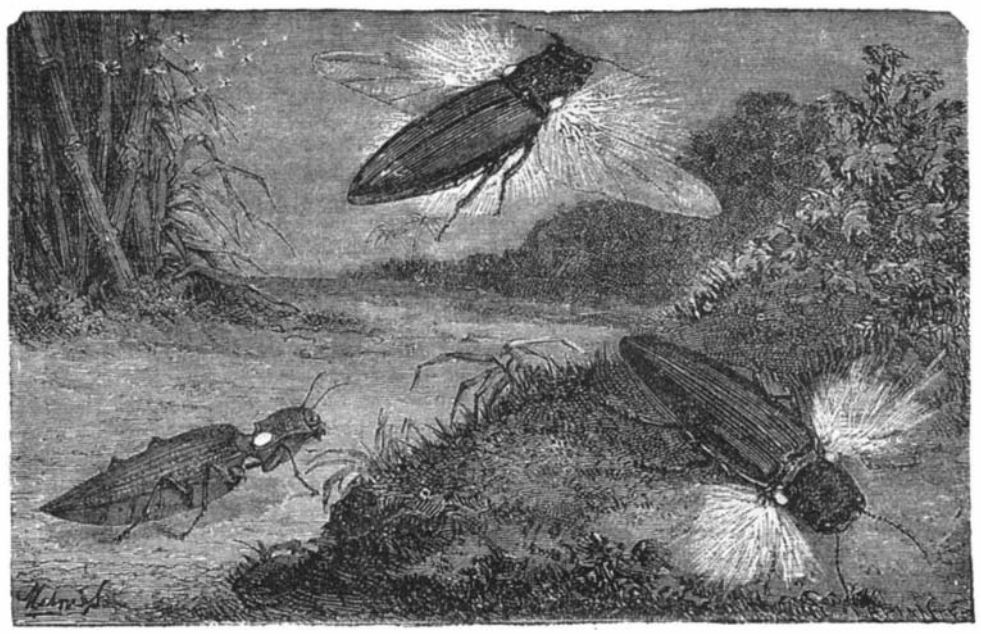
THE COCUYO.

The cocuyo is a varirty of firefly which abounds in Cuba and in some countries of South America, and which emits a light much more brilliant than that given off by the small insects common with us during the summer months. Its form and size are well delineated in the engraving herewith presented. At about the end of April it is found in damp and wooded places throughout Cuba, emerging from its hiding place at twilight, but rarely pursuing its nocturnal rambles for a greater length of time than two or three hours.

The brilliant radiance of the cocuyo is emitted from its ventral region, where there are three phosphorescent organs which the insect can expose and render luminous at will. It is believed that a substance accumulates slowly in the cells of these members, and is discharged voluntarily. As soon as this principle is set free it manifests itself by the production of light alone, without heat, and in a manner similar to that caused by the accidental decomposition of tissue, mucus, sugars, etc.



THE COCUYO.

The insect lives in hollow trees and under dense shrubbery, subsisting on young leaves and similar vegetation. At about the end of July it disappears, though it may be kept until September or October. Occasionally importers of sugar from Havana, in this city, receive specimens of cocuyos from their correspondents, and we have ourselves obtained several in this way. They live for about a fortnight if supplied with brown sugar, though they prefer fresh sugar cane. By placing a few on a table, in a dark room, a curious and interesting effect is produced by the traveling points of light as the bugs run around the surface. Two or three cocuyos in a bottle will emit sufficient light at night to render a letter easily read or the face of a watch distinguished. They are often thus used by hunters, and Captain Mayne Reid, in one of his interesting juvenile works, makes use of this fact in describing how some surprise party of soldiers, in the Mexican war, managed to read important orders when they had no means of illumination, and, besides, could not have used the same for fear of discovery by the enemy. The cocuyo shows his light best while flying, but it can be forced to shine by dipping it in water for an instant. It is inoffensive to man, but a quarrelsome customer among its own species. When a number are confined fearful battles ensue, in which the claws form powerful weapons. Mutilation of the members is almost always the result, although the insect often lives for months after severe maiming.

The most recent application of the bug to useful purposes was its proposed utilization for lighting the interior of the car of the transatlantic balloon at night. The idea, it is needless to add, was never carried out.

THE BRIGHTON AQUARIUM.

The Brighton aquarium, while emulated by several buildings of a similar nature in different parts of England and the continent, still holds its own in being on a scale of magnitude hitherto unsurpassed, more than one of its tanks, in illustration of this, being of sufficient size to accommodate the evolutions of porpoises and other small cetacea. The works were commenced in the autumn of the year 1869, but owing to various interruptions the building was not formally thrown open to the public until August 1872.

