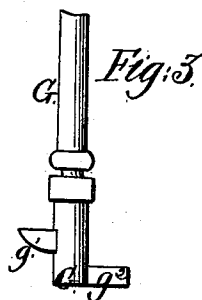
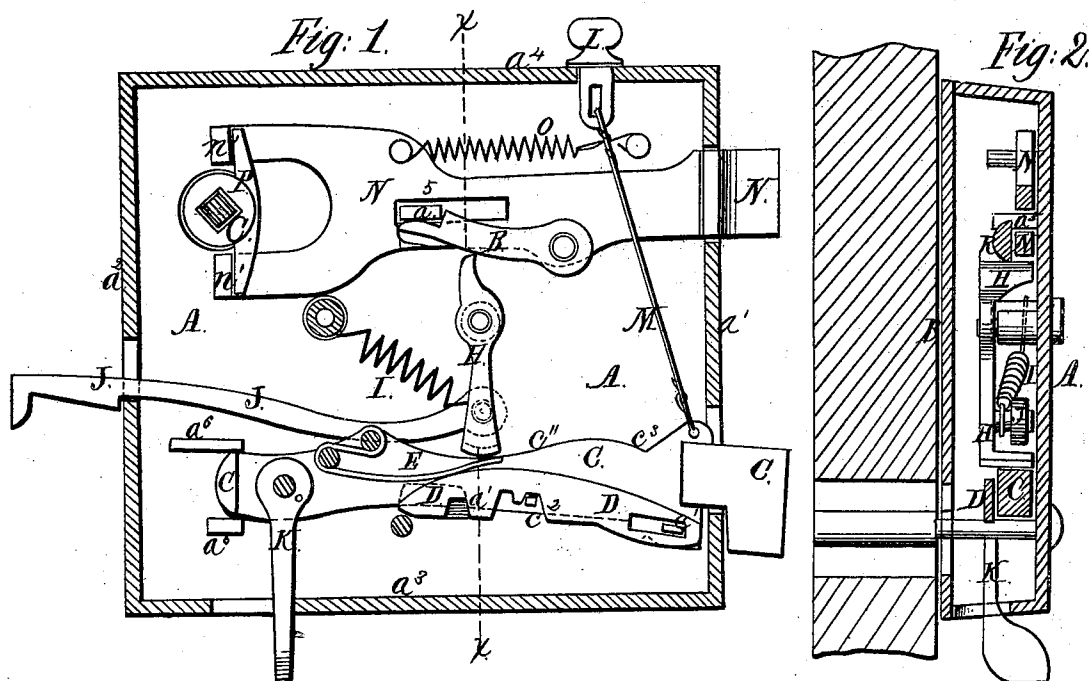


D. V. Miller,

Door Lock.

No. 89,161.

Patented Apr. 20, 1869.



Witnesses:

A. W. Almqvist
Anna Morgan

Inventor:
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per *Wm. C. Smith*
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United States Patent Office.

DARWIN V. MILLER, OF WEEDSPORT, NEW YORK, ASSIGNOR TO HIMSELF AND JAMES KEIRNAN, OF THE SAME PLACE.

Letters Patent No. 89,161, dated April 20, 1869.

IMPROVEMENT IN DOOR-LOCKS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DARWIN V. MILLER, of Weedsport, in the county of Cayuga, and State of New York, have invented a new and useful Improvement in Combined Bolt and Lock; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a detail view of my improved bolt and lock, the inner plate being removed.

Figure 2 is a detail sectional view of the same, taken through the line *x x*, fig. 1.

Figure 3 represents the operating part of the key.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved bolt and lock, which may be used either with or without a key, and which shall be simple in construction, easily operated, and, at the same time, burglar-proof; and

It consists in the construction and combination of the various parts of the lock, as hereinafter more fully described.

A is the outer, and B is the inner plate of the lock, which are constructed in the ordinary manner.

C is the sliding bolt, the rear end of which is kept in proper position while moving back and forth, by guides *a'*, formed upon or attached to the plate A.

Upon the lower edge of the forward part of the bolt C, is formed a notch, in such a position that when the bolt is pushed fully out, it may drop down upon the end plate *a'* of the lock-case, as shown in fig. 1, and when in this position, the said bolt cannot be forced back with the key, and can only be drawn back by manipulating the lock, in the manner hereinafter described.

This dropping down of the bolt C is only used when the lock is to be used exclusively as a bolt, and without a key.

