W. F. & H. J. HALL.

REVERSIBLE LATCHES.

No. 195,270. Patented Sept. 18, 1877.

Fig. 1.

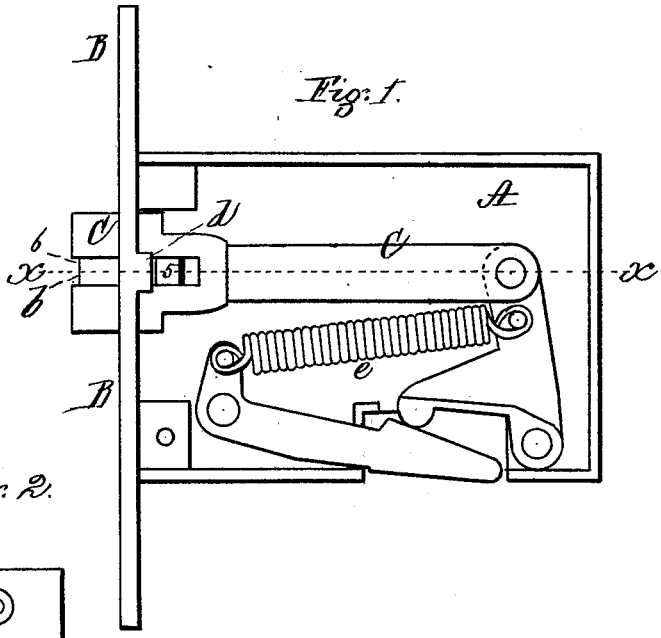


Fig. 2.

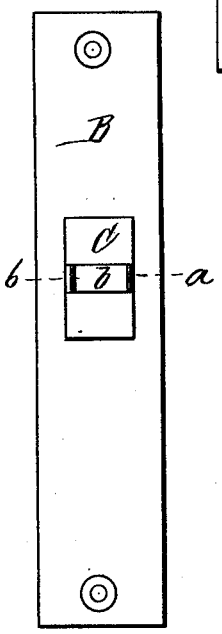


Fig. 3.

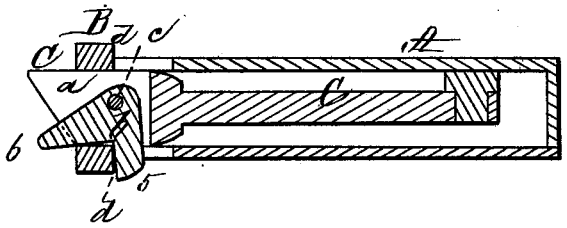
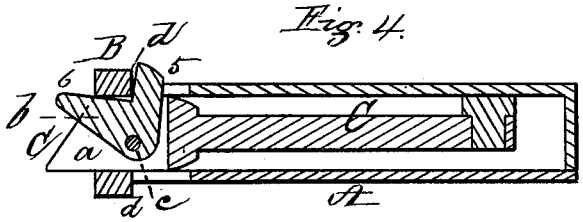


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM F. HALL AND HENRY J. HALL, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN REVERSIBLE LATCHES.

Specification forming part of Letters Patent No. **195,270**, dated September 18, 1877; application filed August 7, 1877.

To all whom it may concern:

Be it known that we, WILLIAM F. HALL and HENRY J. HALL, both of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Latches for Doors, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of the interior of a door-latch having our improvement applied thereto, the covering-plate being removed. Fig. 2 is an end elevation of the same. Fig. 3 is a horizontal longitudinal section on the line *x x* of Fig. 1. Fig. 4 is a similar section, but representing the latch-bolt reversed.

That class of door-latches in which the bolt is provided at its outer end with a lever, which is brought into contact with the striker, and forces back the bolt, do not admit of the latter being reversed to adapt the latch to right and left hand doors. Our invention has for its object to simplify and cheapen the construction of this class of latches, and at the same time render the bolt capable of being reversed for right and left hand doors; and our invention consists in a sliding latch-bolt, having its lever pivoted directly thereto instead of to the latch-case, in combination with two stops, one on each side of the case, either of these stops serving as a fulcrum for the lever according to the position of the latch-bolt, by which construction the latch-bolt and its lever are rendered reversible, as desired.

To enable others skilled in the art to understand and use our invention, we will proceed to describe the manner in which we have carried it out.

In the said drawings, A represents the casing, and B the face-plate of the latch. C is the sliding latch-bolt, to the rear of which is connected a lever mechanism of well-known construction, which will, therefore, not be described. The outer end of the bolt C is provided with an open slot, *a*, within which is placed a bent lever, *b*, of the form seen in Figs. 3 and 4, this lever being pivoted at its elbow directly to the bolt by a pin, *c*, the inner arm 5 being free, and resting directly against one of the two stops or projections *d d* on the inner surface of the face-plate B, these stops being located one on each side of the case A, and either of them serving as a fulcrum for the lever *b*, according as the latch-bolt is in position for a right or left hand door. This arm of the lever may, however, bear against a portion of the latch-case or any suitable stationary stop.

When the door is shut the end of the outer arm *b* of the lever comes into contact with the striker of the door-frame, by which the lever is pressed back, the inner end 5 of the lever bearing against the stop *d*, which serves as a fulcrum, and the bolt C is thus forced in by the lever *b* against the resistance of the spring *e*, to enable it to come into line with the opening in the striker, as desired. The pivoting of the lever directly to the bolt, in connection with the two stops *d d*, admits of the ready removal and reversal of the bolt, so as to adapt the latch to right and left hand doors, as seen in Figs. 3 and 4, which cannot be done where the lever is pivoted to the latch-case, as heretofore. Furthermore, our invention simplifies and reduces the cost of the construction, one pin being dispensed with, while the labor of fitting is also diminished.

We claim—

The lever *b*, pivoted directly to the sliding latch-bolt C, in combination with two stops, *d d*, located one on each side of the case A, either of which serves as a fulcrum for the lever, according to the position of the latch-bolt, whereby the latch-bolt and its lever are rendered reversible, substantially as described.

Witness our hands this 2d day of April, 1877.

WILLIAM F. HALL.
HENRY J. HALL.

In presence of—
P. E. TESCHEMACHER,
W. J. CAMBRIDGE.