The area occupied by the aquarium, says the eminent naturalist Mr. W. Saville Kent, in *Nature*, to which we are indebted for the engraving, averages 715 feet in length by 100 feet in width, running east and west along the shore line. The building internally is divided into two corridors separated from one another by a fernery and considerable interspace The approach to the first or western corridor is gained through a spacious entrance hall supplied with reading tables, and containing, between the pillars which support the roof, portable receptacles of sea water for the display of small marine specimens that would be lost to sight in the larger tanks.

The tanks for ordinary exhibition commence on the left side of the western corridor, and follow in consecutive order round the two corridors, the last immediately facing No. 1. The smallest of these tanks measures 11 feet long by ten feet broad, and is capable of holding some 4,000 gallons of water; while the largest, No. 6, in the western corridor, and the subject of the accompanying engraving, presents a total frontage, including the two angles, of 130 feet, with a greatest width of 30 feet, and contains no less than 110,000 gallons. Every gradation of size occurs between these two extremes, the depth of the water in all ranging from 5 to 6 feet. Supplementary to the foregoing, a series of half a dozen shallow octagonal table tanks occupies a portion of the interspace between the two corridors, these being especially adapted for the exhibition of animals such as starfish, anemones, and others seen to best advantage when viewed perpendicularly through the water. Flanking one side of this same interspace are several ponds fenced off for the reception of seals and other amphibious mammalia and larger reptilia, while at its further or eastern extremity artistic rock work runs to a hight of 40 feet, thickly planted with choice ferns and suitable exotic plants, and broken in its course by a picturesque waterfall and stream. Tanks 12 to 17 in the eastern corridor, in addition to the stream and basin beneath the waterfall, are set apart for the exclusive exhibition of fresh water fish, the remaining tanks being devoted to marine species. The bulk of water thus utilized in the fresh and salt water tanks collectively amounts to 500,000 gallons, and in addition to this several smaller store tanks in the naturalists' room, adjoining the eastern corridor, afford accommodation for reserve stock, or for new arrivals before their display to public view.

The style of architecture dominant throughout the building is Italian and highly ornate, the arched roof of the corridors being groined and constructed of variegated bricks, supported on columns of Bath stone, polished serpentine marble, and Aberdeen granite; the capital of each column is elaborately carved in some appropriate marine device, while the floor in correspondence is laid out in encaustic tiles. The divisions constituting the fronts of the tanks are composed each of three sheets of plate glass, each plate having a thickness of one inch, and measuring six feet high by three feet wide, separated from one another and supported centrally by upright massive iron mullions; in the smallest tanks the front is represented by but one of these divisions, while that of the largest, No. 6, consists of as many as eleven. Among other conspicuous structural features of the aquarium demanding notice are the huge masses of rock entering into the composition of the tanks and fernery.

The system adopted at the Brighton aquarium for continually renewing the supply of oxygen, necessary for the well being of the animals, is by streams of compressed air, which are constantly forced into the tanks through vulcanite tubes carried to the bottom of the water, each tank being fitted with a greater or less number of these tubes according to its size.

Ink in the Teapot.

The adulteration of tea by the addition of iron filings has just been brought rather forcibly to public attention, by a communication to *Food, Air, and Water*, from the pen of Dr. Hassall. The iron is added, the doctor believes, not so much for increasing the weight of the tea as for giving a dark color to the infusion; and since tea naturally contains a large amount of tannin, there are thus brought together the two chief ingredients of ink. Not content with asserting the fact, the doctor demonstrates it by extracting, from such adulterated tea, a bottle of ink and using it in the writing of his communication.

This is a common way of giving an appearance of strength to teas that have been already once steeped. Those who like inky tea can get it more cheaply by using a rusty tin teapot.

Chinese Physiology.

In some respects the Chinese are an intelligent, people but they are not strong in science. Their physiology is especially whimsical. According to their notion, the chief organ of the human economy is the spleen. Its functions are manifold. It rubs against the stomach and grinds the food, it keeps up the proper degree of heat in the five *toang*; it moves the muscles and the lips, and thus regulates the opening of the mouth; furthermore, it directs our secret ideas so that they become known to us. The liver regulates the tendons and ornaments the nails of the hands and feet. The heart regulates the blood vessels, beautifies the complexion, and by its means we are enabled to open the ears and move the tongue. Of the circulation of the blood, the Chinese are profoundly ignorant. The kidneys govern the bones, beautify the hair of the head, and open the orifices of the two *yin*. The diaphragm, being spread out like a membrane beneath the heart, and joined all round to the ribs and spine, covers over the thick vapors so that the foul air cannot rise. The gall bladder is the seat of courage; hence the popular belief that whoever eats the gall of a brave man or beast will inherit the valor of its original possessor: a belief which frequently leads to a lively competition for the galls of remarkable animals.

