

Gems

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JOHN SINIKAN KAS

★ MINERALS STONES AND ★

GEMSTONES OF NORTH AMERICA · PROSPECTING · FOR GEM

G E M S .

WHETHER as objects of beauty, of curiosity, of adornment, or of commerce, precious stones have, from the earliest ages of which we have record, been held in high esteem by people of all nations. Not only in the civilized world, but among half savage, and even savage communities, there has always been a desire for personal decoration with such stones as might be available. Intrinsic beauty, even when these stones were cut in the rudest manner, took the place of artistic elegance, appealing to the most uncultured and the least educated. Among the early Egyptians and Assyrians, the cutting and polishing of gems was carried to a high degree of excellence. But there is no reason to believe that any of the ancients reached the knowledge and practice of the art of working precious stones, as now understood and operated. Their cutting was imperfect, their engraving generally faulty, and in setting and mounting, their ideas were limited. The Israelites learned in Egypt the art of manipulating precious stones. The breastplate of their High Priest was set with twelve conspicuous gems, and his robes were adorned with lesser ones. The Phœnicians, who were the traders of the world, included costly stones among the other

articles of luxury in which they maintained a busy traffic, such as Tyrian purple stuffs, ivory, and highly-prized spices. The patriarch Job, whose date and residence are uncertain, seems to have lived among people who made free use of precious stones. He speaks of the onyx and sapphire, and of the coral, pearl, ruby, and topaz, from Ethiopia. In the time of Solomon, precious stones were among the luxuries for which he and his subjects freely spent their money. The Queen of Sheba, who is by many supposed to have come from Southern Arabia, included them in the catalogue of presents she brought, when on her memorable visit to that magnificent monarch. Two or three hundred years after Solomon's time, we find the Greeks familiar with precious stones, their rulers and the wealthy citizens and their wives indulging in signet rings of engraved stones, and in many other personal decorations, in which gems of various kinds bore a conspicuous part. They ascribed all manner of supernatural influences to these stones, and attached to them some of the most absurd and amusing superstitions. In the time of Alexander the Great, the use of precious stones became general among those who could afford them. Their ancient use as signet rings was still maintained; for many eminent men, who were unable to write, made their mark, in order to affix their signature, by means of the signet rings, which they wore on their hands. These rings were set with a large stone, cut with some curious device, which was the monogram, or coat-of-arms, as we would say in these days, of its owner.

When the Roman Empire began to be the conqueror of

the world, and the treasures of Asia and Africa were opened up, knowledge of precious stones became more general, and the luxury of their use pervaded the upper classes of society. Immense amounts were squandered on costly gems. The emperors adorned their robes liberally with them. Of the character and costliness of stones used for this purpose, we have little means of knowing. Possibly, the stones on the robes were much like those used by the Shah of Persia. When he made his famous visit to England, a few years ago, it was said, in advance of his coming, that his robes were decorated with diamonds. This proved to be true, but the diamonds were so small, and of such a cheap variety, as to excite mirth rather than admiration, in the minds of the British public. We are told that Paulina, the wife of Caligula, one of the Roman emperors, had her dress covered with emeralds and pearls of immense value. In Pliny's time, drinking cups were set with great quantities of gems. The expenses of the admirers of Cleopatra, for presents of precious stones to that somewhat exacting lady, are said to have been enormous. The Emperor Constantine made his triumphant entry into Rome in a chariot, which is said to have been of gold, but which was presumably gilt. This chariot was studded with precious stones, which sparkled in the sunshine, and sent forth brilliant rays of light. Constantine made an extraordinary display with his crown, which is, by some historians, said to have been the first one which was set about with precious stones. This statement is, however, disputed. There are some who think they have good reason for thinking that

the Pharaohs, and such monarchs as Nebuchadnezzar, would hardly have lived up to their privileges without gems in their royal head-gear.

WHAT ARE PRECIOUS STONES?

In the broadest application of the term, precious stones are minerals of great density and hardness, either of beautiful color or entirely free from color. They are generally transparent, although some which possess great value are opaque. A precious stone is always susceptible of taking a high degree of polish. The term Gem is specially applied to those of the greatest hardness, durability and purity. Others are for many purposes technically called by the name of the "half-pure" precious stones. The preciousness of the stone, as regards its pecuniary value, is dependent on an immense variety of widely differing circumstances. There are all manner of caprices in fashion as to gems, and these caprices vary from age to age, although by no means as rapidly as the caprices of fashion in regard to material for raiment. Peculiar beauty, rarity of tint, extraordinary shape, phenomenal size, and remarkable brilliancy, have much to do with the regulation of values.

