

New Inventions.

Bolting Flour.

F. B. Hunt, of Richmond, Indiana, has taken measures to secure a patent for an improvement in operating wire cloth bolts for flouring mills, the nature of which consists in a peculiar means of adjusting the brushes which act upon the inner surface of the bolt. The brushes are made to expand and contract within the bolt by being secured to a hollow shaft having grooves and slides, to which springs are also attached, so that their pressure on the bolts can be easily regulated, and at the same time they can (the brushes) be adjusted without taking apart the frame and the wire cloth, as is now done in common bolts. The brushes can be adjusted in a moment, without disturbing any part of the bolting frame.

Explosive Shot for Cannon.

William Tibbals, of South Coventry, Conn., has taken measures to secure a patent for explosive shot for cannons which possesses peculiarities different from the other explosive shot heretofore tried. It is conical, hollow, and contains powder, has a nipple on its point and is covered with a jacket of soft metal which has flanges, and which allows of the shot being rammed down so tight as to prevent windage, but not affect the explosion of the percussion cap on the nipple of the ball. The shot is discharged by a charge of powder behind it, and when its point strikes an object the soft metal case is driven down forcibly on the cap, which explodes, ignites the powder in the hollow shot, and then it explodes, scattering destruction all around.

Fire Arms.

Among the many improved plans of fire-arms which have been brought before the public within the past year, we have to record another by Daniel B. Neil, of Mount Gilead, Ohio. It has for its object the firing of two charges, one after the other, from the barrel in which they are placed, by means of a common gun lock. Two priming holes are bored in the side of the barrel, and two charges are inserted at once. The lock is so arranged with a hammer having two heads, as to strike the cap of the first nipple on the side of the barrel, and discharge the first ball, and then to strike the nipple of the second priming orifice, and discharge the second ball. This one barreled gun is intended to possess all the advantages of a double barreled one. It can be charged with ball or shot. Applied to fowling pieces it is believed to be an improvement of great value. Measures have been taken to secure a patent.

Improvement in Gates.

Figure 1 is a perspective view of a new Self-opening and Closing Gate, and figure 2 an elevated section of the gate bar and central post, with its friction rollers running in the inclined guide ways of a box. The same letters refer to like parts.

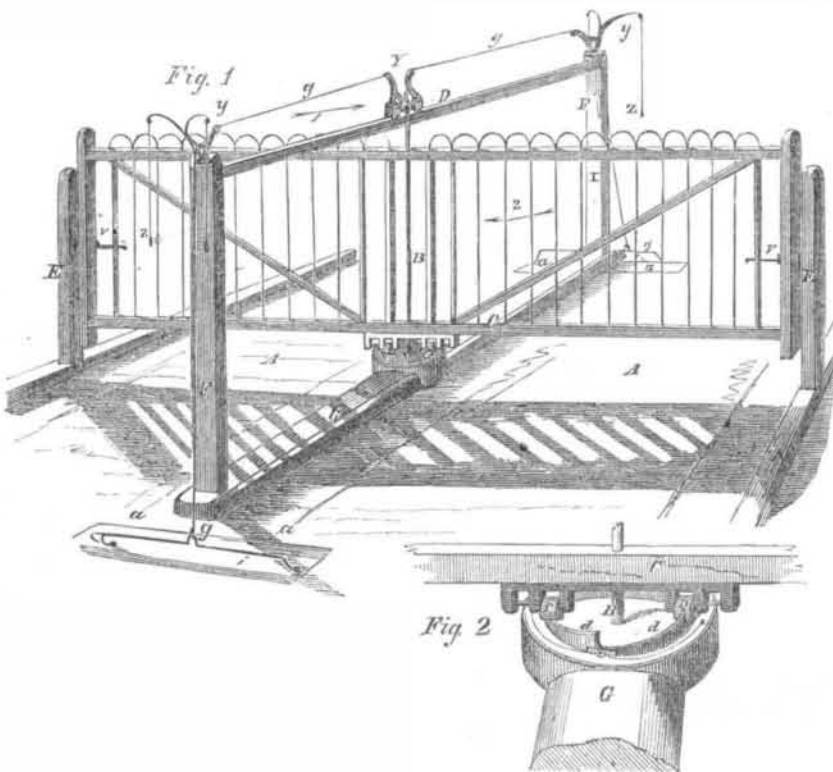
A patent was granted for this improvement in gates to Wm. G. Phillips, of Newport, Delaware, on the 7th of last March. The nature of the invention consists in providing the gate post or pivot, and the platform with springs, so arranged that a vehicle passing on to the platform will press upon a spring, and so operate the gate as to allow the vehicle to pass through, and in going from the platform on the opposite side, another spring is pressed by the carriage, which causes the gate to close.

