, 9 Fischaugenstein w, 9 Fixed air—26 a Fleurs de cinnabre Delisle, 80.111. & Fleurs de cobalt 8, 37 iii. Fleurs de cuivre bleues Delisle,

38 vi. Fleurs de cuivre vertes Delisle, 38

Fleurs de manganèse—76 i. a

# 50. FLINT. TABLES, XXI.

a. Compact. Flint J, к, Quarzagathe pyromaque и, Feurstein w, Pierre à fusil в, Silex Petr. Pedernal Herrg.

 Chert Kidd—Petrosilex of some authors.

- b. Decomposed. Quarz nectique H, Schwimmstein Kars. Levi silex Méth. Schwimmkiesel Haus.
- c. Baows. Egyptian jasper J, Egyptian pebble K, Jaspe Egyptien B, Calcedoine silex Bournon, Selee d'Egitto Nap. Quarz agathe onyx opaque u.

Flint slate J, 103 i. Flokkenerz Kars. 70 vi. Florid red copper or R, 38 v. Floss ferri—10 b Floss niccoli Wall. 87 iii.

#### 51. FLUATE OF LIME. TAB. IX.

a. Cristallised. Fluor spar J. N. Chaux fluatée cristallisée n. Spath fluor n. Fluor spath w. Fluorite Nap. Spath fusible Delisle,—the phosphorescent var. Chlorophane—also according to colour, False Amethyste, Emerald, Ruby, and Topaz.

 COMPACT. Compact fluor J, Ch. fluatée compatto u, Dichter fluss w, Fluorite compatto Nup.

c. Earthy. Earthy fluor s, Chaux fluatée amorphe н, Erdiger fluss Kars. Fluss erd w.

Fluor spar J, K, 51 c Fluss spath w, 51 a Fluorite Nap. 51 a Fhorite compatto Nap. 51 b
Fluss erd—51 e
Foliated carbonate of lime—25 d
Foliated chlorite J, 31 b
Foliated coal J, 36 b
Foliated prehnite J, 102
Foliated zeolite J, 118
Fortification agate—24 d
Fossil oil J, 20
Fossile vert Leonhard, 103 l
Francheis w, 120 a
French chalk—124 a
Fresh feldspar J, 48 a

# 52. FREISLEBEN. TABLES, XCV.

A mineral so named by Moll after the mineralogist who first described it; its colour is greyish blue, or blue, it is fragile, scratches calcareous spar with difficulty, fracture, lamellated; lustre, shining; soft to the touch, and insoluble in water, Lucas.

### 53. FULLERS EARTH. LXXXIV.

. Fullers earth J, Argile smectique н, Terre à Foulon в, Walkererdew, Creta cimolia of Pliny Къдд.

a. Cimolithe B, Argile cimolith Brong.

Fuscite Schumacher, 96

Gabbronite Schumacher, 48 f

#### 54. GADOLINITE. TABLES, LII.

Gadolinite 1, 11, Gadolinit w, Ytterbite—Zeolite noire Geyer, Klaproth has discovered the Kohle blend of Bornholm to be Gadolinite.

Gagate Petr. 36 a Galanite—112 b Galena κ, 70 ii. Galena antimoniale Petr. 8 ii. Galène s, 70 ii.
Galène antimonial Méth. 70 ii. c
Galène de bismuth s, 19 ii.
Galène compacte Deborn, 70 ii. a
Galène speculaire Deborn, 70 ii. b
Gänseköthiges silber Reuss. 37 iii. α
Gallizinite—128 i. c
Galmei w, 140 i.
Ganil κ, 25 g

# 55. GARNET. TABLES, XXXVIII.

a. Parcious. Precious garnet J, Grenat H, B, Edler granat W, Almandin Kars. Carbunculus of Pliny Kidd, Syrian garnet of the lapidary, Yellow var. Succinite and Topazolite Bonvoisin.

i. Pyrope J, w, Grenat granuliforme н, Grenat pyrop Brong. Karfunckel Reuss. Oriental garnet of the lapidary—

ii. Cinnamon stone J, Kaneelstein w, Cinnamite Poggi.

b. Common. Common garnet J, Grenat brun, rougeatre, ou verdatre и, Grenat ordinaire—Gemeiner granat w.

c. Black. Melanite J, B, w, Grenat noir de Frescati—Schlackiger granat Kars. Grenat émarginé noir π,—the Black garnet of the Pyrenees, Pyrenaït w.

d. Olive Green. Grossularia w, Grenat vert olive n, Olyntholith Fisch. i. Aplome appen. a. Hawy con-

siders this a distinct mineral.

ii. Allochroite Andrada, Splittriger granat Kars. Green amorphous garnet—

e. GRANGLAR. Grenat resinite n, Pech granat Kars. Colophonit Reuss.

f. Manganesian. Grenat manganesié Brong. Manganèse granatiforme n, Braunstein kiesel Renss. placed by some among the ores of Manganese—

Geanthrace Tondi, 7 a Gediegen platin w, 98

Gediegen sylvan w, 126 i. Gediegen tellur Reuss. 126 i. Gemeine braun kohle Reuss, 36 c Gemeiner anthracite Kars, 7 b Gemeiner asbeste w. 13 b Gemeiner corund w. 39 b Gemeiner kalzedon w, 24 a Gemeiner opal w, 91 c Gemeiner quarz w, 103 n Gemeiner schorl w, 130 b Gemeiner talk w, 124 b Gelb menacanerz w, 128 ii. Gelberz Kars. 126 iv. Gesso compatto alabastro Nap.120c Gesso fibroso Nap. 120 b Geyerite Méth. 91 f Giacinto et Giargone Nap. 141 Giada Petr. 48 g i. Giallamina Petr. 140 i. Gips dichter-120 c Gips fascriger w, 120 b Gips späthiger Kars. 120 a Gipserde w, 120 d Girasol Delisle, 91 c i. Glance coal J. 7 a Glanzkohle muschliche w. 7 c Glanzerz Kars, 108 iv. Glass schorl, Glass stein Wid. 15 Glasserz w, 108 iv. Glasskopf brauner w, 64 v. f Glasskopf rother w, 64 v. Glasskopf schwarzer w, 64 v. h Glassy actinolite J, K, 46 a Glatter smaragd Kars. 45 a Glauber salt J, K, 122 c Glauberite Brong. 122 c Glaubersalz Kars. 122 e Glimmer w, 83

56. GOLD. TABLES, CXIX.

OR Fr. GOLD Ger. ORO Ital. AURUM Lat.

Gold J, K, W, Or H, B.

 a. Electrum Klap. Or argental—a combination of gold and silver in a state of purity.

Gold of nagyag-126 iii.

Goldish native silver J, 108 i. a Gossan brown of Cornwall-139 i. Goudron mineral B, 20 b Grammatite H, 131 Granat edler, w, 55 a Granat gemeiner w, 55 b Granat schlackiger Kars. 55 e Granat splittriger Kars. 55 d ii. Granatit Reuss. 116 Granular actinolite s, 41 a Granular augite-14 b Granular carbonate of lead \_\_ 70 iv. b Granular corundum—39 c Granular garnet-55 e Granular limestone-25 g Granular peridot-93 b Granular quartz-103 / Graphic ore J, 126 ii. Graphit J, B, W, 99 Green amorphous garnet -55 d ii.

# 57. GREEN EARTH. TAB. LXXXII.

Green earth J, Terre verte в, Baldogée Saussure, Argile verde de monte Baldo Nap. Grün erde w, Terre de Verona—Talc chlorite zographique н.

Green earth is a production of the Flotz formations, Chlorite occurs only in the older rocks.

Green lead ore s, 70 v. Green quartz—103 d Green sand of Peru κ, 38 viii.

# 58. GREENSTONE. TABLES, XXIX.

Greenstone J, Grünstein W, B, Diorite H, Whinstone of Scotland.

Green tourmaline s, k, 130 b Green vitriol—122 f Grenat H, B, 55 a Grenat blanc Méth. 72 Grenat brun H, 55 b Grenat émarginé noir H, 55 c Grenat granuliforme H, 55 a.i. Grenat manganesié Brong. 55 f Grenat noir de Frescati—55 c Grenat ordinaire-55b Grenat pyrope Brong. 55 a i. Grenat résinite H, 55 e Grenat rougeâtre ou verdâtre н, 55 b Grenat vert olive-55 d Grenatite Daub. 71-J, B, 116 Grés B, 103 l Grés cristallisé B, 25 m Grés élastique B, 103 l ii. Grés flexible Brong. 103 l ii. Grey antimony-8 ii. Grey cobalt ore 1, 37 i. a Grey copper ore k, 38 iv. Grey ore of manganese J, K, 76 i. Grey sulphuret of copper-38 iv. Grossularia w, 55 d Grünerde w. 57 Grünes fossil—103 l Grünstein w, B, 58 Guhr gypseux Delisle, 120 d Guhr siliceux Klap. 91 f Gültigerz weis-70 ii. d Gurofian Klap. 25 l iii. Gurhosian Lucas. 25 l iii. Gyps earth J, 120 d Gypse compacte в, 120 с Gypse pesant d'Arcet, 16 a Gypse terreux в, 120 d Gypse violet de Rosena Deborn, 71

Haarformiges rothkupfererz w, 38 v. a
Haarkies w, 87 i.
Haarsalz w, 122 e i.
Hair pyrites J, 87 f.
Hair salt J, 122 e i.
Halb opal Kars. 91 b
Halb zeolith Estner, 102
Hallite Méth. 2 a
Halorichum Scapoli, 122 e i.
Hard calcareous spar—10 a
Hard spar J, 6

# 59. HARMOTOME. TABLES, LXVIII.

Cross stone J, Staurolite κ, Harmotome, c'est à dire qui se devise sur les jointures H, Pierre cruciform B, Stauro baryte. Saussure, Andreasbergolithe Meth. Ercinite Nap. Kreuzstein w.

Haüyn Kars. 66 Heavy spar J, 16 a Heliotrop J, w, 24 c Helleflinta-48 f Hématite B, 64 v. Hématite friable Delisle, 64 v. c Hématite noire en boule fibreuse Deborn, 64 v. h Hématite rouge écailleuse Méth. 64 v. c Hematitic quartz-103 h Hepatic barytes - 16 a iv. Hepatic mercurial ore к, 80 iii. в Hepatic pyrites k, 64 iv. a Hepatit Klap. 16 a iv. Hæpfnerite—131 Hierro-64 Hierro micaceo Herrg. 64 iii. a Hierro nativo Herrg. 64 i. Hoegaüit Selb. 86 Hollow spar J, 30 Holespath w, 30 Holz asbest Kars. 13 d Holz zinn Wid. 127 i. a Honeystone J, 79 Honigstein w, 79 Horn ore J, 108 vi. Hornblei w, 70 x. Hornblende Méth. 4 a Hornblende basaltiche w, 4 Hornblende de Labradore B, 60 Hornerz w, 108 vi. Hornstein splittriger w, Kars. 24 g—48 fHornstone к, 24 g-J, 48 g Houille-36 ii. Houille bacillaire н, 36 с й. Houille brune B, 36 c Houille compacte Brong. 36 a ii. Houille éclatante B, 7 c Houille grasse Brong. 36 b Houille de Kilkenny B, 36 a ii. Houille limoneuse-36 c iii.

. Houille papyracée и, 36 b i. Houille piciforme B, 36 a i. Houille scapiforme B, S6 c ii. Houille schisteuse B, 36 b Houille sèche Brong. 36 a i. Houillite Daub. 7 a Huille mineral commune B, 20 a Humite Bournon, 112 a Hyacinth J, K, B, 141 a Hyacinthe de Compostello-103 h Hyacinthe d'Expaillie-141 a Hyacinthe de Somma Meth. 77 Hyacinthe du Vésuve Delisle, 135 Hyalite w, 91 f i. Hyazinth w, 141 a Hydrargillite Davy, 136 Hydrargill. de Schemnitz Méth. 2 a Hydrargyrum-80 Hydrophane к, 91 b Hydrolite Mackenzie, 91 f Hydrolite de Dréc, 5 b Hyperstène н, 60 Hydrate d'alumine Klap. 136

# 60. HYPERSTÈNE. TABLES, XLIX-

Hyperstène н, Labrador hornblend л, Hornblend de Labradore в, Paulite w, Schiller spar—

- Bergmannit Schumacher, probably a fibrous variety of Hyperstène.
- b. Anthophyllite Schumacher, a substance from Kongsberg, probably a var. of Hyperstène, although placed as a separate species before Axinite by Karsten.

Jade K, 48 g i. Jade Saus. 48 g Jade ascien п. 48 g ii. Jade néphritique п, appen. 48 g i. Jargon в, 141

#### 61. JASPER. TABLES, XXII.

a. Common. Jasper J, K, Jaspe B,

Quarz jaspe н, Jaspis w, Diaspero Petr.

b. Opal Jasper J, Jaspe opal B, Opal jaspis w.

c. Porcellaine jasper J, Porcellanite κ, Thermantide porcellanite π, Jaspe porcellaine Β, Porzellan jaspis w.

Jaspe egyptien в, 50 с Jaspe opal в, 61 с Jaspe porcellaine в, 61 с Jaspe sanguin—24 с Jaspery clay iron stone з, 64 v. k Jayet п, в, 36 а Iceland agate—90 Iceland spar—25 а Ichtiophtalme в, 9 Idocrase н, 135

#### 62. JENITE. TABLES, LI.

Yénite, a name given to a mineral from Elba by Lelièvre in commemoration of the battle of Jena.—Lievrit w.

Jet K, 36 a lgida—48 g ii. Igloît w, 10 a Imperfect corrundum Bournon, 39 b Indianite Bournon, 48 a Indicolit Kars. 130 c Indicolithe Andrada 130 c Indurated clay—101 b Indurated tale s, 124 a Inolite Gall. 25 b Iridium Tennant, 98

#### 63. IOLITE. TABLES, XCVI.

Iolithe н, w, Cordierite *Lucus* Dichroïte *Cordier*, considered by *Bournon* as a var. of quartz.

There is a substance from India which possesses some of the principal characters of this mineral, and has been considered Dichroïte; it is transparent; by transmitted light, it is of a grey colour in one direction, and of a deep indigo blue in another. It is usually brought to Europe in small polished masses, about the size of a nut. It has not been submitted to regular analyses, but contains nearly one-third of magnesia, upwards of one-half of silex, and about one-tenth of iron.

64. IRON. TABLES, CXXIV.

FER Fr. EISEN Ger. FERRUM Lat. HIERRO Span.

- i. Native. Fossil. Native iron J, K, Eisen gediegen w, Fer natif H, B, Fer malléable natif Delisle, Hierro nativo Herrg. Ferro nativo Petr. Tellureisen Kars. a. Meteoric.—See 82.
  - b. Native Steel. Acier natif pseudo volcanique н, Acier natif Méth.
- ii. MAGNETIC. Magnetic iron stone J, Fer oxydulé H, Magnetic iron ore κ Fer magnetique B, Aimant Delisle, Magnet eisenstein w, Mina de Hierro magnetico Herrg.

a. Magnetic iron sand J, Magnetic sand K, Fer magnetique sablonneux B, Eisensand W, Fer oxydulé titanifère H, Fer titané Cordier. These two last are probably the same as the Granular titanium—Arena de hierro magnetico Herrg.

b. Magnetic pyrites k, Fer sulfuré ferrifère h, Magnet kies w. iii. Specular. Iron glance J, Specular iron ore k, Fer oligiste h, Fer spéculaire b, Eisenglanz w, Fer sublimé des volcans Faujas, Fer de l'Isle d'Elbe, de Framont, et volcanique Méth. Miniera di

Acciajo Petr.

a. Scaly. Iron mica s, Micaceous iron ore к, Fer oligiste écailleux н, Eisen glimmer w, Hierro micaceo Herrg. Fer micacé в.

iv. Sulphuret. Iron pyrites J,
Martial pyrites B, Fer sulfuré
B, Mine sulfureuse de fer Mongez, l'er sulfuré au maximum
Méth. Pirita de azufre Herrg.
Schwefelkies w, Marcassites Delisle.

a. Hepatic pyrites κ, Liver pyrites J, Pyrite sul épigène κ, Pyrite hépatique κ, Pyrite brune martiale Bomare, Fer hépatique Deborn, Pirita hepatica Herrg. Leberkies Kars.

 Capillary pyrites,—found to be Native nickel.

v. OXIDE.

a. Red. Red hematite s, к, Fer oligiste concretionné н, Rother glaskopf w, Amatita Petr. Hématite в, Kidney iron ore—

b. Reddle J, Fer oxydé graphique, ou Fer oligiste argillifère compacte rouge H, Sanguine Deborn, Crayon rouge B, Röthel W, Red chalk—Ochriger Thoneisenstein Kars.

c. Red iron froth J, Red scaly iron ore κ, Fer oligiste luisant π, Eisenrahm rouge Β, Rother eisenrham w, Hématite friable Delisle, Hématite rouge écailleuse Méth. Fer micacé rouge Daub. Eisenrahm roxo Herrg. Schuppiger rotheisenstein Kars.

d. Columnar clay iron stone J, Fer oligiste bacillaire conjoint H, Fer argilleux scapiforme B, Fer limoneux en prismes Deborn, Stängliger thoneisenstein W.

e. Red ochre к, Fer oligiste terreux и, Eisenokker w, Ochriger rotbeisenstein Kars. f. Brown. Brown hematite s, κ, Fer oxydé hématite н, Fer oxyde brun fibreux Brong. Brauner glasskopf w.

g. Brown iron ochre κ, Fer ox. brun ocreux Brong. Ocre martiale brune Delisle, Braun eisen okker w, Ochriger braun eisenstein Kars. Ocro de hierro pardo Herrg.

h. Black. Black hematite J, Schwarzer glasskopf w, Hématite noire, en boules à cassure fibreuse Deborn.

i. Fer noir, ou Ethiops martial natif Deborn, Fer ox. au minimum Méth. Fer oxydulé fuligineux u, Eisenschwärze Reuss.

k. Jaspery clay iron stone J, Fer argilleux jaspoïde n, Compact clay iron stone—

l. Pea ore s, Fer oxydulé brun granuleux Brong. Fer oxydé globuliforme н, Kuglicher thoneisenstein Kars. Bohnerz w.

m. Lenticular clay iron stone s, Fer argilleux grenu ou lenticulaire B, Körniger thoneisenstein w.

D'Aubuisson proposes to establish a new species among the irons, comprehending under the name of Hydrates, the Brown Hæmatites, Pea ore, Lenticular clay iron stone, and all those distinguished in the chemical tables, by the loss of a considerable portion of their weight by calcination, supposed to be water.—

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vi. Carbonate. Sparry iron stone J, Calcareous, or Sparry iron ore, also Ferricalcites κ, Fer oxydé carbonaté, formerly Chaux carbonatée ferrifère u, Fer spatique u, Spath fusible Delisle, Fer spathique, on mine d'acier Méth. Ferro aerato Petr. Picdra de acero Herrg. Spath eisenstein w, Steelstone-

a. Common clay iron stone э, Com. argillaceous iron ore к, Fer ox. argillifère massif н, Mine de fer limoneuse en roche Delisle.

yii. Phosphate. Fer phosphaté eristallisé il, Schorl bleu de Siberie Macquart, Bleu martial fossile cristallisé Sage, Fer phosphaté au maximum Méth. Fer phosphaté laminaire Brong.

a. Larthy. Blue iron earth J, Fer phos. terreux, formerly Fer azuré pulverulent B, Prussiate de fer natif Deborn, Blue martial earth K, Fer terreux bleu B, Fer azuré Méth. Fer phos. azuré Brong. Blaue eisenerde w.

b. Pulverulent. Bog ore β, Morass, Swamp, and Meadow ore κ, Rasen eisenstein Kars. Morassterz, Sumpferz, Wiesenerz w. Mine de marais, des lieux bourbeux et de prairies β, Fer oxydé des lacs Lucas.

c. Massive. Pitchy iron ore s, Eisenpecherz w, Manganèse phosphaté Brongniart, Fer oxydé resinite Lucas. Pecherz ferrugineux Meth. Pittizit Haus.

viii. Arseniate. Cube ore J, Fer arseniaté H, Wurfelerz W, Mina cubica Herrg. Cupreous arseniate of iron Bournon, Cuivre ars. ferrifère B.

ix. Сняомать. Chromate of iron s, Fer chromaté и, Chrome oxydé ferrifère St Menin, Fer chromé Laugier, Eisenchrom Kars.

x. Muriate. Fer muriaté Lucus, Pyrodmalith Hausman.

Iron glance J, 64 iii. Iron flint J, 103 h Iron mica J, 64 iii a Iron pyrites J, 64 iv. Iron vitriol J, 122 f Iserin Kars. 128 i. c Julia—36 Jupiter—127 i.

KALKSINTER W, 10 b-25 b Kalkspath w, 25 a Kalkstein excentrischer Kars. 10 a Kalkstein faseriger w, 25 c Kalkstein dichter w, 25 h Kalkstein körniger w, 25 g Kalkstein spätiger Kars. 25 a Kalzedon gemeiner-24 a Kalzedonartiger kieselsinter Hausman 91 f Kallochrom Haus. 70 vii. Kaneelstein w, 55 a ii. Kännel kohle w, 36 a ii. Kaolin K, 48 h Karabé Deborn, 3 Karfunckel Reuss. 55 a i. Karneol w, 24 c Karstenit Haus. 120 c Katzenauge-103 g Keffikill K, 75 b i.

### 65. KEFFEKILITHE. TAB. XCVII.

A name given by Fischer of Moscow, to a mineral from the Crimea, which is supposed by Leonhard to be an indurated Lithomarga.

Kermes mineral natif Deborn, 8 iv. Kératite Méth. 24 g Kidney iron ore 1, 64 v. Kiesel guhr Klap. 68 d Kiesel schiefer w, 103 i. Kieselsinter gemeiner Kars. 91 f Kilkenny coal—7 b Klaprothite De Dréc, 69 a Klebschiefer w, 1 Klingstein w, 35 Kobalt—37 Kobalt blüthe Kars. 37 iii. Kobalt glanz Kars. 37 ii. b Kobalt vitriol w, 132 i.

Kohle-36 Kohlenblende Est. 7 a Kohlenblende of Bornholm-54 Kohlenstoffsäure Germ. 26 a Kokkolithe w, 14 b Kolyrite Kars. 2 a Korallenerz-80 iii. b Koréïte Méth. 117 c Koernerkrenerz of Hesse-38 ii. b Körniger augite Kars. 14 b Körniger thoneisenstein-64 v. m Körnisches zinnerz w, 127 i. a Korund gemeiner w, 39 b Koupholite в, 102 Kreide w, 25 f Kreuzstein w. 59 Krisoberyll w, 33 Kryolith w, 2 b Krysolith w, 93 a Krysopras w, 24 f Kubezit w, 5 a Kuglicher thoneisenstein Kars, 64 v. l Kupfer-38 Kupfer blüthe Wid. 38 v. a Kupfer gediegen w, 38 i. Kupfer vitriol-122 g Kupfer salsaures w, 38 viii. Kupfer schwärze-38 ii. a Kupfererz phosphor w, 38 ix. Kupferglanz Kars. 38 ii. Kupferglass w, 38 ii. Kupferglimmer w, 38 x. ii. Kupfergrün w, 38 vii. Kupfergrün cristallis. Est. 38 vii. b Kupferkies w, 38 ni. Kupferlazur w, 38 vi. Kapfernickel w, 87 ii. Kupfersmaragd w, 38 vii. b Kyanite w, 105

Labrador hornblend J, 60 Labradorische hornblende Emm. 41b Labradorite Méth. 48 c Labradorstone J, K, 48 c Lac lunæ—25 f i. Lait de montagne B, 25 f i. Laminated talc— $124\ b$  Lapis lazuli  $\kappa$ , 69 Lapis lydius Wall. 103 i. Lapis mutabilis— $91\ b$ Lardite Pctr. 117 aLasulit de Werner  $\kappa$ , 69 a

# 66. LATIALITE. TABLES, XCVIII.

Latialite H, Hauyn Kars. Saphirin Nose, Lazulith de Somma Breyslac, Spinelle bleu Cordier. A blue coloured mineral found among the volcanic products of Italy.

# 67. LAUMONITE. TABLES, LX.

Laumonite H, formerly Zeolithe efflorescente—Mesotype laumonite Brong. Lomonite J.

# 68. LAVA. TABLES, XXVI.

- a. Lava J, к, Lave в, Lave lithoïde в, Lave proprement dite Dolomicu.
- b. Vesicular. Pumice J, к, Lave vitreuse pumicée н, Pierre de Ponce в, Bimstein w.
- c. Earthy. Moya Klap. Volcanic mud of Quito.
- d. Pulverulent. Kiesel ghur Klap. Volcanic ashes—

Lave lithoïde basaltique 11, 17 Lave vitreuse obsidienne 11, 90 Lave vitreuse pumicée 11, 68

#### 69. LAZULITE. TABLES, LVIII.

Azure stone J, Lapis lazuli R, Lazulite H, Zeolithe bleue Deborn, Zeolite turchina o Lapis lazzoli Petr. Lazurstein w.

a. Lasulit de Werner II, Klaprothite De Drée, Tyrolite et voraulite Méth. Faux lapis Stütz, Blauspath w, Lazulit gemeiner Kars.

Lazulit gemeiner Kars. 69 a Lazulit splittriger Kars. 48 e Lazulithe de Somma Breyslac, 66 Lazurstein w, 69

#### 70. LEAD. TABLES, CXXII.

PLOMB Fr. BLEI Ger. PLUMBUM Lat. PLOMO Span. PIOMO Ital.—SATURN of the Alchimists.

- i. NATIVE. Plomb natif volca-
- Sulphuret. Lead glance J, Galena κ, Plomb sulfuré π, Galène π, Bleiglanz w, Alquifoux ou mine de vernis des potiers Lucas.

a. Compact lead glance J, Compact galena κ, Plomb sulfuré compacte π, Galène compacte Deborn, Bleischweif w.

 Plomb sul spéculaire н, Galène spéculaire Deborn, Slickensides of Derbyshire.

c. Plomb sulfuré antimonifère н, Galène antimonale Méth. Spiesglanz blei Kars.

d. Plomb sul. antimonifère et argentifère μ, White silver ore J, Light grey silver ore κ, Mine blanche riche Β, Argent blanc Brong. Mina de plata blanca Herrg. Weis gultigerz w, Argent blanc de Freyberg—

e. Cupreous antimonial sulpluret—Antimonial sul, of lead Thoms. Tripple sulphuret Hatchet, Endelion Bournon, Bournonite J.

iii. Охібе. Lead earth л, Native ceruse к, Plomb охуде́ н, Plomb terreux в, Bleierde w.

a. Native minium Smithson, Plomb ox. rouge Lucas.

iv. Carbonate. White lead ore J, K, Plomb carbonaté H, Plomb blanc B, Weisbleierz W, Plomo blanco Herrg.

a. Black lead ore л, Plomb carb. noir н, Mine de plomb noire в, Plomo negro Herrg. Schwarz Kars.

b. Lead earth J, Bleierde w, Compact or granular carb. of

v. PHOSPHATE. Brown and green lead ore J, Phosphorated lead ore к, Plomb phosphaté н, Plomb vert B, Braun and grün bleierz w, Gemeines phosphorblei Kars. Pyromorphit Haus.

а. Blue lead ore J, к, Plomb bleu B, Blau bleierz w, Plomb

sulfuré épigène н.

b. Plomb phosphaté arsenifère н, Plomb arseniaté Mohr, Muschliges phosphorblei Kars. Traubenerz Klap.

vi. Arsentate. Plomb arsenié H. E. Bleiniere w. Flokkenerz Kars.

Massicot natif-

vii. CHROMATE. Red lead ore s, Red lead spar k, Plomb chromaté н, Plomb rouge в, Plomb spatique rouge Pallas, Plomo roxo espatico Herrg. Rothbleierz w, Kallochrom Haus.

a. Plomb chromé Bournon.

viii. MOLYBDATE. Yellow lead ore s, Yellow molybdenated lead ore k, Flomb molybdaté u, Plomb jaune s, Plomo amarillo Herrg. Gelb bleierz w.

ix. Sulphate. Natural lead vitriol J, Native vitriol of lead K, Plomb sulfaté н, Vitriol de plomb natif B, Blei vitriol w.

x. Muriate. Plomb muriaté s, Hornblei w, Murio-carbonate of

Lead earth J, 70 iii. Lead glance J, 70 ii. Lead vitriol J, 70 ix. Leberkies Kars. 64 iv. a Leberstein Crons. 16 a iv. Lehmanite Méth. 48 g Lenticular clay iron stone 1, 64 v.m.

# bleierz w, Dunkler bleispath | 71. LEPIDOLITE. TABLES, LXX.

Lepidolite J, Lepidolithe H, Lilalit Poda, Gyps violet de Rosena Deborn, Lepidolita Herrg. White var. from Sweden, Petalite according to De Drée.

# 72. LEUCITE. TABLES, XXXIX.

Leucite J, Amphigène c'est à dire que a une double origine H, Vesuvian k, Grenat blanc Méth, Grenatite Daub. Leucolite Nap. Leucite Herrg. Leuzit w, White garnet-

Leucolite Nap. 72 Leucolithe d'Altenberg Métherie, 129 appen. i. Leucolithe de Mauléon Méth. 43 Leuttrite Lucas, 25 i. Leuzit w, 72 Levisilex Meth. 50 b Lherzolite Méth. 14 c Lidischerstein w, 103 i. Liége de montagne B, 13 c Lievrit w, 62 Light grey silver ore K, 70 ii. d. Lignite friable Brong. 36 c iii. Lignite jayet Brong. 36 a Lignite terreux Brong. 36 c iv. Ligniform asbestus k, 13 d Ligno bituminoso Petr. 36 c i. Ligno montaño Nap. 13 d Lilalit Poda, 71 Limestone compact-25 h Limestone granular-25 g

# 73. LIMBELITE. TABLES, XCIX.

Limbelite Saus. Peridot alteré Brard .- found at Limbourg in the cavities of Basaltic porphyry.

Lino fossile Nap. 13 a Lino de Piedra amianto Herrg. 13 a Linsenerz w, 38 x. Liquid bitumen-20 a

# 74. LITHOMARGA. TAB. LXXXVI.

Lithomarge s, н, Lithomarga к, Moëlle de Pierre в, Steinmark w.

Lithéosphore Méth. 16 a iii. Liverpyrites s, 64 iv. a Liverstone s, 16 a iv. Lomonite s, 67 Lotalalite Siverguine, 41 a Lustsaures silber Wid. 108 v. Lux saphir—39 a Lydianstone s, 103 i. Lydienne Méth. 103 i. Lythrodes—137 d

Macle н, 30 Madréporite н, в, 25 m iii. Madreporstein Kars. 25 m iii. Magnélithe Hopf. 48 g

# 75. MAGNESIA. TABLES, XVI.

a. NATIVE. Native magnesia Bruce, Magnésie pûre, ou Magnésie hydratée Lucus, Magnesie native B, Magnesite—

b. Carbonate. Native talk earth J, Native magnesia Thomson Magnésie carbonatée H, Magnésie native B, Magnésite de Mitchel Brong. Baudisserite, Roubschite Méth. Reine talkerde w.

 i. Meerschaum J, w, Ecume de mer—Magnésite ecume de mer Brong. Keffikil also Myrsen κ.

c. Borate. Boracit J, w, b, Boracited calx K, Chaux boracique Deborn, Spato sedativo Nap. Quarz cubique——Würfelstein Westr. Magnésie boratée H.

Magnesian carb. of lime—25 l Magnésie boratée n, 75 c Magnésie carbonatée n, 75 b Magnésie hydratée—75 a

Magnésie ferrifère capillaire u, 122 Magnésie native в, 75 в Magnésie půre-75 a Magnésie sulfatée н, 122 е Magnesite-75 a Magnésite ecume de mer Brong. 75 6 Magnésite de Mitchel Brong. 75 b Magnet eisenstein w, 64 ii. Magnetkies w, 64 ii. b Magnetic iron ore k, 64 ii. Magnetic iron stone J, 64 ii. Magnetic sand K, 64 ii. a Malachite K, J, B, W, 38 vii. Malacolite Abild. 104 Malta Petr. 20 b Mangan Kars. 76

# 76. MANGANESE. TABLES, CXXXI.

Manganese Fr. Braunstein Ger. Mangan Kars.

De la Perouse described in the Memoires de l'Academie de de Toulouse for 1782, a mineral from Vicdessos under the name of Native manganese; which, although a production of the eastern Pyrenees, has not subsequently become known to mineralogists.

 Oxide, Grey ore of manganese σ, κ. Manganèse oxydé π, Manganèse gris π, Manganesa radiada Herrg. Grau braunsteinerz w, Grau manganerz Kars.

a. Mang. ox. metalloïde argentifère n, Manganschaum Kars.
 Espuma de manganesa Herrg.
 Fleurs de manganèse—

b. Earthy. Manganèse ox. noir brunâtre н, Verhärtetes schwarz manganerz Kars. Ochro de manganesa Herrg.

c. Bituminous. Manganèse ox. terreux bituminifère и, Mang. inflammable Beurard, Wad Kars. Black wad des Anglais Lucas. d. Cobaltic manganese. The ore of Ringersdorff is a combination of this description according to Klaproth.

ii. Carbonate. Red ore of manganese R, Manganèse ox. carbonaté, formerly Rose silicitère H, Roth braunsteinerz W, Roth Manganerz Kars. Manganèse carbonaté Méth. Manganèse lithoïde rouge Brong. Manganèse rouge B.

iii. Sulphuret. Manganèse sulfuré н, Sulfure de manganèse Proust, Mangan glanz Kars.

iv. Phosphate. Pitchy iron ore 1, Manganèse phosphaté ferrifère 11, Fer phosphaté 12, Manganèse et Fer phosphatés Méth. Phosphormangan Kars.

Manganerz grau Kars. 76 i. Manganerz roth Kars. 76 ii. Manganesa radiada Herrg. 76 i. Manganèse carbonatée Méth. 76 ii. Manganèse granatiforme B, 55 f Manganèse gris B, 76 i. Manganèse inflammable Beurard,

76 i. c Manganèse lithoïde rouge н, 76 ii. Manganèse oxydé н, 76 i. Manganèse ox. carbonaté н, 76 ii.

Manganèse ox. carbonaté и, 76 іі. Manganèse ox. metalloïde argentifère и, 76 і. с

Manganèse ox. [noir brunâtre н, 76 і. b

Manganèse ox. rose silicifére 76 ii. Manganèse ox. terreux bituminifère и, 76 i. с

Manganèse phosphaté, Brong. 64 vii. c.

Manganèse rouge в, 76 ii. Manganèse phos. ferrifère в, 76 iv. Manganèse sulfuré в, 76 iii. Manganesian garnet—55 f Manganglanz Kars. 76 iii. Manganschaum Kars. 76 i. а Marcassitta Petr. 12 iv.
Marcassites Delisle, 64 iv.
Marekanite Β, 90 α
Marle earth J, 25 i.
Marne argilleuse Brong. 25 i
Marne terreuse Β, 25 i,
Martial pyrites κ, 64 iv.
Mascagnin Kars. 122 b
Meadow ore J, 64 vii. b
Massicot natif—70 vi.
Mealy zeolite J, 81 α
Méconites—25 ε i.
Meerschaum—75 b i.
Mehlbaz—25 h
Mehlzeolith w, 81 α

# 77. MEIONITE. TABLES, XLI.

Méionite, c'est à dire moin re ou inférieur 11, Hyacinthe de la Somma Méth.

Melanite J, w, B, 55 c Mélantherite Méth. 44

### 78. MELILITE. TABLES, C.

Melilite H, B, a mineral found in the clefts of lava at Capo di Bovi.

#### 79. MELLITE. TABLES, CXIII.

Honeystone σ, Mellilite κ, Mellite n, Pierre de miel Β, Succin cristallisé Deborn, Alumine mellatée Méth. Piedra melada Petr. Honigstein w.

Menacan w, 128 i. c Menacanerz brann & gelb w, 128 ii. Menachine Gregor, 128 Menachinite s, 128 i c Ménakanite Brong. 128 i. c Ménilite w, 91 d Mercure—80 Mercure argental н, 80 ii. Mercure coulant Delisle, 80 i. Mercure doux natif Delusle, 80 iv. Mercure hépatique н, 80 iii. b Mercure muriaté н, 80 iv. Mercure natif n, 80 i. Mercure sulfuré n, 80 iii. Mercure sul. bituminifère n,80 iii. b Mercure vierge Delisle, 80 i.

#### 80. MERCURY. TABLES, CXXI.

MERCURE Fr. AZOGUE Span-HYDRARGYRUM Lat. QUICKSIL-BER Ger.

i. Native. Native quicksilver J, Native mercury &, Mercure natif n, Mercure vierge ou coulant Delisle, Azogue nativo Herrg. Gediegen quicksilber w.

 Argentiferous. Amalgam J, w, B, Mercure argental H, Amalgama nativo de Plata Herrg.

iii. Sulphuret. Cinnabar J, Native cinnabar K, Mercure sulfuré H, Cinnabar B, Mine de mercure sulfureuse Delisle, Oxyde de mercure sulfuré rouge Deborn, Cinabrio Herrg. Zinnober W.

 a. Pulverulent. Native vermillion—Fleurs de cinnabre Delisle.

b. Hepatic. Quicksilver liver ore 1, Hepatic mercurial ore 18, Mercure sulfuré bituminifère 11, Mercure hépatique 18, Mina de azogue hepatico Herrg. Quicksilber lebererz w, Testaceous var. Korallenerz—

c. Earthy. Black friable cinnabar J, Ethiops mineral natif B, Natürlicher mineral mohr w.

iv. Muriate. Quicksilver horn ore J, Corneous mercurial ore κ, Mercure muriaté π, Mercure corné β, Mercure doux natif Deliste, Mina de azogue corneo Herrg.

Merda de Diavolo—36 b i. Mere d'emèraude Nonnull, 24 fMergelerde w, 25 iMergelschiefer bituminæser w, 25 k

### SI. MESOTYPE. TABLES, LIX.

Radiated, Fibrous, and Needlezeolite J, Mésotype, c'est à dire forme primitive moyenne H, Mésotype zeolite Brong. Faser zeolith and Nadelstein W, Prismatischer and Faser zeolith Kars.

a. Farinaccous. Mealy zeolite з, Mésotype alterée н, Zeolithe farineuse в, Mehl zeolith w.

b. Brick coloured. Zeolithe rouge d'Edelfors н, Edelite н, Mésotype crocalite Brong. Crocalite Est.

Mésotype alterée n, 81 a Mésotype concretionnée, &с. н, 86 Mésotype crocalite Brong. 81 b Mésotype laumonite Brong. 67 Meteoreisen Kars. 82 Meteoric iron—82

### 82. ME PEOROLITE. TAE. CXLI.

Thunderstone — Moonstone — Aerolithe — Bolide — Ceraunite — Pierre de Tonnère, &c.

Meteoric iron—Fer natif météorique н, Meteoreisen Kars.

From the investigations of Pallas and Ruben de Celis, no doubt seems now to remain that the celebrated masses of native iron, found in Siberia and South America are of meteoric origin. The circumstances under which they were both discovered, first suggested this idea, which has been very amply confirmed by the subsequent chemical investigations of Mr Howard.

#### 83. MICA. TABLES, LXXI.

Mica J, K, H, B, Talc Daub. Glimmer w, Schisolith Haus. Muscovy glass—

Mica vert Leske, 134 i.

Micaceous iron ore κ, 64 iii. a
Micaceous uranitic ore κ, 134 i.
Micarelle κ, 96
Micarelle Abidd. 137 c
Miémite Reuss. 25 l
Mikaphyllite Brunner, 6
Milch quarz w, 103 f
Mik quartz J, 103 f
Mina arsenical blanca Herrg. 12 iv.
Mina de azogue corneo Herrg. 80 iv.
Mina de azogue hepatico Herrg. 80
iii. b

Mina cubica Herrg. 64 viii. Mina de hierro magnetico Herrg. 64 ii.

Mina de plata blanca Herrg. 70 ii. d Mina de plata negra Herrg. 108 iii. a

Mina de plata roxa Herrg. 108 iii. Mina de plata vidriosa Herrg. 108 iv. Mine d'argent antimoniale Daub. 108 ii.

Mine d'argent grise Mongez, 38 iv. Mine d'argent en plumes—8 ii. Mine blanche riche s. 70 ii. d Mine de cuivreantimoniale Deborn, 38 iv.

Mine de cuivre jaune Deborn, 38 iii. Mine de cuivre vitreuse rouge Delisle, 38 v.

Mine de fer limoneuse en roche *Qelisle*, 64 vi. a

Mine de lieux bourbeux 8,64 vii. b Mine de mercure sul. rouge Deborn 80 iii.

Mine de mercure sulfureuse Delisle, 80 iii.

Mine de marais B, 64 vii. b Mine de plomb noire B, 70 iv. a Mine de prairies B, 64 vii. b Mine sulfureuse de fer Mongez, 64 iv. Mine de vernis des potiers Lucas, 70 ii.

Mineral cahouchou κ, 20 c Mineral mohr natürlicher w,80 iii. c Mineral pitch J, Mineral tar—20 b Miniera di Acciajo Petr. 64 iii. Miroitante Méth. 41 b Mispickel Delisle, 12 iv. Mittelstein—25 m Mock diamond—141 Moëlle de pierre B, 74 Mohr mineral w, 80 iii. c Molarite Méth. 103 n i. Moliddeno Petr. 84

#### 84. MOLYBDENA. TAB. CXXXIV.

Molybdene s, Molybdène sulfuré н, Plomo de agua Herrg. Wasserblei w, Molybdänglanz Kars, Moliddeno Petr.

Molybdate of lead-70 viii. Moonstone k, 48 b Moonstone-82 Moorcoal s, 36 ciii. Moorkohle w, 36 c iii. Morass ore J, 64 vii. b Morassterz w, 64 vii. b Moroxite Kars. 94 a Mountain cristal k, 103 a Moya Klap. 68 c Mountain green J, 38 vii. a Mountain leather-13 c Mountain paper-13 c Müllersglass-91 f i. Muriacit Klap. 120 e Muriacite Fichtel, 85 b Muriate of ammonia-85 e Muriate of copper-38 viii. Muriate of lead-70 x. Muriate of mercury-80 iv. Muriate of silver-108 vi. Muriate of soda-85 b Muriated antimony-8 iii.

# 85. MURIATIC SALTS. TAB. IV.

a. NATIVE. Acid muriatique Lucas, Acid of sea salt—Salzsaure w, Acido muriatico Petr. sometimes occurs in rock salt, and also in the waters of volcanic countries.

b. Muriate of Soda. Rock salt J, Sal gemme R, Soude muriatée H, Sel de cuisine B, Steinsalz W, Common salt—Alkali mineral muriatique Berg. Soude muriatée gypsifère Brong. Muriacite Fichtel.

с. Микіате оf Аммоніа. Sal ammoniac з, к, Ammoniaque muriaté н, Sel ammoniac natif в, Alkali volatil muriatique Delisle, Salmiak Kars.

Muricalcite к, 25 l Murio-carbonate of lead—70 х. Muschliche glanzkohle w, 7 с Muschliges phosphorblei Kars. 70 v. b Muscovy glass—83 Mussite—104 Myrsen к, 75 b i.

NACRITE Brong. 124 & Nadelerz w, 19 ii. a Nadelstein w, 81 Nadelstein-128 i. Nagiagerz w, 126 iii. Nagyker ore J, 126 iii. Naphta-20 a Naphte Deborn, 20 a Native alum k, 122 d Native antimony J, K, 8 il Native argile k, 2 a Native arsenic J, K, 12 i. Native bismuth J, K, 19 i. Native borax-22 Native calx of arsenic K, 12 ii. Native carbonic acid-26 a Native ceruse k, 70 iii. Native cinnabar K, 80 iii. Native copper J, K, 38 i. Native iron J, K, 64 i. Native lead-70 i. Native magnesia Bruce, 75 a Native magnesia Thoms. 75 b Native manganese Perouse, 76 Native mercury k, 80 i. Native muriatic acid-\$2 i. Native mineral carbon K, 7 a

Native nickel—87 i.
Native quicksilver—80 i.
Native silver J, κ, 108 i.
Native steel—64 i. b
Native sulphuric acid—122 i.
Native sylvan J, 126 i.
Native talc earth J, 75 b
Native vermilion—80 iii. a
Native vitriol of lead κ, 70 ix.

#### 86. NATROLITE. TABLES, XLIV.

Natrolit J, Mésotype concretionnée mamelonnée jaunâtre et jaune rougeâtre, à tissu fibreux et serré n, Hoegaüit Selb. Zeolithe jaune de Schaffhousen Bellevue.

Natrolite of Sweden—137 à Natron Kars. 26 b
Natron des anciens Lucas, 26 b
Natural epsom salt—122 e
Natural lead vitriol J, 70 ix.
Natural soda J, 26 b
Natürlicher vitriol w, 122 f
Needle ore J, 19 ii. a
Needle zeolite J, 81
Némate H, 92 a
Néopetre Saus. 24 g
Nephéline H, B, 110
Nephrit Kars. 48 g i.
Niccolanum Richter, 87 iii. a
Nichelio—87

### 87. NICKEL. TABLES, CXXIII.

NICCOLUM Lat. NICHELIO Ital.

- i. Native. Nickel natif n, Gediegen nikkel Klap. Haarkies w, Pyrite capillaire B, Capillary pyrites—Hair pyrites J. This substance has been placed under the heads of both Iron and Bismuth.
- ii. Arsenical. Copper nickel s, Nickel arsenical s, Kupfernikkel w, Nicolo de cobre Herrg.

Obsidienne perlée Brong. 92

iii. Охідь. Níckel ochre J, к, Nickel oxydé п, Ocre de nickel в, Floss niccoli Wall. Carb. de nickel Daub. Nikkel okker w, Earthy var. Pimelite Kars.

a. Niccolanum; the supposed new metal of Richter, has been found to be a compound of Nickel and Cobalt, with a trace of Iron and Arsenic, by Hisinger and Gelden.

iv. ANTIMONIAL.