PECULIARITIES.

In former times, the superstitions and curious notions entertained in regard to precious stones were such as would now be regarded as most absurd. Some stones were considered powerful to confer riches, beauty, health, long life, and good luck. Others were avoided as likely to bring disaster. Many people carried stones on their persons for good luck, and called them amulets. These were supposed to protect their wearers against the power of disease and the baneful influences of witchcraft. Stones were supposed to have some connection with the planets, and hence with the seasons. A particular stone was considered in season in each month, on this wise :

January, Hyacinth.	July, Onyx.
February, Amethyst.	August, Carnelian.
March, Jasper.	September, Chrysolite.
April, Sapphire.	October, Beryl.
May, Agate.	November, Topaz.
June, Emerald.	December, Ruby.

The opal was, in ancient times, thought to bestow every conceivable good upon its wearer. By a curious change of fancy it has become associated with the idea of bad luck, of which some superstitious people consider it the precursor. The Empress Eugenie refused to wear an opal. The stone is in favor, however, among many of the crowned heads of Europe, and Queen Victoria has had no fear of including it among stones presented to her daughters as wedding-gifts.

The twelve Apostles were represented by symbols of pre-

cious stones. These stones thus acquired the name of "Apostle Gems." The selections, although they may seem to us purely arbitrary, grew out of the supposed characteristic of each stone as bearing on that of the Apostle to whose name it was affixed.

The jasper, hard and solid, representing the rock on which the Church was built, was the emblem of Peter. The sapphire, with its bright blue, an emblem of heavenly faith, was appropriated to Andrew. The emerald was considered emblematic of the purity and gentleness of John, the white chalcedony of the affection of James, and the sardonyx of the friendliness of Philip. The blood-red carnelian seems a fit selection for the martyr Bartholomew. The chrysolite is given to Matthias, the beryl to doubting Thomas. The delicacy of the topaz makes it fit for James the younger. The trustful Thaddeus is emblemized by the chrysoprase. Matthew, the devoted and energetic, is known by the amethyst, and the amiable Simeon of Cana by the pink hyacinth. It will be noticed that the selection of these stones was not made until Matthias had taken the place of Judas Iscariot. Had Judas been assigned a stone, nothing would have been so appropriate as the cheap imitation diamonds which are sold for a trifle, and which impose on the credulity of the unskilled, in the belief that they are real diamonds.

In a quaint old book, published in 1661, the diamond is spoken of as the emblem of fortitude; the sapphire is said to denote prudence; the ruby, charity; the topaz, justice; the emerald, hope; and the amethyst, temperance and worship.

SOURCES.

There is no infallible rule for indicating the regions where precious stones are found. The laws regarding their distribution appear to be arbitrary. Some of the most valuable stones are found in what seems to be their primeval bed, in mountain ranges composed of the oldest and hardest material in the world. What wealth of gems may be imbedded in rocks inaccessible to human exploration, will probably never be known. It is largely through the disintegration of primeval and secondary rocks, and by the drifting in the gravels and sands of the beds of rivers, that most gems are found. Forced from their original resting-places by rain-storms and torrents and the power of various upheavals of the earth, these have been carried far away, and tossed among more common material, to be discovered by diligent seekers after wealth. India was formerly the chief home of precious stones. Brazil yielded enormous stores of diamonds. In Ceylon have been found many varieties of stones. Australia has contributed its abundant share. The Ural Mountains have proved rich in certain kinds of highly valued gems, and bleak Siberia has been generous in her yield. Many beautiful things have been brought to light with the opening up of the gold regions of the Pacific Coast; and South African diggings have furnished much of the material for the diamond merchants of the world during the last decade.

THE DIAMOND.

First among all gems is the diamond. Its name implies its hardness and indestructibility. In brilliancy, it surpasses all other stones. It is perfectly transparent and clearly translucent. The fires which fuse other stones have no effect on the diamond. No acids can make their mark on it. No file can scratch it. Its substance is pure carbon, crystallized in eight-sided or twelve-sided forms. In the refraction of light, it possesses such remarkable qualities that it is sometimes used for microscope-lenses. It has the power of reflecting rays of light to a most extraordinary extent. It is found tinted with yellow, green, red, blue, brown and black. Beautiful black diamonds have been found in Borneo.

