

IMPROVED HAND CART.

The ordinary hand cart is open to two objections: first, the impossibility of loading from the rear on account of the disposition of the vehicle to tilt; and second, the inconvenience of loading at the side, owing to the wheel being in the way. Both of these difficulties, it is claimed, are overcome in the invention illustrated in the annexed engravings, which consists in an arrangement of the bed so that it slides back and forth at the will of the operator.

A is a frame attached to the axle of the cart and further supported by the braced standards shown, which rest on the ground when the cart is stationary. On the top side of the frame are secured the metal runners, B, upon which clips, C, having eyes, and attached to the bottom of the vehicle body, fit. These clip eyes are loose upon the runners, so that the body can be moved forward from the axle, as shown in Fig. 1, to allow of loading without the interference of the wheel. When the loading is finished, the body is pushed back and balanced over the axle, as shown in Fig. 2.

It will be seen that the standards give the body a firm support when the same is pulled forward. The inventor suggests that, as there is no establishment in this country which makes a specialty of hand cart making, a profitable trade might be monopolized under his patent.

The inventor, Mr. Joseph M. Jones, desires to dispose of his right for two thirds of the United States; for further particulars regarding which offer, etc., he may be addressed at Paris, Bourbon county, Ky.

Patented through the Scientific American Patent Agency, May 11, 1875.

Feeding Marine Boilers.

The use of a second boiler for the purpose of providing a supply of fresh water to keep up the feed to the main boilers of ships fitted with compounded engines, is becoming very general. Various contrivances have been adopted also with the view to utilize the working power of the steam of this second boiler by passing it through the engines before allowing it to go to the condensers. The *Societa Nazionale* of Naples have adopted the following plan in the engines fitted by them to the ships of the Italian navy: The small boiler is vertical, with a number of transverse tubes of very simple arrangement. These boilers are easily cleaned by loosing a joint and removing the outer shell, which leaves all the parts in contact with water and steam exposed. These boilers are also used for other purposes, such as working pumps and winches, and are not always in use for their primary purpose.

DUNN'S IMPROVED VINE RAKE.

The invention illustrated herewith is an implement for pulling sweet potato or other vines off from the ridges preparatory to the digging and plowing of the ground. It consists of a supporting plow beam provided with lever handles of the usual construction, and having, in place of the plow stock and share, a fork or rake made with two forward curved teeth. This is rigidly secured to the beam by a central eye bolt and rear braces.

