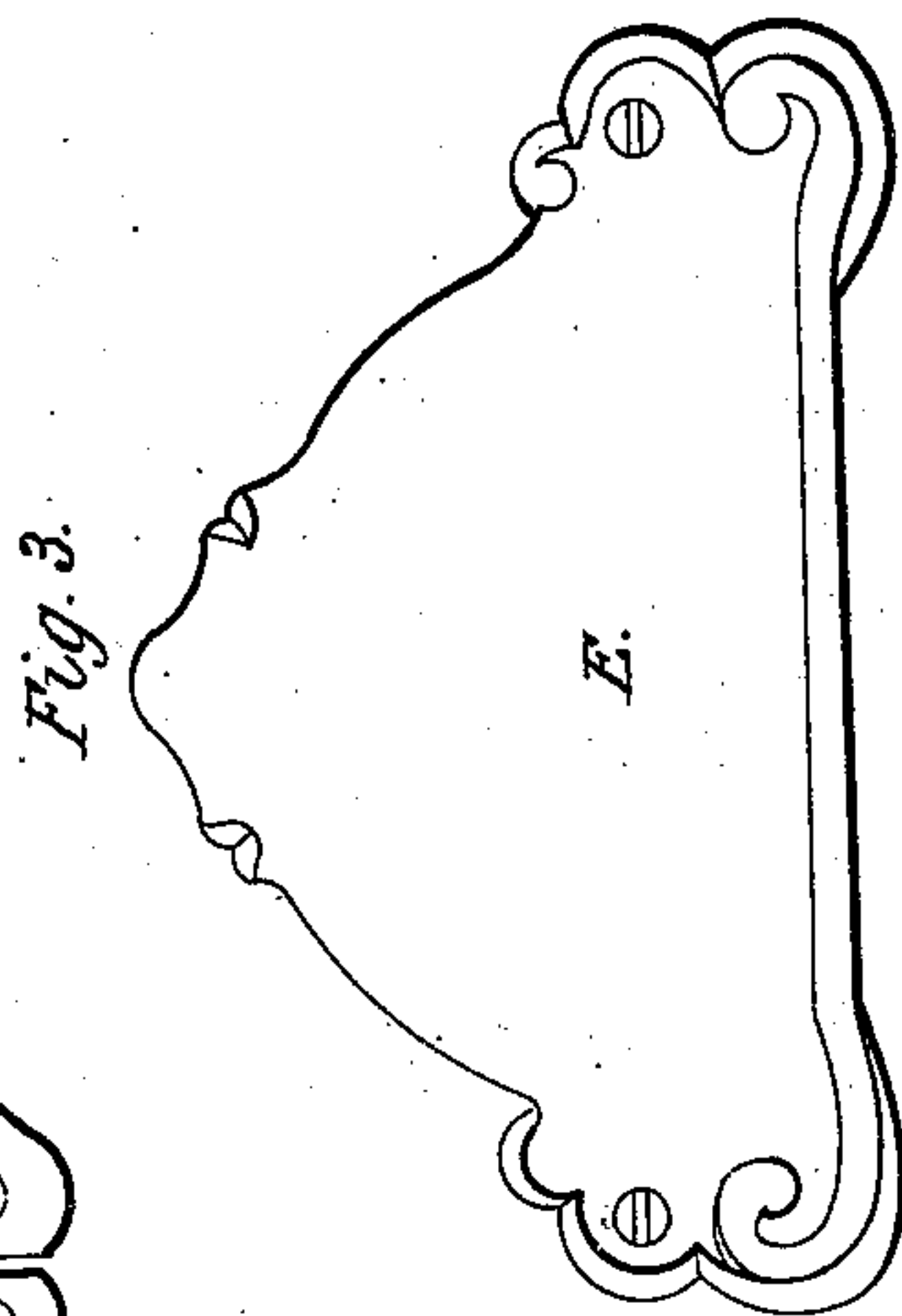
