(No Model.) 2 Sheets—Sheet 1.

T. A. WATROUS.

Press.

No. 238,463. Patented March 1, 1881.

Fig. 1.

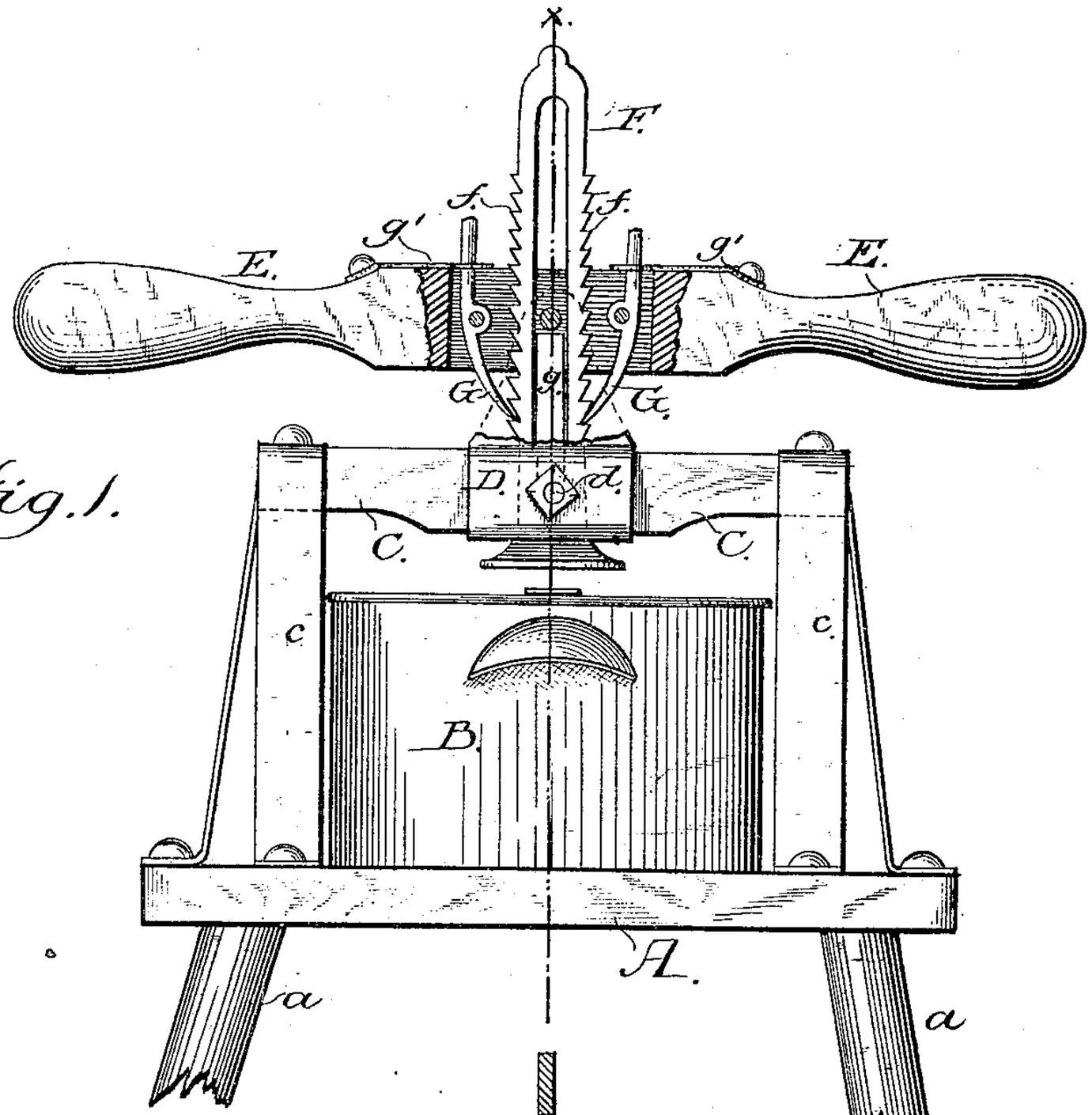
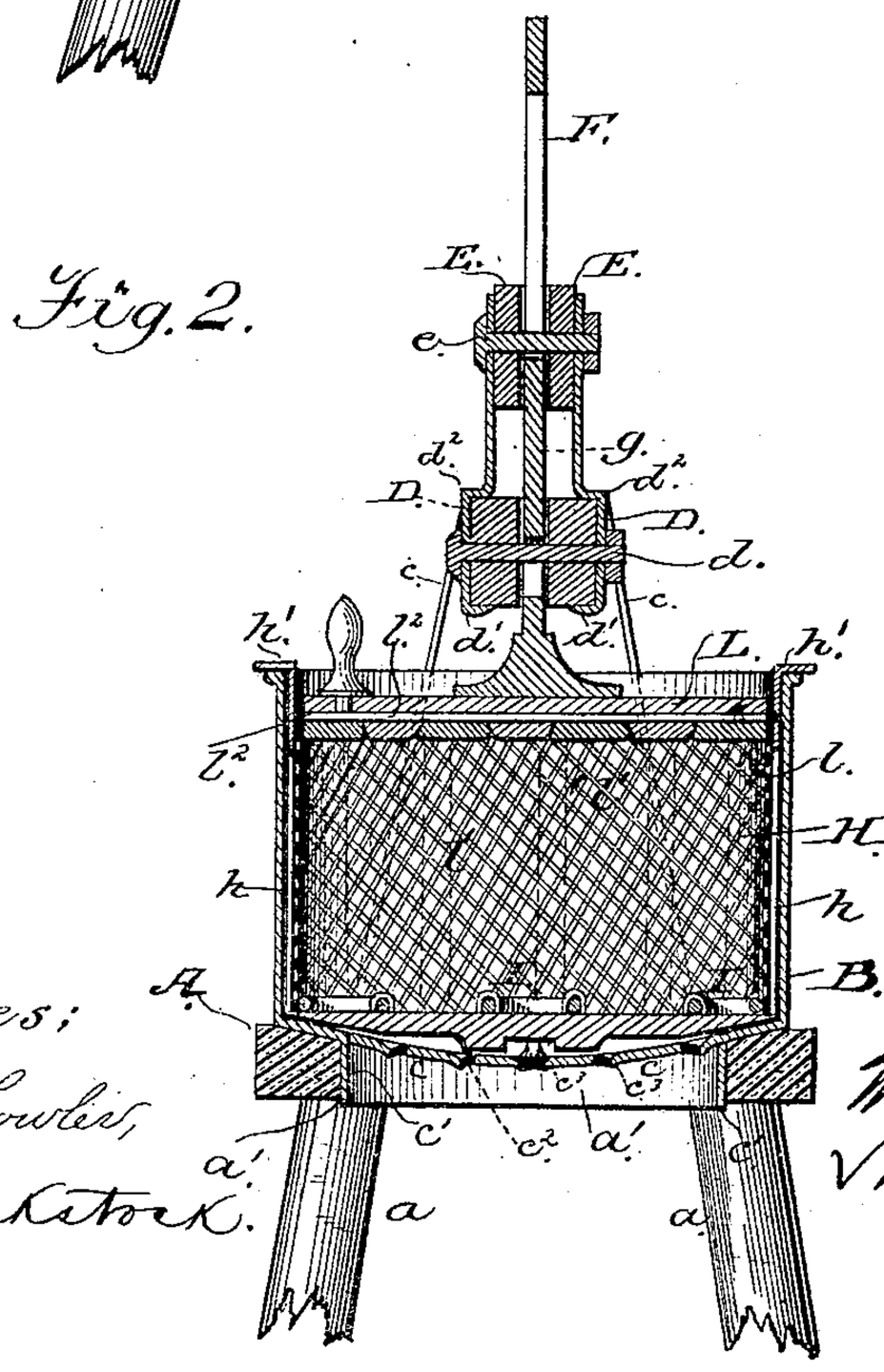