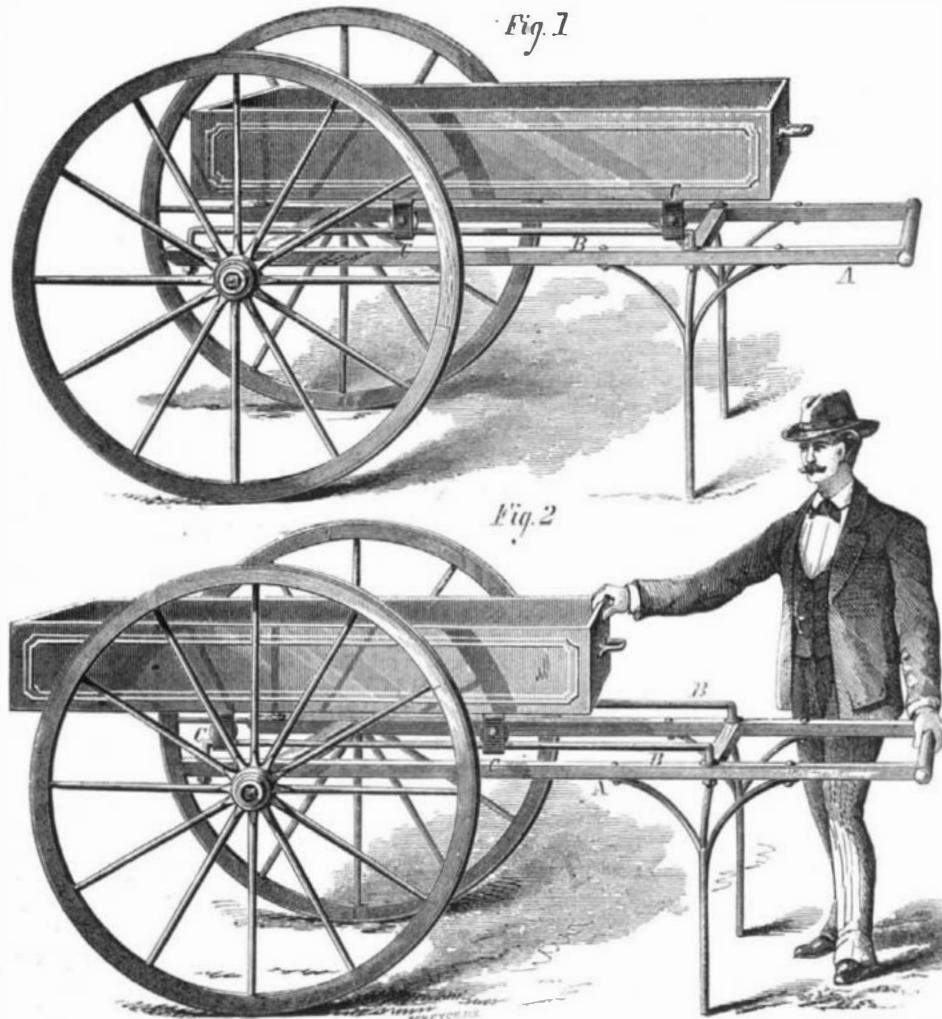


The rake is drawn by a pair of animals, one walking on each side of the ridge to be cleared. The beam is placed directly over the top of said ridge, with the teeth on the sides of the drill, at base of the vines. As the team advances, the teeth pass under the vines and tear them loose from the ground, carrying them along until the rake becomes full. The implement is then pulled back and raised clear of the gathered vines, and again started to clear another section of the field.

Patented through the Scientific American Patent Agency, April 20, 1875. For further particulars address the inventor, Mr. Joseph W. Dunn, P. O. Box 8, Corpus Christi, Texas.

The Odorless Broiler.

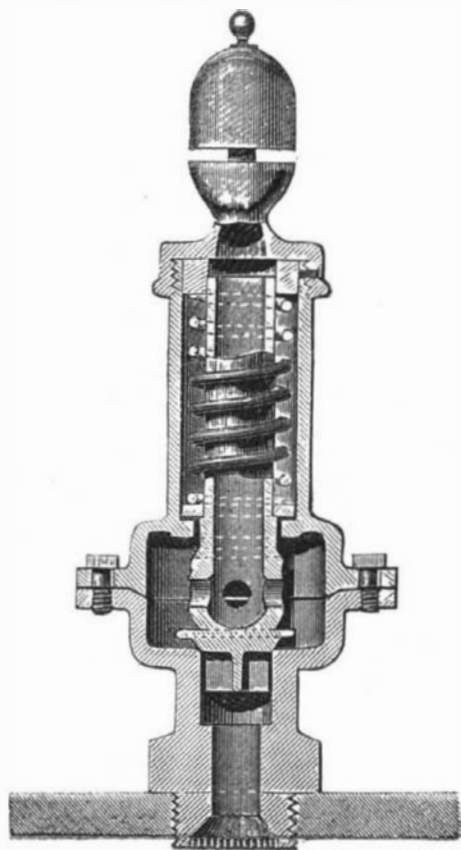
This consists of a gridiron of the usual kind, fitted within a case of tin, so arranged that, when placed over the fire of an ordinary stove or range, the smoke and odors of the cooking operation, instead of escaping into the kitchen apartment, are drawn into the fire and go up chimney. We are using

**JONES' HAND CART**

this improvement in our household, and therefore speak from experience when we say that it operates with success, prevents all escape of smoke and odors, and, by concentrating the heat upon and around the meat, insures, we think, better cooking. Housekeepers will highly appreciate this invention. Maker and patentee, Joseph Mansfield, Jefferson, Wis.

SMITH'S STEAM SENTINEL.

An English inventor has recently produced a combined safety valve and whistle, which cannot be tampered with, and is, as will be seen from our engraving, an efficient and simple device. The safety valve is conical, and is kept in



place by a spiral spring, which is carefully adjusted to the required pressure. The lifting of the valve is at once made known by the sounding of the whistle.

Consumption.

