

No. 743,716.

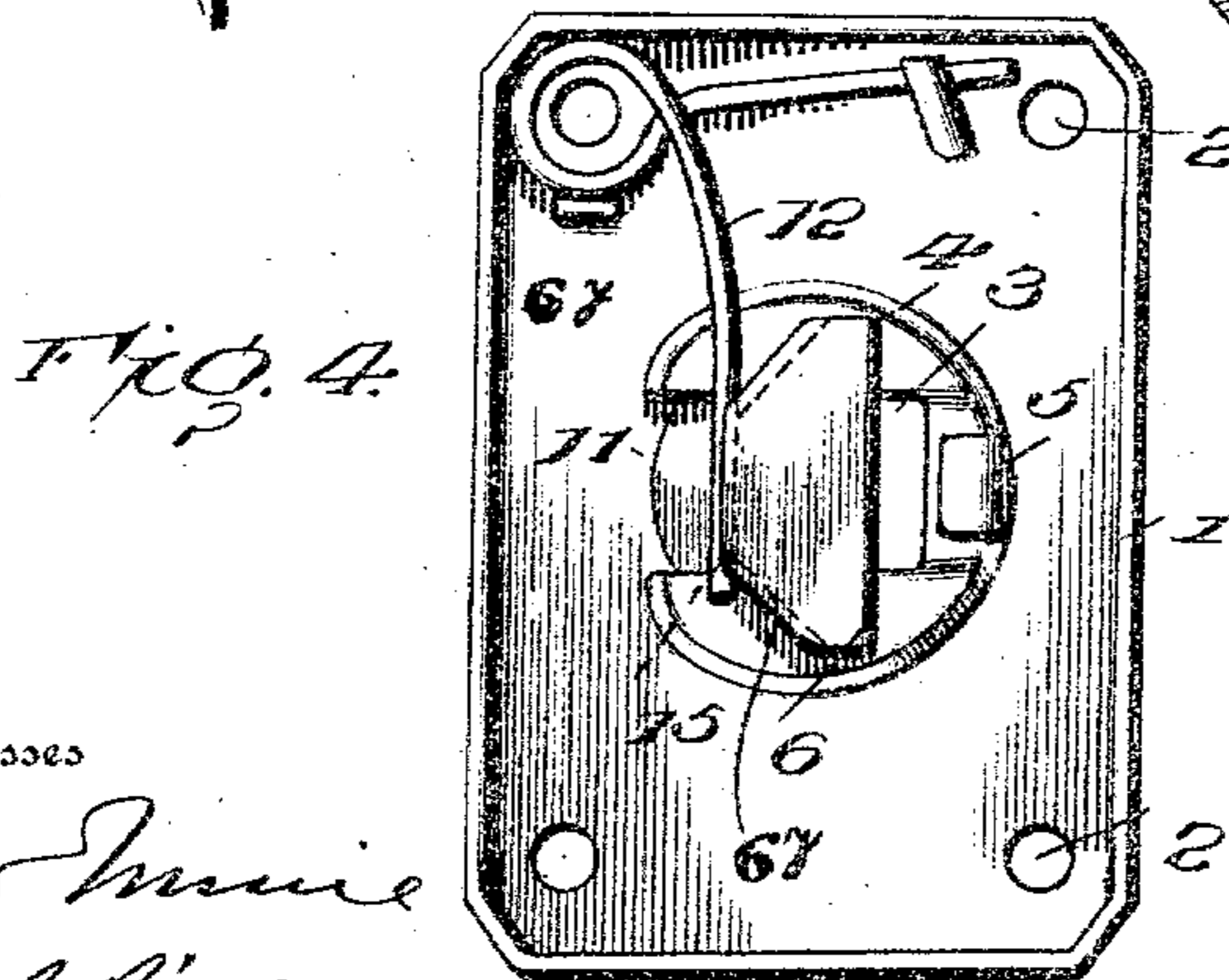
