

## New Inventions.

## Improved Hoisting Machine.

Mr. Perry Dickson, of Blooming Valley, Crawford Co., Pa., has taken measures to secure an improvement on machinery for hoisting, which will effect a great saving in labor, for loading and unloading ships, raising hog-heads up into stores, &c. Two treadles for a person to act on with his feet, like operating a hand turning lathe, move gear wheels by pull and ratchet, so as to turn a windlass barrel and elevate by rope any bale or bag secured to the same. The weight of the person operating it is applied instead of the muscular action of the arms only.

## Improved Spike Machine.

Mr. Mark M. Ison, of Etowah, Cass Co., Geo., has taken measures to secure a patent for improvements in machinery for making spikes and nails. This invention is different from the roller spike machines, and the vertical reciprocating cutting nail machines. There is a horizontal table nearly the form of the segment of a circle, having a hollow space within it, in which works a revolving cam on a shaft concentric to the table. The iron plate to be made into spikes, is fed in along the upper surface of the table, and is cut off in strips, of suitable size, across the edge of an opening in the top of the table, by a vibrating shear arm working above, and these are pointed afterwards between the said shear arm and the table. The cam spoken of has an intermittent motion, and is made to carry the spike within the hollow space of the table, and allow it to stop under a holding die which receives it, when a heading tool comes down and completes the operation.

## Improved Plow.

Mr. George Sheldon, of Millersburg, Holmes Co., Ohio, has taken measures to secure a patent for an improvement in plows which he has recently invented. The improvement consists in applying a series of conical rollers so arranged as to throw off the mould on the land side of the plow instead of employing the ordinary mould board. The conical rollers revolve while the plow is in motion, consequently there is less friction on the said rollers, than on the rigid "mould board."

## New Planing Machine.

On our list of patents this week there is one granted to Mr. George W. Beardslee, of Buffalo, which has received the name of the "Elastic Cutter Planing Machine," and is said to be a valuable improvement. It is claimed for it that its operation will produce work superior to the hand plane, and that its ordinary speed will be one hundred and fifty feet per minute, or 9,000 feet per hour, and that it can be increased to 200 or 300 feet per minute, without any danger to the machine. We will not say any more about it at present, as we hope to be able to present engravings of it at an early date.

## New Steam Drill.

The Boston papers state that Mr. Henry Golding, of that city, has invented an improved drilling machine, which is highly spoken of as being capable of drilling in any position at any angle of a wall, consequently it is set forth as being the very thing for perforating the Hoosac Tunnel through the Green Mountains. It is to be operated by steam power, and the chisel is struck by a hammer,—that is as we understand it.

## Machine for Flecking Cloth.

Messrs. D. & R. Pratt, of Elmira, Chemung Co., N. Y., have invented a machine whereby they will be enabled to use flocks in woolen cloth, and to work them into the cloth before it goes to the fulling stocks. This will be a saving in wool, as the flocks are so much cheaper. Measures have been taken to secure a patent.

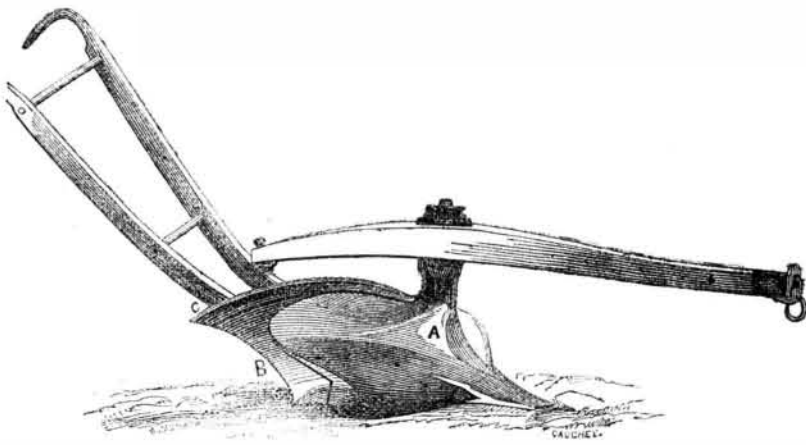
If about seven or eight pounds of leather currier's shavings are put into a steam boiler every week, it is said that no incrustations will be formed, however hard the water may be that is used.