At a recent meeting of the New York Academy of Medicine, the pathology and etiology of pulmonary phthisis, in relation to its prevention and early treatment, was described. The discussion was opened by Dr. Leaming, who gave an abstract of Dr. Hudson's paper

Dr. W. H. Draper said that phthisis in its early stage was one of the most unsatisfactory diseases that we had to deal with. The recent pathological views were only of indirect benefit in guiding us. Laennec held that phthisis was always tuberculosis; but Dr. Addison, in 1846, declared that inflammation was the object of destruction in every form of phthisis, and at that time his views were coincided with by some of the French pathologists. If phthisis, said Dr. Draper, is inflammatory in its nature, rest is and must be one of the most important ends to attain in its treatment, and any action, exercise, or anything which tends to increase the pulmonary circulation, of necessity is contraindicated. Dr. Roberts, of London, and Dr. McCree, of Belfast, have followed this out with good results in strapping the chest, and thus keeping it to a great extent in a quiescent state.

Those who ignore the element of inflammation in the disease consider rest prejudicial. In respect to climatic influence, there can be but little advantage gained beyond allowing the patient to live out of doors a great part of the time. Patients, however, frequently derive more benefit from a residence in the Northwest than they do from more southerly latitudes. Phthisis as a disease is most common in the tropics, and decreases in frequency toward the extreme north or the extreme south. Elevated regions have also a beneficial effect, and in mountainous sections phthisis is relatively unknown.

Dr. John C. Peters did not think that phthisis should be considered as an inflammation, though it might provoke it. He was strongly convinced of its dyscratic nature.

Dr. Sullivan was of the opinion that the subject of defective ventilation had a most important bearing on the production of phthisis, and brought forward different facts to substantiate his views.

Dr. Willard Parker coincided in the views of Dr. Sullivan in respect to ventilation, and thought deficient sunlight also a most important factor to consider in reference to the etiology of the disease. He

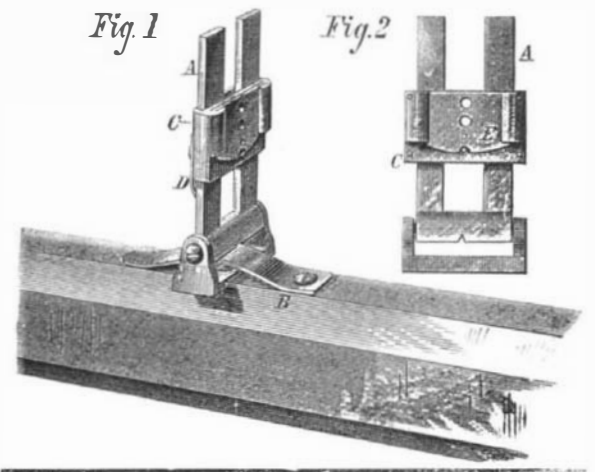
was strongly opposed to the plan of rest for consumptives in the beginning of the disease. The cases that do best are those that spend most of their time in outdoor exercise. He cited different cases in which the disease had made decided progress, and which were thoroughly cured by a life of activity outdoors.

Dr. Hubbard said that the same climate did not suit all patients; some patients do exceedingly well in Santa Barbara, where the thermometer does not vary more than ten degrees the year round; while others, who are not benefited there, improve by moving sixty or seventy miles inland.

HARRINGTON'S IMPROVED GUN SIGHT.

The invention herewith illustrated is a globe or peep sight which may be adjusted so as to present either a coarse or fine sight as desired. It can be attached to any gun, and is claimed to insure accuracy in shooting.

A is a slotted standard suitably hinged to the barrel and held upright by the spring, B. C is an adjustable slide held in any desired position by the spring, D, engaging in notches on the standard. This slide is provided with a sight hole. E is another slide adapted to move in guides on the slide, C, and pierced with a number of holes of different sizes, as



shown. By raising the slide, E, the slide, C, can be used as a coarse sight, and by lowering the former a finer sight is obtained. The finest sight hole that can be seen through may be used, and generally the size of the orifice may be easily changed to suit differing conditions of weather, whether bright, overcast, or dark.

Patented February 25, 1873. For further particulars address the inventor, Mr. Munson W. Harrington, York Center, Iowa county, Iowa.

GLYCERIN paste for office use may be prepared by dissolving 1 oz. gum arabic and 2 drachms glycerin, in 3 ozs. boiling water