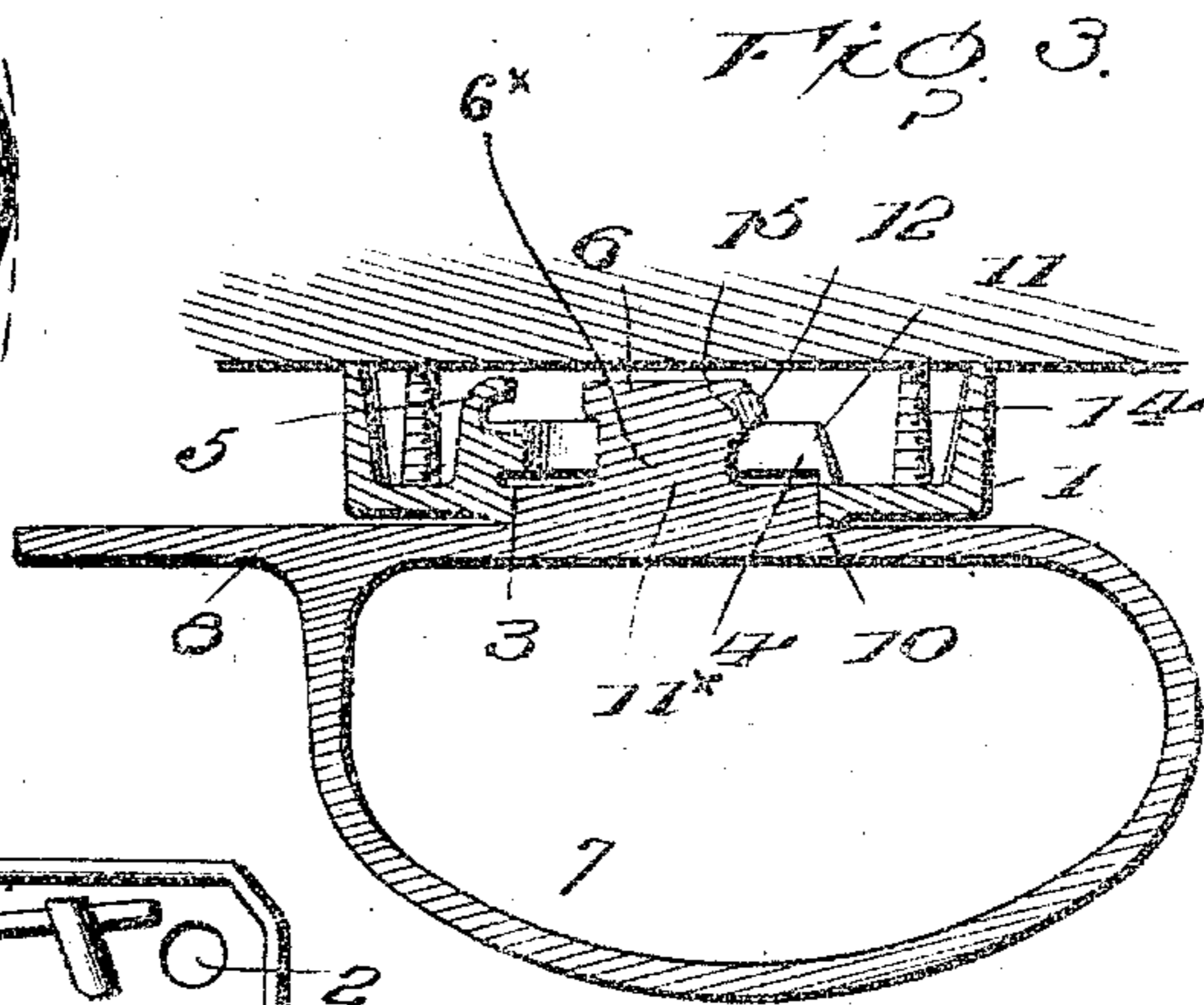
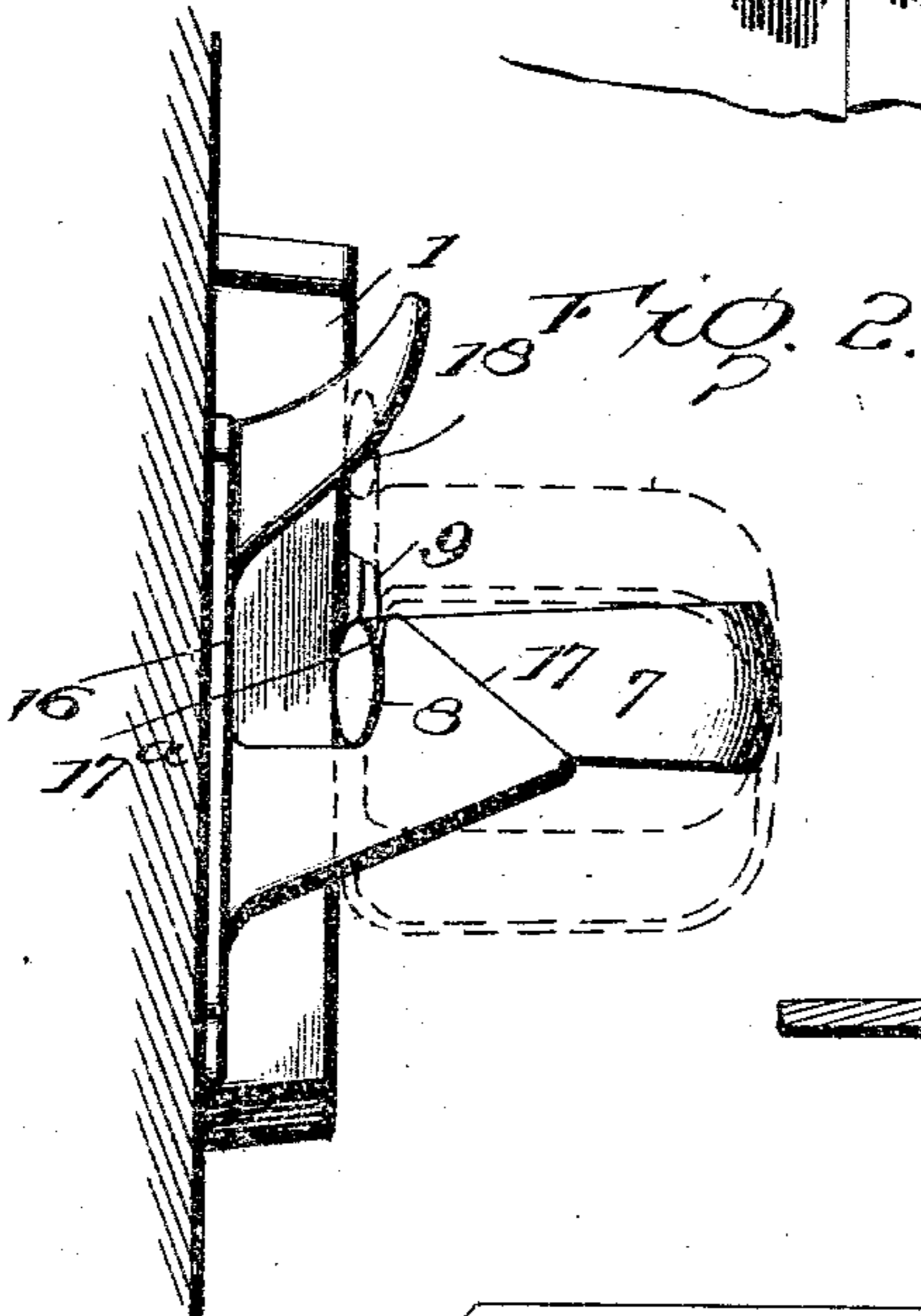
