For the Scientific American.

The Mineralogist.—The description and locality of every important Minerat in the United States.

(*Continued.*)

CACHOLONG.

Occurs in layers or crusts of a milk white color. Scratches glass. It has a pearly lustre. Found at Pittsfield and Deerfield, Mass.

CALCAREOUS SPAR.

Occurs in crystals of a white, yellowish, red, or gray color, of a shining lustre, and yields to the knife. Specific gravity, (weight compared with water) 2.7. Its localities are numerous. Beautiful specimens are found at Leyden and Lockport, N. Y. Often called *hog tooth* spar.

CARNELIAN.

Occurs in rounded and flat masses of a reddish color and glimmering lustre. It is nearly transparent, and infusible. Fine specimens are found near Lake Superior; at Deerfield, Mass.; at the Falls of St. Anthony, and at Herculaneum, Mi.

CELESTINE, FIBROUS.

Occurs massive, in plates, and in fibrous crystals, of a milk white color with a tinge of blue. Loses its color by keeping. Easily broken. Specific gravity 3.80. Found in the Bald Mt., at Frankstown, Pa.

CELESTINE, FOLIATED.

Occurs in masses and crystals, of a white, gray, or blue color and translucent. Localities are, Moss Island and Lockport, N. Y.; near Baltimore; Strontian Island in Lake Erie.

CERIUM, ITTRI-CALCAREOUS OXIDE OF.

Occurs in masses and crusts, of a grayish white or red, or violet blue. Its texture is granular and lnstre glimmering. Yields to the knife. Specific gravity 3.44. Infusible. Forms a yellow solution with muriatic acid. Found at Franklin, N. J.

CHABASIE.

Occurs in crystals of a white, yellowish, grayish, or reddish color. Fusible; unattacked by acids. Specific gravity 2.70. Found at Chester and Deerfield, Mass.; Hadlyme, Ct.

CHALCEDONY.

Occurs in masses, round, icicle form, or in crusts, of a white, bluish, grayish, yellowish, brownish or greenish color, rough surface, and glassy lustre. Harder than flint, and translucent. Infusible. Specific gravity 2.60. Often found in dark colored, hollow crusts, whose cavities are lined with quartz crystals. Fine specimens of this beautiful and valuable mineral are found at East Haven, Ct; Little Britain, Pa.; Middlefield, Lynnand Deerfield, Mass.; Pompton Plain, Pracknes Mt. and Sussex Co. N. J.; Perry, Hocking and Athens Co's. Ohio.

CHIASTOLITE. (MACLE.)

Occurs in crystals, whitish on the outside and blackish on the inside. Infusible. Specific gravity 2.94. Found abundantly at Westford, Lancaster and Stirling, Mass.; Brunswick and Georgetown, Me.; Croydon, Cornish, Charleston, Langdon, Allstead and Bellows Falls, N. H.; Litchfield, Ct.

CHLORITE.

Occurs in masses of a greenish color and shining lustre. Somewhat soapy to the touch; yields to the knife. Specific gravity about 2.65. It is found at Harper's Ferry, Va.; Rye, N. Y.; New Haven, Saybrook and Brookfield, Ct.; Topsham, Me.; Chester Co. Pa.; West Stockbridge, Charlestown, Bridgewater and Brighton, Mass.

CHLORITE SLATE.

Occurs consisting of plates like slate, of a greenish color and glistening lustre. Easily cut. Found at Williamston and Westfield, Mass.; New Haven and West Haven, Ct.

CHLOROPHŒITE.

Occurs in small round masses, of a greenish color; transparent; turns black by exposure to air. Soft; brittle. Specific gravity about 2. Unaltered by heat. Found at Southbury, Ct.; Gill, Mass.; Turner's Falls, Vt.

CHLOROPHANE.

Color, pale violet; translucent. Placed on a hot iron in the dark, it emits a beautiful emerald green light. Occurs at New Stratford, Ct.

CHRYSOBERYL.

Occurs in masses, rolled pieces and crystals, of a green color with a tinge of yellow or brown. Nearly transparent; lustre, shining. Acquires electricity by friction. Specific gravity 3.80. Infusible. Found at Haddam, Ct.

CHRYSOCOLLA.

Occurs in masses, kidney-shaped, and resembling a cluster of grapes, of a green color, shining lustre. Translucent; brittle; yields to the knife. Specific gravity 2. Infusible, but turns black. Found at the Somerville copper mine, N. J.

To be continued.

Magnetic Cures.

