has occupied the highest positions in science. While examiner for many years at the Polytechnic School, all the celebrities in the sciences and the higher administration passed before him, and remained his admirers. He has always been president of the National Agricultural Society. After presiding over the Museum for a long time, he was about being superseded by Prince Bonaparte of Canino (as the administration was then desirous of changing the oligarchical management of this celebrated establishment), when the death of the Prince, who had made him change his apartments, caused him to resume direction, and it was not till 1883 that he gave up the place to Mr. Fremy.

MR. CHEVREUL. (FROM A LITHOGRAPH OF 1836.)

All the scientific bodies in the world have done themselves the honor to include him among their foreign members, such as the Royal Society of London, and scientific societies of Copenhagen, Stockholm, Berlin, Moscow, Philadelphia, and others.

Up to 1855 he had been a member of the jury of every French exhibition. A member of the Legion of Honor, commander in 1844, grand officer in 1865, grand cross in 1875, he has all the grades that any scientist could be covetous of. The foreign decorations that he has received would cover his entire breast. But honors have never elated the indefatigable worker, who is ever studying, and who remains more than ever, at the age of one hundred, the dean of the students of France and of the entire world. The life of the centenarian has been passed between the Museum of Natural History, the Gobelins, and the Institute of France. Mr. Chevreul never fails to be present at the Monday sessions of the Academy.

The number of memoirs that he has presented to his colleagues is incalculable, so to speak. He has never been desirous of being a politician, but has preferred to remain a great man and a great patriot. During the Franco-Prussian war (1870–71), at the age of eighty-six, he willingly endured the privations of the siege, and did not leave the confines of Paris. He lived at the Museum, while more than eighty Prussian bombs

MEDALLION STRUCK IN 1839.

were shattering the galleries and breaking the cases. More than one of these projectiles burst in the vicinity of the laboratory where the noble old man was at work.

Let us reproduce just here the indignant protest that he caused to be entered in the proceedings of the Academy on the 9th of January, 1871:

"ACADEMY OF SCIENCES.

"*Session of Jan.* 9, 1871.

BOMBARDMENT OF THE MUSEUM OF NATURAL HISTORY.

"*Declaration.*

"The garden of medicinal plants founded at Paris by an edict of Louis XIII., in the month of January, 1626,

"Became the Museum of Natural History, by a decree of the Convention, June 10, 1793,

"Was bombarded

"Under the reign of William I., King of Prussia, Count Bismarck, Chancellor,

"By the Prussian army on the night of Jan. 8–9, 1871,

"Up till when it had been respected by all parties, and by all national and foreign powers.

"E. CHEVREUL, *Director.*

"Paris, Jan. 9, 1871."

It was in the train of this declaration that Mr. Chevreul had occasion to write a letter to Abbot Lamazou, in which he styled himself the dean of students. We reproduce the last sentence of this touching epistle: "Let the expression of such sympathy be permitted, not to the scientist, but to him who can call himself the dean of French students, since it has been allowed him to uninterruptedly continue upon the banks of the Seine studies that were begun at the end of the last century in the beautiful country of Anjou."

Mr. Chevreul has a large library at the Museum, which has kept constantly increasing by the addition of valuable books, part of which have been discovered by his son, who also is a book-lover. His grand life has been absorbed by thought and concentrated in study, and from thence have been evolved his useful discoveries. He has been rendered happy by work and moderation. His wife (*née* Braccini), his devoted companion during her entire married life, always foresaw his wants, and up to her death (a long time ago) paid him that devotion that superior minds know how to offer to those that surround them. Mr. Chevreul's only son lives at Dijon. The illustrious veteran lives alone, then, having for his sole companions certain old books, through which he can converse with his brothers, the great men of the world.

When he is not among his books, he is at his laboratory at the Gobelins, where he is still pursuing his researches with a juvenile lightness of hand.

Mr. Chevreul has a large fortune, which his life as a scientist is yearly increasing. His life is therefore passing along peacefully, and he has the happiness of receiving ovation after ovation as the end of his career approaches. He has been present at the advent of all the scientific discoveries of our era, and at the wonderful spectacle of the development of the modern industries.

Mr. Chevreul is tall and straight, elegant in manner, and of matchless affability, and it is rarely the case that in approaching a person he has not a smile upon his countenance. He has a splendid head, with a wide and powerful forehead and white hair. He is a man of humor as well as one of genius. Upon recently employing a new preparator, he exclaimed: "You must have courage in order to accept a situation as my curator; I have already killed four."