Nickel arsenical H, 87 ii.
Nickel ochre J, K, 87 iii.
Nickel okker W, 87 iii.
Nickel oxydé H, 87 iii.
Nicolo de cobre Herrg. 87 ii.
Nigrica Wall. 44
Nigrin Kars. W, 128 i. c
Nigrine J, 128 i. c
Nikkel gediegen Kars. 87 i.
Nitre J, K, 89 i.
Nitre calcaire Deborn, 89 ii.
Nitre des anciens Lucas, 26 b
Nitrate of potash Thoms. 89

#### 89. NITRIC SALTS. TABLES, III.

i. NITRATE OF POTASH. Nitre J, K, Potasse nitratée H, Alkali végétal nitré Berg. Nitrate of potash Thoms. Salpeter Kars.

 NITRATE OF LIME. Nitrous selenite κ, Chaux nitratée u, Nitre calcaire Deborn, Nitro calizo Herrg.

Nitrous selenite κ, 89 ii. Novaculite κ, 138 Nuovas minas—129

### 90. OBSIDIAN. TABLES, XXV.

Obsidian л, к, Lave vitreuse obsidienne н, Obsidienne в, Iceland agate—

 a. Marekanite B, Obsidienne de Marikan Brong. Obsidenne de Marikan Brong, 90 a Occhio de gatto Petr. 193 b Occidental topaz k, 129 Ochre d'antimoine B, 8 iii. Ochriger brauneisenstein Kars. 64 Ochriger rotheisenstein Kars. 64 v. e Ochriger thoneisenstein Kars. 64 v.b Ocre Brong. 21 Ocre de bismuth-19 iii. Ocre martiale brun Delisle, 64 v. g Ocre de nickel B, 87 iii. Ocre d'uran B, 134 i. a Ocro de hierro pardo Herrg. 64 v. g Ocro de manganesa Herrg. 76 i. b Octohedrite J, 128 i. a Oculus mundi-91 b Œil de chat B, 103 g

Œil de chat  $\mathfrak{s}$ ,  $103\ g$ Oisanite  $M\acute{e}th$ . 128 i.  $\mathfrak{a}$ Oktaedrit w, 128 i.  $\mathfrak{a}$ Olive copper ore  $\mathfrak{s}$ , 38 x. Olivin w, 93  $\mathfrak{b}$ Olivin ore  $\mathfrak{s}$ , 38 x.

Olivina Nap. 93 b Olivinerz w, 38 x. Ollaire Méth. 124 c

Olyntholite Fischer, 55 d Ommailouros Méth 103 g Oolite в, 25 e

# 91. OPAL. TABLES, XX.

 a. Precious. Precious opal л, Оpal к, Quarz résinite opalin и, Opale noble в, Opalo Herrg. Edler opal w.

b. Нұркорнамоиз. Quarz résinite hydrophane н, Halb opal Kars. Hydrophane к, Silex hydrophane Brong. Oculus mundi

—Lapis mutabilis—

c. Соммон. Common opal s, Semi opal к, Quarz résinite commun п, Opale commune в, Gemeiner opal w.

i. Girasol Delisle, Opale bleuatre Meth. d. Brown. Quarz résinite subluisant н, Ménelit w, Leber opal Kars. Pestene de menil montant Petr.

e. Blue. Quarz resenite bleu grisâtre Lucas, Blau quarz of the Germans. See Siderite 48 e

f. STALACTITICAL. Quarz agathe concretionné thermogène u, Hydrolite Mackenzie, Gemeiner kieselsinter Kars, Guhr siliceux Klap. Geyerite Méth. Kalzedonartiger and Opalartiger kieselsinter Haus.

i. Quarz hyalin concretionné н, Hyalite w, Fiorite Thoms. Perlartiger kieselsinter Kars. Calcedoine volcanique Nonnull, Müllers glass—

Opal jasper J, 61 b Opale bleuâtre Méth. 91 c i. Opale commune B, 91 c Opale noble в, 91 a Opalartiger kieselsinter Haus. 91 f Opalescent felspar-48 c Opalo Herrg. 91 a Ог н, в, 56 Or argental Lucas, 56 a Or blanc Delisle, 98 Or blanc dendritique Deborn, 126 i. Or feuilleté Méth. 126 iii. Or graphique Méth. 126 ii. Oriental chrysolite—33 Oriental garnet-55 a i. Oriental ruby, saphire, and topaz-39 a Orniblenda basaltica-4 a Orobites-25 e i. Orpiment k, 12 iii. Orthose H, 48 a Osmium Tennant, 98 Oviform limestone k, 25 c Oxide of antimony-8 iii. Oxide of arsenic-12 ii. Oxide of bismuth-19 iii.-Deborn, 134 i. Oxide of cobalt-37 ii. Oxide de cobalt rouge Deborn, 37 iii. Oxide of copper—38 v.
Oxide of iron—64 v.
Oxide of lead—70 iii.
Oxide of manganese—76 i.
Oxide de mercure sul. rouge Deborn, 80 iii.
Oxide of nickel—87 iii.
Oxide of titanium—128 i.
Oxide of titanium—128 i.
Oxide of zinc—140 i.
Oxide de zinc silicifère Berth. 140 i.

Pagonite Brong. 117 b
Paläiopètre Saus. 48 f
Palladium Wollaston, 98
Paranthine n, 137 b
Paulite w, 60
Pea ore J, 64 v. l
Pea stone J, 25 e i.
Peach Kidd, 31
Parret coal of Scotland—36 a ii.

# 92. PEARLSTONE. TABLES, XXIV.

Pearlstone J, Perlaire, formerly Obsidienne perlée н, Perlstein w,

a. Perlstein pumiciforme Tondia Némate н.

Pearlspar—25 n
Pecherz w, 134 ii.
Pecherz ferrugineux Méth. 64 vii. c
Pechblend Deborn, 134 ii.
Pechkohle w, 36 a i.
Pechgranat Kars. 55 c
Pechstein w, 97
Pechuran Haus. 134 ii.
Pedernal Herrg. 50 a
Pentaklasit Haus. 104
Perfect corundum—39 a

### 93. PERIDOT. TABLES, LXIX.

a. Cristallised. Péridot u, Chrysolite J, Krysolith w, Crisolito nobile Nap.

b. GRANULAR. Péridot granuli-

forme H, Olivin J, w, Crisolito commune, o Olivina Nap.

Péridot alteré Brard, 73 Perlartiger kieselsinter Kars. 91 fi. Perlaire н, 92 Perimutter opal Kars. 24 b Perlstein w, 92 Perlstein pumiciforme Tondi, 92 a Pestene de menil montant Petr. 91d Pétalite De Drée, 71 Petalite Andrada, 48 a Petrilite K, 48 a i. Petrol K, 20 a Pétrole compacte Deborn, 36 a Petroselse commune Petr. 48 f Petrosilex-50 a i. Petrosilex Mongez, 48 f Petrosilex Deborn, 24 g Petrosilex résinite н, 97 Petunzé-48 a ii. Pfeiffenthon w, 101 a Pharmacolite Kars. 11 Pharmacochalzite Leonhard, 38 x. a Phonolite H, 35 Phosphate of copper J, 38 ix.

# 94. PHOSPHATE OF LIME. VIII

- a. CRISTALLISED. Appatite J, Phosphorite κ, Chaux phos. cristal-lisée H, Appatite commune Β, Apatit w, Moroxite Kars. Augustit Reuss.
- b. Green var. Asparagus stone 3, Chaux phos. chrysolite Brong. Apatito Herrg. Beril de Saxe— Amethyste basaltine Sage, Crisolito Nap.

c. Earthy. Ch. phos. terreuse II, Phosphorit w, Erdiger phosphorit Kars. Terre de Marma-

rosch-

Phosphate of iron—64 vii. Phosphate of lead—70 v. Phosphate of manganese—76 iv. Phosphor kupfererz w, 38 ix. Phosphormangan—76 iv. Phosphorated lead ore  $\kappa$ , 70 v. Phosphorblei gemeines Kars. 70 v. Phosphorit erdiger Kars. 94 c Phosphorite  $\kappa$ , 94 a Phtanite  $\kappa$ , 103 i

#### 95. PICOLITE. TABLES, CI.

Picrite Brong. 25 1

A name given by Charpentier to a mineral from the Pyrenees, resembling Gadolinite, not yet analysed.

Pictite-128 ii. Piedra de acero Herrg. 64 vi. Piedra de escrivir Herrg. 99 Piedra malada Herrg. 79 Pierre d'Amazon Deborn, 48 d Pierre des Amazons-48 g i. Pierre calcaire grenue B, 25 g Pierre calc. testacée B, 25 d i. Pierre cruciforme B, 59 Pierre à corne B, 48 g Pierre de corne infusible Broche 24 g Pierre de croix Delisle, 30 Pierre d'etain B, 127 i. Pierre à fusil B, 50 a Pierre grasse и, 137 d Pierre de hache-48 g ii. Pierre de Labrador в, 48 с Pierre de miel B, 79 Pierre ollaire B, 124 c Pierre à plâtre-120 c Pierre pesante в, 139 ії. Pierre de poix B, 97 Pierre de ponce B, 68 b Pierre puante B, 25 k i. Pierre de reins-48 g i. Pierre à sculpture в, 117 b Pierre sonnante B, 35 Pierre de thum B, 15 Pierre de Tonnêre-82 Pierre de tripes-120 e Pietra avanturina Petr. 103 k Pietra epatica Petr. 16 a iv. Pimelite-87 iii.

#### 96. PINITE. TABLES, LXXII.

Micarelle к, Pinite н, Pinit w, Fuscite Schumacher.

Piomo—70
Pipe clay J, 101 a
Pirita de azufre Herrg. 64 iv. a
Pirita hepatita Herrg. 64 iv. a
Pirita venenosa Herrg. 12 iv.
Pirite gialia Petr. 38 iii.
Pisolithe B, 25 e 1
Pissasphalte Daub. 20 b
Pissite Méth. 97
Pistazite J, w, 46 a
Pitch coal J, 36 a i,
Pitch ore—134 ii.

#### 97. PITCHSTONE. TABLES, XXIII.

Pitchstone J, K, Feldspath résinite H, Pierre de poix K, Rétinite Brong. Pissite Méth. Deodalite Rose, Pechstein W, Pyraphrolith Haus.

Pitchy iron ore s, 64 vii. c—76 iv Pittizit Haus. 64 vii. c
Plasma s, s, 103 d
Plasma de zaffiro Nap. 103 c
Plata—108
Plata aerata Herrg. 108 v.
Plata cornea Herrg. 108 vi.
Plata nativa Herrg. 108 i.
Plata nat. antimonial Herrg. 108 ii.
Plata nat. arsenical Herrg. 108 ii.

#### 98. PLATINA. TABLES, CXVIII.

Platina J, к, Platino Petr. Or blanc Delisle, Platine natif ferrifère н, Gediegen platin w.

The crude ore of Platina, as imported from South America, is a compound of a variety of metals; besides Platina, and the new metals Osmium, Iridium, Rhodium, and Palladium, it is

usually combined with Gold Mercury and Iron. According to Proust, Gold to the amount of 13 per cent. is sometimes obtained from it.

Osmium and Iridium were first separated from Platina by Fourcroy and Vauquelin, and to the substance thus obtained, they gave the name of Ptène. Tennant subsequently discovered that this supposed new metal was a compound of two, to which he gave the above names. Rhodium and Palladium were still more recently discovered by Dr Wollaston.

None of these four new metals have yet obtained a place in any system; but are particularly noticed in Bournon's catalogue. He mentions that he is possessed of Native Palladium, as well as separate cristals, composed of Iridium and Osmium.

Pléonaste H, 112 a

Plomb-70 Plomb arseniaté-70 v. b Plomb arsenié-70 vi-Plomb blanc B, 70 iv. Plomb bleu B, 70 v. a Plomb carbonaté н, 70 iv. Plomb carb. noire H, 70 iv. a Plomb chromaté н, 70 vii. Plomb chromé Bournon, H, 70 vii. a Plomb jaune B, 70 viji. Plomb molybdaté н, 70 viii. Plomb muriaté B, 70 x. Plomb natif volcanique и, 70 i. Plomb oxydé и, 70 iii. Plomb ox. rouge Lucas, 70 iii. a Plomb phosphaté н, 70 v. Plomb phos. arsenifère н, 70 v. b Plomb rouge B, 70 vii. Plomb spatique rouge Pallas, 70 vii. Plomb sulfaté н, 70 ix.

Plomb sulfuré н, 70 ii.
Plomb sul. antimonifère н, 70 ii. c
Plomb sul. ant. et argentifère н, 70 ii. d
Plomb sul. compacte н, 70 ii. a
Plomb sul. épigène—70 v. a
Plomb sul. spéculaire н, 70 ii. b
Plomb terreux в, 70 ii.
Plomb vert в, 70 v.
Plombagine Delisle, 99
Plombagine charbonneuse Deborn, 7 a

### 99. PLUMBAGO. TABLES, CXVII.

Graphit J, ε, w, Graphite, formerly Fer carburé, π, Piedra de escrivir Herrg. Carbone oxydulé ferruginé Tondi, Carbon, combined with 1-10th iron, κ, Black wad vulg. Plombagine Delisle.

Plomo amarillo Herrg. 70 viii.
Plomo de agua Herrg. 84
Plomo blanco Herrg. 70 iv. a
Plomo negro Herrg. 70 iv. a
Plomo roxo espatico Herrg. 70 vii.
Plumbum—70
Plumose antimony—8 ii. a
Poix minérale Delisle, 20 b
Poix min. élastique B, 20 c
Poix min. scoriacée B, 20 d
Polierschiefer w, 100
Polierschiefer B, 1

#### 100. POLISHING SLATE. CII.

Polishing slate J, Polierschiefer w, Tripoli schisteux *Tondi*, Thermantide Tripoléenne n.

Ponderous spar—16 a Porcellaine clay s, 48 h Porcellaine jasper s, 61 c Porcellaine s, 61 c Porzellan jaspis w, 61 c Porzellan jaspis w, 61 c Potasse nitratée n, 89 Potstone s, s, 124 c

# 101. POTTERS CLAY. LXXXVI.

Potters clay J, K, Argile glaise H, Argile à potier B, Argile plastique Brong. Argile commune Deborn, Töpferthon w.

a. Pipe clay s, Argile à pipe н, Pfeiffenthon w.

b. Indurated clay k, Argillolite Brong. Verhärteter thon w.

d. Argile legere Brong. Tale pulverulent silicifère—Farin fossile Fabroni—Farine volcanique Méth. Bergmehl Kars.—Sp. gr. sometimes so low as '262, of this Fabroni constructed bricks which floated in water.

Prase Delisle, 24 f
Prase J, B, 103 d
Prase cristallisée Hacquet, 102
Prasem K, 103 d
Prasio Petr. 24 f
Prasium w, 103 d
Precious beryll J, 45 b
Precious garnet J, 55 a
Precious opal J, 91 a
Precious serpentine J, 106 a

# 102. FREHNITE. TABLES, LNV.

Prehnite J, R, H, B, W, Bostrichites of Walker Brong. Lamellated var. Koupholite B, Prehnite koupholite Brong. Foliated prehnite J.

The Fan shaped var. of Dauphine, School en gerbes Schreiber, Prehnite conchoïde н.

Emeraude du Cap Rochon, Chrysolite du Cap Sage, Prase cristallisée Hacquet, Halb zeolith Estner, were the names given to this fossil when first imported from the Cape by Captain Prehn.

Prehnite chonchoïde н. Prehnite koupholite Brong. 102

Primitive limestone-25 g Prismatic heavy spar J, 16 a ii. Prismatischer zeolith Kars. 81 Prussiate de fer natif Deborn, 64 Pseudo aventurine quartzeuse Deborn, 103 k Pseudo népheline ou Pseudo sommite Bellevue, 110 a Pseudo quartz-103 o Ptène-98 Pumice J, к, 68 b Punamu néphrite Reuss. 48 g ii. Pure clay J, 2 Purette-128 i. c Purple copper ore k, 38 iii. a Purple quartz-103 b Pycnite н, 129 ар. і. Pyraphrolith Haus. 97 Pyrenaït w, 55 c Pyrite d'argent Bomare, 12 iv. Pyrite arsenicale B, 12 iv. Pyrite arsenicale argentifère n, 12iv. Pyrite brune martiale Bom. 64 iv. a Pyrite capillaire B, 87 i. Pyrite cuivreuse B, 38 iii. Pyrite hépatique B, 64 iv. a Pyrite sulfurée épigène H, 64 iv. a Pyrodmalith Haus. 64 x. Pyrope J, w, 55 a i. Pyrophysalite His. 129 ap. ii. Pyromorphit Haus. 70 v. Pyroxène и, 14 a Pyroxène coccolithe Brong. 14 b Pyroxène granuliforme и, 14 b Pyroxène en roche Charp. 14 c

#### 103. QUARTZ. TABLES, XVIII.

- α. CRISTALLISED. Rock cristal J, Mountain cristal κ, Quarz hyalin limpide H, Berg krystal w, Quarzo Herrg. Cristal de roche B.
- Purple. Amethyst J, к, w, в, Quarz violet н, Violetto o ametista Nap.
- c. Blue. Quarz bleu H, Quarz

hyalin saphirine Mong. Plasma di Zaffiro Nap. False saphire. Dichroite, according to Bour-

non, is Blue quartz.

d. Green. Quartz agathe calcedoine vert obscure н, Prase J, Prasium к, Prasem w. Plasma J, B, w.

 e. Yellow. Quarz jaune enfumé н, Тораz de Boheme—Smokey Тораz—Scotch Тораz—Quarz се-

trino Nap.

f. Rose. Milk quartz s, Rosy red quartz κ, Quarz laiteux Delisle, Quartz rose ε, Milch quarz w.

Rubase, a name given to quartz cristals, which have been made red-hot and thrown into a metallic solution, to give them a mottled red colourand a fractured appearance Brong.

g. Resplendent. Catseye J., Quarz agathe chatoyant H. Eil de chat B., Ommailouros ou Eil de chat, agathine chatoyante Méth. Quarz hyalin amianté Cordier, Occhio de gatto Petr. Katzenauge W., Schiller quarz Kars.

h. Нематітіс. Quarz hyalin hematoïde н, Hyacinth de Compostello —Iron flint s, Eisenkiesel w, Sinople к, Quarz rubigineux sinople

Brong.

- FLINTY SLATE. Flint slate J, Siliceous schistus κ, Lydianstone J, Basanite κ, Lidischerstein w, Quarz argillifere shistoïde ou Phtanite u, Quarz agathe schistoïde Lucas. Lydienne Méth. Lapis lydius Wall. Touchstone Kidd, Kieselschiefer w.
- k. Scalv. Quarz aventuriné ff, Avanturine s, Pseudo aventurine quartzeuse Méth. Pietra ayanturina Petr.
- I. Granular. Sandstone J, Quarz arénacé agglutiné u, Gres s. i. Cantalite Kars. Quarz byalin

granulaire jaune verdâtre н, Fossile vert *Leonhard*, Grünes fossil—

ii. Elastic quartz—Grés élastique B, Grés flexible Brong.

m. Fibrous. Fibrous quartz к, Dick faseriger amethyst w, Faser quarz Kars.

n. Amorphous, Amorphous quartz s, Quartz commun s, Quartz informe Deborn, Gemeiner quarz w. i. Cellular quartz J, Quarz agathe mollaire H, Quarz carié Delisle, Silex meulière cellulaire Brong. Molarite Méth. Bhur stone of France—

 PSEUDO QUARTZ. The casts or after cristals of Fluor or Calcareous spar which occur at Bere Alston, &c.

Quartz rose B, 103 f Quartzose carbonate of lime—25 m Quarz agathe cachalong H, 24 b Quarz ag. calcedoine B, 24 a Quarz ag. calcedoine vert obscure H, 103 d

Quarz ag. calcifère H, 25 m i. Quarz ag. chatoyant—103 g Quarz ag. concretionné thermogène H, 91 f

Quarz ag. cornaline H, 24 c Quarz ag. dendritique—24 d Quarz ag. grossier H, 24 g Quarz ag. mollaire H, 103 n i. Quarz ag. onyx H, 24 d Quarz ag. onyx opaque H, 50 c Quarz ag. panaché H, 24 d

Quarz ag. ponctué н, 24 e Quarz ag. prase н, 24 f Quarz ag. pyromaque н, 50 a

Quarz ag. sardoine  $\mathbf{n},\,24\,d$ Quarz ag. schistoïde  $Lucas,\,103$  i. Quarz arénacé agglutiné  $\mathbf{n},\,103\,l$ Quarz argillifère schistoïde  $\mathbf{n},\,103\,i$ 

Quarz aventuriné н, 103 k Quarz bleu н, 103 с Quarz carié Delisle, 103 n i. Quarz citrino Nap. 103 e Quarz commun B, 103 n Quarz cubique—75 c Quarz en stalactite Delisle, 24 a Quarz hyalin amianté Cordier, 103 g Quarz hyalin concretionné u, 91 fi.

Quarz hyalin concretionné н, 91 fi. Quarz hyalin granulaire jaune verdâtre н, 103 l i.

Quarz hyalin hematoïde н, 103 h Quarz hyalin limpide н, 103 a Quarz hyalin saphirine н, 103 c Quarz informe Deborn, 103 n Quarz jaspe н, 61

Quarz jaune enfumé н, 103 с Quarz laiteux Delisle, 103 f Quarz nectique—50 b

Quarz résinite opaline #, 91 a Quarz résinite bleu grisâtre Lucus,

Quarz résinite commun н, 91 с Quarz résinite hydrophane н, 91 в Quarz résinite opalin н, 91 а Quarz résinite subluisant н, 91 d Quarz rubigineux sinople Brong.

103 h
Quarz violet n, 103 b
Quarzo Herrg. 103 a
Quicksilber—80 iv.
Quicksilber gediegen w, 80 i.
Quicksilber lebererz w, 80 iii. b
Quicksilver horn ore J, 80 iv.
Quicksilver liver ore J, 80 iii. b

Radiated zeolite 3, 81
Rame nativo Petr. 38 i.
Rapidolite Abild. 137 b
Rauschgelb w, 12 iii.
Rautenspath w, 25 l
Rayonnante en goutiers—128 ii. a
Rayonnante vitreuse B, 46 a
Realgar—12 iii.
Red antimonial ore K, 8 iv.
Red antimony J, 8 iv.
Red chalk J, 64 v. b

Red copper ore J, 38 v. Red hematite-64 v. Red iron froth J, 64 v. c Red lead ore k, 70 vii. Red lead spar J, 70 vii. Red ochre K, 64 v. e Red ore of manganese k, 76 ii. Red oxide of iron-64 v. Red scaly iron ore J, 64 v. c Red schorl—128 i. Red silver ore J, K, 10 Red tourmaline - 130 d Red vitriol-122 i Reddle J, 64 v. Reinetalkerde w, 75 b Reinethonerde w, 2 a Resplendent felspar-84 b Resplendent quartz-103 g Rétinite Brong. 97 Reussin-122 c Rhodium Wollaston, 98 Rhomb spar J, 25 l Ribband agate s, 24 d Roche serpentineuse B, 106 b Rock butter J, 122 d ii. Rock cork s, 13 e Rock cristal J, 103 e Rock salt J, 85 h Rock milk J, 25 f i. Rock wood J, 13 d Röthel w, 68 v. b Roestone J, 25 e Rogenstein w, 25 e Rose quartz-103 f Rosy red quartz k, 103 f Rowley rag k, 17 Rothgültigerz-108 iii. Rotheisenstein schuppiger Kars. 64 V. C Röschgewächs of Hungary--108 iii. a Roubschite Meth. 75 b Rubase—103 f Rubellite k, 130 d Ruby spinel-112 Ruthile B, 128 i. Rutil w, 128 i. Rutile J, 128 i.

104. SAHLITE. TABLES, LIII.

Sahlite w, Malacolithe Abild. Salaït Haus. var. de Pyroxène u. Alalite and Mussite Bonvoisin, Diopside Brong.—var. de Pyroxène u, Pentaklasit Haus.

Sagenite Saus. 128 i. b. Sal ammoniae J, B, 85 c Sal de los Alpes Herrg. 122 e Sal gemme k, 85 b Sal milagrosa nativa Herrg. 122 c Salaït Haus. 104 Saline marble-25 g Salmiak Kars. 85 b Salpeter Kars. 89 Sandarac Deborn, 12 iii. Sandstone J, 103 1 Sandstone cristallised—25 m Sanidin Nose, 48 a ii. Salzkupfer k, 38 viii. Salzsäure w, 85 a Sanguine Deborn, 64 v. b Saphir w, 39 a Saphirin Nose, 66 Saphirine quarz hyalin Brong, 103 c

#### 105. SAPPARE. TABLES, LXXV.

Cyanite *s*, в, Disthène, c'est à dire qui a deux forces н, Tale bleu et Beril feuilleté Sage, Schorl bleu Méth. Sorlo ceruleo Petr. Kyanite w.

Sapphire J, 39 a
Sappira—39 a
Sassolin Kars. 22 a
Sarcolite Thomson, 5 b
Sard, Sardoine, Sardonix—24 c
Satin spar—25 c
Saturn of the Alchimists—70
Säulenspath w, 16 a i.
Saussurit Kars. 48 g
Scaly quartz—103 k
Scaly talc—124 d
Scapolite Andrada, 137 b
Schaalstein w, 25 d i.
Schaalstone J, 25 d i.

Schabasit w, 29 Schaumerde w, 25 d ii. Scheel w, 139 Scheelerz Kars. 139 ii. Scheelin a, 139 Scheelin calcaire н, 139 іі. Scheelin ferruginé и, 139 і. Schieferkohle w, 36 b Schieferspath w, 25 d Schiefrige glanz kohle w, 7 b Schiller quarz Kars. 103 g Schillerspar-60 Schillerstein w, 41 b Schillerstone J, 41 b Schisolith Haus. 83 Schiste à aiguiser By 138 Schiste à dessiner B, 44 Schiste happant Tondi, 1 Schiste marno bitumineux B, 25 k Schiste à polir и, 1 Schisto chloritico-31 a Schisto spato Nap. 25 d Schlackiger anthracit Kars. 7 c Schmaragd w, 45 a Schmelzstein w, 43 Schmirgel w, 39 c Schorl K, 130 Schorl blanc hexagonal du Vesuve Ferber, 110 Schorl blanc prismatique Delisle, 129 ap. i. Schorl bleu-128 i. a Schorl bleu Méth. 105 Schorl bleu de Siberie Macq. 64 vii. Schorl cruciforme Delisle, 116 Schorl electrischer w, 130 b Schorl edler Kars. 130 b Schorl en gerbes Schreiber, 102 Schorl noir B, 130 a Schorl octaèdre-128 i. a Schorl pourpre de Madagascar-128 j. Schorl rouge de Hongrie Deb. 128 i. Schorl spatheux-115 Schorl transp. lenticulaire Del. 15 Schorl vert du Vesuve Non. 135 Schorl vert du Zillerthal Meth. 4 b Schorl violet Mongez, 15

Schorlartiger beril w, 129 ap. i. Schorlartiger topaz Benhardi, 129 ap. i. Schorlit Klap. 129 ap. i. Schrifterz w, 126 ii. Schützit Reuss. 119 a Schwarz manganerz verhärtetes Kars. 76 i. b Schwarz uranerz Emm. 134 ii. Schwefel w, 121 Schwefelkies w, 64 iv. Schwerspath w, 16 a Schwerstein w, 139 ii. Schwimmender asbest Kars. 13 c Schwimmkiesel Haus. 50 b Schwimmstein Kars. 50 b Scotch topaz-103 e Sel admirable Glauber, 122 c Sel amer natif-122 e Sel ammoniac natif B, 85 e Sel capillaire B, 122 e i. Sel sedatif Homberg, 22 a Sel secret de Glauber-122 b Sel de cuisine B, 85 ii. Selce Petr. 50 a Selce d'Egitto Nap. 50 c Selenite J, K, 120 Séméline-128 ii. Semi indurated steatites k, 124 d Semi opal—91 e 106. SERPENTINE. TAB. LXXXI.

a. Precious. Precious serpentine J, Serpentine noble B, Edler serpentin w, Verde di Prato, Verde di Suza, &c.

b. Common serpentin J. Roche serpentineuse B, Serpentin w.

Serpentin ollaire Brong. 124 e Siberite J, 130 d Sidérite Moll, 48 e-91 e Sidero calcite k, 25 n

107. SIDEROCLEPTE. TAB. CIII-

A mineral found at Limbourg in the Porphyritic basalt by Saussure.

Silber arsenic Kars. 108 ii. a
Silber gediegen w, 108 i.
Silberschwarze of the Germans—
108 iii. b
Silex agathe Brong. 24 a
Silex cacholong Brong. 24 b
Silex calcedoine Brong. 24 c
Silex cornaline Brong. 24 c
Silex corné Brong. 24 g—48 g
Silex hydrophane Brong. 91 b
Silex meulière cellulaire Brong.
103 n i.
Silex silicicalce Brong. 25 m i.

Silice fluatée alumineuse и, 129

Siliceo calcareous titanium-128 ii.

Siliceous schistus k,103 i-108. SILVER. Tables, CXX.

ARGENT Fr. ARGENTUM Lat. SILBER Ger. PLATA Span.

i. Native. Native silver л, к, Argent natif н, Argent vierge Delisle, Plata nativa Herrg. Gediegen silber w.

 a. Goldish native silver J, Argent natif aurifère н.

ii. Antimonial. Antimonial silver J, Antimoniated native silver K, Argent antimonial H, H, Spiesglas silber W, Mine d'argent antimoniale Daub. Plata natantimonial Herrg.

a. Argent ant. ferro arsenifere μ, Arsenical silver ore μ, Arsenicated native silver κ, Argent arsenical μ, Arsenik silber w, Silber arsenik Kars. Plata nat. arsenical Herrg.

iii. Sulphurated Antimonial. Red Silver ore J, κ, Argent antimonié sulfuré H, Argent rouge B, Roth gültigerz w, Mina de Plata roxa Herrg.

a. Brittle silver glance J, Argent antimonié sulfuré noir B, Argent noir Méth. Argent vitreux aigre B, Sprödglasserz w, Sprödglanzerz Kars. Röschgewächs of Hungary—Mina de Plata negra Herrg.

b. Sooty silver ore J, Silver black κ, Argent noir B, Silberschwarze of the Germans.

- iv. Sulphurated. Silver glance J, Sulphurated silver ore K, Argent sulfuré H, Glasserz W, Glanzerz Kars. Argent vitreux B, Mina de Plata vidriosa Herrg. Vitreous silver—
- v. Carbonate. Calciforme silver ore к, Argent carbonaté н, Luftsaures silber Wid. Plata aerata Herrg.
- vi. Muriate. Horn ore j, Corneous silver ore κ, Argent muriaté μ, Argent corné ε, Plata cornea Herrg. Hornerz w.

a. Earthy. Argent mur. terreux н, Buttermilcherz w.

Silver black k, 108 iii. b Silver glance J, 108 iv. Silverish arsenical pyrites J, 12 iv. Sinople k, 103 h Skorza-46 b Slaggy mineral pitch J, 20 d Slate coal J, 36 b Slate spar s, 25 d Slaty chlorite J, 31 Slaty glance coal s, 7 b Slickensides-70 ii. b Smaragd glatter Kars. 45 Smaragd gestriefter Kars. 45 b Smaragdit Kars. 41 a Smaragdus Wall, 45 Smeraldo Nap. 45 a Smeriglio Petr. 39 c Smokey topaz-103 e Soap rock-117 Sodait Ekeberg, 137 d

109. SODALITE. TABLES, XLIII.

Sodalite *Thomson*. A mineral found by Mr Giesecké in Green-land, imbedded between Gneiss and Mica slate.

#### 110. SOMMITE. TABLES, LXVII.

Sommite J, Népheline H, B, W, Schorl blanc hexagonal du Vesuve Ferber.

a. Pseudo sommite or Pseudo nephéline de Bellevue, is according to De la Métherie a var. of Sommite.

Solid bitumen-20 d Solpho Petr. 121 Sooty silver ore k, 108 iii. b Sorlo ceruleo Petr. 105 Sorlo nero Nap. 130 a Soude blanche d'Egypte Delisle, 26 8 Soude boratée H, 22 b Soude carbonatée H, 26 b Soude muriatée H, 85 b Soude muriatée gypsifère Brong. 85 b Soude sulfatée H, 122 c Soufre H, B, 121 Sparry iron ore k, 64 vi. Sparry iron stone J, 64 vi. Spath adamantin B, 39 b Spath de Boulogne B, 16 a iii. Spath brunissant B, 25 n Spath calcaire B, 25 a Spath chatoyant B, 41 b Spath composé Woulfe, 25 1 Spath cubique-120 e Spath eisenstein w, 64 vi-Spath étincillant Daub. 48 e Spath fluor w, 51 a Spath fusible Bucquet, 16 a

# 111. SPATH DE GLACE. TAB. CIV.

Spath fusible d'Arcet, 48 a

Spath fusible Delisle, 51 a

Spath de Glace De Drée, Risspath Werner. A substance from Vesuvius, mixed with Sommit, possibly Karsten's Glassiger feldspath in thin Laminae.

Spath pesant B, 16 a Spath pesant en barres B, 16 a ii. Spath pesant vert Sage, 134 i. Spath schisteux B, 25 d Spath séléniteux de Sicile Del. 119 Spath en tables Brong. 123 Spath de zinc Delisle, 140 i. Späthiger galmei Kars. 140 i. Spato adamantino Nap. 39 b Spato sedativo Nap. 75 c Speckstein w, 117 Specular iron ore k, 64 iii. Sphen gemeiner Kars. 128 ii. Sphène н, 128 іі. а Spiesglanz blei Kars. 70 ii. c Spiesglas gediegen w, 8 i. Spiesglas okker w, 8 iii. Spiesglas silber w, 108 ii. Spiesglaserz grau w, 8 ii. Spiesglaserz roth w, 8 iv. Spiesglaserz weiss w, 8 iii. Spieskobolt grauer w, 37 i. a Spieskobolt weisser w, 37 i.

#### 112. SPINELL. TABLES, XXXIV.

Spinelle J, H, B, Spinel W, Balas ruby, from Balachan the Persian name of Pegu Kidd—Ruby spinel—Malabar name Bacham.

a. Spinelle pléonaste Brong. Pléonaste c'est à dire qui surabonde и, Spinelle noir Lucas, Ceilanite Reuss. Zeylonite w, Ceylonite s.

Humite, is a substance mentioned by Bournon, which occurs among the ejected rocks of Monte Somma, and presents a cristallisation apparently belonging to the Octobedron; it is of a cinnamon colour, very shining and transparent.

b. Spinelle zincifère n, Corindon zincifère Hisinger, Automolite Ekcherg, Gahnite Brong. Fahlunit Kurs.

#### 113. SPINELLANE. Tables, cv.

A mineral from the borders of the Laach, so named by Nose from its affinity to Spinel.

Spinelle noir *Lucas*, 112 *a* Spinelle pléonaste *Brong*. 112 *a* Spinelle zincifère *n*, 112 *b* Spinelline *Nose*, 128 ii. *b* 

#### 114. SPINTHERE. TABLES, CVI.

A mineral from Marromme dep. d'Isere, supposed by De la Métherie to be a variety of Sphène.

#### 115. SPODUMENE. Tables, XLV.

Triphane c'està dirc apparent dans trois sens u, Spodumene Andrada, Schorl spatheux et zeolite de Suède—

Spiritus lethalis des anc. 26 c Spiritus sylvestris Van Helmont, 26 c

Sprödglasserz w, 108 iii. a Sprödglanzerz Kars. 108 iii. a Stagno Petr. 127 Stagno bruna o nera Petr. 127 i. Stalactitic globuleuse Deborn, 25 e i. Stalactitical carbonate of lime— 25 b

Stängenkalk Schum. 10 a Stängenkohle w, 36 e ii. Stangenspath w, 16 a ii. Stangenspath Reuss. 129 ap. 1. Stannum—127 Stanzaït Flurl, 6 Statuary marble—25 g Stauro-baryte—59 Staurolite ĸ, 59

#### 116. STAUROTIDE. TABLES, LIV.

Grenatite J, B, Staurotide c\*est à dire Croisette n, Staurolith w, Granatite Reuss. Schorl cruciforme Delisle, Croisette Daub.

#### 117. STEATITE. TABLES, LXXX.

- a. Steatite J, в, н, Steatites в, Speckstein w, Craie d'Espagne Delisle, Esteatita Herrg. Soap rock—
- b. Figure stone J, Tale glaphique ap. n, Pierre à sculpture n, Agalmatholite Klap. Stéatite pagodite Brang. Bildstein w, Lardite Petr. Koreite Méth.

Steatite compatto Nap. 124 d Stéatite lamelleuse Daub. 124 b Stéatite prodite Brong. 117 a Steatite schistosa Nap. 124 d Steel native—64 vi. Steinsalz w, 85 b Steinmark w, 74 Stephanstein—24 e Stibium—8

### 118. STILBITE. TABLES, LXII.

Foliated zeolite 3, Stilbite c'est à dire, corps qui a un certain eclat n, Zeolithe lamelleuse n, Strahlzeolith and Blätterzeolith w, Stilbit Kars.

a. Stilbite orangée Brong. Zeolithe rouge du Tyrol Fanjas, Fassaït Lenz.

Stinkstone s, 25 k i.
Strahlstein w, 4 b
Strahlstein körniger w, 4 c
Strahlstein körniger w, 41 a
Strahlzeolith w, 118
Strahliger scapolite Kars. 137 c
Stralite commune Nap. 4 b
Stralite vitriosa Nap. 46 a
Striated barytes w, 16 a ini.
Strontiane s, 119 b
Strontianite x, 119 b

#### 119. STRONTITES. TABLES, XV.

a. Sulphate. Celestine J, в, w, Strontiane sulfatée н, Spath seleni-

teux de Sicile Delisle, Schützit

 b. Carbonate. Carbonate of strontites Hope, Strontiane σ, Strontianite κ, Strontiane carbonatée H.

The acicular var. from Braunsdorf in Saxony was long mistaken at Freyberg for Arragonite.

Suber montanum R, 13 c
Succin H, B, 3
Succin cristallisé Deborn, 79
Succin noir—36 a
Succinite Bonvoisin, 55 a
Sulfure de manganèse Praust, 76 iii.
Sulphate of alumine—122 d
Sulphate of barytes—16 a
Sulphate of cobalt—122 i
Sulphate of copper—122 g
Sulphate of iron—122 f
Sulphate of lead—70 ix.

# 120. SULPHATE OF LIME. TAB. X.

α. Cristallised. Scienite J, Chaux sulfatée cristallisée B, Broad foliated gypsum κ, Fraueneis w, Späthiger gips Kars. Vitrum Muscoviticum Kidd, being according to Pallas used in place of glass on the banks of the Wolga—Yeso cristalisado Herrg.

b. Fibrous, Chaux sulfatée fibreuse π, Fibrous gypsum J, κ, Gesso fibroso Nap. Yeso fibroso Herrg. Faseriger gips w.

e. Сомраст. Compact gypsum л, Chaux sulfatée compacte н, Gypse compacte в, Alabastrite Méth. Dichter gyps w, Gesso compatto alabastro Nap. † i. Pierre à plâtre—Chaux sul-

fatée calcarifère u, Plaster of Paris—

d. Earthy. Gyps earth s, Farinaceous gypsum к, Chaux sulfatée niviforme и, Gypse terreux в,

Gipserde w, Farine fossile Brong. Guhr gypseux Delisle, Vulpinite—

e. Annydbrous. Cube spar J. Chaux anhydro sulfatée n. Muriacit Klap. Chaux sulfatine Brong. Bardiglione Bourn. Spath cubique B. Karstenit Haus. Laminated var. Würfelspath, Lamellar var. Anhydritw. The blue compact var. according to Haüy is the Celestine of the Germans—Botrioidal var. Pierre de Trippes—Gekrösstein of the Polish miners.

Sulphate of magnesia—122 Sulphate of soda—122 c Sulphate of strontites—119 a Sulphate of zinc—122 h

#### 121. SULPHUR. TABLES, CXI.

Sulphur J, K, Soufre H, B, Schwefel W, Solpho Petr. Azufre nativo Herrg. Brimstone—

Sulphurated silver ore k, 108 iv.

Sulphurated antimonial silver—108 iii.
Sulphurated antimony κ, 8 ii.
Sulphurated ox. of antimony—8 iv.
Sulphurated uranite κ, 134 ii.
Sulphuret of antimony—8 ii.
Sulphuret of arsenic—12 iii.
Sulphuret of bismutb—19 ii.

Sulphuret of lead—70 ii. Sulphuret of manganese—76 iii. Sulphuret of mercury—80 iii. Sulphuret of tin—127 ii. Sulphuret of uranium—134 ii.

#### 122. SULPHURIC SALTS. TAB. V.

Sulphuret of zinc-140 iii.

- a. NATIVE. Acide sulfurique libre H, Acide vitriolique naturellement pûr, concret et non combiné Baldassari.
- b. Sulphate of Ammonia. Ammo. niaque sulfaté H, Alkali vola.

til vitriolé Berg. Sel secret de Glauber Delisle, Mascagnin Kars.

с. Sulphate of Soda. Glauber salt л, к, Soude sulfatée н, Glauberite Brong. Sel admirable Glauber, Sal milagrosa nativa Herrg. Glaubersalz Kars.

i. Reussin, found by Reuss. in efflorescence on morasses in the vicinity of the Pseudo volcanoes

of Hungary.

d. Sulphate of Alumine. Native alum K, Alumine sul. alkaline K, Alumine sulfatée Brong. Alumine fs, Argile vitriolée Berg. Alumbro nativo Herrg. Alumine i. Fibrons var. Federsalz Kars. Alun de plume Bomare, Alumine sul. fibreuse H, Trichites of the ancients Brong.

ii. Ferruginous Sulphate. Rock butter s, Beurre de montagne B,

Berg butter w.

e. Sulphate of Magnesia. Natural epsom salt κ, Magnesie sulfatée μ, Sel amer natif κ, Vitriol de magnesie Méth. Sal de los Alpes Herrg. Bittersalz w, Epsomite Méth.

i. Capillary. Hair salt J, Capillary alum K, Mag. sul. ferrifère capillaire H, Sel capillaire B,

Halotrichum Scopoli.

f. Sulphate of Îron. Iron vitriol J, Green vitriol—Fer sulfaté H, Couperose vert Delisle, Vitriolo de marte Petr. Naturlicher vitriol w, Eisenvitriol Kars.

g. Sulphate of Copper. Blue vitiol—Vitriol of copper κ, Cuivre sulfaté π, Vitriol natif в. Vitriol de Chypre—Copparoza turchina Petr. Kupfer vitriol w, Calchante, des anciens minéralogistes Brong.

h. SULPHATE OF ZINC. White vi-

triol—Zinc sulfaté н, Zinc vitriol Kars. Vitriolo di Goslar Petr.

 Sulphate of Cobalt. Red vitriol—Cobalt sulfaté Brong. Kobolt vitriol w.

Sumpferz w, 64 vii. b Suturbrand—36 c i. Swamp ore s, 64 vii. b Swinstone κ, 25 ki. Sylvan w, 126 Sylvan graphique B, 126 iv. Sylvanerz wciss—126 iv. Sylvanite κ, 126 i. Sylvan garnet—55 α

# 123. TABULAR SPAR. TAB. CVII.

Tafelspath Stütz, Spath en tables Brong.

Lucas considers the Tafelspath of Stütz and the Schaalstein of Werner as synonymous.

Takourave-48 g ii.

# 124. TALC. TABLES, LXXVIII.

- a. Indurated talc J,
   Verhärteter talk w, Talc endurci B, Craie de Briançon—French chalk—
- b. Laminatep. Talc laminaire— Gemeiner talk w, Venetian talc s, Talc commun B, Steatite lamelleuse Daub. Talco compatto Nap.
- c. Massive. Potstone J, K. Talc ollaire H, Pierre ollaire B, Ollaire Méth. Serpentine ollaire Brong. Topfstein W.
- d. Scaly. Tale ecailleux π, Steatite compatto e Steatite schistosa Nap. Semi indurated steatites κ.
- e. EARTHY. Talcite K, Earthy talc J, Talc granuleux H, Nacri-

te Brong. Talkerde Lenz. Talco terroso Nap. Chlorite blanche— Erdiger talk w.

Tale Daub. 83 Talc bleu Sage, 105 Talc chlorite и, 31 Talc chlorite zographique n, 57 Talc glaphique ap. H, 117 b Tale granuleux n, 124 c Talc laminaire-124 b Talc pulverulent silicifère-101 d Talc schisteux gris verdatre Deborn, 31 Talcite R, 124 c Talco compatto Nap. 124 b Talco terroso Nap. 124 e Talk erdiger w, 124 e Talk gemeiner w, 124 b Talk verhärteter w, 124 a

125. TANTALUM. TAB. CXXXVIII.

TANTALE Fr. TANTALIO Span. Co-LUMBIUM Hatchet.

Tantal oxydé n, Columbite s, Columbeisen Reuss, Eisenkolumb Kars.

a. Tantal oxydé yttrifère и, Yt-

tro tantal Kars.

Talkerde Lenz. 124 e

Talkspath Estner 25 l

This mineral was found cristallised in acute rectangular prisms imbedded in Quartz in Greenland, by M. Giesecké.

Télésie н, 39 a
'Tellur gediegen Reuss. 126 i.
Tellure natif auro-argentifère graphique н, 126 ii.
Tellure natif auro-ferrifère н, 126 i.
Tellure natif auro-plombifère laminaire н, 126 iii.
Tellureisen Kars. 64 i.

