No. 693,050. Patented Feb. 11, 1902.

J. MURDOCK, JR.

HAND PRESS.

(Application filed Aug. 20, 1900.)

(No Model.)

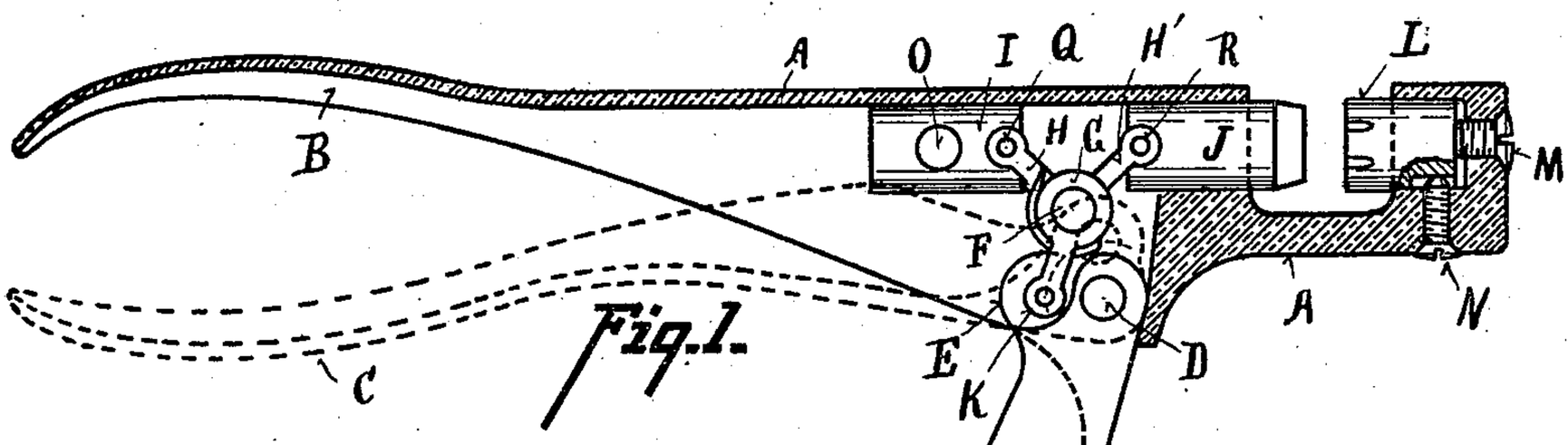

Fig. 1.

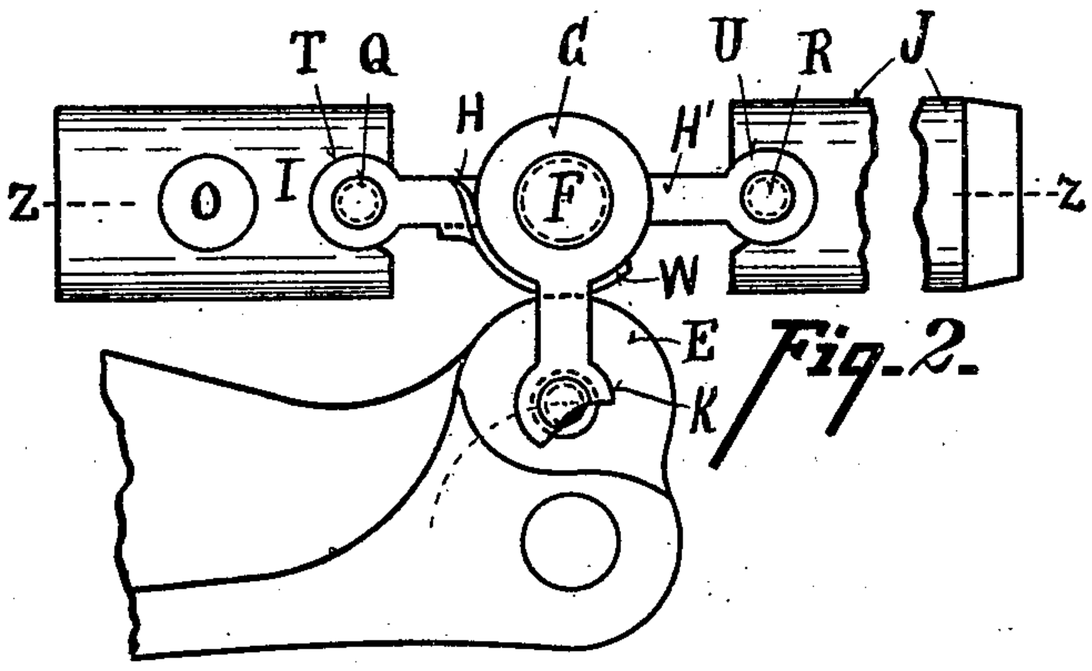

Fig. 2.

