

**No. 658,688.**

**Patented Sept. 25, 1900.**

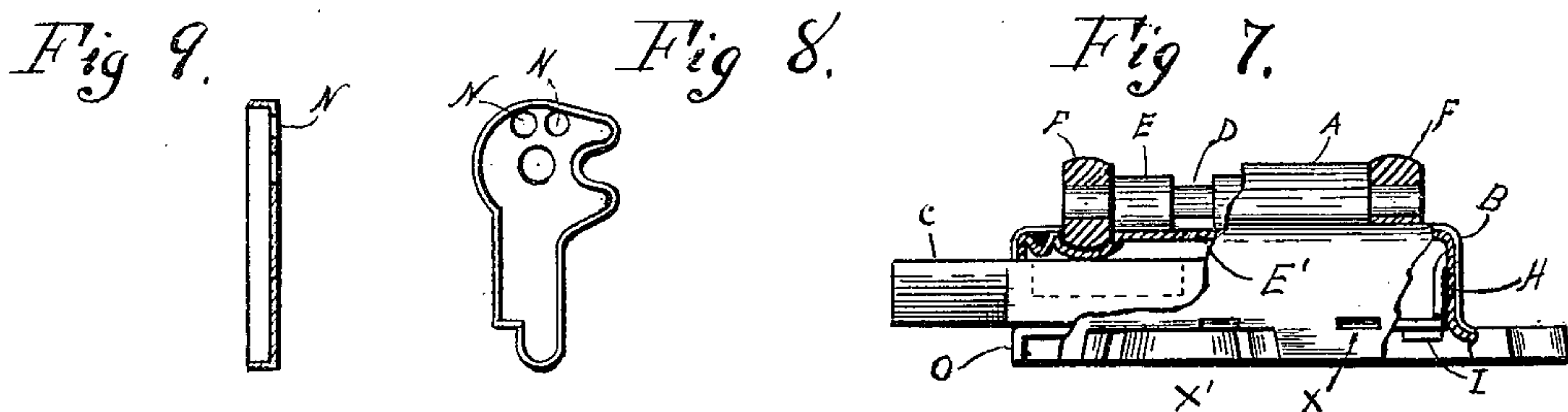