It is believed that the first diamonds known to the world came from Indian mines. These diamond fields have been famous from remote ages. Princes of India enriched themselves enormously with priceless gems. In the wars which they waged with each other, the plunder of diamonds was generally an important consideration. Mohammed Ghori, who died in the latter part of the twelfth century, and who was the founder of the Mohammedan dominion in India, left, at his death, diamonds which weighed, in the aggregate, four hundred pounds. Most of these he obtained by plunder. Within a hundred years after his death, they were scattered by other plunderers.

The diamonds which are found in the beds of the rivers—for instance, in the Mahanuddy river, from Chunderpore to

Sonopore—are of various sizes and of very pure quality. The people who make it their business to search for them are of a rather low order of Hindoos. They carry with them a pickaxe and two boards. These boards are hollowed in the middle and have raised edges. With the pickaxe, the men scrape the dirt out of holes. Then they pile it in heaps on the river-bank, where the women place it on the larger board, and wash all the earthy matter away, leaving the pebbles. These they place on the smaller board, to sort them. When they find diamonds, it is generally in a mass of tough clay, mixed with sand and pebbles. In some of the diamond fields, a flat surface is formed, and surrounded by a wall two feet high. Into this inclosure the earth is thrown, openings through the wall being so arranged that the water passes through. After a few washings, the large and coarse pebbles are lifted out, and the residue dried. It is in this that the diamonds are sought for.

A "rough diamond" is indeed a rough-looking object; so different from the exquisitely cut and polished stone, that one who has seen only the latter would hardly recognize it in the rough, or think of it as possessing any particular value. It is generally of a brownish gravel-color, unlovely in appearance, and not at all suggestive of the great value which attaches to it.

BRAZIL DIAMONDS.

Previous to the early part of the eighteenth century, India had been the chief dependence for the supply of diamonds. In 1727, an explorer in the gold district of Minas Geraes, was struck by the resemblance of certain stones which he found there, to the rough diamonds he had seen in India. He took a number of these to Portugal, where he found ready sale for them. This soon produced a stir among the European diamond merchants, who were afraid that large supplies from Brazil might greatly reduce the price of diamonds. They circulated the story that these diamonds were the refuse of the mines of India, forwarded to Goa, and thence to Brazil. But, as there was really no appreciable difference in the quality of the stones, the Portuguese merchants slyly sent the Brazilian diamonds to the markets of India, where they were sold as stones from Indian mines, and whence they duly found their way to the European dealers. It is estimated that the yield of the Minas Geraes district, from its opening until the present time, has been \$50,000,000 worth of diamonds. The Bahia mining district of Brazil has yielded an immense quantity of highly prized diamonds, which, although not generally large in size, are superior in brilliancy, and quite equal to any of the products of the old mines of India. Most of the diamond mining of Brazil is done by washing the sand of the rivers. In the dry seasons, the water remaining in these rivers is turned aside, by means of canals and ditches. The sand, to the depth of several feet, is lifted out, and washed in

large basins. Sometimes, as many as a dozen diamonds have been found at once in a basin. The washing of sand and mud for diamonds has always been done by negroes, who work in a shed, under the eye of an overseer. When a negro finds a diamond, his duty is to signal the overseer, who comes and takes it from him. If he finds a chance to conceal the gem about his person, he is likely to do so, instead of informing the overseer that he has it. There are difficulties attending this operation, however. The negroes generally are naked when they work; besides which, their hair is cropped very short. And the punishment, in case they are caught stealing diamonds, is very severe. Of late years, the yield of the Brazil diamond diggings has considerably fallen off.

SOUTH AFRICAN DIAMONDS.

The treasures of gems awaiting discovery in the Transvaal, were unsuspected until 1867. The child of a Dutch farmer, settled near the Cape, had been picking up pretty pebbles. One of these looked so much unlike ordinary pebbles, that it attracted the attention of her father, and of his neighbors. It was sent from one authority to another, for examination, and was finally pronounced a diamond of over 21 carats in weight. It was sent to the Universal Exhibition in Paris, where the wise men of all nations examined it. At the close of the Exhibition, it was sold for about \$2,500. The discovery of this

gem led to the opening of the great diamond fields of South Africa. These fields are mostly in the Griqualand colony. The streams, which flow through the Vaal Valley, are those which have brought down the sand and earth in which the diamonds are found. While many diamonds are washed from the sand, as in India and Brazil, the "dry diggings" constitute an important feature of South African mining. In these, claims are staked out, and excavations made so close to each other, that they look like deep cellars. The Kimberly mines are the most famous. They owe their origin to the fact that a diamond was found in the mud wall of a Dutchman's house. The destruction of the wall revealed more diamonds, and it was found, on digging down, that the earth yielded them in considerable abundance. Last year, \$20,000,000 worth of diamonds were sent to England from the Kimberly mines. The Colesburg mines are almost equally famous.