The external application of the magnet to cure disorders, is not a modern discovery. It was known and used to cure the gout as early as the year 500. Actius says that those who "have convulsions find relief by holding a magnet in their hands." In the 15th century some of the physicians prescribed the application of the magnet as a cure for the toothache. About the end of the 17th century, magnetic tooth picks and ear pickers were quite fashionable to prevent pains in the teeth and ears. Magnets were used more than two hundred years ago, to remove iron filings that had accidentally fallen into the eyes, and this although used by Fabricanus Hildanus, has lately been revived as a new invention. At Fairbairne in Belgium when the workmen in the largeiron works frequentlygetsmall particles of iron in their eyes, either by chipping or grinding, there are large magnets suspended where the workman immediately goes and gets the iron or steel whipped out of his eye, in shorter time than a dentist could extract a tooth.

About 1770, Father Hehl, of Vienna, invented steel plates of a peculiar form which he magnetised and employed in the cure of various diseases. From him Anton Mesmer derived his knowledge of their use and he subsequently inventedanimal magnetism sometimes called mesmerism, after its inventor. In 1798 Perkins used metallic magnetic bars, called tractors, which were drawn over the diseased parts of the body and were supposed to cure many maladies. These tractors were patented. Dr. Falconer made wooden tractors of the shape and color of those made by Perkins and employed them on a large scale at Bath Hospital, England, and he found that from them the very same effects and cures were produced as by those made of iron. A few years ago, galvanic rings came extensively into use and they are worn by many at the present time. They are perfectly useless, owing to the way in which they are constructed. The galvanic belt of Mr. Rodgers, represented in No. 17 present vol. of the Scientific American is at least constructed with a knowledge of the laws of magnetism and if there is any virtue in the application of it to cure disease, it certainly will not fail for want of being made correct.

Magnets have a great power, but there is much, very much hid from us respecting its application to useful purposes. The greatest feat of power displayed by any magnet that we have ever heard of, was with one of Dr. Farady's powerful electro magnets, which attracted an iron candlestick that was standing near one of its poles on the table, that it cleared its way of jugs, glasses, &c. on the table, and sprung to the electro magnet with as much vehemence, as the yard black pudding sprung to the nose of the old dame in the story of the "Three Wishes"

Air and the Lungs.

The lungs can contain 22 pints of air though 9 1-2 pints is as much as is inhaled at a single inpsiration. In ordinary and placid breathing we inhale about one pint at an inspiration; public singers, when they "take breath" as it is called, inhale from 5 to 7 pints. Eighteen respirations take place in a minute, it takes therefore, 18 pints of air every minute and 57 hogsheads every 24 hours to supply the lungs. Seventy-two pulsations occur in one minute, and 130,680 in 24 hours.

The dark venous blood passed and repassed from the veins through the heart to be purified into vermillion color arterial blood, by contact with fresh air in the lungs, amounts to 24 hogsheads in 24 hours. It is then sent through the arteries to nourish the whole system distributing its vitality, to be recovered again by fresh air from the lungs.

"From the construction of most of our buildings (says Dr. Gibson in a recent lecture) it would seem that the builders thought that pints of air were sufficient in place of hogsheads."

The Way Inventors are Plundered.

The following story is one which we know to be true, and no doubt, many such cases have occured in many places. The extract is taken from the article to which we allude on our Editorial page.

Many years since I knew the author of a long sought improvement in the arts. When announced, the possibility of producing the article in the simple and cheap way stated, was denied. Those conversant with kindred professions believed not till the operation of the process was shown and then it was approved and adopted.

In this country its introduction was pretty effectually opposed till two or three years only of the patent had to run. At that time, circumstances of a local nature were likely to render it valuable to its author, but those whose interests it was foolishly supposed to affect combined to destroy it in public estimation.—It was denounced with virulence and its inventor maligned as if he had committed a felonious offence. An adventurer was employed to write it down. (He actually sued his employers for the balance of one thousand dollars promised him, and they compromised by the payment of a sum somewhat less.)

A suit, prolonged over a week, was tried before Judge T——, the origin, history and merits of the invention searchingly investigated, and the Patent sustained by a verdict accordant with an opinion decidedly expressed by one of the soundest and most sagacious judges of inventions that ever occupied a seat on the Bench of the Supreme Court.

Subsequently, another suit for infringement came on before an inferior tribunal, in the interval between the death of Judge T— and the appointment of his successor, when a verdict was given, agreeable to the instructions of the Court, for the defendant, and consequently against the patent.

So far, there was nothing peculiar in the history of the case, nor in the fact that the inventor never reaped anything more from the invention than a harvest of persecution, and the wear and tear of feelings for which no money could compensate. But, something rich followed.