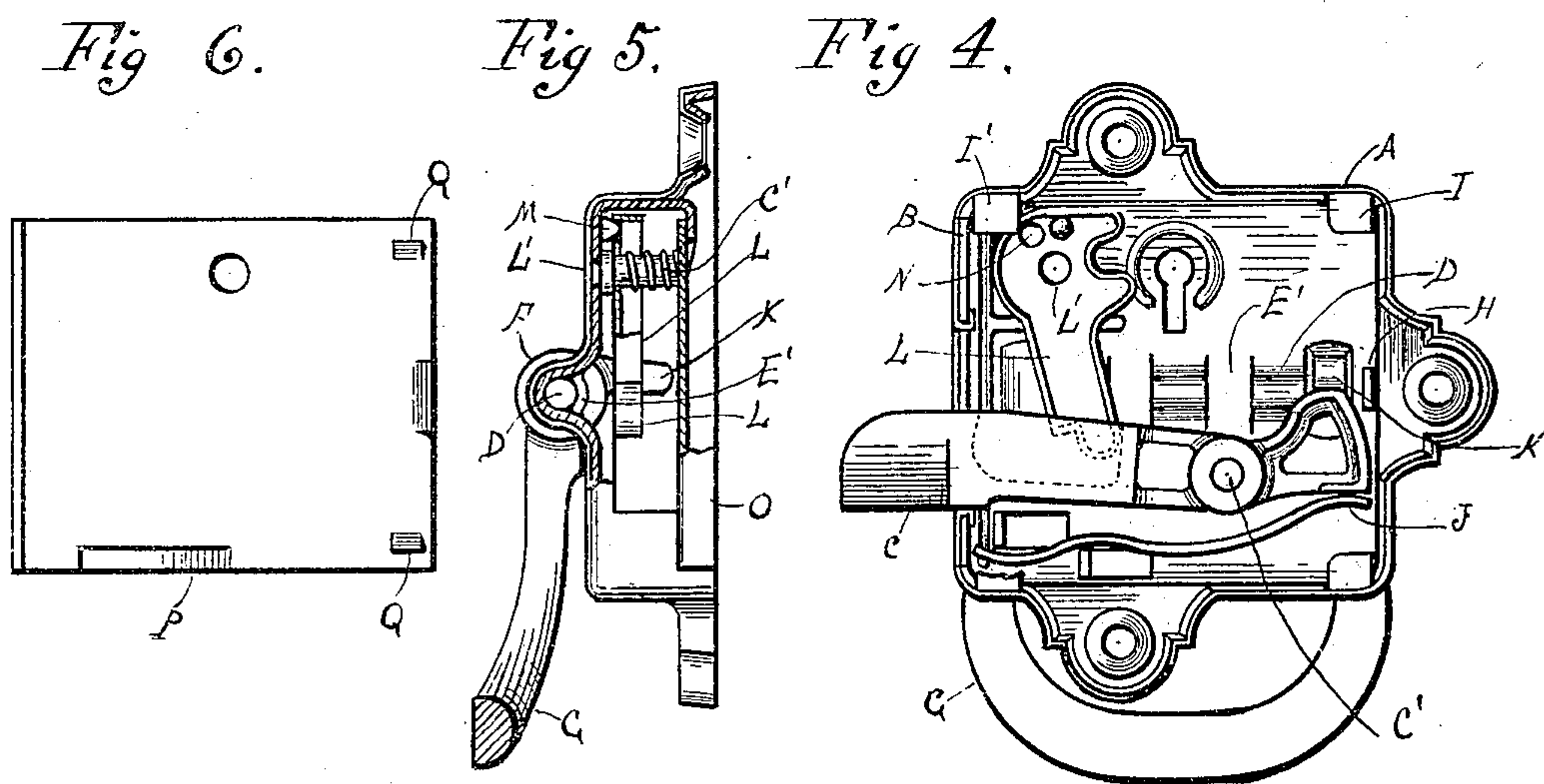
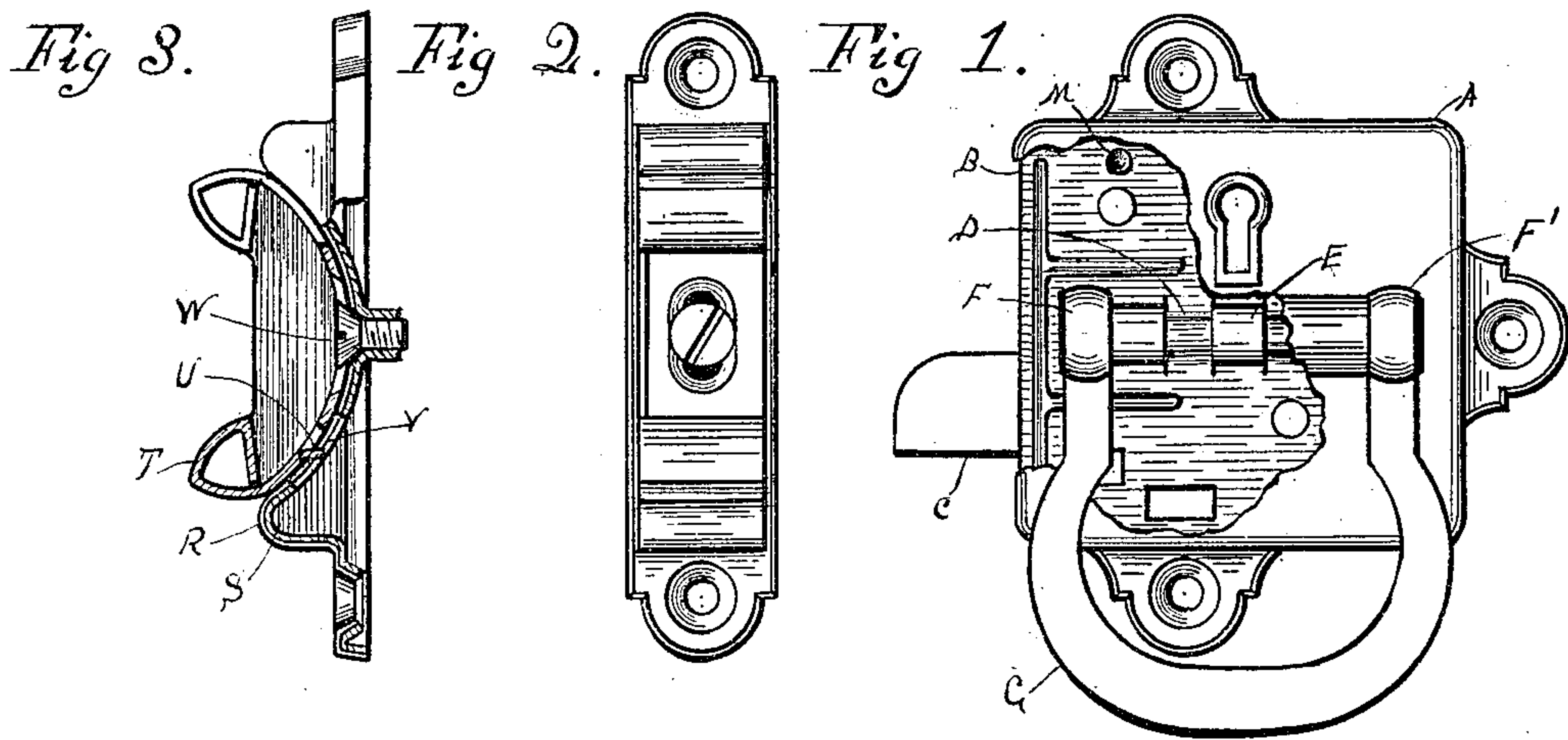
D. W. TOWER.