## IMPROVEMENT IN PLOWS.

The accompanying engraving is a perspective view of an improvement in plows by Mr. J. C. Cloud, of May's Landing, Atlantic Co., N. J. for which a patent was granted on the 6th of last February. The improvement relates especially to what is termed "an auxiliary furrow side."

A is the mould board; B is the auxiliary furrow side with a curved concave shear, C. This shear is a section bell shape, with its upper edge projecting over and forwards so as

to act upon the surface of the mould that is turned over. It is well known that the perfection of plowing consists in turning over, perfectly the moulds so as to turn under the sward, or otherwise what was the exposed surface. This "auxiliary furrow side" forms a broad bearing at the heel of the mould-board, and so acts upon the surface as to turn it under if any is exposed, while at the same time, it breaks it nearly like a harrow. This auxiliary piece is fastened by bolts and loops, or it

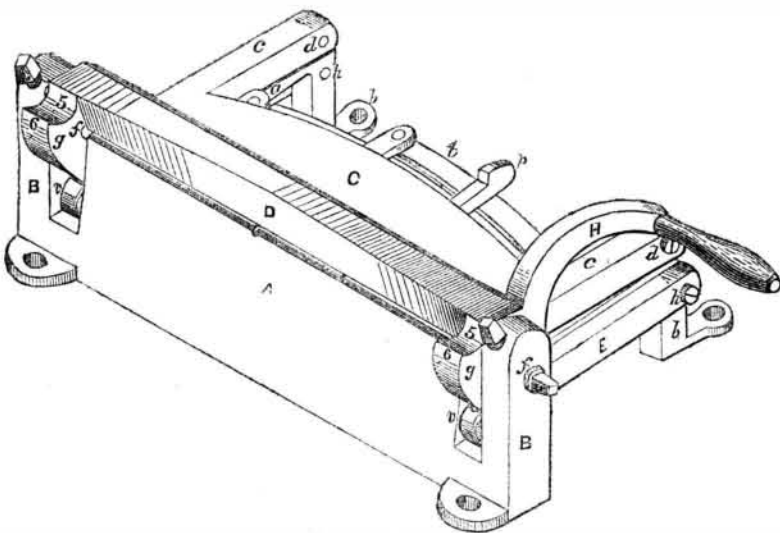


may be cast in one piece if desired along with the mould board. The cutter extends down on the land side to the bottom of the plow, and is fastened by a mortise through it, which receives a tenon on the wrought iron plate bolted to the mould board. The plow point and

share is fastened to the plate which has a tenon thereon, and an ordinary screw bolt. The methods of fastening are not represented, but it is believed they will be sufficiently understood. More information may be obtained by letter addressed to Mr. Cloud.

## WALKER'S PATENT IMPROVED SHEET METAL FOLDER.

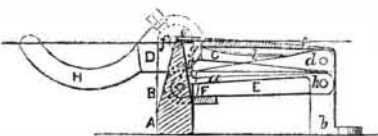
Figure 1.



This improvement is the invention of Mr. Jabez Walker, of East Bloomfield, Ontario Co., N. Y., and a patent was granted for it on the 1st of last April. Figure 1 is an isometrical view, and figure 2 is a vertical section. The same letters refer to like parts.

The nature of this invention consists in the employment, in connection with the movable or clamping jaw and folding tumbler, of devices for holding down the jaw and securing the plate during the process of folding, and for throwing up the jaw and releasing the plate after the folding is performed.

FIG. 2.



A is the bed of the machine; B B are standards; these parts may be of cast-iron with the top edge of the bed steeled or chilled. a a are two bars on the back of the bed, the back ends of which are supported by feet, b b. C is a movable swinging jaw of cast-iron. It is supported by two arms, c c, the ends of which are jointed by pins, d d, to the back part of the bars, a a. The lip, e, of the movable jaw is very thin and made of steel. Its front edge is flush with the front edge of the face of the bed and is of the same length. There is a small spring, l, on each bar under the arm, c, which has a tendency to raise the jaw when

