(No Model.) 2 Sheets—Sheet 1.

C. W. MONROE.

LATCH.

No. 481,910. Patented Aug. 30, 1892.

Fig. 1.

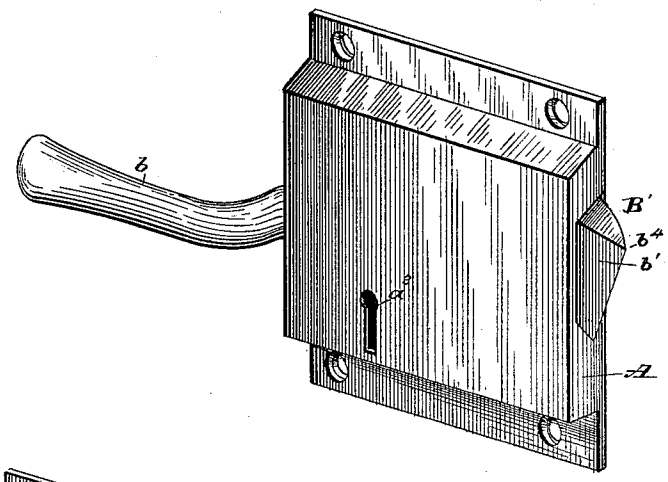


Fig. 2.

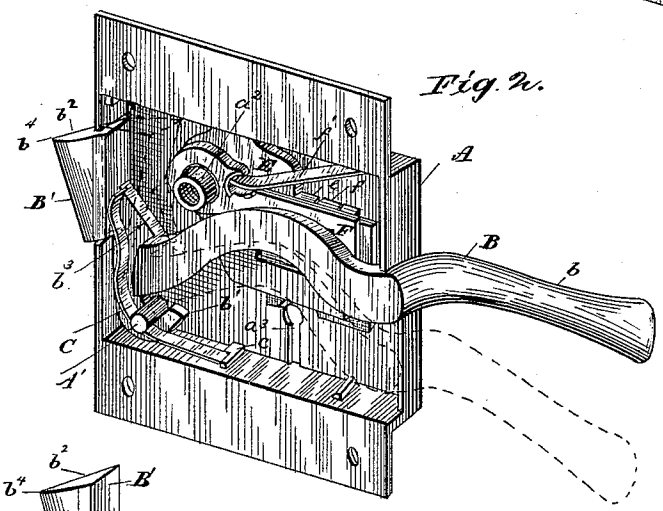
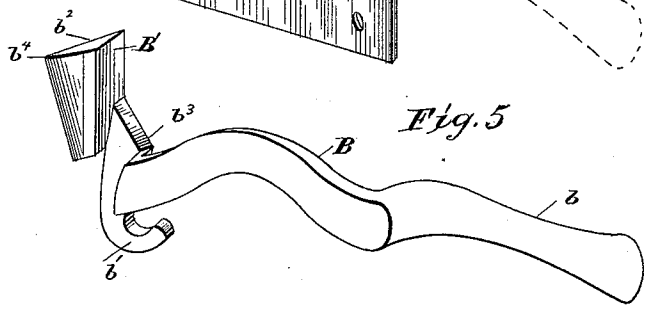


Fig. 5



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Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

C. W. MONROE.

LATCH.

No. 481,910. Patented Aug. 30, 1892.

Fig. 3.

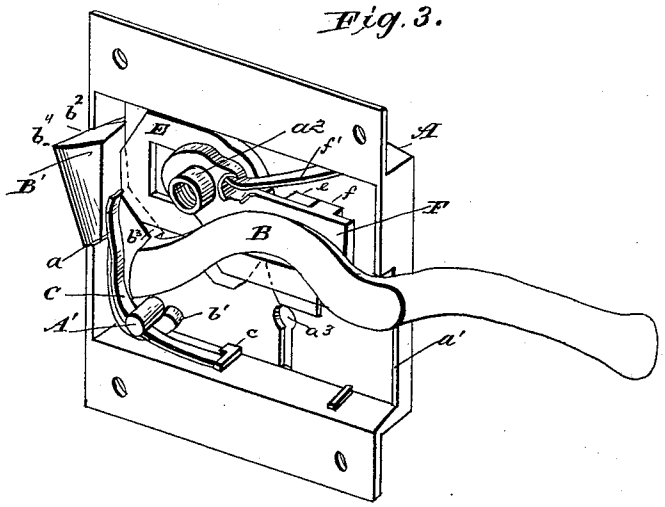


Fig. 4.

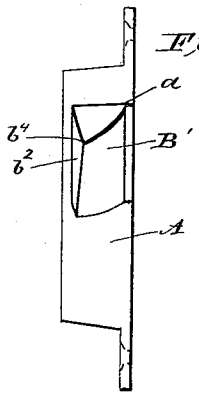


Fig. 6.

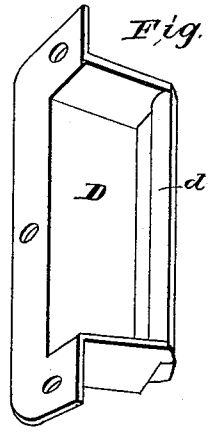
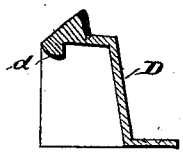


Fig. 7.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES W. MONROE, OF CLEVELAND, OHIO.

