W. E. SPARKS.
Reversible-Latch.

No. 198,704. Patented Dec. 25, 1877.

Fig. 1.

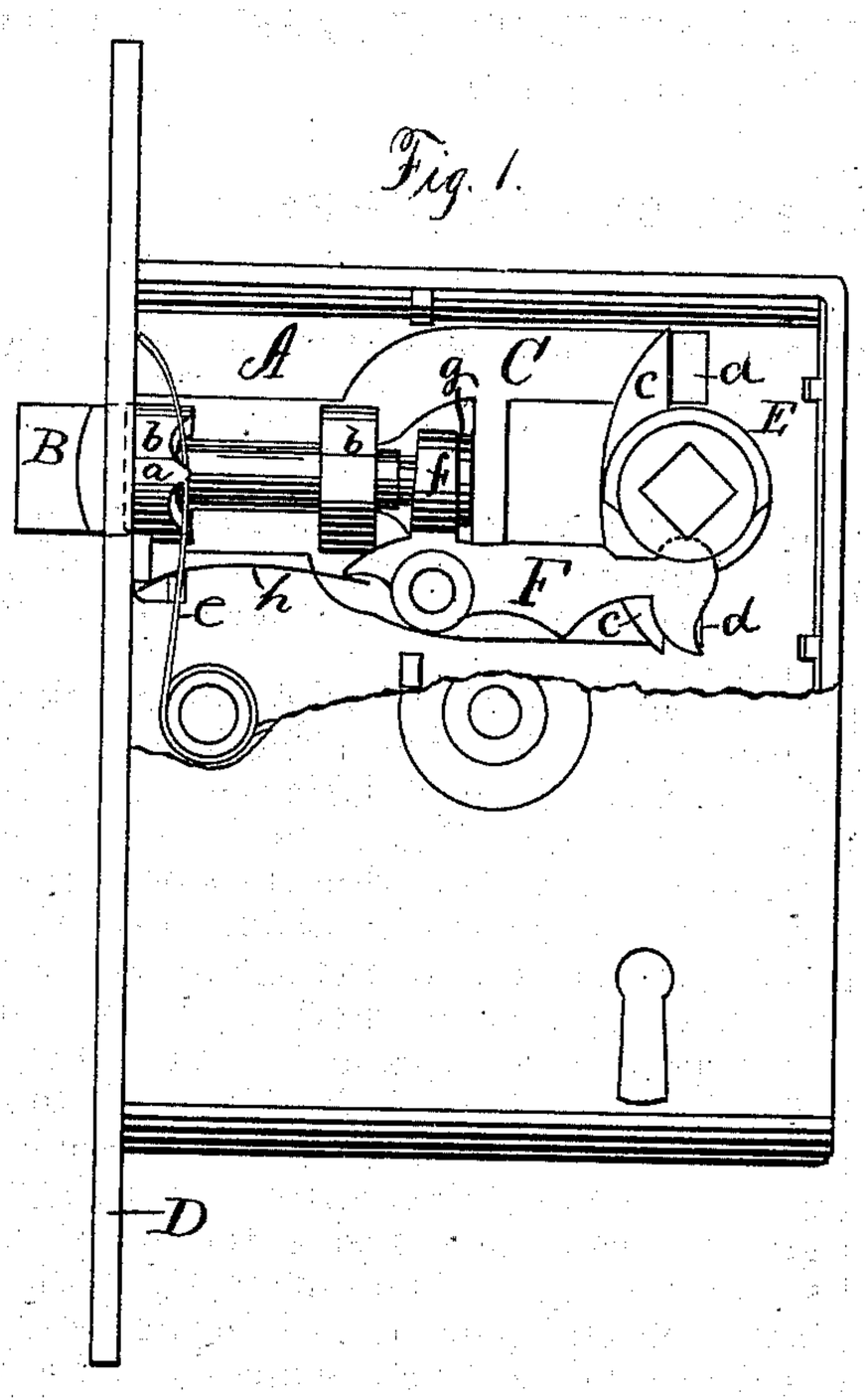


Fig. 2.

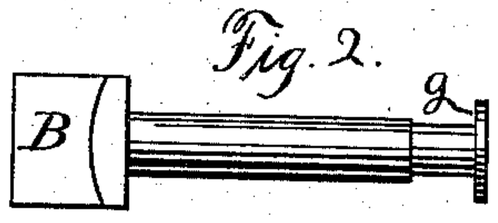


Fig. 3.

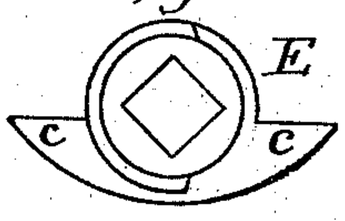


Fig. 4.

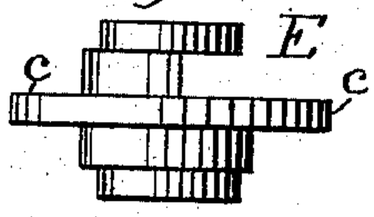


Fig. 5.