One might say to Mr. Chevreul what Voltaire said to Madam Lullin, who reached a hundred years: "Par votre esprit vous plaisez à cent ans," and desire Mr. Chevreul, as the patriarch of Ferney also desired his centenarian lady, to survive for a long time for Fontenelle. But Mr. Chevreul has what the author of the Plurality of the Worlds did not always have, and that is goodness and sensibility of heart. Fontenelle, who died at the age of ninety-nine years and eleven months, had said of himself: "I have failed to love." Madam de Tencin one day uttered this cruel apostrophe:

"It is not a heart that you have there, but brains like those of the head."

However this may be, Mr. Chevreul has the privilege of being not less amiable than the great writer.

Up to a few years ago, he still attended the winter balls of the Elysée, and we remember having seen him there at midnight, fresh and smiling, and surrounded by ladies whom he was entertaining with exquisite and charming grace.

Mr. Chevreul is very temperate. He drinks nothing but water or beer; but it is certainly not to this regimen alone that he owes his longevity, but to his strong constitution and his virtuous, regular, and industrious life. The birthday of such a man, who honors to such a degree the science to which he has devoted himself and the country to which he belongs, is a memorable event that cannot be celebrated with too much *eclat.*

Our centenarian offers a grand and beautiful spectacle, like that of an old oak sheltering under its shade continuously renewed generations. Deaf to the noises of the world, he delights in remaining isolated in his laboratory, where his ever active intelligence is being attracted without cease to the irradiations of eternal truths.—*La Nature.*

STOPPER FASTENER.

Extending across the top of the stopper, the form of which is clearly shown in the right hand view, is a bar bent to form arms terminating in eyes. This bar is so attached to the stopper that when the latter is pressed down in closing the bottle, the bar may be turned without carrying the stopper around with it. Encircling the neck of the bottle is a stout wire, bent as plainly shown in the two left hand views. The upward extensions of the neck band are on opposite sides of the bottle, and the inclination of the fastening rods, upon which slide the eyes formed in the arms of the stopper bar, is in opposite directions on the two sides. To close the bottle, the stopper is turned down on the mouth, and the eye on the free end of the bar is brought opposite the extremity of the inclined fastening rod. The bar is then turned so as to make its eyes move down the inclined rods, forcing the stopper to its seat. The arms, after reaching the lower part of the inclines, move upon seats, which then receive the upward pressure exerted by the contents of the bottle upon the stopper. The bottle is opened by moving the arms in the opposite direction.

As here shown, both the extensions carrying the fastening rods and the neck band are of one piece of wire, the arms being turned to the sides to form the neck band, and smaller wires being used to connect the arms. The rod shown below the inclined fastening rod is designed to guide the free eye upon the fastening rod.

HAZARD'S STOPPER FASTENER.

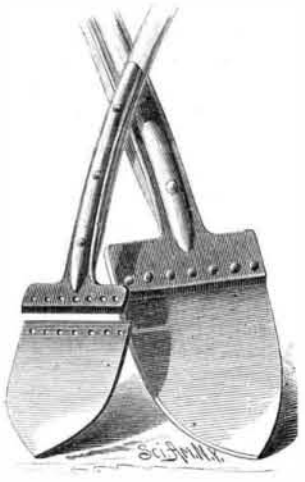
This invention has been patented by Mr. Robert H. Hazard, whose address is care of the Firemen's Insurance Co., of Washington, D. C.

Artificial Respiration.

Mr. J. A. Francis describes the following method of artificial respiration in the *British Medical Journal.* The body of the patient is laid on the back, with clothes loosened, and the mouth and nose wiped; two bystanders pass their right hands under the body at the level of the waist, and grasp each other's hands, then raise the body until the tips of the fingers and the toes of the subject alone touch the ground; count fifteen rapidly; then lower the body flat to the ground, and press the elbows to the side hard; count fifteen again; then raise the body again for the same length of time; and so on, alternately raising and lowering. The head, arms, and legs are to be allowed to dangle down quite freely when the body is raised. The author alleges that this method is most successful, and it is so simple that any one can perform it without any teaching.—*London Medical Record, June* 15, 1886.

IMPROVED SHOVEL.

The shovel shown in the engraving is constructed in such a manner that the blade when worn can be readily replaced by a new one. Upon the lower end of the socket strap, to which the handle is secured in the usual way, is formed a plate similar to the upper part of a shovel blade, and which has a row of holes near its lower edge. The upper part of the blade also has a row of holes along its edge, and is lapped upon the rear side of the plate, so that the rows of rivet holes will coincide. The plate and blade are then riveted together. The edges of the plate and blade are beveled to prevent the substance being shoveled from lodging against them. When the blade becomes worn, the rivets can be punched out and the worn plate replaced by a new one at a trifling cost, thereby saving the expense of an entire new shovel every time a blade wears out.



All further particulars regarding this invention can be had from the patentee, Mr. Wm. C. Gregg, of Golconda, Nevada.