The largest stone from South Africa is known as the "Stewart" diamond. It was taken in 1872 from a "dry digging" claim, which a miner had bought for \$150, and was working with another man on shares. In its rough state, this gem weighed 288 carats, or nearly two ounces. It is believed that only three diamonds in existence exceed this stone in size. It is of a light yellow color, and beautifully crystallized.

FAMOUS DIAMONDS.

Some diamonds have become famous from their size, their beauty, or their peculiar history.

The "Braganza" diamond is about as large as a hen's egg, and weighs 1680 carats. It was discovered in Brazil, in 1741, and is a very unsatisfactory piece of property, its alleged value being about \$300,000,000. It belongs to Portugal, and is among the state jewels of that country. It has never been cut, but is still in the rough. It is said, that the reason the Government of Portugal refuses to allow it to be cut, is the disbelief in its genuineness as a diamond. There is an unpleasant suspicion that cutting might prove it to be nothing but a large white topaz.

The Rajah of Mattan, in Borneo, is said to possess the largest known diamond. It was found on the island of Borneo, about 1760. It weighs 367 carats, and is pear-shaped. The rajah has been offered for it \$150,000 in cash, with other valuable considerations; but he believes that good luck would permanently forsake him, if he were to part with it.

The "Kohinoor," or "Great Mogul," is one of the best known of diamonds. It had for centuries been in the possession of various Indian princes, changing hands sometimes as a gift, and sometimes by way of capture. At the time of the annexation of the Punjaub by the English Government, it was among the crown jewels of Lahore, which became the property of the East India Company. By special stipulation,

this gem was to be presented to the Queen. Its weight, on arriving in England in 1850, was 186 carats. It was unskillfully and irregularly cut. It was exhibited in the "World's Fair" in 1851, and was then valued at about \$700,000. Afterwards it was recut, reducing it to a weight of 106 carats. Great regret has been expressed by many who are conversant with precious stones, that it ever should have been recut at all.

The "Orloff" diamond is set in the top of the Russian imperial sceptre. It weighs 194 carats, and although of the purest water, is of an irregular shape, and not cut according to modern style and usage. It is an "old mine" Indian gem, and is said to have done duty as one of the eyes of the wooden idol Sheringham, in the temple of Brahma. It has been in possession of the great Shah Nadir, of Persia, and has been stolen more than once, and passed through the hands of sailors and traders. Catherine II. of Russia bought it from an Amsterdam man in 1775, giving him \$450,000, and a life pension of \$20,000 a year.

The "Shah" diamond is about half the size of the Orloff, and is among the Russian state jewels. It weighs 86 carats, and is only partly cut. The facets are engraved with Persian inscriptions.

The "Pitt" or "Regent" diamond is said to be the most perfect gem in existence. It weighs 136 carats, having been reduced, in cutting, from 410 carats. It is now among the French crown jewels. Governor Pitt is said to have obtained this stone in 1702, for \$5,000. He bought it from a sailor,

who had murdered the slave who had found it in the Golconda mines.

The "Florentine" diamond is among the crown jewels of Austria, and weighs 139 carats. It is of a light citron tint, and valued at about \$500,000. It was presented to the Emperor of Austria by Pope Julius II.

The "Sancy" diamond, which weighs 53 carats, came originally from India; and, in the fifteenth century, fell into the possession of Charles the Bold, Duke of Burgundy. A century later, Baron de Sancy, a Huguenot nobleman, owned it. Somehow or other, it came into the hands of James II. of England, who, in 1688, when short of money, and troubled with the distractions of his kingdom, sold it to Louis XIV. of France. For a long time, it was lost; but it came to light in the time of Napoleon Bonaparte who sold it to the Emperor of Russia, for about half a million dollars.

There are other historic gems, of less size and value, but the above may be set down as the most important and interesting.

DIAMOND WORKING.