A is the platform, it supports the whole working apparatus, and is of sufficient width for the passage of the carriage on each side of the guide post, B. The gate, C, is hung at its center on this post, and is kept in an upright position by a bolt passing from it through a cross beam, D, which is supported by two uprights, F F. Attached to the gate, C, on each side of the foot of post B, are two friction rollers, c c; these rest and act upon four inclined planes, d d, fig. 2, which are made in a box—each plane is about one-fourth the circumference of the circle. Partly cross-wise of the carriage track there is a

lever, a, (one on each side,) which projects a little above it near uprights, F; this lever rests upon another, g, which runs in the direction of the tracks and between them (not shown, and which actuates a spring, also not shown,) under G, which tilts the roller box, which rests upon a pivot; this allows of the horizontal play of about one-eighth of the circle, which is regulated by a pin, so that when the gate is lifted the planes move in a contrary direction to the gate. Suppos-

ing a carriage to be passing through in the direction of arrow 1, when its wheels come on the lever, a, it will actuate the one, g, which will operate the spring under the guard, G, which will tilt the roller box on the guard upwards, thus lifting the gate, and its roller, c, will run down the inclined groove, and this will make the gate swing in the direction of arrow 2, on its center post, B, to one-fourth of a circle, allowing the carriage to pass, through, until its wheels pass over a, on the

SELF-OPENING AND CLOSING GATE.

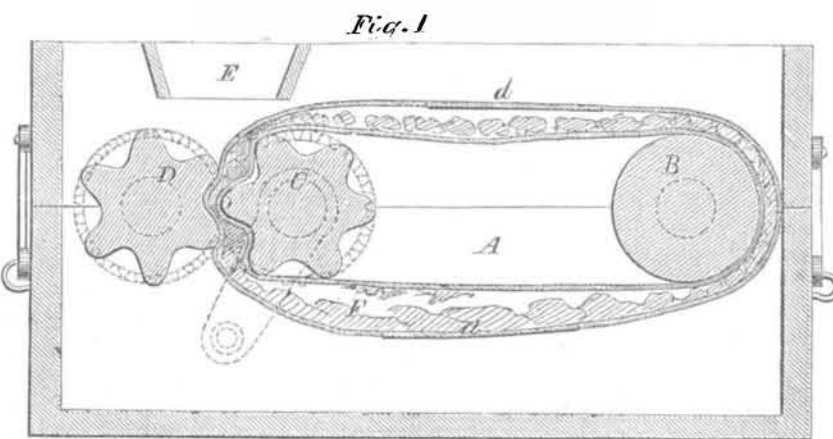


other side, beyond the gate, when the levers act upon the spring which raises the roller box, in the same manner as that described for opening the gate, but which, being a reverse motion, closes the gate. The description of one side will answer for all the others, which are like it. E E are the end posts to support the gate, the catches, V V, working in grooves which are made to let them in and out, according to the tilt of the gate. A person passing on horseback, has only to pull

upon the cord, z, which is secured to a bell crank lever, y, which has a cord secured to it and attached to the head of post, B at Y. By placing a weight on the top of the center post, the gate is made to act more rapidly.—The claim is for the double span rotating gate, opening and closing by the means described or any similar devices.

More information may be obtained by letter addressed to the patentee at his place of residence, Newport, Del.

IMPROVED BUTTER WORKER.



The annexed engraving is a vertical longitudinal section of an improvement in Butter Workers, for which a patent was granted to Ezekiel Gore, of Bennington, Vt., on the 25th of last July.

The nature of this invention consists in the employment of an endless revolving sack or bag for containing and confining the butter, and conveying it to and between two fluted or working rollers, and through the water in the tub or box as fast as the rollers operate upon it, until it is thoroughly worked, washed, and seasoned.

