

by the results obtained, and that the directors of the other railways terminating at Jersey City are likely to adopt the same system of examination for their employes.

RAILWAY CREMATION.

It is a pretty universally recognized fact at the present day that burying such animals as have succumbed to a pes-

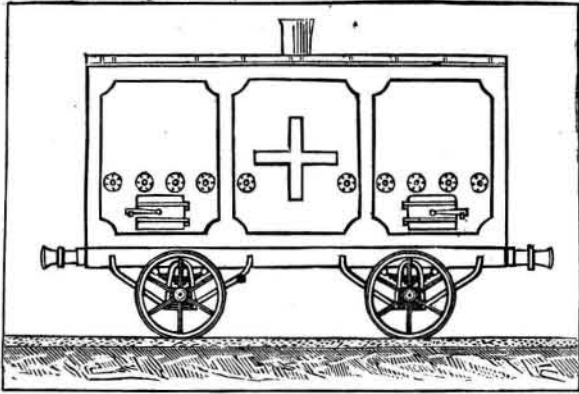


FIG. 1.

tential disease is not sufficient to destroy the contagious germs which remain in their bodies. This has been shown especially by the researches of Messrs. Pasteur, Chamberland, and Roux. These gentlemen have ascertained that when infected blood is consigned to the earth the bacteria are preserved therein in the germ state, multiply, and, in a short time become transformed into corpuscles which can be detected after remaining in the soil for several months. We ought to welcome, then, a new method of cremation which has been invented by Messrs. Kuborn and Jacques, and which satisfies every sanitary necessity by furnishing an easy means of totally destroying the infected animals. The two accompanying engravings give an exact representation of the apparatus. As shown in Fig. 1, it looks externally like a railway car; but it differs in the fact that rails are dispensed with, the car being drawn on the surface of the ground by horses or mules. Fig. 2 shows the arrangement of the interior of the apparatus. The closed space, A, is designed to receive the cadavers. It is a chamber having walls, R R, impermeable to heat. The bottom is composed of two dead plates, S, both of refractory material, the lower extremities of which terminate in a well, B, so as to form a hydraulic joint. Beneath these dead plates are located two fire places, F F, provided with movable working holes, which, by regulating the introduction of the air, allow of perfect combustion being obtained. The products of combustion reach the chimney through the flues, C, C', and C''.

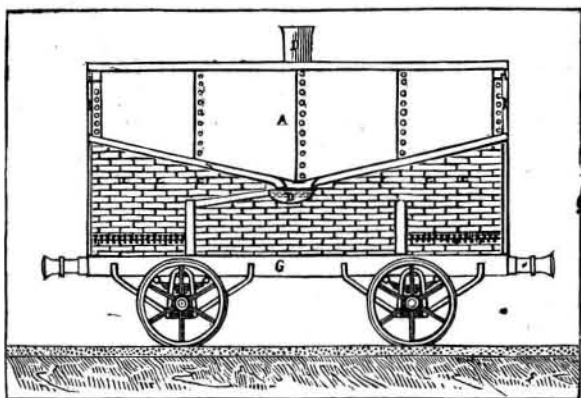


FIG. 2.

Any kind of fuel, no matter what, may be used. The apparatus is simple, and is easily operated at but trifling expense.

Packing Apples with Salicylic Acid.

There are few greater treats during the winter and early spring seasons, says the *London Magazine of Pharmacy*, than the magnificent apples which are imported from America to find their places on the dessert table in England. Considerable numbers, however, arrive here in a bruised condition from the effects of careless packing; a certain amount of fermentation is set up, and unless they are consumed without delay, they are lost to the dessert table. This is more frequently the case when barrels full of the so-called "Newtown pippins," and others, have been exported by private individuals to their friends in England, than when they are packed by the regular tradesmen. There is no reason why this splendid fruit should not be imported here almost as fresh and blooming as when it is gathered from the tree. A common but soft kind of tissue paper should envelop each apple before it is placed in the cask, and this tissue paper should have been soaked in a solution of salicylic acid and dried before it is used. The best preparation of salicylic acid for this purpose is the alcoholic solution, made with the strongest spirit, and then diluted with as much water as it will bear without precipitating the acid, so as to make the solution go as far as possible. Each apple should be enveloped in at least three or four folds of the salicylated paper, and every possible precaution should be taken to prevent bruising when loading into the casks or cases. Well packed apples should not move at all during the voyage, and the shaking of a railway train should have little effect

