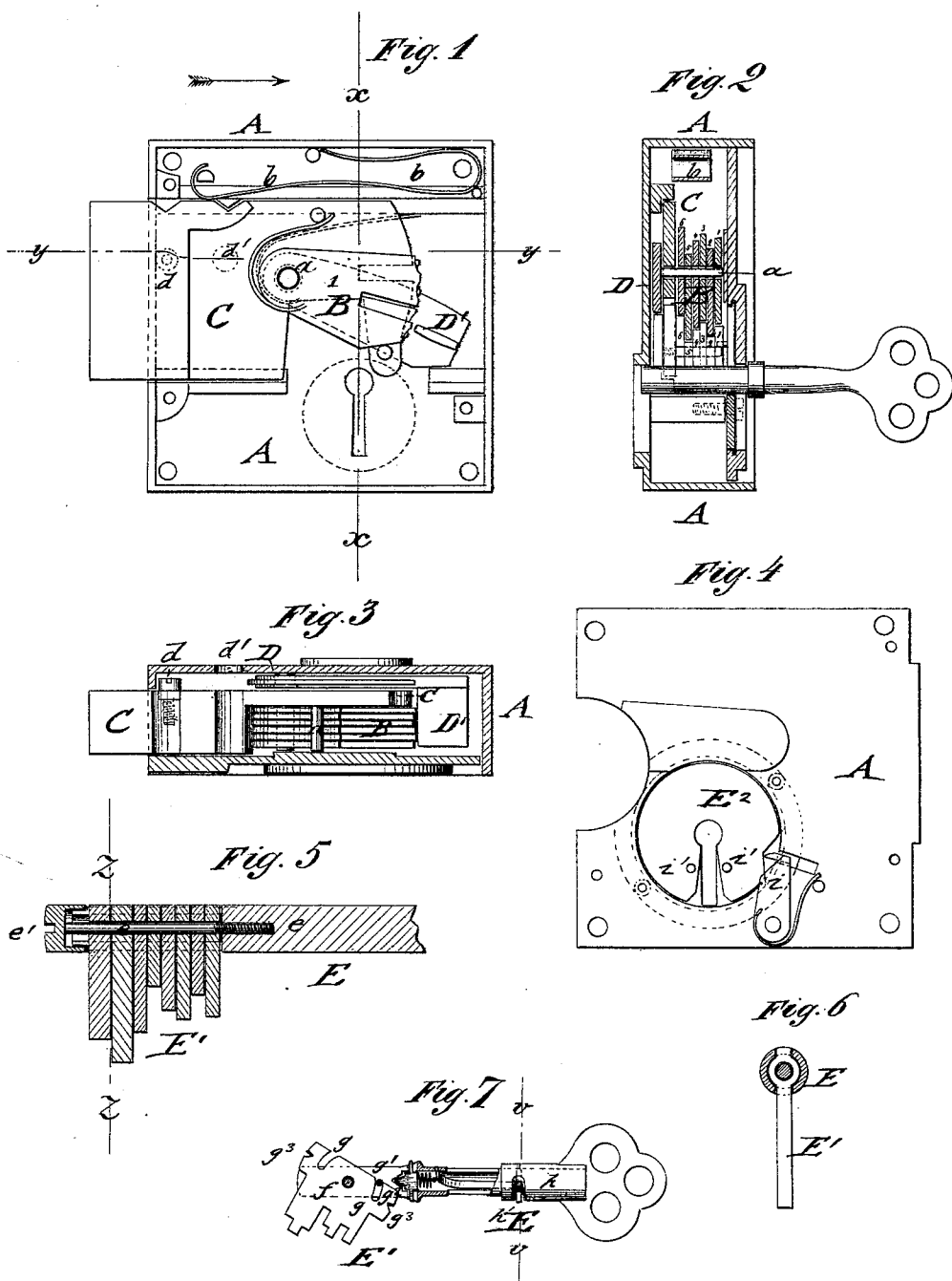


M. C. HAWKINS.

DOOR-LOCK.

No. 180,874.

Patented Aug. 8, 1876.



WITNESSES:

A. W. Almquist
John Coethals

Fig. 8



INVENTOR:

M. C. Hawkins

BY

Munn
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UNITED STATES PATENT OFFICE

MOSES C. HAWKINS, OF EDINBOROUGH, PENNSYLVANIA.

IMPROVEMENT IN DOOR-LOCKS.

Specification forming part of Letters Patent No. **180,874**, dated August 8, 1876; application filed April 18, 1876.

To all whom it may concern:

Be it known that I, MOSES C. HAWKINS, of Edinborough, in the county of Erie and State of Pennsylvania, have invented a new and Improved Lock, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation of my improved lock, with face-plate detached. Figs. 2 and 3 are vertical transverse and horizontal sections of the same, respectively, on lines *xx* and *yy*, Fig. 1. Fig. 4 is an inside view of the inner face-plate, showing revolving guard-escutcheon. Figs. 5 and 6 are, respectively, a vertical longitudinal section and a transverse section on line *zz*, Fig. 5, of a key with interchangeable bits, for use with the lock as a combination-lock; and Figs. 7 and 8 are, respectively, a sectional side view and section on line *vv*, Fig. 7, of a key with reversible bits, for locking from both inside and outside.