126. TELLURIUM. TAB. CXXXVII.

Tellure Fr. Sylvan Ger. Telurio Span.  Native Sylvan J, Tellure natif auro-ferrifère H, Sylvanite κ, Gediegen tellur Reuss. Aurum problematicum Müller, Gediegen sylvan w, Or blanc dendritique Deborn.

ii. Graphic ore 1, Tellure natif auroargentifère graphique 11, Sylvan graphique 11, Schrifterz 11, Or graphique ou Aurum graphicum Meth.

iii. Nagyker ore and Black sylvan ore J, Tellure nat. auro-plombifere laminaire u, Nagiagerz w, Blättererz Kars. Or feuilleté de Nagyag Méth. Gold of Nagyag—

iv. Yellow sylvan ore J, Sylvan blanc B, Gelberz Kars. Weiss syl-

Terre bitumineuse feuilletée Bo-

vanerz w.

mare, 36 b i. Terre de Cologne-36 c iv. Terre à foulon B, 53 Terre de Marmarosch-94 c Terre de Verona-57 Terre verte B, 57 Terre verte Meth. 31 c Thallit Kars. 46 a Thermantide porcellanite н, 61 с Thermantide tripoléenne и, 100 Thon verhärteter w, 101 b Thoneisenstein körniger w, 64 v. m Thoneisenstein kuglicher Kars. 64 Thoneisensten stängliger w, 64 v. d Thoneisenstein ochriger Kars.64 v.b Thumerstone J, K, 15 Thunderstone-82

Tile ore J, 38 v. b 127. TIN. TABLES, CXXVI.

> ETAIN Fr. ZINN Ger. STANNUM Lat. Strong Ital. Estang Span. Jupiter Alchim.

i. Oxide. Cristallised. Common tin stone J, Tin stone K, Etain oxy-

dé в, Pierre d'etain в, Etain vitreux cristallisé Deborn, Etain ox. au maximum Méth. Stagno bruna o nera Petr. Estaño vidrioso Herrg. Zinnstein w, Cristallised ore Zinn graupen.—Granular ore Zinn zwitter, of the Germans.—

a. Radiated. Cornish tin ore 3, Wood tin K, Etain oxydé concretionné H, Etain stalactite Delisle, Etain limoneux Deb. Holz zinn Wid. Kornisches zinnerz w.

ii. Sulphuret. Tin pyrites J, к, Etain sulfuré н, Etain pyriteux в, Zinnkies w.

Tin pyrites 1, 127 ii.
Tin stone common 1, κ, 127 i.
Tinkal Kars. 22 b
Titan—128
Titane anatase 1, 128 a
Titane chromaté Ekeberg, 128 i. d
Titane menakanite Brong. 128 i. d
Titane oxydé 1, 128 i.
Titane oxydé chromifère 1, 128 i. d
Titane oxydé ferrifère 1, 128 i. c
Titane siliceo calcaire 1, 128 ii.
Titaneisen Kars. 128 i. c
Titanite κ, 128 ii.
Titanitic ore κ, 128 ii.

#### 128. TITANIUM. TABLES, CXXXV.

Menachine Gregor, Titane Fr. Titanio Span.

Oxide. Prismatic rutile J, Titanite κ, Titane oxydé n, Ruthile n, Schorl pourpre de Madagascar Delisle, Schorl rouge de Hongrie Deborn, Rutil w, Nadelstein—Red schorl—

a. Octohedral. Octohedrite J, Titane anatase c'est à dire étendu en hauteur B, Oisanite Meth. Oktaedrit w, Titan anatas Kars. Schorl octaèdre—Schorl bleu b, Reticalated. Sagenite Saus.

Crispite Meth.

c. Granular. Menachanite and Nigrin л, Titan ox. ferrifère н, Menacan and Nigrin w, Titaneisen—Iserin et Nigrin Kars. Titane menakanite Brang. Purette —Massive var. from Aschaffenburg, Gallizinite—

d. Titane oxydé chromifère n, Titane chromaté Ekcherg.

ii. Siliceo-Calcareous. Titane siliceo-calcaire н, Calcareo siliceous Titanitic ore к, Gemeiner sphèn Kars. Braun and gelb menacanerz w, Brown ore Thoms. Pictite—Séméline—

a. Var. Caniculé, formerly Sphène c'est à dire ayant la forme d'un coin н, Rayonnante en gou-

b. Spinelline Nosc—according to Lucas, belongs to the Siliceocalcareous titanium.

# 129. TOPAZ. TABLES, XXXV.

Topaz л, в, w, Occidental topaz к, Silice fluatée alumineuse, topaze н, Topazio Nap. Topacio Herrg. Yellow topaz. Brézilienne Sans.—the foliated Beril of Seifen, Ehrénfriedersdorf is a var. of topaz. Тораze laminaire н, Muschliger feldspath Link. Nuovas minas of Brasil.

i. ap. Topaz cylindroïde H, Beryl schorliforme B, Schorlartiger beril W, Stangenspath Reuss. Pycnite e'est à dire dense compacte H, Schorl blanc prismatique Delisle, Leucolithe d'Altemberg Méth. Schorlite Klap. Schorlartiger topaz Benhardi.

ii. ap. Topaze prismatoïde H, Pyrophysalite—Hisinger considers this mineral as a distinct species.—The cristals of topaz with white opake terminations are called by the Tartars Horses teeth Pairin.

Topaz is according to its colour, named Ruby or Saphire of Brasil, Hyacinth of Portugal, Chrysolite of Saxony, Rubicelle, Aigue marine, &c.

Topacio Herrg, 129 Topaze de Boheme-103 e Topaze cylandroïde н, 129 ар. i. Topaze laminaire н, 129 Topaze prismatoïde н, 129 ap. ii. Topazio Nap. 129 Topazolite Bonvoisin, 55 Topfstein w, 124 c Töpferthon w, 101 Touchstone Kidd, 103 i Tourbe papyracée Tondi, 36 b i.

# 130. TOURMALINE, TABLES, XLVII.

a. Common. Common schorl s, Schorl K, Tourmaline noire II, Schorl noir B, Sorlo nero Nap. Gemeiner schorl w, Basalt transparent Delisle, Turmalin Wall. Aphrizit Andrada.

b. Green tourmaline J, K, Tourmaline verte H, Electrischer schorl W, Edler schorl Kars, Electric schorl -Brasil Emerald of the lapi-

daries.

c. Blue. Tourmaline indigo H, Indicolithe Andrada, Indicolit Kars.

d. Red. Siberite J, Rubellite K, Tourmaline apyre н, Tourmaline rubéllite Brong. Daourite Méth. Apyrit Haus.

c. Tourmaline apyre cylindroïde u, var. du Stangenspath Reuss. var. du Rubellit Kars. from Rosena.

Tourmaline apyre н, 130 d Tourmaline indigo и, 130 с Tourmaline noire и, 130 а Tourmaline rubellite Brong, 130 d Tourmaline verte и, 130 b Тгар к, 17 Trap tuff w, 18 Traubenerz Klup. 70 v. b

131. TREMOLITE. TABLES, LXXVI.

Tremolite J, Tremolith w, var. d'amphibole formerly Gramatite c'est à dire marquée d'un ligne. н, Höpfnerite-

a. Baikalite has been considered a var. of Tremolite, perhaps im-

properly.

Trichites-122 d i.

#### 132. TRIKLASITE. TABLES, CVIII-

A name given by Willman to a substance which occurs at Fahlun, accompanied with Yellow copper ore, suspected by Lucas to be Pyroxène.

Triphane н, 115 Triple sulphuret Hatchet, 70 ii. c Tripoli schisteux Tondi, 100 Tuff basaltique B, 18 Tungstate manganesié Deborn, 139 i. Tungstate ferrugineux Deborn, 139i. Tufo oolitico Nap. 25 e Tungstenite a, 139 ii. Tungstene J, K, 139 ii. Tungstène de Bastnaes Crons. 28 i. Tumite Nap. 15

#### 133. TURQUOISE. TABLES, CIX.

Turmalin Wall. 130 a

Turquoise H, B, Turkis W.

Although there are few substances more common in the cabinets of mineralogists, we can scarcely name any one, the origin of which is so little known. The Turquoise is noticed by the French authors, only in the annotations to the Carbonate of copper. The analyses given of it by Lagrange and by John, are as widely different as possible. This may arise from there being two substances totally distinct, which are both denominated Turquoise ;-that of

the Vieille roche as it is called, which is found in Persia, is certainly a mineral. The other is merely teeth and bones of animals, penetrated by copper. The specimen analysed by Lagrange he believed to be of the Vieille roche, though the result does not warrant that conclusion.

Tyrqlite Méth. 48 e-69 a

Uran glimmer w, 134 ii.
Uran mica J, 134 ii.
Uran ochre J, 134 i. a
Urane micacé B, 134 i.
Urane noir B, 134 ii.
Urane oxydé H, 134 i.
Urane oxydulé H, 134 ii.
Urane sulfuré brun Méth. 134 ii.
Uranecher Festes, w, 134 i. a

#### 134. URANIUM. TABLES, CXXXIII-

i. Cristallised. Uran mica J, Micaceous uranitic ore R, Urane micacé B, Spath pesant vert Sage, Uranglimmer w, Cuivre corné, Oxyde de bismuth Deborn, Mica vert Leske, Chalkolite—Urane oxydé H, Oxide of uranium.

a. Earthy. Festes uranocher w, Zerreiblicher uranokker Kars. Ocre d'urane B, Uran ochre J.

ii. Massive. Pitch ore J, Sulphurated uranite κ, Urane oxydulé n, Urane noir в, Pechblend Deborn, Uran sulfuré brun Meth. Blenda picea Herrg. Pecherz w, Schwarz uranerz Emm. Pechuran Haus. Eisenblende.—

Variegated calcedony—24 d Variegated copper ore J, 38 iii. a Venetian talc x, 124 b Venus—38 i. Verde de cobre Herrg. 38 vii. a Verde de Prato—106 a Verde de Suza—106 a Vert de montagne Delisle, 38 vii. «

#### 135. VESUVIAN. TABLES, XL.

Vesuvian J, Vésuvienne B, Idocrase c'est à dirc Figure mixte H, Hyacinthe du Vésuve Delisle, Schorl vert du Vésuve Non. Wilouïte Sewerg. Crisolito de vulcani Petr. Chorlo volcanice Herrg.

Vesuvian k, 72 Violetto Nap. 103 b Virescite Meth. 14 a Virum-42 Viscid bitumen-20 b Vitreous copper ore k, 38 ii. Vitreous silver-108 iv. Vitriol blue-122 g Vitriol de chypre-122 g Vitriol of cobalt-122 i Vitriol of copper-122g Vitriol green-122 f Vitriol of iron J, 122 f Vitriol of lead native K, 70 ix. Vitriol de magnesie Meth. 122 e Vitriol natürlicher w, 122 f Vitriol de plomb natif s, 70 ix. Vitriol white-122 h Vitriolo de Goslar Petr. 122 h Vitriolo de marte Petr. 122 f Vitrum Muscoviticum-120 a Volcanic ashes-68 d Volcanic mud-68 c Volcanic schorl-14 a Volcanite-14 a Vulpenite-120 d Voraulite Méth. 69 a

WAD Kars 76 i. c Wad des Anglais Lucas, 76 i. c Walkererde w, 53 Wasserblei w, 54

#### 136. WAVELLITE. TABLES, LXVI.

Wavellite Babington, Hydrargillite Davy, Hydrate d'alumine Klap. According to Bournon Diaspore is a variety of this mineral.

Weissgültigerz w, 70 ii. d Weisserz w, 12 iv. Weissbleierz—70 iv.

### 137. WERNERITE. TABLES, LVII.

- a. CRISTALLISED. Wernerite Andrada, Arktizit w.
- PRISMATIC. Paranthine u, Scapolite Andrada, Rapidolithe Abild.
- e. Foliaten. Micarelle Abild. Strahliger scapolith Kars.
- d. Compact. Fierre grasse n, Fettstein w. Elacolith Klap. Sodäit Ekeherg, Lythrodes—Natrolite of Sweden—

Whinstone K, 17

### 138. WHETSLATE. TAB. LXXXVII.

Whetslate J, Argile schisteuse novaculaire H, Schiste à aiguiser B, Novaculite κ, Coticula Wall. Cos Méth.

White antimony J, 8 iii. White cobalt ore J, 37 i. White garnet—72 White lead ore J, R, 70 iv. White silver ore J, 70 ii. d White vitriol—122 h Weisenerz w, 64 vii. b Wilouïte Severgin, 135 Wismuth gediegen w, 19 i. Wismuthglanz w, 19 ii. Wismuthokker w, 19 iii. Wismuthokker w, 19 iii. Witerite Nap. 16 b Witherit J, B, w, 16 b

#### 139. WOLFRAM. TABLES, CXXXVI-

SCHEELIN Fr. SCHEEL W, TUNG-STENITE K.

- Fearuginous, Wolfram J, W, R, Scheelin ferruginé B, Tungstate manganesié Deborn, Tungstate ferrugineux Méth. Brown gossan of the Cornish miners.
- CALCAREOUS. Tungsten s, к, Scheelin calcaire н, Pierre pesant в, Schwerstein w, Scheelerz Kars.

Wood tin J, K, 127 ii. Würfel zeolith var. Reuss. 5 a—29 Würfelerz w, 64 viii. Würfelstein Westr. 75 c Würfelspath w, 120 e Würflicher feldspath w, 48 a

Yanolite Méth. 15
Yellow copper ore K, 38 iii.
Yellow lead ore J, 70 viii.
Yellow molybdenated lead ore K, 70 viii.
Yellow orpiment—12 iii.
Yellow quartz—103 e
Yellow silyan ore J, 126 iv.
Yellow sulphuret of copper—38 iii.
Yénite Lelievre, 62
Yeso cristalizado Herrg. 120 a
Yeso fibroso Herrg. 120 b
Ytterbite—54
Yttro tantal Kars. 125 a

Zeichenschiefer W, 44
Zeolite noire Geyer, 54
Zeolithe bleue Deborn, 69
Zeolithe cubique B, 29
Zeolithe dur Méth. 5 a
Zeolithe efflorescente H, B, 67
Zeolithe farincuse B, 81 a
Zeolithe d'Hellesta Rinman, 9
Zeolithe jaune de Schaffhausen
Bellevue, 86
Zeolithe lamelleuse B. 118
Zeolithe rouge d'Edelfors 81 b
Zeolithe rouge du Tyrol Faujas, 118

Zeolithe de Suède—115
Zeolithe turchina Petr. 69
Zeolithe à 24 facettes B, 5 a
Zeigelerz w, 38 v. b
Zillerthite Meth. 4 b
Zeylonite w, 112 a
Zerreiblicher uranokker Kars. 134
i. a

#### 140. ZINC. TABLES, CXXVII.

 Oxide π, Zinc en chaux Berg. Spath de zinc Delisle, Cadmia of Pliny Kidd, Oxyde de zinc silicifère Berthier, Giallamina Petr. Galmei w, Zinc glaserz Kars.

 Саввовать. Zinc carbonaté и, Späthiger galmei Kars. Zinc carb. hydreux и, Zinc hydraté Méth. Zinc blüthe Kars.

iii. Sulphuret. Blende J, к, в, w, Zinc sulfuré н, Blenda Herrg.

Zinc blüthe Kars. 140 ii.
Zinc carb. hydreux n, 140 ii.
Zinc en chaux Berg. 140 i.
Zinc glaserz Kars. 140 i.
Zinc hydraté Méth. 140 ii.
Zinc oxydé n, 140 i.
Zinc sulfaté n, 122 h
Zinc sulfuré n, 140 iii.
Zinc vitriol Kars. 122 h

Zinn—127 Zinnstein w, 127 i. Zinnkies w, 127 ii. Zinnerz kornisches w, 127 i. a Zinnober w, 80 iii.

# 141. ZIRCON. TABLES, XXXI.

Zircon J, H, Jargon B, Zircon W, Zirconite Schum. Giacinto et Giargoné Nap. Colorless var. false or mock Diamond—

 a. Hyacinth J, K, B, Hyacinth w, Hyacinthe d'Expaillie—

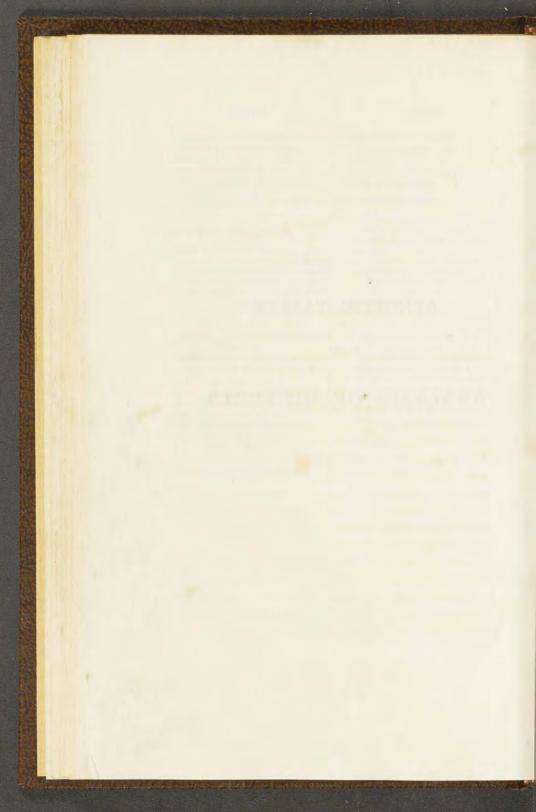
Bournon has given the name of Craitonite to a substance which accompanies the Anatase of St Christophe, in compliment to his friend Dr Crichton of St Petersburg, with whose name he has taken the same liberty Lelievre did with that of Jena, in order to adapt it to the French orthography. Craitonite occurs in very minute acute rhomboidal cristals, which are often deeply truncated. It has not been regularly analysed, but its component parts are found to be Zircon, Silex, Iron and Manganese.

Zoisite w, 46 Zoned agate—24 d

# SYNOPTIC TABLES

OF THE

ANALYSES OF MINERALS.



# EXPLANATION

OF THE

# TABLES OF ANALYSES.

In the arrangement of these Tables, it has been my wish, as far as it was possible, to place before the eye, the principle by which Mineralogical arrangement is guided; and to give as it were, along with the systematic distribution, the grounds on which it rested. For this purpose the Tables are divided into 16 columns. The first contains the Number by which the Analysis of any substance mentioned in the List of Synonymes may be found;-the second presents the Systematic arrangement of Minerals; -the third, the Trivial Names by which they are most commonly known ;-the fourth is destined for the Locality of the substance analysed, which, though of very prominent importance, is often totally neglected. This omission cannot be attributed to the Analysts, but in general to the carelessness of the authors who have quoted their works, without thinking it necessary to state all the particulars; and, in many instances, I have not been able to consult the original. In the third and fourth columns are occasionally inserted notices, relative to the substance analysed, neither belonging to its trivial name nor locality. Where neither of these were given, I thought it better to make some use of the columns than to leave them altogether unemployed. The fifth column is intended to represent the Specific Gravity, which it is very surprising should ever be neglected by the Analyst. This, however, is often the case; and is, in some instances, supplied on the authority of HAUY, on whose accuracy I have every reliance.

The next column contains the Name of the Analyst, and the ten following the different chemical ingredients of the mineral. To prevent the columns from spreading beyond a convenient breadth, one only has been devoted to Acids, and another to Alkalies; the kind of either being distinguished by an initial letter. A star in a column marks that a trace of the substance under which it is placed, has been observed by the chemist; and where an initial letter is subjoined to the portions of any of the earths or metals, it is to notify that these are acidiferous compounds, of which the letter denotes the nature.

The double column is intended for the reception of such ingredients as occur so seldom as not to demand a head for their own use; and when I have not been able to dispose of the whole in these ten columns, I have had recourse to a foot-note,—but it will be seen how very seldom I have been obliged to make use of it.

It very often occurs in stating the results of analyses, that chemists have not considered it requisite to separate the proportions of different compounds. Of this we have several examples in the analyses of the Carbonate of Magnesia, which, we are generally informed, contains so much Carbonate of Lime, and so much Carbonate of Magnesia. In some instances this has been carried still farther; for in Klaproth's Essays, we find an analysis of the Saltpetre of Molfetta, in which four different ingredients are named, all of them compounds. These in the annexed tables are reduced by means of Dr Wollaston's scale, to the proportions of the usual analytic elements of which the fossil is composed; thus, in Klaproth's Essays we find the stone of Molfetta is stated to contain

| Pure prismatic nitre  | 125½ gr. by t | he scale | = to { | 22.75 nit. acid.<br>19.85 potash.<br>-093 m. acid. |
|-----------------------|---------------|----------|--------|--|
| Muriated neutral salt | 2. gr.        |          | =      | ·093 m. acid.<br>·107 soda.                        |
| Selenite              | 254½ gr.      |          | = {    | 15.4 sul. acid.<br>10. lime.                       |
| Limestone .           | 304. gr.      |          | = {    | 17. ditto.<br>13.4 carb. acid.                     |
| Loss                  | 14. gr.       |          | =      | 1.4  |
|                       | 1000          |          |        | 100  |

In the same way some others are reduced, and the compound of Carbonate of Lime in general wherever it occurred. This operation might have been extended throughout the whole, had the scale supplied the means. I am aware it might have been done by applying the proportions as estimated by other chemists; but being afraid of misleading others, by going astray myself, I refrained from making the attempt.

The last column is devoted to the names of the authors I have consulted—whose works are as under:

Aikin .- Dictionary of Chemistry and Mineralogy-London 1807.

An. Ch.—Annales de Chimie: when followed by a number it denotes the volume.

Annals,-Annals of Philosophy.

Bournon .- Traité Complete de Chaux Carbonatée-London .

Brochant.—Traité Élémentaire de Minéralogie—Paris 1802.

Brongniart.—Traité Élémentaire de Minéralogie—Paris 1807-

Ed. Trans.-Transactions of the Royal Society of Edinburgh.

Gallizin.—Tableau Lithologique—Brunswick 1802.

Haüy.-Traité de Mineralogie-Paris 1801.

Jameson-System of Mineralogy-Edin. 1804.

Journal.—Journal des Mines; and when followed by a number it denotes the volume.

Kidd .- Outlines of Mineralogy-Oxford 1809.

Kirwan .- Elements of Mineralogy-1784.

Klaproth's Essays.—His own analyses are distinguished by a number corresponding with that of the experiment in his book.

Leonhard. Taschenbuch 1810, 11, 12, & 13.

Lucas.—Tableau Méthodique des Espèces Minerales—Paris 1806 and 1813.

Phil. Trans.-Transactions of the Royal Society of London.

Tab. Com.—Tableau Comparatif, des Résultats de la Cristallographie et de l'Analyse Chimique—Par Haüy, Paris 1809.

Thomson.—System of Chemistry—Edin. 1807 & 1810.

Thury.—Héricart de Thury Mineralogie Synoptique—Paris 1805.

In a Table by themselves, I have given the analyses of all the Meteoric minerals I have been able to meet with.

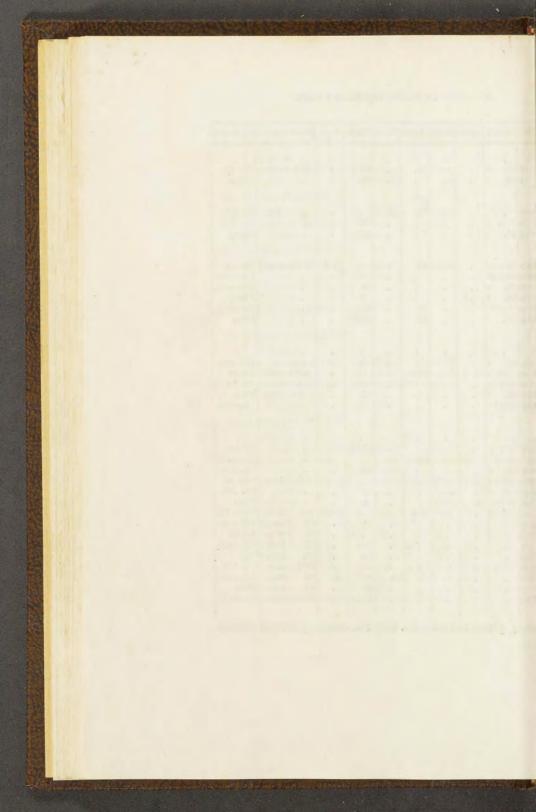
# 1st CLASS, SALINE SUBSTANCES.

| ı.   | I. GEN. CARBONIC.   | Trivial Name   | Locality   | Sp.gr. | Analyst  |
|------|---|--|--|--------|--|
|      | a. Native b. Carbonate of soda Ditto  | Natron<br>Artificial   | Sukena   |        | Klaproth<br>Ditto  |
| II.  | 2. GEN. BORACIC.  |  |  |        |  |
|      | a. Native b. Borate of soda Ditto   | Sassolin<br>Tinkal<br>Borax                                  | Tuscany<br>Thibet  |        | Klaproth<br>Ditto<br>Bergman   |
| III. | 3. GEN. NITRIC.   |  |  |        |  |
|      | a. Nitrate of potash Ditto Ditto Ditto b. Nitrate of lime Ditto   | Saltpetre Artificial  Artificial  Ditto                      | Molfetta   | 1.62   | Klaproth<br>Berthollet<br>Bergman<br>Kirwan<br>Bergman<br>Kirwan   |
| IV.  | 4. GEN. MURIATIC.  a. Native b. Muriate of soda  c. Muriate of ammon. Ditto Ditto   | Fossil salt<br>Muriacite<br>Sal ammoniac<br>Artificial       | Halle<br>Bucharia<br>Vesuvius  |        | Bergman<br>Klaproth<br>Ditto<br>Ditto<br>Lussac  |
| v.   | 5. GEN. SULPHURIC.  a. Native b. Sulph. of ammonia c. Sulph. of soda Ditto d. Sulph. of alumine Ditto Ditto Ditto Ditto ferruginous e. Sulph. of magnesia Ditto f. Sulph. of copper h. Sulph. of cinc Ditto Ditto i. Sulph. of cobalt | Glauberite<br>Glaubersalt<br>Plumose alum<br><br>Rock butter | Tuscany<br>New Castile<br>Freyenwalde<br>Tolfa<br>Irtisch<br>Mt. Martre<br>Idria<br>Ramelsberg<br>Cornwall |        | Kirwan<br>Brongniar<br>Bergman<br>Klaproth<br>Ditto<br>Vauquelin<br>Klaproth<br>Bergman<br>Proust<br>Klaproth<br>Schaub<br>Bergman<br>Kopp |

<sup>\$\</sup>dagger\$ Both anhydrous sulphates. \$\dagger\$ With water of cristallisation. \$\dagger\$ Micacc

| Acid               | Alkali  | Silex | Alum  | Lime  | Mang | Water  | Loss  | Other | ingred | Authority      |
|--------------------|---------|-------|-------|-------|------|--------|-------|-------|--------|----------------|
|                    |         |       |       |       |      |        |       |       |        |                |
| 38. c              | 37. s   |       |       |       |      | 22.5   |       | 2.5   | s soda | No. 78         |
| 16. 0              | 22. s   |       |       |       |      | 62.    |       |       |        | Ditto          |
| 00                 |         |       |       |       |      |        |       |       | *      | 37 00          |
| 86. B              |         |       |       | 3. s  |      |        |       | #     | iron   | No. 80         |
|                    | 14.5 s  |       |       |       |      | 47.    |       |       |        | No. 163        |
| 36. в              | 17. s   |       |       |       |      | 47.    |       |       |        | Thury          |
| 22.75 N            | 19.85 P |       |       | 27.   |      |        | 1.4   | 13.4  | acid S | No. 24         |
| 51.38 ×            | 48.62P  |       | 1     |       |      |        |       |       |        | Thomson        |
|                    | 49. P   |       | 1     | 1     |      | 18.    |       | 1     |        | Tab. com.      |
|                    | 63. P   |       |       |       |      | 7.     |       |       |        | Thury          |
| 43. N              |         |       |       | 32.   |      | 25.    |       |       |        | Thomson        |
| 57.44 N            |         |       | 1:    | 32.   |      | 10.56  | 1     |       |        | Ditto          |
| ol ren             |         |       |       | 0.0   | 1    | 10 00  |       |       |        |                |
|                    |         |       |       |       |      |        |       |       |        |                |
|                    | 42. s   |       |       |       |      | 6.     | 100   |       |        | Tab. com.      |
| 6.9 M              |         | 53. ‡ |       | 14.3  |      |        |       |       | acid   |                |
| 49.5 M             |         |       |       |       | 4    | 16.6   |       |       | amm.   |                |
| 50.73 <sub>M</sub> |         |       |       |       |      | 17.    |       | .27   | soda   | Ditto          |
| 61.65м             | 38·35 A |       |       |       | 4    |        |       |       |        | homson         |
|                    |         |       |       |       |      |        |       |       |        |                |
| 55.7 s             | 29.7 A  |       |       |       |      | 14.16  |       |       |        | Kirwan         |
|                    | 51. 4   |       | :     | 49. + |      | 1.4.10 |       |       |        | An. ch. 67     |
|                    | 15 s    |       | 1     | 45. T |      | 58.    |       |       |        | Tab. com.      |
|                    | ·25 P   |       | 15.25 |       |      |        |       | 7.5   | iron   | No. 81         |
| 16.5 s             |         |       | 56.5  |       |      | 3.     |       |       |        | No. 150        |
|                    | 3.08 P  |       | 43.92 |       |      | 4.     |       |       |        | Ditto          |
|                    |         |       |       | 4.5   | 25   | T.     | 49.25 | 6.    |        | Leon. 13       |
| 00                 | 12.2.12 |       | 2.5   | 4.0   |      | 18.    | 49.20 | 19.   |        | Tab. com.      |
| 200                |         |       |       |       | -    |        |       | 33.   |        | No. 82         |
| -                  |         |       |       |       |      | 38.    |       | 23.   |        | Tab. com.      |
| 40                 |         | *     |       |       |      | 36.    |       | 32.   |        | Ditto          |
| 40                 |         |       |       |       |      | 50.    |       | 27.5  |        | No. 205        |
| 0.                 |         |       |       |       |      | 46.    | 4.    | 25.   |        | Tab. com.      |
| 10                 |         |       |       |       |      | 40.    | 1.00  | 20.   | ditto  |                |
| 40. s              |         |       |       |       |      | 40.    |       | 38.71 |        | An. ch. 70     |
| 19.74 s            |         |       |       |       |      | 41.00  | *     | 00 11 | Cobait | raile Cite (U) |
|                    |         |       |       | 1     |      |        |       |       | 1      |                |

ous sand. § With 15.4 s. acid & a trace of m. of soda. || With 16. sul. acid.

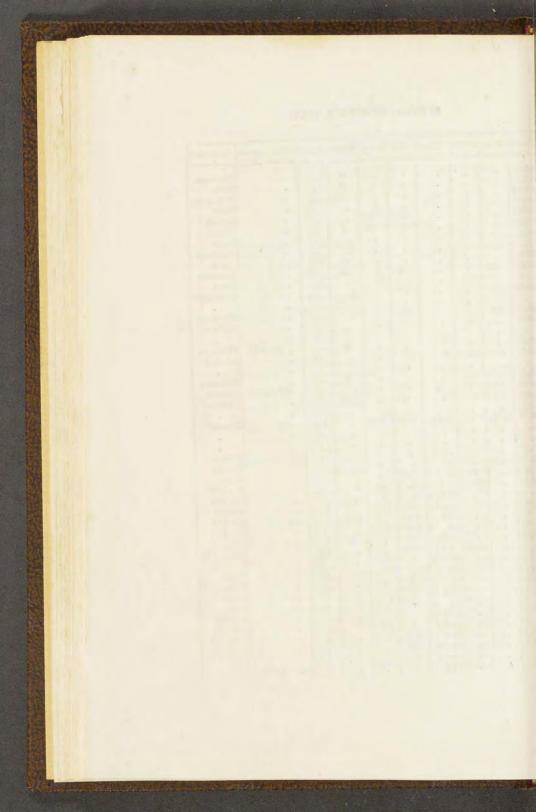


# 1st CLASS, SALINE SUBSTANCES.

VI

| 1. GEN | NUS, LIME.                              | Trivial Name   | Locality     | Sp.gr. | Analyst   | Lin          |
|--------|---|--|--------------|--------|-----------|--------------|
|        | ECIES, CARBONATE                        |  |              |        |           |              |
| U      | Cristallised                            | Calcareous sp.   |              | 2.71   | Phillips  | 55           |
|        |   | Ditto  | Ditto        |        | Bucholz   | 56           |
|        |   | Ditto  |              |        | Biot      | 56-3         |
|        |   | Ditto  |              |        | Vauquelin | 57.          |
|        |   | Ditto  | Iceland      |        | Stromayer |              |
|        |   | Ditto  | Andreasberg  |        | Ditto     | 55.5         |
|        |   | Ditto  |              |        | Wollaston | 56.          |
| ъ.     | Stalactitical                           | Calc sinter  |              | 2.81   | Bucholz   | 56.          |
|        | Fibrous                                 | Satin spar   | Alston moor  | 1      | Pepys     | 50.          |
|        | Foliated Solid                          | Schieferspar   | Cornwall     | 2.74   | Phillips  | 54.          |
| Lie V  | I Oliutou Dolla                         | Ditto  | Comwan       | . 11   | Bucholz   | 55.          |
|        |   | Ditto  | Norberg      |        | Hissinger | 56.          |
|        |   | Schaalstein  | Norberg      |        | Histinger | 100          |
|        | Pulverulent                             | Schaumerd  |              |        | Bucholz   | 51.          |
|        | Oviform                                 | Oolite   |              |        |           | 50.          |
| e.     | Ovnorm                                  |  |              |        | Kirwan    | 30           |
| .0     | F . (1 - (1 2) 2                        | Peastone   |              | 0.01   | r lala    | 56           |
| f.     | Earthy Solid                            | Chalk  | ** **        | 2.31   | Bucholz   | 47.          |
|        |   | Ditto  | Volhynia     |        | Hacquet   | +10          |
|        |   | Agaric min.  |              |        |           | · c.         |
| g.     | Granular                                | Statuary marb.   |              | 2.48   | Bucholz   | 56           |
|        |   | Bluelimestone  | Vesuvius     |        | Klaproth  | 58.          |
| h.     | Compact                                 | Comp. marble   |              | 2.6    | Simon     | 53.          |
|        |   | Lumachello   |              |        |           |              |
|        |   | Mehlbaz  | Weimar       |        | Bucholz   | 334          |
| i.     | Argillaceous                            | Marl   |              |        |           |              |
| k.     | Bituminous                              | Stinkstone   |              |        |           |              |
|        | 211111111111111111111111111111111111111 | Fetide   |              | 2.67   | Kirwan    |              |
| 7.     | Magnesian Crist.                        | The state of the s | Halle        | 2.48   | Klaproth  | 29.          |
|        | ana Barana a                            | Rhomb spar   | Taberg       |        | Ditto     | 41.          |
|        |   | Ditto  | Halle        |        | Ditto     | 38 8         |
|        |   | Miemite  | Miemo        |        | Ditto     | 30.          |
|        |   | Pearl spar   | Sweden       |        | Hisinger  | 27-9         |
|        |   | Ditto  | Gotha        | 2.88   | Klaproth  | 33.          |
|        | Prismatic                               |  | 2000         | 2.00   | Ditto     | 28.9         |
|        | Prismatic                               | Company of the Compan | Mexico       | 0.00   | 131660    | 28.2         |
|        | 0 7                                     | Ditto  | Tschislag.   | 2.76   | Ditto     | 44.2         |
|        | Granular                                | Ditto  | St Gothard   |        | Daussurv  | 28.5         |
|        |   | Ditto  | Ditto        |        | Traptori  | 36.5         |
|        |   | Ditto  | Appenines    |        | Ditto     | 29.3         |
|        |   | Ditto  | Carin. Alpes | 2.83   | Ditto     | 400          |
|        |   | Ditto  | Castellamare |        | Ditto     | 33.          |
|        |   | Ditto  | Tenedes      |        | 171110    | 29.          |
|        | Compact                                 | Gurofians  | Guros        | 2.76   | 371110    | 39.5         |
|        | 4                                       | D. Bitterkalk  | Moravia      | 2.88   |           | 18.          |
|        |   | Ditto  | Herjeadalen  |        |           | 29.8         |
|        |   | Gree, marble   | R. of Rome   |        | T'ennant  | 30.3         |
|        |   | Massive  | Vesuvius     |        | Ditto     | 34·3<br>31·1 |
|        |   |  |              |        |           |              |

| C.acid | Silex | Alum | Mag.    | Iron  | Mang. | Water | Loss | Other ingred. | Authority         |
|--------|-------|------|---------|-------|-------|-------|------|---------------|-------------------|
| 14.    |       |      |         |       |       | •5    |      |               | Thomson           |
| 43.    |       |      |         |       | 1     | •5    |      |               | Ditto             |
| 42.92  |       |      | 3 7     |       |       | .73   |      |               | Tab. com.         |
| 43.    |       |      |         |       |       | -     |      |               | Ditto             |
| 43.7   |       |      |         |       | -15   |       |      |               | Annals            |
| 43.56  |       |      |         | -     | •36   | -1    |      |               | Ditto             |
| 14.    |       |      |         | 700   | -30   | -     |      |               | Scale             |
| 43.    |       |      |         |       |       | ,     |      |               | The second second |
| 47.6   | 1     |      |         |       |       | 1.    | 0.0  |               | Thomson           |
| 43.3   | •05   |      |         | .8    |       |       | 2.3  |               | Aiken             |
| 11.7   | -03   |      |         |       | 9     | .5    | *65  |               | Thomson           |
| 12.25  |       |      |         | *     | 3.    |       | 3.   |               | Ditto             |
|        |       |      |         |       |       | 1.    |      |               | Leonhard          |
| 39.    | ***   |      |         |       |       |       |      |               |                   |
| 39.5   | 5.7   |      |         | 3.3   |       | 1.    |      |               | Thomson           |
| 1      |       | 10.  |         |       |       |       |      | 100           | Gallizin          |
| 10     |       |      |         |       |       |       |      |               |                   |
| 43.    |       |      |         |       |       | .5    |      | " m. acid     | Thomson           |
| 33.    | 7.    | 2.   | 8.      |       |       |       | *5   |               | Journal           |
| 10     |       |      |         | 16    |       |       |      |               |                   |
| 43.    |       |      |         |       |       | .5    |      |               | Thomson           |
| 28.5   | 1.25  |      | .5      | .25   |       | 11.   |      | -25 carbon    | Journal           |
| 12.5   | 1.12  | 1.   |         | .75   |       | 1.63  |      |               | Thomson           |
|        |       |      |         |       |       |       |      |               |                   |
| 42.    | 10.25 |      | 9 43    | 2.25  | 1.25  |       | 1.41 |               | Journal           |
|        |       |      |         |       |       |       |      |               | o our nut         |
|        |       |      |         |       |       |       |      |               |                   |
| 45.    |       |      |         |       |       |       |      |               | Kirwan            |
| 23.    |       |      | 45. c   | 3.    |       |       |      |               | No. 21            |
| 31.5   |       |      | 25. c   | 2.25  |       |       |      |               | Ditto             |
| 29.5   |       | 2.   | 25.5 c  | 1. c  |       | 2.    |      |               | No. 148           |
| 23.    |       |      | 42.5 c  | 3. c  |       | 100   |      |               | No. 110           |
| 11.6   |       |      | 21.14 c | 3.4   | 1.5   |       | 1.39 |               |                   |
| 17.5   |       |      | 14.5    | 2.25  |       | 2.75  | 1 09 |               | Annals<br>No. 111 |
| 22.6   |       |      | 32. c   | 7.5 c | 2. c  |       |      |               |                   |
| 39.25  |       |      | 19.74   | .5    |       | 11.31 | 1.   |               | No. 145           |
| 46.    |       | 5.86 | 1.4     | •14   |       | 11.21 |      |               | Leon. 13          |
| 21.5   |       |      | 1 5 6   | •5    | .25   |       | 1.71 |               | Klap. 146         |
| 28.5   |       |      | 200     | .0    | .20   |       | *75  |               | No. 146           |
| 22.7   |       |      | 72.7    | .0    |       |       |      |               | Ditto             |
| 26.    |       |      | 48. c   | .2    |       |       |      |               | Ditto             |
| 22.    |       |      | 40.5 c  |       |       |       | .5   |               | Ditto             |
| 38.    |       |      | 48. c   |       |       |       |      |               | Ditto             |
| 28.    |       |      | 29.5 c  | :     |       |       |      |               | No. 186           |
| 17.6   |       |      | 20.5    | -     | 1.5   |       |      |               | Journal           |
| 48.    |       |      | 21.6    | 1.5   |       |       |      |               | Leon. 12          |
|        |       |      | 21.24   | •4    |       |       | +    |               | Bournon           |
| 48.    |       |      | 18.27   | •24   |       |       |      |               | Ditto             |
| 148.   |       |      | 17.6    |       |       |       |      | 4. residue    | Ditto             |

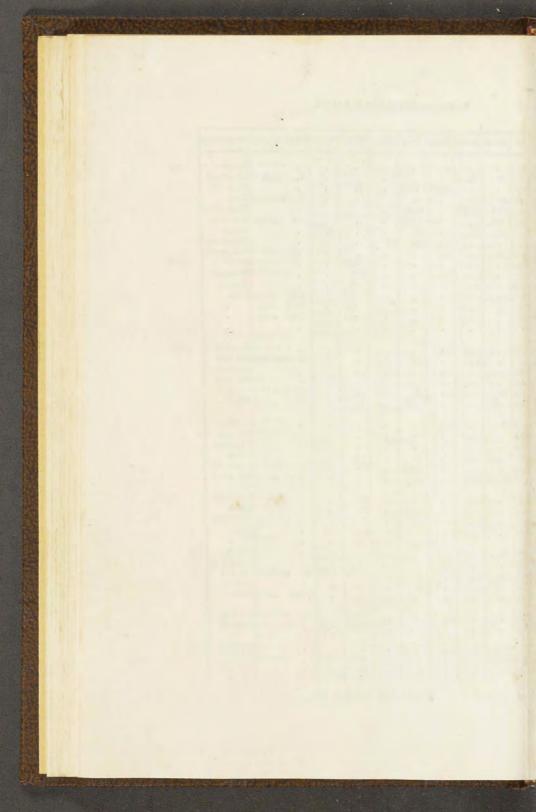


and the second second second second

# 1st CLASS, SALINE SUBSTANCES.

| T      | 1 GENUS, LIME.     | Trivial Name                           | Locality    | Sp. gr. | Analyst          | Lime         |
|--------|--------------------|--|-------------|---------|------------------|--------------|
| VI.    | 1 C. Continued     | Cris. sandstone                        | Fontainebl. |         | Sage             | 18·5<br>31·5 |
|        |                    | Titte Ocuterate                        | Reichenbach |         | John             | 14.          |
|        |                    | Connec                                 | Meisner     | 3.      |                  | 38.25        |
|        |                    | Ottip                                  | Dublin      |         |                  | 35.75        |
|        |                    | THE SECOND OF THE PARTY OF             | Salzbourg   |         | Klaproth         | 53.          |
|        |                    | Ditto                                  |             |         | Ec. de Min.      |              |
|        |                    | Ditto                                  |             |         | Bergman          | 21.5         |
|        | n. Ferro-manganes. | Pearl spar                             |             | 2.91    | Vauquelin        |              |
| VII.   | 2. Sp. ARRAGONITE. | Hard cal. spar                         |             | 12000   | Biot             | 56.33        |
|        | a. Cristallised    | Ditto                                  |             |         | Bucholz          | 51.5         |
|        |                    | Ditto                                  |             |         | Holme            | 55.5         |
|        |                    | Ditto                                  |             |         | Stromeyer        |              |
|        |                    | Ditto                                  | Dax         |         | Ditto            | 53.62        |
|        |                    | Ditto                                  | Arragon     |         | Ditto            | 55.02        |
|        |                    | Ditto                                  | Auvergne    |         | Ditto            |              |
|        | b. Coralliforme    | Flos ferri                             |             |         |                  |              |
| VIII.  | 3. Sp. PHOSPHATE   |  | Comanus     | 3.20    | Klaproth         | 55.          |
| A TITE | a. Cristallised    | Apatite                                | Saxony      | 0.00    | Dirto            | 92. 1        |
|        |                    | Ditto                                  | Uton        | 3.09    | -                | 54.28        |
|        | b. Green           | Asparag. stone                         | Zillerthal  | 3.19    | Klaproth         | 53.75        |
|        |                    | Do, Massive                            | Estramadur. |         | Pelletier        | 59.          |
|        | c. Earthy          | Phosphorite                            |             | 201     | Klaproth         | 47.          |
|        |                    | Do. Pulverul.                          | Marmaros    |         | It well a series |              |
| IX.    | 4. Sp. FLUATE.     | 24 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 |             | 3.19    | Scheele          | 57.          |
| 2.444  | a. Cristallised    | Fluor spar                             | Gersdorf    |         | Klaproth         | 67.75        |
|        |                    | Ditto                                  | Gersdon     |         | Richter          | 65.          |
|        |                    | Ditto                                  |             |         | Thomson          | 67.34        |
|        |                    | Ditto                                  | Ratofska    |         | John             | 20.          |
|        | b. Compact         |  | Marmaros    | 1       | Pelletier        | 21.          |
|        | c. Earthy          |  | Marmaros    |         |                  |              |
| X.     | 5. Sp. SULPHATE.   |  |             | 2.31    | Berthier         | 32.8         |
|        | a. Cristallised    | Gypsum                                 | New York    |         | Warden           | 32.          |
|        |                    | Selenite                               | New Torn    |         | Bucholz          | 33.          |
|        | A minutes          |  |             | 2.30    | Ditto            | 33.          |
|        | b. Fibrous         |  |             |         |                  |              |
|        | c. Compact         | to Auticities                          | Vulpino     | 2.87    | Vauquelin        | 92. s        |
|        | d. Earthy          | Vulpinite                              | Berne       |         | Ditto            | 40.          |
|        | c. Anhydrous       | Cube spar                              | Halle       | 2.96    |                  | 41.71        |
|        |                    |  | Sulz        | 2.94    | Ditto            | 42.          |
|        |                    | Commo                                  | ct Bothnia  |         | Klaproth         | 42.          |
|        |                    |  |             |         |                  |              |
| XI.    | 6. Sp. NITRATE.    | See Nit. salt                          |             | 2.64    | Klaproth         | 25.          |
| XII.   | 7. SP ARSENIATE.   | Pharmacolite                           | Andreasberg |         | John             | 27.28        |
|        |                    | Ditto                                  | Amaran      |         | 100              | 05.5         |
| XIII.  | 8. Sp. Borate.     | D-thalite                              | Arendahl    | 2.98    | Klaproth         | 35.5         |
|        | a. Cristallised    | Datholite                              | Ditto       |         | Variatielli      | 9.44         |
|        |                    | Ditto<br>Botriolite                    | Ditto       | 2.88    | Klaproth         | 39.0         |
|        | b. Botrioidal      | Botttonte                              | I           | 1       |                  | at 11.5      |

| Acid    | Silex | Alum  | Mag.     | Iron  | Mang  | Water | Loss | Other ingred  | Authority |
|---------|-------|-------|----------|-------|-------|-------|------|---------------|-----------|
| 14.5    |       |       |          |       |       |       |      |               | Lucas     |
| 24.5    | 37.   | 4.    |          | *     | *     |       |      | 4. soda       | I.eonhard |
| 19.     | 011   |       | 33.75    | 2.25  |       | 1.    |      | . South       | Ditto 13  |
| 29.75   | 18.   |       | F 12 C C |       |       |       |      | 3. bitumen    |           |
| 27.5    |       | 7.    |          | 2.    |       |       |      | 3. Dittillen  | Klap. 105 |
| 40.     | 125   | 10.15 |          | 10.85 |       |       |      | ·5 carbon.    | No. 105   |
|         | 4.5   |       | 1        | 1.25c | *     |       |      | *5 Carbon.    | Lucas     |
| 27.5    | 13.   | 10.   |          | 11.   |       |       | 3.   |               |           |
| 16.5    |       |       |          | 38.   | 24. c |       |      |               | Thomson   |
| 41.5 c  |       |       |          |       | *     |       |      |               | Tab. com. |
| 43.04 c |       | +     |          |       |       | •63   |      |               | Ditto     |
| 11.5 c  |       |       |          |       |       | 3.5   |      |               | Thomson   |
| 43.7 c  |       |       |          |       |       | *8    |      |               | Annals    |
| 12.87   |       |       |          |       |       | -98   |      | 2.88 stron.   | Ditto     |
| 42.45   |       |       |          |       |       | •30   |      | 2.52 ditto    |           |
| 13.29   |       |       |          |       |       | .21   |      | 1.45 ditto    |           |
|         |       |       |          |       |       |       |      |               |           |
| 45. P   |       |       |          |       |       |       |      |               | No. 144   |
| 10. P   |       |       |          | *     |       |       |      | 6. carb. lime |           |
| 45.72 P | 1.    |       |          | *     | *     |       |      |               | Journal   |
| 46.25 P | 1     |       |          |       |       |       |      |               | No. 144   |
|         | 1     |       |          |       |       |       |      |               |           |
|         |       |       |          | 1.    |       |       |      | 2.5 Facid §   |           |
| 32.25 P | .0    |       |          | .75   |       | 1.    |      | 2.5 F acid +  | An. ch. 1 |
| 16. F   | 27.   |       | -2       |       |       |       |      |               | Brong.    |
| 32.25 F |       |       |          |       |       |       |      |               | No. 165   |
| 35. P   |       |       |          |       |       |       |      |               | Thomson   |
| 32.66 F |       |       |          |       |       |       |      |               | Ditto     |
| 49.5 F  |       |       |          | 3.75  |       | 10.   |      | 2. s. lime 1  |           |
| 28.5 F  | 31    | 15.5  |          | 1.    |       | 2.00  | 2.   |               | An. ch. 9 |
|         | 01.   | 10.0  |          | 1.    |       |       | 4.   | 31 3 88       |           |
| 45.2 s  |       |       |          | 0     |       | 22.   |      |               | lab. com. |
| 17. s   |       |       |          |       |       | 21.   |      | . 1           | Ditto     |
| 43.9 s  |       |       |          |       |       | 21.   |      | . 7           | Chomson   |
| 13.5 s  |       |       |          |       |       | 21.   | 2.5  | . 1           | Ditto     |
|         |       |       |          |       |       |       |      |               |           |
|         | 8.    |       |          |       |       |       |      |               | Thury     |
| 60. s   |       |       |          |       |       |       |      | . I           | Clap. 198 |
| 55. s   |       |       |          |       |       |       | 2.25 | 1. m. soda    | No. 147   |
| 57. s   |       |       |          | 1.    |       |       | 2 20 | I             | Ditto     |
| 56.5 s  | 115   |       |          |       |       |       |      | ·25 soda I    | Ditto     |
|         |       |       |          |       |       |       |      | Suda -        |           |
| 50.54 A |       |       |          |       |       | 24.26 |      | 18            | To. 106   |
| 45.68 A |       |       |          |       | -     | 23.86 | 3.18 |               | ournal    |
|         | 1     |       |          |       |       | 63.90 | 2,19 |               | Outhat    |
| 24. B   | 36.5  |       |          |       |       | 4.    |      |               | No. 164   |
| 21.67 B | 37.66 |       |          |       |       | 5.5   | 1.17 |               | ucas      |
| 13-5 в  | 36.   |       |          | 1.    |       | 6.5   |      | . 2           | No. 192   |
|         |       |       |          |       | ,     | ,     |      | ,             |           |