**LOCK.**

(Application filed Apr. 23, 1900.)

(No Model.)

**2 Sheets—Sheet 1.**



Witnesses,  
Carlton Austin  
Chas. D. Reeve.

Inventor:  
Daniel W. Tower.  
By Edward Taggart his Att'y.

Fig 10.

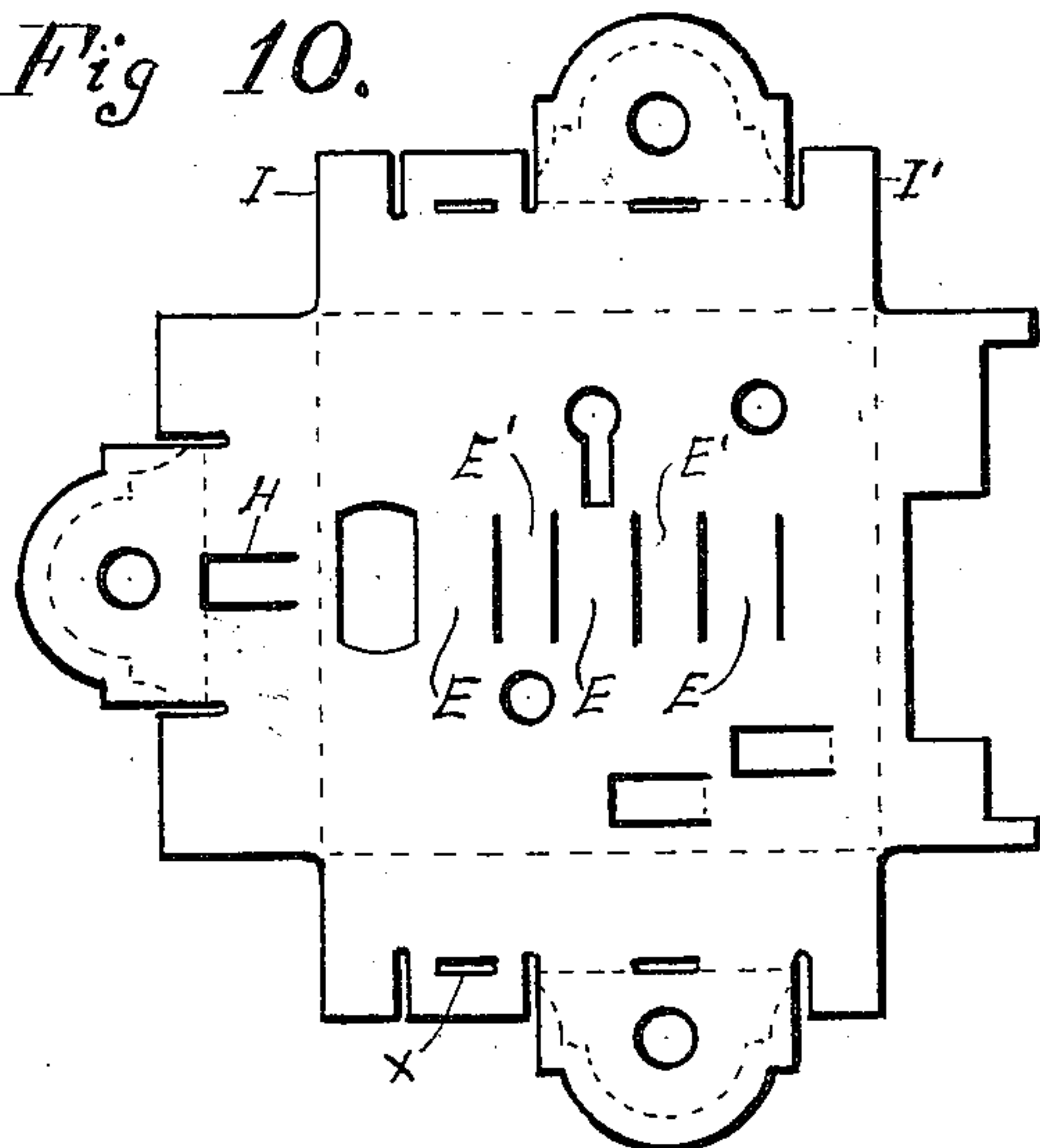


Fig 11.