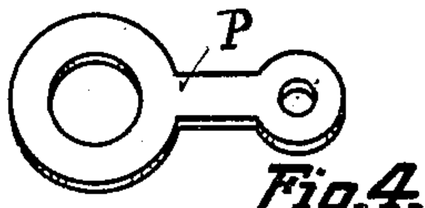

Fig. 4.

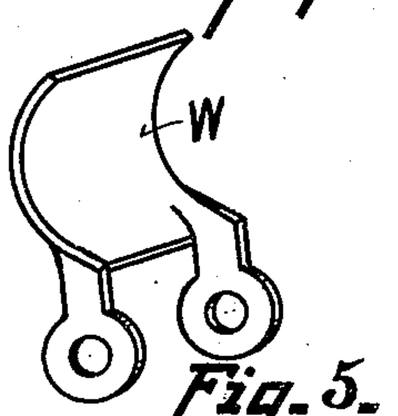

Fig. 5.

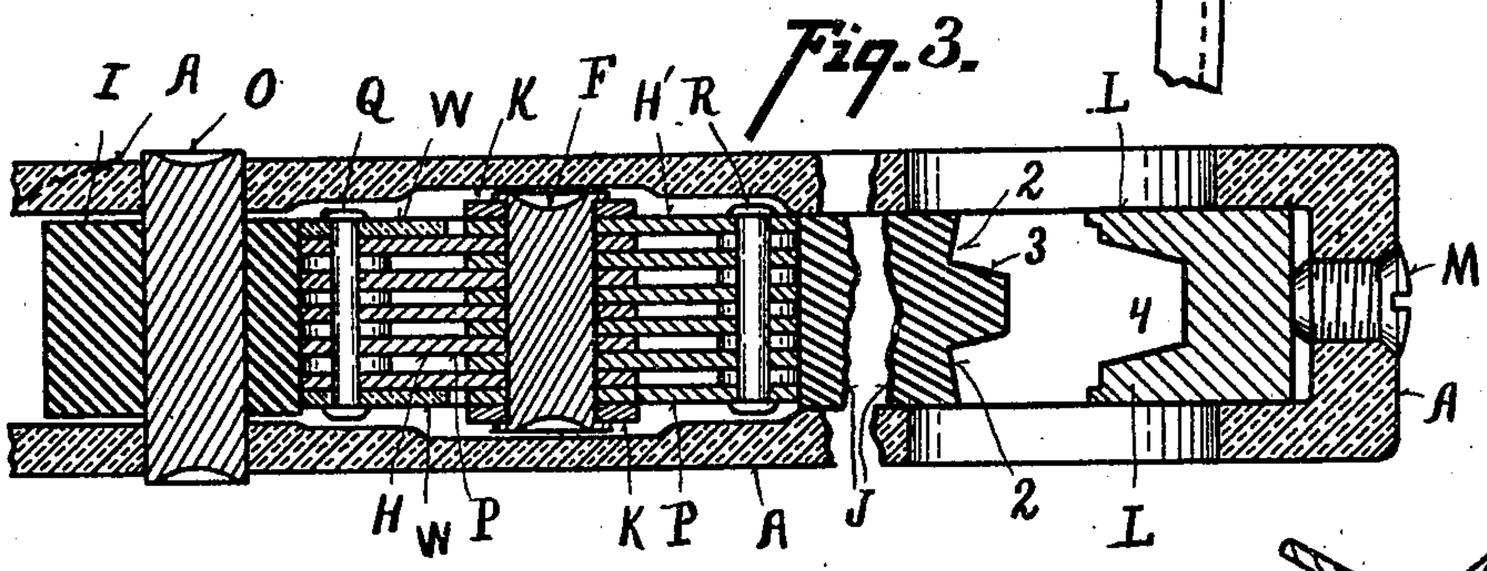

Fig. 3.