Fig. 2.



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Attys.

(No Model.) 2 Sheets—Sheet 2.

T. A. WATROUS.

Press.

No. 238,463. Patented March 1, 1881.

Fig. 3.

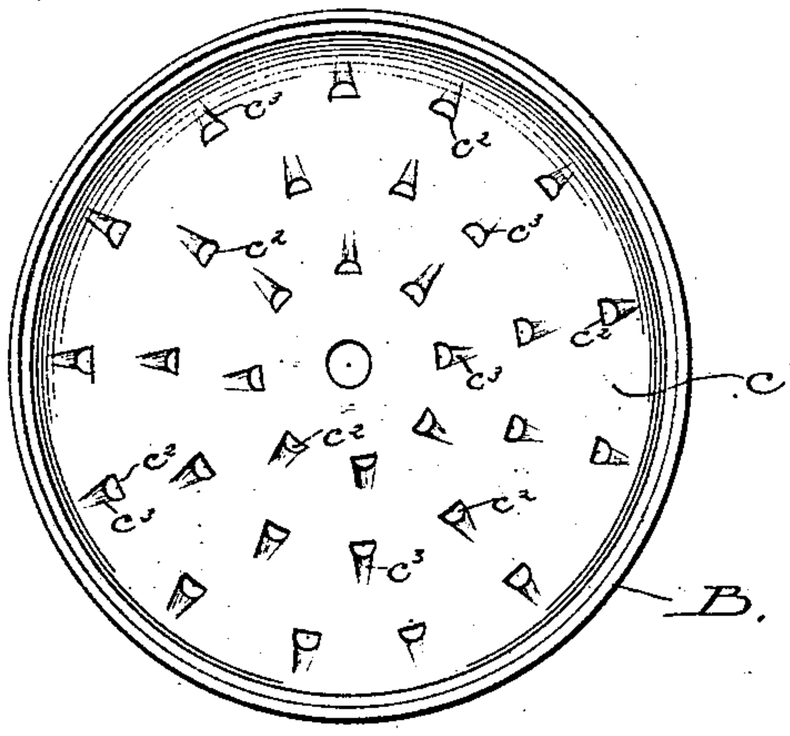


Fig. 4.

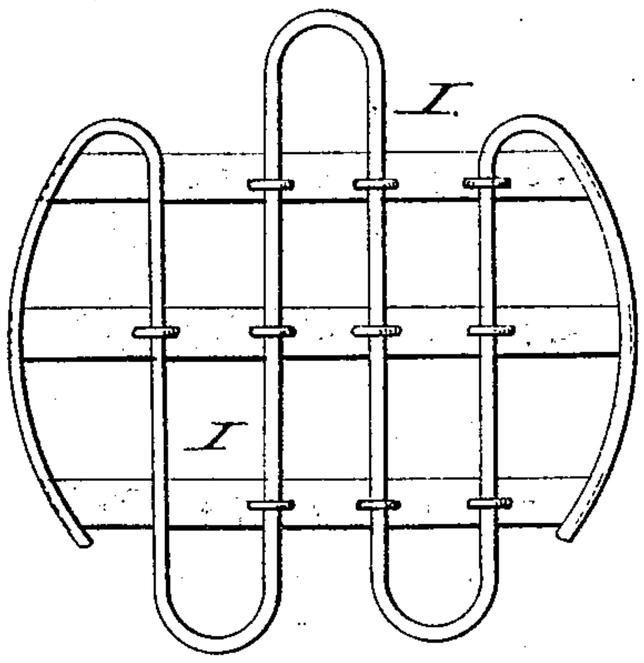


Fig. 6.

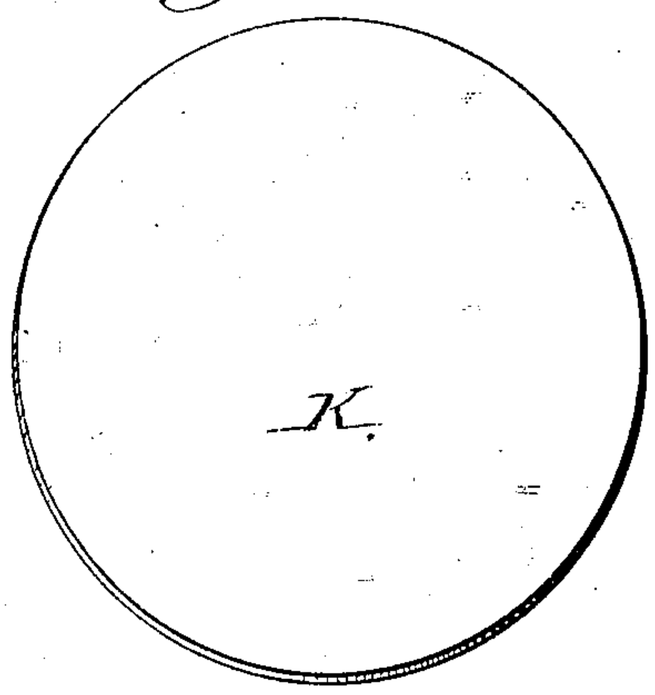
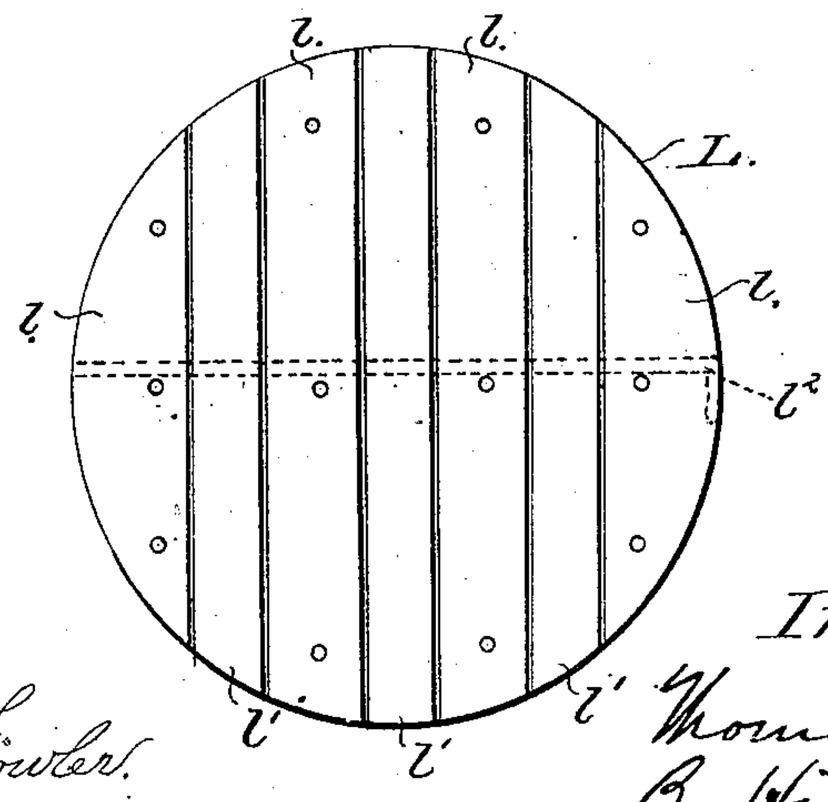