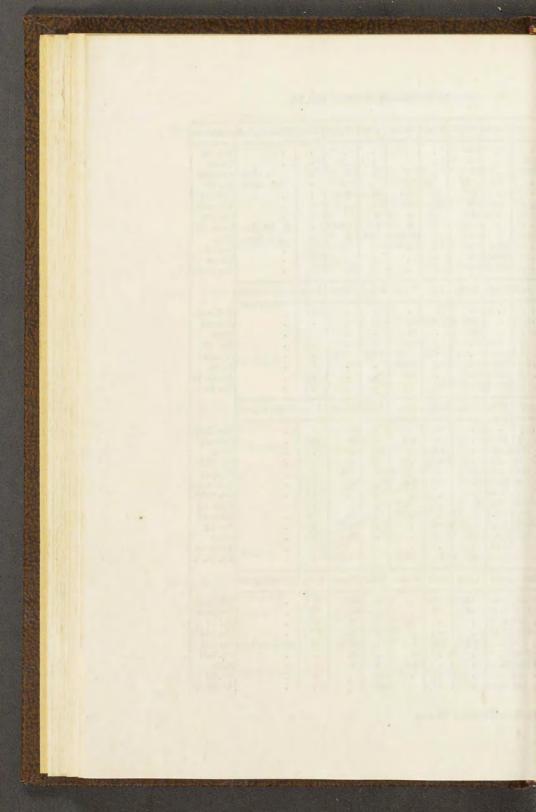


|        |                       |                            |                         | in .         |                       | n                    |
|--------|-----------------------|----------------------------|-------------------------|--------------|-----------------------|----------------------|
| XIV.   | 2. GENUS, BARYTES.    | Trivial Name               | Locality                | Sp.gr.       | Analyst               | Baryt.               |
|        | 1. Sp. Sulphate       | Heavy spar<br>Baroselenite | Peggau                  | 4·38<br>4·29 | Withering             | 60.<br>67.2<br>61.34 |
|        |                       | Ditto<br>Do testaceous     | New Jersey<br>Freyberg  | 4.41         | Chilton<br>Klaproth   | 97.5 s               |
|        |                       | Do. compact                |                         |              | Westrumb              |                      |
|        | -                     | Hepatit<br>Ditto           | Andrarum<br>Ditto       | 4.12         | Rergman<br>Klaproth   | 29.<br>85.25 s       |
|        |                       | Ditto                      | Ditto                   |              | John                  | 92.75 s              |
|        |                       | Ditto                      | Kongsberg               | * 00         | Ditto                 | 93.55 s              |
|        | 3. Sp. Carbonate.     | Witherite<br>Ditto         | Anglesark               | 4.30         | Klaproth<br>Vauquelin | 78.<br>74.5          |
|        | -                     | Ditto                      |                         |              | Pelletier             | 62.                  |
| XV.    | 3. GEN. STRONTITES.   |                            |                         |              |                       | Stront.              |
|        | 1. Sp. Sulphate.      | Celestine                  | Sicily                  |              | Vauquelin             | 54.                  |
|        |                       | Compact                    | Mt. Martre              | 3.59         | Dr. C.                | 91·42 s<br>83. s     |
|        |                       | Ditto<br>Fibrous           | Bouvron<br>Pensylvania  | 3.83         | Ditto<br>Klaproth     | 58.                  |
|        |                       |                            | Süntal                  | 3.90         | Stromeyer             | 97.2 s               |
|        | 2. Sp. CARBONATE.     | Strontianite               | Argyleshire             | 3.67         |                       | 61·21<br>62.         |
|        |                       | Ditto<br>Ditto             | Ditto<br>Ditto          | 3.67         | r curence             | 69.                  |
| XVI.   | 4. GEN. MAGNESIA.     |                            |                         |              |                       | Mag.                 |
| 24.12. | 1. Sp. Native.        |                            | New Jersey              | 2.13         | Bruce                 | 70.                  |
|        | 1. SP. INATIVE.       |                            |                         |              | Vauquelin             | 64.                  |
|        | 2. Sp. Carbonate.     | Magnesite                  | Baudisero               | 2.01         | Giobert               | 68.<br>48.           |
|        |                       | Ditto<br>Ditto             | Steirmark<br>Hrubschitz | 2.91         | Mitchell              | 17.5                 |
|        |                       | Ditto                      | Ditto                   |              | Wondrash.             | 33.                  |
|        |                       | Ditto                      | Ditto                   |              | Bucholz               | 48.<br>46.59         |
|        |                       | Ditto                      | Ditto<br>Castelamonte   | 2.61         | Ditto<br>Guyton       | 26.3                 |
|        |                       | Meerschaum                 | Levant                  |              | Klaproth              | 18.25                |
|        |                       | Ditto white                | Ditto                   | 1.60         | Ditto                 | 17·25<br>51·61       |
|        | 3. Sp. Borate.        | Pipehead<br>Boracite       | Luneberg                | 2.56         | Westrumb              |                      |
|        | O. Of DORAGE          | Doracie                    | Lunchorg                |              |                       | Alum.                |
| XVII.  | 5. GEN. ALUMINE.      |                            |                         |              |                       | _                    |
|        | 1. Sp. Sulphate.      | Pure clay                  | Halle                   | 1.67         |                       | 32.5                 |
|        |                       | Kolyrite                   | Schemnitz               | :            | Klaproth              | 45.                  |
|        |                       | Alum stone                 | Hungary                 |              | Ditto                 | 17·5<br>16.          |
|        |                       | Alum slate                 | Freynwald               |              | Ditto<br>Ditto        | 56.5                 |
|        |                       |                            | Tolfa<br>Ditto          |              | Vauquelin             | 43.92                |
|        | 2. Sp. Alkal. Fluate. | Crvolite                   | Greenland               | 2.94         | Klaproth              | 24.                  |
|        |                       |                            | Ditto                   |              | Vauquelin             | 21.                  |

# 2d ORDER .- INSOLUBLE SALTS.

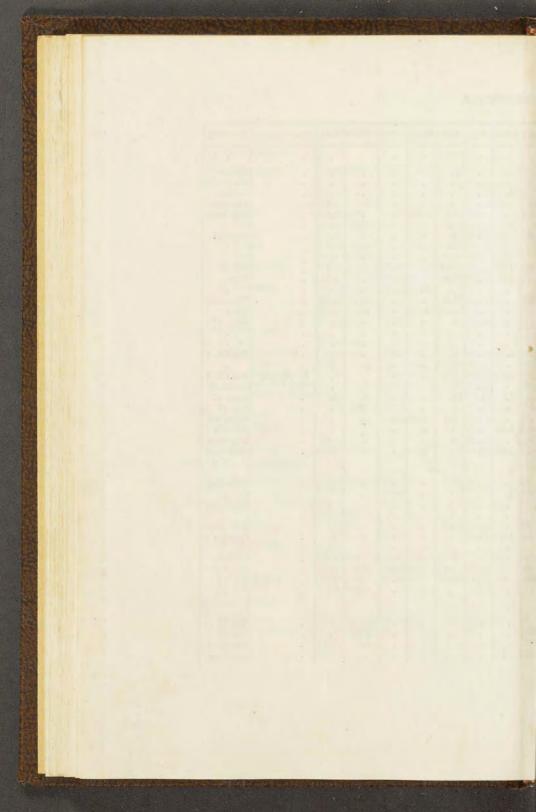
| S. acid  | C.acid | Silex | Alum. | Lime    | Iron  | Water                                   | Loss  | Other ingred. | Authority  |
|--|--------|-------|-------|---------|-------|---|-------|---------------|--|
| 30.  |        | 10.   |       |         |       |   |       |               | No. 35   |
| 32.8   |        |       |       |         |       |   |       |               | Thury  |
| 30.67  |        | 3.    |       |         | 1.    | 2.                                      |       | e etron       | Am. Jour.  |
| 00.01  |        | .8    | .05   |         | 1.    | .7                                      |       | ·85 ditto     | No. 36   |
|  |        | 6.    | 1.    | 2.5     | 4.    | 2.                                      |       | -00 airro     | Gallizin   |
| 19.  |        |       |       | 3.7     |       | 2.                                      |       |               | Control of the Contro |
| *  |        | 33.   | 5.    | 100     | 3     | *                                       |       |               | Klaproth   |
|  |        | 1.    |       | 6. s    |       | * |       |               | No. 190  |
|  |        | *     |       | 2. s    |       | 1.25                                    |       | 2. bit. &c.   | Leon. 12   |
|  |        |       |       | 3.58 s  | *87   | 2.                                      |       | * s. stron.   |  |
|  | 22.    |       |       |         |       |   |       |               | No. 18   |
|  | 22.5   |       |       |         |       |   |       |               | Thury  |
|  | 22.    |       |       |         |       | 16.                                     |       |               | An. ch.21  |
| S. acid  | Coold  | Lime  | Iron  | Water   | Barvt | Silex                                   | Loss  | Other ingred. |  |
|  |        | Line  | 11011 | 11 alci | Daiye | DHEA                                    | 11000 |               |  |
| 46.  |        |       |       |         |       |   |       |               | Tab. com.  |
|  |        | 8.3 c | *25   |         |       |   |       |               | Journal  |
|  |        | 10. c |       | 6.      |       |   | -9    |               | Ditto  |
| 42.  |        |       | 9     |         |       |   |       |               | No. 49   |
|  |        |       | .12   | -19     | 2.228 | .25                                     |       |               | Annals   |
|  | 30.2   |       |       | 8.59    |       |   |       |               | Aikin  |
|  | 30.    |       |       | 8.      |       |   |       |               | An. ch. 21   |
|  | 30.    |       |       | .5      |       |   |       |               | No. 18   |
|  |        |       |       |         |       |   |       |               |  |
| Acid   | Silex  | Alum. | Lime  | Iron    | Mang  | Water                                   | Loss  | Other ingred. |  |
| 1 10   |        |       |       |         |       | 30.                                     | -     |               | Am. Jour.  |
|  | 2.     |       |       | 2.5     |       | 29.                                     | 2.5   |               | Journal  |
| 200  | 15.6   |       | 1.6 s |         |       | 3.                                      | ~ 0   |               | Ditto  |
| 49. c  |        |       | 100   |         |       | 3.                                      |       |               | No. 185  |
|  |        |       |       | *       |       | 1.5                                     |       |               | Journal  |
| 100  |        |       | .5    | 1.5     |       | 20.                                     |       |               | Tab. com.  |
| 30. c  | 1000   |       | .0    | 1.5     | #     |   |       | *             | An. chim.  |
| 52. c  |        |       | 9.    | *       | .*    |   |       |               | Ditto 74   |
| 51. c  |        | 1.    |       | -25     |       | 1.                                      |       |               |  |
| The state of the s | 14.2   |       |       | *       |       | 12.                                     | 1.5   | *             | Ditto 47   |
| 7 7 7  | 41.    |       | *5    |         |       | 35.5                                    |       |               | No. 52   |
| 5. c   | 50.5   |       | •5    |         |       | 25.                                     | 1     | *             | Ditto  |
| 14110  | 54.16  |       |       |         |       |   |       |               | Brochant   |
| 68, в  | 2.     | 1.    | 11.   | .75     |       |   |       |               | An. ch. 2  |
| Acid   | Silex  | Lime  | Iron  | Potas.  | Soda  | Water                                   | Loss  | Other ingred. |  |
| 19.25 s  | •45    | •35 c | -45   |         |       | 47.                                     |       |               | Tab. com.  |
|  | 1.     | .5    | •5    |         |       | 45.                                     | .5    |               | Thomson  |
|  | 14.    |       |       |         |       | 42.                                     |       |               | No. 17   |
|  | 62.25  |       |       | 1.      |       | 5.                                      | 1.75  |               | No. 150  |
|  | 40.    | 1.5 s | 6.4   | 1.5 s   |       | 10.75                                   | +     | 19.65 carbon  | P. Carlotte  |
|  |        | 1.9 S | 0.4   |         |       | 3.                                      | -1    | Lo oo carbon  | No. 150  |
|  | 19.    |       |       | 4.      |       |   |       |               | Ditto  |
| 120  | 24.    |       |       | 3.8     | 00    | 4.                                      |       |               | No. 97   |
| 10. F  | -      |       |       |         | 36.   | 栎                                       |       |               | An. ch. 37   |
| 46. F  |        |       |       |         | 33.   |   |       | 1 .           | Alli Cit. 31   |

(iron, .5 m. of potash, .25 mag.



| XVIII. 1. Sp. QUARTZ 2.65 Hauy                      | 2 000      |
|---|------------|
| 0.00  | sd. 100.   |
| a. Cristallised Rock cristal . 280 Trom             |            |
| Ditto . Buch  |            |
| Ditto . Berg  | 93.        |
| Ditto . Buch  | olz 97.75  |
| b. Purple Amethyste . 2.65 Rose                     | 97.5       |
| c. Blue False saphir . 2.58 .                       |            |
| d. Green Prase Buch                                 | olz 98.5   |
| e. Yellow Scotch topaz . 2.65 Haüy                  |            |
| f. Rose Milk quartz . 2.67 Ditto                    |            |
| g. Resplendent Cats eye white Ceylon 2.66 Klapt     | oth 95.    |
| brown Malabar 2.62 Ditto                            | 94.5       |
| h. Hematitic Hyacinthe of Compostello .             |            |
| Iron flint red . Buch                               |            |
| Ditto brown . Ditto                                 |            |
| Ditto yellow . Ditto                                | 93.5       |
| i. Flinty slate                                     |            |
| k. Scaly Avanturine                                 | . 00       |
| L. Granular, Grey Sandstone Hartz . West            |            |
| Green Ditto Spessart 2.50 Klapi                     |            |
| Zection of the Dieto                                | rumb 71.   |
| Greenish yellow Ditto Cantal 2.85 Lang              |            |
| Greenish brown Ditto Autum . Vaug                   | 00 +       |
| Elastic quartz Brasil . Klapi                       | 00.5       |
| m. Fibrous . Vorgebirge . Ditto                     | 10000      |
| n. Amorphous . 2.58 Morv                            | 00 4.      |
| Buch  | 00.40      |
| Pseudo quartz After cristals . 2.55 Guyto           | on on      |
| XIX. 2. Sp. CALCEDONY.                              | 1 2        |
| a. Stalactitical Com.calcedony Faroe 2.66 Bergi     | nan 84.    |
| Ditto Ditto .                                       | 83.        |
| Saphirine Ditto Siberia . Trom                      |            |
| b. White Cachalong                                  | . 00       |
| c. Coloured Carnelian . 2.61 Trom                   |            |
| . Siberia . Bındl                                   |            |
| d. Variegated Agate                                 | ed 84.     |
| e. Green Heliotrop Bohemia 2.60 Trom                | ISU+       |
| Ditto Olympus 2.55 Klapi                            | 00.10      |
| f. Chrysoprase   Chrysoprase   Kosmutz   2.58 Ditto | 50.11      |
| g. Massive Hornstone · ·                            |            |
| XX. 3. Sp. OPAL.                                    |            |
| a. Precious Noble opal Hungary 2.10 Klapr           | oth 90.    |
| h Hydrophanous Oculus mundi Saxony . Ditto          |            |
| Ditto . Weig  |            |
| Ditto Mussinet . Bonvo                              | oisin 100. |

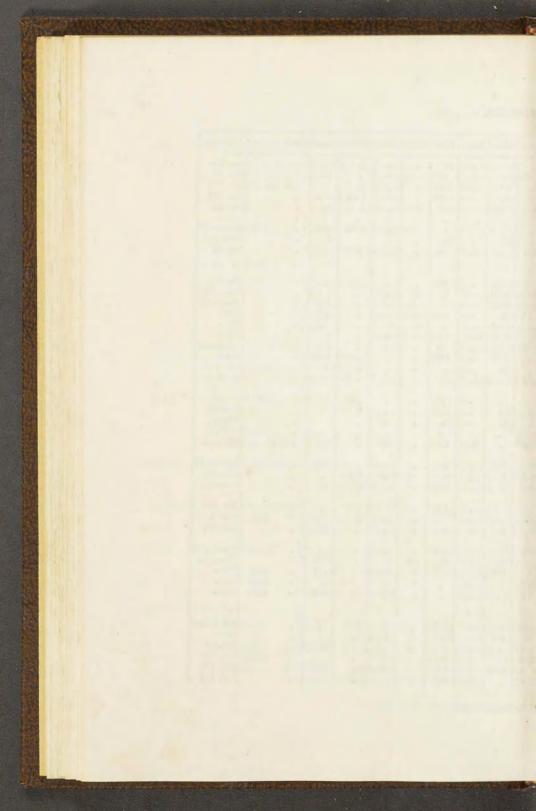
| Almei     | T .  | 20   |           | 2.5   |       |       | 1.   |               | (                   |
|-----------|------|------|-----------|-------|-------|-------|------|---------------|---------------------|
| Alum      | Lime | Mag. | Iron      | Mang. | Alkal | Water | Loss | Other ingred. | Authority           |
|           |      |      |           |       |       |       |      |               |                     |
|           |      |      |           |       |       |       |      |               | Thomson             |
|           |      |      |           |       |       |       |      |               | An. Ch. 70          |
| 6.        | 1.   |      |           |       |       |       |      |               | Gallizin            |
| '5        |      |      | *         |       |       | 1.    | .75  |               | Thomson             |
| .25       |      |      | .5        | -25   | *     |       | 1.5  | 4             | Tab. Com.           |
| .5        |      |      |           |       |       |       |      |               |                     |
|           |      |      | 1.        | *     |       |       |      |               | Jour. 27            |
|           |      |      |           |       | *     | *     |      |               |                     |
| 1.75      | 1.5  |      | .25       |       | *     |       |      |               | :                   |
| 2.        | 1.5  |      | .25       |       |       |       | 1.5  |               | No. 5               |
|           |      |      |           |       |       |       | 1.75 |               | Ditto               |
| .25       |      |      | 21.5      |       |       | 1.    | 1.25 |               | Thomson             |
|           |      |      | 5.75      | 1.    |       | 1.    | .25  | •             | Ditto               |
|           |      |      | 5.        |       |       |       |      | ,             | Jour. 27            |
|           |      |      |           |       |       |       |      |               | 00011 21            |
| 0.        |      |      |           |       |       |       |      |               |                     |
| 25.<br>1. | 2.   |      | 4.        |       |       |       |      |               | An. Ch. 4           |
| 19.       |      |      | 7.        |       |       | 5.    |      |               |                     |
|           | 7. c |      | 9.5       |       | *     |       | *    | 1. baryte     | An. Ch. 4           |
| 2.        | 1.   | 1.   | 8.<br>15. |       | *     | 7.    |      |               | An.Ch.69            |
| 2.5       | 1.   | -    | 5.        |       |       | 4.    | 3.   |               | Jour. 27            |
|           |      | :    | 1.5       |       |       |       |      | *             | No. 42              |
| 6.3       | 1.55 |      |           |       |       | :     |      |               | Leon. 12            |
| .5        |      |      |           |       |       | 1.    | .75  | *             | Gallizin<br>Thomson |
|           | 3.55 | 2.   |           |       |       |       | 2.13 |               | An.Ch. 30           |
|           |      |      |           |       |       |       | ~ 10 |               | An.ch. 50           |
| 16.       |      | -    |           |       |       |       |      |               |                     |
| 2.        | 11.  | .    |           |       |       |       |      |               | Thomson             |
|           |      |      |           |       |       |       |      |               | An.Ch. 34           |
|           |      |      |           |       | -     |       |      |               | An.Ch. 34           |
| *         | 6    |      |           |       |       |       | 1.   |               | Tab. Com.           |
| 3.5       | 1.5  |      |           |       |       |       | 1.   |               | Gallizin            |
| 7.5       |      |      |           |       |       |       |      |               |                     |
| 25        |      |      | 5.        |       |       |       | 1.5  |               | Gallizin            |
| -08       | -83  |      | *5        |       |       | 2.5   |      |               | No. 158             |
| 00        | *83  |      | *08       |       | *     |       | 1.84 | I. nickel     | No. 44              |
|           |      |      |           |       |       |       |      |               |                     |
|           |      |      |           |       |       | 10.   |      |               | N. 45               |
| 1.62      |      |      |           |       | :     | 5.23  |      |               | No. 45              |
| 5.8       |      |      | -1        |       |       | 5.8   | 5.4  | •             | No. 36<br>An. ch. 6 |
| 35.77     | 3.5  |      | .25       |       |       |       | - T  |               | Saussure            |
|           |      |      |           | 1     |       | ,     |      |               | Baussure            |

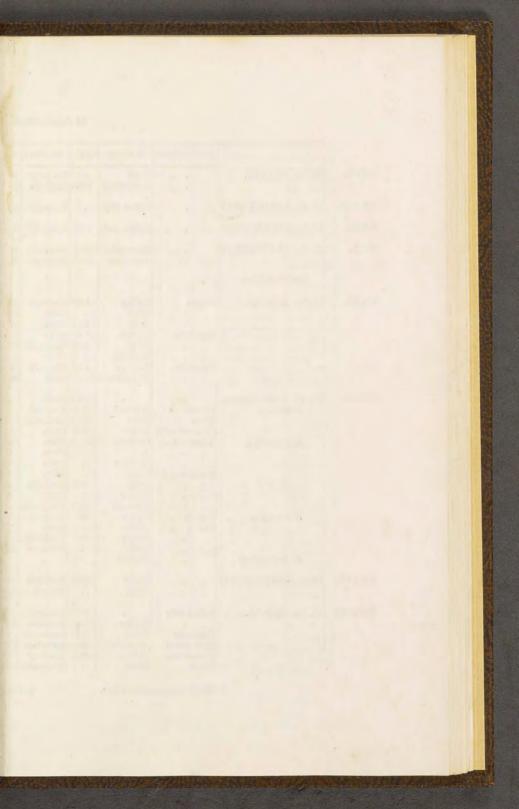


| XX.    | 3. Sp. OPAL. Contin   | Trivial Name          | Locality                                | Sp.gr. | Analyst           | Silex        |
|--------|-----------------------|-----------------------|---|--------|-------------------|--------------|
|        | c. Common yellow      | Semiopal              | Telkobania                              | 1.90   | Klaproth          | 93.5         |
|        | Milk white            | semiopai .            | Kosmutz                                 |        | Ditto             | 98.75        |
|        | Grey                  |                       | Mähren                                  |        | Ditto             | 83.          |
|        | 5103                  | Feuer opal            | Mexico                                  | 2.12   | Ditto             | 92.          |
|        | d. Brown              | Menilite              | Menil mont.                             | 2.18   | Ditto             | 85.5         |
|        | e. Blue               |                       |   |        |                   |              |
|        | f. Stalactitical      | Hyalite               | Frankfort                               |        | Bucholz           | 92.          |
|        |                       |                       |   |        | Link.             | 57.          |
|        |                       | Fibrous incr.         | Geyzer                                  | 1.80   | Klaproth          | 98.          |
| XXI.   | 4. Sp. FLINT.         |                       |   |        |                   |              |
|        |                       | Common flint          |   | 2.63   | Klaproth          | 98.          |
|        | a. Compact            | Common min            | Ochabo, Pol.                            | . 00   | Hacquet           | 92.75        |
|        | Flint                 |                       | Pednigarb do                            |        | Ditto             | 92.75        |
|        |                       |                       | Dodromiel do                            |        | Ditto             | 92.5         |
|        |                       |                       | Studeno do                              |        | Ditto             | 97.          |
|        |                       |                       | Nudanto do                              |        | Ditto             | 89.          |
|        |                       |                       |   |        | Vauquelin         | 96.75        |
|        |                       | White crust           |   |        | Ditto             | 86·42<br>98. |
|        | b. Decomposed         | Swimming st.          |   | 0.00   | Ditto             | 74.58        |
|        | e. Brown              | Egypt. pebble         | Egypt                                   | 2.00   | Weigleb           | 1200         |
| XXII.  | 5. Sp. JASPER.        |                       |   | 2.71   | Haüy              |              |
| A A11. | a. Common             |                       |   | 2.70   | Kirwan            | 75.          |
|        | Mr. Commission        |                       |   |        | Ditto             | 80.          |
|        | b. Opal jasper        |                       |   |        |                   | 20.44        |
|        | c. Porcellaine jasper |                       |   |        | Rose              | 60.75        |
|        | a a DIVIGUEDONE       | Oline mass            | Cantal                                  | 9.10   | Bergman           | 78.          |
| XXIII. | 6. Sp. PITCHSTONE.    | Onve green            | Meisner                                 |        | Klaproth          | 73.          |
|        |                       | Blackish grey         | 7.0000000000000000000000000000000000000 |        | Bergman           | 59.          |
|        |                       | Ditterning Stof       |   | 9 99   |                   |              |
| XXIV.  | 7. SP. PEARLSTONE.    |                       | Telkobania                              | 2.34   | Klaproth          | 75.25        |
| ****** |                       | Pierre perlée         | Cinapecuaro                             | 2 54   | Vauquelin         | 74.          |
|        |                       | Marekanite            | Siberia                                 | 2.36   | Lowitz            | 14.          |
|        | a a angentiat         |                       | Hecla                                   |        | Tromsdorf         | 63.          |
| XXV.   | 8. Sp. OBSIDIAN.      |                       | Hecia                                   | 9.24   | Vauquelin         | 78.          |
|        |                       |                       | Mexico                                  | 9.90   | Drapier           | 74.          |
|        |                       |                       | Ditto                                   |        | Ditto             | 71.          |
|        |                       |                       | Ditto                                   |        | Descostils        | 72.          |
|        | 0 0 7 1771            |                       | 1                                       |        |                   |              |
| XXVI.  | 9. Sp. LAVA.          |                       | 22                                      |        |                   | 50.75        |
|        | a. Compact            | Lava                  | St. Venere                              |        | Kennedy           | 51.          |
|        |                       |                       | Catania                                 |        | Ditto             | 77.5         |
|        | b. Vesicular          | Pumice                | Lipari                                  | *      | Klaproth<br>Ditto | 77:5         |
|        | 77                    | Mana                  | Quito                                   |        | Ditto             | 16.5         |
|        | c. Earthy             | Moya<br>Volcan, ashes | Isle of France                          |        | Ditto             | 72.          |
|        |                       | voicani, asnes        | Isie of France                          |        |                   |              |

|       |      |      |       |       | -      |       |      |               | -                  |
|-------|------|------|-------|-------|--------|-------|------|---------------|--------------------|
| Alum  | Lime | Mag. | Iron  | Mang. | Alkali | Water | Loss | Other ingred. | Authority          |
|       |      |      | 1.    |       |        | 5.    | •5   |               | No. 48             |
| -10   | 2    |      | •10   |       |        |       | 1.5  |               | No. 47             |
| 3.    |      |      | 1.75  |       |        | 8.    |      | .33 bit. oil  | No. 175            |
|       |      |      | .25   |       |        | 7.75  |      |               | No. 139            |
| 1.    | •5   |      | .5    |       |        | 11.   | 1.5  |               | No. 50             |
|       |      |      |       |       |        |       |      |               |                    |
|       |      |      |       |       |        | 6.33  | 1.66 | 4 -           | An. ch. 73         |
| 18.   | 15.  |      | 3.    |       |        |       | 7.   |               | Thomson            |
| 1.5   |      |      | .5    |       |        |       |      |               | No. 41             |
|       |      |      |       |       |        |       |      |               | - 1                |
| +25   | .5   |      | -25   |       |        |       |      |               | No. 1              |
| 1.5   | 2.75 | •51  | 1.    |       |        |       | 1.49 |               | Journal 20         |
| 1.10  | 1.25 |      | 2.    |       |        |       | 2.9  |               | An. ch. 64         |
|       | 3.   |      | 1.25  | -75   |        |       | 2.5  |               | Ditto              |
| 1.    | •25  |      | 1.    |       |        |       | •75  |               | Ditto              |
| 2.    | 4.15 |      | 1.75  |       |        |       | 3.   |               | Ditto              |
| .25   |      |      | •5    |       |        |       | 2.5  |               | Thomson            |
|       | 9.88 |      | 1.23  |       |        |       | 2.47 |               | Aikin              |
|       | 2.   |      |       |       |        |       |      |               |                    |
| 15-4  |      | 5.   |       | *     |        |       |      |               |                    |
|       |      |      |       |       |        |       |      |               |                    |
| 20.   |      |      | 5.    |       |        |       |      |               | Gallizin           |
| 5.    | 2.   |      | 13.   |       |        |       |      |               | Thury              |
|       |      |      |       |       |        |       |      |               |                    |
| 27.25 |      | 3.   | 2.5   | *     | 3.6 P  |       | 2.9  |               | Thomson            |
| 3.    | 4.5  |      | 2.    |       | 3. s   |       | 2.5  |               | Journal 16         |
| 14.5  | 1.   |      | 1.    | •1    | 1.75 s | 8.5   |      |               | No. 102            |
| 18.5  | 4.   |      | 3.5   |       | 3. s   | 8.    |      |               | Journal 16         |
| 12.   | +5   |      | 1.6   |       | 4.5 P  | 4.5   |      |               | No. 116            |
| 13.   | 1.5  |      | *     | 3.    | 2. P   | 4.    |      | •7 soda       | An. ch. 55         |
| 12.   | 7.   | 3.   | 1.    |       |        |       | 3.   |               | Gallizin           |
| 20.5  |      |      | 13.5  |       |        |       |      |               | An. ch. 34         |
| 10.   | 1.   |      | 2.    | 1.6   | 6. P   |       | 1.4  |               | Thomson            |
| 14.   | 1.2  |      | -     | 3.    | 3.3 1  |       | 4.3  | * soda        | Ditto              |
| 13.4  | 1.   |      |       | 4.    | 4. 1   |       | 6.   | * ditto       |                    |
| 12.5  |      |      |       | 2.    | 10. P  |       | 3.5  | e ditto       | Ditto              |
|       |      |      |       |       |        |       |      |               |                    |
| 17.5  | 10.  |      | 14.25 |       | 4. 8   | 1.    |      |               | Ed. Trans.         |
| 19.   | 9.5  |      | 14.5  |       | 4. 8   |       |      |               | Ditto              |
| 17.5  | ,    |      | 1.75  |       |        |       | 3.25 |               | No. 33             |
| 17.5  |      |      | 1.75  |       | 3. 8   |       |      | * potasi      | h No. 103          |
|       |      |      |       |       |        |       |      |               |                    |
| 11.5  | 6.25 |      | 6.5   |       | 2.5 5  | 11.   |      | +             | No. 138<br>No. 154 |

<sup>25</sup> inches carb. acid.





|         |  | Trivial Name   | Locality   | Sp.gr.                       | Analyst   | Silex  |
|---------|--|--|--|------------------------------|---|--|
| XXVII.  | 10. Sp. BASALT.  | :  | Staffa<br>Hassenberg   | 3.06                         | Kennedy<br>Klaproth   | 48.<br>44·5  |
| XXVIII. | 11. Sp. BASALT TUFF  |  | Calton Hill  |                              | Kennedy   | 50.  |
| XXIX,   | 12. Sp. GREENSTONE   | 4  | Salisb. craig  | 2.80                         | Kennedy   | 46.  |
| XXX.    | 13. Sp. CLINKSTONE   | :  | Donnersbg.<br>Auvergne   |                              | Klaproth<br>Bergman   | 57·25<br>58.   |
| XXXI.   | 14. Sp. ZIRCON.  | Jargon : Hyacinth : Zirconite                                    | Ceylon Ditto India Ceylon Ditto Expaillie Norway Fk-Schwerin   | 4·18<br>4·58<br>4·38<br>4·48 | Klaproth<br>Ditto<br>Ditto<br>Ditto<br>Vauquelin<br>Ditto<br>Klaproth<br>John | 31·5<br>26·5<br>32·5<br>25.<br>32.<br>31.<br>35.                       |
| XXII.   | 15. Sp. CORUNDUM.  a. Perfect  b. Imperfect  c. Granular  d. Amorphous | Saphir Ditto Oriental ruby Adamant. sp Demant spath. Emery Do. § | Oriental Ditto Ditto Carnatic Ava Malabar China Ditto Bengal Piémont Naxos Ditto Jersey Ditto Madras | 3.95<br>4.01<br>3.97<br>3.93 | Ditto Ditto Ditto Ditto Ditto Ritto Klaproth Ditto                            | 5.25<br>7.<br>5.<br>6.5<br>7.<br>5.25<br>6.5<br>5.5<br>4.8<br>8.<br>3. |
| XXXIII. | 16. Sp. CHRYSOBERIL  |  | Brasil<br>Ditto  | 3.71                         | Klaproth<br>Achard  | 18.<br>15.   |
| XXXIV.  | 17. Sp. SPINEL.  | Spinel ruby Pleonaste Blue spinel Automolite Ditto               | Ceylon<br>Ditto<br>Akers,Swed<br>Fahlun<br>Ditto   | 3.57<br>3.79<br>3.68         | Vauquelin   | 15·5<br>2.<br>5·48<br>4·75<br>4.                                       |

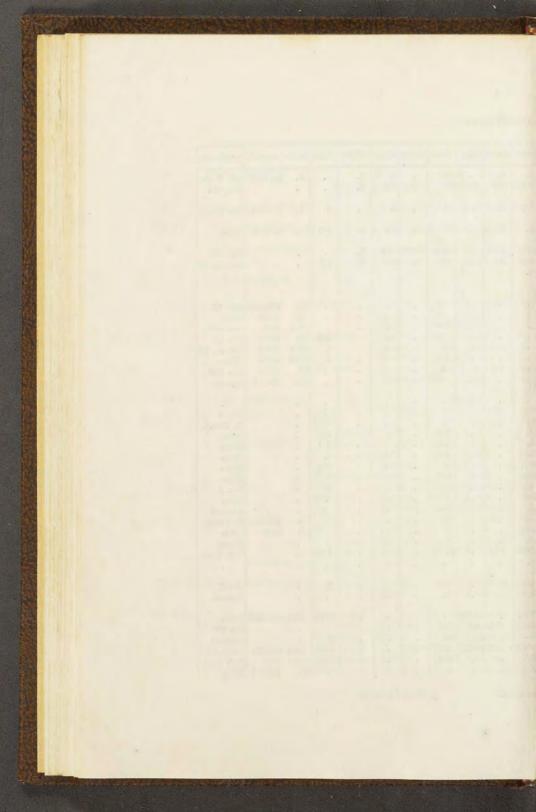
<sup>§</sup> Freed from magnetic iron.

## Y COMPOUNDS.

| 16·75 9·5 2·25 20.   |          |
|--|----------|
| 16.75 9.5 2.25 20.   | uthority |
| 16·75   9·5   2·25   20.   .12   2·6   s   2.   .   .   .   .   .   .   .   .  | l. Tran  |
| 19. 8. 17. 3.5 s 4. 1.5 1. m. acid Dit 23.5 2.75 3.5 . 4.5 . 6. s 2. 1.5 . No Jou  10. 8. 17. 3.5 s 4. 1.5 1. m. acid Dit 23.5 2.75 3.5 . 4.5 . 6. s 2. 1.5 . No Jou  10. 68. zirconia 69. ditto 10. 64.5 ditto 10. 64.5 ditto 10. 64.5 ditto 10. 65. ditto 10. 64. ditto † 10. 1.5  | 0. 101   |
| 23.5   | l. Trans |
| 24.5 3.5 . 4.5 . 6. s 2. 1.5 . Jour Mo. 3.6 . s 3.75 . Jour Mo. 3.77 | tto      |
| 24.5 3.5 . 4.5 . 6. s 2. 1.5 . Jour Jour Jour Jour Jour Jour Jour Jour   | 100      |
| 1.5  | urnal 1  |
| 1.5  | 10       |
| 1.5  |          |
| 98.5   | 0. 192   |
| 2. 64·5 ditto An Dit An | 0. 13    |
| 98.5   | n. ch. 2 |
| 98.5 ·5 1. · · · · · · · · · · · · · · · · · ·   | itto     |
| 98.5   | 0. 104   |
| 98.5   | nnals    |
| 92.  |          |
| 90. 91. 1·2 1·5  |          |
| 91.  | Trans.   |
| 87.  |          |
| 86.5   |          |
| 86.5   |          |
| 84.  |          |
| 89.5   |          |
| 92.  |          |
| 50. 6  | urnal    |
| 80   | Trans.   |
| 70. 53. 6. 24.66   |          |
| 71·5 6 1·5   | ong.     |
| 71.5 6 1.5 3 No. Jou   | ab. com. |
| 64. 17 1 Jou   |          |
| 64. 17 1 Jou   | 0. 6.    |
|  | urnal    |
| 82.47 . 8.75 2.57 6.18 chr. acid Dit   | itto     |
| 74.5 .75 8.25 1.5 No.  | 0. 27    |
| 68 12. 16 2 Jou  | urnal    |
| 72.25 . 14.63 4.26 1.55 1.83 residue Lec   | eon. 11  |
| 60 9.25 1.75 24.25 zinc Tat  | b. com.  |
| 42.   .   .   5.   .   .   .   28. ditto ‡ Dit   |          |

titanium.

