

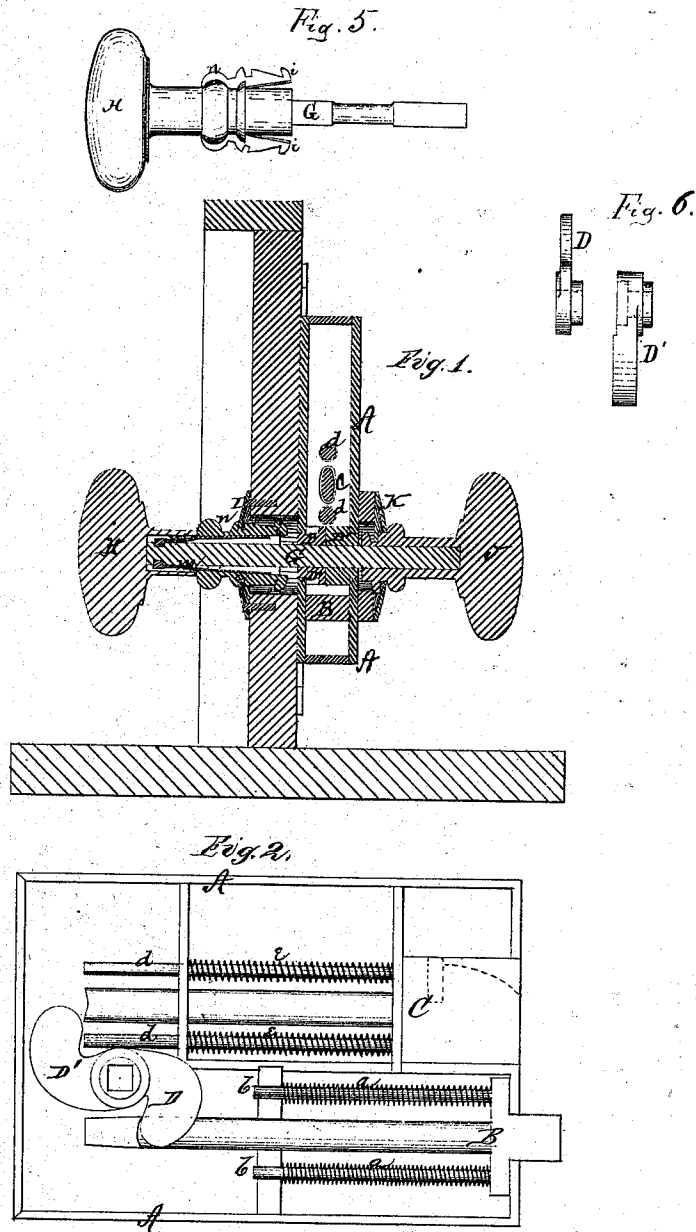
J. Davis,

2. Sheets, Sheet 1.

Latch.

No. 104,712.

Patented June 28, 1870.



Witnesses  
Jno. A. Ellis  
J. White

Inventor  
Jno. Davis  
Per  
J. H. Alexander  
Att'y

J. Davis,

2. Sheets, Sheet 2.

Latch.

No. 104,712.

Patented June 28, 1870

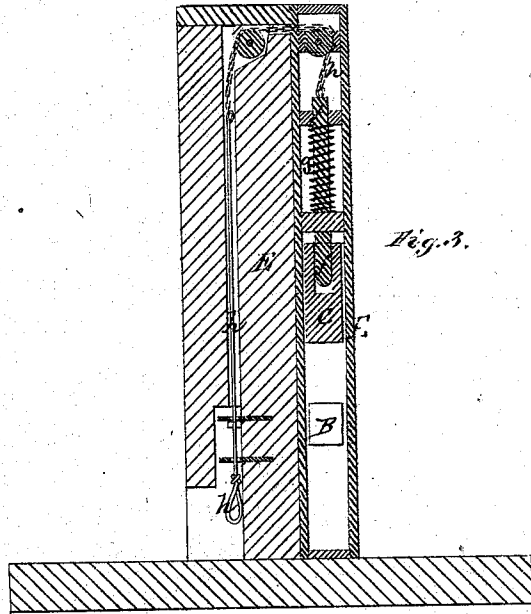


Fig. 3.

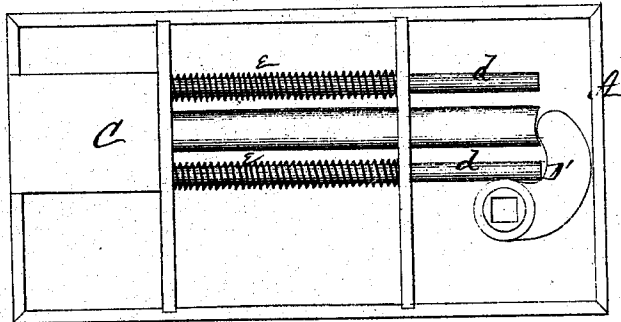


Fig. 4.