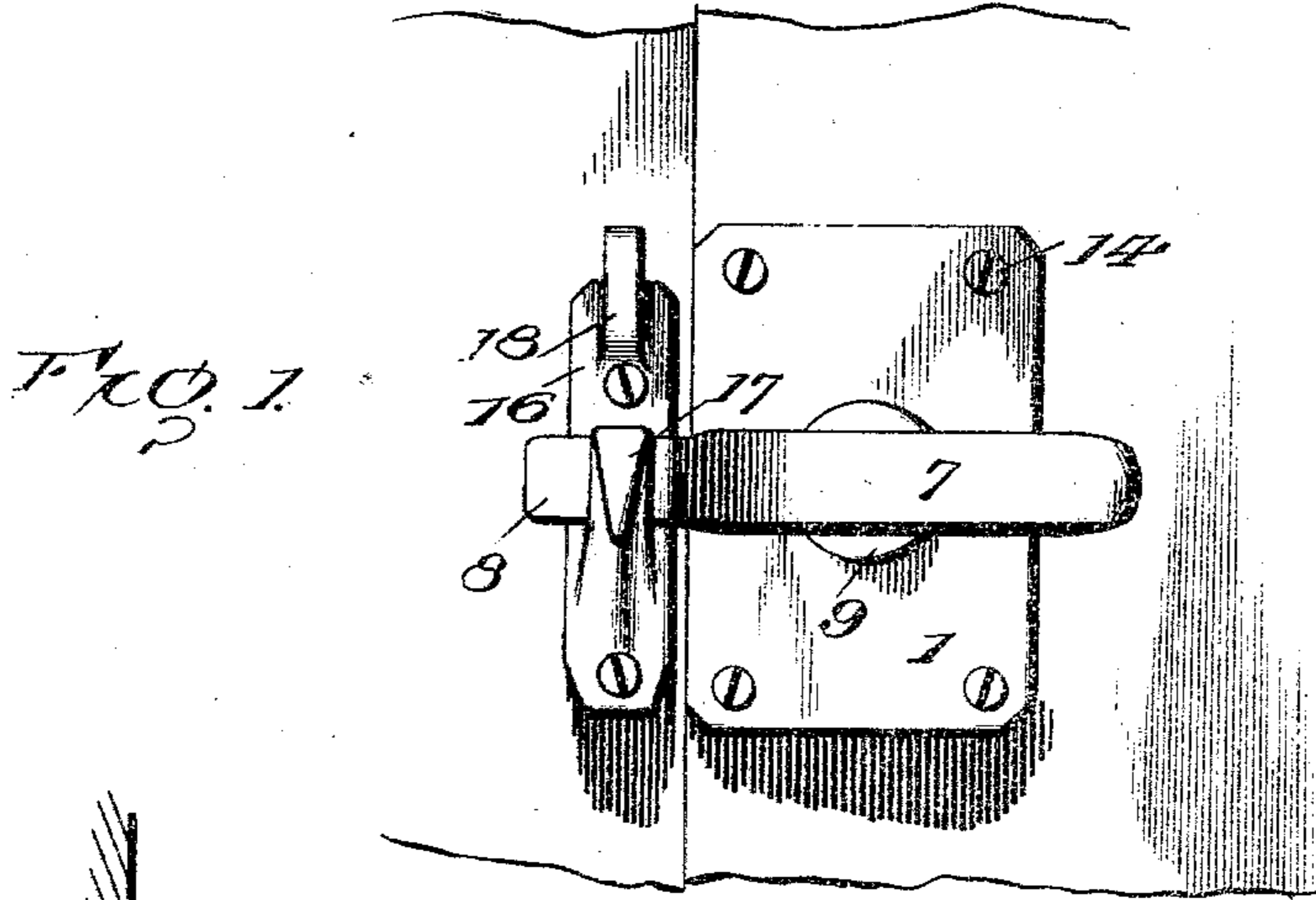
PATENTED NOV. 10, 1903.

