



**Improved Hand Sawing Machine.**

No labor is more exhaustive to the wind or requires more monotonously muscular exertion than that of sawing wood for fuel by the old-fashioned buck saw. It may be excellent exercise for those of sedentary habits and others of a dyspeptic tendency, but we never heard of any one choosing the wood sawyer's as his vocation, however agreeable it may be to officiate as a "wood sawyer's clerk." The inventor of the machine shown in the engraving evidently agrees with us, as he has constructed a neat and portable machine, which, if it does not make wood sawing a pleasure, greatly diminishes its labor.

The machine is a frame with a braced upright, to the top of which is pivoted a segmental swinging frame, holding between its lower ends a curved saw plate. The movement of the frame and its saw is like that of a pendulum, and it is produced by a handle attached to the wrist pin of a crank, which pin carries a sliding box traversing between vertical slides the length of which is equal to the full stroke of the crank. The shaft that carries the crank has on its other end a balance wheel to equalize the reciprocatory motion of the saw.

In the engraving, A is the sliding box and handle, and B the balance wheel. The lever, C, is for elevating the saw and its appurtenances by means of a sliding bar, D, traversing between two uprights. This lever is weighted at the end opposite the handle, C, by a weight that may be moved toward or from the center to act as a means of forcing the saw into the wood. The bar, E, with the toothed catch, F, is intended to hold the stick or log while being sawed.

This simple machine will saw wood much more rapidly and with less labor than the work can be performed by hand, and it is cheap and durable. It is the subject of a patent obtained through the Scientific American Patent Agency, dated Nov. 6, 1866, and an application for improvements is now pending. Further information may be obtained by addressing H. A. Daniels, at Thomaston, Conn.

**Burying Alive.**

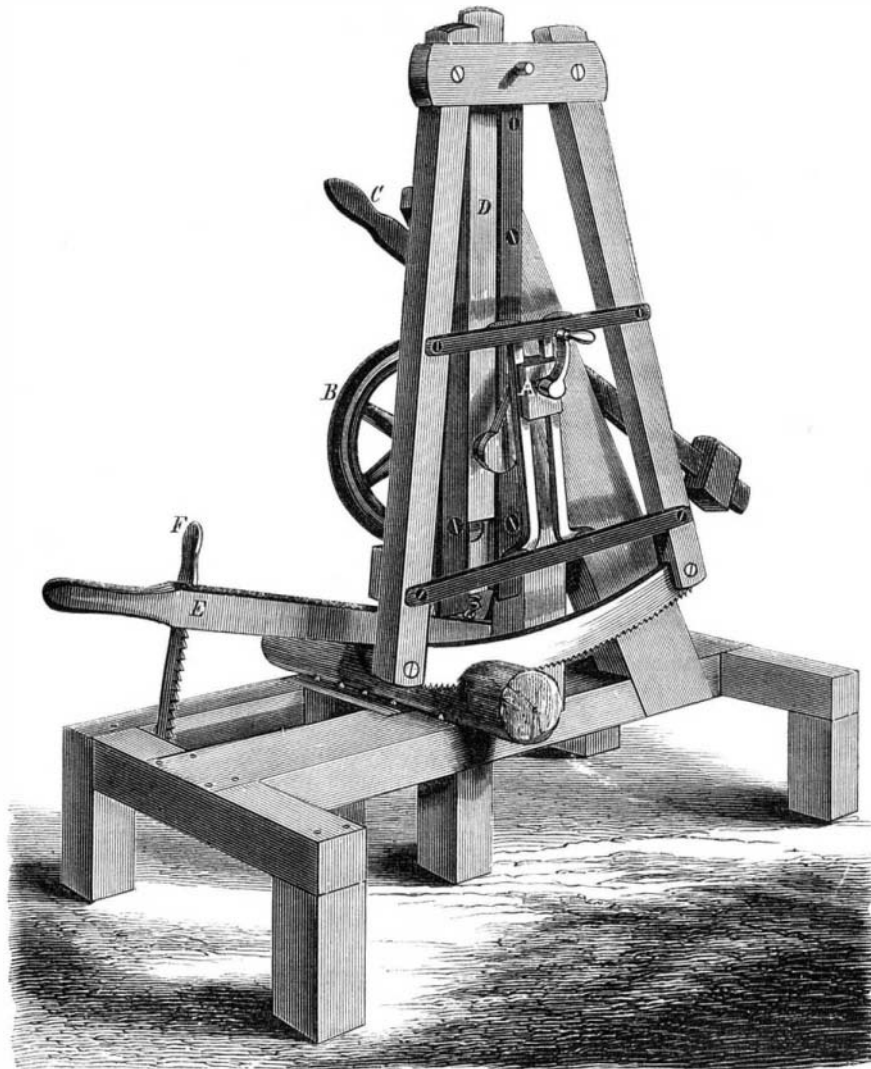
A method for determining when death has taken place without that of actual decomposition, which in very cold weather might be delayed for weeks, has always been a desideratum. The fear of being buried alive, which has undoubtedly occurred in many instances, has proved a source of anxiety to persons during life and of sad conjecture to their surviving friends. It is said that it has been recently discovered that if the skin of a deceased person is blistered, as by holding the flame of a candle against the body, when punctured the blister will give out only air, whereas if death has not taken place the flame causes inflammation and a watery serum will be deposited under the blister. It is claimed that this is a certain test when inability to feel the pulse, cold skin, no deposit of breath on glass, and other methods fail.

