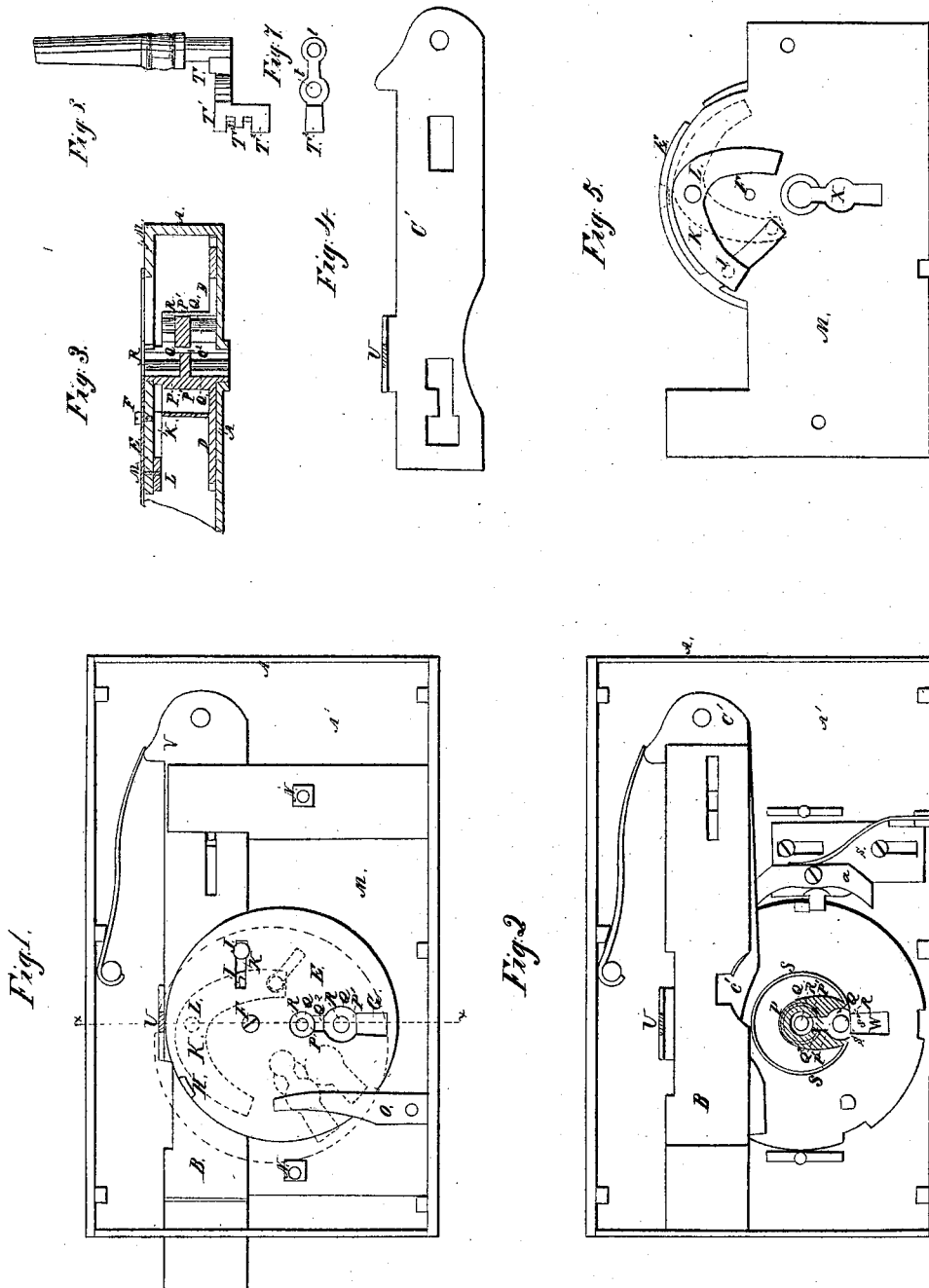


W. Stephenson,
Door Lock.

N^o 5,758.

Patented Sep. 12, 1848.



UNITED STATES PATENT OFFICE.

WILLIAM STEPHENSON, OF CINCINNATI, OHIO.

DOOR-LOCK.

Specification of Letters Patent No. 5,758, dated September 12, 1848.

To all whom it may concern:

Be it known that I, WILLIAM STEPHENSON, of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Door-Locks, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a plan showing the side of the lock next the door in a position as locked from the outside—the dotted lines showing the position of yoke and plate when locked from the inside. Fig. 2 is a view of the interior of the box—the cap plate and vibrating guard plate being removed in order to show the parts concealed by said plates as in Fig. 1. Fig. 3, is a section of the lock on a vertical plane represented by the dotted line *x, x* in Fig. 1, showing a section of the case, barrel, spindles, notched plate, and guard plate, &c. Fig. 4, is a plan of the tumbler on which there is an arm that falls into a notch in the guard plate. Fig. 5, is a view of the inner side of the cap plate—representing the position of the guard plate and yoke when the lock is unlocked from the inside—the dotted line showing the position of the guard plate and yoke when locked on the inside. Fig. 6, is a plan of the key. Fig. 7, is an end view of the key.

Similar letters in the several figures refer to corresponding parts.