upon them. Nevertheless, a certain amount of contusion is inevitable, and to avoid the ulterior results of this, the salicylated paper is indispensable. As to the cost it would be a mere trifle when we consider the result gained, and the splendid condition of the fruit when it enters the London market. Besides, it is very probable that the salicylic acid paper used for packing the apples in America, might be used over again, or applied here in England to some similar antiseptic purpose, and an allowance made for it accordingly.

SEA BEANS.

BY A. W. ROBERTS.

So much confusion of ideas exists about these so-called sea beans in the minds of most people that I have taken the trouble to obtain all the information obtainable about them.



Fig. 1—Seed of *Entada Scandens*.

Fig 1 is the seed of a vine, the *Entada scandens*, which grows in the tropical portions of both hemispheres. The vine is chiefly remarkable for the large pods and seeds, the pods often being from six to eight feet long, divided into numerous joints, each one of which contains a bean. In some parts of India these beans are used as weights. In London the seeds are sold under the name of "West Indian filberts." These sea beans are found in large quantities on the coast of Florida, particularly after northeast storms. These beans are worked into various trinkets, such as perfume bottles and snuff boxes. One of our leading jewelers has had some of these sea beans to polish and mount in gold for watchseals and lockets. For polishing the best materials are fine pumice stone powder, putty powder, and rotten stone. After the roughness of the outside of the bean is taken down with the pumice stone powder to a uniform surface, then put on the second polish with putty powder and oil. After which finish with rotten stone and oil on a lap wheel.



FIG. 2.

Any one handy with the graver can embellish these beans with every style of device desired. The beans should be first boiled in water for a half to one hour to soften the outer coating. After the outer coating is softened give it a coating of Winsor & Newton's Chinese white, on which the drawing is made for the engraver to follow. One of the prettiest styles of ornamentation of these beans is that of monograms inlaid with gold bronze. These beans are believed by most persons to be a product of the ocean from the fact of their being found on different parts of our seashore, particularly of the Southern States. I have found them on both the Massachusetts and Long Island shores. They have also been found on the coast of Scotland and as far north as the Loffoden Islands, off the coast of Norway.

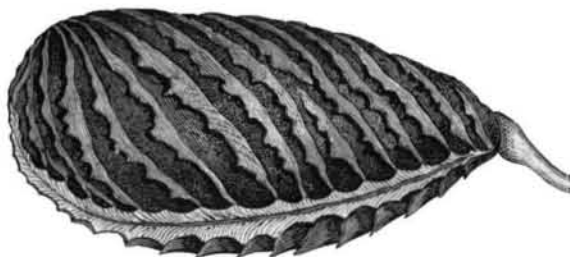


FIG. 3.

Figs. 2 and 3 represent the bean and pod of the "asses-eye," the scientific name of which is *Mucuna urens*. This bean is also a native of the West Indies, and is borne to the Florida coast by ocean currents. These beans have of late years been sent north from Florida in large quantities for the use of jewelers and tortoise shell workers, who convert them into charms for watch chains. They are capable of receiving a very high polish, the same materials being used as directed for polishing the *Entada scandens*. Miniature compasses and portraits are often introduced as a setting in these beans. They grow in short stout pods, covered with brownish bristly hairs, which easily separate, and when handled stick in the fingers, producing an intense itching sensation. The pods of this bean are used to adulterate the pods of the *Mucuna pruriens*, of which the hairs are the official portion. These hairs are the cowhage sold by drug-

gists and commonly known as "cow-itch." *Mucuna urens* is a perennial climbing plant, which twines round the trees and rises to a considerable height. The flowers are yellow and large, and resemble the pea blossom in form; usually placed in twos and threes in short peduncles.

The hairs of the *Mucuna urens* and *Mucuna pruriens* are possessed of powerful vermifuge properties, and act mechanically by penetrating the worms.

