(No Model.)

M. M. HENRY.

CATCH FOR LATCH BOLTS.

No. 265,925. Patented Oct. 10, 1882.

Fig. 1.

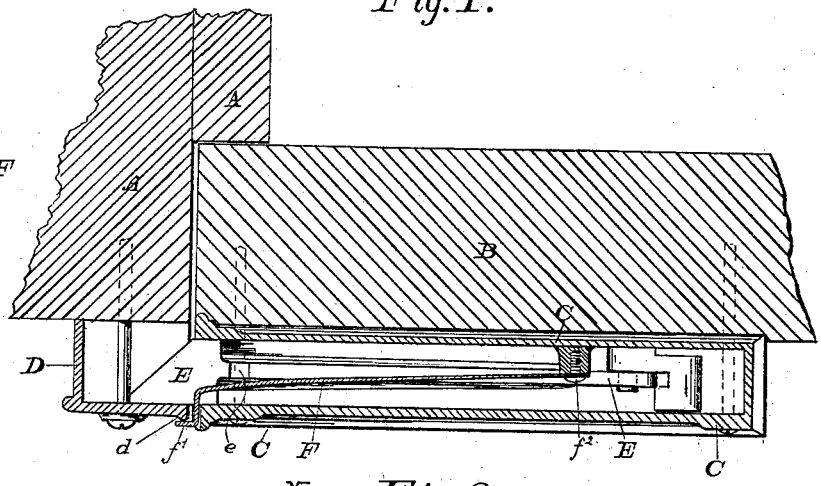


Fig. 6.

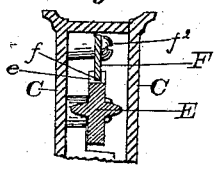


Fig. 2.

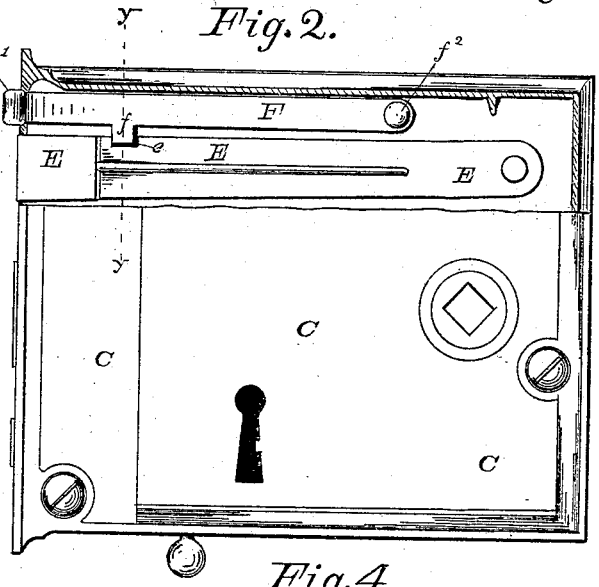


Fig. 3.

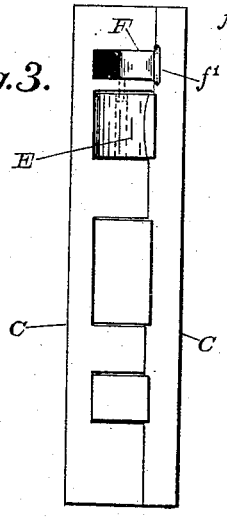


Fig. 4

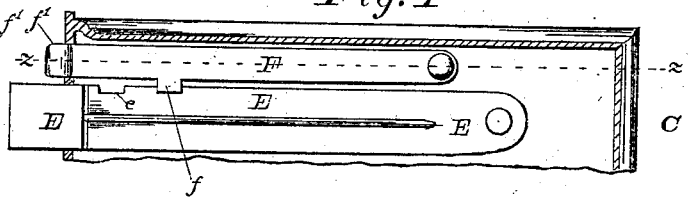
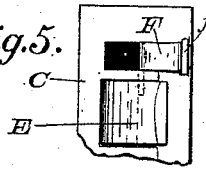


Fig. 5.



WITNESSES.

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MARTIN M. HENRY, OF LADOGA, INDIANA.

CATCH FOR LATCH-BOLTS.

SPECIFICATION forming part of Letters Patent No. 265,925, dated October 10, 1882.

Application filed February 28, 1882. (No model.)

To all whom it may concern:

Be it known that I, MARTIN M. HENRY, of the town of Ladoga, county of Montgomery, and State of Indiana, have invented certain new and useful Improvements in Catches for Latch-Bolts, of which the following is a specification.