Witnesses  
Jno A. Ellis,  
J. White

Inventor  
Jno. Davis.  
By  
J. H. Alexander  
Att'y

# United States Patent Office.

JOHN DAVIS, OF TERRE HAUTE, INDIANA.

Letters Patent No. 104,712, dated June 28, 1870.

## IMPROVEMENT IN KNOB-LATCHES.

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, JOHN DAVIS, of Terre Haute, in the county of Terre Haute, and State of Indiana, have invented certain new and useful Improvements in Locks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a door-lock, where both the latch and bolt are operated by the same spindle, as will be hereinafter fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a transverse vertical section of a door, with my lock attached;

Figure 2 is an inside view of the lock;

Figure 3 is a transverse vertical section of the door-frame, showing the manner of securing the bolt of the lock;

Figure 4 is an inside view of a lock and bolt alone, showing its application to left-hand doors;

Figure 5 is a side view of the door-spindle; and

Figure 6 is a detached view of the tumblers of the lock.

A represents the lock-box, in which is placed the latch B, pressed outward by means of two spiral springs, *a a*, surrounding two rods, *b b*, attached to the latch within the box.

Above the latch B, in the lock-box A, is placed a bolt, C, which is pressed inward by means of two spiral springs, *e e*, surrounding two rods, *d d*, attached to the bolt.

It is, of course, understood that the latch B, as well as the bolt C, with their rods, move in suitable guides formed in the inside of the lock-box.

The latch and bolt are operated by means of two cam-shaped tumblers, D D', the one, D, catching on a projection on the inner end of the latch, to draw the same inward, and the other tumbler, D', pressing on the inner end of the bolt, to force it outward.

Within the door-frame E, above where the bolt C enters, is placed a vertically-operating bolt, *f*, surrounded by a spiral spring, *g*, which forces the bolt downward.

In the upper edge of the bolt C is a hole, for the reception of said bolt *f*, and from this hole to the outer edge of the bolt C is a curved groove, as shown in dotted lines in fig. 2, so that, when the bolt C is forced outward in the door-frame, the bolt *f* will be moved upward by this curved or inclined groove, and, as soon as the bolt *f* reaches the hole in the bolt C, the spring *g* forces it into said hole, holding or locking it.

From the upper end of the bolt *f* a cord, *h*, leads to the inside of the door-frame, or to any other de-

sired place in the house, and, by pulling on said cord, the bolt *f* is raised up out of the bolt C, and the springs *e e* at once throw the bolt back again.

The door-spindle G is square at both ends, but round in the center, and provided with two springs, *m m*, at its inner end, to which springs are attached pieces *n n*, the inner ends of which correspond with the formation of the inner knob H, and the outer ends provided with catches *i i*, as shown in fig. 1.

The knob H is slotted, for the insertion of the spindle G, with its spring pieces *n n*, and on the inside of the door is a rose, I, into which the end of the knob is inserted, and the inner edge of said rose fits in notches on the pieces *n n*, so as to hold it in place.

The spindle passes through both tumblers D and D', and is so arranged that the round portion will be within the tumbler D', while the square portion is within the tumbler D.

On the outside end of the spindle G is placed another knob, J, which is, by screw-threads or other suitable means, held to the rose K, on the outside of the door, preventing it from coming out, but allowing the spindle to be withdrawn from it from the inside.

The lock, being in this position, it will be seen that, by turning the knob only, the tumbler D is operated, which actuates the latch.

To lock the door, press on the spring pieces *n n*, and withdraw the knob H, with the spindle, until the catches *i i* catch in the rose I, when the round portion of the spindle will be within the tumbler D, and the tumbler D' have the outer square portion through it, so that, by turning the knob again, the bolt C will be forced into the door-frame, and be locked by the bolt *f*, when the knob and spindle are pressed inward back again to their former position.

To unlock, it will then only be necessary to pull on the cord *h*, as above set forth.

The locality of this cord or wire should be a secret to the inmates of the house.

The bolt C may be placed below the latch B, as well as above, and the lock be used on both right and left-hand doors.

Having thus fully described my invention,

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

1. The spring pieces *n n*, provided with catches *i i*, and attached to the spindle G, substantially for the purposes herein set forth.

2. The combination of the spindle G, tumblers D D', latch B, bolt C, and bolt *f*, all constructed and arranged as described, to operate substantially in the manner and for the purposes herein set forth.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

JOHN DAVIS.

Witnesses:

WILLIAM A. NICHOLS,  
L. B. DENEPIE.