# With 17. sulph.



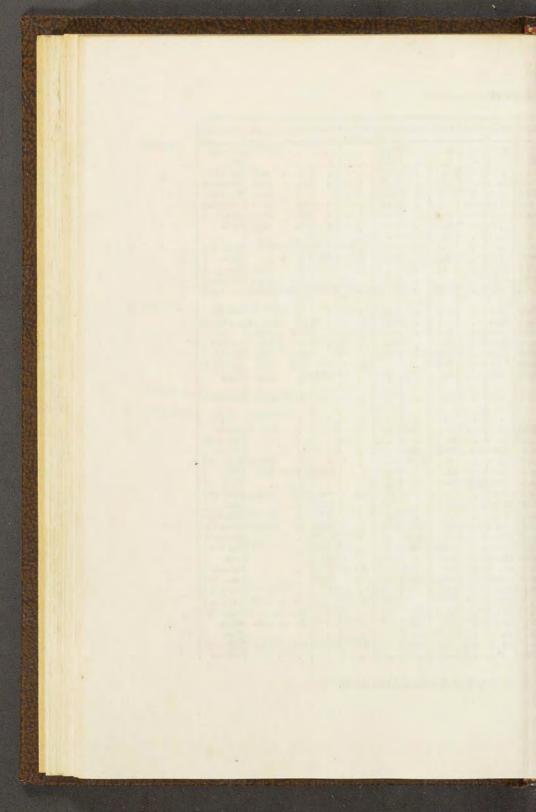
|          | 4               |                |              |        |           |       |
|----------|-----------------|----------------|--------------|--------|-----------|-------|
|          |                 | Trivial Name   | Locality     | Sp.gr. | Analyst.  | Silex |
| XXXV.    | 18 Sp. TOPAZ.   |                | Saxony       |        | Bergman   | 39.   |
|          |                 |                | Ditto        |        | Vauquelin | 31.   |
|          |                 |                | Ditto        | 3.54   | Klaproth  | 35.   |
|          |                 |                | Ditto        |        | Vauquelin | 29.   |
|          |                 |                | Brasil       | 3.54   | Klaproth  | 14.5  |
|          |                 |                | Ditto        | 1      | Vauquelin | 29.   |
|          |                 |                | Ditto        |        | Ditto     | 28.   |
|          |                 |                | Siberia      |        | Ditto     | 30.   |
|          |                 |                | Cairngoram   | 3.56   |           |       |
|          | 1 Appendix      | Pycnite        | Altenberg    |        | Bucholz   | 34.   |
|          | 22/2            | 2 3 00000      | Ditto        | 3.48   | Klaproth  | 43.   |
|          |                 |                |              |        | Vauquelin | 30.   |
|          |                 |                |              |        | Ditto     | 36.   |
|          | 2 Appendix      | Pyrophysallite | Finbo        | 3.54   | Hisinger  | 32.88 |
| XXXVI.   | 19 Sp. EMERALD. | Precious       | Peru         | 2.77   | Klaproth  | 66.25 |
|          | 1               |                | Ditto        |        | Vauquelin | 64.6  |
|          |                 |                | Ditto        |        | Klaproth  | 68.5  |
|          |                 | Beril          | Siberia      |        | Vauquelin | 68.   |
|          |                 |                | Nertschinsk. | 2.75   | Klaproth  | 66.45 |
|          |                 |                |              |        | Gmelin    | 54.75 |
|          |                 | Blue var.      | Siberia      |        | Schaub.   | 66.5  |
| XXXVII.  | 20 Sp. EUCLASE. |                | Brasil       | 3.06   | Vauquelin | 35.   |
| XXXVIII. | 21 Sp. GARNET.  |                |              | 4.     | Haüy      |       |
|          | a. Precious     |                | Syrian       | 4.08   | Klaproth  | 35.75 |
|          |                 |                | Ditto        |        | Vauquelin | 36.   |
|          | 1               | Pyrop          | Bohemia      | 3.71   | Klaproth  | 40.   |
|          |                 |                | Greenland    |        | Tromsdorf | 50.   |
|          |                 |                | Ditto        |        | Gruner    | 30.75 |
|          |                 |                | Ditto        | 3.52   | Klaproth  | 43.   |
|          |                 | Cinnamon st.   | Ceylon       |        | Lampad.   | 42.8  |
|          |                 |                | Ditto        | 3.62   | Klaproth  | 38.8  |
|          | b. Common       | Red            | Eredlitz     |        | Vauquelin | 52.   |
|          |                 | Brown          | Langbans.    | 3.84   | John      | 35.2  |
|          |                 | Amorphous      | Corsica      | 4.55   |           | 38.   |
|          | c. Black        | Melanite       | Frescati     | 3.73   | Klaproth  | 35.5  |
|          | -               |                | Ditto        |        | Vauquelin | 34.   |
|          |                 |                | Eredlitz     |        | Ditto     | 43.   |
|          |                 |                | Svapavara    |        | Hisinger  | 34.53 |
|          | d. Olive green  |                | Siberia      | 3.37   | Klaproth  | 14.   |
|          |                 |                | Saxony       |        | Weigleb   | 36.5  |
|          |                 | Aplome         | Riv. Lena    | 3.44   | Laugier   | 40.   |
|          |                 | Allochroïte    | Viroms       | 3.5    | Vauquelin | 35.   |
|          |                 |                | Ditto        |        | 14000     | 37.   |
|          | e. Granular     | Colophonite    | Arendahl     |        | CILLION   | 35.   |
|          |                 |                | Spessart     | 3.6    | Klaproth  | 35.   |
|          | f. Manganesian  |                | Spessart     | 3.6    | Kiaproth  | 00    |

<sup>†</sup> With 3.5 ckrome

<sup>‡</sup> With ·3 chrome.

| L   |        |              |      | _     |       |        |       |       |                      |        |                   |
|-----|--------|--------------|------|-------|-------|--------|-------|-------|----------------------|--------|-------------------|
| -   | Alum   | Lime         | Mag. | Iron  | Mang. | Alkali | Water | Loss  | Other ing            | red.   | Authority         |
| ł   | 16.    | 8.           |      | 6.    |       |        |       |       |                      |        | Journal           |
| ł   | 68.    |              |      |       |       |        |       | 1.    |                      | - 1    | Ditto             |
| п   | 59.    |              |      |       |       |        |       | 1.    | 5. F. a              |        | No. 140           |
| П   | 49.    |              |      |       |       |        |       | 2.    |                      |        | Thomson           |
| Н   | 47.5   |              |      | -5    |       |        |       |       |                      |        | No. 140           |
| H   | 50.    |              |      |       |       |        |       | 2.    | 1000                 |        | Thomson           |
| П   | 47.    |              |      | 4.    |       |        |       | 4.    |                      | 2000   | Ditto             |
| N   | 48.    |              |      | 2.    |       | 1      |       | 2.    |                      |        | Ditto             |
| П   |        |              |      |       |       |        |       | 100   |                      | LECO . | Citto             |
| ı   | 48.    |              |      |       |       |        |       |       |                      | tto    | Klap. 180         |
| Н   | 49.5   |              |      | 1.    |       | 1      | 1.    | 1.3   | 4. F. ac             |        | Ditto             |
|     | 60.    | 2.           |      |       |       | 1      | 1.    | 1.    |                      |        | Brong.            |
|     | 52.6   | 3.3          |      |       |       |        | 14    | 1.5   |                      |        | Thomson           |
|     | 53.25  | -88          | 1    | .88   |       | 1      |       | 11.36 |                      |        | An. Ch. 58        |
|     |        |              |      | 00    |       |        |       | 11.90 | 10 Ca                | icii.  | All Ch. So        |
| 423 | 31.25  |              | 1 -  | .5    |       | 1 2    |       |       |                      | ,      | No. 28            |
| P   | 14.    | 2.56         |      |       |       |        | 2.    |       | 13. glue             |        | An. Ch. 26        |
|     | 15.75  | -25          |      | 1.    | 1     |        |       |       | 12.5 glue            |        |                   |
| ı   | 15.    | 2.           |      | 1.    |       |        |       |       | 63                   |        | I amanal          |
| 453 | 16.75  |              |      | •6    |       |        |       |       | 14. gluc<br>15.5 dit |        | Journal<br>No. 98 |
|     | 24.41  |              |      | 1.5   | 1     |        | 2.    | 1.9   |                      |        | An. Ch. 44        |
| П   | 16-75  |              |      | 1.    |       |        | 4.    |       | 100                  | 300000 | Ditto             |
| П   |        | -            |      |       |       |        |       | 10    | 10. (11)             | 10     | Ditto             |
|     | 22.    |              |      | 3.    |       |        |       | -28   | 12. dit              | to .   | Journal 10        |
| I   |        |              |      |       |       |        |       |       |                      |        |                   |
|     | 27.25  |              |      | 00    | *     |        |       |       |                      | 1      |                   |
| 0   | 22.    | 3.           |      | 36.   | -25   |        |       |       |                      |        | No. 30            |
| ı   | 28.5   | 3.5          | 10   | 16.5  | ***   |        |       |       |                      |        | Tab. com.         |
|     | 28.    |              | 10-  | 6.    | *25   |        |       |       |                      |        | No. 29            |
|     | 30.5   | *            |      | 13.00 |       | *      |       | 6.    |                      |        | Klap. 193         |
| 0   | 15.5   | 7.           | 0.5  | 16.   | 1     | *      | 2.    | 2.75  | 11. di               |        | Ditto             |
| 4   | 8.6    | 1.75         | 8.5  | 29.5  | •5    |        |       |       |                      |        | Ditto             |
|     | 51.5   | 3.8          | *    | 3.    |       | 6. F   | 2.6   | 4.4   | 28.8 zii             |        | Ditto 194         |
|     | 50.    | 31.25        |      | 6.5   |       |        |       | 2.25  |                      | 15     | Ditto             |
|     | .2     | 24.7         |      | 17.   | 0.0   |        |       | 3.3   |                      |        | Tab. com.         |
| ľ   | 20.    | 1            |      | 26.   | 8.6   | 1.05 s |       | 2.25  | 2. su                |        | Leon. 12          |
|     | 6.     | 31.          |      | 10.   | 5.    |        |       | 1.    |                      |        | Thomson           |
|     | 6.4    | 32.5         |      | 24.25 | .4    |        | *     | 1.2   |                      |        | No. 199           |
|     | 16.    | 33.          |      | 25.5  | 15    |        |       | 1.1   |                      |        | Haüy              |
| Q   | 1.     | 20. c        |      | 16.   |       |        | 4.    | 1.    |                      |        | Journal           |
| 0   | 8.5    | 0 - 10 0     |      | 36.05 |       |        | *5    | 3.56  |                      |        | Leon. 11          |
|     |        | 33.5         |      | 12.   |       |        | .*    | 2.    |                      |        | No. 157           |
|     | 20.    | 30.8         |      | 28.7  |       |        | 4.    |       |                      | cid .  | An. Ch. 1         |
|     | 8.     | 14·5<br>30·5 |      | 14.   | 2.    |        |       | 5.    |                      |        | Ditto 71          |
|     | 5.     |              |      | 17.   | 3.5   |        | *     |       | 6. c. ac             |        | Aikin             |
|     | 15.    | 30.          |      | 18.5  | 6.25  |        |       |       |                      |        | Ditto             |
|     | 14.25  | 29.          | 6.5  | 7.5   | 4.75  |        | 1.    | .75   | 0.1 tita             |        | Tab. com.         |
|     | 1.5.50 |              |      | 14.   | 35.   | 1      |       |       |                      | 1      | No. 60.           |
|     |        |              |      |       |       |        |       |       |                      |        |                   |

§ With 2. Silex and Iron mixed.



|        |                    | Trivial Name                    | Locality            | Sp.gr. | Analyst               | Silex                  |
|--------|--------------------|---------------------------------|---------------------|--------|-----------------------|------------------------|
| XXXIX. | 22. Sp. LEUCITE.   | White garnet                    | Vesuvius<br>Albano  | 100    | Ditto                 | 53.75<br>54.23<br>54.5 |
|        |                    | ;                               | Pompeji             | :      | Ditto<br>Vauquelin    |                        |
| XL.    | 23. Sp. VESUVIAN.  | Idocrase<br>Wilonite            | Vesuvius<br>Siberia |        | Klaproth<br>Ditto     | 35·5<br>42.            |
| XLI.   | 24. Sp. MEIONITE.  |                                 | Somma               | 3.27   | Vauquelin             | 46.                    |
| XLII.  | 25. Se. FELSPAR.   |                                 |                     |        |                       |                        |
|        | a. Common          | Petunze                         |                     |        | Vauquelin             | 74.                    |
|        |                    |                                 | Finbo               |        | Hedenberg             | 72.75                  |
|        | 1                  |                                 | Carnatic §          | 2.64   | Chenevix              | 64.                    |
|        | 1                  |                                 | Piémont §           |        | Vauquelin             | 62.4                   |
|        |                    | In grains                       |                     |        | Chenevix              | 68·5<br>42·5           |
|        | 1 1 1 1 1          | Indianite                       | Carnatic            | 0.00   | Ditto                 |                        |
|        | b. Resplendent     | Adularia                        | D 1 01-             | 2.00   | Vauquelin<br>Klaproth | 68.                    |
|        | c. Opalescent      | Labradore sto.                  | Drachenfels         |        | Bindheim              | 96.5                   |
|        | t. oparescent      | Labradore sto.                  | Labradore           | 2.03   | Gerrard               | 62.                    |
|        | d. Green           | Amazon stone                    | Siberia             | 2.70   | Vauquelin             | 62.83                  |
|        | c. Blue            |                                 | Kreiglach           | 3.04   | Klaproth              | 14.                    |
|        | 1                  | Siderite                        | WerfenSalzba        | 10000  | Tromsdorf             | 10.                    |
|        | f. Compact         | Hornstone                       | Loraine             |        | Kirwan                | 72.                    |
|        |                    |                                 |                     |        | St. Memin             | 68.                    |
|        |                    | Gabronite                       | Norway              |        | John                  | 54.                    |
|        | g. Tough           | Jade de Sauss.                  | Switzerland         |        | Dausoure              | 14.                    |
|        |                    | Ditto                           |                     | 3.50   | Triaproti             | 49.                    |
|        |                    |                                 |                     |        | Hæpfner               | 47.<br>53.75           |
|        |                    | Nephrite                        | Oriental            | 2.95   | Saussure              | 50.5                   |
|        | 7. December 1      |                                 |                     |        | Kastner<br>Vauquelin  |                        |
|        | h. Decomposed      | Kaolin                          | (1) 3T 1            | 2.20   | Hassenf.              | 70.                    |
|        | 1                  | Feldsp. Broyé<br>Porcell, earth | St Yrieux           |        | Ditto                 | 61.                    |
|        |                    | orcen, earth                    | Ditto               |        | Vauquelin             | 55.                    |
|        |                    |                                 |                     |        | 1 augusti             | P                      |
| XLIII. | 26. Sr. SODALITE.  |                                 | Greenland           |        | Ekeberg               | 36.                    |
|        |                    |                                 | Ditto               |        | Thomson               | 38.52                  |
|        | La constant and    |                                 |                     |        |                       |                        |
| XLIV.  | 27. Sr. NATROLITE. |                                 | Hæn-Twiel           | 2.2    | Klaproth              | 18.                    |
| XLV.   | 28. Sr. SPODUMENE. | Triphane                        | Sweden              | 2.28   |                       | 64.4                   |
|        |                    |                                 |                     |        | Berzelius             | 63.4                   |
|        |                    |                                 |                     |        | Hisinger              | 00-1                   |
| XLVI.  | 29. Sp. AXINITE.   | m.                              | a. a                |        | Klaproth              | 52.7                   |
|        | were statisting.   | Thumerstone                     | St Christoph.       |        | Ditto                 | 50.5                   |
|        |                    |                                 |                     | 1      | Vanquelin             |                        |
|        |                    |                                 |                     | 1 40   |                       |                        |

S Accompanying the corundum of Carnatic and Piémont.

## COMPOUNDS.

| Alum   | Lime  | Mag. | Iron  | Mang | Alkali | Water  | Loss | Othe  | r ingred. | Authority   |
|--------|-------|------|-------|------|--------|--------|------|-------|-----------|-------------|
| 24-62  | -     | -    |       |      | 21. P  |        | -28  | -     |           | No. 32      |
| 22.    |       |      |       |      | 22. P  |        | 1.   |       |           | Ditto       |
| 23.5   |       | 1    |       |      | 19.5 P |        | 2.5  |       |           | Ditto       |
| 20.    | 2.    |      |       |      | 20. P  |        | 1.   | 1     |           | Thomson     |
|        | ~     |      |       |      |        |        |      | -     |           | z nomou     |
| 22.25  | 33.   |      | 7.5   | +25  |        |        | 1.5  |       |           | No. 31      |
| 16.25  | 34.   |      | 5.5   | -    |        |        | 2.25 |       |           | Ditto       |
|        |       |      |       |      |        |        |      |       |           |             |
| 49.    | 2.    |      | 1.    |      |        |        |      |       | 1         | Thomson     |
|        |       |      |       |      |        |        |      |       |           |             |
| 14.5   | 5.5   |      |       |      |        |        | 6.   |       |           | Tab. com-   |
| 13.    | 9.5   |      | 1.    |      |        | -25    | 3.5  |       |           | Leon. 11    |
| 24.    | 6.25  |      | 2.    |      |        |        | 3.75 |       |           | P. Trans.   |
| 17.    | 1.2   |      | 4.    |      |        | 15.4 ± |      |       |           | Journal     |
| 20.5   | 7.    |      | 1.5   |      |        |        | 2.5  | 1     |           | P. Trans.   |
| 37.5   | 15.   |      | 3.    |      |        |        |      |       |           | Bournon     |
| 20.    | 2.    |      |       |      | 14. P  |        |      | -     |           | Tab. com.   |
| 15.    |       |      | .5    |      | 14.5 P |        | 2.   |       |           | No. 171     |
| 13.6   | 12.5  |      | 3.    |      |        |        | 3.9  | -7    | copper    | Thomson     |
| 30.    |       |      | 4.    |      |        | 4.     |      |       | 11        | Ditto       |
| 17.02  | 3.    |      |       |      | 16. P  |        | -15  |       |           | An. Ch. 30  |
| 71.    | 3.    | 5.   | .75   |      |        | 5.     |      | -25   | chrome    | No. 153     |
| 66.    | 2.    | 18.  | 2.5   |      |        |        | 1.5  |       |           | An. Ch. 62  |
| 22.    | 6.    |      |       |      |        |        |      |       |           | Gallizin    |
| 9.     | 1.    |      | 4.    |      | 5.55 P | 2.25   | .2   |       |           | Tab. com.   |
| 24.    |       | 1.5  | 1.25  |      | 17.25+ | 2.     |      |       |           | Annals      |
| 30.    | 4.    |      | 12.25 | *05  | *25 P  |        | 3.2  | 6.    | soda      | Ditto       |
| 24.    | 10.5  | 3.75 | 6.5   |      |        |        |      | 5.5   | ditto     | No. 152     |
| 4.     | 2.    | 38.  | 9.    |      |        |        |      |       |           | Ditto       |
| 1.5    | 12.76 |      | 5.    | 2.   | 8.5 P  | 2.25   | 3.5  | 10.75 | soda      | Tab. com.   |
| 10.    |       | 31.  | 5.5   |      |        | 2.75   | 2.   | .05   | chrome    | Ditto       |
| 15.86  | 1.92  |      |       |      |        | 6.73   | 4.34 |       |           | Ditto       |
| 12.    |       | 9.   |       |      |        |        |      | 8.    | baryte    | An. Ch. 14  |
| 19.    | 12.   |      |       |      |        |        |      | 7.    | ditto     | Ditto       |
| 27.    | 2.    |      | 5.    |      |        | 14.    |      |       |           | Thomson     |
| 32.    |       |      | .25   |      | 25. s  |        |      | 6.75  | m. acid   | Letter      |
| 27.48  | 2.70  |      |       |      |        |        | 1.7  | 3.    | ditto     | Ed. Trans.  |
| VI.40  | 2.10  |      | 1.    |      | 23.5 s | 5.1    | 1-1  | u.    | cityto    | Liui x tuno |
| 24.25  |       |      | 1.75  |      | 16.5 s | 9.     |      |       |           | No. 179     |
| 24.4   | 3.    |      | 2.2   |      | 5. P   |        | 1.   |       |           | Tab. com.   |
| 27.    | •63   |      | 3.    |      |        |        | 1.34 | •53   | vol.mat.  | Leon. 12    |
| 29.4   | .75   |      | 3.    |      |        |        | 2.92 | •53   | ditto     | Ditto       |
| 25.6   | 9.4   |      | 9.6   |      |        |        | 2.7  |       |           | No. 43      |
|        | ar Ir |      | 00    |      |        |        | ~ '  |       |           | No. 174     |
| 12 - 1 | 17.   |      | 9.5   | 5.25 | ·25 P  |        |      |       |           | NO. 11+     |

<sup>+</sup> Potash and soda.

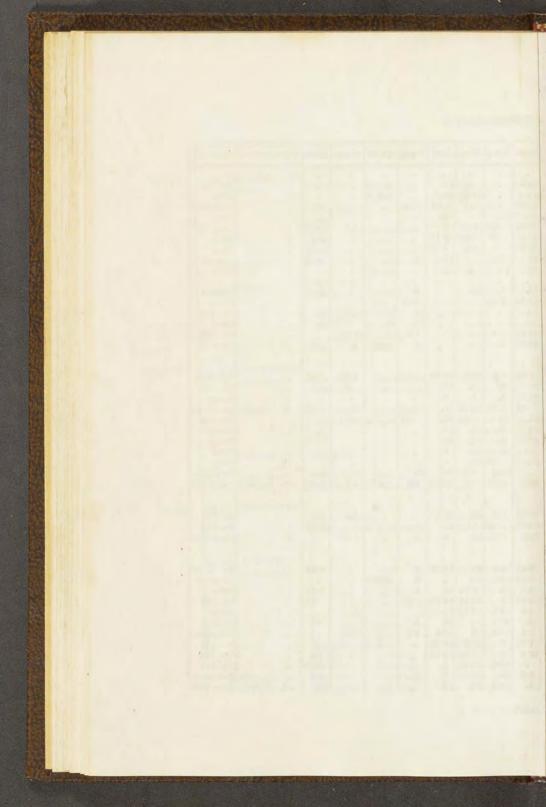
<sup>#</sup> Water and perhaps potash.

|           |                                     | Trivial Name   | Locality  | Sp.gr.                              | Analyst.   | Silex   |
|-----------|-------------------------------------|--|---|-------------------------------------|--|---|
| XLVII.    | 30 Sp. TOUR MALINE.<br>1. Common    | Com. schorl  | Eibenstock<br>Spessart  |                                     | Ditto<br>Weigleb   | 36·75<br>36·5<br>33·35<br>38.                               |
|           | 2. Green                            | Ditto Ditto Ditto Ditte                                    | St Gothard<br>Ditto<br>Tyrol<br>Ceylon                                    |                                     | Gerhard<br>Bucholz<br>Ditto<br>Ditto<br>Vauquelin  | 36·5<br>35.<br>35·5   |
|           | 3. Blue<br>4. Red                   | Indicolite<br>Rubellite<br>Transparent                     |   | 2.87                                | Herman<br>Vauquelin<br>Ditto   | 47.<br>47.27<br>42.   |
| WI 377. V |                                     | Opake<br>Stangenspath<br>Ditto                             | Ditto<br>Rosena<br>Ditto  | 3.02                                | Ditto<br>Klaproth<br>Bucholz   | 45.<br>43·4<br>39·25  |
| XLVIII.   | 31. Sp. AMPHIBOLE.  a. Cristallised | Hornblend<br>Basaltic ditto<br>Actinolite<br>Com.hornblen. | Cap de Gate<br>Fuldischen<br>Zillerthall<br>Nora                          | 3·15<br>3·33                        | Bergman<br>Laugier<br>Klaproth<br>Kirwan   | 42.<br>47.<br>58.<br>50.<br>42.<br>37.<br>37.               |
|           | b. Radiated                         | Actinolite  Amianthoïde Absestous act.                     | Oisans<br>Cornwall  | 3·45<br>2·91                        | Herman<br>Bergman<br>Ditto<br>Vauquelin<br>Thomson   | 72.<br>54.  |
| XLIX.     | 32.Sp. HYPERSTENE                   | Labrad, hornb.<br>Anthophyllite                            |   | 3.39                                | Klaproth<br>John<br>Ditto  | 54·25<br>62·68<br>56.                                       |
| L.        | 33. Sp. AUGITE. a. Cristallised     | Foliated<br>Slaggy   | Etna Ditto Frascati Rhineberg Ditto green Arendahl Ditto Carinthia Sicily | 3·40<br>3·33<br>3·28<br>3·6<br>3·08 | Vauquelin<br>Tromsdorf<br>Klaproth<br>Ditto<br>Ditto<br>Roux<br>Simon<br>Klaproth<br>Ditto | 54.<br>48.<br>52.<br>55.<br>45.<br>52.<br>52.<br>52.<br>55. |
|           | b. Granular                         | Mussite<br>Cocolite  | Piémont<br>Arendahl   | 1                                   | Laugier<br>Vauquelin   | 57.   |
|           | c. Compact                          | Lherzolite   | Pyrenees  | 1.                                  | Vogel  | 45.   |

+ With 3.84 Tunst

| _     |      |       |                  |       |        |       |       |               |               |
|-------|------|-------|------------------|-------|--------|-------|-------|---------------|---------------|
| Alum  | Lime | Mag.  | Iron             | Mang. | Ałkali | Water | Loss  | Other ingred. | Authority     |
|       |      |       |                  |       |        |       |       |               |               |
| 31.5  |      | -25   | 21.              | 10    | 6. P   |       |       |               | No. 195       |
| 31.   |      | 1.25  | 23.5             |       | 5.5 P  |       |       |               | Ditto         |
| 48.83 |      |       | 21.41            | 3.33  |        |       | 3.1   |               | Thomson       |
| 20.   | 20.  |       | 19.              |       |        |       | 3.    |               | Ditto         |
| 33.75 | .25  | 6.08  | 8.               | -     |        | 1.5   | 13.92 |               | Leon. 13      |
| 31.5  | +06  | 5.94  | 6.12             |       |        | 2.    | 19.25 |               | Ditto         |
| 33.25 | .5   | 9.3   | 5.10             |       |        |       | 16.35 |               | Ditto         |
| 39.   | 3.81 |       | 12.5             | 2.    |        |       | 2.66  |               | Journal       |
| 39.   | 15.  |       | 9.               |       |        |       |       |               | Ditto         |
|       |      |       |                  |       |        |       |       |               |               |
| 28.   | 7.   | 10.   |                  | 2.    |        |       | 6.    |               | Gallizin      |
| 45.46 | 1.78 |       |                  | 5.49  |        |       |       |               | Lucas         |
| 40.   |      |       |                  | 7.    | 10. 8  |       | 1.    |               | No. 170       |
| 30.   |      |       |                  | 13.   | 10. s  |       | 2.    |               | Ditto         |
| 42.25 | -1   |       |                  | 1.5   | 9. 8   |       |       |               | No. 183       |
| 15.25 | 1.   | 1     |                  | 2.    | 7.22 8 |       | 1.2   |               | Leon 10       |
| 10 20 | 1.   |       | *                | ~.    | 1.22 8 | 4.    | 1.0   |               |               |
|       |      |       |                  |       |        |       |       |               |               |
| 7.69  | 9.8  | 10.9  | 22.69            | 1.15  |        | 1.92  | 3.85  |               | Tab. com.     |
| 26.   | 8.   | 2.    | 15.              |       |        | -5    | 1.5   |               | No. 196       |
| 27.   | 4.   | 1.    | 9.               |       |        |       | 1.    |               | Brong.        |
| -75   | 9.75 | 19-25 | 11.              |       |        | 3.    | 1.25  | 5. chrom.     | An. ch. 66    |
| 12.   | 11.  | 2.25  |                  | 35    |        | .75   |       | or chrom.     | No. 196       |
| 22.   |      | 16. c |                  | .30   | - P    |       | 3.    |               | Kirwan        |
| 27    | 5.   | 3.    | 35.              |       |        |       | 1000  |               | Thury         |
| 2.    | 6.   | 12.   | 7.               |       | *      |       |       |               | Ditto         |
| 27.   | •33  | 20.   | 1.               |       |        |       |       |               | Ditto         |
| ~1.   | 11.3 |       | 0.00             | 10    |        |       | 4.4   | •             | Tab. com.     |
| 28.2  | 1.05 | 7.3   | 20.              | 10.   |        | 1.7   | 2.06  | ·1 copper-    | An. ch.212    |
| 20.2  | 1.00 | •6    | 17-15            | 7.2   | 3.8    | 1.7   | 2.00  | T cobbert     | Till Clive I. |
|       |      |       |                  |       |        |       |       |               |               |
| 2.25  | 1.5  | 14.   | 24.5             |       |        | 1.    | 2.5   |               | No. 177       |
| 13.33 | 3.33 | 4.    | 12.              | 3.25  |        | 1.    | 1.43  |               | No. 215       |
| 13.3  |      |       | 6.               | 3.    |        | 1.43  |       |               | Leon.1812     |
| 100   | 0 00 | T.T.  | 0.               | 0.    |        | 1.40  |       | ,             |               |
|       |      |       |                  |       |        |       |       |               |               |
| 3.83  | 13.2 | 10.   | 14.66            | 2.    |        |       | 4.49  |               | An. ch. 30    |
|       | 16.2 | 14.   | 7.               | 2.    | 5-18 P |       |       |               | Thomson       |
| 5.    | 24.  | 8.75  | 12.              | i.    | _ P    |       | 1.25  |               | Ditto         |
| 2000  | 14.  | 12.75 | 12.75            | -25   |        |       | -25   |               | No. 197       |
| 5.5   | 12.5 |       | 11.              | .23   | * P    | 1.    |       |               | Ditto         |
| 3.    | 30.5 | 1     | 16.              | 5.    |        | 1.    | .5    |               | Journal       |
| 3.5   | 25.5 | 7.    | 10.5             |       |        | .5    |       |               | Tab. com.     |
| 7.25  |      | 12.5  | Part of the last | 2.25  | -5 P   | 1000  |       |               | No. 142       |
| 16.5  | 10.  |       | 16.35            |       | 1 2 2  |       | 1.5   |               | No. 143       |
|       | 16.5 |       | 13.75            |       |        |       | 2.25  |               | No. 177       |
| 1.5   | 24.  | 18.25 | 6.               | 9     |        |       | 4.5   | 1             | Tab. com.     |
| 1.    |      | 10.   | 7.               | 3.    |        |       | 6.    | 5 chrom.      | Jour. 199     |
| 1 1.  | 19.5 | 16.   | 12.              | *     |        | 1 1   | 0.    | o carona      | hours Top     |
|       |      |       |                  |       |        |       |       |               |               |

ic acid.



|       |                     | Trivial Name                             | Locality                         | Sp.gr              | Analyst                         | Silex               |
|-------|---------------------|--|----------------------------------|--------------------|---------------------------------|---------------------|
| LI.   | 34. Sp. JENITE.     | Yénite                                   | Elba<br>Ditto                    | 4.06               | Vauquelin<br>Descostils         |                     |
| LII.  | 35. Sp. GADOLINITE. | Ytterbite                                | Ytterby                          | 1.04               | Ekeberg<br>Ditto                | 23.<br>25.<br>25.5  |
|       |                     | Kohlenblende                             | Bornholm                         | 4.23               | Vauquelin<br>Klaproth<br>Ditto  | 21·25<br>22.        |
| LIII. | 36. Sp. SAHLITE.    | Malakolith                               | Sweden<br>Langbanshytt.          | 3·23<br>2·29       | Vauquelin<br>Hisinger           | 53.<br>54·18        |
| LIV.  | 37. Sp. STAUROTIDE. | Grenatite<br>Ditto<br>Ditto brown        | Morbihan<br>St. Gothard<br>Ditto | 3.28               | Vauquelin<br>Ditto<br>Klaproth  | 33,<br>30·59<br>27. |
| 1.V.  | 38. Sp. EPIDOTE.    | Ditto black                              | Ditto                            | 3.51               | Ditto                           | 37.5                |
|       | Cristallised        | Arendalit<br>Pistazit<br>Thallit         | Norway<br>Oisans<br>Siberia      |                    | Vauquelin<br>Descostils<br>John | 37.<br>37.<br>39.   |
|       | Prismatic<br>V. V.  |  | Carnatic<br>Ditto                |                    | Chenevix<br>Ditto               | 45.<br>40.<br>42.   |
|       | Yellow<br>Violet    | Ditto<br>Ditto<br>Zoïsit                 | Ditto<br>Piémont<br>Carinthia    | 3·31<br>3·26       | Ditto<br>Cordier<br>Klaproth    | 33·5<br>49.<br>37·5 |
|       | Granular            | Friable<br>Skorza                        | Ditto<br>Ditto<br>Transylvania   | 3·3<br>3·13<br>2·5 |                                 | 44.<br>43.<br>88.25 |
|       |                     | Foliated                                 | Spessart<br>Bareuth<br>Valais    | 3.31               | Laugier                         | 40·25<br>37.        |
| LVI.  |                     | Smaragdite<br>Körn, strahlite<br>Bronzit | Corsica<br>Teinach<br>Kraubat    | 3.25               | Vauquelin<br>Klaproth<br>Ditto  | 60.                 |
|       |                     | Ditto<br>Ditto<br>Dilto                  | Hartz<br>Basta<br>Ditto          |                    | Drapier<br>Gmelin<br>Heyer      | 41.<br>43·7<br>52.  |
| LVII. | 40. Sp. WERNERITE.  | +  | Lacelle                          |                    | Vauquelin                       | 41.66               |
|       |                     | Green<br>White<br>Greenish grey          | Arandahl                         |                    | Ditto                           | 51·5<br>60·25       |
|       | Prismatic           | Scapolite<br>Vitreous                    | :                                | 3.71               | Abildgaard<br>Laugier           | 48.<br>45.<br>53.   |
|       | 9                   | Sodaït                                   | Sweden<br>Nerike                 | .                  | Berzelius<br>Ekeberg            | 61.<br>46.          |
|       | I                   | Cettstein Elacolith Lythrodes            | Norway<br>Fk. Schwerin           | 261                | Vauquelin<br>Klaproth<br>John   | 46.5                |

<sup>+</sup> Vauquelin does not name this stone, but thinks it may belong to tale, because it was tion analogous, it is more probably a variety of bronzite.

|        |       |       |              | -     | -      |       | -     |               |            |
|--------|-------|-------|--------------|-------|--------|-------|-------|---------------|------------|
| Alum   | Lime  | Mag.  | Iron         | Mang. | Alkali | Water | Loss  | Other ingred. | Authority  |
|        | 12.5  |       | 57.5         |       |        |       |       |               | Tab. com.  |
| •6     | 12.   |       | 55.          | 3.    |        |       | 1.4   |               | Ditto      |
| -      |       |       | 16.5         |       |        |       | .5    | 55.5 yttria t | Letter     |
| 4.5    |       |       | 18.          |       |        |       |       | 17.5 ditto    | Tab. com.  |
|        | 2.    |       | 25.          | 2.    |        | 14    | 10.5+ | 35. ditto     | An. ch. 36 |
| .5     |       |       | 17.5         |       |        | .5    |       | 59.75 ditto   | No. 76     |
|        |       |       | 16.5         | *     |        | .5    |       | 60. ditto     | No. 200    |
| 3.     | 20.   | 19.   |              | 4.    |        |       | 1.    |               | Tab. com   |
|        | 22.72 | 17.81 | 2.18         | 1.45  |        |       | 1.2   |               | Leon. 12   |
| 44.    | 100   | 2.01  |              | -     |        |       | 5.16  |               | Journal    |
| 47.06  | 3.84  |       | 13.          | 1.    |        |       | 4.05  |               | An. ch. 30 |
| 52.25  | 3.    |       | 15·3<br>18·5 | *25   |        |       |       |               | No. 182    |
| 41.    |       |       | 200          |       |        |       |       |               | Ditto      |
| +1.    |       | .5    | 18-25        | •5    |        |       | -     |               | Ditto      |
| 21.    | 15.   |       | 24.          | 1.5   | 1+     |       | 1.5   |               | Tab. com.  |
| 27.    | 14.   |       | 17.          | 1.5   |        |       | 3.5   |               | Ditto      |
| 20.    | 15.   |       | 19.5         | 1.5   |        | . /   |       |               | Leon. 12   |
| 28.    | 15.   |       | 11.          |       |        |       | 1.    |               | P. Trans.  |
| 25.    | 21.5  |       | 11.5         |       |        |       | 2.    |               | Ditto      |
| 25.5   | 16.   |       | 14.          |       |        |       | 2.5   |               | Ditto      |
| 15.    | 14.5  |       | 19.5         | 12.   |        |       | 5.5   |               | Journal    |
| 29.    | 21.   | i     | 3            | Tie.  |        |       |       |               | No. 141    |
| 29.5   | 17.5  |       | 4-5          |       |        |       |       |               | Ditto      |
| 32.    | 20.   |       | 2.5          |       |        |       |       |               | No. 178    |
| 21.    | 14.   |       | 16.5         | •25   |        |       | 2.5   |               | No. 107    |
| 1.     | 1.24  |       | 7.           |       |        |       | 5.    |               | No. 189    |
| 30.25  | 22.5  |       | 4.5          | *     |        |       | 2.    |               | Leon. 10   |
| 26.6   | 20.   | 1     | 13.          | *6    |        | 1.8   | 1.    |               | Ditto      |
| 11.    | 13.   |       |              | 0     |        | 10000 |       | 7.5 chrom. §  | Thurs 58   |
|        | 1000  | 6.    | 55.          |       |        | 4.5   |       | 1. ditto      | Leon 13    |
| 3.25   | 15.5  | 18.5  | 4.25         | *     |        | *_    | 1.5   | 1. ditto      | No. 176    |
|        | -     | 27.5  | 10.5         |       |        | .5    | 2.    |               | Jour. 16   |
| 3.     | 1.    | 29.   | 14.          |       |        | 10.   | 1000  |               | Thury      |
| 17.9   |       | 11.3  | 23.7         |       |        |       |       |               | Broch.     |
| 23.33  | 7.    | 6.    | 27.5         |       |        |       | 4.5   | 4.5 charcoal  | An. ch. 49 |
| 1.33   | 1.01  | 36.34 | 10.          |       |        |       | 4.9   | 4.9 Charcoar  | in the 10  |
| 34.    | 16.5  |       | 8.           | 1.5   |        |       |       |               | Jour. 22   |
| 33.    | 10.45 |       | 3.5          | 1.45  |        |       |       |               | Ditto      |
| 30.    | 10.40 |       | -            |       | 9      | 2.85  |       |               | Leon. 12   |
| 30.    | 14.   |       | 3.           | 2.45  | 2.     | 2.00  | 5.    |               | Thomson    |
| 33.    | 17.6  |       | 1.           | .5    | 1.5 s  | 100   | 1.4   | 5 potash      | Tab. com.  |
| 15.    | 13.25 | *     |              |       | 3.5 s  |       | 1.75  | Potton        | Ditto      |
| 25.75  | 3.    | 7.    | 2.           | 4.5   | 2:0 S  |       | 1.    |               | Leon 11    |
| 28.25  | 13.5  | -75   | 1.5          | *     | 5.25 s | 3.25  | 3.5   |               | Ditto      |
| 34.    | 13.5  |       |              |       | 16.5 s | 3.20  | -     |               | Aikin      |
| 30.25  | -75   |       | 4.           |       | 18.    | 2.    | 1.5   |               | No. 201    |
| 37.36  |       | 1:    |              | 1     | 8.     | 6.    | 1.0   |               | Annals     |
| 191.20 | 2.75  |       | 11.          | 1 "   | 0.     | 0.    |       |               |            |

as accompanied with serpentine; being spathose and lamellated, and the composi-4.5 glucine. § With 1.5 copper.

|         |                    | Trivial Name                 | Locality             | Sp.gr. | Analyst              | Silex      |
|---------|--------------------|------------------------------|----------------------|--------|----------------------|------------|
| LVIII.  | 41. Sp. LAZULITE.  | Lapis Lazuli<br>Ultra marine | Oriental<br>Prepared | 3:36   | Klaproth<br>Désormes | 46<br>35·8 |
|         |                    | LasulitdeWer.                |                      |        |                      |            |
| LIX.    | 42. Sp. MESOTYPE.  | Cristallised                 | Auvergne             |        | Smithson             | 49.        |
|         |                    | Radiated                     | Faroe                | 2.08   | Pelletier            | 50.        |
|         |                    | Acicular                     | Ditto                |        | Meyer                | 41.        |
|         |                    |                              | 4.                   |        | Bergman              | 60.        |
|         | -                  |                              |                      |        | Klaproth             | 14.        |
|         | Farinaceous        |                              | Ditto                |        | Vauquelin            | 50.54      |
|         |                    | Ditto                        | Fahlun               |        | Hisinger             | 60.        |
|         | Brick coloured     | Edelite                      | Edelfors             | 2.51   | Bergman              | 60.        |
| LX.     | 43. Sp. LAUMONITE. | Efflorescent z.              | Huelgoet             | 2.23   | Vogel                | 49.        |
| LXI.    | 44.Sp. APOPHYLLITE | Fish eye stone               |                      | 2.46   | Vauquelin            | 51.        |
|         |                    |                              |                      |        | Rose                 | 55.        |
|         |                    |                              | 5                    |        | Ditto                | 52.        |
| LXII.   | 45. Sp. STILBITE.  | Foliated zeol.               | Faroe                | 9.50   | Vauquelin            | 52.        |
|         | Orange coloured    |                              | *                    |        |                      |            |
| LXIII.  | 46. Sp. CHABASIE.  | Cubic zeolite                | Faroe                | 2.71   | Ditto                | 43.33      |
| * ***** | 47. Sp. ANALCIME.  |                              |                      | 2.     | Haüy                 |            |
| LXIV.   |                    | Cubezit                      | Viscentin            |        | Ditto                | 58.        |
|         |                    | Sarcolite                    | Ditto                |        | Ditto                | 50.        |
|         |                    | Ditto                        | Castel               |        | Ditto                | 50.        |
| LXV.    | 48. Sp. PREHNITE.  | Cristallised                 | Dauphiné             | 2.60   | Hassenfr.            | 50.        |
|         |                    |                              | Cape                 |        | Klaproth             | 43.8       |
|         |                    |                              | Fassa                |        | Ditto                | 42.87      |
|         |                    |                              | Ratschinkes          | 2.92   | Ditto                | 43.        |
|         |                    | Radiated                     | Reichenbach          |        | Laugier              |            |
|         |                    | Koupholite                   | Barêge               | 2.69   | Vauquelin            | 40.        |
| LXVI.   | 49. Sp. WAVELLITE. |                              | Barnstaple           |        | Klaproth             | 4.5        |
|         |                    |                              | South America        |        | Ditto                | 20         |
|         |                    |                              | St. Austle           | 2.22   | Davy                 | 6.12       |
|         |                    |                              | Ditto                |        | Gregor               | 10000      |
|         |                    | Diaspore                     |                      | 3.4    | Vauquelin            | 1          |
|         |                    | Earthy ‡                     | Freyberg             |        | John                 |            |
| LXVII.  | 50. Sp. SOMMITE.   | Nepheline                    | Monte Somma          | 3.27   | Vauquelin            | 46.        |
| LXVIII. | 51. Sp. HARMOTOME. | Cross stone                  | Andreasberg          | 2.35   | Heyer                | 44.        |
|         |                    |                              | Ditto                | 2.30   | Klaproth             | 49.        |
|         |                    |                              | Oberstein            | 2.33   | Tassaert             | 47.5       |
|         |                    |                              | ,                    |        |                      |            |

<sup>+</sup> With 10. c. acid.

<sup>#</sup> This substance is descr

| Alum   Lime   Mag.   Iron   Mang   Alkali   Water   Loss   Other ingred.   Authority  |        |       |      |   |      |        |   |   |               |  |
|---|--------|-------|------|---|------|--------|---|---|---------------|--|
| 34-8  | Alum   | Lime  | Mag. | Iron                                    | Mang | Alkali | Water                                   | Loss  | Other ingred. | Authority  |
| 34-8  | 14.5   | 17.5  |      | 3.                                      |      |        | 2.                                      | 3.  | 4. s. acid+   | No. 10   |
| 27.   | 34.8   | 3.1 c |      |   |      | 23.2 8 |   |   |               |  |
| 27.   |        |       |      |   |      |        |   |   |               |  |
| 20. 8. 1.1  |        |       |      |   |      |        |   |   |               |  |
| 31.   | (2)7.7 |       |      |   |      | 17. s  | 9.5                                     |   |               | Nicholson  |
| 18.       16.       30.       8.       5.       2.       10.       1.       Thury 37 Ditto       Tab. com. Tab. com. Tab. com. 12         156       8.       18.       118.       11.6       1.       11.6       1. <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>22.</td><td></td><td></td><td>Tab. com.</td></t<> |        |       |      |   |      |        | 22.                                     |   |               | Tab. com.  |
| 30. 8. 5. 5. 1. 2. 10. 11. 11. 11. 12. 12. 12. 12. 13. 12. 12. 14. 15. 12. 12. 14. 15. 15. 15. 15. 15. 15. 15. 15. 15. 15   |        |       |      |   |      |        | 16.                                     | 1.  |               |  |
| 29.3   9.46   |        |       |      |   |      |        |   |   |               |  |
| 15-6       8.       1.8       1.8       1.16       1.7       2.5       2.5       2.6       2.25       2.75   |        |       |      | 5.                                      |      |        |   |   |               |  |
| 20. 16  | 12 2 2 |       |      |   |      |        |   | 1.  |               |  |
| 22. 9   |        | 10.70 |      | 1.8                                     |      |        |   |   |               | Leon. 12   |
| 28.   | 20.    | 10.   | *    |   |      |        | 4.                                      |   |               |  |
| 25.   24.5   .   .   .   .   .   .   .   .   .  | 22.    | 9.    |      |   |      |        | 17.5                                    |   | 2.5 c. acid   | Leon. 11   |
| 25.   24.5   .   .   .   .   .   .   .   .   .  |        | 28.   |      |   | 3    | 4. p   | 17                                      |   |               | Tab. com   |
| 17.5   9.   .   .   .   .   .   .   .   .   |        |       |      |   |      |        |   | 9.75  |               |  |
| 17.5 9  |        | 24.5  |      |   |      |        |   | N. S. C. S. |               |  |
| 22-66 2.24  |        |       |      |   |      |        |   |   |               |  |
| 22-66   | 17.5   | 9.    |      |   |      |        | 18.5                                    | 3.  |               | Tab. com.  |
| 18. 2   |        |       |      |   |      |        |   |   |               |  |
| 18. 2   | 20.00  |       |      |   |      |        |   |   |               |  |
| 18.       2.       .       .       10.       s       8.5       3.5       .       Tab. com. Ditto         20.       4.5       .       .       .       4.25       s       21.       .       .       Ditto         20.4       23.3       .       5.66       .       .       .       .       .       Ditto         20.4       23.3       .       5.66       .       .       .       .       .       Ditto         21.5       26.5       3.          | 55.66  | 2.24  |      |   |      | 9.34 s | 21.                                     | *33   | * potash      | Tab. com.  |
| 18.       2.       .       .       10.       s       8.5       3.5       .       Tab. com. Ditto         20.       4.5       .       .       .       4.25       s       21.       .       .       Ditto         20.4       23.3       .       5.66       .       .       .       .       .       Ditto         20.4       23.3       .       5.66       .       .       .       .       .       Ditto         21.5       26.5       3.          | 1      |       |      |   |      |        |   |   |               |  |
| 20.   | 10     |       |      |   |      |        |   |   | 4             |  |
| 20. 4·25  |        | 10000 |      |   |      |        |   | 3.5   |               |  |
| 204 23·3 ·5 4·9 · · · · · · · · · · · · Ditto An. Ch. 75 24· 23. · · · · · · · · · · · · · · · · · Ditto Ditto An. Ch. 75 24· 23. · · · · · · · · · · · · · · · · · · ·   | 1000   | -     |      |   |      |        |   |   |               |  |
| 30·88 18·33 . 5·66 . 1·83   | 20.    | 4.25  |      |   |      | 4.25 s | 20.                                     | 1.5   |               | Ditto  |
| 30·88 18·33 . 5·66 . 1·83   | 20.4   | 90.0  |      |   |      |        |   |   |               | Dive   |
| 21.5 26.5   |        |       | .9   | -                                       |      |        |   |   |               |  |
| 23.25 26. 2. 2. 25  | 21.5   |       |      | 100000000000000000000000000000000000000 | .0.  |        |   | 1.00  |               |  |
| 28.5 20.4 23.   |        |       | -    |   |      |        |   |   |               | The second secon |
| 24. 23 4  |        |       | *    |   | -23  | 75.    |   |   | *             | the second second second   |
| 71.5  | - 100  | 0000  |      |   |      | 10 8   | 100.0                                   |   |               | TOP OF THE PERSON NAMED IN   |
| 68. 70. 1.4 . 1   |        | -01   |      | T.                                      |      | *      | 1.                                      |   |               | o da i da  |
| 68. 70. 1.4   | 71.5   |       |      | +5                                      |      |        | 98.                                     |   |               | No. 187  |
| 70. 1-4   |        |       |      |   |      |        |   |   |               | The second secon |
| 50·7 80   | 70.    | 1.4   |      |   |      |        | - 10 Maria                              | 2.4   | * r. acid     |  |
| 80. 81.75 4. 83   | 50.7   | -37   |      | •19                                     |      |        | T. (*)                                  | 3.87  |               | Thomson  |
| 49. 2 1   | 80.    |       |      | 3.                                      |      |        | 000000000000000000000000000000000000000 |   |               | An. Ch. 42   |
| 20  | 81.75  | 4.    | *83  | 100                                     |      | .5 P   | 100000000000000000000000000000000000000 |   |               | Annals 21  |
| 16 15 18. ditto No. 87  | 49.    | 2.    |      | 1.                                      |      |        |   | 2.  |               | Tab com.   |
| 16 15 18. ditto No. 37  | 20.    |       |      |   |      |        |   | 12.   | 24. baryte    | An. Ch. 6  |
| 10 )  | 16.    |       |      |   |      |        | 15.                                     |   |               |  |
|   | 19.5   |       |      |   |      |        | 10 C C 10 C C C C C C C C C C C C C C C | 3.5   |               | Tab. com.  |

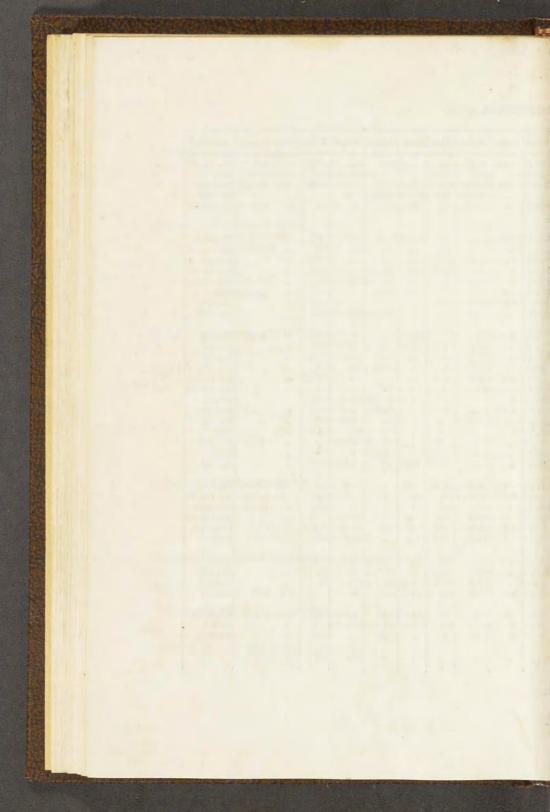
bed by John as the white earthy talc of Freyberg.