Fig. 6.

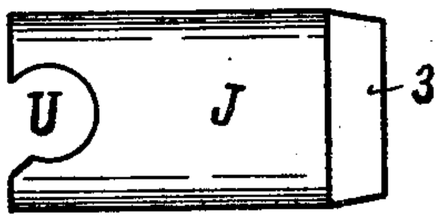

Fig. 7.

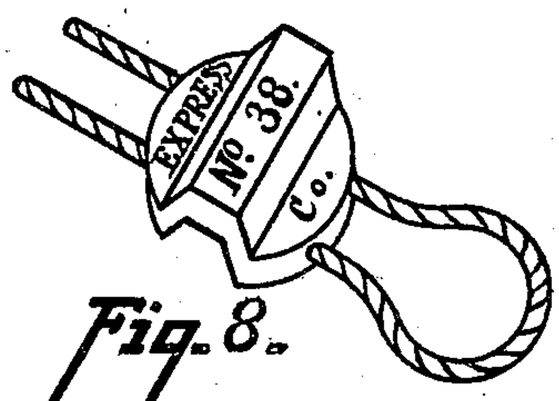

Fig. 8.

Inventor

Witnesses
C. W. Miles.
C. W. Earnist.

James Murdock Jr.

By James A. Ramsey Attorney.

UNITED STATES PATENT OFFICE.

JAMES MURDOCK, JR., OF CINCINNATI, OHIO.

HAND-PRESS.

SPECIFICATION forming part of Letters Patent No. 693,050, dated February 11, 1902.

Application filed August 20, 1900. Serial No. 27,410. (No model.)

To all whom it may concern:

Be it known that I, JAMES MURDOCK, Jr., a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Hand-Presses, of which the following is a specification.

My invention relates to improvements in hand-presses of any kind, and I have for the purpose of illustrating their operation and use shown a press as specially adapted for metallic seals.

Some of the objects of my invention are to provide a press capable of exerting more pressure than those heretofore in use, to provide a lighter and more convenient press to operate, to provide a press more simple and inexpensive to construct and more durable and easily repaired than those heretofore in use, to provide a press for sealing in which the seal is compressed into a zigzag form to prevent tampering with the seal, and to provide a press of compact form for convenience in carrying in the pocket.

My invention consists in the novel features of the several parts and in the construction, combination, and arrangement of the same, whereby certain important advantages are secured and the device is rendered simple, effective, and cheap and otherwise better adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is a central vertical section through my improved press, showing the operative parts in elevation in the retracted position. Fig. 2 is an enlarged detail view of the operative parts in the extended position. Fig. 3 is a section on line *z z* of Fig. 2. Fig. 4 is a perspective view of one of the links composing the toggle-joint. Fig. 5 is a perspective view of the toggle-joint shield. Fig. 6 is a side elevation of the abutment-block. Fig. 7 is a side elevation of the movable press member. Fig. 8 is a perspective view of the seal after being pressed.

A represents the frame of the press, the rear end of which is extended out into a hand-lever B. C represents the opposite hand-lever, which is pivoted to the frame at D and provided with a cam or wiper face E, which engages the central portion of the toggle-joint G, one end H of which is connected by a socket-hinge to the removable abutment-block I, while the other end H′ is socket-hinged to the rear end of the movable press member J, which is adapted to slide in the body of the press.

K represents links pivoted, respectively, to the center F and to the sides of the wiper or cam E for the purpose only of bending the toggle-joint and retracting the movable press member when the hand-lever C drops down or open, the whole force in closing the press members being between the wiper-face and the central portion of the toggle without regard to the links at all, the pivot connecting the links and the wiper taking into a hole in the wiper, which is large enough to relieve the links of any pressure when the wiper-face engages with the central portion of the toggle to close the press members. The stationary press member L is adjustable in its socket to or from the movable press member by means of the screw M to regulate the extent of impression or squeeze of seal.

N represents a set-screw the point of which enters a longitudinal slot in the side of the stationary press member to hold the same in alinement and lock and hold it rigid when adjusted and set. The abutment-block is held in place in the frame by means of the pin O.