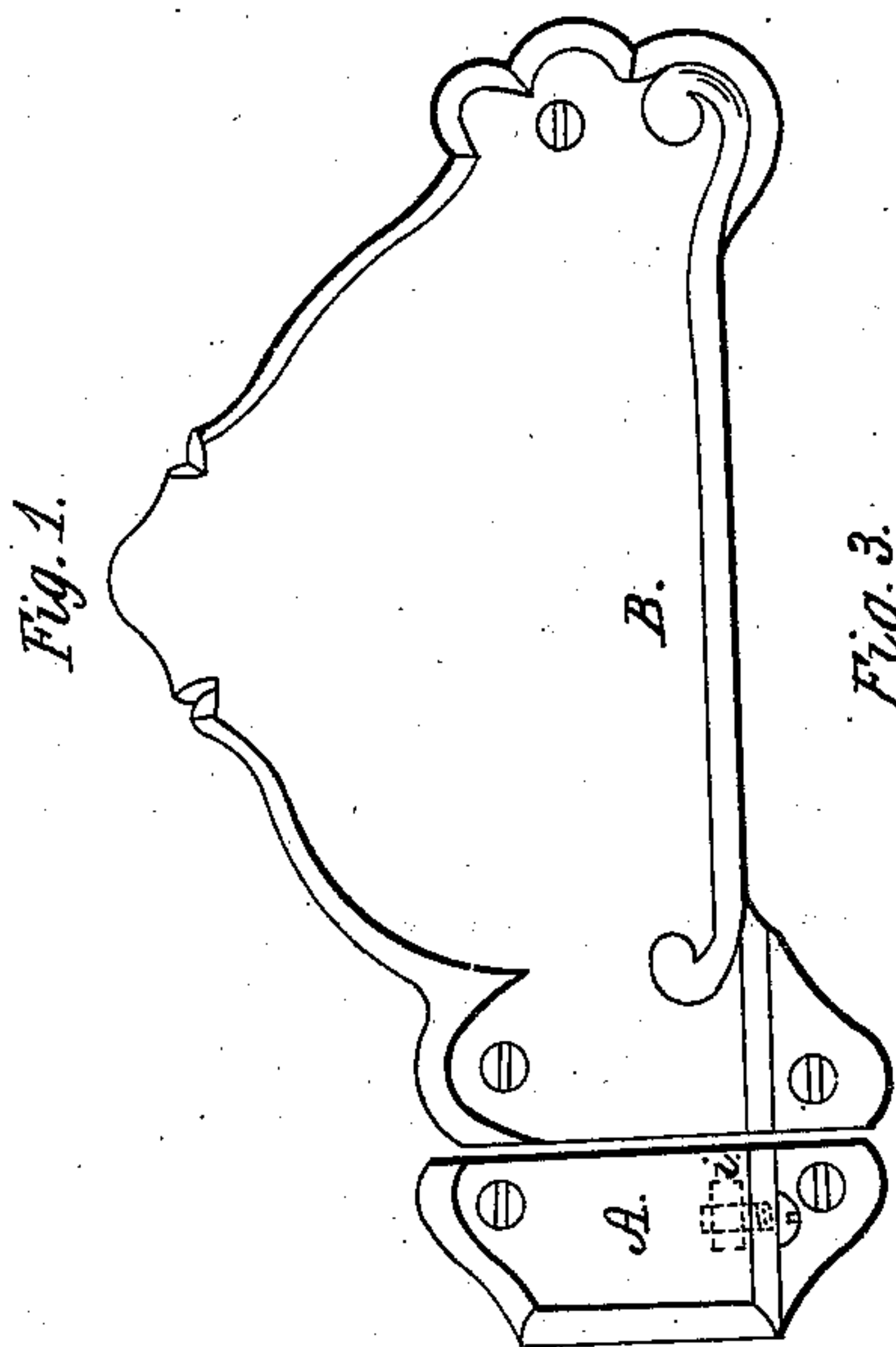
