I. E. VAN BENTHUYSEN.
Reversible Latch.

No. 201,573. **Patented March 19, 1878.**

Fig. 1.

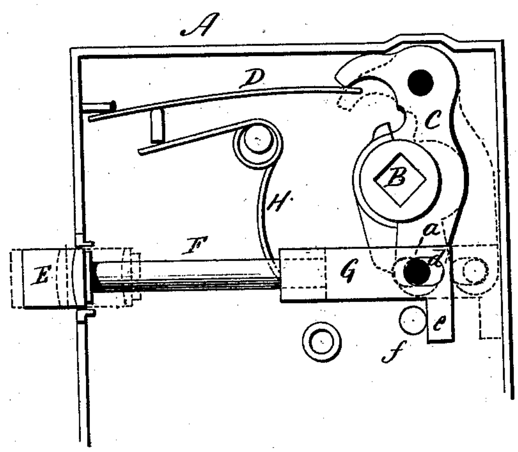


Fig. 2

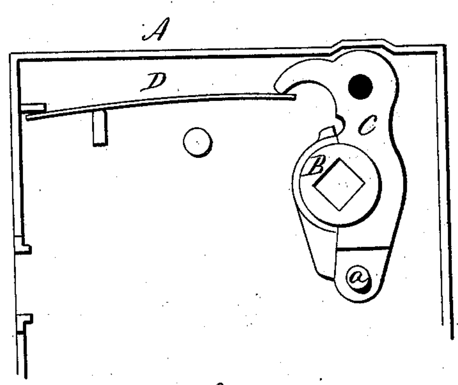
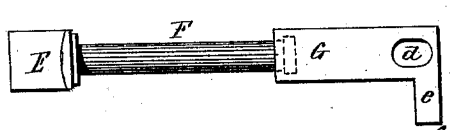


Fig. 3



Witnesses.
[illegible]
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Inventor
By atty.
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UNITED STATES PATENT OFFICE.

ISAAC E. VAN BENTHUYSEN, OF BRANFORD, CONNECTICUT, ASSIGNOR TO THOMAS KENNEDY, OF NEW YORK.

IMPROVEMENT IN REVERSIBLE LATCHES.

Specification forming part of Letters Patent No. **201,573,** dated March 19, 1878; application filed January 24, 1878.

To all whom it may concern:

Be it known that I, ISAAC E. VAN BENTHUYSEN, of Branford, in the county of New Haven and State of Connecticut, have invented a new Improvement in Reversible Latches; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, which said drawings constitute part of this specification, and represent, in—

Figure 1, an interior view of one of the plates removed; in Fig. 2, the same with the latch-bolt removed, and in Fig. 3 the latch-bolt.

This invention relates to an improvement in knob-latches, the object being to construct the latch so that the bolt may be set for either a right or left hand door, and commonly termed "reversible latches," and particularly to that class known as "rim-latches," or such as are applied upon the surface of the door.

The object of this invention is to make the action from the knob on the bolt positive; and it consists in a stud on the lever or part intermediate between the bolt and hub, and a corresponding slot in the tail of the bolt, the said slot only of sufficient length to allow the head to be drawn from the case for the purpose of reversal, and with a spring to hold the latch-bolt back against the said stud, and so that when the knob is turned the said stud will strike the rear end of the slot and act positively upon the bolt, as more fully hereinafter described.

A represents the case; B, the hub; C, the lever; D the mainspring, all of substantially usual construction, and so that the spindle of the knob passing through the hub and turned in either direction will cause a rear movement of the lever C. On the lower end of the lever C is a stud, *a*.

E is the latch-bolt, the tail formed in two parts, F G, swiveled so that the part F will turn in the part G, in the usual manner. In the part G there is a slot, *d*, corresponding to the stud *a*, and so as to set thereon, as seen in Fig. 1. A spring, H, is arranged to press the latch-bolt rearward, but very much weaker than the mainspring D, so that while working in the opposite direction it has very little effect on the action of the said spring D. The slot *d* is made only of sufficient length to allow the head of the latch-bolt to be drawn from the case, as seen in broken lines, Fig. 1, for the purpose of reversal. When in its normal condition the latch-bolt is forced in, so that the forward end of the slot *d* rests against the stud *a*, as seen in Fig. 1.

When the knob is turned so that the hub will act upon the lever C, the said lever moves backward without the latch-bolt until the stud *a* reaches the rear end of the slot *d;* then it takes the latch-bolt with it until the bolt is completely drawn, as indicated in broken lines, Fig. 1, thus making the drawing of the bolt positive and always at the same time, regardless of the amount of force required.

In order to prevent the latch-bolt from being reversed after attachment to the door, the part G is constructed with a downward projection, *e*, and through perforations *f* in the case one of the screws for securing the case is passed, and this screw is close in front of the projection *e* when in its normal condition, and prevents any forward movement or withdrawal of the bolt.

It will be understood that for the lever C there may be substituted any of the known intermediate devices between the latch-bolt and the hub; and by the expression "intermediate lever" I wish to be understood as embodying such devices.

I am aware that latch-bolts have been attached to the operative mechanism, so that the latch-bolt may be drawn out and reversed without moving the operative mechanism, and the connection between the latch-bolt and its mechanism such that the bolt would be held back by a spring when in its normal condition, and also that the screw by which the lock was secured to the door would prevent the withdrawal of the bolt after it was on the door, this invention being limited to the slot in the tail of the latch-bolt and the stud on the operating-needle, whereby a positive bearing is made between the bolt and its operative mechanism in the operation of the latch.

I claim—

The combination, in a knob-latch, of the hub and swiveled latch-bolt with an intermediate lever, the inner end of the said latch-bolt constructed with a slot, and the lever with a corresponding stud, and a spring acting upon the latch-bolt independent of and in opposition to the mainspring, substantially as and for the purpose described.

ISAAC E. VAN BENTHUYSEN.

Witnesses:

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WILLIAM REGAN.