When the lock is to be operated with a key, the guard-bar D is connected with the bolt C.

The bar D has a longitudinal slot formed in its forward part, which receives a stop, *c'*, formed upon or attached to the bolt C.

The forward and backward movement of the bar D is limited by a projection, *c''*, formed upon or attached to the bolt C, and which enters notches formed upon the lower edge of the middle part of the said bar D.

The rear or inner end of the bar D is held down to its place by the spring E, attached to the bolt C, and the free end of which rests against the upper edge of the rear part of the said bar D.

In operating the lock with the key G, when the key is pushed into the lock, the inclined lower edge of the ward *g'* enters an inclined notch *d'*, formed in the lower edge of the guard-bar D, and pushes said bar back from the stop *c'*; then, as the key is turned, the guard-

bar D is pushed forward, covering the notch in the lower edge of the bolt C.

As the key G is turned still further, the ward *g''* enters a recess in the lower edge of the bolt C, and pushes said bolt forward. In unlocking the bolt C, this process is reversed, the ward *g''* first drawing the bolt C back and the ward *g'* then operating upon the guard-bar D, drawing it back to its former position.

H is a lever, pivoted to a projection formed upon or attached to the plate A, and which is made in about the shape shown in figs. 1 and 2.

The lower end of the lever H is held down against the upper edge of the bolt C by the spring I, one end of which is connected with the said lever, and the other end of which is connected with a projection formed upon or attached to the plate A.

When the bolt C is to be operated by the key G, the lower end of the lever H rests on the curve *c'*, formed in the forward part of the upper edge of the bolt C, so as not to interfere with the movement of the said bolt C. But when the lock is used without the key, and the bolt C drops down into the position shown in fig. 1, the lower end of the lever H moves into the curve *c'*, formed in the upper edge of the bolt C, and takes the position shown in fig. 1, so that the bolt C cannot be drawn back until the lever H is moved from its position.

J is a bar passing in through a slot in the rear end plate *a''* of the lock-case, and the forward end of which is pivoted to the lower end of the lever H, so that by operating the bar J, the lever H may be raised from the bolt C, allowing said bolt to be operated.

Upon the outer end of the bar J is formed a knob, or thumb-piece for convenience in operating it.

A notch is formed upon the lower edge of the outer part of the bar J, which catches upon the edge of the end plate *a''*, so that the said bar cannot be pushed in without first slightly raising it.

K is an arm, the upper end of which is connected with the bolt C, either loosely or rigidly, as may be desired, and which passes out through a slot in the lower edge of the plate *a''* of the lock-case.

The lower or projecting end of the arm K is formed with a knob or thumb-piece, for convenience in drawing the bolt C back or pushing it forward.

L is a knob or thumb-piece, the stem of which passes through a slot, or hole in the top edge-plate *a'* of the lock-case, and which is connected with the forward end of the sliding bolt C, by the rod or bar M, so that when the lever H has been pushed away from the bolt C by operating the bar J, the said bolt C may be raised, allowing it to be drawn back by operating the arm K.

N is the catch-bolt, which is drawn forward by the spring O, and which is drawn back by the armed cylinder P, operated by the knob stem Q, and operating upon projections *n'*, upon the rear end of the catch-bolt N.

The bolt N is kept in proper position while moving back and forth by the projection, or stop-pin a^2 , formed upon or attached to the plate A, and which passes through a slot in the said bolt N.

R is a bar, or lever, the forward end of which is pivoted to the catch-bolt N, and upon the rear end of which is formed a notch, or shoulder, in such a position that when the bolt N is drawn forward, and the bar R raised, the said notch, or shoulder may catch upon the stop a^3 , and securely lock the said bolt N.

The bar R is raised to lock the bolt N, by the upper end of the lever H at the same time, and by the same movement by which the bolt C is locked by said lever, as shown in fig. 1.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The combination of the notched sliding bolt C,

lever H, spring I, bar J, arm K, rod M, and knob L, with each other, substantially as herein shown and described, and for the purpose set forth.

2. The notched sliding guard-bar D, in combination with the key G and notched sliding bolt C, as and for the purpose herein shown and described.

3. The notched sliding guard-bar D, in combination with the notched sliding bolt C, substantially as herein shown and described, for the purpose specified.

4. The bar R, constructed as described, in combination with the bolt N, stop a^3 , and spring lever H, arranged and operating as described, for the purpose specified.

DARWIN V. MILLER.

Witnesses:

HENRY R. FILLEY,
PETER D. HAMILTON.