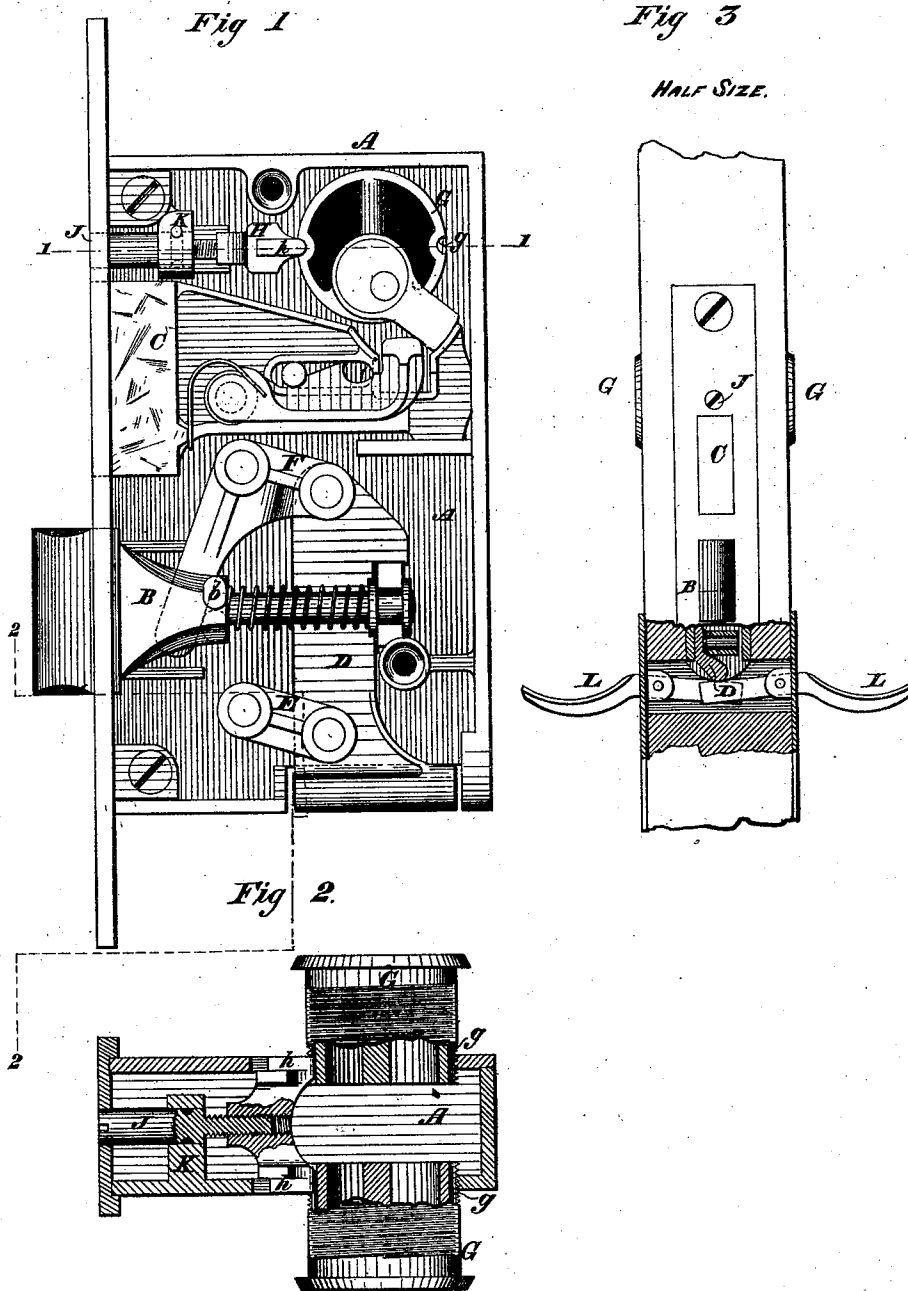


H. R. TOWNE.
LOCKS AND LATCHES.

No. 180,287.

Patented July 25, 1876.



WITNESSES

Wm A. Shinkle
Baltis DeLong

INVENTOR

Henry R Towne,
By his Attorney *Marcus S. Hopkins*

UNITED STATES PATENT OFFICE.

HENRY R. TOWNE, OF STAMFORD, CONNECTICUT, ASSIGNOR TO THE YALE LOCK MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN LOCKS AND LATCHES.

Specification forming part of Letters Patent No. **180,287**, dated July 25, 1876; application filed May 12, 1876.