J. HADKA.

LATCH.

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NO MODEL.



Witnesses

Joe Insure
M. A. Kier

Inventor

Joseph Hadka
by *Ruf. R. Gatlins*

Attorney

UNITED STATES PATENT OFFICE.

JOSEPH HADKA, OF CHICAGO, ILLINOIS.

LATCH.

SPECIFICATION forming part of Letters Patent No. 743,716, dated November 10, 1903.

Application filed March 13, 1903. Serial No. 147,592. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HADKA, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Door-Latches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

The invention relates to latches or fastenings for the doors of ice-boxes and the like, and has for its object to simplify the construction and insure certainty and efficiency in action.

The invention consists in the construction hereinafter particularly pointed out and described.

In the accompanying drawings, Figure 1 is a front elevation of the improved latch. Fig. 2 is a side elevation of the same. Fig. 3 is a central horizontal section. Fig. 4 is a rear elevation of the latch-case.

Numeral 1 denotes a case provided with holes 2 to receive screws or the like whereby it may be fixed to the exterior of a refrigerator, box, or other receptacle.

The case has a central circular opening 3, nearly surrounded on the interior by a flange or C-shaped boss 4, provided with a malleable lip 5, adapted to be bent into the form shown in Fig. 4, to act like a stop to an oscillating stop or cross bar 6, fixed to a handle 7, having a latch-bar 8 and a part 9, which covers a circular boss 10 on the exterior of the case and surrounding the opening 3.

The bar 6 is integral with a journal 11^x and with the handle. Said journal is rotatably held in the opening or bearing 3 and is connected to the bar by a short stud 6^x, which has such length that the inner face of the bar 6 rides on the proximate face of the boss 4 and the part 9 of bar 6 rides on the boss 10. This stud connection is made of small diameter, so as not to obstruct the assemblage of the integrally-connected boss and case.

The C-shaped interior boss 4 has its open part 11 opposite the lip 5 to facilitate assembling the connected handle, journal, and cross-bar with the case, which is effected before the lip 5 is bent by introducing the bar 6 endwise toward and through the opening 11 in an

angular direction and then moving the handle and stud so that the axis of the latter shall be in the center of the opening 3, whereupon the bar 6 can be turned to ride on the boss 4. The lip being thereupon bent, as shown, the escape of the bar and stud is prevented thereby, the bent lip also serving as a stop to limit the rotary movement of the bar in either direction. By the "angular direction" referred to is meant a line inclined to the case and passing from its front, immediately adjacent the recess 11, upwardly through opening 3 toward the lip 5, which before it is bent will not stop the advancing end of bar 6 thus introduced until its rear end can be passed through the opening 3 at a point adjacent the cut-away or open part 11 of the boss 4. When thereupon the lip 5 is bent, as illustrated, it will stop the bar 11 in case it is attempted to remove it from the opening 3 by a reverse operation. Said bent lip is also in the path of each end of the bar 6 when the latter having been assembled with the case and spring is oscillated, together with the handle, connecting-stud 11^x, and journal 10, the latter having a bearing in the opening 3.