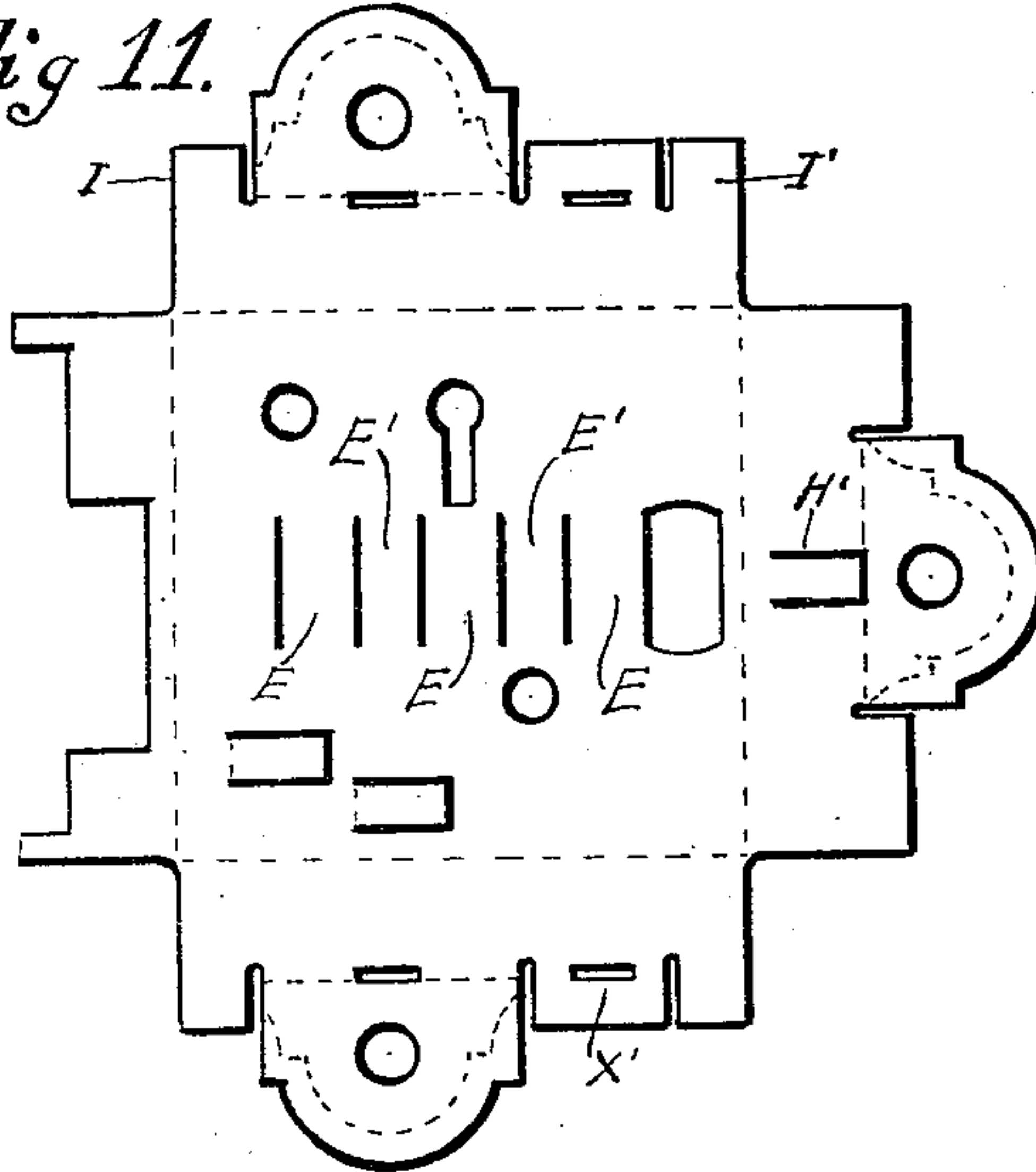


Fig 13.