My said invention consists of certain improvements in the construction and arrangement of parts of that class of latches the bolts of which are retained within the casing by a spring-catch until the door is shut, when said catch is disengaged by the contact of a projection thereon with the latch-strike or door-casing, permitting the latch-bolt to fly forward and latch the door. I am aware that this result has before been accomplished, but by more expensive and less reliable means. I do not therefore desire to be understood as claiming all forms of mechanism for the purpose, but only those which are hereinafter particularly described and claimed as new.

In the example shown the latch-bolt is an ordinary reciprocating bolt of a kind common in ordinary door-locks, (in connection with one of which this invention is illustrated,) and the spring is an ordinary flat spring secured inside the lock alongside the latch-bolt, in such relation that a projection thereon will engage with a notch in the bolt when the latter is forced back and the former is in normal position. A continuation of the same spring passes through a slot in the latch-plate by the side of the bolt, and is so adjusted as to come against the strike immediately after the bolt has passed it, whereby the projection on the spring is pushed out of the notch in the bolt, thus letting the bolt pass out to secure the door.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a horizontal section of a door-lock, the lock-strike, and so much of the door and door-casing as form a support for the same, on the dotted line *z z;* Fig. 2, a plan view of the lock, so much of the top plate being broken away as to show the latch-bolt and spring, and said bolt being held back by said spring; Fig. 3, a front elevation of the lock when the parts are in the position shown in Fig. 2; Fig. 4, a view similar to the upper portion of Fig. 2, except that the latch-bolt is released from the spring and projects from the front edge of the lock. Fig. 5 bears the same relation to Fig. 4 that Fig. 3 does to Fig. 2, and Fig. 6 is a detail cross-section of the latch and spring on the dotted line *y y.*

In said drawings, the portions marked A represent the door-casing; B, the door; C, the lock-casing; D, the lock-strike; E, the latch-bolt, and F the spring, which, or its equivalent, forms the essential feature of my invention.

The door-casing A, door B, lock-casing C, and strike D are or may be of any ordinary or approved form, and need no special description.

The latch-bolt E is or may be in itself the ordinary latch-bolt common to most forms of door-locks, and is commonly actuated by a spring within the lock to assume and remain in the position shown in Figs. 1, 4, and 5 when not forcibly pressed back. When forced back by any means (as by the turning of the door-handle) it assumes the position shown in Figs. 2 and 3, and is so held by the detent *f* on the spring F, which enters the notch *e*, and there remains until forcibly moved from its position by the end *f'* thereof coming in contact with the lock-strike D as the door is closed.

The spring F is a flat spring rigidly secured at its rear end by a screw, f^2, to the inside of the lock. It is provided at the proper point with the projection *f*, which is adapted to engage with the notch *e* in the latch-bolt, and thus hold said bolt in the position shown in Figs. 2 and 3. When this spring is pressed sidewise it throws the projection *f* out of the notch *e* and permits the latch-bolt to move forward, it being impelled by the spring in the lock by which this movement is ordinarily secured.

The operation of my said invention may be recapitulated as follows: The door being latched in the ordinary manner, it is opened by turning the knob, which throws the latch-bolt back, when the projection on the spring catches in the notch in said latch-bolt and holds said bolt back inside the lock-casing until such engagement is displaced. When the door is shut the arrangement is such that the latch-bolt first passes the outer casing of the strike D, so as to be enabled to catch thereunder. The projection *f'* on the spring F then comes in contact with the outside of said strike, throwing the projection *f* out of the notch *e* and allowing

the bolt E to move forward and engage with said strike and hold the door closed in the usual manner.

It will be readily seen that by this means all the noise, friction, and wear incident to the contact of the latch-bolt and latch-strike as commonly used, and the consequent loosening and breakage of parts, are avoided.

It will also be seen, especially by an examination of Fig. 1, that the latch-bolt and the spring clamp the edge *d* of the strike D firmly between them, and thus secure the door against shaking and rattling, notwithstanding that it may be loosely fitted.

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

The combination, with the bolt E, having notch *e* in its side, of the straight flat spring F, arranged alongside said bolt, and provided with the lateral projection *f*, which is adapted to enter the notch *e*, and a turned-up portion or projection, *f'*, on its front end, which is adapted to come in contact with the strike on the door-casing, all substantially as shown and described, and for the purposes specified.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 24th day of February, A. D. 1882.

MARTIN M. HENRY. [L. S.]

In presence of—
C. BRADFORD,
C. L. THURBER.