**Device for Replacing Cars on the Track.**

Notwithstanding the frequent accidents from the displacement of locomotives and cars from railways, the use of the jack screw and frequently other less mechanical and still cruder means are employed to replace them. Even the former is not always carried on the train, and the latter demand the oversight of some well balanced and executive mind to make their use effectual. A portable and convenient device for remedying the annoyances attending these almost unavoidable accidents seems to be really a desideratum. It would seem that the one represented in the engraving accompanying this article was well fitted to answer this want.

The pieces to be used are only three in number, and are not so heavy but that either of them can be readily carried by one man. They consist of a grooved plate, A, with side projecting flanges to slip over the rail and to be held in place by means of wedges, or keys, B, fitting between the flanges of the plate and the web of the rail. This plate has a gradually opening or expanding groove, guarded on each side by flanges. It is so constructed that from the forward end it declines to the road way, forming an easy incline for the wheels of a car. To further assist the car in its progress to the track, a bar, C, is used, one end of which fits in a proper socket in the plate, A, and the other end of which is curved so as to fit either one track or the other, as the run-off cars may be. It can be easily reversed so as to suit either contingency.

On the other side of the road, or on the other rail is placed a curved plate, D, secured to the rail as the plate, A, is, by a key or wedge, which assists the wheel of the car to assume its normal and proper position. These comprise all the appliances of this device. They are simple in construction, can be easily carried on any engine tender or street car, and the pieces composing them can be readily handled by one man in case of accident. It will be seen that while the flanged incline, A, pilots the flange of one wheel to its posi-

**DANIELS' PATENT WOOD SAWING MACHINE.**

tion on the rail, the other is assisted to its place by the smooth incline, D. The device is as well adapted to street cars as to steam cars. It is recommended by Franklin Peal of the Baldwin Locomotive Works, Philadelphia, Robert H. Sayers of the Lehigh Valley Railroad Co., and other prominent engineers and railroad men.

It was patented through the Scientific American Patent Agency, April 14, 1868. Railroad companies and others desirous of purchasing rights may address B. K. Jamison, 301 Chestnut street, Philadelphia, Pa.

**Vitality of Insects' Eggs.**

The Troy Times says: "A gentleman who lives on Ida Hill

and dealers in paper will not hear of it with much surprise. The *Cimex Lectularius* or common bedbug is very tenacious of life, as all our neat housewives know. He will stand boiling water, oil, soap, and even some of our patent bug destroyers, and rather seems to enjoy his rough treatment, as we superior animals enjoy the rough usage of the Russian bath. But his embryo offspring seem to be still more tenacious of life. Some years ago, in writing on unprinted news paper, we detected a bunch which occasioned some annoyance, as such an obstruction will to a writer, and opened it with the point of a pen, when a veritable *cimex* made his appearance, apparently as fresh as though he had just awaked from a long winter nap. Subsequently, under similar circumstances one fairly cut through his paper envelope and walked out before our eyes. In both cases the enveloping film of paper appeared to be whole, and we could not resist the conviction that the embryo had passed through all the stages of the paper manufacture—the sorting and washing of the rags, their grinding, steaming, pulping, manufacture into paper, calendering, and putting up for the market.

**A New Life Saving Invention.**

Last summer public interest was excited in watching the success of two trans-Atlantic excursions undertaken by certain foolhardy individuals who were willing to stake their lives against a short-lived notoriety. It having been demonstrated that the ocean passage can be made in an ordinary sail boat, or raft, with a fair share of safety, we should not be surprised if some future adventurer desirous of creating a sensation and rendering himself famous in this line, should undertake a trip, or rather swim, to Europe, the feat being possible with the life-saving apparatus of Captain Stoner, exhibited in this harbor on the 27th ult. The apparatus, whose design is for service in case of shipwreck, consists of an india-rubber suit, in one piece and made large enough to put on over the ordinary clothing of the wearer. The buoyant power resides in a cork jacket worn inside the rubber suit. A covered framework fastened to the hands furnishes propelling or swimming device, and a light metallic case serves as a reservoir for provisions, holding enough food and water to last for a month or more. The trial on Wednesday was under the auspices of the National Life Saving and Ship Ballasting Company, who chartered a government steamer for the occasion. Two persons dressed in this suit remained in the water for nearly two hours without wetting their clothing in the slightest degree.

