

A. F. WHITING.
Reversible Knob-Latches.

No. 137,272.

Patented March 25, 1873.

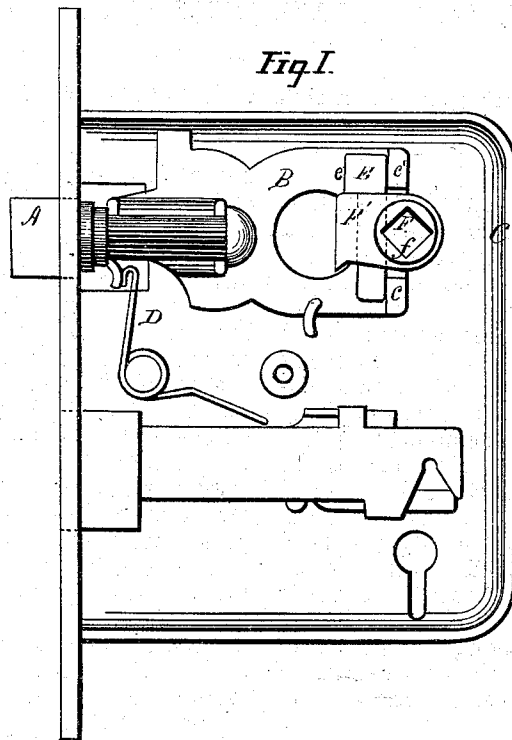


Fig. 3.

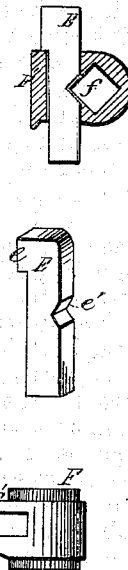
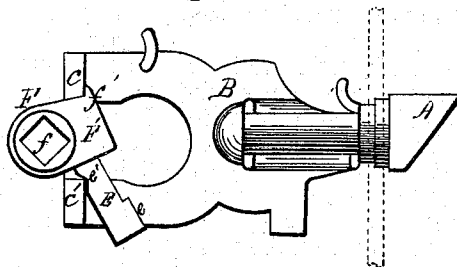


Fig. 2.



Witnesses
Jas. C. Hutchinson
J. W. Minter

Inventor
Andrew F. Whiting
Edmund Brit

Attorn

UNITED STATES PATENT OFFICE.

ANDREW F. WHITING, OF CRESTLINE, OHIO.

IMPROVEMENT IN REVERSIBLE KNOB-LATCHES.

Specification forming part of Letters Patent No. 137,272, dated March 25, 1873.

To all whom it may concern:

Be it known that I, ANDREW F. WHITING, of Crestline, in the county of Crawford and State of Ohio, have invented a certain Improvement in Reversible Latches, of which the following is a specification:

The nature of my invention consists in the use of a movable cross-bar for the hub of the spindle, which, resting in a bearing in an enlargement on one side of the hub, is ordinarily held in position by the spindle. On the removal of the latter, the cross-bar may be slid in one direction by its own gravity, so as to release one of the lugs of the latch-bolt slider or carriage, which, on being pushed outward by the action of the spring, oscillates the hub, the motion of both the hub and carriage being stopped after the latch-bolt has been projected far enough to permit of reversal by a shoulder on the enlargement of the hub bringing up against the released lug of the carriage.

This engagement of the parts holds them in such a position that the movable cross-bar cannot entirely fall out of its seat or bearing, and that after reversal of the bolt it may readily be brought back to its normal position by its own gravity.

Figure 1 is an elevation of a lock and latch containing my improvement, one plate of the case having been removed to expose the interior arrangement. Fig. 2 is a detail view of the mechanism of the latch, showing the movable cross-bar as dropped and the bolt projected ready for reversal. Fig. 3 illustrates in detail the hub and its movable cross-bar.

The same letters of reference are used in all the figures in the designation of identical parts.

The latch-bolt A has the usual square and beveled head, and shouldered cylindrical shank, with which latter it rests in suitable bearings in the slider or carriage B within the case C. The carriage is actuated by one end of the spiral spring D in the well-known manner, and the lugs *c* and *c'*, upon the respective legs of its bifurcated end, draw against the ends of the cross-bar E of the hub F. The latter has a square eye, *f*, for the reception of the spindle, by which it is turned in operating the latch by the knobs, and it has also an enlargement, *F'*, formed on the side facing the fork of the carriage. The cross-bar E is a flat

bolt with a shoulder or head, *e*, at one end, and is loosely fitted in a transverse aperture in the enlargement *F'*, so made that it crosses the square eye *f* at one corner. The cross-bar has a triangular nick, *e'*, in one edge, which, when it is in position reaching across both lugs of the carriage, receives the adjacent corner of the spindle, by which the cross-bar is thus held in place.

When reversal of the latch-bolt becomes necessary, the latch is removed from the door, and the spindle having been drawn out of the eye *f*, the case is turned so that the head *e* of the cross-bar shall hang downward. Then press the latch-bolt inward a little, which will release the cross-bar from the pressure of the carriage-lugs, and cause it to drop by its own gravity, its movement being checked by the end of the case, which permits it to fall far enough to escape from behind the upper carriage-lug *c*. On discontinuing the inward pressure upon the bolt, the spring D will force it outward until its square head protrudes entirely from the case, permitting the desired reversal. This outward movement of the carriage oscillates the hub, turning the enlargement in an upward direction, so as to bring a shoulder, *f'*, thereon up against the lug *c* to stop further motion, which occurs directly after the square head of the latch-bolt is out of the case. At this point the movable cross-bar is in the inclined position shown in Fig. 2, one end being still in its bearing, while the other end rests against the end of the case. After the bolt has been reversed, it is pushed back into the case, so that on turning the case right-side up the cross-bar will drop back to its normal position to be locked by the spindle, as stated.

What I claim as my invention, and desire to secure by Letters Patent, is—

In combination with the lugs *c* *c'* of the carriage B, the movable cross-bar E, provided with shoulder *e* and nick *e'*, and hub F, having an aperture in the enlargement *F'*, substantially as and for the purpose set forth.

In testimony whereof I have hereunto signed my name this 8th day of February, 1873, in presence of two subscribing witnesses.

ANDREW F. WHITING.

Witnesses:

FRANK WHITNEY,
JOHN VETTER.