Of all mechanical work in the world, there is nothing which requires higher skill, finer perception, or more accurate tools, than the cutting and setting of gems. Of all precious stones, the diamond is the most difficult to cut,

owing to its great hardness. As its value so far exceeds that of other stones, the responsibility involved in its manipulation is vastly greater. None but the most skilled and experienced workmen are allowed to cut diamonds. The wonderful lustre, the play of color, and the adamantine hardness of the diamond, are rendered more conspicuous by skilful cutting. The art of the lapidary began to be prosperous in Europe about six hundred years ago, when a corporation of gem cutters and polishers was formed in Paris. About one hundred and fifty years later, one Hermann, a superior worker in gems, carried the art of cutting to great perfection. Louis de Berquem, of Paris, introduced in Bruges his discovery of the art of cutting the diamond in regular facets, thus considerably increasing the play of color. This made a revolution in gem cutting, and placed De Berquem at the head of a Corporation of Diamond Workers. Twenty-five years later, he succeeded in making what is known as the "perfect cut" on three diamonds of extraordinary size, which had been sent him by the Duke of Burgundy. Some of his pupils went to Paris, some to Antwerp, and some to Amsterdam. Under the patronage of Cardinal Mazarin, diamond working made considerable progress, in the latter part of the sixteenth century.

In the seventeenth century, Vicenzio Bruzzi, of Venice, attained great success in cutting, and introduced the form known as the Recoupé Brilliant. The finest cutting, during later years, was done in Amsterdam, where the Jews very largely engaged in the business. The springing up of the

industry of diamond cutting in London, is a matter of recent date. "London cut" diamonds are highly prized for the superior style in which they are faceted and polished. The cutting of the old East Indian diamonds, by native workmen, was generally clumsily done. The famous Kohinoor was first cut in India, then recut by a Venetian named Borgio, who reduced it from 793 carats to 186. When it came into the possession of the British crown, it was recut in London, and its weight reduced to 106 carats.

The working of diamonds comprises three operations, namely: splitting, cutting and polishing. These are done by different artisans. The cleaving or splitting is done with a view of bringing out the facets in the rough. It requires a thorough knowledge of the formation of the diamond, coupled with an eminent degree of skill.

The cutter gives the stone its definite form. He brings out the facets, which the splitter produced in the rough. The process of grinding is slow and laborious, and requires the closest attention.

When the cutter has done his work, the diamond goes to the polisher, that its brilliancy and transparency may be developed. The polishing is done on flat wheels, which make about two thousand revolutions a minute. The proper polishing of the gem has much to do with its worth. A large stone ground and polished in an inferior manner is by no means as valuable as a smaller one skillfully worked.

AS TO SELECTING GEMS.

It will thus be seen that there are many considerations important to be borne in mind by the purchasers of precious stones. It is not everybody who can tell the value of a diamond. Indeed, it is only by long experience and diligent study of all that pertains to these wonderful gems, that one can become sufficiently acquainted with them to enable him to pass judgment and give an opinion which is worth listening to. There are comparatively few who can be called experts in diamonds, and they are those who have made the study of these gems a life-long work.

The house of BAILEY, BANKS & BIDDLE has an honorable record of half a century in successful dealing in gems. Originally established as BAILEY & KITCHEN, and afterwards doing business as BAILEY & Co., the house early took a leading position in the diamond business. It has imported directly from the European centres of the diamond traffic more diamonds than any other house in this city has handled. The members of the present firm have, from their boyhood, been trained to a thorough acquaintance with precious stones of all descriptions. The long experience of the house and the immense cash transactions with foreign houses, afford the largest opportunities for securing the most perfect stones, cut in the most faultless manner. Our own resources in the means of mounting gems are not surpassed by those of any house in the world. We do most of our own mounting, for we have designers and artists and workmen of our own, who

can, in most instances, give us better work than we can secure in Europe. The proper mounting and setting of a diamond is a matter of more importance than many people suppose. It is, indeed, quite as important as the selection of the stone. If not mounted with a proper regard to artistic effect, the gem will appear at a disadvantage, and will not display its true value. If the stone is not firmly held in the mounting, it is almost certain to be lost. Great artistic skill and a superior order of workmanship are required in the mounting of all precious stones. To this we give unremitting attention, and it is to this that we owe much of our success in satisfying diamond buyers, and the high reputation we have attained as diamond dealers.

By Mr. Bailey's repeated visits to the diamond marts of Europe; by his long-trying skill in selecting the purest and clearest stones, and in perfectly matching pairs; by our large importations and our unquestioned facilities for securing diamonds at the lowest figures, that we may sell at the lowest, we have no hesitation in saying that we can gratify every taste and meet the views of all buyers as to price.