not otherwise depressed. D is the tumbler consisting of a strong bar having its faces chilled; it is provided at its ends with pivots, f f, which fit in bearings in the standards; B; it is also provided at each end with a cam, g, part of whose face is part of a circle described around the axis, and part is recessed at 5. (One is provided with a handle, H). E E are levers or arms hung on pivots, h h, their front ends are provided with friction rollers, v v, which are always under the cams, g g, between the ends of the bed and the standards. F is a bar spring which is placed across below the arms, E E, and secured to the jaw, C, by screws, and rests on the ends of pins. There is a gauge plate sliding under the lip, e, with its face turned towards the bed, A. It has two lugs bent under the jaw, C, and held by a spring, between which spring and the jaw they slide. The two lugs are connected by pins to two cranks levers, p, (not seen) and p', having fixed fulcra secured in the jaw; these crank levers are connected in equal distances from their fulcra at a bar, and the lever, p, is prolonged beyond the fixed bar, l, upon which there may be an index for setting the gauge. By moving the end of the lever, p, the gauge may be moved nearer to or further from the edge of the lip, e, the distance from the gauge to the edge of the lip, forming the depth of the lock.

The gauge is first set, and the handle, H, turned in front, one face of the tumbler bar, D, is then level with the upper edge or face of

the bed, A, and is kept in that position by resting against the front of the bed; the recessed part, 5, of the cams, g g, is then over the friction rollers, v v, and the levers, E E, not being depressed, the jaw, C, is thrown up by the springs, l, and the lip, e, is consequently open or raised. The plate or sheet of metal to be folded, represented by a line, is then put in at the front, between the lip and the bed, and pushed up to the gauge, the handle is then thrown back, and as soon as the projections, 6, on the cams come in contact with the friction rollers, v v, they press down the levers, E E, which, by means of the bar spring, F, and screws, pull down the jaw, C, and compress the plate tightly between the lip, e, and the bed, preventing its being drawn back while being folded; as the tumbler is thrown over, the circular parts of the cams continue to bear on the friction rollers and keep the plate secure, the plate being bent backwards until the tumbler reaches the back position, by which time the fold is complete. When the lever, H, is thrown back to its original position as at first described, the jaw, C, will be raised by the springs, l, and the plate may be removed, the fold or lock being perfectly formed.

More information may be obtained by letter addressed to Mr. Walker.

## Noiseless Wheels.

In this instance the invention consists in the application of a solid band of vulcanized india rubber over the iron tire of the wheel. The india rubber is held in its place by the tire having a raised rim on both sides, and by its own elasticity. The band of an ordinary carriage wheel is about an inch to an inch and a half in thickness, and, unless on close inspection, no difference from the common iron-shod wheel is perceptible. We have driven some distance in a carriage with the wheels so shod, and were struck, not only with its noiselessness, but at the perfect smoothness of the motion—the wheels being, in fact, springs, and, by their elasticity, giving a lighter draught than with the iron tire. We have seen one set of wheels which have been driven 4,000 miles, they have here and there a trifling cut but show no appearance of being worn out, and seem quite capable of another three or four thousand. An iron tire is generally worn out in 3,000 miles, so that the india rubber tire has so far proved itself the more lasting. It is certainly a great addition to the luxury of a carriage to have it run without jar or noise; and it would be a universal comfort to have the streets of cities without the present incessant rattle of carriages, omnibuses, etc.

## To Make Artificial Marble and Stone.

The following is the condensed specification of a patent granted to Selim R. St. Clair Massiah and published in the May number of "Newton's London Journal and Repository of Inventions." The material of which the artificial stone is made is plaster of Paris. After it has been prepared and of the right shape, it is dried in a room at about 80°. When completely dry, it is immersed in a warm solution of borax and glauber salts, prepared by dissolving 1 lb. of borax and a quarter of an ounce of the salts in one gallon of water, as a ratio. After the casting is thoroughly wet in this, it is removed to the drying room and exposed to a heat of 250° Fahr., until all the watery parts are thrown off. It is then permitted to get nearly cold, when it is immersed in strong hot solution of borax, to which has been added one ounce of strong nitric acid for every gallon of the borax solution. This solution is kept quite warm, and the castings kept in it until they are completely saturated, when they are taken out and dried and found to have acquired a marble like hardness. A day or two after this operation the castings are slightly heated and covered over with a thin coat of Canada balsam dissolved in turpentine, after which they are kept warm until the turpentine is driven off. Various colored substances may be used along with the materials specified to color the artificial marble, such as indigo for blue and other substances for other colors. The marble may also be streaked and beautifully variegated.