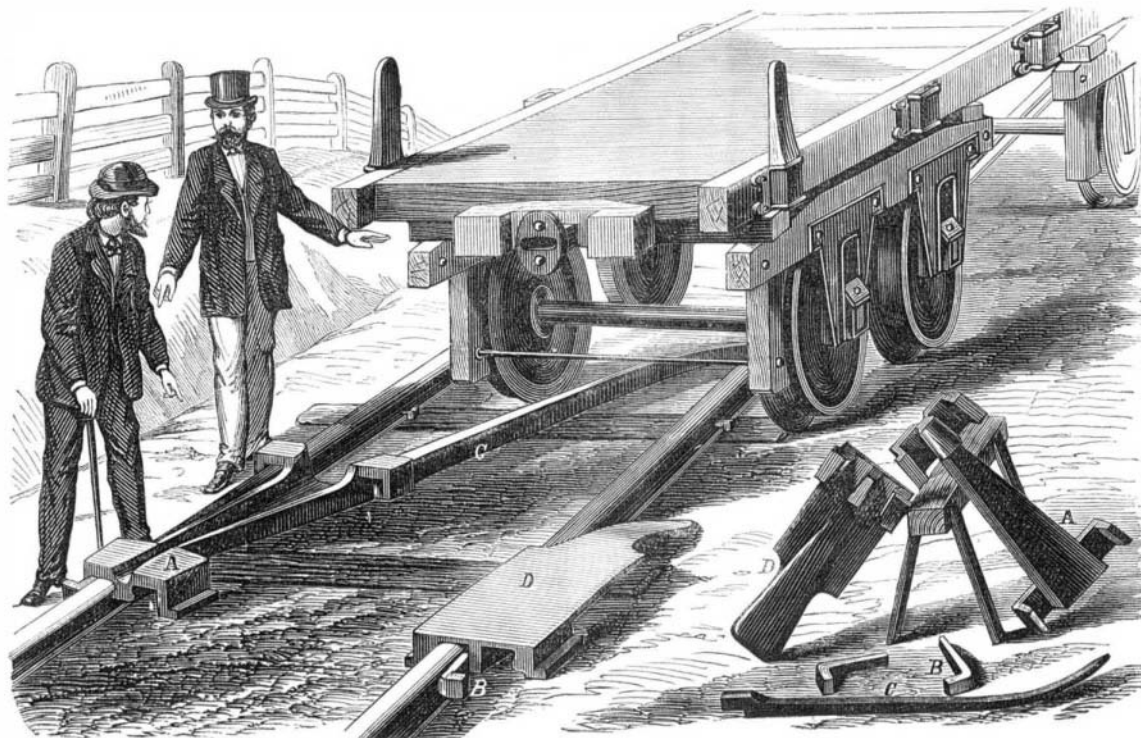
The apparatus is somewhat similar in construction, and for the same purpose, as an india-rubber suit with an air bag on the back, making the wearer when in the water, resemble a porpoise, which was exhibited by the inventor in our harbor several years ago, much to the amusement and consternation of great numbers of persons who gathered upon the docks to witness the exploits of the exhibitor. Similar apparatus has been experimented with on the Continent for a number of years, but we have never known of their useful application except for wrecking purposes.

**Petroleum in Parliament.**

The English journals notice the introduction of a bill into parliament imposing additional restrictions upon the sale and use of petroleum. The bill—which by this time has undoubtedly become a law—while serving as an amendment to what is known as the Petroleum Act of 1862, is still more stringent in its provisions, and virtually puts an end to the sale of all lamps using the light hydrocarbons, and also the various styles of portable illuminating-gas machines which have proved themselves of great service in many localities in this country, but of whose value, it seems, the Britons are never to be acquainted. The test for lawful petroleum is placed, by this bill, at one hundred and ten degrees Fah., the commercial test for kerosene in this country, and any person selling, or exposing for sale, oils giving off inflammable vapors below that point, is subjected to a fine of five pounds sterling. Venders of

"patent non-explosive oils" will not find much encouragement for driving a very extensive trade in England.

THE French towns of Narbonne and Passy, near Paris, have been lighted at night, for several years past, by illuminating gas made by passing the vapor of water over incandescent coal.

**JAMISON'S CAR REPLACER.**

informs us that ten years ago he bought a piece of enameled cloth for a table cover, on which there was at that time and has been ever since a small knot or bunch, apparently in the make of the cloth. A day or two since a child of his scraped the bunch with a knife, when out crawled a bedbug, as lively as ever."

This case may be a remarkable one, but newspaper men