(Model.)

A. HITT.

KNOB LOCK.

No. 354,472. Patented Dec. 14, 1886.

Fig. 1.

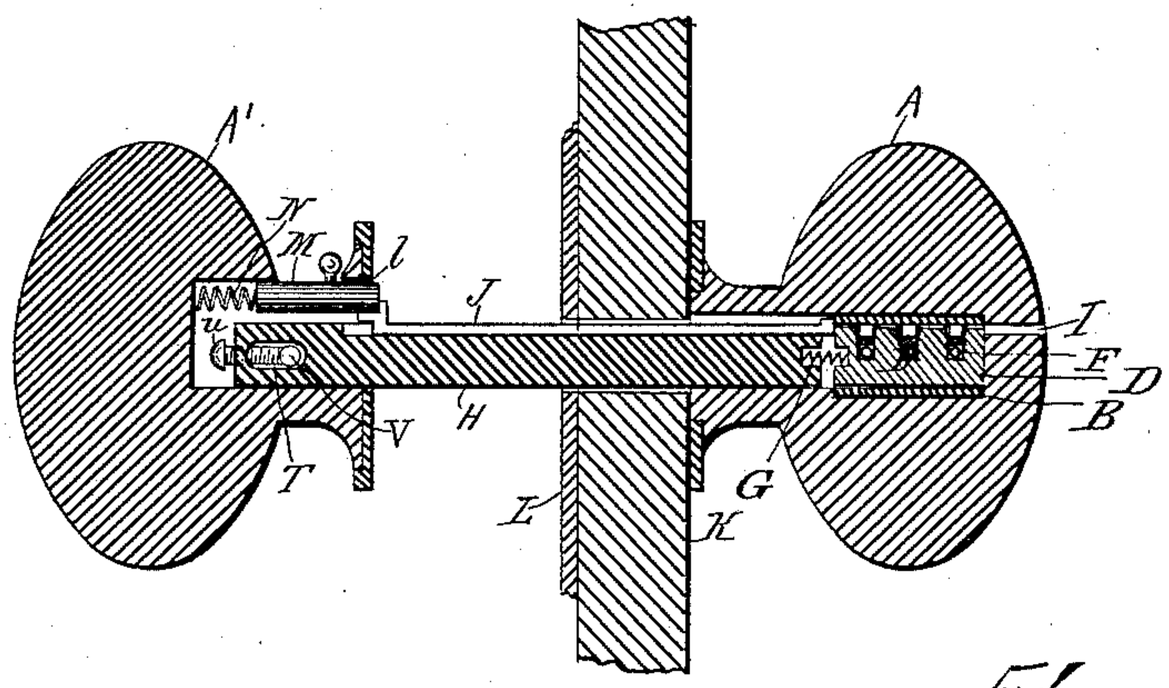


Fig. 4.

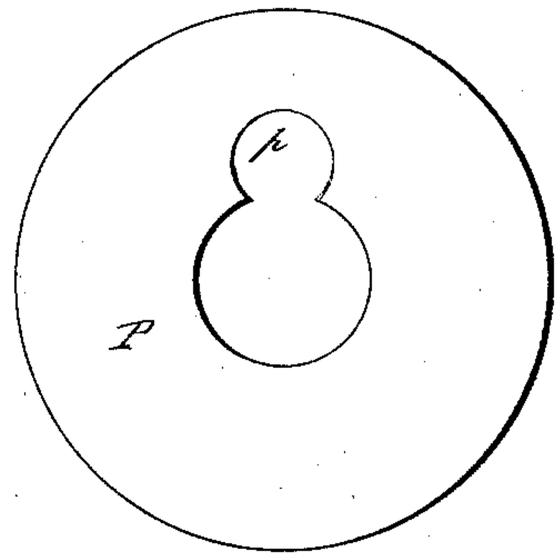


Fig. 3.

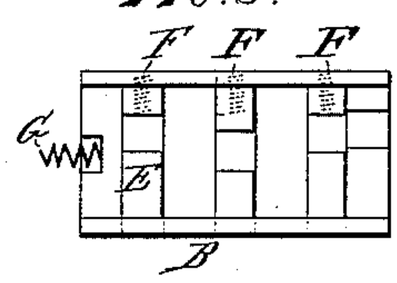


Fig. 2

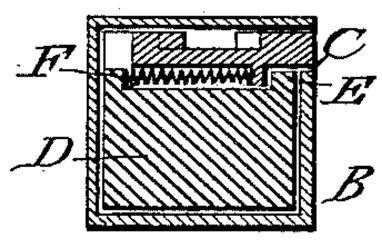
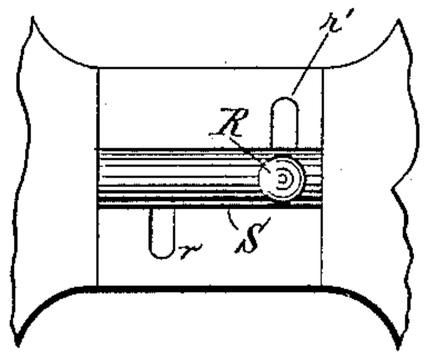


Fig. 5.