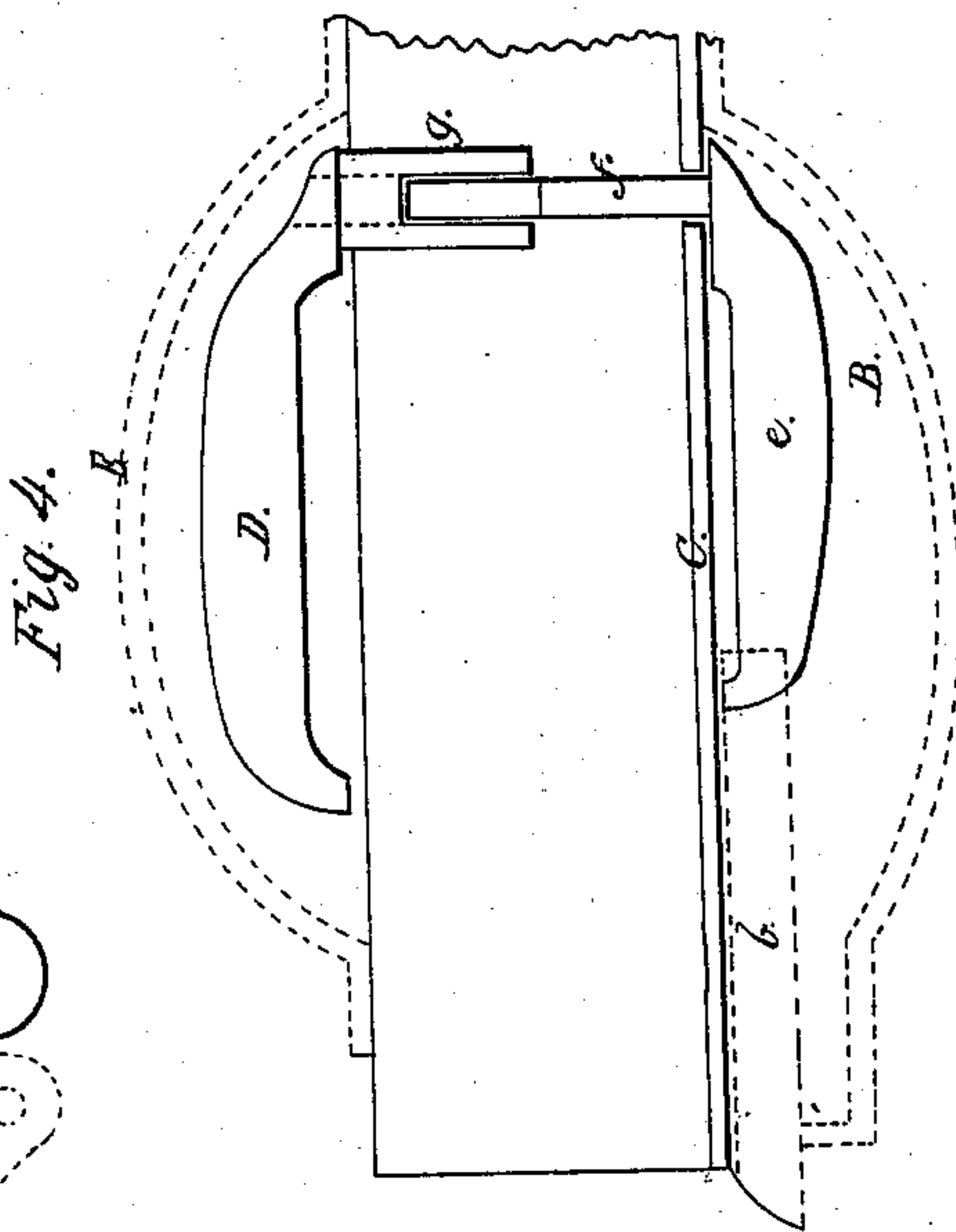