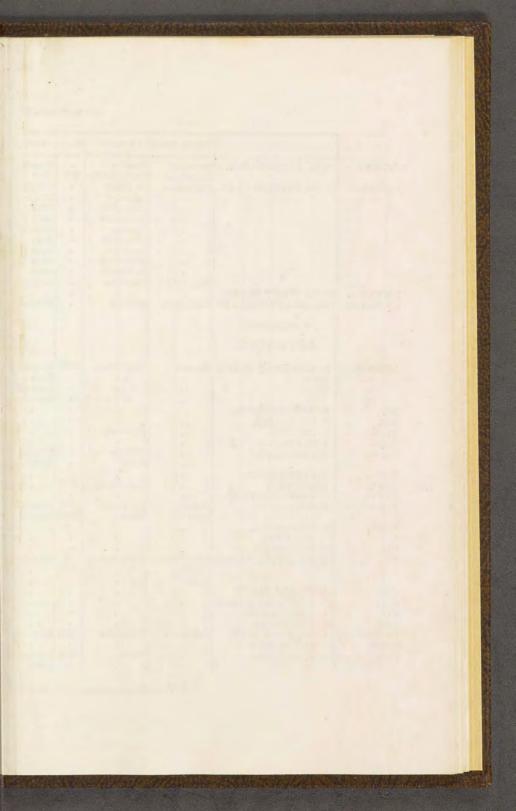
|                |                      | Trivial Name   | Locality       | Sp.gr.    | Analyst                | Silex        |
|----------------|----------------------|--|----------------|-----------|------------------------|--------------|
| v viv          | 52. Sp. PERIDOT.     | Chrysolite   | Levant         | 3.34      | Klaproth               | 39.          |
| TXIX'          |                      | Of commerce  |                | 3.28      | Vauquelin              | 38.          |
|                | 073044               |  |                |           | Chenevix               | 39.          |
|                | Granular             | Olivin   | Unkel          | 3.26      | Klaproth               | 50.<br>52.   |
|                |                      | Ditto decomp.  |                |           | Ditto                  | 54.          |
|                |                      |  | Siberian iron  | 3.26      | Howard                 |              |
| LXX            | 53. Sp. LEPIDOLITE.  | Lilalite   | Rosena         | 2.81      | Klaproth               | 54·5<br>54·5 |
| 1122.22        | 00.01                |  |                |           |                        |              |
|                |                      | 4  |                |           | Vauquelin<br>Fromsdorf | 59.          |
|                |                      | White  |                |           | John                   | 61.6         |
|                |                      |  | Utön           |           |                        |              |
| · VVI          | 54. Sp. MICA.        | Glimmer  | Muscovy        |           | Bergman                | 40.          |
| LXXI.          | 34. 3P. MIGH         |  |                | 2.93      | Vauquelin              | 50.          |
|                |                      |  | Zinwald        |           | Klaproth               | 47.          |
|                |                      |  | Muscovy        | 2.79      | Ditto                  | 42.5         |
|                |                      | Black  | Siberia        | 2.53      | Ditto                  | 42.0         |
| - X-X-T-T      | 55. Sp. PINITE.      | Micarelle  | Saxony         | 2.98      | Klaproth               | 29.5         |
| LXXII.         | 33. 31. 1 III I I I  |  | France         |           | Drapier                | 46.          |
|                | 56. Sp. DIPYRE.      |  | Pyranees       | 2.63      | Vauquelin              | 60.          |
| LXXIII.        | 57. Sp. CHIASTOLITE. | Vivole   | 1 ylunoss      |           |                        |              |
| LXXIV.         |                      |  |                | 1         | Saussure               | 29.2         |
| LXXV.          | 58. SP. SAPPARE.     | Cyanite  | St. Gothard    | 1000      | Struve                 | 51.          |
|                |                      |  | Ditto          |           | Laugier                | 38.5         |
|                |                      |  | Ditto<br>Ditto | 3.68      | Klaproth               | 43.          |
|                |                      |  | Aschafenburg   | 1 0 1 0 0 | Ditto                  | 39.          |
|                |                      |  | Ascharenous    |           |                        | 51.5.        |
| LXXVI.         | 59. Sp. TREMOLITE.   | Fibrous  | Edinb. castle  | 2.92      |                        | 27.          |
| 114444         |                      | Grammatite   | St. Gothard    | 1 .       | Chenevix<br>Klaproth   | 65.          |
|                |                      | Ditto  | Ditto          |           | Laugier                | 50.          |
|                |                      | Ditto grey   |                |           | Ditto                  | 35.5         |
|                |                      | A STATE OF THE STA | c Ditto        | 1         | Ditto                  | 28.4         |
|                |                      | Ditto  | Ditto          |           | Ditto                  | 41.          |
|                |                      | Ditto  | Ditto          |           | Lowitz                 | 52.          |
|                |                      | Common<br>Baikalite  | Siberia        | 3.20      | Ditto                  | 44.          |
| LXXVII.        | 60. Se. ASBEST.      |  |                |           | Bergman                | 64.          |
| and the second | a. Flexible          | Amianth  | Dalecarlia     | *00       | Chenevix               | 59.          |
|                |                      | Ditto  |                | -50       | Bergman                | 64.          |
|                | b. Hard              | Asbestus   | Tarantais      | 9.00      | Ditto                  | 63.5         |
|                |                      | Ditto  | Dalecarlia     | 200       | Ditto                  | 62-          |
|                | c. Suberiforme       | Rockcork   |                |           | Ditto                  | 56.2         |
|                | 7 T. Company         | Ditto<br>Rockwood  | Corias         |           | Ditto                  | 172.         |
|                | d. Ligniforme        | ROCKWOOD   | Corns          |           |                        |              |

|       |        |         |       |      | -      |       |      |        |         |               |
|-------|--------|---------|-------|------|--------|-------|------|--------|---------|---------------|
| Alum  | Lime   | Mag.    | Iron  | Mang | Alkali | Water | Loss | Other  | ingred. | Authority     |
|       |        | 44.5    | 19.   |      |        |       |      |        |         | No. 7         |
|       |        | 51.5    | 9.5   |      |        |       | 2.   |        |         | An. ch. 21    |
|       |        | 53.     | 7.5   |      |        |       |      |        |         | An. ch. 28    |
|       | .95    | 38.5    | 12.   |      |        |       |      |        |         | No. 8         |
|       | 1000   | 37.75   | 10.75 |      |        | *     |      |        |         | Ditto         |
|       |        |         |       |      |        |       | 4    | 1.     | nickel  | P. Trans.     |
|       |        | 27.     | 17.   | *    |        |       | 1.   | 1.     | nickei  | I . I I alls. |
| 38.25 |        |         | *     | *    |        |       | 6.5  | 4      |         | No. 19        |
| 38.25 |        |         | .75   | *    | 4. P   |       |      |        |         | No. 56        |
| 20.   | 4. F   |         | 1.    | 3.   | 18. P  |       |      |        |         | Tab. com.     |
| 31.   | 8.5    |         | .25   |      | 7. P   |       | 1.25 |        |         | Thomson       |
| 20.61 | 1.6    |         | *     | .5   | 9.16 P |       | 1.86 |        |         | Leon. 12      |
|       |        |         |       |      |        |       |      |        |         |               |
| 46.   |        | 5.      | 9.    |      |        |       |      |        |         | Aikin         |
| 35.   | 1.33   | 1.35    | 7.    |      |        |       | 5.33 |        |         | Lucas         |
| 20.   |        |         | 15.5  | 1.75 | 14.5 P |       |      |        |         | No. 181       |
| 34.25 |        | •5      | 4.5   |      | 8.75 P | 1.25  |      |        |         | Ditto         |
| 11.5  |        | 9.      | 22.   | 2.   | 10. г  | 1.    |      |        |         | Ditto         |
|       |        |         |       |      |        |       |      |        |         |               |
| 63.75 |        | . 1     | 6.25  |      | 0.     |       |      |        |         | Jour. 16      |
| 42.   |        |         | 2.5   |      |        |       | 9.5  |        |         | Ditto         |
|       |        |         |       |      |        |       |      |        |         |               |
| 24.   | 10.    |         |       |      | 2      | 2.    | 4.   |        |         | Tab. com.     |
|       |        |         |       |      |        |       |      |        |         |               |
|       |        |         | 1     |      |        |       |      |        |         | r             |
| 55.2  | 2.05   | 2.      | 6.65  |      |        | -     | 4.9  |        |         | Lucas         |
| 30.   | 4.     | 5.      | 5.    |      |        |       |      |        |         | Thury 77      |
| 55.5  | .5     |         | 2.75  |      |        | -75   | 2.   |        |         | Tab. com.     |
| 55.5  |        |         | .5    |      | * P    |       |      |        |         | No. 170       |
| 53.   |        | 3.5     |       |      |        |       | 2.   |        |         | Leon. 10      |
|       | 20     |         | -     |      | 0.4    |       |      | 5.     | c. acid | Ed. Trans.    |
| .5    | 32.    |         | •5    | 100  | 8.3 s  | *     |      | 11.000 | ditto   | An. ch. 28    |
| 6.    | 21.    | 18.5    | *     |      |        |       | 1.5  | 26.    |         | Tab. com.     |
|       | 18.    | 10.33   | .16   |      |        |       |      | 6.5    | ditto   |               |
|       | 18.    | 25.     |       |      |        |       | *    | 5.     | ditto   | Ditto         |
|       | 26.5   | 16.5    |       |      |        |       |      | 23.    | ditto   | Ditto         |
| 1.    | 30.6   | 19.     |       |      |        | . 9   |      | 25.    | ditto   | Ditto         |
|       | 15.    | 15.25   |       |      |        |       | 5.75 | 23.    | ditto   | Ditto         |
|       | 20.    | 12.     |       |      |        |       | 4.   | 12.    | c. lime | Ditto         |
|       | 20.    | 30.     | 6.    |      |        |       |      |        |         | Ditto         |
| 0 *   | 10.5   | 10.0    | 2.2   |      |        |       |      |        |         | Thomson       |
| 2.7   | 1      | 17.2 c  |       |      |        |       | 1.25 |        |         | Ditto         |
| 3.    | 9.5    | 25.     | 2.25  |      |        |       | 1 20 | 6.     | baryte  | Ditto         |
| 3.3   | 6.9 c  |         |       |      |        |       |      | 0.     | baryte  | Ditto         |
| 1.1   | 12.8   | 16.     | 6.    |      |        |       |      |        |         | Ditto         |
| 2.8   |        | 22. c   | 200   |      |        |       |      |        |         |               |
| 2.    | 12.7 c |         | 1 100 |      |        | *     |      |        |         | Ditto         |
| 3.3   | 10.5 c | 12.19 c | 1.3   |      |        |       |      |        |         | Ditto         |
|       |        |         |       |      |        |       |      |        |         |               |

| LXXVIII. 61. Sp.         | TALC   | Trivial Name                   | Locality               | Sp.gr. | Analyst.           | Siles | 6 3 |
|--------------------------|--|--------------------------------|------------------------|--------|--------------------|-------|-----|
| a.                       | Indurated<br>Laminated   | French chalk<br>Talc laminaire | Briançon               | :      | Vauquelin<br>Ditto | 61-24 | 5   |
| C.                       | Massive  | Potstone                       | Chiavena               |        | Weigleb            | 38.12 | 2/1 |
| d.                       | Scaly  |                                | St. Gothard            |        | Klaproth           | 62.   |     |
|                          | Earthy   | Talcite                        | Merowitz               |        | John               | 60.2  |     |
|                          |  | 7.00000                        | THE TO HELD            | 1      | 001111             |       | 1   |
| LXX1X. 62. Sp.           | . CH LORITE.   |                                |                        |        |                    |       |     |
| a.                       | Cristallised   |                                | St. Gothard            |        | Lampad.            | 35.   |     |
| ъ.                       | Foliated   | White var.                     | ou obliniti            | 1      | Vauquelin          |       | 1   |
|                          |  | Ditto                          |                        |        | Höpfner            | 41.13 | 5   |
|                          |  | Common                         |                        |        | Vauquelin          | 26.   |     |
| C.                       | Earthy   | White silvery                  |                        |        | Ditto              | 56.   |     |
|                          | Commercial.  | Ditto                          |                        |        |                    | 50.   | 1   |
|                          |  | Earthy                         |                        | :      | Höpfner            | 37.   | ı   |
|                          |  | Sinopis earth                  |                        |        | TTOPPLOT           | 32.   | 119 |
|                          |  | Suropia curen                  |                        |        | Riajion            | 273   |     |
| LXXX. 63. Sp.            | STEATITE.  | Eatable                        | N. Caledonia           |        | Vauquelin          | 36.   |     |
|                          |  | Speckstein                     | Baireuth               |        | Klaproth           | 59.5  |     |
|                          |  | Soap rock                      | Cornwall               |        | Ditto              | 48.   |     |
|                          |  | Ditto                          | Ditto                  |        | Ditto              | 45.   |     |
|                          |  | White steatite                 |                        |        |                    | 60.   |     |
|                          |  | Bildstein red                  |                        |        | Vauquelin          |       |     |
|                          |  | Ditto yellowish                |                        |        | Ditto              | 56.   |     |
|                          |  | Ditto genoussa                 |                        |        |                    | 55.   |     |
|                          |  | Do. translucid                 | Ditto                  | 0.01   | O CHILL            | 54.   |     |
|                          |  |                                |                        | 2.81   | Trimbrons          | 62.   | I   |
|                          |  | Agalmatholith                  | Ditto                  | 1      | Ditto<br>Ditto     | 55.   | -   |
| 4                        |  | Ditto                          |                        |        | Vauquelin          |       | 1   |
|                          |  | 200                            | China                  |        | John               | 51.5  | 1   |
|                          |  | Ditto rea                      | Ditto                  |        | 3000               | O. O  | T   |
| LXXXI. 64. Sp.           | SERPENTINE.  | Proginge                       |                        | 0.50   | John               | 42.5  |     |
| and the second           |  | Common                         |                        | 1000   | Knoch              | 45.   |     |
|                          |  | Ditto                          | Harzburg               |        | Chenevix           | 26.   |     |
|                          |  | Ditto                          |                        |        | Ditto              | 28.   | H   |
|                          |  |                                | No. 1                  |        |                    | 32.   |     |
|                          |  | Redish brown                   | Norberg                |        |                    | 31.5  |     |
| and the second           |  | redish blown                   |                        | *      | JOHN               | 0.0   |     |
| LXXXII. 65.Sp.(          | GREEN EARTH  | Torro do Voy                   | ST.                    |        | Vauquelin          | 52.   | 4   |
| The second second        | The state of the s | refre de ver.                  | Ditto                  |        | Klaproth           | 53.   |     |
|                          |  |                                | 100000                 |        | Ditto              | 51.5  |     |
|                          |  |                                | Cyprus<br>East Prussia |        |                    | 51.   | 16  |
| A CAMPAGE AND ASSESSMENT |  |                                | East Prussia           |        | Ditto              | 0.2.  |     |
| LXXXIII. 66. Sp.         | BOLE.  | Tripoli                        | Donnahana              |        | Bucholz            | 81.   |     |
|                          |  | Yellow ocre                    | Ronneberg<br>Pourrain  |        | Duchow             | 65.   | -   |
|                          |  | Ditto                          |                        |        |                    | 92.   | 1   |
| LXXXIV. 67. SP           | -  | Ditto                          | Bitry                  |        | Ditto              | 1     |     |
|                          |  |                                |                        |        |                    |       |     |
| LAZAIV. DI. SP           | EARTH.   | Walkererde                     |                        |        |                    |       |     |

| Alum  | Lime | Mag.    | Iron  | Mang. | Alkali | Water  | Loss | Other ingred. | Authority  |
|-------|------|---------|-------|-------|--------|--------|------|---------------|------------|
| 1.    | .75  | 26.25   | 1.    |       |        | 6.     | 3.75 |               | An. Ch. 49 |
| 1.5   |      | 27.     | 3.5   |       |        | 6.     |      |               | Ditto      |
| 6.66  | -41  | 34.54   | 15.05 |       |        |        | .84  | ·41 F. acid   | Tab. com.  |
|       |      | 30.15   | 2.5   |       | 2.75 1 | .5     |      |               | No. 181    |
| 30.83 | *    | 3.55    |       |       |        | 5.     |      |               | An. Ch. 67 |
|       |      | 4       |       |       |        |        |      |               |            |
| 18.   | 29.9 |         | 9.7   |       |        | 2.7    | 4.7  |               | Thomson    |
| 18.   | 3,   |         | 4.    |       | 8. P   | 6.     | 5.   |               | An. Ch. 37 |
| 6.13  | 1.5  | 39.47   | 10.5  |       |        | 1.5    | •10  |               | Journal    |
| 15.5  |      | 8.      | 43.3  |       | 2. MP  |        | 1.5  |               | An. Ch. 29 |
| 18.   | 3.   | *       | 4.    | 8     | 8. P   | 6.     | 5.   |               | Tab. com.  |
| 26.   | 1.5  |         | 5.    |       | 17.5   |        |      | * M. acid     |            |
| 4.1   | 6.2  | 43.7    | 15.8  |       |        |        |      | +             | Journal    |
| 26.5  |      | ,       | 21.   |       | 1.5 MP | 17.    |      |               | No. 162    |
|       | 2.   | 37.     | 17.   |       |        | 4.     | 6.4  | * copper      | Journal    |
|       |      | 30.5    | 2.5   |       |        | 5.5    | 2.   | ·             | No. 53     |
| 14.   |      | 20.5    | 1.    |       |        | 15.5   |      |               | No. 54     |
| 9.25  |      | 21.75   | 1.    |       | .75 P  | 18.    |      |               | No. 173    |
| 3.    | 2.5  | 28.5    | 2.25  |       |        |        | 3.73 |               | An. Ch. 28 |
| 3.    |      | 22.     | 5.    | *     |        | 6.     |      |               | An. Ch. 49 |
| 29.   | 2,   |         | 1.    |       |        | 5.     |      |               | Ditto      |
| 30.   | 1.75 |         | 1.    | 10    | 6.25 P |        |      |               | Annals     |
| 36.   |      | .75     |       |       |        | 5.5    |      |               | No. 55     |
| 24.   | 1.   | .5      |       |       |        | 10.    |      |               | Ditto      |
| 33.   |      |         | •5    |       |        | 3.     |      |               | No. 172    |
| 34.   |      |         | .75   |       | 6.25 P |        |      |               | Ditto      |
| 32.5  | 3.   |         | 1.75  | 1.2   | 6. P   | 5.13   |      |               | Annals     |
| 1.    | -25  | 38.63   | 1.5   | -62   |        | 15.2   |      | ·25 chrome    |            |
| *     |      | 33.75 c |       |       |        |        |      | •75 magnes.   |            |
| 18.   |      | 8.      | 43.   |       |        | 2.     |      | 2. M. acid    |            |
| 25.   | •5   | 34.3    | 4.5   |       |        | 10.5   | *    |               | An. Ch. 28 |
| •5    | 10.6 | 37.24   | •6    |       |        | 14.16+ |      |               | Leon. 12   |
| 3.    | .5   | 47.25   | 5.5   | 1.5   |        | 10.5   |      |               | Ditto      |
| 7.    |      | 6.      | 23.   |       | 7.5 P  | 4.     | +5   |               | Tab. com.  |
|       |      | 2.      | 28.   |       | 10. 1  | 6.     |      |               | No. 149    |
| 10    |      | 1.5     | 20.5  |       | 2.45   | 8.     | 1.   | 1.5 40.00     | Ditto      |
| 12.   | 2.5  | 3.5     | 17.   | *     | *      | 9.     | .5   | 4.5 soda      | Ditto      |
| 1.5   | *    |         | 8.    |       |        | 4.55   | 1.5  | 3.45 s. acid  | Leon. 10   |
| 9.    | 5.   |         | 20.   |       |        |        |      |               | Brong.     |
| 2.    | 3.   | *       | 3.    | *     | *      |        |      |               | Ditto      |
|       |      |         |       |       |        |        |      | 14            |            |



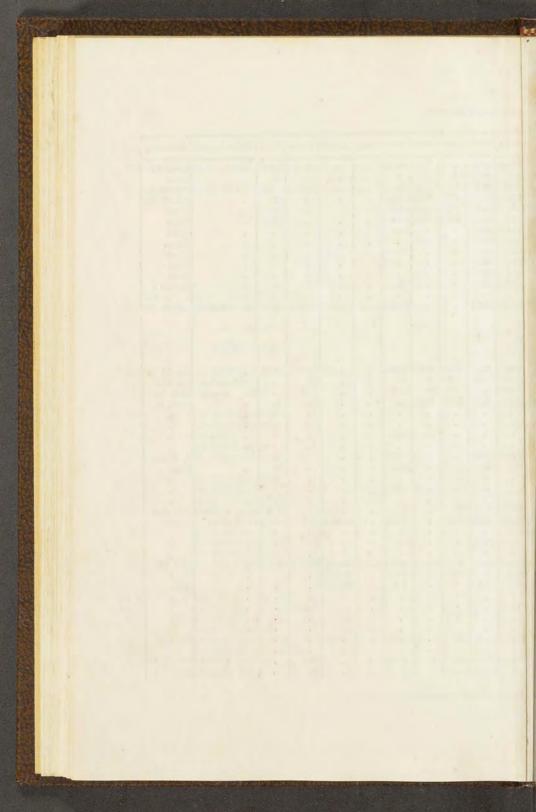


|                 |                             | Trivial Name   | Locality       | Sp.gr. | Analyst   |
|-----------------|-----------------------------|----------------|----------------|--------|-----------|
| LXXXV.          | 68. Sp. LITHOMARGA.         | Steinmark      | Rochlitz       |        | Klaproth  |
| # 14-10-10-2    |                             | Cristallised   | Flachenseiffen | 2.6    | Ditto     |
| LXXXVI.         | 69. Sp. POTTERS CLAY.       | Töpferthon     | De Dreux       |        | Vauquelin |
|                 |                             |                | Lemnos         |        | Bergman   |
|                 |                             |                | Osmunde        |        | Ditto     |
|                 |                             |                | Hampshire      |        | Ditto     |
|                 |                             | 200            | Tournay        |        | Hassenfr. |
|                 |                             |                | Montcenis      |        | Ditto     |
|                 |                             |                | Neuilly        |        | Ditto     |
|                 |                             |                | Wedgwood       |        | Ditto     |
|                 |                             |                | St. Yrieux     |        | Ditto     |
| LXXXVII.        | NO G WILLIAM OF LINE        | Berg mehl      | Sta. Fiora     |        | Klaproth  |
| LXXXVIII.       | 70. Sp. WHET SLATE.         |                |                |        | Weigleb   |
| LAAAVIII.       | 71.Sp. DRAWING SLATE.       | Black chalk    | Baireuth       |        | Weigien   |
|                 | State and the second second |                |                |        |           |
|                 | APPENDIX.                   |                |                |        |           |
|                 | The Late Distance           |                |                |        |           |
| LXXXIX.         | 1. ADHESIVE SLATE.          | Manilita       | Menil Mont.    | 2.08   | Klaproth  |
| 211000000000000 | TO MEDITE STATE.            | Memmed         | archir mone    |        | Ditto     |
|                 |                             |                | 1              |        | Lampad.   |
|                 |                             |                |                |        | Bucholz   |
| XC.             | 2. ANDALOUSITE.             |                |                |        |           |
| XCI.            | 3. CEREOLITE.               |                |                |        |           |
| XCII.           | 4. CHUSITE.                 |                | Limbourg       |        |           |
| XCIII           | 5. DESMINES.                |                |                |        |           |
| XCIV.           | 6. FIBROLITE.               |                | Carnatic       |        | Chenevix  |
|                 |                             |                | China          |        | Ditto     |
| XCV.            | 7. FREISLEBEN.              |                |                |        | 76        |
| XCVI.           | 8. IOLITHE.                 |                | C. de Gattes   | 2.56   |           |
| XCVII.          | 9. KEFFEKILITHE.            |                |                |        |           |
| XCVIII.         | 10. LATIALITE.              | Haüyn          | Lac Nemi       |        | Vauquelin |
| ALC: NO.        |                             | Ditto          | ttome          | 2.83   | Gmelin    |
| XCIX.           | 11. LIMBELITE.              |                |                | 2      |           |
| C.              | 12. MELILITE.               |                |                |        | (0)       |
| CI.             | 13. PICOLITHE.              |                |                |        | 100       |
| CII.            | 14. POLISHING SLATE.        | Polier Shiefer | Bellin Bohem.  | .6     | Bucholz   |
|                 |                             | Compact        |                | 2.02   |           |
| 0111            | La company of the last      | Friable        |                |        |           |
| CIII.           | 15. SIDERO CLEPT.           | -              |                |        | 1         |
| CIV.            | 16. SPATH DE GLACE.         |                | 1.6            |        | 1         |
| CVI.            | 17. SPINELLANE.             | 2.             |                |        |           |
| CVII.           | 18. SPINTHERE.              | 2000           |                |        | ert worth |
| CVIII.          | 19. TABULAR SPAR.           | Tafelspath     | Dognatska      | 2.86   | Klaproth  |
| CIX.            | 20. TRICKLASITE.            |                |                | 0.10   | T mongo   |
| VI A            | 21. TURQUOISE.              |                | Persia         | 100    | Lagrange  |
|                 |                             |                |                |        | John      |

#### THY COMPOUNDS.

| -     |       |       |       |       |       |         |                 |         |               |            |
|-------|-------|-------|-------|-------|-------|---------|-----------------|---------|---------------|------------|
| Silex | Alum  | Lime  | Mag.  | Iron  | Mang. | Alkali  | Water           | Loss    | Other ingred. | Authority  |
| 45.25 | 36.5  |       |       | 2.75  |       | * P     | 14.             |         |               | Leon. 13   |
| 58.   | 32.   | 1     |       | 2.    |       |         | 7.              | 1.      | *             | Ditto      |
| 43.5  | 33.2  | 3.5   | 1     | 1.    |       |         | 18.             | -8      |               | Thomson    |
| 17.   | 19.   | 5.4 c | 6.2 c | 5.4   |       |         | Digital Control | 17.     |               | An. ch. 14 |
| 60.   | 11.1  | 5.7 c |       | 4.7   |       |         |                 | 18.     |               | Ditto      |
| 51.8  | 25.   | 33 c  |       | 3.7   |       |         |                 | 15.5    | *             | Ditto      |
| 13.   | 57.   |       |       |       |       | *       |                 | 1       |               | Ditto      |
| 55.   | 45.   |       |       |       |       |         |                 |         |               | Ditto      |
| 73.   | 27.   |       |       |       | *     |         |                 |         |               | Ditto      |
| 76.   | 24.   |       |       |       |       |         |                 |         |               | Ditto      |
| 70.   | 30.   |       |       |       |       |         |                 |         |               | Ditto      |
| 79.   | 5.    |       |       |       |       |         | 19              | 1.      |               |            |
| 1     |       |       |       | 3.    |       | *       | 12.             |         |               | Annals     |
| C.    | 11.05 |       |       |       | *     |         | 7.5             |         |               | 1 00       |
| 64.   | 11.25 |       |       | 2.75+ |       |         | 1.5             | 3.      | 11. carbon.   | An. ch. 30 |
|       | 1     |       |       |       |       |         |                 |         |               |            |
| 110   |       |       |       |       |       |         |                 |         |               |            |
| N     |       |       |       |       |       |         |                 |         |               |            |
|       |       |       |       |       |       |         |                 |         |               |            |
| -56   |       |       | 0.0   |       |       |         |                 |         |               |            |
| 66.5  | 7.    | 1.25  | 1.5   | 2.5   |       |         | 19.             | 2.25    | *             | No. 51 *   |
| 65.2  | .5    | .25   | 8.    | 4     |       |         | 22.             |         | ·75 carbon.   |            |
| 30.8  |       | -8    | 28.   | 11.2  | 4     |         | •3              |         | 27. c. acid   | Jour. 18   |
| 58.   | 5.    | 1.5 c | 6.5   | 9.    |       |         | 19.             | 1.      |               | Ditto 27   |
| *     |       |       |       |       |       |         |                 |         |               |            |
|       |       |       |       |       |       |         | 4               |         |               |            |
|       |       |       |       |       |       |         |                 |         |               |            |
|       |       |       |       |       |       | 2       |                 |         |               |            |
| 38.   | 52.25 |       |       | •75   |       |         |                 | 3.      |               | P. Trans.  |
| 33.   | 46.   |       |       | 13.   |       |         |                 | 8.      |               | Ditto      |
| 2     |       |       |       |       |       |         |                 |         |               |            |
|       |       |       |       |       |       |         |                 |         |               |            |
|       |       |       |       |       |       |         |                 |         |               |            |
| 30.   | 15.   | 5.    |       | 1.    |       | 11. P   |                 | 17.5    | 20. s. lime   | Tab. com.  |
| 35.48 | 18.85 | 2.66  |       | 1.16  |       | 15.45 P | 1.2             | 3.45 \$ | 21.73 ditto   | Annals     |
|       | 1000  |       |       |       |       |         |                 |         |               |            |
|       |       |       |       | *     |       |         |                 |         |               |            |
| -     |       |       |       |       |       |         |                 |         |               |            |
| 79.   | 1.    | 1.    |       | 4.    |       | 14.     | 1.              | 1.      | 1             | Jour. 21   |
| 83.5  | 4.    | .5    |       | 1.5   |       | 9.      | **              |         |               | Ditto      |
| 87.   | •5    | .5    |       | 1.5   |       | 10.     |                 | -       |               | Ditto      |
| 01.   | .0    |       |       | 1.9   |       | 250     |                 |         |               |            |
|       |       |       |       |       |       |         |                 | 3.      |               |            |
|       |       |       |       |       |       |         |                 | 4       |               |            |
|       |       |       |       |       |       |         |                 |         |               |            |
| 50.   |       | 1.    |       |       |       |         |                 |         |               | No. 109    |
| 30.   |       | 15.   |       |       | 5.    |         |                 |         | •             | 100 100    |
|       | 1.    |       |       |       |       |         | 0 -             |         | 8. c. lime    | An. ch. 59 |
| -     | 1.5   | 80. P | 2. P  |       |       |         | 6.5             |         | 8. c. lime    | Loon 19    |
| *     | 73.   |       |       | 4.    |       |         | 18.             |         | 4.5 copper    | Leon. 12   |
|       |       |       |       |       |       |         |                 |         |               |            |

Partly bit, hydrogene,



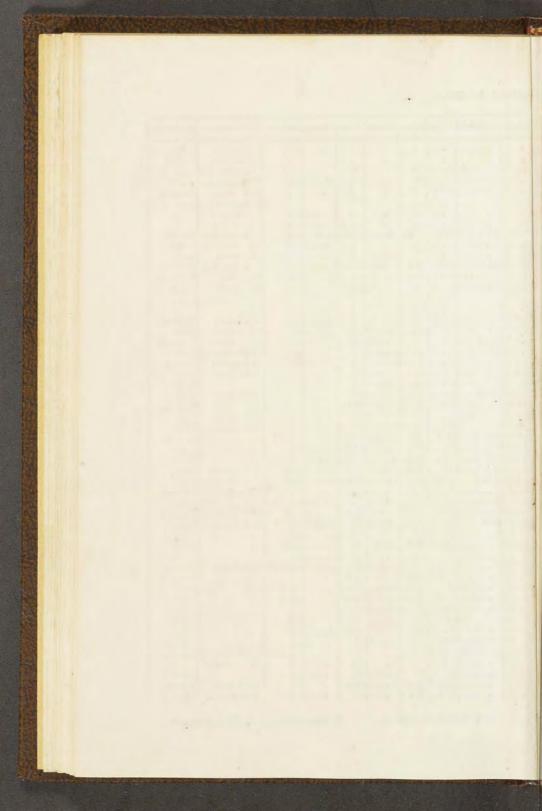


|        |                    | Trivial Name  | Locality             | Sp.gr. | Analyst            | Carbon       |
|--------|--------------------|---------------|----------------------|--------|--------------------|--------------|
| CX.    | I. Sp. DIAMOND.    | Colourless    |                      | 3.52   | Lavoisier          |              |
| CXI.   | 2. Sr. SULPHUR.    | Colouriess    |                      |        |                    |              |
| CXII.  | S. Sr. AMBER.      |               |                      | 1.08   | Baumer             | 7.           |
| CXIII. | 4. SP. MELLITE.    | Honeystone    | Thuringia            | 1.55   | Klaproth           |              |
|        |                    |               |                      |        | Vauquelin          |              |
| CXIV.  | 5. Sp. BITUMEN.    |               |                      | -      |                    |              |
|        | a. Liquid          | Naphta        | -                    | +80    |                    |              |
|        | b. V.scid          | Mineral tar   |                      | -85    |                    |              |
|        | c. Elastic         | Cahoutchou    | Castleton            |        | Rlaproth           | 6.25         |
|        | A                  | Dapèche       |                      |        | W. Allen           | 16.          |
|        |                    | Cahoutchou    |                      |        | Ditto              | 6.           |
|        | d. Solid           | Asphaltes     | Albania              | 1.20   | Klaproth           | 30.          |
|        |                    | Retin asphalt | Bovey                | 1.13   | Hatchet            |              |
|        |                    | Ditto         | Halle                |        | Bucholz            |              |
| CXV.   | 6. Sp. COAL.       |               |                      |        |                    |              |
|        | a. Compact         | Jet           |                      |        |                    |              |
|        |                    | Canal coal    |                      |        | Kirwan             | 75.          |
|        |                    | Slaty ditto   | Ayrshire             | 1.42   |                    | 47.6         |
|        |                    | Ditto         | Scotland             |        | Mushet             | 39.43        |
|        |                    | Ditto         | Derbyshire           |        | Ditto              | 18.37        |
|        | b. Foliated        | Slate coal    | Whitehaven           |        | Kirwan             | 57.<br>61.43 |
|        |                    |               | Wigan                |        | Ditto              | The second   |
|        |                    |               | Newcastle            |        | Llandaff           | 58.<br>52.89 |
|        |                    |               | Butterly             | 1.26   | Mushet             | 58.          |
|        |                    |               | Walden               |        | Richter            | 63.33        |
|        |                    |               | Sultz                |        | Ditto              | 58.17        |
|        | 1                  |               | Beilschovitch        |        | Ditto<br>Brandhorn |              |
|        |                    |               | Saarbrüch            | *      | Ditto              | 71.2         |
|        |                    | Friable       | Roderan              |        | Ditto              | 77.6         |
|        | 1                  | Black shining | Lalaye               |        | Ditto              | 27.4         |
|        |                    | Ditto dull    | Lopsau<br>Bouxweiler | *      | Ditto              | 19.6         |
|        | c. Brown coal      | Ditto earthy  | Bovey                | 1.19   | Hatchet            | 45.          |
|        | C. Blown coal      | Suturbrand    | Iceland              | 1.19   | Roroman            | 12 +         |
|        |                    | Bitum, wood   | Rello                |        | Vauquelin          | 54. 1        |
|        |                    | Earth coal    | Schraplau            |        | Klaproth           | 20.25        |
|        |                    | Columnar coal | Schrapian            |        | · ·                |              |
|        |                    | Moor coal     | De la Mothe          | 1.65   | Héricart           | 65.5         |
|        |                    | Earthy coal   |                      |        |                    |              |
| CXVI.  | 7. Sp. ANTHRACITE. | Blind coal    | Kilkenny             | 1.52   | Kirwan             | 97.3         |
|        |                    |               | Duclos               |        | Thury              | 97.25        |
|        |                    |               | N. D. Devaux         |        | Ditto              | 78.5         |
|        |                    |               | Tarentais            | 1.3    | Dolomieu           | 72.05        |
|        |                    |               | Schemnitz            |        | Panzenbg.          | 90.          |
|        |                    | Slaty         |                      |        | Ditto              | 90.          |
|        |                    | Conchoidal    | Hesse                |        |                    | 96.66        |
|        |                    | Slaty         | Pyrenees             | 1.8    | Vauquelin          | 00.0         |
| CXVI   | .8. Sp. PLUMBAGO.  |               |                      | 2.08   | Berthollet         | 81.          |
|        |                    |               |                      |        |                    |              |
|        |                    | Impure        | Pluffier             |        | Vauquelin          | 85.25        |
|        |                    | *             | Borrowdale           |        | Schrauce           | 88.15        |
|        | A.                 |               | Spain                |        | Ditto              | 100.00       |
|        |                    |               |                      |        |                    |              |

<sup>†</sup> Carbon and earthy matter. 

‡ Veg. earth.

| Bit.oil | Elas, fluid                             | Silex | Alum. | Lime  | Iron | Water | Sulph. | Other ingred.                           | Authority     |
|---------|---|-------|-------|-------|------|-------|--------|---|---------------|
|         |   |       |       |       |      |       |        |   |               |
|         |   |       |       |       |      |       |        |   |               |
| 72.     |   |       | *     |       | 5.   |       |        | 4.5 suc. acid                           |               |
|         |   |       | 16.   |       |      | 38.   |        | 46. mel.acid                            | No. 85        |
|         |   | -     | it    | *     |      |       |        | 66.6 ditto                              | Jameson       |
|         |   |       |       |       |      |       |        |   |               |
|         |   |       |       |       |      |       |        |   |               |
|         |   |       |       |       |      |       |        |   |               |
| 73.     | 42.                                     | 1.5   | +25   | 2.    | .75  | 1.5   |        | ·5 s. of lime                           | No. 83        |
| 80.     |   |       |       |       |      | 2.    |        | 2. carb.hyd.                            |               |
| 92.     |   |       |       |       |      |       |        | 2. ditto                                | Ditto         |
| 32.     | 36.                                     | 7.5   | 4.5   | .75   | 1.25 |       |        | ·5 mang.                                | No. 113       |
| 41.     |   | *     | *     |       | 1 20 |       |        | 55. resin                               | Thomson       |
| 9.      |   | -     |       |       |      |       |        | 91. ditto                               | An. ch. 83    |
| 2.5     |   |       |       |       |      |       |        | JI. titto                               | Trais Cits Oo |
|         |   | 1.0   |       |       |      |       |        |   |               |
| 21.7    |   |       |       |       |      |       |        | 3-12 sand                               | Kirwan        |
| 32.5    |   |       |       |       |      |       |        | 20. ashes                               | Ditto         |
|         | 56.57                                   |       |       | *     |      |       |        | 4. ditto                                | Thomson       |
|         | 47.                                     |       |       |       |      |       |        | 4.63 ditto                              | Ditto         |
| 41.3    |   |       |       |       |      |       |        | 1.7 ashes                               | Kirwan        |
| 36.7    |   |       |       |       |      |       |        |   |               |
| 40.     |   |       |       |       |      |       |        | 1.57 ditto                              | Ditto         |
|         | 42.83                                   |       |       |       |      |       |        |   | Ditto         |
|         | 100000000000000000000000000000000000000 |       |       |       |      |       |        |   | Thomson       |
| 36.87   |   |       |       | *     | 1.16 |       |        | 7 | Jameson       |
| 32.93   |   |       |       |       |      |       |        | 46.00                                   | Ditto         |
| 37.9    | Gin o                                   |       |       |       |      |       |        |   | Ditto         |
| 20.3    | 619. S                                  | 1.2   | 1.8   | ·11 s | .5   | 2.    |        |   | Jour. 28      |
| 6.2     | 340. §                                  | 5.    | 3.4   |       | -6   | 2.    |        |   | Ditto         |
| 4.4     | 542. §                                  | 4.3   | 5.6   | .6    | •3   | 3.2   |        |   | Ditto         |
|         | 268. §                                  | 8.    | 1.6   | 1.4   |      | 22.8  | 17.9   | 1.5 mang.                               | Ditto         |
|         | 440. §                                  | 10.5  | 10.   |       | 2.4  | 14.4  | 18.4   | •5 m. acid                              | Ditto         |
|         | 55.                                     |       |       |       |      |       |        |   | Thomson       |
|         | 58.                                     |       |       |       |      |       |        |   | Aikın         |
|         |   | .5    |       | ·7 s  | 12.7 |       | •8     | 10.7 s. of iron                         |               |
| 30.     | 67.5                                    |       |       | 2.5 s | 1.   | 12.   |        | 14.5 earth                              | Ditto         |
|         |   |       |       |       |      |       |        |   |               |
| *       |   | 5.    | 6.8   | 3.25  | 8.   |       | 10.5   |   | Thury         |
|         |   |       |       |       |      |       |        |   |               |
|         |   |       |       |       |      |       |        | 3.7 ashes                               | Kirwan        |
|         |   | .95   | •3    |       | 1.5  |       |        |   | Jour. 16      |
| *       |   | 4.    | 6.8   | 2.25  | 6.45 |       | 2. 4   |   | Ditto         |
| *       |   | 13.19 | 3.29  |       | 3.47 |       | 8. 9   |   | Ditto         |
|         |   | 2.    | 5.    |       | 3.   |       |        |   | Ditto         |
|         |   | 4.    | 4.    |       | 2.   |       |        |   | Aikin         |
|         |   |       | 2.    |       | 1.33 |       |        |   | Ditto         |
|         |   | 30.   |       |       | 2.   |       |        |   | Tab. com.     |
|         |   |       |       |       | 9.1  |       |        |   | Lucas         |
|         |   |       |       |       | 10.  |       |        | 9. oxygen                               |               |
|         |   | 38.   | 37.   |       | 2.   |       |        |   | Aikin         |
|         |   | 3.5   | 2.3   |       | 5.8  |       |        | 3.15 titan.                             | Annals        |
|         |   | 1.5   | 1.2   | -     |      |       |        | 1.55 ditto +                            | Ditto         |
| 1       | 1                                       |       | -~    |       |      |       |        |   |               |



|         |                                      | Trivial Name             | Locality                   | Sp.gr.        | Analyst                      | Gold       |
|---------|--------------------------------------|--------------------------|----------------------------|---------------|------------------------------|------------|
| cxvIII. | 1. GEN. PLATINA.                     | :                        | Native<br>Purified         | 15·6<br>20·98 | Haüy<br>Ditto                |            |
| CXIX.   | 2. GEN. GOLD.                        | Brass yellow<br>Electrum | Pure<br>Bohemia<br>Siberia | :             | Ditto<br>Lampad.<br>Klaproth | 96·9<br>36 |
|         |                                      | Aurifer, silver          |                            | 10.6          | Fordyce                      | 28.        |
| CXX.    | 3. GEN. SILVER.                      |                          | Purified                   | 10.47         |                              |            |
|         | 1. Sp. Native.<br>2. Sp. Antimonial. | Cristallised             | Johangeorgen.              | *             | John<br>Klaproth             |            |
|         | W. Dr. BATIMONIAL.                   | Spiesglanz               | Wolfach                    |               | Ditto                        |            |
|         |                                      | Coarsegrained Massive    |                            | 0.29          | Ditto                        |            |
|         |                                      | Mussive                  | Andreasberg<br>Ditto       | 3.02          | Abich.                       |            |
|         |                                      |                          | Ditto                      |               | Vauquelin                    |            |
|         | Ferro arsen.                         |                          | Ditto                      |               | Klaproth                     |            |
|         |                                      | Pacos                    | Peru                       |               | Ditto                        |            |
|         | 3. Sp. Sulphurated<br>Antim. Silver. | Red silver ore           |                            |               | Klaproth                     |            |
|         | ZENTIM DILVER                        |                          |                            |               | Ditto                        |            |
|         |                                      |                          | Freyberg                   |               | Ditto                        |            |
|         |                                      |                          | Andreasberg                |               | Vauquelin                    |            |
|         |                                      |                          |                            |               | Thenard                      |            |
|         |                                      |                          |                            |               | Lampad.                      |            |
|         |                                      |                          | Johangeorgen.              |               | Ditto                        |            |
|         |                                      |                          | o omingeor gen.            |               | Proust                       | 0          |
|         |                                      | Sprödglaserz             | Freyberg                   |               | Klaproth                     |            |
|         | 4. Sp. Sulphurated.                  | Silver glance            | Freyberg                   |               | Ditto                        |            |
|         |                                      |                          | Joachimstal                |               | Sage                         |            |
|         | * 6 6                                |                          | Ditto                      |               | Bergman                      |            |
|         | 5. Sp. Carbonaie.                    |                          | Wolfach                    |               | Selb                         |            |
|         | 6. Sr. Muriate.                      | Horn silver              | Andreasberg                |               | Klaproth                     |            |
|         |                                      | Ditto                    | Peru                       |               | Ditto                        |            |
|         |                                      | Ditto carthy             | Andreasberg                |               | Ditto                        | _          |
|         |                                      |                          |                            |               |                              | Merc.      |
| CXXI.   | 4. GEN. MERCURY.                     |                          | Congealed                  | 15.61         |                              |            |
|         | I. Sp. NATIVE.                       |                          |                            | 13.56         | Haüy                         |            |
|         | 2. Sp. Argentiferous.                | Amalgam                  | Deuxponts                  |               | Cordier                      | 72.5       |
|         |                                      |                          | Ditto                      | 10.           | Klaproth                     | 64.        |
|         | 0 0 0                                |                          |                            |               | Heyer                        | 75.        |
|         | 3. Sp. Sulphuret.                    | Cinnabar                 | Almaden                    | 6.9           | Sage                         | 80.        |
|         |                                      |                          | N. Marktel                 | 8-16          | Klaproth                     | 85.<br>81. |
|         |                                      |                          | Deuxponts                  |               | Tuttibue                     | 84.5       |
|         |                                      |                          | Japan                      |               | Klaproth                     | 81.8       |
|         | 4. Sp. Muriate.                      | Hepatic                  | Idria                      | 7.10          |                              | 70.        |
|         | P. MICHIATE.                         | Corneous mer             | Obermuschel                |               | Deignia                      | 75.        |
|         |                                      |                          |                            |               | Ditto                        | 67.75      |
|         |                                      |                          | Saxony                     |               | Klaproth<br>Fernandez        | 9.92       |
|         |                                      |                          | Creu Valence               |               | Ditto                        | 13.        |
|         |                                      |                          | Ditto                      |               | Ditto                        | -          |

| Silver       | Antim.  | Sulph.       | Iron  | Arsenie | Acid           | Water | Loss | Other ingred. | Authority            |
|--------------|---------|--------------|-------|---------|----------------|-------|------|---------------|----------------------|
|              |         |              |       |         |                |       | -    |               |                      |
|              |         | 1            |       |         |                |       |      |               |                      |
|              |         |              |       |         |                |       |      |               |                      |
| 2.           |         | *            | 1.1   |         | 4.             |       |      |               |                      |
| 64.          |         |              | 1.1   |         |                |       |      |               | Jameson<br>Thomson   |
| 72.          |         |              |       |         |                |       | 1    |               | Ditto                |
| 1            |         |              |       |         |                |       | -    |               | Ditto                |
| 99.          |         | *            |       | (4)     |                |       |      |               |                      |
| 84.          | 1.      |              |       | 4       |                |       |      |               | Leon 12              |
| 76.          | 24.     | *            |       |         |                | *     |      |               | No. 68               |
| 77.          | 23.     |              |       |         |                | *     |      |               | Ditto<br>No. 91      |
| 75.25        | 24.75   |              |       |         |                |       |      |               | Ditto                |
| 78.          | 22.     |              |       |         |                |       |      |               | Haüy                 |
| 12.75        | 4.      |              | 44.25 | 38.     |                |       |      |               | No. 9                |
| 14.          |         |              | 71.   |         |                | 8.5   |      | 4.5 silex     | No. 118              |
| 60.          | 20.3    | 17-7         |       |         | 8. +           |       |      |               | No. 9                |
| 62.          | 18.5    | 11,          |       |         | 8.5 +          |       |      |               | Ditto                |
| 60.<br>56.67 |         | 17.          |       |         |                |       |      | 4. oxyg.      | No. 206              |
| 58.          |         | 15.07        |       |         |                |       |      | 12.13 ditto   | Tab. com.            |
| 29-12-       |         | 16.<br>17.57 |       |         |                |       | 2.5  | 11.85 ditto   | Ditto<br>Thomson     |
| 2000         |         | 11.1         | :     | .9      | 7. s           |       | *    | 11.99 (1110)  | Jameson              |
| 58.3 s       | SEE OF  | .            | 3.    |         |                | 3.    |      | 3. sand       | Tab. com             |
|              |         | 12.          | 5.    |         |                |       |      | ·5 copper ‡   | No. 9                |
| 85.          |         | 15.          |       |         |                |       |      |               | Ditto                |
| 84.<br>75.   |         | 16.          |       |         |                |       |      |               | Thury                |
| 7000         | 15.5 c  | 25.          |       |         | 10             |       |      |               | Jameson<br>Tab. com. |
| 67.75        |         |              | 6.    |         | 12. c<br>21. m |       | •5   | 1.7 alum.§    |                      |
| 76.          |         |              | 0.    |         | 16.4 M         |       |      | 7.6 oxyg.     | No. 119              |
| 24-64        |         |              |       |         | 8.28 M         |       |      | 67.08 alum.   | No. 9                |
| Silver       | Copper  | Sulph.       | Iron  | Lime    | Acid           | Alum  | Loss | Other ingred. |                      |
|              | -       |              |       | -       |                |       |      |               |                      |
| - 40         |         |              |       |         |                |       |      |               |                      |
| 27.5         |         |              |       |         |                |       |      |               | Lucas                |
| 36.          |         |              |       |         |                | 4     |      |               | No. 9<br>Kidd        |
| 25.          |         |              |       |         |                |       |      |               | Ditto                |
|              |         | 20.<br>14·25 |       |         |                |       |      |               | No. 120              |
|              |         | 15.2         | 4.7   |         |                |       |      |               | Jameson              |
|              |         | 14.75        |       |         |                |       |      |               | No. 120              |
|              | .02     | 13.57        | .2    |         |                | .95   | •73  | 2.3 carbon +  |                      |
|              |         |              |       |         | 20. M          |       |      |               | Thury                |
|              |         |              |       |         | 24.5 M         |       | 100  | *05 15ma !!!! | Ditto                |
| *00          | 18.76   | 16           | 6.    | 00.     | 21. M          | 3·5   | 8.01 | 9. unknown    |                      |
| -08          |         | 16.<br>18·5  | 8.25  |         |                | 3.    | 5.75 |               | Ditto                |
| 00           | I W L P | 120.0        | 4.0   | 25.25   |                | . 0.  | 0.10 | 1 41          |                      |

With a trace of copper. 