Witnesses:
John Buechler,
Wm. H. Weightman

Inventor:
A. Hitt.
By A. M. Pierce.
Attorney.

UNITED STATES PATENT OFFICE.

ADRIAN HITT, OF JERSEY CITY, NEW JERSEY, ASSIGNOR OF ONE HALF TO LUCIUS T. EVERETT, OF SAME PLACE.

KNOB-LOCK.

SPECIFICATION forming part of Letters Patent No. 354,472, dated December 14, 1886.

Application filed January 25, 1886. Serial No. 189,553. (Model.)

To all whom it may concern:

Be it known that I, ADRIAN HITT, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Knob-Locks, of which the following is a specification.

My invention relates especially to door-locks, and has for its object the provision of devices whereby any style of lock may be constituted a spring-lock, and can only be unlocked from the interior of the house or apartment by a special key operating a bolt within the knob.

To attain the desired end my invention consists, essentially, in a knob wherein is secured a bolt to be manipulated by means of a key entering a hole in said knob. Passing along the spindle to the knob upon the opposite extremity thereof is a connecting-bar, so arranged as to engage with a spring-bolt fitting into a recess in the inner knob and engaging when shot with a perforation in the shell of a rim-lock or with a notch or perforation in the rose, where the device is used with a mortise-lock. The spring-bolt is provided with an operating projection for securing the latch-bolt against all movement, simply locking it or permitting the free movement of both the knobs, as occasion may require; and my invention also involves certain other novel and useful combinations or arrangements of parts, and peculiarities of construction and operation, all of which will be hereinafter first fully described, and then pointed out in the claims.

In the drawings, Figure 1 is a vertical sectional view of my device, showing the arrangement and location of all the parts. Fig. 2 is a cross-sectional view of the knob-lock. Fig. 3 is a plan view of the knob-lock. Fig. 4 is a plan view of the rose used with a mortise-lock. Fig. 5 is a plan view of a fragment of my device wherein the spring-bolt is employed.

Like letters of reference, wherever they occur, indicate corresponding parts in all the figures.

A A′ are the knobs, made of any approved material. Within the knob A is secured a shell, B, provided with perforations C.

D is a bolt fitting into said shell. Within the shell B and in slots in bolt D are cross-bars E, arranged to play in perforations C.

F are springs which hold the extremities of bars E in said perforations when the lock is at rest. G is a spring secured between the extremity of spindle H and bolt D, serving to automatically shoot said bolt into place when the key is removed.

I is the key-hole, located in the face of the knob. The knob A should be cast upon or firmly riveted to spindle H, to prevent its removal.

J is a connecting-bar, passing along spindle H through the door K and lock L to an independent spring-bolt, M, said bolt sliding in a perforation or slot, S, in knob A′, a spring, N, forcing it into engagement with a perforation, *l*, in the shell of the lock, or, where a mortise-lock is used, with a perforation, *p*, in a knob-rose, P, when free to move in a lateral direction, said rose being particularly illustrated in the plan view, Fig. 4. As indicated in Fig. 5, such bolt may be held back by a manipulating-knob, R, engaging with a notch, *r*, in the side of the slot S, left free to move in a longitudinal direction or locked into the perforation *l* by means of notch *r′*.

In order to dispense with the usual washers for regulating the position of the knob for different thicknesses of door, I make a longitudinal slot, T, in the spindle and fit a set-screw, *u*, in the end thereof, whereby the position of the screw *u*, which holds the knob to the spindle, may be accurately regulated, as plainly indicated in Fig. 1.

The position of the screw *u* should be regulated before the knob A′ is applied to the spindle, as when properly adjusted the spindle cannot play in the lock. If the knob, lock-shell, or rose becomes worn by use, the screw *u* may be tightened, taking up the wear.

In manipulating my improved knob-lock, a key of suitable construction is inserted in the hole in the knob, drawing back the cross-bars E, permitting the pushing in of the bolt D. Said bolt strikes the connecting-bar J, pushing back spring-bolt M from engagement with the lock shell or rose, permitting the turning of the knob and opening of the door. When the key is removed, the spring-bolt M shoots

into the shell or rose, the bolt D is forced outward, and the cross-bars secure it in position.

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

1. The combination, with a rim or mortise lock, of a knob secured to one end of the spindle and containing an independent bolt, a connecting-bar passing along the spindle, and a spring-bolt located in the opposite knob, adapted to be pressed back by the bolt located in the outer knob, substantially as shown and described.

2. The combination, with the spring-bolt M, of the lock shell or rose having a perforation therein, connecting-bar J, bolt D, cross-bars E, slotted shell B, and knob A, provided with a key-hole, I, substantially as shown and described.

3. The combination, with the knob A, provided with key-hole I, of the shell B, having slots C, cross-bars E, bolt D, and springs F G, substantially as shown and described.

Signed at New York, in the county of New York and State of New York, this 28th day of December, A. D. 1885.

ADRIAN HITT.

Witnesses:
W. J. MORGAN,
A. M. PIERCE.