N. O'BRIEN.

REVERSIBLE KNOB LATCHES.

No. 190,356. Patented May 1, 1877.

fig. 1.

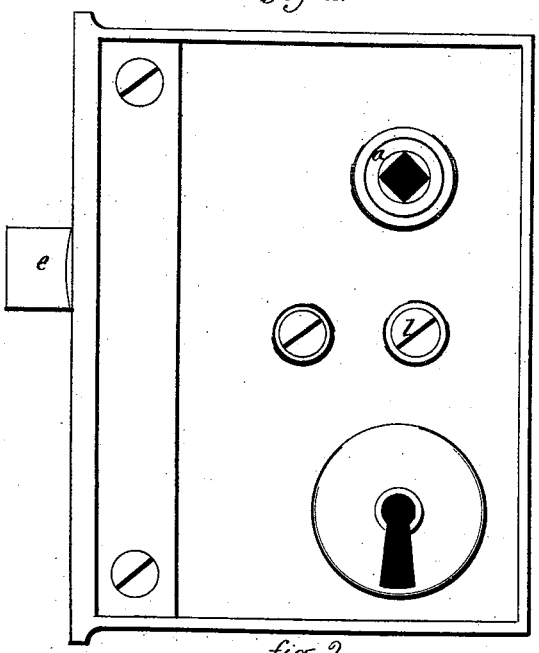
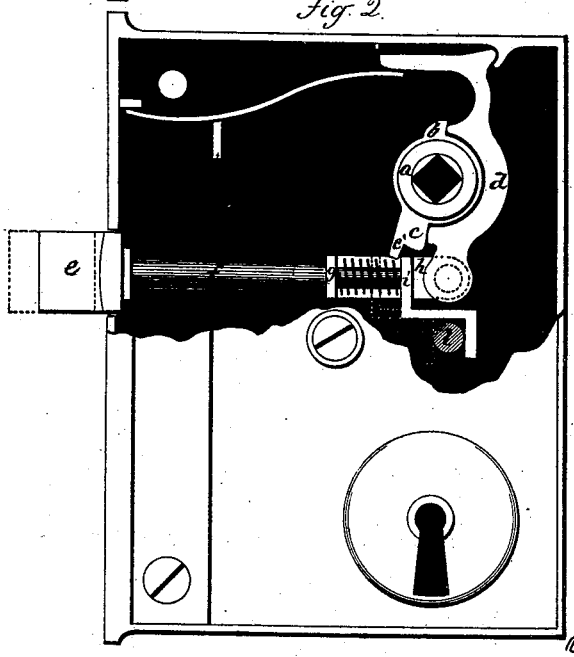


fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

NICHOLAS O'BRIEN, OF BRANFORD, CONNECTICUT.

IMPROVEMENT IN REVERSIBLE KNOB-LATCHES.

Specification forming part of Letters Patent No. **190,356**, dated May 1, 1877; application filed March 17, 1877.

To all whom it may concern:

Be it known that I, NICHOLAS O'BRIEN, of Branford, in the county of New Haven and State of Connecticut, have invented a new Improvement in Reversible Knob-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, and which said drawings constitute part of this specification, and represent in—

Figure 1 a side view, and in Fig. 2 a side view with a portion of the covering-plate removed to show the mechanism of the latch.

This invention relates to an improvement in that class of knob-latches in which the bolt is made reversible, so as to be set to adapt the latch to either a right or left hand door, and with special reference to that class commonly termed "rim-locks," or such as are adapted for attachment upon the surface of the door.

The invention consists in the arrangement and construction of the parts, as hereinafter described, and particularly recited in the claim.

The case is of the usual form, and is provided with the usual lock mechanism. *a* is the hub, operating through its arms *b c* upon the hub-lever *d* in the usual manner for this class of latches; *e*, the latch-bolt, the tail *f* of which extends inward and through the end *g* of a link, *h*, hung to the lower end of the lever *d*, a shoulder being formed on the tail *f* to bear against the outer end *g*, and the tail reduced from that point toward the end, and so as to be rotated freely in the said end *g*. On the end of the tail *f* a transverse piece, *i*, is attached, so as to allow the latch-bolt to be rotated without turning the piece *i*, and between the piece *i* and the end *g* a spring is arranged, the tendency of which is to draw the latch-bolt inward, and hold the shoulder on the tail of the bolt against the end *g*, but yet so that when force is applied to the latch-bolt to draw it outward the spring will yield so far as to allow the bolt to be drawn from the case to be turned to the right or left, as the case may be, and when so turned the spring will draw the bolt back into its normal condition.

The piece *i* extends to the rear of a perforation through the case, through which a screw, *l*, is inserted, so that the piece *i* will bear against that screw, as seen in Fig. 2, and thereby prevent the latch-bolt from being drawn outward for reversal when attached to the door.

The latch-bolt is operated in the usual manner for this class of latches, and because of the stop *i* the latch is secured from being reversed when it is on the door; but when off the door it may be readily reversed by simply drawing it forward, and without the previous movement of any other part.

In some cases the latch-bolt is liable to stick in its keeper, so that when the knob is turned, without some additional device, the lever would move without drawing the bolt.

To avoid this difficulty an auxiliary arm, *c'*, is formed on the hub, which, while it will not interfere with the drawing out of the bolt for the purpose of reversal, it will, when the knob is turned, strike the stop *i*, so that in case the lever *d* shall not have drawn the bolt in the first movement of the knob, the auxiliary arm *c'* will directly engage the bolt through the stop *i*, this stop being practically a part of the bolt.

I claim—

The combination of the hub, provided with the auxiliary arm *c'*, the hub-lever, the bolt hinged to the said lever through the link *h*, the stop *i*, and spring between the said stop and the end *g* of the link, substantially as described.

NICHOLAS O'BRIEN.

Witnesses:

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