The wearing of diamonds is every year becoming more and more general, among those who can afford them. This is a sign of refinement, and of advancing high civilization.

Our importation of diamonds has been larger by far this year than in former years, as we have been driven to it by the constantly increasing demand. Our stock, always large and attractive, is now more so than ever, both in unmounted stones, and in those which are tastefully set in new and strik-

ing designs. Such a museum of gems as we constantly have in our cases, is well worth seeing, even by those who have never bought a diamond, and are not even thinking of buying any. We are always pleased to exhibit our diamonds to any who may call to see them, and to answer any questions in regard to their value, or any other points of interest in reference to them.

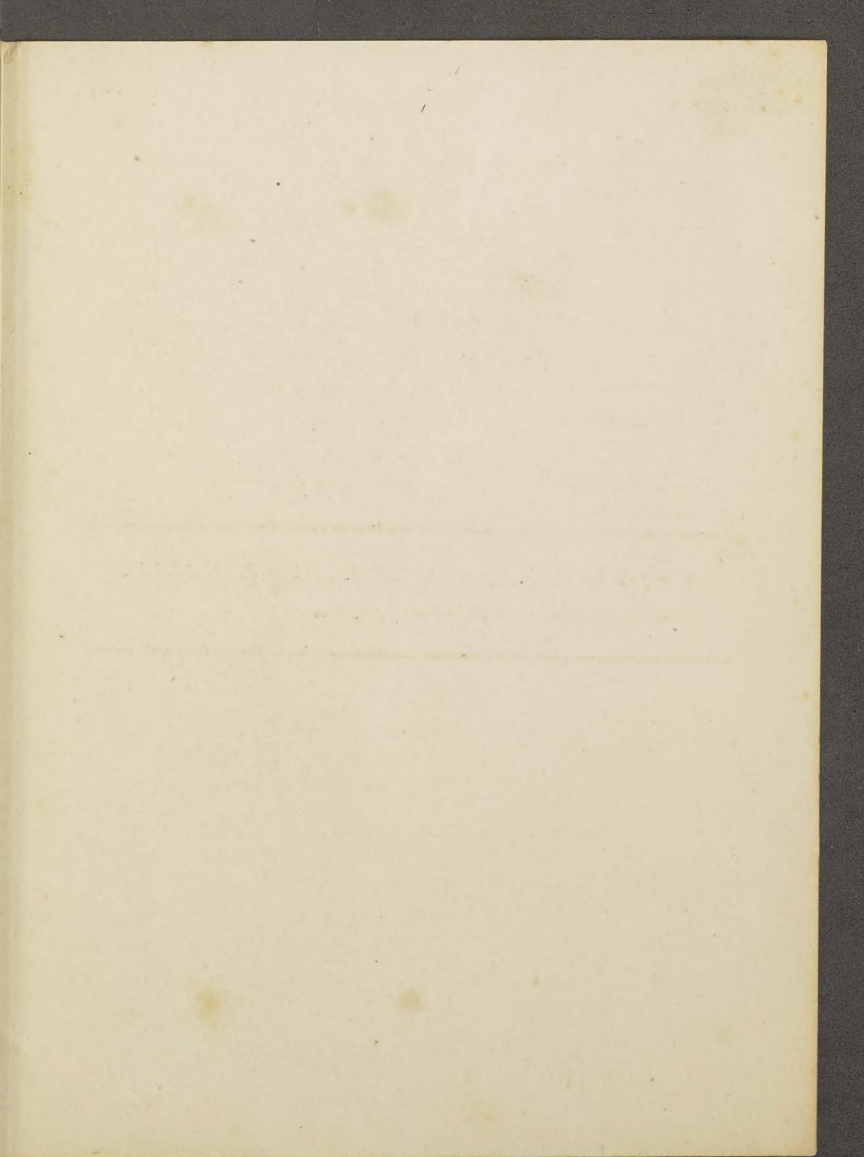
Persons residing at a distance are informed that they can, by correspondence with us, procure precious stones at exactly the same prices as if they were personally present. On request, we will send "on approval" to any part of the country. Persons who thus correspond, will have the advantage of Mr. Bailey's particular attention, in making selection of the stones they desire. Every article in our store is marked with a fixed and uniform price, from which no deviation is ever made.

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