12 denotes a spring held between the main flange of the case and one or more lugs and by a case-securing screw 14. Said spring bears in a groove 15 in the edge of the cross-bar 6, and the bar, shaped as shown, has three grooved bearing-faces, the groove in each being indicated by a broken line. When the spring presses on the middle one, the latch is held in a central situation, which is the operative one, behind the keeper, and when the handle is turned with the effect to turn the bar against the stop 5 the spring bears on one or the other of the outside grooved faces, and the latch is held in a raised or inoperative position. A return movement of the cross-bar and latch is aided by the spring as soon as it is moved over the dead-center at the juncture of the two grooved faces of the cross-bar.

Two grooved bearing-faces inclined to the central one (indicated by dotted lines at 6^y) are provided that the latch may be applied to either a right or left hand door, only one of the inclined faces being used in any particular case.

16 denotes a keeper having an inclined face

17, whereby when the latch-bar is thrown against the same in shutting the door it is raised so that it can drop behind the catch 17^a.

18 denotes a latch-guide which when the latch is held up by the spring or by friction will under the effect of the door-closing movement force it down sufficiently to cause the spring to move beyond the dead-point and depress the latch behind the catch of the keeper. When in opening the door the latch by means of the handle is moved to its elevated position, it rides upon the latch and is thereby crowded outwardly, with the effect to loosen the door, which being customarily made as near air-tight as practicable is liable to stick. Obviously the handle adds to the certainty of this operation.

The handle, latch, and cross-bar are preferably made integral, as also are the case and malleable lip or boss. These two pieces, the keeper, and the spring—four in number—constitute the whole device, which is capable of use either with a right or left hand door, the spring actuating the latch in either use of the device.

The latch and case may be assembled and the lip 5 bent to act as a stop either at the time and place of manufacture or when the latch is required for use, the latter method having a useful relation to packing and transporting the articles in compact form.

Reversible latches have been heretofore proposed. One characteristic of my improvement in that particular is the simple construction whereby a separate fastening is dispensed with and integral latch and stop bars are operatively combined with a case and with either a right or left hand door.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a door-fastening, the case having the interior C-shaped boss 4 provided with a stop, the latch having a journal in the case, and a cross-bar connected to the journal and resting on the boss 4, said stop operating to limit the reciprocation of the bar, and said bar having a grooved face, a keeper, and a spring bearing in the groove.

2. In a door-fastening, the case having the interior C-shaped boss 4 provided with a stop, the latch having a journal in the case, and a

cross-bar connected to the journal and resting on boss 4, said stop operating to limit the reciprocation of the bar, and said bar having a centrally-situated grooved face and having a second like face inclined to the first, and a spring adapted to bear on either face to hold the latch operative or inoperative.

3. In a door-fastening, the case having the interior C-shaped boss 4 provided with a stop, the latch having a journal in the case, and a cross-bar connected to the journal and resting on boss 4, said stop operating to limit the reciprocation of the bar, and said bar having a centrally-situated grooved face and having a second like face inclined to the first, a keeper, and a spring adapted to bear on either face to hold the latch operative or inoperative, and a guide to move the latch or spring over the dead-point when the door is closed.

4. In a door-fastening, the case having the interior C-shaped boss 4 provided with a stop, the latch having a journal in the case, and a cross-bar connected to the journal and resting on boss 4, said stop operating to limit the reciprocation of the bar, and said bar having a centrally-situated grooved face and having two like faces inclined to the first, a keeper, and a spring adapted to bear on either face to hold the latch operative or inoperative whether on a right or left hand door.

5. In a door-fastening, the case, the latch-bar having a journal fitting an opening in the case, a cross-bar fixed to the journal, said bars each made integral with the journal and bearing on the case, one on the interior and the other on the exterior, and a stop to limit the movement of the cross-bar.

6. In a door-fastening, the case, the latch-bar having a journal fitting an opening in the case, a cross-bar, said bars each made integral with the journal and bearing on the case, one on the interior and the other on the exterior, and a stop to limit the movement of the cross-bar, said stop being also integral with the case.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOSEPH HADKA.

Witnesses:

THOMAS C. ERNY,
GEORGE KLOPF.