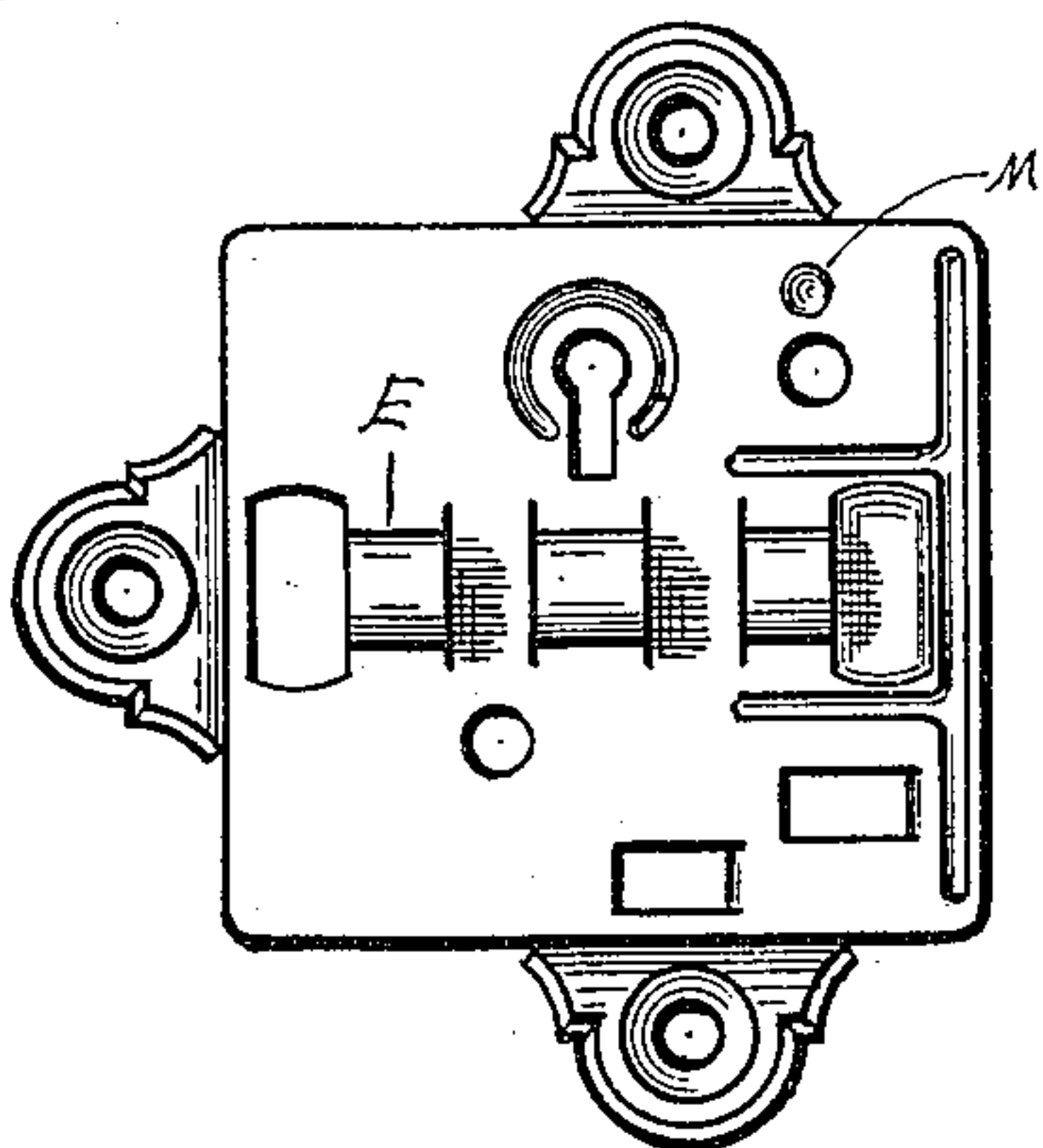


Fig 12.