In this lock the box A, bolt B—tumblers C, are made and arranged substantially in the usual manner. The revolving notched plate, D, the vibrating dog *a* and the slide *s* to which it is attached, are made in the manner described in the specification of my newly invented lock for which I have recently applied for Letters Patent at the United States Patent Office, to wit on the 27th of June, 1848; and therefore I do not consider it necessary to describe the same in this application. There are, however, several improvements in some of the parts above excepted which will be described presently.

My essential improvements in this lock relate to the manner of constructing, arranging, and operating a vibrating metallic guard plate for preventing the opening of the lock from the outside, when locked on the inside, having a yoke attached to it by which it is turned. Likewise to the manner of constructing the case P for the key, by which the key can enter it from either side

of the lock. Also to a peculiar and novel construction of key adapted to the aforesaid case. Likewise to the addition of a cylindrical curb to surround the case of the key. Likewise to constructing one of the tumblers with an arm in connection with a notch in the vibrating plate into which it falls to hold the said vibrating plate in its place. Also to having key holes opposite each other in the sides of the lock—in connection with having spindles to enter the key.

F, represents the vibrating guard plate for closing the key hole on the outside of the lock when locked on the inside.

F is a pin by which the plate E is attached to the cap plate and on which it vibrates.

G is an opening in plate E for the insertion of the key, when the lock is required to be locked on the outside.

H is a notch in the periphery of the plate E for the reception of the arm U on the tumbler C' to hold the plate E to its place when the lock is locked on the inside.

I is an oblong opening in plate E for the insertion of the pin J that connects the plate E to an arm of the yoke K, in which opening the pin plays, as the yoke is vibrated to change the position of the plate.

K is the yoke for moving the guard plate E.

L is a pin for attaching the yoke to the cap plate and on which it vibrates. This yoke is generally made in the form of a semi-ellipse, but may be made of any convenient or suitable form for the purpose intended.

M is the cap plate.

N, N, are the screws for screwing the cap plate to the box of the lock. O is a spring for holding the guard plate.

P is the revolving case for the reception of the key attached to the notched plate, consisting of a casting having two circular cavities Q Q united by a central opening Q². These two circular cavities Q Q extend from the ends of the case P to near the middle of the same, where the case is left solid as at P' Fig. 3, serving as a vertical partition (except at Q² which is an open space extending through the case). Through this solid portion P Fig. 3 of the case are inserted spindles R R for preventing the lock being picked and for guiding and steadying the key in its operation when turning it.

S is a cylindrical curb surrounding the case P of the key and united to it on its in-

ner periphery at S' to divert the direction of any instrument that may be introduced for the intention of picking the lock.

T is the key whose spindle and bit are perforated with round holes *t, t*, to allow the spindles and bit to be passed over the spindles R, R.

U is an arm on the tumbler C' for dropping into the notch H in the vibrating guard plate E when the bolt is thrown out, or locked from the inside.

W is the key hole in the inner plate A' of the lock; and

X is the key hole in the cap plate, the one being opposite the other, so that the key can be inserted and pass over the aforesaid spindles from either side of the lock.

To throw the bolt out, or in, from the outside of this lock, the key being inserted, that part of the bit marked T' Fig. 6 passes beyond the yoke K and turns without moving the guard plate and the locking and unlocking of this lock are the same as in the lock for which I have recently applied for Letters Patent, as above stated. To throw the bolt out from the inside of this lock insert the key and that part of the bit of the key marked T² goes into the lock far enough to operate on the yoke K. In turning the key to throw the bolt out the bit raises the tumblers and moves the bolt, and at the same time that portion of the bit marked T² strikes the arm of the yoke K and moves it and simultaneously with this movement of the yoke the pin J attached to the yoke K and plate E moves in the oblong mortise I of the plate E and causes the plate T to vibrate on the pin F and thus effectually closes the key hole G. At the same time the arm U falls into the notch H and prevents it from turning, so that the lock cannot be entered from the outside with the proper key, or any other instrument. In turning the key to throw the bolt in that

portion T² of the bit of the key bears against the other arm of the yoke and the pin in the mortise bears against the plate and brings the guard plate back to the position it had when the key was first inserted and the bolt can then be thrown with the key either from the outside or inside as above described.

I do not claim the invention of closing the key hole of a lock on the outside by a sliding plate when locked on the inside as that has been done, neither do I claim the covering the keyhole on the outside of the lock partially by means of a revolving plate when locked on the inside as that has been done, but,

What I do claim as my invention and desire to secure by Letters Patent, is—

1. The application of a vibrating guard plate in connection with a yoke attached to the outer plate of the lock constructed and operating substantially as herein described and set forth so as effectually to close the key hole of any lock on the outside when locked on the inside by the application of the key.

2. I also claim the manner of constructing, arranging, and operating substantially the case for the key with that spindle in said case in connection with opposite keyholes on each side of the lock so that the key can be inserted from either side of the lock and slipped over the same spindles and when withdrawn from the outside of said lock said spindles shall prevent the lock from being picked as herein described and set forth.

In testimony whereof I have hereunto signed my name before two subscribing witnesses this sixth day of July A. D. 1848.

W. STEPHENSON.

Witnesses:

WM. P. ELLIOT,
JOHN L. SMITH.