(No Model.)

C. W. BULLARD.

LATCH.

No. 352,515. Patented Nov. 16, 1886.

FIG. 1.

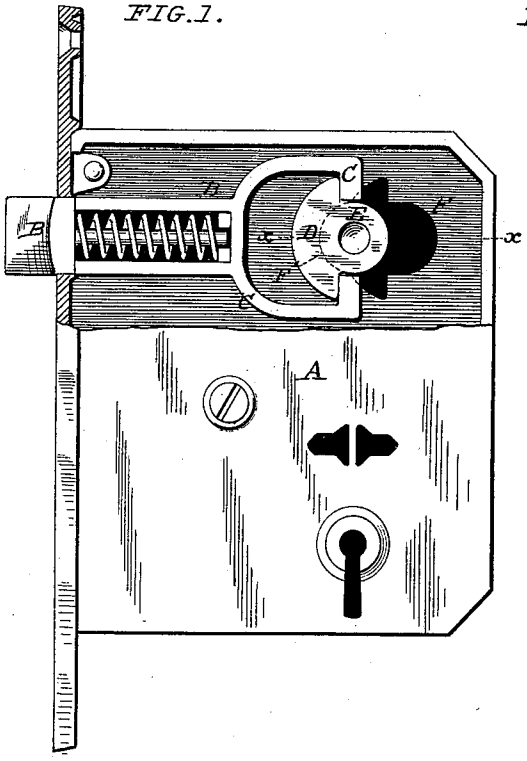


FIG. 2.

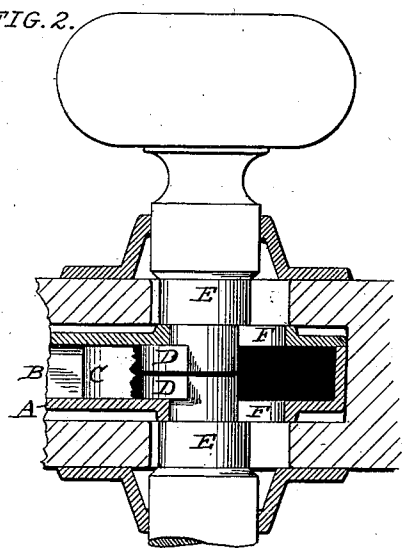


FIG. 3.

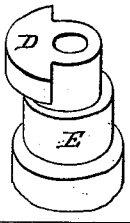


FIG. 5.

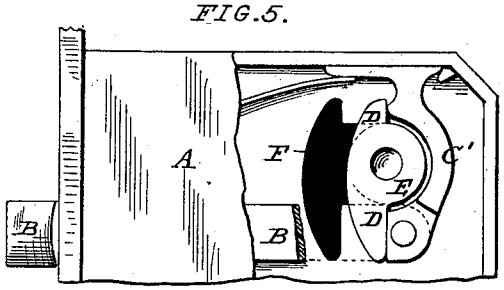


FIG. 4.

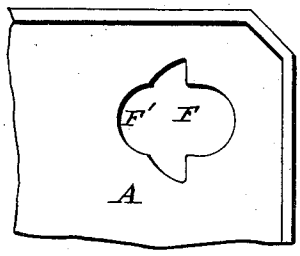
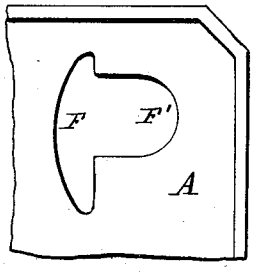


FIG. 6.



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UNITED STATES PATENT OFFICE.

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LATCH.

SPECIFICATION forming part of Letters Patent No. 352,515, dated November 16, 1886.

Application filed October 7, 1886. Serial No. 215,628. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. BULLARD, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Latches; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of a latch with parts of the case broken away to show the internal arrangement of parts; Fig. 2, a horizontal section of the same, the knob-spindles being shown in elevation; Fig. 3, a detail perspective view of the inner end of the knob-spindle; Fig. 4, a detail view of the latch-case, showing one form of the improved spindle-attaching orifice; Fig. 5, a detail view, similar to Fig. 1, of a modified construction of parts; and Fig. 6 a detail view of the latch-case, showing a modified form of the spindle-attaching orifice.

Similar letters of reference indicate like parts in the several views.

This invention relates to that class of reversible door-latches in which the yoke, or similar operative member of the spring latch-bolt, is directly operated by suitable cam projections on the knob-spindle.

The present improvement has for its object to provide a strong, simple, and efficient means for attaching the knob-spindles to the latch-case without the addition of any separate attaching parts.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to more fully describe its construction and mode of operation.

The latch-case A, with its horizontally-moving spring bolt or latch B, may be of any of the usual forms now in use, being formed either with an operating-yoke, C, as indicated in Fig. 1, or pivoted at the end of a vertically-arranged operating-lever, C′, as indicated in Fig. 5. Such yoke or lever is common to the two sets of operating-cam projections or lugs D at the inner ends of the independently-operating knob-shanks E, being of the required width to be engaged by both, so that a movement of either of said knob-shanks will operate such yoke or lever to retract the spring-bolt.

In the present improvement the main feature of novelty consists, in connection with substantially the above arrangement of parts, of means for attaching the knob-spindles to the latch-case. In this F is an opening or orifice in each side of the latch-case A, of a shape adapted to admit of the introduction or passage of the end of the knob-shank with its cam projections or lugs D into the interior of the case, and arranged in a horizontal plane a suitable distance forward, as indicated in Fig. 5, or to the rear, as indicated in Fig. 1, as desired, of the operating-axis of the knob-spindle when in use. F′ is a horizontal continuation of the vertically-elongated opening or orifice F, which extends to and has its end concentric with the operating-axis of the knob-shank in the latch-case, and is made of a diameter equal to that of the knob-shank outside of its cam projections D.

The mode of attachment with the above construction and arrangement of parts consists, simply, in introducing endwise the lugged ends of the knob shank into the interior of the case through the main orifice F, and then moving the shank horizontally in the horizontal continuation F′ of such orifice, so as to bring it to its proper operating-axis in the latch-case. This movement of the knob-spindle brings the cam projections or lugs D to a bearing against the inner face of the latch-case, as shown, to prevent a detachment of the parts, the usual knob-rose or combined rose and escutcheon supplying the means for holding the knob-shank from any lateral movement after the parts have been applied.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a door-latch, and with its rose, or combined rose and escutcheon, of the latch-case provided with an enlarged orifice of sufficient capacity to admit the lugged end of the knob-shank, and having a contracted horizontal continuation, F′, and the knob-shank E, provided with a projecting cam or lugs, D, the parts being adapted to engage

together in the manner essentially as herein described.

2. The combination, in a door-latch, and with its rose, or combined rose and escutcheon, of the latch-case provided with a vertically-elongated orifice, F, of a like configuration to the lugged end of the knob-shank and having a contracted horizontal continuation, F′, the end of which is concentric with the axis of the knob-spindle in use, and the knob-shank E, having projecting cam or lugs D, the parts being adapted to engage together in manner essentially as herein described.

In testimony whereof witness my hand this 2d day of October, 1886.

CHARLES W. BULLARD.

In presence of—
ROBERT BURNS,
JAMES H. GORMLEY.