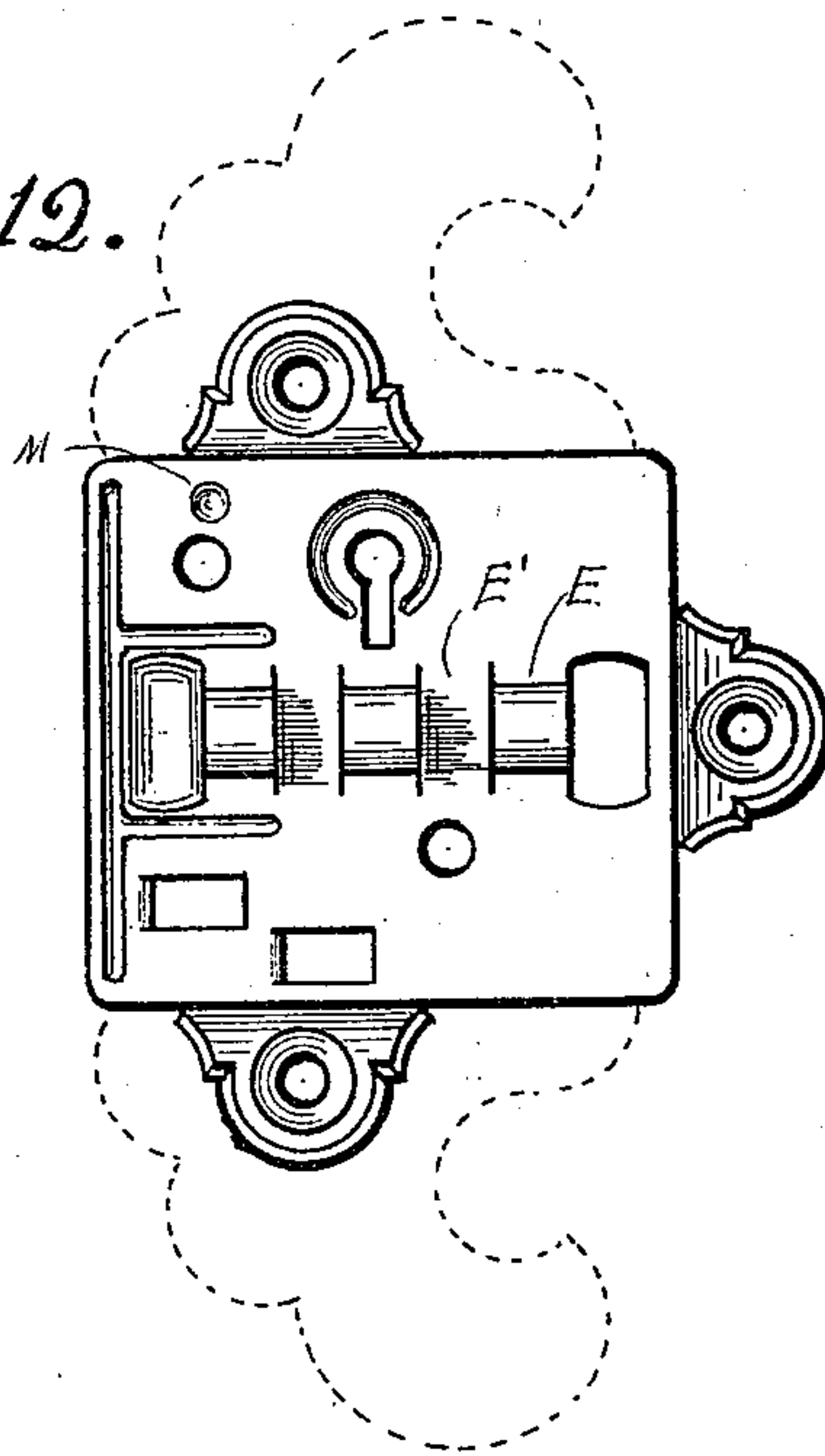
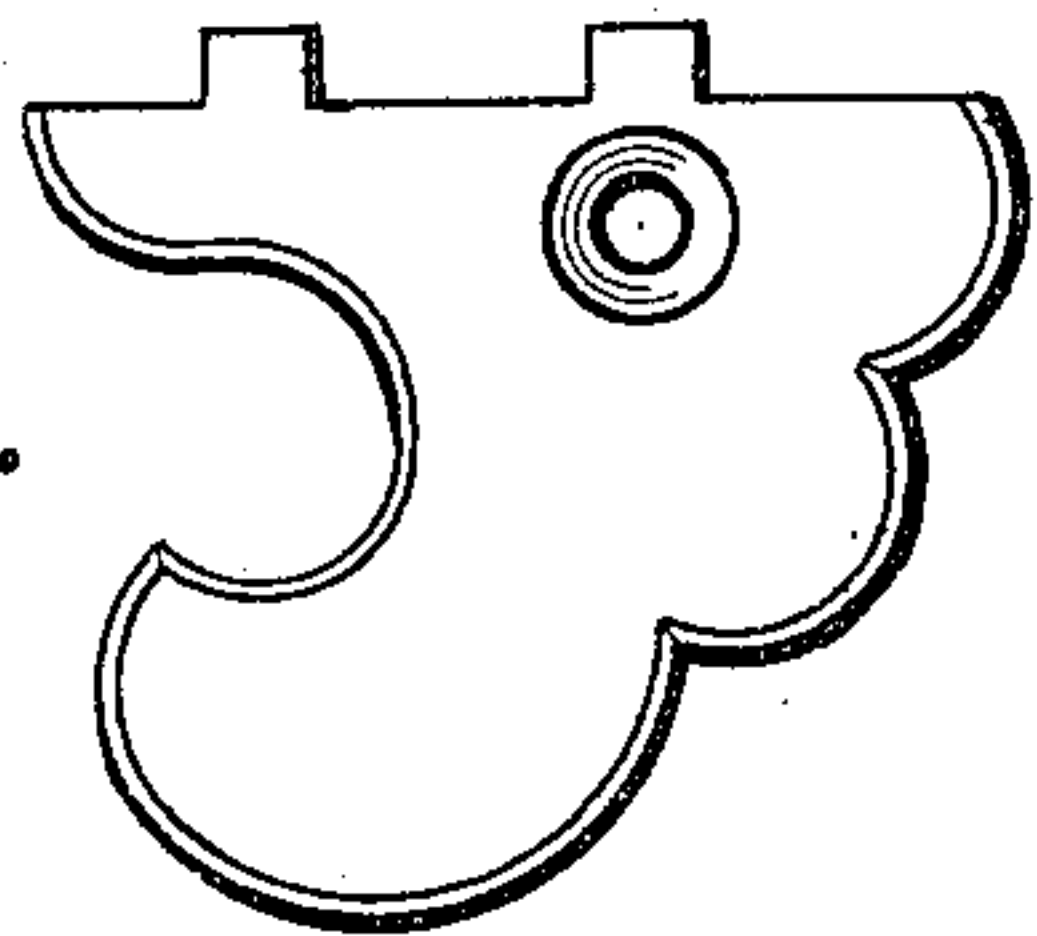