With 65 silex. 

With 0.25 s. acid.

| CVVII  |                                  | Trivial Name    | Locality   | Sp.gr. | Analyst           | Lead  | - |
|--------|----------------------------------|-----------------|--|--------|-------------------|-------|---|
| CXXII. | 5. GENUS, LEAD.<br>I Sp. Native. |                 |  | -      |                   | -     | t |
|        | 2. Sp. Sulphuret.                | Galena          | Dunkana  |        | m, ,              | 85.13 | ŀ |
|        | Z. SP. SULPHURET.                | Galena          | Durham<br>Louisiana  | * *    | Thomson           | 72.   | k |
|        |                                  |                 | Kirschwald   | 7.5    | Meade             | 0.000 | ľ |
|        |                                  |                 |  | 6.82   | Vauquelin         | 69.   | ı |
|        | 1                                |                 | Kampfstein   | 7.1    | Ditto             | 68-69 | Ì |
|        |                                  | *               | Ecklesberg   | 7.4    | Ditto             | 64.   | ľ |
|        |                                  | Ditta avantan   | Kantenbach   | 6.14   |                   | 9.    | ľ |
|        |                                  | Ditto quartzy   | Savoy  | 3.56   | market Processing | 34.5  | ŀ |
|        |                                  |                 | Andreasberg  |        | Ditto             | 39.   |   |
|        |                                  | T t am all one  | Cornwall   |        | Ditto             | 48.06 | ľ |
|        |                                  | Lt. w. sil. ore |  |        | Ditto             | 00000 | 1 |
|        | 0.5.0                            | Dark ditto      | Ditto  |        | Ditto             | 41.   | ľ |
|        | 3. Sp. Oxide.                    | White land and  | 7.11 - 0.1.1   |        | XX7               | 01.0  | ı |
|        | 4. Sp. Carbonate.                | White lead ore  | The state of the s | 0.40   | Westrumb          |       | ı |
|        |                                  | 2               | Wanlockhead  | 6.48   | Klaproth          | 77.   | ۱ |
|        |                                  |                 | Ildekanskoi  |        | Bindheim          | 77.5  | ١ |
|        | 1                                |                 | Ditto  |        | Ditto             | 74.   | ı |
|        | 1                                |                 | Ditto  |        | John              | 69.5  | ١ |
|        |                                  |                 | Taininskoi   | 6.50   | Ditto             | 78.5  | ı |
|        | 1                                |                 | Siberia  |        | Trace of com-     | 67.   | ١ |
|        |                                  | Comp.           | Tainowitz  |        | John              | 60.   | ı |
|        | t c n                            | Black lead ore  | 7 - 7 - 7 - 7  |        | Lampad.           | 78.5  | ı |
|        | 5. Sp. Phosphate.                | Green lead ore  |  | 6.07   |                   | 78.4  |   |
|        |                                  |                 | Zschopau   | 6.27   | Section 1         | 77.1  |   |
|        |                                  |                 | Brisgaw  |        | Ditto             |       |   |
|        |                                  |                 | Erlbach  |        | Vauquelin         | 78.58 |   |
|        |                                  | Brown var.      | Brittany   | *      | Klaproth          | 80.   |   |
|        |                                  | Yellow ditto    | Wanlockhead  | 10000  | Ditto             | 76.9  |   |
|        |                                  |                 | Johangeorgen.  |        | Laugier           | 76.   |   |
|        | 1                                |                 | Auvergne   | 1      | Klaproth          | 77.5  |   |
|        |                                  |                 | Johangeorgen.  |        | Rose              | 50.   |   |
|        | 0.5- 4                           |                 | Rosiers  |        | Fourcroy          | 73.13 |   |
|        | 6. Sp. Arseniate.                |                 | Johangeorgen.  | 7.26   | Rose              | 69.76 |   |
|        |                                  |                 | Cornwall   | 201    | Gregor            | 35.   |   |
|        | W 8- C-                          | n               | Nertschink   | 6.04   |                   |       |   |
|        | 7. Sp. CHROMATE.                 | Red lead spar   |  |        | Vauquelin         | 65.1  |   |
|        |                                  |                 | Ditto  |        | Litero            | 64.   |   |
|        |                                  |                 | Ditto  |        | Lilchara          | 74.2  |   |
|        | 0 C- M                           | Brown var.      | Mexico   | *      | 2700000           | 64-42 |   |
|        | 8. Sp. Molybdate.                | Yellow lead ore |  | 1000   | Klaproth          | 58.4  |   |
|        |                                  |                 | Ditto  | 1:00   | Hattener          | 58.75 |   |
|        | 0 0 0                            |                 | Ditto  | 5.48   | 111ttel atte      | 71.   |   |
|        | 9. Sp. Sulphate.                 |                 | Anglesey   | 6.3    | Trupi ou          | 70.5  |   |
|        | 10 C- M                          |                 | Wanlockhead  |        | Dicco             | 55.   |   |
|        | 10. Sp. MURIATE.                 |                 | Derbyshire   |        | Ditto             | 85.5  |   |
|        |                                  | Murio carb.     | Ditto  |        | DILLO             | 85.   |   |
|        |                                  |                 | Ditto  |        | Chenevix          | 001   |   |

<sup>†</sup> With 2.25 silver. ‡ With 1.75 m. acid. § V

# LLIC MINERALS.

|        |       | -  |        |       |       |      |       |      |   |                     |
|--------|-------|----|--------|-------|-------|------|-------|------|---|---------------------|
| Sulph. | Acid  | ı  | Antim. | Iron  | Silex | Alum | Water | Loss | Other ingred.                           | Authority           |
|        |       |    |        |       |       | -    |       |      |   |                     |
| 13.2   |       |    |        |       |       |      | *     |      |   |                     |
| 24.    |       |    |        |       | 4.    |      |       | 5.   |   | Jameson             |
| 8.     |       |    |        | *     | 7.    |      |       |      | silver                                  | Am. Jour.           |
| 16.    |       |    |        |       | 1     |      |       |      | 38. sil. & lime                         |                     |
| 16.18  |       |    |        |       |       |      |       |      | 2 | Ditto               |
| 18.    |       |    |        |       |       |      |       |      | 16.13 ditto                             | Ditto               |
| 8.     |       |    |        | 7.    | 63.   | 6.   |       |      | -                                       | Ditto               |
| 13.5   |       |    | 16.    | 13.75 | 2.5   |      |       | 1.25 |   | Leon. 13            |
| 16.    |       |    | 28.5   | 1.    |       |      |       | 2.   | 13.5 ditto                              | No. 128<br>Ditto    |
| 12.25  |       |    | 7.88   | 2.25  | 1.25  | 7.   |       | 1.91 | 20.4 silver                             |                     |
| 22.    |       |    | 21.    | 1.75  | -75   | 1.   |       | 2.75 | 9.25 ditto                              | No. 9               |
| .0     |       |    |        |       |       |      |       | . 10 |   | Ditto               |
|        | 16.   | C  |        | 3.    |       | 1    |       | 1.6  | ·9 lime                                 | m.                  |
|        | 16.   | C  |        |       |       |      |       | 2.   |   | Thomson             |
|        | 15.   | c  |        | 1.25  |       | +5   |       | ~.   | 5. oxyg.                                | No. 89              |
|        | 15.   | c  |        | -25   | .25   | 1    | 4.    |      | 1. lime                                 | Jameson<br>Ditto    |
| 4.84   | 15.   | c  |        |       | 8.    | 2.66 |       |      | . inne                                  | Leon. 12            |
| 6.     | 15.5  | c  |        |       |       |      |       |      |   | Ditto               |
|        | 24.   | c  |        |       |       |      |       | 3.   | 6. oxvg.                                |                     |
|        | 12.   | c  |        | 1.25  | 10.5  | 4.75 | 2.5   |      | 6. oxyg. 1. mang.                       | Jameson<br>Leon.    |
|        | 18.   | c  |        |       |       |      | 2.    |      | 1.5 c. coal                             |                     |
| 4      | 18.   | P  |        | 1.    |       |      | 2.    |      |   | Thomson             |
|        | 18.37 | P  |        | 1.    |       |      | 7.    |      | 1.7 m. acid                             | An. ch. 2<br>No. 87 |
|        | 19.   | P  |        | -1    |       |      |       |      | 1.54 ditto                              | Ditto               |
|        | 18:17 | P  |        |       | 32.   |      |       |      | 4.05 oxyg.                              |                     |
|        | 19.73 | P  |        |       |       |      |       |      | 1.65 m. acid                            | Thomson             |
|        | 18.   | P  |        |       |       |      |       |      | 1.6 ditto                               |                     |
|        | 9.    | P  |        |       |       |      | 7.    | 1.7  | 4. ar. acid                             | Ditto<br>Tab. com.  |
|        | 13.   | P  |        |       |       |      | 5.    |      | 7. ditto ‡                              | The second second   |
|        | 7.5   | P  |        |       |       |      |       | 1.   | 12.5 ditto \$                           | No. 207             |
|        | 14.   | P  |        |       |       |      | 3.    |      | miceo S                                 | Tab. com.           |
|        | 19.05 | A  |        | -25   | 1     |      |       | 1.7  | 4.37 oxyg.                              | An. ch. 2<br>Lucas  |
|        | 26.4  | A  |        |       |       |      |       |      |   | Phil. Mag           |
|        | 25.   | A  |        | 14.   |       |      |       |      | II acid                                 | Lucas               |
|        | 36.4  | ch |        |       |       |      |       |      |   | Tab. com.           |
|        | 34.9  | ch |        |       |       |      |       |      |   |                     |
|        | 36.   | ch |        |       |       |      |       |      |   | Thomson<br>Ditto    |
|        | 16.   | ch |        | 3.5   |       |      |       | 4.8  |   | An. ch. 53          |
|        | 34.25 | мо | 11.    |       |       |      |       | - 0  |   | No. 63              |
|        | 38.   | MO |        | -     |       |      |       |      |   | P. Trans.           |
|        |       | MO |        |       | 4.    |      |       |      |   | Journal             |
|        | 24.8  | S  |        | 1.    |       |      | 2.    |      |   | No. 88.             |
| *      | 25.75 | 8  |        |       |       |      | 2.25  |      |   | Ditto               |
|        | 45.   | M  |        |       |       |      |       |      |   | Thury               |
|        | 8.5   | M  |        |       |       |      |       |      | 6. c. acid                              |                     |
|        | 8.    | M  | 4.     |       |       |      | *     | 1.   |   | Thomson             |
| TT7: 4 |       |    |        |       |       |      |       |      | or unto                                 | rnomson             |

With 1.5 m. acid. || With some silver & earthy mat.

| CANIII  | C MICHEL                            | Trivial Name          | Locally                                 | Sp. gr. | Analyst           | Nickel |
|---------|-------------------------------------|-----------------------|---|---------|-------------------|--------|
| CXXIII. | 6. GENUS, NICKEL.<br>1. Sp. Native. | Capill. pyrites       |   |         |                   |        |
|         | 2 Sp. Arsenical.                    | Kupfer nickel         |   | 6.64    |                   | 1 .    |
|         | 3. Sp. Oxide.                       | Nickel ochre          |   |         | Lampad.           | 67.    |
|         | 4. Sp. Antimonial.                  |                       | Nassau                                  |         | Klaproth          | 25.25  |
|         |                                     |                       |   |         |                   | Copper |
| CXXIV.  | 7. GENUS, COPPER.                   |                       | ~ .                                     | 0.40    |                   | 99.75  |
|         | 1. Sp. Native.                      |                       | Siberia                                 | 8.99    | John              | 84.    |
|         | 2. Sp. Black Sulph.                 | Copper glance         |   |         | Chenevix          | 73.    |
|         |                                     | Ditto                 | Nova Scotia                             |         | Thomson           | 78.5   |
|         |                                     | Ditto                 | Siberia                                 | 1.00    | Klaproth          | 76.5   |
|         |                                     | Kupferglanz.          | Rothenberg                              | 1       | Ditto             | 69.    |
|         |                                     | Bunt Kupfer.<br>Ditto | Hitterdahl                              |         | Ditto<br>Ditto    | 58.    |
|         |                                     | Ditto                 | Rudelstadt                              |         |                   | 74.5   |
|         |                                     | Ditto                 | Siberia<br>Ditto                        |         | Gueniveau         | 47.    |
|         | 3. Sp. Yellow Sulph                 |                       |   |         | Ditto<br>Chenevix | 30.    |
|         | O. DE. LELLOW SULPH                 | Ditto                 | Sainbel                                 | 1.16    | Gueniveau         | 30.    |
|         |                                     | Ditto                 | Ditto                                   | 4.10    | Ditto             | 30.5   |
|         |                                     | Ditto                 |   |         | Ditto             | 27.    |
|         |                                     | Ditto                 | Baigorie<br>Ditto                       |         | Ditto             | 28.    |
|         |                                     | Ditto                 | Ditto                                   |         |                   | 41.    |
|         |                                     | Ditto                 |   |         | Lampad.           | 40.    |
|         | 4. Sp. GREY SULPH.                  | Fahlerz               | Airthrie                                | 4.87    | Sage<br>Thomson   | 19.2   |
|         | - Out Other College                 | Ditto                 | Freyberg                                | 1       | Klaproth          | 41.    |
|         |                                     | Ditto                 | Ditto                                   |         | Ditto             | 48.    |
|         |                                     | Ditto                 | Ditto                                   |         | Ditto             | 42.5   |
|         |                                     | Ditto                 | Andreasberg                             |         | Ditto             | 16.25  |
|         |                                     | Ditto                 | Piémont                                 |         | Napione           | 29.3   |
|         |                                     | Grey silver ore       | C C P C C C C C C C C C C C C C C C C C |         | Klaproth          | 31.36  |
|         |                                     | Black ditto           | Kapnick                                 |         | Ditto             | 37.75  |
|         |                                     | Ditto                 | Poratch                                 |         | Ditto             | 39.    |
|         |                                     | Ditto                 | Anaberg                                 | 1       | Ditto             | 40.25  |
|         |                                     | Ditto                 | Zilla                                   | 1:      | Ditto             | 37-5   |
|         |                                     | Ditto                 | Wolfach                                 | 1       | Ditto             | 25.5   |
|         |                                     | Ditto                 | Peru                                    | 3.91    | Ditto             | 27.    |
|         | 5. Sp. Oxide.                       | Ruby copper           | Cornwall                                | 3.88    | Chenevix          | 85.5   |
|         | 1                                   | Ditto foliated        | Siberia                                 |         | Klaproth          | 91.    |
|         |                                     | Ditto                 | Catherineburg                           |         | John              | 99.    |
|         |                                     | Ditto compact         | Ditto                                   | 6.      | Ditto             | 99:5   |
|         |                                     |                       |   |         |                   | Copper |
|         | 6. Sp. Blue Carbon.                 | Copper azure          | Siberia                                 |         | Klaproth          | 56.    |
|         |                                     | Pro- undic            | Ditto                                   |         | Pelletier         | 68.    |
|         |                                     |                       |   |         | Fontana .         | 66.    |
|         | +                                   | cristallised          | Chessy                                  |         | Vanquelin         | 56.    |

## LLIC MINERALS.

|       |        |        |        |        |      |       | -    |       | -       |            |
|-------|--------|--------|--------|--------|------|-------|------|-------|---------|------------|
| Iron  | Antim. | Arsen. | Sulph. |        |      | Water | Loss | Other | ingred. | Authority  |
|       |        |        |        |        |      |       |      |       |         |            |
|       |        |        |        |        | 2    |       |      |       |         |            |
| 23.2  |        |        |        |        |      | 1.5   | 8.3  |       |         | Thomson    |
|       | 47.75  | 11.75  | 15.25  |        | 4.   |       |      |       |         | Aikin      |
| Iron  | Sulph. | Arsen. | Silver | Antim. | Zine | Silex | Loss |       |         |            |
| -12   |        |        |        |        |      |       |      |       | gold    | Leon. 12.  |
| 4.    | 12.    |        |        |        |      |       |      |       |         | P. Trans.  |
| 1.    | 24.5   |        |        |        |      | 1.8   | -22  |       |         | Thomson    |
| 2.25  | 18.5   |        |        |        |      | .75   |      |       |         | No. 64     |
| •5    | 22.    |        |        |        |      |       | 1.   |       |         | No. 125    |
| 7.5   | 19.    |        |        |        |      |       |      | 4.    | oxyg.   | No. 65     |
| 18.   | 19.    |        |        |        |      |       |      | 5.    | ditto   | Ditto      |
| 1.5   | 20.5   |        |        |        |      |       | 3.5  |       |         | Jour. 21   |
| 9.3   | 13.    |        |        |        |      | 25.   |      | 7.    | lime    | Ditto      |
| 53.   | 12.    |        |        |        |      | 5.    |      |       |         | P. Trans.  |
| 31.   | 36.5   |        |        |        | 1.   | 1.    | .5   |       |         | Jour. 21   |
| 33.   | 35.    |        |        |        | *    | 1.    | 1.5  |       |         | Ditto      |
| 30.   | 31.5   |        |        |        | 1.   |       |      | 8.5   | residue | Ditto      |
| 29.   | 31.5   |        |        |        |      |       |      | 9.    | ditto   | Ditto      |
| 17-1  | 45.1   |        |        |        |      |       |      |       |         | Jameson    |
| 40.   | 20.    |        |        |        |      |       |      |       |         | Ditto      |
| 51.   | 14.1   | 15.7   |        |        |      |       |      |       |         | Ed. Trans. |
| 22.5  | 10.    | 24-1   | •4.    |        |      |       | 2.   |       |         | No. 126    |
| 25.5  | 10.    | 14.    | •5     |        |      |       | 2.   |       |         | Ditto      |
| 27.5  | 10.    | 15.6   | -9     | 1.5    |      |       | 2.   |       |         | Ditto      |
| 13.75 | 10.    |        | 2.25   | 16.    |      | 2.5   | 4.75 | 34.5  | lead    | Jameson    |
| 12.1  | 12.7   | 4.     | .7     | 36-9   |      |       | 3.2  | 1.1   | alum.   | Ditto      |
| 3.3   | 11.5   |        | 14.75  | 34.09  |      |       | 4.68 | -3    | ditto   | No. 9      |
| 3.25  | 28.    |        | -25    | 22.    | 5.   |       | 3.75 |       |         | No. 127    |
| 7.5   | 26.    |        | 200    | 19.5   |      |       | 1.75 | 6.25  | merc.   | Ditto      |
| 13.5  | 18.5   | .75    | -3     | 23.    |      |       | 3.7  |       |         | Ditto      |
| 6.5   | 21.5   | 10     | 3.     | 29.    |      |       | 2.5  |       |         | Ditto      |
| 7.    | 25.5   |        | 13.25  | 27.    |      | 0     | 1.75 |       |         | Ditto      |
| 7.    | 27.75  |        | 10.25  | 23.5   |      |       | 2.75 | 1.75  | lead    | Ditto      |
|       | 61 10  |        | 10.23  | 20.0   |      |       |      | 11.5  | oxyg.   | P. Trans.  |
| 9.    |        |        |        |        | -    |       |      |       |         | No. 122    |
| -25   |        |        |        |        |      |       |      | .75   | water   | Leon. 12   |
| •25   |        |        |        |        |      |       |      | .25   | ditto   | Ditto      |
|       |        |        |        |        |      |       |      |       |         |            |
| Acid  | Oxyg.  |        |        |        |      | Water | Loss |       |         |            |
| 24. c | 14.    |        |        |        |      | 6.    |      |       |         | No. 123.   |
| 19. c | 9.     |        |        |        |      | 2.    |      |       |         | Tab. com.  |
|       | 10.    |        | -      |        |      | 2.    |      |       |         | Thury      |
| 200   | 12.5   |        |        |        |      | 6.5   |      |       |         | Journal    |
| C.    | 115.0  |        |        |        |      | 00    |      |       |         | 1          |

Aver II no a 4111 11 112.

| ATTITLE | COPPED                                    | Trivial Name             | Locality                | Sp.gr. | Analyst    | Copper |
|---------|---|--------------------------|-------------------------|--------|------------|--------|
| CAAIV.  | 7. GENUS, COFPER.<br>7. Sp. GREEN CARBON. | Fibrous                  | Chessy                  |        | Vauquelin  | 56.1   |
|         | 1. SP. GREEN CARBON.                      | LIDIOUS                  | Siberia                 |        | Klaproth   | 58.    |
|         |   |                          | Arragon                 |        | Proust     | 56.8   |
|         |   |                          | China                   | 3.57   | Fontana    | 75.    |
|         |   | Copper green             | Siberia                 | 2.5    | John       | 12.    |
|         |   | Chrysocolle              | Ditto                   |        | Klaproth   | 40.    |
|         |   | Dioptase                 | Ditto                   | 3.3    | Vauquelin  | 28.57  |
|         |   | Ditto                    | Ditto                   |        | Lowitz     | 55.    |
|         | S. Sp. MURIATE.                           | Copper sand              | Peru                    |        | Berthollet | 52.    |
|         | Di Di Vilonia                             |                          | Ditto                   |        | Proust     | 70.5   |
|         |   |                          | Ditto                   |        | Ditto      | 46.8   |
|         |   |                          | Chili                   |        | Ditto      | 76.5   |
|         |   |                          | Ditto                   |        | Ditto      | 57.4   |
|         |   |                          | Ditto                   |        | Klaproth   | 73.    |
|         | 9. Sp. Phosphate.                         |                          | Firneberg               |        | Ditto      | 68.13  |
|         | 10. Sp. ARSENIATE.                        | Obtuse octoh.            | Cornwall                | 2.88   | Chenevix   | 49.    |
|         | 10. SP. ARSENIATE,                        | Acute ditto              | Ditto                   | 4.28   | Ditto      | 60.    |
|         |   | Lamellated               | Ditto                   |        | Ditto      | 58.    |
|         |   | Ditto                    | Ditto                   |        | Vauquelin  | 39.    |
|         |   | Prismatic                | Ditto                   | 4.28   | Chenevix   | 54.    |
|         |   | Capillary                | Ditto                   |        | Ditto      | 51.    |
|         |   | Acicular                 | Ditto                   |        | Klaproth   | 50.62  |
|         |   | Ditto                    | Ditto                   |        | Vauquelin  |        |
|         |   | Hematitiform             | Ditto                   |        | Chenevix   | 50.    |
|         |   | Artificial               |                         |        | Ditto      | 50.    |
|         |   | Ditto                    |                         |        | Ditto      | 35.    |
|         |   |                          |                         |        |            | 1ron   |
| CXXV.   | 8. GENUS, IRON.                           |                          | 20.000                  | ~ **   |            |        |
|         |   |                          | Forged                  | 7.78   |            |        |
|         |   |                          | Melted                  | 7.2    | Thomson    | 69.    |
|         |   | Red oxide                | 1.0                     |        | Ditto      | 78.5   |
|         |   | Black ditto              | TT 1 0                  |        | Klaproth   | 92.5   |
|         | 1. Sp. NATIVE.                            | Tellure eisen            | Kamsdorf                | 7.74   |            | 94.    |
|         |   | Native steel             | La Bouiche<br>See CXLI. | 1.14   | St Memm    |        |
|         | 2 2 15                                    | Meteoric iron            | Aberdeenshire           | 4.76   | Thomson    | 98.7   |
|         | 2. Sp. MAGNETIC.                          | Titaniferous             |                         | 4.10   | Inombon    | 85.3   |
|         |   | Do. less excess<br>Ditto | Puy en Valais           |        | Cordier    | 82.    |
|         |   | Ditto                    | Neidermenich            |        | Ditto      | 79.    |
|         |   |                          | Saint Quay              |        | Descostils | 86.    |
|         |   |                          | Teneriffe               |        | Cordier    | 79.    |
|         | 9 Ca Change                               |                          | Grengesberget           |        | Hisinger   | 94.38  |
|         | 3. Sp. Specular.                          |                          | Orengesberger           |        | Brochi     | 88.    |
|         |   | Vol. eisenglass          | Vosuvins                | 3.88   | Klaproth   | 66.    |
|         |   | 1 on ciscingiass         | , couvido               |        |            |        |

<sup>#</sup> With 1. phos.

<sup>§ 14.</sup> excess.

## LIC MINERALS.

| Acid    | Oxyg.  | Sulph.    | Silex  | Alum  | Lime  | Water  | Loss | Othe      | r ingred. | Authority |
|---------|--|-----------|--------|-------|-------|--------|------|-----------|-----------|-----------|
| 21.25 c | 14.  |           |        |       |       | 8-65   |      |           |           | Journal   |
|         | 12.5   |           |        |       |       | 11.5   |      |           |           | No. 66    |
|         | 14.2   |           | 1.     |       | 1.    |        |      |           |           | Journal   |
| 19.4 c  |  |           |        |       |       | 5.6    |      |           |           | Kirwan    |
| 3. c    |  | 7.63      | 28.37  |       | 1.5 s |        |      |           |           | Leon 12   |
|         | 10.  | 1         | 26.    |       |       | 12.    |      |           |           | No. 124   |
| 18.67 c |  |           | 28.57  |       | 24.18 |        | 130  |           |           | Tab. com. |
| 19.01 C |  |           | 200    |       |       | 12.    |      |           |           | Lucas     |
|         |  |           | 33.    | *     |       |        |      | 1         | c. iron   | Tab. com  |
|         | 11.  |           | 11.    |       |       | 12.    |      | 1.        | C. Iron   |           |
| 1.4 M   |  |           |        |       |       | 18.1   |      |           |           | Ditto     |
|         | 11.5   |           | 17.    |       |       | 15.    |      |           |           | Thury     |
| 10.6 м  |  |           |        |       |       | 12.7   | 2.   |           |           | Tab. com. |
| 10. M   | 14.6   |           |        |       | 4.    | 12.    |      | 2.        | iron      | Thury     |
| 10·1 M  |  |           |        |       |       | 16.9   |      |           |           | No. 95    |
| 20.05   |  |           |        |       |       |        |      |           |           | No. 96    |
| 30-95 р |  |           |        |       |       |        |      |           |           |           |
| 14. A   |  |           |        |       |       | 35.    | 2.   |           |           | P. Trans. |
| 39.7 A  |  |           |        |       |       |        | .3   |           |           | Ditto     |
| 21. A   |  |           |        |       |       | 21.    |      |           |           | Ditto     |
| 3. A    |  |           |        |       |       | 17.    | 1.   |           |           | Tab. com  |
|         |  |           |        |       |       | 16.    |      |           |           | P. Trans. |
|         |  | *         |        |       |       | 18.    | 2.   |           |           | Ditto     |
|         |  |           |        |       |       | 172.42 |      |           |           | No. 94    |
| 15. A   |  |           |        |       |       | 3.3    | -88  |           |           | Tab. com. |
| 31. A   |  |           |        |       |       |        |      |           |           | P. Trans. |
| 29. A   |  |           |        |       |       | 21.    |      |           |           |           |
| 27. A   |  |           |        |       |       | 22.    |      |           |           | Ditto     |
| 39·5 A  |  |           |        |       |       | 24.    |      |           |           | Ditto     |
| Oxyg.   | Titan.   | Mang.     | Copper | Silex | Alum  | Lime   | Loss |           |           |           |
|         |  |           |        | -     |       | -      |      |           |           |           |
|         |  |           |        |       |       |        |      |           |           |           |
| 31.     |  |           |        |       |       |        |      |           |           | Thomson   |
| 21.5    |  |           |        |       |       |        |      |           |           | Ditto     |
| 0.10    |  |           | 1.5    |       |       |        |      | 6.        | lead      | No. 130   |
|         |  |           |        |       |       |        |      | 4.        |           | Journal   |
|         |  |           |        |       |       |        |      | To        |           |           |
|         | 12.65  |           |        | 1.5   |       |        |      | 1.        |           | Ed. Tran  |
|         | 9.5  |           |        | 1.5   |       |        | 2.7  | 1.        | ditto     |           |
|         | 12.6   | 4.5       |        |       |       |        | 3.   |           | chrome    | Journal   |
|         | 1 = 0  | 2.6       | 4.     |       | 1.    |        |      |           |           | Ditto     |
|         | 15.9   |           |        |       |       |        |      |           | ditto     | Ditto     |
|         | Control of the Contro | 2.        |        |       | E     |        |      |           |           |           |
| •       | 8.   | 2.        |        |       |       |        |      |           |           | Ditto     |
|         | Control of the Contro | 2.<br>1·6 |        | :     | -8    | 2.75 p | *    | 1.        | bitum.    |           |
|         | 8.   |           |        |       |       | 2.75 P |      | 1.<br>8.5 | bitum.    | Leon. 12  |

<sup>||</sup> With a trace of mag. + With S. s. acid.

| SENER | C TRON                               | Trivial Name   | Locality                 | Sp.gr. | Analyst               | Iron  |
|-------|--------------------------------------|----------------|--------------------------|--------|-----------------------|-------|
| XXV.  | 8. GENUS, IRON.<br>4. Sp. Sulphuret. | Iron pyrites   | Dodecahedron             |        | Hatchet               | 47.85 |
|       | 4. SP. SULPHUREI.                    | non pyrics     | Cube, striated           |        | Ditto                 | 47.5  |
|       |                                      |                | Ditto, smooth            |        | Ditto                 | 47.3  |
|       | 1                                    | 1000           | Radiated                 |        | Ditto                 | 46.4  |
|       |                                      |                | Ditto                    |        | Ditto                 | 45.66 |
|       |                                      | 2              | Magnetic                 | 4.51   | Ditto                 | 63.5  |
|       |                                      |                | Cube                     |        | Bucholz               | 44.85 |
|       | P.                                   |                | Radiated                 |        | Ditto                 | 18-29 |
|       |                                      |                |                          |        | Proust                | 47.36 |
|       |                                      |                |                          |        | Gueniveau             |       |
|       |                                      |                |                          |        | Ditto                 | 53.69 |
|       | 5. Sp. Oxide.                        | Cris. in cubes | Toeschnitz               |        | Bucholz               | 70.   |
|       | Compact                              | Red Hematite   |                          | 48-9   | Lampad.               | 65.4  |
|       |                                      | Ditto          | Ardèche                  | 4.3    | Descostils            | 92.   |
|       |                                      | Ditto          | Ditto                    | 4.9    | Ditto                 | 85.   |
|       |                                      | Ditto          | Framont                  | 4.8    | Daubuison             | 90.   |
|       |                                      | Ditto          | Ditto                    | 5.     | Ditto                 | 94.   |
|       | Soft                                 | Ditto          | Ardèche                  | 4.1    | Descostils            | 40.2  |
|       | 100                                  | Red iron froth |                          |        | Henry                 | 66.   |
|       |                                      | Brown hemat.   |                          | 3.8    | Daubuison             | 78.   |
|       |                                      | Ditto          | Ditto                    |        | Calmelet<br>Daubuison |       |
|       |                                      | Ditto          | Vicdessos                | 3.9    |                       | 84.   |
|       | Compact                              | Ditto          | Bergzabern               |        | Ditto<br>Ditto        | 64.   |
|       |                                      | Ditto          | Ditto                    |        | Ditto                 | 81.   |
|       |                                      | Ditto          | Pyranees                 |        |                       | 81.   |
|       |                                      | Ditto          | Vicdessos                | 3.4    | Ditto<br>Ditto        | 69.   |
|       |                                      | Ditto          | Voigtsberg               | 3.2    | Vauquelin             |       |
|       |                                      | Black hemat.   | Bas Rhin                 | 2.4    | Klaproth              | 67.   |
|       |                                      | Ditto          | Freyberg                 | 10000  | Drapier               | 59.   |
|       |                                      | Grey ore       | Deuxponts                |        | Brochi                | 50.   |
|       |                                      | Prismatic      | Odelo                    |        | Daubuison             | 73.   |
|       |                                      | Lenticular     | Doubs                    | 6.67   |                       | 64.   |
|       |                                      | Ditto          | Radnitz<br>Colebrookdale |        | Descostils            | 50.   |
|       |                                      | Ditto          | Blancheland              |        | Ditto                 | 54.   |
|       |                                      |                | Gieslautern              | 1      | Ditto                 | 38.6  |
|       |                                      |                | Ditto                    |        | Ditto &               | 40.   |
|       |                                      |                | Haute Loire              |        | Berthier              | 51.   |
|       |                                      |                | Du Garde                 |        |                       | 57.3  |
|       |                                      | Œitte          | Dep. deL'orme            | 3.3    | Daubuison             | 78.   |
|       |                                      | Pea ore        | Hogau                    |        | Klaproth              | 53.   |
|       |                                      | L ca of c      | Penné                    | 5.2    | Vauquelin             | 30.   |
|       |                                      | Com.iron stone |                          |        | Lampad.               | 35.   |
|       |                                      |                | Ditto                    |        | Ditto                 | 39.   |
|       |                                      | Umber          | Cyprus                   |        | Klaproth              | 48.   |
|       |                                      | Yellow ocre    | Elba                     |        | Daubuison             | 83.   |
|       |                                      | Bog ore        | Klempnow                 |        | Klaproth              | 66.   |
|       |                                      |                | Lusace                   |        | Daubuison             | 01+   |
|       |                                      |                |                          |        |                       |       |

#### C MINERALS.

| Sulph. | Oxyg. | Mang.     | Silex | Alum | Lime | Mag. | Loss | Othe | r ingred. | Authority  |
|--------|-------|-----------|-------|------|------|------|------|------|-----------|------------|
| 52-15  |       |           |       |      |      |      |      |      |           | P. Trans.  |
| 52.    |       |           |       |      |      |      |      |      |           | Ditto      |
| 52.7   |       |           |       |      |      |      |      |      |           | Ditto      |
| 53.6   |       |           |       |      |      |      |      |      |           | Ditto      |
| 54.34  |       |           |       |      |      |      |      |      |           | Ditto      |
| 36.5   |       |           |       |      |      | 1    |      |      |           | Ditto      |
| 51.15  |       |           | 4.    |      | 100  |      |      |      |           | An. ch. 68 |
| 49.61  |       |           | 2.    |      |      |      |      |      | -         | Ditto      |
| 52.64  |       |           | ~.    |      |      |      |      |      |           | Ditto      |
| 47.2   |       |           | *     |      |      |      |      |      |           | Ditto      |
| 46-31  |       |           |       |      |      |      |      |      |           | Ditto      |
|        | 29.   |           | *     |      |      |      |      |      |           | Journal    |
| 9      |       | 2.7       | 10.7  | 9.3  |      |      |      |      |           | Jameson    |
|        |       | 1.2       | 2.4   | *    | 2.   | *    | .8   | 1.6  | calcin.   | Journal    |
|        |       | 2.        | 8.    | -8   | ~    | -    | 1.2  | 3.   | ditto     | Ditto      |
|        |       | ~.        | 2.    |      | 1.   |      | 4.   | 3.   | ditto     | Ditto      |
|        |       |           | 2.    |      | *    |      | 2.   | 2.   | ditto     | Ditto      |
| 1      |       | 2.5       | 11.   |      | 23.  |      |      | 20.2 | ditto     | Ditto      |
|        | 28.5  |           | 4.5   | 1.25 | 20.  |      |      |      |           | Thomson    |
|        | 200   | 2.        | 3.    | 1 20 |      |      | 1.   | 15.  | calcin.   | Journal    |
|        |       | 7.        | 11.   |      |      |      | 4.   |      |           | Ditto      |
|        |       | 2.        | 1.    |      |      |      | 1.   | 14.  | calcin.   | Ditto      |
| 112    |       | 1.        | 2.    |      |      |      | 2.   | 11.  | ditto     | Ditto      |
|        |       | 7 100 100 | 25.   |      |      |      | 3.   |      |           | Ditto      |
|        |       |           | 2.    |      |      |      | 6.   | 11.  | calcin.   | Ditto      |
|        |       |           | 4.    |      |      |      | 4.   | 12.  | ditto     | Ditto      |
|        |       | 3.        | 10.   | 3.   |      |      | .2.  | 13.  | ditto     | Ditto      |
| 20     |       | -         | 3.75  |      | -    |      | 1.   | 15.  | water     |            |
|        |       | *         | -     |      | .    |      |      | 25.  | ditto +   | No. 311    |
|        |       | 2.4       | 9.4   | •6   | .2   |      |      | 29.5 | calcin,   | An. ch. 84 |
|        |       |           | 30.5  | 7.   |      | 2    | 2.5  | 13.  | water     | Leon. 13   |
|        |       | 1.        | 9.    | 2-1  |      |      | 3.   | 14.  | calcin.   | Journal    |
|        |       | 500       | 7.5   | 23.  | 1.5  |      | .5   | 5.   | water     | Thomson    |
|        |       | 2.6       | 10.6  | 2.   | 1.6  | 2.4  |      | 32.  | calcin.   | An. ch. 84 |
|        |       | 26.16     | 13.   | 1.   | 4.2  | 2.   |      | 24.6 | ditto     | Ditto      |
| 1.20   |       | 100       | 32.   | 4.   | 1.8  | 4.3  |      | 20.  | ditto     | Ditto      |
|        |       |           | 19.   | 3.4  | 2.8  | 4.   |      | 32.  | ditto     | Ditto      |
|        |       | 1.5       | 9.    | 7.   | 1.   |      | 1.   | 29.  | ditto #   | Ditto      |
| 200    |       | 1.4       | 5.2   | 1.2  | 1.8  | 3.6  |      | 31.  | ditto §   | Ditto      |
|        |       | *         | 7.    | 1.   |      |      | 1.   | 13.  | ditto     | Journal    |
|        | 1     |           | 23.   | 6.5  |      |      |      | 14.5 | water     | No. 134    |
|        | 18.   |           |       | 31.  |      |      |      | 6.   | ditto     | Thomson    |
| 3.     | 100   |           |       | 39.  |      | 2.   |      | 10.  | ditto     | Ditto      |
| 1.     |       |           |       | 40.  | :    | 1.   |      | 9.   | ditto     | Ditto      |
|        | 121   | 20.       | 13.   | 5.   |      |      |      | 14.  | ditto     | No. 85     |
|        |       | *         | 5.    |      |      |      |      | 12.  | calcin.   | Journal    |
|        | -     | 1.5       |       |      |      |      |      | 23.  | water     | No. 133    |
|        |       | 7.        | 6     | 2.   |      |      |      | 19.  | calcin.   | Journal    |
| 1      | . 1   | . 1       |       | ~ 1  | -    |      |      |      |           |            |

With 1.6 carbon.

|| With 8. phosphorus.