To all whom it may concern:

Be it known that I, HENRY R. TOWNE, of Stamford, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Locks and Latches, as fully set forth in the following specification.

My invention has for its object to provide a mechanism which will operate with a minimum of friction and with a uniform action under all circumstances, and which will enable the thumb-levers passing through the door to be set so as to operate close to the rear edge of the case of the lock. A further object of my invention is to provide a means for securing escutcheons or tumbler-cases of what are known as "pin-locks" to the lock-case, which is mortised into the door.

My invention consists in the matters hereinafter more particularly set forth and claimed.

In the accompanying sheet of drawings, forming a part of this specification, Figure 1 is a plan of my improved combined lock and latch with the cap removed. Fig. 2 is a section of the same on the line 1 1 of Fig. 1. Fig. 3 is an elevation, partly in section, on the line 2 2 of Fig. 1, to a reduced scale of the edge of the door having my lock mortised therein, and illustrating the action of the thumb-levers upon the latch-bolt mechanism.

A is the case of the lock; B, the ordinary latch-bolt, and C the dead-bolt. D is a slide, adapted at its lower edge to be acted on by the thumb-levers, and guided in its movement by the link E and bell-crank F, which also acts as a link, turning on suitable pivots, and constituting a partial parallel motion. The long arm of the bell-crank F engages with the stump *b* on the bolt B, to retract it when the slide D is elevated, and the bolt B, being provided with one of these stumps on each of its sides, can readily be reversed. The dead-bolt C is controlled by its key acting through the escutcheon G, and for this purpose I prefer to use the well-known Yale pin-lock, the key mechanism of which is entirely contained within the escutcheon or tumbler-case G. I provide two of these escutcheons, so that the lock may be operated from either side of the door, and they are threaded on their exterior circumferences, so that they may be screwed

into suitable apertures in the case A. To secure them in position, and to prevent the unscrewing of the escutcheons from the outside of the door, I make use of the slide or set H, which is controlled by means of the screw J passing through the face of the lock, and inaccessible when the door is closed. The screw J passes through the post K, and is longitudinally secured therein by means of a pin engaging with a groove in the screw. The inner end of the screw J is threaded to engage with a hole tapped in the slide-set H, so that the rotation of the screw will move the set H in and out, as may be desired. This sliding set H is provided with two projecting points or teeth, *h h*, which slide in guides formed in the case A, and which engage with suitable notches or recesses *g g*, formed on the opposite sides of the escutcheon G, and thus prevent the unscrewing of the escutcheon, except when the slide H is withdrawn from engagement with the recess *g*.

The lock being mortised into a door, and the ordinary lever-handles L L, as shown in Fig. 3, being suitably attached to the door, the depression of the outer end of these handles by the thumb or finger will cause their inner ends to be elevated, and these, acting on the lower edge of the slide D, will cause the latter to move upward, and, acting through the crank F, to retract the latch-bolt B. The two arms of the crank F being of unequal length, it will be seen that what is termed an "easy spring action" is secured.

Locks of this class are commonly used on glass doors, the lock-rail or stile of which is necessarily narrow, and it will be seen that my mode of construction is such that with a lock-case of less than the ordinary depth I am enabled to set the thumb-levers and handles to which they may be attached at a point almost as far distant from the edge of the door as the depth of the lock-case, the action of the slide D being the same whenever the levers L L may act upon it.

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

1. The combination, substantially as set forth, of the bolt, the slide or plate moving

at a right angle thereto, and the pivotal links for guiding said slide, the combination being such that vertical motion of the slide shall cause a simultaneous horizontal motion of the bolt.

2. In a mortise-lock, the mechanism of which to be operated upon by the key is contained within one or two separate tumbler-cases or escutcheons, adapted to be secured to the lock-case after the latter has been mortised into the door, a set or slide contained within said lock-case, and controllable only when the door is open, which set or slide is adapted to suitably engage with either one or both of said escutcheons inserted through either or both sides of the door, and to prevent the withdrawal of said escutcheons from the lock-case.

3. The combination, substantially as set

forth, of the slide H, adapted to engage with one or more escutcheons or tumbler-cases, and to prevent the withdrawal of the latter from the lock-case, and the operating-screw J, inaccessible when the door on which the lock is used is closed.

4. The slide or set H, provided with two wings or projections, *h h*, and adapted to engage, as desired, with either one or two escutcheons or tumbler-cases inserted from one or both sides of the case of a mortise-lock.

In testimony whereof I have hereunto subscribed my name.

HENRY R. TOWNE.

Witnesses:

H. I. EARNEST,

E. C. DAVIDSON.