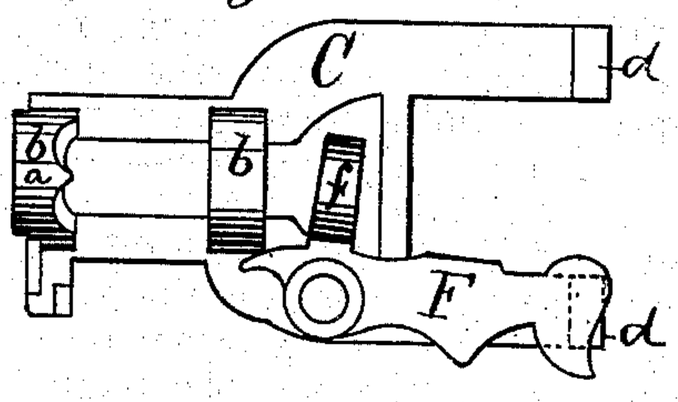
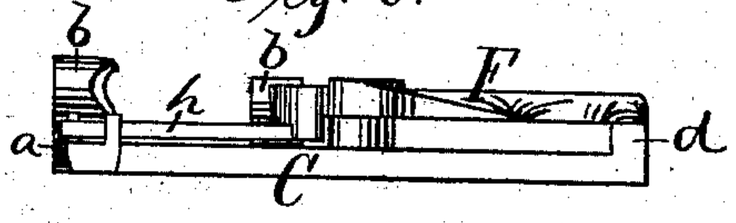


Fig. 6.



Witnesses.
W. B. Thomson.
O. J. Markley.

Inventor.
William E Sparks
By James Shepard Atty.

UNITED STATES PATENT OFFICE.

WILLIAM E. SPARKS, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO P. & F. CORBIN, OF SAME PLACE.

IMPROVEMENT IN REVERSIBLE LATCHES.

Specification forming part of Letters Patent No. **198,704**, dated December 25, 1877; application filed November 26, 1877.

To all whom it may concern:

Be it known that I, WILLIAM E. SPARKS, of New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Reversible Latches, of which the following is a specification:

My invention consists of the peculiar construction of certain parts, and in the combination of parts, as hereinafter described.

In the accompanying drawings, Figure 1 is a front elevation of a latch which embodies my invention, the same being represented with one side plate partially broken away, in order to better show the parts. Fig. 2 is a side elevation of the latch-bolt detached. Fig. 3 is an end view of the hub detached. Fig. 4 is an edge view of the same. Fig. 5 is a side elevation of the yoke detached, and Fig. 6 is an edge view of the same.

A designates the latch-case; B, the latch-bolt, with square and beveled head and a round shaft, substantially as in other reversible latches. C designates the yoke, made longer than those ordinarily employed, and having a shouldered tenon, *a*, on its outer end, which takes into the bolt-head mortise in the face-plate D. This yoke has two bearings, *b b*, for the round shaft of the latch-bolt B, and the front or outer end of the yoke is supported by engagement with the face-plate, as before described, thereby supporting the latch-bolt in a very firm manner.

The length of the yoke C and its position in relation to the hub are such that when the yoke is thrown forward by means of the spring *e*, and engages with the face-plate D, as shown in Fig. 1, both arms *c c* of the hub E bear against the ordinary studs *d d* at the end of the yoke, ready to be moved inward by either arm upon the first movement of the hub. One side of the hub E is slotted, as shown in Fig. 4.

Upon one side of the yoke C, and pivoted thereon, is an angle-lever, F, the short arm *f* of which engages the neck of the latch-bolt in front of the shoulder *g*. The latch-bolt has no shoulders to engage the bearings of the yoke, so that the short arm *f* of the angle-lever F controls the longitudinal position of the latch within the yoke. A spring, *h*, engages the angle-lever, to make it continually press its short arm against the shoulder *f* of the latch-bolt.

The relations of the angle-lever, yoke, and hub are such that when the square head of the latch-bolt is just within the bolt-head mortise, as shown in Fig. 1, the long arm of the angle-lever F rests within the slot in the hub, and with its upper edge about flush with the sides of the hole through the hub, so that when the knob spindle or shaft is inserted in the hub the angle-lever cannot be moved in such a direction as to allow the latch-bolt to move forward in the yoke; but when the knob shaft or spindle is withdrawn from the hub the angle-lever can move inside the walls of the square hole in the hub sufficiently to allow the latch-bolt and short arm of the angle-lever to be drawn forward independently of the yoke, to take the square head of said latch-bolt out of the mortise in the face-plate, when it can be turned with its beveled face in either direction for a right-hand or a left-hand latch, as may be desired.

If desired, a single spring might be so arranged as to perform the office of the two springs *e* and *h*, herein shown and described.

I claim as my invention—

1. In a reversible latch, the combination of slotted hub, provided with rigid arms, the yoke having studs to engage the arms of the hub, the latch-bolt arranged to move longitudinally within said yoke, and the angle-lever pivoted to the yoke, and having one arm engaging a shoulder on the latch-bolt and the other arm resting within the slotted hub, substantially as described, and for the purpose specified.

2. In a reversible latch, the yoke C, having two bearings, *b b*, for the round shaft of the latch-bolt, and a shouldered tenon, *a*, at its outer end, adapted to engage the bolt-head mortise in the face-plate, substantially as described, and for the purpose specified.

WILLIAM E. SPARKS.

Witnesses:

CHARLES PECK,

E. L. PRIOR.