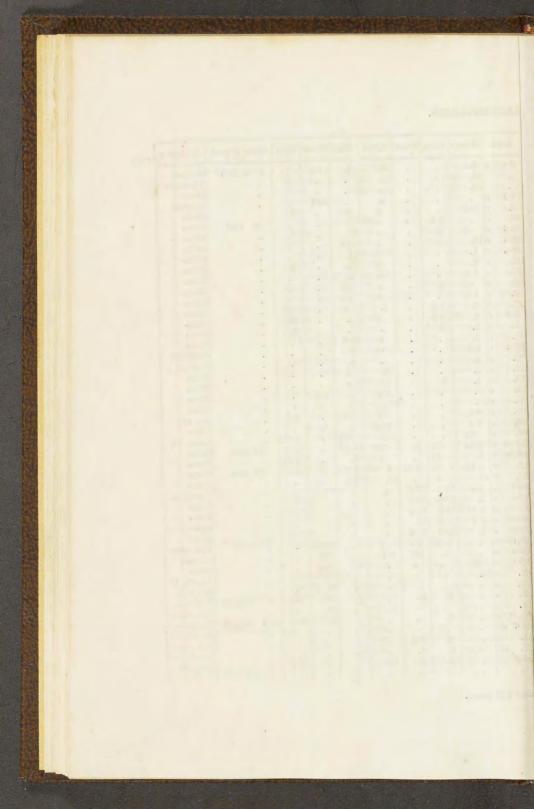
+ Tolly

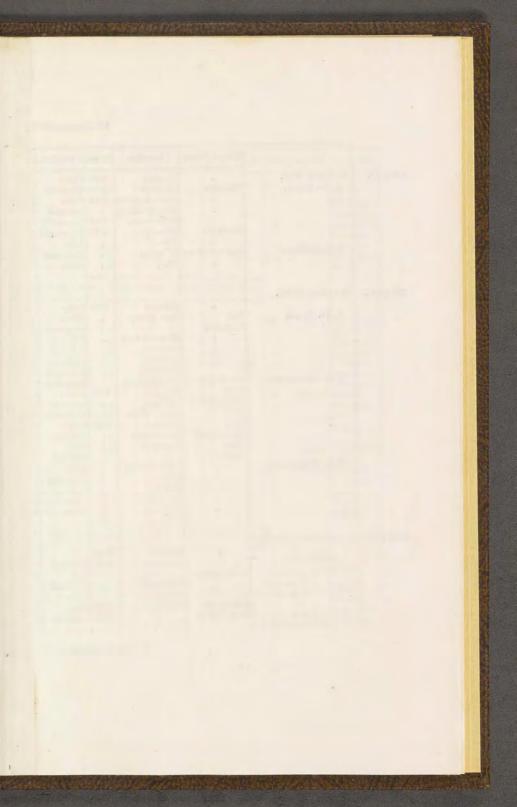
| cxxv.   | 8. GENUS, IRON.  | Trivial Name     | Locality        | Sp.gr.   | Analyst               | Iron  |
|---------|--|------------------|-----------------|----------|-----------------------|-------|
| WALLEY. | 6. Sp. Carbonate.  | White            | Allevard        |          | Bergman               | 25.   |
|         | 01 021 01111111111111111111111111111111  | Brown            | Ditto           |          | Ditto                 | 38.   |
|         |  | Ditto            | Ditto           |          | Ditto                 | 22.   |
|         | 1  | Black iron sp.   |                 |          | Ditto                 | 62.   |
|         | 1  | Ditto            |                 |          | Berthier              | 57.   |
|         |  | Ditto, fibrous   | Cantal          |          | Ditto                 | 59.   |
|         |  | White            | Ditto           | 3.65     | Ditto                 | 49.   |
|         | 1  | Grev             | Ditto           | 3.82     | The second second     | 52.   |
|         | 1  | Dark red         | Grenoble        | 3.71     |                       | 50.   |
|         | 1  | White            | Vizilles        |          | Ditto                 | 50.   |
|         |  | Yellowish grey   | 1 444           |          | Ditto                 | 60.   |
|         |  | Light coloured   | 0               | W. C. C. | Ditto                 | 61.5  |
|         | 1  | Opake brown      | St Agnes, Isere | 100000   | Ditto                 | 59.   |
|         | 1  | Black decomp.    | Ditto           |          | Ditto                 | 81.   |
|         | 1  | Ditto            | Rancie          |          | Ditto                 | 80.   |
|         | l.   | Ditto            | Biscay          |          | Ditto                 | 86.   |
|         | 1  | White            | Saxony          | 946      | Ditto                 | 52.   |
|         | 1  | Willied          | Vaunaveys       | 3.6      | Ditto                 | 49.   |
|         |  | Dark brown       | Crotz           |          | Ditto                 | 57.   |
|         | 1  | Brown decomp.    |                 |          | Ditto                 | 72.   |
|         | 1  | Diown accomp.    | Siberia         |          | Ditto                 | 82.   |
|         | 1  | Brown spar       | Baireuth        | 1        | Bucholz               | 59.5  |
|         | 1  | Diown spac       | Harzgerode      | .5       | Ditto                 | 55.   |
|         | 1  |                  | Baireuth        |          | Klaproth              | 58.   |
|         |  |                  | Dankerode       | :        | Ditto                 | 57.5  |
|         |  | Fibrane          | Steinheim       |          | Ditto                 | 63-75 |
|         |  | Fibrous          | Bovano          |          | Brochi                | 54.5  |
|         |  | 1                | Ditto           |          | Ditto                 | 57-54 |
|         |  |                  | Ditto           |          | Ditto                 | 67.   |
|         | 1  |                  | Ditto           |          | Ditto                 | 17.   |
|         | 100  | Com.cl. iron st. |                 |          | Richter               | 35.5  |
|         |  | Ditto            |                 |          | Ditto                 | 42.5  |
|         |  | Ditto            |                 |          | Ditto                 | 39.1  |
|         |  | Ditto            | *               |          | Ditto                 | 33.9  |
|         |  | Ditto            |                 |          | Ditto                 | 20.1  |
|         | 7. Sp. PHOSPHATE.  | Laminated        | Isle de France  | 2.6      | Laugier               | 41.25 |
|         | The state of the s | Lammated         | Isie de France  |          | Cadet                 | 41.1  |
|         | 1  |                  | A 17            |          | Berthier              | 43-   |
|         |  | Manus            | Alleyras        | 3.65     |                       | 31.   |
|         | 1  | Manganesian      | Limoges         | 3.00     | y auque               | 47.2  |
|         | 8. Sp. ARSENIATE.  | Earthy           | Ekartsberg      |          | Klaproth              | 45.5  |
|         | OF DIS AROESIATE.  | Cube ore         | Cornwall        | 3.       |                       | 48.   |
|         |  | Cumman           | Ditto           |          | Vauquelin<br>Chenevix | 27.5  |
|         | 9. Sp. CHROMATE.   | Cupreous         | Ditto           | 1.00     |                       | 36.   |
|         | OF CHROMATE.   |                  | Gassin          |          | Tassaert              | 34.7  |
|         |  |                  | France          | 4.03     | + auduon              | 34.   |
|         |  |                  | Siberia         | 4.6      | Laugier<br>Klaproth   | 33.6  |
|         | 10. Sr. MURIATE.   | 1                | Kreiglach       | 4.5      | Kapou                 | ,     |
|         | -V. Dr. MURIATE.   |                  |                 |          |                       |       |

## ALLIC MINERALS.

| Aci    | id  | Mang. | Silex | Alum | Lime | Mag.  | Water | Loss | Other ingred. | Authority  |
|--------|-----|-------|-------|------|------|-------|-------|------|---------------|------------|
| 6.8    | C   | 4.5   |       |      | 48.  | 7.    | 17.2  |      | 3. s. iron    | Journal    |
| 4      |     | 24. c |       |      | 38.  |       |       |      |               | Thomson    |
|        |     | 28. c |       | 1    | 50.  |       |       |      |               | Ditto      |
| 16.9   | C   | 1000  |       |      | 5.   |       | 16.1  |      |               | Journal    |
| 35.    | c   | 1     |       | 1    |      | 5.5   | 1000  | 1.   |               | Ditto      |
| 33.    | C   | 1     | 1.6   |      | -04  | 4.    |       |      | ·2 coal       |            |
| 36.5   | c   |       | 2.    |      | *    | 11.   |       | 1.   |               | Ditto      |
| 34.5   |     | 12.   | 1.    | -    | 1    | 2.8   |       |      |               | Ditto      |
| 37.5   | 0   |       | 1     |      |      | 70.00 |       |      |               | Ditto      |
| 37.    | 0   | 1     |       |      | *5   | 11.   |       |      |               | Ditto      |
| 37.    | 0   |       |       |      | -8   | 10.   |       | 2.   | *             | Ditto      |
| 34.    | 0   | 2 4   |       |      |      | 4.    |       |      |               | Ditto      |
| 34.    | 0   | 1     | 1.    |      |      | 3.8   |       |      |               | Ditto      |
| 13.    | - 2 | 1     |       |      | *    | 5.6   |       |      |               | Ditto      |
| 8.5    | C   | 1     | 1.5   |      | 1.   | 8     |       | 1.5  |               | Ditto      |
|        | C   | 9.0   | 2.5   |      | .5   |       |       | 2.5  | -             | Ditto      |
| 7.     | C   | ~ .   | 3.    |      |      |       |       | 2.   |               | Ditto      |
| 37.    | C   | 100   |       |      |      | 12.6  |       |      |               | Ditto      |
| 37.5   | c   |       |       |      | •3   | 12.5  |       |      |               | Klaproth   |
| 33.    | C   |       |       |      |      | 4.    |       |      |               | Journal    |
| 21.    | c   | 0.0   |       |      | 1.   |       |       |      |               | Ditto      |
| 13.    | c   | 1     | 2.    |      | 1.   |       |       |      |               | Ditto      |
| 36.    | C   |       |       |      | 2.5  |       | 2.5   |      |               | Ditto      |
| 35.    | C   | 10.   |       |      |      |       |       |      |               | Ditto      |
| 35.    | C   | 4.5   |       | 1.6  | .5   | .75   |       | 1.5  |               | No. 131    |
| 36.    | C   | 3.5   |       |      | 1.35 |       |       |      |               | Ditto      |
| 34.    | C   | .75   |       |      |      | .25   |       | 1.25 |               | Leon. 13   |
| 33-25  |     | 4.25  | .75   | 2.   | -38  | 1.25  |       | 3.37 | -25 zine      | Ditto      |
| 32.38  | +   | 6.    | .25   |      | .25  | 1.    |       | 3.87 |               | Ditto      |
| 19.    | +   | 3.75  | •25   | 2.25 | 5.   | 1.25  |       | 3.75 | ·25 zinc      | Ditto      |
| 36.    | +   | 18.   | .5    | 1    | 27.  | 1.5   |       |      | 4.5 0000      | Ditto      |
| 28-1   | c   | 1.5   | 14.3  | 22.6 |      |       |       |      |               | Thomson    |
| 27.1   | c   | 3.    | 13.8  | 13.6 |      |       |       |      | 2             | Ditto      |
| 32.1   | c   |       | 11-9  | 15.8 |      |       |       |      |               | Ditto      |
| 58-1   | c   | 2.0   | 23.9  | 13.  |      | 180   |       |      |               | Ditto      |
| 28.8   | C   |       | 19.9  | 30.2 |      |       |       |      |               | Ditto      |
| 19.25  |     |       | 1.25  | 5.   |      |       | 31.25 |      |               | Tab. com.  |
| 36.9   | p   |       | 3.    | 5.8  | 9-1  |       | 13.1  |      |               | Journal    |
| 23.1   | p   | -3    | *     | *    | 7.72 |       | 34.4  |      |               | Ditto      |
| 27.    |     | 42.   |       |      |      |       |       |      | *             | An. ch. 41 |
| 32.    | p   | 24.   |       |      |      | *     | 20.   |      |               | No. 132.   |
| 31.    | A   |       | 4.    |      | 100  |       | 10.5  |      | 9. copper     | P. Trans.  |
| 18.    | A   |       |       |      | 2.   |       | 32.   |      | 9. copper     | Tah. com.  |
| 33.    | A   |       |       |      | 2.   |       |       | 1.5  | 00.5          | Thomson    |
| 63.6   | ch  |       | 3.    | *    |      | *     | 12.   | 1.5  | 22.5 copper   |            |
| 43.    | ch  |       |       | 20.0 |      | *     | *     | 4    |               | An. ch. 31 |
| 53.    | ch  |       | 2.    | 20.3 |      |       |       |      |               | Tab com.   |
| 55.5   |     |       | 1.    | 11.  |      |       |       | 1.   | *             | An. ch. 78 |
| 10.000 | ch  |       | 2.    | 6.   |      |       |       | 3.5  | 100           | Ditto 64   |
| 1 .    |     | *: 1  | *     |      |      |       |       | 4 3  |               | 1 " 1      |

acid and water.





|          |  | Trivial Name                           | Locality   | Sp.gr.       | Analyst  | Tin                                |
|----------|--|--|--|--------------|--|------------------------------------|
| exxvi,   | 9. GENUS, TIN.<br>1. Sp. Oxide.          | Tinstone                               | Purified<br>Cornwall<br>Schlackenwald<br>Ehrenfreiders.        | 6.95         | Haüy<br>Klaproth<br>Ditto<br>Lampad.                 | 77·5<br>75.<br>68.                 |
|          | 2. Sulphuret.                            | Wood tin<br>Bell metal ore             | Goanaxuato<br>Cornwall<br>Ditto<br>St Agnes<br>Ditto           |              | Descostils<br>Vauquelin<br>John<br>Klaproth<br>Ditto | 66.<br>91.<br>94·5<br>26·5<br>34.  |
| CXXVII.  | 10. genus, ZINC.                         |  |  | W 10         |  | Zinc                               |
|          | 1. Sp. Oxide.                            | Red<br>Calamine                        | Purified<br>New Jersey   | 7-19         | Haüy<br>Bruce<br>Bergman                             | 76.<br>84.                         |
|          |  | •                                      | Wanlockhead<br>Freyberg<br>Regbania                            |              | Klaproth<br>Pelletier<br>Smithson<br>Bonesuel        | 66.<br>38.<br>68.<br>88.9          |
|          | 2. Sp. Sulphurei.                        | Blend, yellow<br>Ditto<br>Ditto, brown | Limbourg<br>Scharfenberg<br>Brisgau<br>Sahlberg                | 3.63         | Bergman<br>Hecht<br>Bergman                          | 64.<br>62.<br>44.                  |
|          |  | Ditto Ditto Ditto, black Ditto Ditto   | Alston Moor<br>Cornwall<br>Dannemore<br>Bowallon               | 4.04         | Thomson<br>Ditto<br>Bergman<br>Ditto<br>Lampad.      | 58.8<br>58.64<br>45.<br>52.<br>53. |
|          | 3. Sp. Carbonate.                        | Ditto                                  | Altai, Siberia<br>Bleyberg<br>Mendip<br>Derbyshire<br>Holywell |              | John<br>Smithson<br>Ditto<br>Ditto                   | 50.<br>71·4<br>64·8<br>65·2<br>69. |
| CXXVIII. | 11. genus, BISMUTH.                      |  |  |              |  | Bism.                              |
|          | 1. Sp. NATIVE.                           |  | Purified<br>Hungary  | 9·82<br>9·02 | Klaproth   | 95.                                |
|          | 2. Sp. Sulphuret. Cupicous Argentiferous |  | Wittichen<br>Schatzlach  | 6.12         | Sage<br>Klaproth<br>Ditto                            | 60.<br>47.24<br>27.<br>43.2        |
|          | 3. Sp. Oxide.<br>4. Sp. Carbonate.       | Needle ore<br>Bism. ochre              | Siberia<br>*   |              | O CHILL  | 86.3                               |

+ With 1. arsenic.

|  |                                       |   |                                 |                      |                  |                                   |      |       | _       |  |
|--|---------------------------------------|---|---------------------------------|----------------------|------------------|-----------------------------------|------|-------|---------|--|
| Oxyg.  | Sulph.                                | Iron  | Copper                          | Mang.                | Silex            | Alum                              | Loss | Other | ingred. | Authority  |
| 21·5<br>23·75<br>16.<br>29.                                    | 30.5                                  |   | 30.                             |                      | .75<br>.75<br>7. | 3.                                |      |       | lime    | No. 61<br>Thomson<br>Jameson<br>An. ch. 53<br>Thomson<br>Leon 12<br>No. 213<br>No. 62  |
| Sulph  | Acid                                  | Iron  | Silex                           | Alum                 | Lime             | Water                             | Loss |       |         |  |
| 20.<br>21<br>17.<br>23.5<br>28.64<br>29.<br>26.<br>26.<br>12.5 | 36. cc 13.5 cc 35.2 cc 34.8 cc 28. cc | 3.<br>5.<br>8·4<br>11·96<br>9.<br>8·<br>12. | 12.<br>33.<br>50.<br>25.<br>2·8 | 2.5.                 | I.4              | 12. 4.4<br>4. 5. 6. 4. 45<br>15·1 | 2.3  | 4. 5. | arsenic | Am. Jour. Thury Thomson Tab. com P. Trans. Journal Tab. com. Journal Thomson Ditto Annals . Thomson Ditto Leon. 12 P. Trans. Ditto Ditto Ditto |
| Sulp   | Silver                                | Lead  | Nickel                          | Copper               | Iron             | Tellure                           | Loss |       |         |  |
| 5.<br>40.<br>12.58<br>16.3<br>11.58                            | 15.                                   | 33.<br>24·32                                |                                 | 34·66<br>·9<br>12·10 | 4·3<br>5·2       | 1:32                              | 5.9  | *     | oxyg.   | No. 16<br>No. 129<br>No. 67<br>An. ch. 67<br>Thomson   |
|  |                                       |   |                                 |                      |                  | . 1                               |      | *     |         |  |

<sup>#</sup> With 3.4 water.

A SECOND THE REAL PROPERTY AND ADDRESS OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TO THE PERSON NAMED IN COLUM

|        | I was a second of the second o |   |  |        |   |                                  |
|--------|--|---|--|--------|---|----------------------------------|
| CXXIX  | 12. GEN. COBALT.   | Trivial Name  | Locality   | Sp.gr. | Analyst   | Cobalt                           |
|        | 1. Sp. Arsenical.  | White cob. ore<br>Grey cob. ore<br>Ditto<br>Ditto                       | Tunaberg<br>Ditto<br>Bieber  | 6.45   | John<br>Klaproth<br>Fassaert<br>Laugier               | 28.<br>44.<br>36.66<br>12.7      |
|        | 2. Sp. Oxide. 3. Sp. Arseniate. 4. Sp. Sulphuret.  | White<br>Grey cob. ore<br>Argentiferous<br>Black cob. ore<br>Red cobalt | Ditto<br>Cornwall<br>Allemont<br>Cheshire<br>Reichelsdorf<br>Ridershytan | 5.57   | Ditto<br>Klaproth<br>Schreiber<br>Bucholz<br>Hisinger | 9·6<br>20.<br>4·3<br>39.<br>43·3 |
|        |  |   | - Tanakan Julia  |        | A LONG OF   | Arsenc                           |
| CXXX.  | 13. GEN. ARSENIC.  |   | Regulus  | 8:31   | Aikin   |                                  |
|        | 1. Sp. Native.   |   | Erzgebirge   | 5.72   | John  | 96.97                            |
|        | 2. Sp. Oxide.  |   |  |        |   |                                  |
|        | 3. Sp. Sulphuret.  | Realgar   | Pouzzol  | 3.35   | Bergman   | 90.                              |
|        |  | Ditto   |  |        | Klaproth  | 69.                              |
|        |  | Orpiment<br>Ditto   |  | 0.00   | Ditto   | 62. 80<br>57.                    |
|        | 4. Sp. MARTIAL SULPH.  | Mismiskal   |  | 3.35   | Thenard   | 53.                              |
|        | TOTAL TRANSPORTER  | Mispickei   |  |        | Vauquelin<br>Thomson                                  | 48.1                             |
|        |  |   | :  | 1:     | Chevreul  | 13.41                            |
|        |  |   |  |        |   | Mang                             |
| CXXXI. | 14. GEN. MANGANESE.  |   | Purified   | 0.05   | Haüy  |                                  |
|        | 1. Sp. Oxide.  | Radiated  | Hefeld   | 4.75   |   | 90.5                             |
|        |  |   | Moravia  | 110    | Ditto   | 89.                              |
|        |  |   | St Diey  | 4.07   | Vauquelin   | 82.                              |
|        |  |   | Tholey   | 1      | Cordier   | 45.5                             |
|        |  |   | Vesoul   |        | Ditto   | 44.                              |
|        |  | Compact   | F. Micaud  |        | Ditto   | 35.                              |
|        | Ī  | Brown oxide   | Périgueux  |        | Ditto   | 50.                              |
|        |  | Ditto   | Romaneche  |        | Vauquelin   | 50.                              |
|        |  | Ditto   | L'Aveline  |        | Ditto   | 65.                              |
|        |  | Black earthy  | Hartz  |        | Klaproth  | 68.                              |
|        |  | Ditto   | Dalecarlia   |        | Ditto   | 60.                              |
|        |  | Ditto   | Ringersdorf  |        | Westrumb  |                                  |
|        |  | Ditto, cobaltic   | Ditto  |        | Klaproth  | 16.                              |
|        |  | Ditto   |  |        | Berzelius   | 47.7                             |
|        | 2. Sp. Carbonate.  | Siliceous   | Dannemora  | 1.1    | Murray  | 23.54                            |
|        | CARBONATE.   | Red ore<br>Ditto  |  |        | Lampad.   | 48.                              |
|        |  | Ditto   | Bohemia  |        | Descostils  | 53.<br>85.                       |
|        | 3. Sp. Sulphuret.  | Black ore   | Siral annual   | 9.05   | Vauquelin   | 82.                              |
|        | 4. Sp. PHOSPHATE.  | DIREK OLE   | Szekeremb  |        | Klaproth  | 1,000                            |
|        |  |   | Limoges  | 3.00   | Vauquelin   | 1.51                             |

|                   |          |        | _      |       |        |       |        |               |            |
|-------------------|----------|--------|--------|-------|--------|-------|--------|---------------|------------|
| Arsen.            | Sulph.   | Iron   | Silver | Silex | Alum   | Water | Loss   | Other ingred. | Authority  |
| 65.75             |          | 5.     |        |       |        |       |        | 1.25 mang.    | Leon. 12   |
| 55.5              | •5       |        |        |       |        |       |        |               | No. 69     |
| 49.               | 6.5      | 5.66   |        |       |        |       | 2.18   |               | Lucas      |
| 50.               |          |        |        | 25.   |        |       | 100000 |               | An. ch. 85 |
| The second second | *        | 10.5   | 1      |       | *      |       |        |               | Ditto      |
| 68.5              | 7.       | 9.7    |        | 1.    |        |       | 23.    | -             |            |
| 33.               |          | 24.    |        |       | *      |       | 23.    |               | Thomson    |
| 20.75             |          | 3.5    | 12.75  | 14    |        |       |        | 4.75 merc.    | Thury      |
|                   |          |        |        |       |        |       |        |               |            |
| 38. ac.           | 1 100    |        |        |       |        | 23.   |        |               | Lucas      |
|                   | 38.5     | 3.53   |        | •33   |        |       |        | 14.4 copper   | Aikin      |
| Sulph.            | Iron     | Antim. | Silex  |       |        | Water | Loss   |               |            |
|                   |          |        |        |       |        |       |        |               |            |
|                   | 1.       | 3.     |        |       |        | *     |        |               | Leon 12    |
|                   |          |        |        |       |        |       |        |               |            |
| 10.               |          |        |        |       |        |       |        |               | Tab. com.  |
| 31.               |          |        |        |       |        |       |        |               | No. 215    |
| 38.               |          |        |        | 1     |        |       |        |               | Ditto      |
| 43.               |          |        |        |       |        |       |        |               | Tab. com.  |
| 15.3              | 19.7     |        | 12.    |       |        |       |        |               | Thomson    |
| 15.               |          |        | 1000   |       |        |       |        |               | Ditto      |
|                   | 36.5     |        | *      |       |        |       |        |               | Journal    |
| 20.13             | 39.93    |        |        |       |        |       |        |               | Journal    |
| Oxyg.             | Iron     | Silex  | Alum   | Lime  | Baryt. | Water | Loss   |               |            |
|                   |          |        |        |       |        |       |        | 4             |            |
| 2.25              |          |        |        |       |        | 7.    | -25    |               | No. 112    |
| 10.25             |          |        |        |       |        | .5    |        |               | Ditto      |
| 100000            | 1        | 6.     |        | 7.    |        | 5.    |        |               | Journal    |
| 38.               | 2.       | 7.5    | 1:     |       | 1.5    |       | 5.5    |               | Ditto      |
| 12.               | No.      | 1 - 7  |        |       |        |       | 4.5    |               | Ditto      |
| 33.               | 18.      | 5.     |        | 7.    | 4.     |       |        |               | Ditto      |
|                   | To Carlo | 3.     |        | 6.    | 5.     | 1     | 1.5    |               | Ditto      |
| 17.               | 13.5     | 7.     |        |       | 14.7   |       | -      | 4. carbon     | Ditto      |
| 33.7              |          | 1.5    |        |       | 1      | 5.    |        | T. Caroon     | Ditto      |
| 17.               |          | 6.     |        | 7. 0  |        |       |        | 1. carbon     | No. 113    |
|                   | 6.5      | 8.     |        |       | 1.     | 17.5  |        | 1. Carbon     | Do. 136    |
|                   |          | 25.    |        |       |        | 13.   | 2.     | 1.95 000000   | An. ch. 4  |
|                   | 14.      | 11.    | 7.5    | 2. 0  |        |       |        | 1.25 copper   |            |
| 4                 |          | 24.8   | 20.4   |       |        | 17.   |        | 19.4 cobalt # | No. 70     |
|                   | 4.6      | 40.    |        | 1.5   |        |       |        | 1             | Berzelius  |
|                   | 10.03    | 34.04  | 18.07  | 16.56 |        |       |        | •56 mag-      | Annals     |
|                   | 2.1      | -9     |        |       | 4      |       | 1      | 19.2 c. acid  | Jameson    |
| 1                 | 8.       |        |        |       |        |       |        | 36.6 ditto    |            |
| 1                 |          |        |        |       |        |       |        | 15. ditto     | Thomson    |
|                   | 1        |        |        |       |        |       |        | 11. sulph. §  | No. 74     |
|                   | 31.      |        |        |       |        |       |        | 17. P. acid   | An. ch. 41 |
| 1 .               | lor.     |        | 1      | 1     | 1      |       |        | ,             |            |

With 5. c. acid.

|          |  | Trivial Name  | Locality  | Sp.gr.                                  | Analyst   | Antim:   |
|----------|--|---|---|---|---|--|
| CXXXII.  | 15. GEN. ANTIMONY. 1. Sp. Native. 2. Sp. Sulphuret. 3. Sp. Oxide. 4. Sp. Sulph. Oxide. | Grey ore<br>Ditto<br>Triple sulph.<br>White ore   | Melted<br>Andreasberg<br>Cornwall<br>Ditto<br>Altenkirchen<br>Cornwall<br>Przibram<br>Allemont  | 6·72<br>4·51                            | Haüy<br>Klaproth<br>Bergman<br>J. Davy<br>Klaproth<br>Hatchett<br>Klaproth<br>Vauquelin<br>Klaproth | 98.<br>74. 66.<br>47.75.1<br>24.23.1<br>100.<br>86.<br>67.5.1  |
| CXXXIII. |  | Uran mica<br>Uran ochre<br>Pitchblend<br>Ditto  | Joachimstal<br>Eibenstock   | 3·12<br>3·24<br>7·5                     | Klaproth<br>Sage  | Uran: 86.5   |
| CXXXIV.  | 17. GEN. MOLYBDEN A  | Wasserblei  | :   | 4.74                                    | Bucholz<br>Pelletier  | Molyb.<br>60.<br>45.   |
| CXXXV.   | 18. GEN, TITANIUM. 1. Sp. Oxide.   | Red schorl Menacanite Ditto | Boinik Cornwall Ditto Ditto Ditto Transylvania Ditto Botany Bay Uralian Moun. Bavaria Gersdorf Aberdeenshire Siver Don Aschaffenberg Riesengebirge Ufer St Christophe | 4·42<br><br>4·67<br>4·5<br>4·74<br>4·65 | Klaproth<br>Lampad.<br>Ditto<br>Klaproth<br>Chenevix<br>Lowitz<br>Vauquelin<br>Lampad.              | 100.<br>45.<br>45.25.<br>43.5<br>87.<br>84.<br>40.<br>53.<br>49.<br>59.1<br>48.<br>41.1<br>22.<br>28.<br>14. |
|          | 2. Sp. Sillego-Calca-<br>REOUS.  | Brown ore<br>Ditto<br>Sphène<br>Ditto<br>Ditto  | Passau<br>Arendahl<br>St Gothard<br>Ditto<br>Arendahl   | 3·51<br>4·24<br>3·23                    | Ditto<br>Abildgard<br>Cordier<br>Klaproth   | 33.<br>58.<br>33·3<br>45.<br>74.   |

## LIC MINERALS.

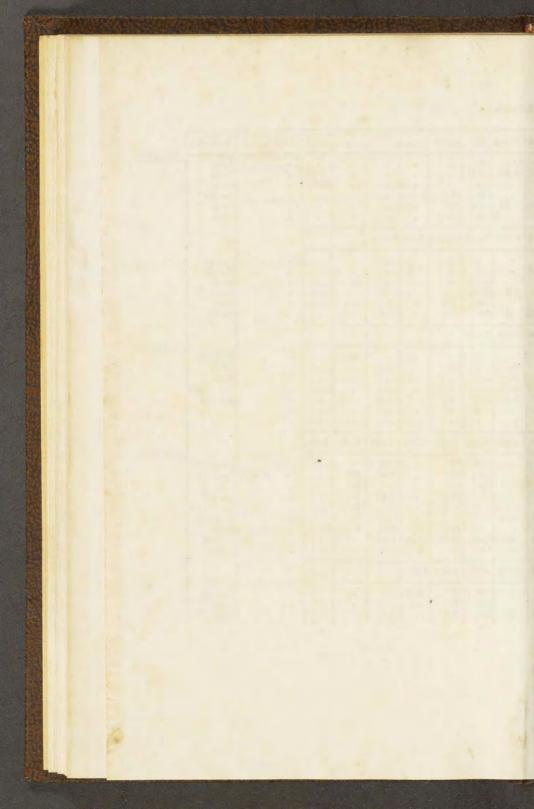
| 7      |       |       |        |        |       |       |      |                   |                       |
|--------|-------|-------|--------|--------|-------|-------|------|-------------------|-----------------------|
| Sulph. | Oxyg. | Lead  | Copper | Nickel | Iron  | Silex | Loss | Other ingred.     | Authority             |
|        |       |       |        |        |       |       |      |                   |                       |
|        |       |       |        |        | •25   |       |      | 1. silver         | No. 90                |
| 26.    |       |       |        |        |       |       |      |                   | Thomson               |
| 25.94  |       |       |        |        |       |       |      |                   | Annals                |
| 15.25  |       |       |        | 25.25  |       |       |      | 11.75 arsen.      | An. ch. 85            |
| 17.    |       | 42.62 | 12.8   |        | 12    |       | 2.15 |                   | P. Trans.             |
|        |       |       |        |        |       |       |      |                   | No. 93                |
|        |       |       |        |        | 3.    | 8.    | 3.   |                   | Journal               |
| 19.7   | 10.5  |       | •      |        |       |       |      |                   | No. 92                |
| Sulph. | 1ron  | Lead  | Silex  |        |       |       |      |                   |                       |
|        |       |       |        |        |       |       | 24   |                   |                       |
|        |       |       |        |        |       |       |      |                   | 3T - FM               |
|        | 2.5   | 6. s  | 5.     |        |       |       |      |                   | No. 57                |
| 2.     | 20.   |       |        |        |       |       | •    |                   | Lucas                 |
| Sulph. |       |       |        |        |       |       |      |                   |                       |
| 10.    |       |       |        |        |       |       |      |                   | Journal               |
| 55.    |       |       |        |        |       |       |      |                   | Thury                 |
|        |       |       | -      |        |       |       |      |                   |                       |
| -Iron  | Mang. | Silex | Alum   | Lime   | Oxyg. | Water | Loss |                   |                       |
|        |       |       |        |        |       |       |      |                   | No. 14                |
| 16.    |       |       |        |        |       |       | 9.   |                   | Thomson               |
| 51.    | .25   | 3.5   |        |        |       |       |      |                   | No. 59                |
| 50.4   | -9    | 3.3   | 1.4    |        |       |       |      |                   | Thomson               |
| 9.     | 3.    |       |        |        |       |       | 1.   |                   | Jameson               |
| 14.    | 2.    |       |        |        |       |       |      |                   | No. 59                |
| 19.    |       | 11.   |        |        |       |       |      |                   | Thomson               |
| 17.    |       |       |        |        |       |       |      |                   | An. ch. 34<br>Journal |
| 35.    | 2.    |       |        |        | 14.   |       |      | 100               | Jameson               |
| 31.1   |       |       |        |        |       |       |      | 10.2 uran         | P. Mag.               |
| 18.    |       |       | 100    |        |       |       |      | 4. ditto          | Thomson               |
| 78.    |       | 16.8  | 3.2    |        |       |       |      | The second second | No. 59                |
| 72.    | 1     |       |        |        |       |       |      |                   | Ditto 208             |
| 85.5   | .5    |       |        |        |       |       |      |                   | Ditto 209             |
| 00.0   | .0    |       |        |        |       |       |      |                   | ,                     |
| -      |       |       | 1      |        |       |       |      |                   |                       |
|        |       | 35.   |        | 33.    |       |       |      |                   | No. 15                |
|        |       | 22.   |        | 20.    |       |       |      |                   | Haüy                  |
| 10     |       | 28.   | 1      | 32.2   |       |       | 6.5  |                   | Jameson               |
|        |       | 36.   |        | 16.    |       | 1.    |      |                   | No. 216<br>Haüy       |
|        |       |       |        |        |       |       |      |                   |                       |

droit.

| and the same |  | Trivial Name   | Locality   | Sp.gr.                     | Analyst.   | Schee   |
|--------------|--|--|--|----------------------------|--|---|
| CXXXVI.      | 19. GEN. WOLFRAM. 1. Sp. Ferruginous. 2. Sp. Calcareous. | Tungsten   | Cornwall<br>Schlackenwd.<br>Pengelly<br>Bitsberg                           | 6·01<br>5·75               | Elhuyars<br>Vauquelin<br>Klaproth<br>Ditto<br>Ditto<br>Scheele       | 65.<br>67.<br>46.9<br>77.75<br>72.25<br>65.                 |
|              |  |  |  |                            |  | Tellur  |
| ÇXXXVII.     | 20. GEN. TELLURIUM.                                      | Native<br>Graphic ore<br>Yellow ore<br>Foliated ore<br>Ditto grey    | Purified<br>Fatzabay<br>Offenbanya<br>Nagyag<br>Ditto                      | 6.11 5.72                  | Klaproth<br>Ditto<br>Ditto<br>Ditto<br>Ditto                         | 92·55<br>60.<br>44·75<br>32·2<br>33.                        |
|              |  |  |  |                            |  | Tanta.  |
| CXXXVIII.    | 21. gen. TANTALUM.                                       | Collumbite Ditto Ytterbite Ditto Ditto Yttro Tantal Do. cristallised | America<br>Ditto<br>Finland<br>Ditto<br>Ditto<br>Ditto<br>Greenland        | 5.87<br>7.8<br>7.95<br>7.3 | Hatchett<br>Wollaston<br>Ditto<br>Vauquelin<br>Klaproth<br>Vauquelin | 45.   |
| CXXXIX.      | 22. GEN. CERIUM.  1. SILICEOUS OXIDE.  2. BROWN OXIDE.   | Cerite.  | Bastnæs<br>Ditto<br>Ditto<br>Ditto<br>Ditto<br>Ditto<br>Ditto<br>Greenland |                            | Thomson<br>Ditto   | 50.<br>68-59<br>71-4<br>54-5<br>63.<br>44.<br>33-9<br>28-19 |
|              |  | Cerin<br>*   | Bastnæs<br>Mysore  | :                          | Berzelius<br>Wollaston   | 2001  |
| CXL.         | 23, gen. CHROMIUM.                                       | :  | Burgandy<br>Ditto<br>Ditto   | 2·57<br>2·61<br>2·5        | Drapier<br>Ditto<br>Descostils                                       | 10·5<br>13.<br>2·5  |

## MINERALS.

| Iron  | Mang.  | Silex  | Lime   |      |        |       | Loss | Other ingred. | Authority  |
|-------|--------|--------|--------|------|--------|-------|------|---------------|------------|
| 13.5  | 22.    | 2.     |        |      |        |       |      |               | Aikin      |
| 18.   | 6.25   | 1.5    |        |      |        |       | 7.25 |               | Ditto      |
| 31.2  |        | -      |        |      |        |       |      | •             |            |
| 1     |        |        | 100    |      |        |       | 21.9 |               | Ditto      |
| 1.01  |        | 3.     | 17.6   |      |        |       |      |               | No. 75     |
| 1.25  | .75    | 1.5    | 18.7   |      |        |       |      |               | Ditto      |
|       | *      | 4.     | 31.    |      |        |       |      |               | Ditto      |
| Gold  | Silver | Lead   | Copper | Iron | Sulph. |       |      |               |            |
|       |        |        |        |      |        |       |      |               |            |
| .25   |        |        |        | 7.2  |        |       |      |               | No. 73     |
| 80.   | 10.    |        |        |      |        |       |      |               | Ditto      |
| 26.75 | 8.5    | 19.5   |        |      | .5     |       |      |               | Ditto      |
| 9.    |        | 54.    | 1.3    |      | 3.     |       |      |               | Ditto      |
| 8.5   | .5     | 50.    | .5     |      |        |       |      |               |            |
|       | - 3    | 50.    | *5     |      | 7.5    |       |      |               | Thury      |
| Iron  | Mang.  | Yttria |        |      |        |       |      |               |            |
| 21.   |        |        |        |      |        |       |      |               | P. Trans.  |
| 15.   | 5.     |        |        |      |        |       |      |               | Aikin      |
| 10.   | 4.     |        |        |      |        |       |      | *             |            |
| 12.   | 8.     |        |        |      |        |       |      | *             | Ditto      |
| 10.   | 2.     |        |        |      |        |       | *    |               | Tab. com.  |
|       |        |        |        |      |        |       |      |               | No. 169    |
|       |        | *      |        |      |        |       |      |               |            |
|       | •      |        |        |      |        |       |      |               |            |
| Iron  | Copper | Mang   | Silex  | Alum | Lime   | Water | Loss |               |            |
| 22.   |        |        | 20     |      |        |       |      | -             |            |
| 2.    |        |        | 23.    |      | 5.5 c  |       |      |               | An. ch. 50 |
| 5.25  |        |        | 18.    |      | 1.25   | 9.6   |      | + c. acid     | Leon. 12   |
| 3.5   | •35    |        | 18.    |      |        | 4.    |      |               | Ditto      |
| 2.0   |        |        | 34.5   |      | 1.25   | 5.    |      |               | No. 137    |
|       |        |        | 17.5   |      | 4.     | 12.   | 1.5  |               | An. ch. 54 |
| 4.    |        |        | 47.3   |      | 1      | 3.    | 1.7  |               | E. Trans.  |
| 25.4  |        |        | 35.4   | 4.1  | 9.2    | 4.    | 12.  |               | Ditto      |
| 20.72 | -87    |        | 30.17  | 1131 | 9.12   |       | 1    |               | Journal    |
| 32.   |        | 1 .    | 34.    | 9.   | 9.12   | :     | :    |               | Letter     |
|       | -      |        |        | J.   |        | -     |      |               | Letter     |
| Iron  | Mang.  | Silex  | Alum   | Lime |        |       | Loss |               |            |
|       | *      | 64.    | 23.    | 2.5  |        |       |      |               | Journal    |
| 2.    |        | 52.    | 27.    | 4.5  | 1      |       | 1.5  | 1             | Ditto      |
| 1.    |        | 84.    | 4.5    | 1    |        |       |      | 1.            |            |
|       |        |        | 1 20   |      | 1 .    |       | 8.   | 1 .           | Ditto      |





|         |                                | Locality   | Date       | Sp.gr.       | Analyst   | Silex | Alum  |
|---------|--------------------------------|--|------------|--------------|-----------|-------|-------|
| CXLI.   | METEOROLITES.                  | Ensisheim  | Nov. 1492  | 2.23         | Berthold  | 42.   | 17.   |
|         |                                | Ditto  | Ditto      |              | Vauquelin |       |       |
|         |                                |  | July 1753  | 4.28         | Howard    | 45.   | 1     |
|         |                                | Plann, Bohemia<br>Eichstadt  | Jan. 1753  |              | Klaproth  | 37.   | 100   |
|         |                                |  |            |              | Proust    | 66.   | 1.    |
|         |                                | Sena, Arragon +  | Tune 1704  | 3.41         | Howard    | 46.66 |       |
|         |                                | Sienna, Tuscany<br>Ditto   | June 1194  | 2.41         | Klaproth  | 44.   |       |
|         |                                | Yorkshire  | Dec. 1795  | 3.5          | Howard    | 50.   |       |
|         |                                | Ville Franche  | Mar. 1798  |              | Vauquelin |       |       |
|         | 1 P                            | of the control of the | Dec. 1798  |              | Howard    | 204   |       |
|         | 1. Pyrites ‡ 2. Malleable iron | Benares  | Dec. 1130  |              | Ditto     |       |       |
|         | 3. Globular concretions        |  |            |              | Ditto     | 50.   |       |
|         | 4. Cement                      |  |            | 3            | Ditto     | 40.   |       |
|         | 4. Cement                      | Ditto  |            | 1            | Vauquelin |       |       |
|         |                                | Aigle  | April 1803 |              | Ditto     | 30.   |       |
| 1       |                                | Ditto  | april 1000 |              | Thenard   | 46.   |       |
|         |                                | Vaucluse   | Oct. 1804  |              | Laugier   | 34.   |       |
|         |                                | St. Etienne §  | Mar. 1806  |              |           | 20.5  | 1     |
| 1       |                                | Ditto  | 1000       | 101          | Vauquelin |       |       |
|         |                                | Smolensk   | May 1807   |              | Klaproth  | 38.   | 1.    |
|         |                                | Connecticut  | 1807       |              | Warden    | 41.   | 1.    |
| 1       |                                | Stannern   | May 1808   | -            | Moser     | 46.24 | 7.62  |
|         |                                | Ditto  | 1000       |              | Vauquelin | 50.   | 9. 1  |
|         |                                | Lissa  | Sept. 1808 |              |           | 13.   | 1.25  |
|         |                                | Tipperary  | Aug. 1810  | The state of | Higgins   | 48-25 |       |
|         |                                | Ditto  | 1103. 1010 | 3.0          | Ditto     | 46.   |       |
|         | METEORIC IRON.                 | South America  | 1          |              | Howard    |       |       |
| 1/2     | militable mon                  | Ditto  |            |              | Proust    |       |       |
| Share . |                                | Ditto  |            |              | Klaproth  |       |       |
|         |                                | Siberia  | 3.         | 6.48         |           |       |       |
|         |                                | Ditto  |            |              | Klaproth  |       | 14/16 |
|         |                                | Bohemia  |            |              | Howard    | 4     |       |
|         |                                | Senegal  |            |              | Ditto     |       | 1     |
|         |                                | Agram Croatia  |            |              | Klaproth  |       | 0     |
|         |                                | Bahia  | 3          | -            | Wollaston |       | 10    |
|         | Peridot ¶                      |  |            | 3.26         | Howard    | 54.   | 1     |
|         | Ditto "                        |  |            |              | Klaproth  | 41.   |       |

+ The magnetic iron contained in this specimen had been previously separated; it amounted to 22 per cent., and contained 3 per cent. of nickel.

‡ 16 grains was the quantity here operated on. I have reduced it to decimal proportions, to assimilate it

with the other analyses. allows that the nickel obt mated. The amount of ma § The very low specific gravit

|       | -     |       |        |       |        |          |      |      |            | *            |   |
|-------|-------|-------|--------|-------|--------|----------|------|------|------------|--------------|---|
| Lime  | Mag.  | Iron  | Nickel | Mang. | Sulph. | Increase | Loss | Oth  | er ingred. | Authority    | , |
| 2.    | 14.   | 20.   |        |       | 2.     |          | 3.   |      |            | 1            | Ī |
| 1.4   | 12.   | 30.   | 2.4    |       | 3.5    | 5.3      | 1    | 1    |            |              |   |
|       | 17-1  | 42.3  | 2.7    | 1     |        | 7.1      |      |      |            | P. Trans.    |   |
|       | 21.5  | 16.5  | 1.5    |       | *      |          | 4.5  | 19.  | magiron    | An. ch. 5    | 1 |
|       | 20.   | 17.   |        |       |        | 3.       | 1    | 1.00 | mag.non    | Aikin        | • |
|       | 22.67 | 34.67 | 2.     |       |        | 6.       |      |      |            | P. Trans.    | ı |
|       | 22.5  | 27.25 | •6     | 2.5   |        |          | 5.4  |      |            | An. ch. 5    | 1 |
|       | 24.67 |       | 1.33   |       |        | 8.       |      |      |            | P. Trans.    | 1 |
| 2.    | 15.   | 38.   | 2.     |       |        | 3.       |      |      |            | Aikin        | I |
| + 1/2 |       | 65.75 | 6.25   |       | 12.5   | 4        | 3.   | 12.5 | earth      | Ditto        | ı |
|       |       | 65.   | 26.    |       | 120    |          |      | 8.   | ditto      | Ditto        | ı |
|       | 15.   | 34.   | 2.5    |       |        | 1.5      |      | O.   | artto      | Ditto        | 1 |
|       |       | 34.   | 2.5    |       |        | 2.5      |      |      |            | Ditto        | 1 |
|       |       | 38.   | 3.     | .     | *      | 2.       |      |      |            | Journal 13   |   |
|       |       | 25.4  | 13.1   |       | 1.     |          |      | 18.  | mag.iron   |              | 1 |
|       |       | 45.   | 2.     |       | 5.     | 8.       |      | 10.  | mag.non    | An. ch. 47   | ŀ |
| 2     |       | 38.3  | -33    | .25   | 9.     |          | 36   |      |            | Ditto 69     | ł |
|       |       | 40.   | 15.    | 2.    |        | 10.5     | 30   |      |            | Ditto 59     | ı |
|       |       | 38.   | 2.     | 2.    | 100    | 10.0     | *    | 2.   | chrome     | Aikin        | ı |
| .75   |       | 25.   | -4     | ~-    | *      |          |      | 17.6 | m. iron    | No. 217      | l |
| 3.    |       | 30.   |        | 1.34  | 2.33   |          | 3.   | #    | chrome     | Phil. Mag.   | ı |
| 2.12  |       | 27.   |        | .75   |        |          | 3.76 |      | Chrome     | Leon. 12     | ı |
| 12.   |       | 29.   |        | 1.    | *      | 1.       |      | 1    |            | An. ch. 70   |   |
| .5    |       | 29.   | -5     | -25   | 3.5    |          |      |      |            | No. 217      | ١ |
| 4     |       | 39.   | 1.75   | 20    | 4.     | 2.       |      | *    |            | Phil. Mag.   | ı |
|       | 12.25 |       | I.5    |       | 4.     | 5.75     |      |      |            | I iiii. mag. | ı |
|       |       |       | 11.1   | -     |        | 0.10     |      |      |            | Aikin        |   |
|       |       |       | 12.    |       |        |          | .    | *    |            | Ditto        | ı |
|       |       | 96.75 | 3.25   |       | ,      |          |      |      |            | No. 120      |   |
|       |       |       | 12.5   |       |        |          |      |      |            | Aikin        | ı |
|       |       |       | 1.5    |       |        |          |      |      |            | Ditto        |   |
|       |       |       | 17.6   |       |        |          |      |      |            | Ditto        |   |
|       |       | 95.2  | 4.8    |       |        |          |      |      |            | Ditto        |   |
|       |       | 96.5  | 3.5    |       |        |          |      |      |            | No. 120      |   |
|       |       | 96.1  | 3.9    |       |        |          |      |      |            | Letter       |   |
|       | 23.50 | 17.   | 1.     |       |        |          |      |      |            | P. Trans.    |   |
|       |       | 18.5  | 4.     |       |        |          |      |      |            | An. ch. 51   |   |
|       |       |       |        |       |        |          |      |      | 1          | IIII CIII OI |   |

Mr Howard, however, || With 2.5 carbonaceous matter, and 9.5 sulphur, water, and loss. || Contained in the Siberian iron.