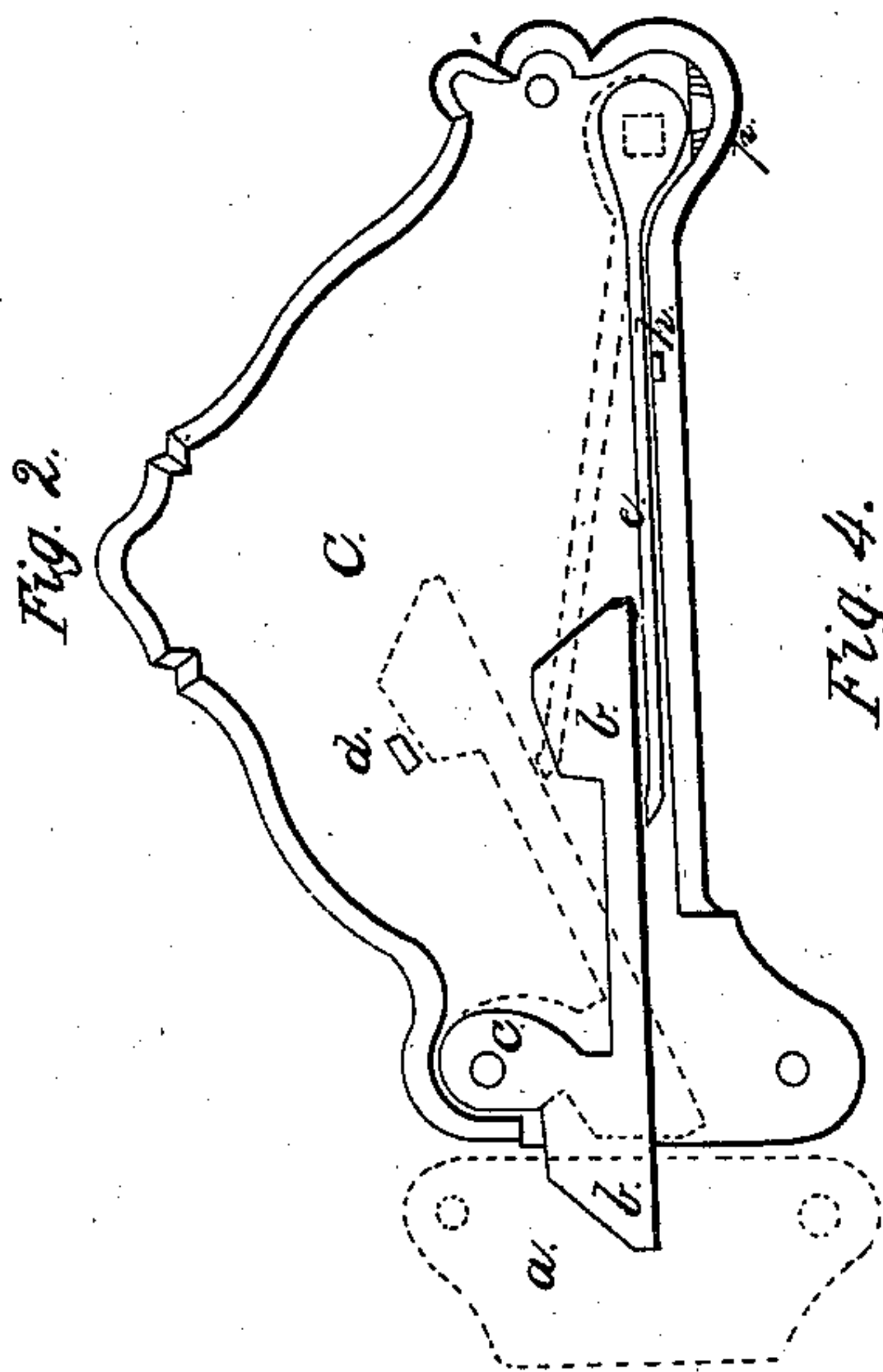