Legal Responsibility for Machinery Accidents.

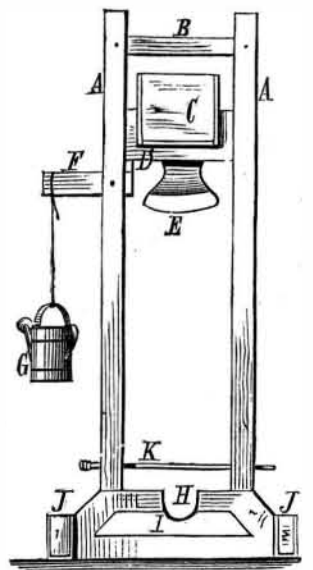
The Supreme Court of the United States has laid down the law as to the responsibility of employers for the lives and limbs of their workmen. They must not expose them to perils which can be guarded against, and if the servant reports defective or unsafe machinery, the master becomes responsible if the repair or restoration is not promptly made. The doctrine, familiar to English courts but never hitherto adopted here, that the acts of a superior officer or workman under a corporation are as those of the employer, and the latter is responsible for negligence involving disastrous results, was affirmed. The case was that of a railroad engineer who lost his life while saving his passengers from an accident, the result of a defect in his engine to which he had called the attention of the master mechanic. His widow sued the railroad, the Texas and Pacific, for \$80,000, but was ruled out of court in Texas. *Lefel's News* thinks the lady will probably be more successful on the retrial which has been ordered.

Operating Elevated Railroads by Electricity.

We learn from our foreign exchanges that the Council of Magistrates of the city of Berlin have appointed a special committee of engineers and architects to examine into and report upon the proposal submitted by Siemens and Halske for the construction of an electric railway across a portion of the capital. It is intended to begin the line at Belle Alliance place and run it through Friedrich and Chaussee streets on to Wedding place. The tracks—one for the up and the other for the down trains—will be supported by iron columns, 14 feet 9 inches high and 33 feet apart. The carriages are to be narrow and short, having only ten sitting and four standing places. The electro-dynamic machine to move the train will be placed under the floor of the carriage between the wheels, and a steam engine of 60 horse power to produce the electricity will be placed at the terminus. There will not be many stoppages, and the rate of speed is estimated at about twenty miles an hour.

INSANE INGENUITY.

Stephen M. Pillsbury, Jr., of Chelsea, Mass., an unmarried man of thirty, with a hereditary taint of insanity, guillotined himself April 20. He is described as a temperate, retiring sort of fellow, in prosperous circumstances, and on good terms with his family and friends. His special weakness was a morbid taste for reports of criminal matters and suicides. Evidently his desire was to do something notable, but owing to feeble health and probable lack of physical courage, he could see no way to distinguish himself except by suicide. Accordingly he constructed an apparatus like that figured herewith (copying a contrivance used for a like purpose in a Western State five or six years ago), and deliberately cut off his own head. He set up his apparatus in the barn, using therefor such materials as were handy. The standards were joists, A A, extending from the floor to the loft, to the under side of which they were securely spiked, a brace, B, adding to their stability. The lower ends of the joist were mortised in a block of hard wood, the top of which was rudely hollowed out at H to support his neck. Boxes of stone, J J, on either side kept the apparatus steady. Fitted between the uprights, so as to slide easily, was a piece of two-inch plank, to which was fastened the blade of a broadax, E. On the top of the slider was a box, C, loaded with stone. A lever, F, pinned to the left upright supported at one end the slider, balanced by a watering pot, G, at the other end. A broom handle, K, thrust through the supports near the base served to hold the suicide's head in place, and a leak in the watering pot let off the guillotine when he had stupefied himself with ether placed under his nose in the trough, I. The apparatus answered its purpose reasonably well, and probably could not have been put to any better use. We are not sure, however, that it would not be well to re-enact the old custom of midnight burial at the crossroads, stake and all, for such as make an end of themselves in such untidy and, to their friends, shocking ways. With so many means at command for decently slipping off the mortal coil bodily mutilations are not to be tolerated.



PILLSBURY'S GUILLOTINE.