Fig. 5.



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UNITED STATES PATENT OFFICE.

THOMAS A. WATROUS, OF WELLSBOROUGH, PENNSYLVANIA.

PRESS.

SPECIFICATION forming part of Letters Patent No. 238,463, dated March 1, 1881.

Application filed September 29, 1880. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. WATROUS, of Wellsborough, in the county of Tioga and State of Pennsylvania, have invented a certain new and useful Improvement in Presses; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of the press, partly in section. Fig. 2 is a sectional view taken on the line *x x*, Fig. 1. Fig. 3 is a top-plan view of the bottom of the receiver or pressing-case; Fig. 4, a view of the rack, which is placed on the bottom of the pressing-case; Fig. 5, a view of the movable follower, and Fig. 6 a view of a thin board used in the pressing of cheese.

Similar letters of reference in the several figures denote the same parts.

This invention has for its object to provide a press adapted for a variety of household uses—such as making cheese, jellies, domestic wines, cider, pressing prepared meats, making lard and tallow, &c., and adapted, also, to be used as a colander in preparing cooked articles—such as squash, turnips, pumpkin, and other vegetables and fruits.

To this end the invention consists in certain novel improvements, which I will now proceed to describe.

In the drawings, A represents a table having supporting-legs *a*, and provided with a central opening, *a'*, in which fits the lower portion or flange of a receiver or pressing-case, B.

C is a cross-piece extending longitudinally over the table, and supported at its ends by braces or standards *c*, rising from the table, as shown. Clamped to the opposite sides of this cross-piece, at about the middle thereof, by a bolt, *d*, are two metal plates, D D, each of which is formed with shoulders *d' d²*, which, respectively, bear upon the top and bottom of the cross-piece, and firmly hold the plate from vertical movement. Between the upper portions of the plates D D a lever, E, is centrally pivoted upon a bolt, *e*. The cross-piece C and lever E are both slotted vertically, and through them passes a pressing-bar, F, provided with ratchet-teeth *f* on its opposite edges, with which pawls G, pivoted to the lever E, are adapted to alternately engage as the lever is oscillated. The pressing-bar is further provided with a central slot extending nearly its entire length, and it is properly guided in its vertical movement by means of the pivotal bolt *e* above and the securing-bolt *d* below, as shown in Fig. 1. To further assist in the guiding of the bar, and to prevent its being bent at the point where the pawls engage with the ratchet-teeth, an inner block, *g*, of wood or metal, is preferably inserted in the slot between the bolts *d* and *e*. This block, by filling the space between the two parts of the bar, prevents the inward bending of said parts, and performs the further function of transferring part of the pressure exerted by the lever upon the upper pivotal bolt, *e*, directly to the lower securing-bolt, *d*. The lower ends of the pawls G are adapted to engage with the teeth on the pressing-bar, while their upper ends project above the top of the lever, and have springs *g'* secured to them, said springs operating to keep the pawls normally engaged with the ratchet-teeth.

