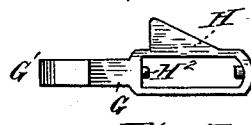
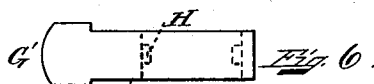
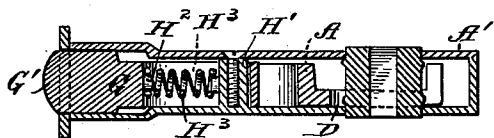
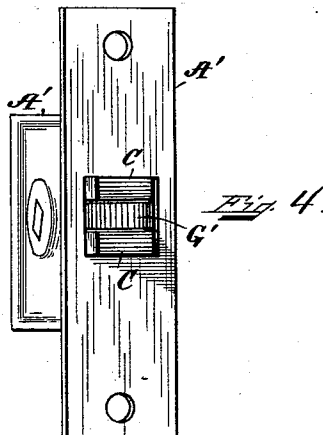
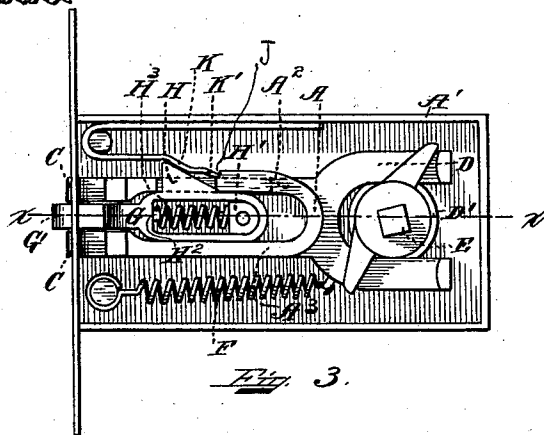
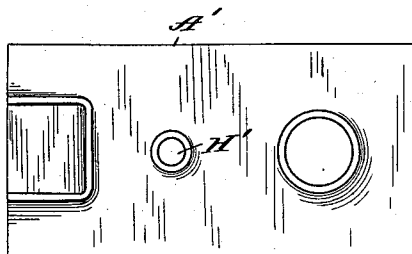
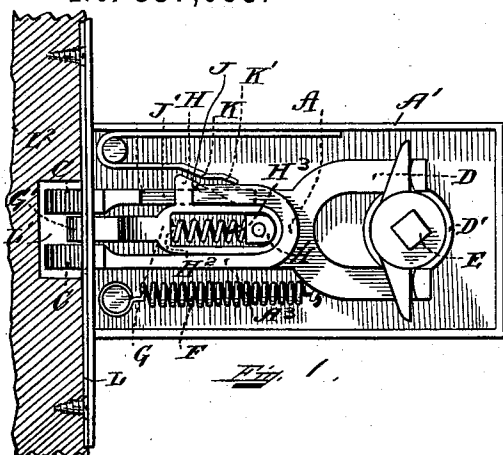


(No Model.)

A. A. MANDELL.
LATCH.

No. 537,055.

Patented Apr. 9, 1895.



Witnesses:
E. L. Karlow.
L. H. Brown

Inventor:
Albert A. Mandell
By J. S. Rust
Atty

UNITED STATES PATENT OFFICE.

ALBERT A. MANDELL, OF HYDE PARK, MASSACHUSETTS.

LATCH.

SPECIFICATION forming part of Letters Patent No. 537,055, dated April 9, 1895.

Application filed October 26, 1894. Serial No. 527,023. (No model.)

To all whom it may concern:

Be it known that I, ALBERT A. MANDELL, of Hyde Park, county of Norfolk, and State of Massachusetts, have invented new and useful Improvements in Latches; and I hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved device by which the latch bolt is locked automatically in its retracted position when the door is open, and automatically released when the door is closed, so that when the door is open the sharp end of the latch is withdrawn and the tearing of clothes and other disagreeable results are not produced, as when the sharp end of the latch is left protruding beyond the door frame when the door is open.

My invention consists of certain novel features, arrangements and combinations hereinafter described and particularly pointed out in the claims.

In the accompanying drawings which form a part of this application—Figure 1 is a side view of the lock with one side of the casing removed. Fig. 2 is an inner view of the far side of the casing with the mechanism removed. Fig. 3 is a side view of the lock with the casing removed and showing the position of the parts when the latch bolt is locked in its retracted position. Fig. 4 is a perspective view of the lock with the parts in position shown in Fig. 3. Fig. 5 is a horizontal section through Fig. 3 on line *xx*. Figs. 6 and 7 represent respectively side views of the locking mechanism taken at right angles to each other.

Like letters of reference refer to like parts throughout the several views.

The sliding latch bolt A within the casing A' is provided with the usual beveled head C at the outer end, and at the opposite end with the fork D, and on the shoulders of the ends of the prongs of the fork the arms of the nut D', mounted on the knob spindle E, act. The latch bolt A is constructed with two opposite arms A², A³, which extend from the fork D forwardly, and out through the front end of the latch casing, and each arm is provided with the usual beveled forward end C.

A spring F is provided for throwing forwardly the latch bolt A. Between the arms A² and A³ of the latch bolt A there is arranged a releasing device G having a forwardly rounded end G' located between the forward beveled ends C of the latch bolt A, and said releasing device is arranged between the arms A² and A³ and has on its upper side a cam H, and its rear end passes around a stud H' against which and against the pin H² a spring H³ exerts its tension to throw said releasing device G out through the front end of the latch case. In the upper arm A² there is cut the slot J' in which the cam H is located in the reciprocation of the latch bolt.

A flat spring K is arranged in the upper part of the casing and one end K' bears on the top of the piece A² in the normal position of the parts, as shown in Fig. 1. When, however, the knob is turned the arms of the nut D' act on the shoulders of the fork D and draw inwardly the latch bolt A, as shown in Fig. 3, and in this position the end K' of the spring K slips under the forward end J of the piece A² of the casing A and locks said latch bolt in its retracted position, as shown in Fig. 3. While the door is open the parts remain in this position, but in moving the door to close it the end G' of the releasing device G strikes the keeper L secured to the door-jamb and moves inwardly the releasing device G against the tension of the spring H³, and the cam H in the rearward movement of the releasing device G lifts the end K' of the spring K from its locked position with the piece A² and the latch bolt, under the tension of the spring F, is thrown outwardly into the recess L' in the door-jamb L² under the keeper L and thus holds the door closed.

It will be seen from the above that my device is simple and cheap in construction and provides an efficient means for locking the latch bolt out of its protruding position, when the door is open, but when the door is closed the latch bolt passes into the keeper and holds the said door closed.

I do not limit myself to the exact arrangement and construction shown as the same may be varied without departing from the spirit of my invention.

Having thus ascertained the nature and set

forth the construction of my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination in a latch case, of a sliding latch bolt having a rear forked end located around the knob spindle and adapted to be actuated thereby, and at its front end provided with two arms, a locking device for retaining said bolt within the case when the door is opened, and a releasing device located between said arms and extending outwardly between the beveled ends thereof and adapted when actuated by contact with the keeper to release said locking device as the door is closed.

2. The combination in a latch case, of a sliding latch bolt having a rear forked end located around the knob spindle and adapted

to be actuated thereby, and at its front end provided with two arms, a spring for locking said bolt within the case when the door is opened, and a releasing device located between said arms and extending outwardly between the beveled ends thereof and provided with a cam adapted to release said spring upon the contacting of the forward end of said releasing device with the keeper as the door is closed.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 22d day of October, 1894.

ALBERT A. MANDELL.

Witnesses:

S. H. GROW,
E. L. HARLOW.