The defendant had never denied the right of the inventor to the invention—no one doubted its originality. Impressed with its value, he had repeatedly made offers to purchase it, and the day before the trial renewed them, offering —— thousand dollars to settle the suit and for the patent for its unexpired term. This was accepted—but the next morning he withdrew it, saying, with sang-froid truly edifying, that his associates in the trade had reconsidered the matter and preferred risking another attempt to break down the patent. Some of them were his witnesses—and virtually their own, for they were equally infringers.

Duly to celebrate a decision which awarded to them the plaintiff's oyster and to him the shell, they assembled once more and voted a silver vase to the defendant, with an inscription much richer than the pitcher. It is of 27 carats.

"Presented to —— ——, Esq. as a tribute of respect for honorably *defending their* RIGHTS, in a suit by—— ———, for an alledged infringment on patent. April, 18—."

Then follow the names of the donors—nine injured worthies!

It is not an uncommon thing for burglars, counterfeiters, swindlers, *et id genus omne*, to evade conviction by legal sophistries; but who ever heard of a gang assembling together on a confederate thus escaping, to compliment him for "defending *their* RIGHTS"! and presenting him with a piece of plate for his services in defeating attempts made by those they had plundered to recover their own! If these gentry are in the habit of awarding such tributes to professional merit—or, as impolite people would say, of handing down to their children such damning proofs of their own rascality—it is, I suppose, not commonly known.

One of the subscribers to the pitcher was an Alderman. On the occasion referred to, he perceived an opportunity of serving the city in another capacity—*i. e.* by supplying the public buildings with the new article. Active in preventing the authorities from employing the inventor, he patriotically secured the job himself, and with that view added, for two or three years, another business to his own. An Angelo in jurisprudence, he, too, occasionally sat with the Recorder to punish petty villains.

Phrenologists inform us that other men beside Bardolphs and Pistols are prevented, by defective organizations, from distinguishing between moral guilt and Old Bailey convictions. The opinion is strengthened by the preceeding case.

Mercury in Hermetically Sealed Glass Vessels.

Prof. Oersted has discovered that a change takes place in mercury kept in hermetically sealed glass vessels, but that it is very slow and not perceptible for years. He had observed them twenty years ago in a glass bulb, and after some years a black one. He took up the subject in 1828, experimenting with four bulbs, two of white and two of green glass, carefully weighed, in order to detect any portion of air that may be admitted through the pores or fissures of the glass. The weight, however remained unaltered. In July, 1839, a small change was visible. At first a feeble ring of yellow powder adhering to the glass was observed where the mercury had been a long time in contact with the glass. And again in a new place, under similar circumstances, a new ring was formed, and so on. The surface itself upon which the mercury had rested some time, had a thin covering of yellow adherent powder. In the course of years the yellow powder became black. The mercury had lost a great deal of its fluidity, and it adhered slightly to the glass. The order in which the two colors follow each other, indicate that they are not produced by oxidation. In the green bulbs no change was visible. In 1845, Prof. Oersted procured twelve bulbs, six of which should contain beside the mercury, atmospheric air, the air of the other six being expelled by boiling the mercury; three of each series being white, and three green glass. In July 1847, there was no sensible change in the first series (namely mercury mixed with air,) but in the second (from which the air had been expelled) change had taken place in all but one. Rarefaction of the air had no connexion with the phenomena, but the boiling of the mercury seemed to have some influence upon them. Analysing the two powders, sulphur was detected. But as a yellow compound of mercury and sulphur contains oxygen, and as no oxygen was found in the black powder, it may be questioned whether the first compound takes oxygen from the air of the bulb and returns it in passing to the state of the black one, or that some hitherto unknown exchange takes place between the elements of the glass and the mercury.

Fulton and Napoleon.

A singular circumstance, says Allison, occurred at this time, (1801,) which demonstrates how little the clearest intellect can anticipate the ultimate result of the discoveries which are destined to effect the greatest changes in human affairs. At the time when all eyes in Europe were fixed on the Channel, and the orators of the French tribunate were wishingfor a "fair wind and thirty-six hours," an unknown individual (Fulton) presented himself to the first Consul, and said—"The sea which separates you from your enemy gives him a great advantage. Aided alternately by the winds and tempests, he braves you in his inaccessible isle. This obstacle, his sole strength, I engage to overcome. I can, inspite of all his fleets, at any time, in a few hours, transport your armies into his territory, without fearing the tempests or having need of the winds. Consider the means which I offer you" A most singular proposition was this, truly. Napoleon so far entertained it, as to commit the plans and details of Mr. Fulton to a Commission of the most learned men which France could produce, and this was all that the First Consul's vast engagements would allow him to do. The most learned Commission reported to Napoleon that it was 'visionary and impracticable.' Such was the reception which steam navigation, that has done so much, first received at the hands of Philosophy.

Part of the wreck of the Ocean Monarch has been washed up at Southport.