The receiver or pressing-case B is preferably made of tin or copper and of cylindrical form, with a concave bottom, *c*, and with a depending circular flange, *c'*, adapted to fit within the opening in the table and hold the receiver in position. The concave bottom of the receiver is provided with perforations c^2, preferably half-moon or crescent shaped, and with channels or indentations c^3 leading into said perforations, as shown in Fig. 3.

When the receiver is used as a colander, the material being pressed is caused to constantly work toward the center of the bottom by reason of the concave shape of the latter, and, passing into the channels or indentations, is conducted to the holes and through the same, the inner or uppermost edges of the holes operating as knife-edges to facilitate the operation.

Within the receiver is placed an inside case, H, of perforated metal, having vertical ribs *h* on its outside, which operate to preserve a uniform space between it and the receiver. This inner case allows the escape of air from the material being pressed, and also permits the escape of the liquid from all parts of the same, thereby requiring less pressure to be exerted than where a solid wall is presented. Ears *h'* prevent the inner case from entering

too far into the receiver, and also facilitate its withdrawal therefrom.

A rack, I, is ordinarily placed on the bottom of the receiver for the purpose of preventing the cloth strainer ordinarily employed from coming in contact with the perforations in the bottom and obstructing the outlet of the expressed liquid. In pressing cheese and some other articles a thin flat board, K, is placed upon the rack I.

L is the follower, adapted to fit within the receiver upon the material to be pressed and to receive pressure from the pressing-bar F. The inner surface of this follower is made of alternate fixed pieces *l* and movable pieces *l'*, united by dovetail joints. When it is desirable that the face of the follower should be smooth, as in pressing cheese, the removable pieces are inserted, and a practically unbroken surface is presented; but when, on the other hand, a material is to be pressed from which it is desired the liquid should escape at the top as well as elsewhere, the removable pieces *l l'* are slipped out from the follower, so as to leave grooves or open spaces between the fixed pieces *l*, as will be readily understood. A rod, l^2, or other equivalent device, is employed to keep the movable pieces in place when once inserted.

In the operation of the press—say, for instance, in making cider—the material to be pressed is placed within the receiver and upon the rack, on the bottom thereof—a layer of straw or hay being first preferably introduced—after which the follower, without its removable pieces, is inserted. The upper ends of the pawls are then grasped by the hand and pressed inward, so as to disengage their lower ends from the teeth of the pressing-bar, and the bar is then pulled up to its full extent. The receiver then being placed in position on the table, and a suitable receptacle being placed beneath it under the table, the lever is oscillated up and down, thereby causing the pawls to engage with the teeth of the pressing-bar alternately on opposite sides of the bar, and force the bar down upon the follower and the latter into the receiver or pressing-chamber, the expressed juice issuing out all around the mass and passing through the perforated bottom of the receiver into the receptacle provided below for its reception.

The operation of the press in pressing other materials will be readily understood without further description.

The press is adapted to numberless uses in a household, is light, portable, and inexpensive, and very effective in its operation.

I claim as my invention—

1. The combination of the vertically-slotted cross-piece C, the plates D D, secured thereto, the vertically-slotted oscillating lever or handle E, pivoted to the bolt and carrying the spring-pawls, and the vertically-moving slotted pressing-bar, having ratchet-teeth on its upper edges, and guided above by the pivot-bolt *e* and below by the securing-bolt *d*, substantially as described.

2. The plates D, between which the oscillating operating handle or lever works, having the shoulders *d'* and d^2, which fit over the top and bottom of the cross-piece, and secured to the cross-piece by the securing-bolt *d*, substantially as described, for the purpose specified.

3. The combination, with the operating-lever, of the pawls pivoted thereto, and the pawl-springs for holding the pawl normally in engagement with the rack-teeth of the pressing-bar, the upper ends of said pawls extending above the top of the lever, so that they may be easily grasped and pressed inward to disengage the pressing-bar and enable it to be raised, substantially as described.

4. The combination of the table supported on legs, and having the central opening, with the receiver having a bottom flange adapted to fit within the central opening to hold the receiver in position, with the cross-piece, the operating-lever, the spring-pawls, the follower, and the pressing-bar, substantially as described.

5. The receiver having perforations in its bottom and channels or indentations extending into said perforations, substantially as described, for the purpose specified.

6. A follower having a portion of its pressing-surface removable at pleasure, for the purpose specified.

7. The follower L, having the fixed pieces *l*, and removable pieces *l'*, and securing-rod l^2, substantially as described.

8. The combination, with the slotted pressing-bar and bolts *d e*, of the block *g*, substantially as described.

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Witnesses:
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ROBERT C. COX.