Fig 14.



Witnesses.

Carlton Austin

Chas. D. Reeve.

Inventor:

Daniel W. Tower.

By Edward Tappan his Att'y.



# UNITED STATES PATENT OFFICE.

DANIEL W. TOWER, OF GRAND RAPIDS, MICHIGAN.

## LOCK.

SPECIFICATION forming part of Letters Patent No. 658,688, dated September 25, 1900.

Application filed April 23, 1900. Serial No. 13,979. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL W. TOWER, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented new and useful Improvements in Locks, of which the following is a specification.

This invention relates to certain new and useful improvements in locks, and more particularly to locks provided with a latch operated by a handle of suitable form, said latch or bolt adapted to engage with a catch or striker; and the invention consists, first, in the peculiar construction of the blank which forms the body of the lock; second, in the axial arrangement of the pin or rivet with which the handle or pull is attached to the body; third, in the peculiar formation and operation of the locking-dog; fourth, in combining with the latch of the lock of an adjustable reversible catch or striker; fifth, in combining with the lock-body a lock-plate held in position by means of lugs integral with the lock-body and a spring formed integral with the lock-plate, and, sixth, in other details of combination and construction hereinafter described and claimed; and the objects of my invention are, first, to increase the efficiency of locks of the construction described; second, to cheapen the construction; third, to form right-hand and left-hand locks from the same blank; fourth, to give a rich and solid appearance to the lock; fifth, to furnish perfect adjustability to the catch; sixth, to furnish a cheap and efficient means for detachably securing the back-plate in position to allow for its ready removal, and, seventh, other objects hereinafter described. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of the lock constructed in accordance with my invention, with a portion of the case cut away to show the internal body part more clearly. Fig. 2 is a front view of the adjustable and reversible catch or striker. Fig. 3 is an edge view of the adjustable catch, partly in section. Fig. 4 is a reverse or back view of the lock with the back-plate removed. Fig. 5 is an edge view of the lock with part of the case cut away, the position of the locking-dog, dog-

pivot, and boss or projection which engages with the limit-holes in the locking-dog. Fig. 6 is a plan view of the back-plate, showing one form of construction. Fig. 7 is a bottom edge view of the lock with part of the outer case cut away. Fig. 8 is a detached plan view of the locking-dog. Fig. 9 is a longitudinal central view of the locking-dog. Fig. 10 is a plan view of a blank for making the body for a left-hand lock, the dotted lines showing the line where the blank is to be bent in the die. Fig. 11 is a plan view of a blank for making a body for a right-hand lock, dotted lines showing where the blank is to be bent. Fig. 12 is a front elevation of a right-hand lock-body formed from a blank such as is shown in Fig. 11. The dotted lines show the position of the wings which may be attached to the lock-body for giving to the latter a larger and more ornamental appearance. Fig. 13 is a front elevation of a left-hand lock-body formed from a blank as shown in Fig. 10, and Fig. 14 shows one of the wings detached. Similar letters refer to similar parts throughout the several views.

B is the inner body, made, preferably, of steel and readily slipped into a case A when the lock is in its perfected condition.

C is the latch or bolt.

D is the pin or rivet, which attaches the handle or pull G to the lock.

E are lugs formed integral with the lock body or shell B and form, in connection with the reverse-lugs E', the bearings for the pin D. The lugs E and E' are formed from the body-plate, preferably in the manner illustrated in Figs. 10 and 11, where it will be seen slots are made in the plate, and when the plates are placed in the die lug E forms the outer bearing and lug E' the inner bearing for the pin D.

The ends of the handle are enlarged, as shown by F F', and are perforated to receive the ends of the pin D. The catch C, in the sample of my invention illustrated in the drawings, is attached by a fulcrum-pivot C' and is held in normal position or in position to engage the catch by means of the spring J, as shown in Fig. 4. The enlarged part F' is provided with a lug or projection K, bearing against the short end of the latch C, and as the handle G is raised the free end of the



latch C is lifted from engagement with the catch T.