The foregoing stationary press member, movable press member, and abutment-block are preferably made round and of the same diameter to fit a horizontally-reamed opening through body of press in which they have their position, the interior portion of the press being bored or reamed with a straight drill or reamer, thereby simplifying the work of fitting. The toggle-joint is built up, as shown in Fig. 3, of the individual links P, (see Fig. 4,) several of which are strung upon the central pivot F and with the extending arms of the alternate links strung upon the pivot-pins Q R. These extended ends, when seated in the recesses T U in the abutment-block and press member, form socket hinge-joints therewith. The two outside links K, which may be of the same form as the links

P, are pivoted at their outer ends to the wiper E for the purpose heretofore set forth. The shield W, Fig. 5, is also held in place and journals upon the pivot-pin Q and serves as a shield to protect the wiper-face and links and may be readily replaced when worn. The faces of the press member are cut—the one with a tongue 3 and the other with a groove 4—so as to press the seal into an irregular or zigzag form, as shown in Fig. 8, bending the sealing-cords therein in such a manner as to make it impossible to withdraw the cords from the seal endwise. The press member J is also undercut at 2, so as to draw the metal of the seal into the press instead of forcing it out at the sides. The metal is forced toward the center, because the undercut inclines inwardly or has walls tapering to form a wedge-shaped space to receive the same, and the metal will flow under pressure toward the center to fill this space instead of outwardly.

When the press is closed and in a horizontal position, with its opening or mouth on the upper side, the toggle-joint is elongated, as shown in Fig. 2, and the center of the toggle being fastened to the lever-handle, which in dropping by its own weight or gravity contracts the toggle, and thereby separates the dies of the press, as shown in Fig. 1, thus doing away with all springs. When the press is in operation, the lever-handle is pulled up and brought close to stationary handle. In so doing the cam or lever handle is brought into operation against the shield covering the center of the toggle, thereby forcing the toggle out straight and closing the dies. When the impression is completed, the handle is let fall, which separates the dies ready for the next sealing.

To take the press apart, all that is necessary is to take out pins O and D, extending through body of press, and set-screw N, which holds stationary die.

The toggle-joint is securely housed and protected from injury by the press-frame, and the whole is compactly and conveniently arranged, and by the system of compound levers which I employ I secure very powerful pressure by very slight effort.

The mouth is on one side of the press and the swinging handle on the opposite side of the press, so as to not interfere with the introduction of work into the press, and thereby allowing the press to be brought very close to the work.

From the above description it will be obvious that the device is capable of some modification without material departure from the scope of my invention, and for this reason I do not wish to be understood as limiting myself to the precise form and arrangement of the several parts as herein set forth.

Having described my invention, what I claim is—

1. In a hand-press, a stationary handle and frame, the latter having a mouth on one side to receive the material to be pressed, and a movable handle secured to the stationary handle and frame on the side opposite said mouth, a stationary press member, a movable press member, a removable abutment-block, a toggle-joint and a link, all housed within said frame, said link connecting the toggle to the movable handle whereby the press member is extended and retracted, and so arranged that the handle will remain closed when desired, substantially as and for the purpose set forth.

2. In a hand-press, a stationary press member, a movable press member, an abutment-block, a toggle-joint, a pivoted wiper, and a shield interposed between said toggle-joint and pivoted wiper.

3. In a hand-press, in combination with a stationary press member; a movable press member; and an abutment-block; a toggle-joint composed of a series of links, the extended arms of alternate links being strung upon separate pivots and entering sockets in the abutment-block and movable press member respectively, substantially as specified.

4. In a hand-press, in combination with a stationary press member; a movable press member; and an abutment-block; a toggle-joint composed of a series of separate link members strung upon a central pivot; part of the extending arms of said links engaging the abutment-block, the movable press member and the wiper, substantially as specified.

5. In a hand-press a movable press member and an abutment-block, each having in one end thereof a transverse cylindrical concavity provided with a mouth or opening smaller than the diameter of said concavity, and a cylindrical boss upon each end of a jointed connection adapted to take into said concavity and be held in pivotal and axial engagement with the walls thereof, substantially as set forth and for the purpose specified.

JAMES MURDOCK, JR.

Witnesses:
LUKE S. MURDOCK,
JAMES N. RAMSEY.