Of the function of the brain, the Chinese have but a vague idea, still they think it has something to do with the intellect. In proof of this suspicion, they offer the case of a man of great renown for his learning, whose misfortune it was to fall from a horse with such violence as to break his skull. The physician who was called to treat the case hit upon the happy thought of supplying from the skull of a cow the portion of brain the wise man had lost. The operation was only a partial success, since the subject's eminent powers of mind remained in utter prostration, and from that time forward he was a very different man from what he had been. Whether his residual intelligence exhibited any bovine characteristics, our informant unhappily neglects to say.

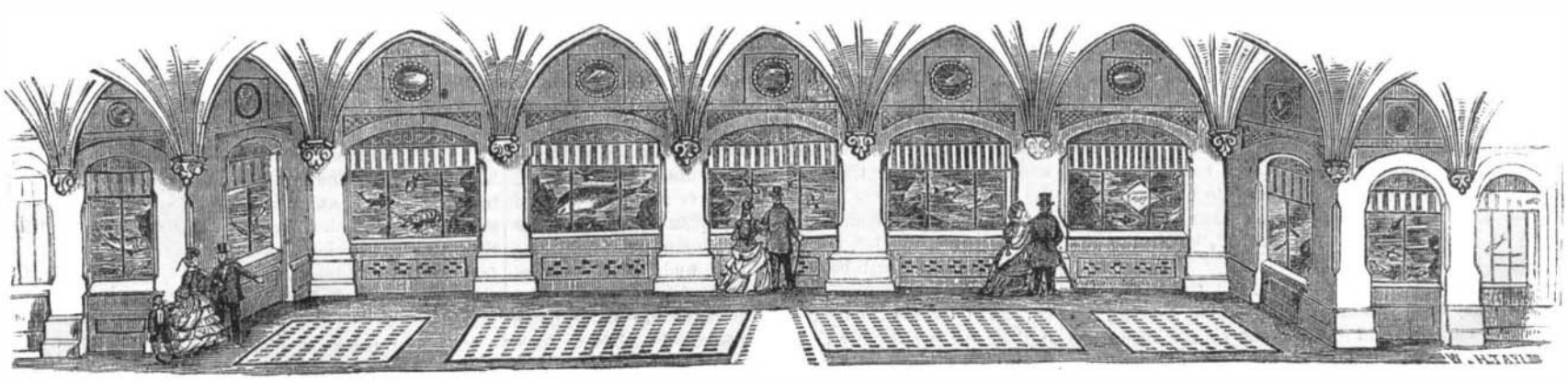
Hereafter we expect to see this case given as additional evidence that the Chinese are the original discoverers of everything. It is certain that it greatly antedates the operation recently reported from Leipsic for the edification of rural editors: a case in which the brain of a good natured wine seller, dead of heart disease, was transplanted into the cranium of a soldier condemned to death for murder, with a corresponding transference of mental and moral traits. The Leipsic surgeon is plainly no better than a skillful imitator.

The Persistence of a Name.

A curious illustration of the living force of a name is to be seen in the title given to the Virgin Mary by the people of the Basque Provinces. In the most ancient records of Chinese history (the annals of the Bamboo Books, lately translated by Dr. Legge), the name *Ishtar* appears as one of the titles of the Queen of the Stars. Among the ancient Assyrians, *Ishtar* was their chief female divinity, the celestial virgin mother. In Solomon's time, the Syrian equivalent of the name was *Astarte;* and in II. Kings, the wise man himself is charged with having set up an altar to this fascinating goddess. In the Hebrew record, the spelling is *Ashtoreth.* By Milton the name is given as

> ". . . . *Astoreth*, whom the Phœnicians called *Astarte*, Queen of Heaven."

Whether Phœnician voyagers left the name in Spain, or whether the Basques brought it with them in their original migration westward, it is impossible to say, nor does it matter. It is there in common use to this day, a living name with a history of at least five thousand years.



FRONT VIEW OF ONE TANK OF THE BRIGHTON AQUARIUM.