O is the back-plate, which engages with the body B and protects and covers the internal mechanism of the lock. The plate is provided with internal lugs Q Q, as shown in Fig. 6, and is also provided with an integral spring P. The lock-body B is provided with ears I I and I' I'. The plate O passes under ears I' I', and the lugs Q Q engage with the ears I I, while the spring P, after the plate O is passed into position, springs outwardly or upwardly, so as to engage with one of the ears I' and retain the plate O in position. In order to remove the plate O from the lock, it is only necessary to bear down on the spring P until its free end allows it to pass beneath the ear I', when the plate O can readily be removed.

M is a boss on the inner side of the lock body or core B, adapted to engage with the limit-holes N and N' of the locking-dog L. The positions of the holes are shown in Fig. 8. The locking-dog L turns on a pivot L', and a spring surrounds the pivot L' and tends to hold the dog against the boss M, so that as the dog is turned by the key into locking position the boss engages with the hole N, and when turned out of locking position the boss engages with the hole N'.

The free end of the latch C engages with a catch when the door of the article to which the lock is applied is closed. The catch which I have shown is provided with a base or support and double catches. All parts may be provided with an outer covering.

R shows an outer covering, which, however, may be dispensed with.

S is the support proper, which has a concave surface to receive the concave surface of the catch. The catch-support is provided with the slots V, only one of which, however, is shown, and an ear or lug passes through the covered portion of the catch and through each of the slots V. The catch T is provided with a slot through which the screw or bolt W passes. By loosening the screw W the catch may be turned, so as to cause one of its catching ends to be raised and the other depressed. Both ends of the catch and catch-support are alike, which adapts the catch to right-hand and left-hand doors, and the catch is therefore both adjustable and reversible.

In order to give the lock an enlarged and enriched appearance when such form is desired, I provide means for attaching wings. One of these wings is shown in Fig. 14. The wing is provided with projections, as shown. These projections when the wing is applied engage with the slots or openings shown by X X' in Fig. 7, and the eyelets which attach the outer covering of the lock to the body pass through the openings shown in the wing. The position of the wing when applied is illustrated in Fig. 12 by dotted lines. The position of the slots or openings X X' is shown in

Figs. 10 and 11, and Figs. 10 and 11, it will be noted, are exact duplicates of each other, except one is desired to face in one direction and the other to face in the other direction. These blanks are both cut by the same die, and as the pin is placed centrally or axially of the blank when coupled and held in position by means of the bars E and the bars E' the right and left hand blanks can be formed into shape by means of the same die—that is, if the blank is struck in one die with one face down it will make a right-hand lock, and if reversed it will make a left-hand lock, thus saving the expense of dies in making the blank and in forming up the blank.

Having thus described my invention, what I claim to have invented, and desire to secure by Letters Patent, is—

1. A lock having its casing provided with alternating half-bearings adapted to receive the axial-handled pin, substantially as set forth.

2. A lock having its casing formed with a plurality of alternating half-bearings and a handled pin or axis held in said half-bearings, substantially as set forth.

3. A lock having its casing formed with a plurality of alternating half-bearings, a latch suitably pivoted or hung in said casing and a handle with its pin or axis adapted to be received by said half-bearings and to engage and actuate said latch, substantially as specified.

4. A lock having its casing provided with a boss or projection, and a spring actuated or held dog provided with limit-holes, beyond its pivot, adapted to engage said projection or boss, and a latch adapted to be engaged by said dog substantially as set forth.

5. In combination with a lock-body suitable ears on said body, a back-plate adapted to slide beneath said ears and a spring integral with the back-plate for retaining the latter in position, substantially as described.

6. In combination with a lock a reversible and adjustable catch provided with a concave base or support, and a curved part fitted to said concave support and suitable means for adjusting said catch, substantially as described.

7. In combination with the base S concave in form and provided with a slot, the catch T provided with a slot and a lug, whereby the catch may be adjusted, substantially as described.

8. In combination with a lock, a reversible and adjustable catch having opposite end hooks and a concaved base or support, and a curved part fitted to said concaved support, and means for adjusting said catch, substantially as described.

9. In combination with a lock, a reversible and adjustable catch having a concaved base or support provided with a slot, said catch also having a slot and a lug, substantially as set forth.

10. In combination with a lock, a reversible  
and adjustable catch having opposite end  
hooks and a concaved base or support, and a  
curved part fitted to said concaved support,  
5 said catch also having a slot and a lug, sub-  
stantially as set forth.

In testimony whereof I have hereunto set

my hand in presence of two subscribing wit-  
nesses.

DANIEL W. TOWER.

Witnesses:

A. C. DENISON,  
JAMES B. DAVIES.