Similar letters of reference indicate corresponding parts.

My invention relates to an improved lock for doors, that may be used as a fixed tumbler-lock or as a combination-lock, in combination with keys having fixed or interchangeable bits, producing a lock that may not be easily picked or tampered with.

The invention consists of a sliding bolt, with interchangeable tumblers pivoted thereto, and so connected to the casing by a detachable screw that bolt and tumblers may be taken out from the casing for changing the combination.

The invention consists, further, in the combination of the sliding and notched bolt and the notched tumbler, pivoted thereto, with a swinging fence-plate and rigid fence-bar, that enters all the notches when set by a combination or reversible key. The reversible key may be finally locked to the inside of the lock by a revolving escutcheon.

In the drawing, A represents the casing of my improved lock; B, the tumblers, that are placed on a pivot-pin, *a*, of the thinner rear section of the sliding bolt C, which is guided in suitable manner at the inside of the casing, and retained in position by a spring, *b*, bearing on the top edge of the bolt, for keeping the same in proper position, so as not to inter-

fere with the working of the tumblers by locking the fence-bar in the false notches while operating the bolt and tumblers.

The fence-plate D is pivoted to the casing A back of the bolt, and provided, near the outer end, with a fence-bar, D', that extends laterally across the casing, and has to enter all the notches of bolt and tumblers to admit the opening of the lock.

The bolt C has, besides the notch, a recess for the action of the key, and the tumblers have small false notches, into which the fence-bar enters when a false key is used, the tumblers being then thrown out of the right position, in which they admit the throwing back of the bolt.

When the lock is intended to be used as a combination-lock, the bolt is provided with screw-pin *d*, with projecting head, that forms contact with the side face-plate of the casing, the screw-pin *d* being readily detached when the bolt is thrown back by inserting a screw-driver through a hole, *d'*, of the casing and unscrewing the pin. The bolt may then be taken out of the casing with the tumblers, and the tumblers interchanged on the pivot, the bolt being then reinserted and the retaining screw-pin replaced. In this case the bits E¹ of the key E have to be changed to correspond to the disposition of the tumblers, the corresponding tumblers and bits being provided with the same numbers. The bits E¹ are for this purpose attached to the hollow slotted end of the key E by a central screw-pin, *e*, with the fastening-cap *e'*, as shown in Figs. 5 and 6.

When the lock is used as a common fixed tumbler-lock, the reversible key (shown in Figs. 7 and 8) is employed, which admits the swinging over of the bits, to admit the introduction and working of the same from either side of the lock. The reversible bit E¹ swings, in this case, on a central pivot-pin, *f*, of the slotted key-stock, and is locked by slots *g* binding on a stop-pin, *g'*, and by a pointed spring-catch, *g*², that enters side notches *g*³ of the bit. The hollow bar or stock of the key slides in a sleeve or shell, *h*, of the thumb-piece or bow of the key, to be extended for use, or shortened when carried in the pocket, the barrel being longitudinally slotted, to move along the

spring-acted cross-pin h' , that locks the key in extended position, while a suitable screw and stop prevent the detaching of the barrel from the thumb-piece. The bit of the key may in this manner be readily reversed, and thereby the key used with equal facility from the inside and outside, which cannot be done with the combination-key and its interchangeable bits.

A revolving escutcheon or rose, E^2 , at the inside of the lock face-plate (shown in Fig. 4) admits the closing of the key-hole, and prevents the removing of the key or any tampering with the lock from the outside. The revolving escutcheon is retained by a spring-catch, i , in open position, and closed by means of small inside projecting pins i' , that are engaged by the bit of the key, so as to be carried across the key-hole.

The advantage of this lock is, that the arrangement of the tumblers and the action of the bolt in the manner of a tumbler, jointly, in connection with the swinging fence-plate and bar, furnishes a lock that is not easily picked or tampered with, and, with an adjustable key, a combination-lock that is readily set and interchanged without detaching the lock from the door-frame.

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

1. The combination of the sliding bolt, having pivoted interchangeable tumblers and a projecting screw-pin, with casing having aperture, through which the screw-pin may be detached and replaced, to admit sliding out of the bolt and changing of tumblers without removing entire lock, substantially as and for the purpose set forth.

2. The combination, in a lock, of a sliding and notched bolt, having notched tumblers pivoted thereto, with a swinging fence-plate and guard-bar entering notches of bolt and tumblers to admit opening of lock, as specified.

3. An extension-key with reversible bit, to be used from either side of lock, substantially as set forth.

4. The combination, with the slotted stock of a key and suitable locking devices, of a pivoted reversible bit, substantially as shown and described.

MOSES CHAMPEN HAWKINS.

Witnesses:

ALONZO PERRY,
M. L. HAWKINS.