F. W. Dean

Door Latch.

N^o 93,685.

Patented Aug. 17, 1869.



*Witnesses,
Balthus DeLong.
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United States Patent Office.

F. W. DEAN, OF TREMONT, ILLINOIS.

Letters Patent No. 93,685, dated August 17, 1869.

IMPROVEMENT IN DOOR-LATCHES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, F. W. DEAN, of Tremont, county of Tazewell, in the State of Illinois, have invented a new and improved Door-Latch; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which like parts are indicated by like letters in the several figures.

The nature of my invention consists in constructing a latch or lock, dispensing with all springs, and making the outer case or covering answer the purpose of a pull.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the drawings—

Figure 1 represents an elevation of my improvement, say on the inside of a door, A being the catch or keeper, and B, the covering of the latch proper, which forms the pull by which to open the door on that side.

Figure 2 is an elevation of a back plate, C, on the same side of the door, its latch and lever, the covering-plate B, being removed.

a shows, in dotted outline, the position of the keeper.

b is the latch proper, pivoted at c, or rotating on a screw which fastens B and C to the door, the inner end of this latch being weighted, as seen, to bring it down automatically after having been raised by hand.

It is shown raised in this figure, in dotted outline, as also its lever, its upper movement in this direction being limited by a stop, d, a mere projection on the outer face of plate C.

Underneath the latch b there is a lever, e, shown more distinctly in Figure 4, which is a partial section of the stile, &c.

This lever has a projection, f, at right angles to it, which passes through plate C, and some distance into the door, its inner end being square, or some other suitable shape to answer its purpose, or by which it may be rotated by an outside lever, D, on the other side of the door, and the cylindrical part of which, g, entering the door, being hollow, and fitting over f, by which to impart motion to e or raise the latch b from the outside.

A projection or stop, h, on plate C, and under the lever e, holds it and the latch b in a horizontal position, or from falling below the plate C or pull B, which covers and conceals them.

That part of the latch b which enters the keeper, is so shaped, rounded, or curved on the inner side and

top, making its faces triangular and the ends pointed, as that when it strikes the keeper, it will rise automatically, being forced entirely under B, when the door will shut and the latch fall, its extreme end passing behind the keeper.

The keeper may be shaped alike at top and bottom, so as to answer for a right or left-hand door.

A sliding stop, i, is shown in fig. 1, for the latch, but a pivoted one, as usual, may be substituted.

The pull or plate B may be so shaped at each end as to answer for a right or left-hand lock, by a slight alteration in the pattern, which must be adapted to the securing and operation of the latch, as also to hold in place its lever e, any lateral movement of which is to be prevented by plate B, which has a proper bearing against the end of e, where it is connected to f, being countersunk, &c.

In this case, also, the back plate C should also be made alike at both ends.

The lever e must always be of a suitable length to release the latch from the keeper, and those parts of the levers e and D which enter the door, and fit each other, can be made adjustable, so as to suit different thicknesses of doors.

An ordinary door-pull, E, fig. 3, may be fitted on the outside of the door, over the lever D.

The operation is simply as follows:

Supposing the door to be closed, to enter from the outside, the fingers are placed under the lower edge of E, pushing up the lever D. This carries up also the inside lever e, and through it raises the latch b, as shown in dotted lines in fig. 2, releasing it from the catch A, when the door can be opened.

It will be found self-shutting, or can be shut by raising the latch, the same as in opening it.

The door can be opened from the inside the same as from the outside.

The several parts are constructed of the usual materials, as may be found convenient.

The pulls may be japanned, bronzed, plated, or enamelled with glass or porcelain.

The "putting on" or fitting of the latch to the door is too evident to require description.

The advantages of my latch are, that it is more easily and quietly operated, is not liable to get out of order, having no spring, and is certain to catch, if properly constructed.

A door can be closed by gentle pressure, like others, without raising the latch by hand, and the article can be produced at small cost.

The pulls form a case to the operating-parts.

A latch constructed and operated like mine may be enclosed in a case, or be made a part of an ordinary lock.

The latch may be enclosed in a metallic case, and a detached pull secured over it.

I am aware of the patent of Shepard and Sigourney. This I do not claim. My invention requires no cutting of the door, but can be screwed upon the outside of the same.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination of plate C, weighted latch b, and levers e D, constructed and arranged in the manner as shown and described.

2. The combination of cover or pull B with the several parts aforesaid, when arranged as described.

F. W. DEAN.

Witnesses:

S. M. HOBART,
W. W. STILES.