A represents the box or tub which contains the water for washing the butter, and also supports the bearings of the rollers, B C D. The box, A, is made in two sections, so that its upper part may be removed, and also the rollers and sack, when it is desired to cleanse the lower part. The roller, B, is made perfectly smooth, and has its bearings at the back end of the machine, and the roller, C, is fluted, as shown, and has its bearings near the front end of the machine. On and

around these rollers, the sack, F, is arranged as represented. The roller, D, is fluted similar to C, and operates in concert with it, but is prevented from touching it by the sack which is placed and revolves between it, as illustrated.

The sack carries the butter between the fluted rollers, and said rollers, as the butter passes between them, effectually operating upon it, and working it to the state desired. E is a hopper arranged above the fluted rollers, as represented; through this hopper the salt is introduced between said rollers, which work it into the butter as the sack feeds it between them. The sack, F, has two openings, d d, for the insertion and removal of the butter; the butter cannot escape out of said openings while the working and washing is being performed, as the cloth forming the bag is made to overlap at the places where the openings are formed.—There is cog gearing for turning the fluted rollers in opposite directions, and a crank for turning the same.

The operation is as follows:—The butter is placed in the sack and the tub filled with water; the fluted rollers are caused to revolve, and set the sack in motion. The sack and butter are thus caused to pass between the fluted rollers under the salt hopper, and then through the water until thoroughly worked, cleansed, and seasoned.

More information may be obtained by letter addressed to the inventor.

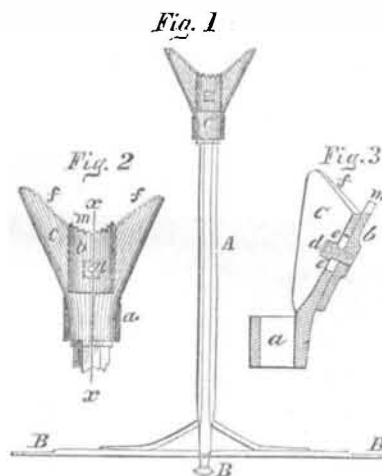
Horse Shoeing Apparatus.

Noah Warlick, of Lafayette, Ala., obtained a patent on the 29th of last August, for the invention represented by the accompanying engravings, figure 1 being an elevation of the apparatus; figure 2 is an enlarged view of the top of figure 1, and figure 3 is a section of figure 2 on the line, x x. Like letters refer to similar parts.

The nature of the invention consists in the employment of a peculiar adjustable rest for the support of the horse's foot during the operation of shoeing.

A is a standard maintained in a vertical position by the branches, B, or in any other suitable manner. Upon this standard, and held by the socket, a, passing over the standard is the head piece, C, having its upper edge hollowed out to receive the horse's hoof. On this head piece is the adjustable serrated slide, b, held by the screw, d, which passing through the slot, e, of the head, admits of securing a slide in any desired position to which it may be moved.

The object of this apparatus is to firmly hold the horse's foot during the operation of shoeing; the operation is as follows. The slide, b, is adjusted by the screw, d, so as to give any desired amount of protrusion of its



serrated edge above the upper edge, f, of the head piece and the horse's hoof rested upon the said serrated edge during the operation of fitting the shoe, paring the hoof, and fastening the shoe to the hoof; the serrated edge of the slide preventing the slipping of the hoof from the head piece.

The use of this support is of importance to the operator as instead of holding the horse's hoof between his knees, and supporting its entire weight, he is enabled to devote all his attention to the adjustment of the shoe and the keeping of the horse quiet. The adjustable slide by which the amount of protrusion of the teeth, m, may be governed by the size of the hoof operated upon, places this apparatus above an ordinary support, on which teeth may be constructed for the prevention of slipping, and it is in this adaptation of the apparatus to all hoofs that one of the principal merits of the apparatus consists—the support at the toe during the operation of paring being insured to large as well as small hoofs.

The claim is for the head piece with the adjustable slide constructed and arranged as shown and described.

More information may be obtained by letter addressed to the inventor.

Wardrobe Bedsteads.

B. P. Hedgeman, of Connersville, Ind., has taken measures to secure a patent for some improvements in wardrobe bedsteads, one of which consists in applying a pair of spiral springs to assist in raising the bedstead, and a hinged pillow rest. Another improvement consists in providing ventilating side doors, something very necessary for such articles of furniture.