LATCH.

SPECIFICATION forming part of Letters Patent No. 481,910, dated August 30, 1892.

Application filed September 21, 1891. Serial No. 406,323. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. MONROE, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Latches, of which I hereby declare the following to be a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in latches, and is especially designed as an improvement upon Letters Patent No. 431,752, issued July 8, 1890, to William R. Monroe. It is adapted especially to refrigerator-doors or to doors in other situations when swollen by dampness or fitting tightly from any cause.

The objects of the invention are to produce a latch which while having increased leverage and wedging power will require no finish or surface work on its interior parts, will not project from the case when withdrawn from engagement with the keeper, (thus adapting it for use as a mortise-lock,) and will dispense with the open slot on the outer edge of the case.

My invention consists in the arrangement of the lever and locking device with the details of construction and combination of parts as are hereinafter described, shown in the accompanying drawings, and more specifically pointed out in the claims.

In the drawings, Figure 1 is a perspective view of the latch, showing exterior of case. Fig. 2 is a similar view of the interior, the back plate being removed and the lock withdrawn. Fig. 3 is a similar view with the lock set to prevent withdrawing the latch. Fig. 4 is an end view of the latch. Fig. 5 is a detached view of the latch and lever. Fig. 6 is a detail view of the keeper, showing the conformation of the lip or thickened edge; and Fig. 7 is a cross-section of the same.

In the patented invention referred to the lever is pivoted nearly centrally in the lock and is drilled and finished to fit nicely over the tumblers supported upon the same pivot. To avoid this unnecessary expense, and at the same time give greater power to the lever and a horizontal movement to the latch, the latch is pivoted in the outer corner of the case in the manner shown.

In the drawings, A is the case; a and a', openings for the projecting latch and handle, respectively. A′ is a lug cast in the interior of the case as a pivot for the latch-lever. a^2 is the lug supporting the lock-tumblers, and a^3 the keyhole. B is the latch-lever; B′, the beveled head of the latch; b, the handle; b', the pivot-hook; b^2, the inclined base of the latch; b^3, the locking-shoulder; b^4, the projecting point of the latch. C is a spring which has the double function of retaining the latch when thrown out and of forcing the hook b' against the corner of the case upon which it bears while playing around the pivot A′. This construction requires no finishing of the parts, since the hook b' can be readily slipped over the lug A′ and does not require to be drilled or milled to fit smoothly. c is a small lug against which the spring C rests to give it security. D is the keeper, which is provided with a thickened and beveled upper edge d. The bevel on this keeper is preferably made rounding, as shown in section. It will be seen that the upper edge of the latch projects farther than the lower one, thus giving an entering-point to the wedge, the face b^2 being beveled slightly, as shown in Fig. 4.

The advantage of this form of latch is increased penetration given to the wedge, the point entering first behind the keeper and assisting the continuous pressure of the spring. When unusual power is required to close the door, the handle b may be lifted by hand to force the wedge in place and draw the parts together. An especial advantage gained is that with doors so swollen as to prevent their being tightly closed the projecting wedge of the latch will bear at some point upon the edge of the keeper and so secure the door from opening, while when fully inserted it will obtain a full bearing across its entire face. The increased leverage gained by the angular shape of the lever and the quick withdrawal of the latch when the handle is depressed will be seen in Figs. 2 and 3, the second position being shown in dotted lines in Fig. 2.

The lock and tumbler are shown in two positions in Figs. 2 and 3, E being the locking-bolt and F the tumbler, both being supported from the lug a^2. In operation, the key being passed into the hole a^3, the tumbler is lifted

and the lug f raised above the lug e, while the lock is pushed forward until it bears against the locking-shoulder b^3 and back of latch B′. When the tumbler is lowered, the lug e is dropped behind the lug f, thus rigidly fastening the latch and lever in their horizontal position. The slot a', in which the handle moves, is necessarily long enough to give the necessary play.

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

1. The combination of a latch-case A, provided with a short latch-opening on one edge and a slotted opening on the opposite side and an interior corner lug A′, a latch-bolt extending through the openings in the case on either side, one extremity being beveled to form a latch, the other forming a handle and the central portion forming approximately a right angle and provided with hook b', substantially as described.

2. A case provided with long and short openings a and a' and a corner lug A′, in combination with the angular latch-bolt B, extending through the openings in said case and provided with the long and short extensions B′ and b and hook b', and a shoulder b^3 and locking-bolt E, with the corner spring C, substantially as described.

3. The combination of a case provided with long and short side openings and a corner lug integral with the case, a latch-bolt pivotally connected with the corner lug and provided with long and short extensions arranged to meet angularly at the pivoted point, and a hook b', a beveled latch-head on the short extension, the said beveled head being cut away at its lower portion to form a pointed wedge, substantially as set forth.

CHARLES W. MONROE.

Witnesses:
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