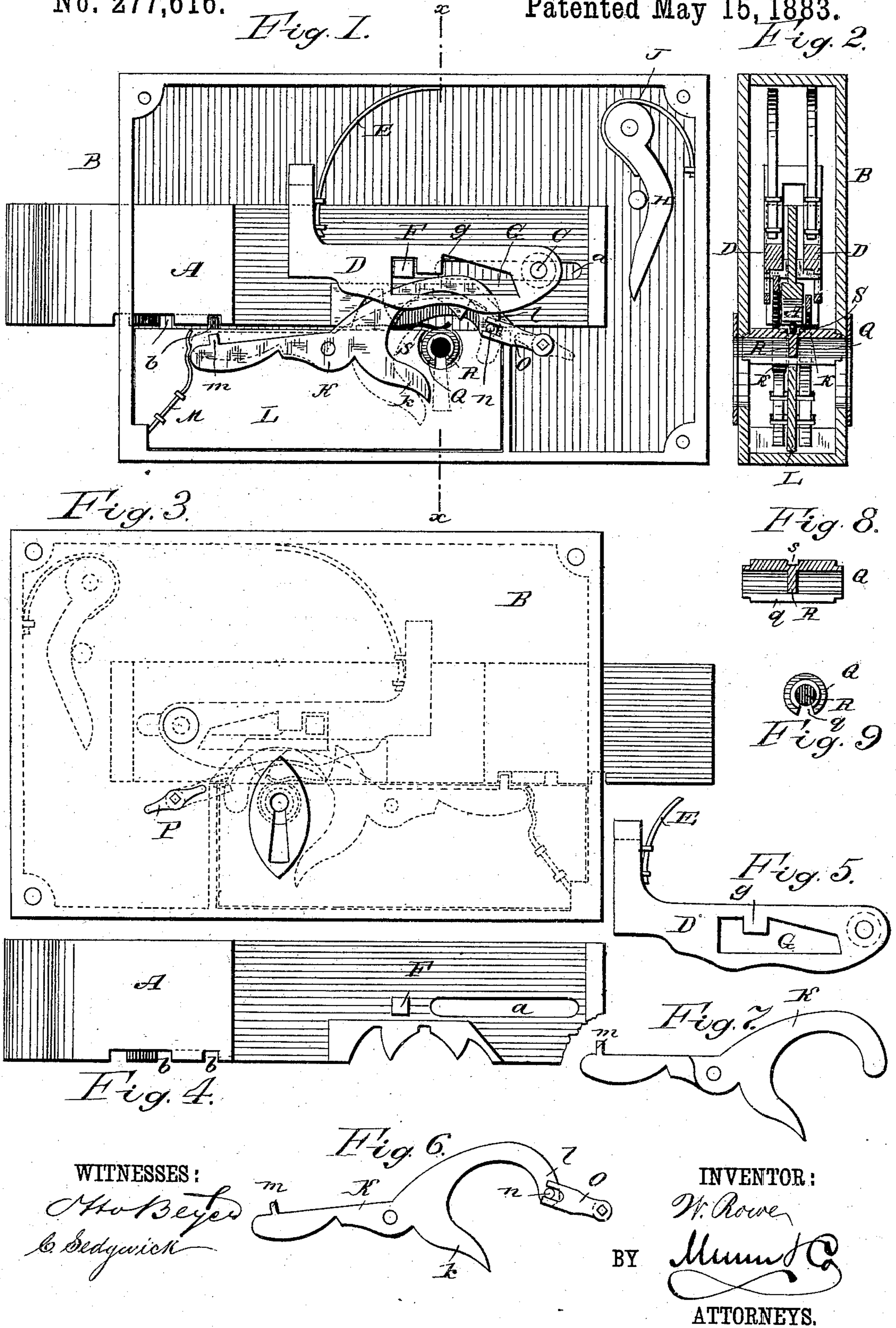


(Model.)

W. ROWE.
DOOR LOCK.

No. 277,616.

Patented May 15, 1883.



UNITED STATES PATENT OFFICE.

WILLIAM ROWE, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND JOHN A. CLARKE, OF SAME PLACE.

DOOR-LOCK.

SPECIFICATION forming part of Letters Patent No. 277,616, dated May 15, 1883.

Application filed November 15, 1882. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM ROWE, of Haverhill, in the county of Essex and State of Massachusetts, have invented a new and Improved Lock, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved lock which can only be unlocked from the side of the door on which it was locked.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional elevation of my improved lock. Fig. 2 is a cross-sectional elevation of the same on the line x , Fig. 1. Fig. 3 is an outside longitudinal elevation of my improved lock. Fig. 4 is a longitudinal elevation of the bolt. Fig. 5 is a longitudinal elevation of one of the tumblers. Fig. 6 is an elevation of another tumbler. Fig. 7 is a longitudinal elevation of a like tumbler on the inner side of the lock. Fig. 8 is a longitudinal elevation of the key-nut. Fig. 9 is a cross-sectional elevation of the same.

The bolt A is adapted to slide longitudinally in the lock-casing B, and is guided in its movement by a pin, C, which passes through a longitudinal slot, a , in the bolt. The bolt is provided near its outer end and in its inner edge with notches or recesses b for receiving a projection at the end of a tumbler. A tumbler, D, is pivoted on the pivot C, at each side of the bolt, which tumblers swing in the vertical plane, and are united at their upper ends, and are pressed downward by springs E, resting against the top of the lock-casing. The bolt is provided on each side with a stud or projection, F, which passes into a longitudinal slot, G, in the tumbler D, which slot is provided with a lug, g , projecting downward from its upper edge. A lever, H, pivoted in the upper part of the lock-casing, is pressed by a spring, J, against the inner end of the bolt A, and presses the said bolt from the end of the casing when the locking-bolt is arranged for use as a latch-bolt also. The outer notch b is made longer, as shown. A tumbler, K, is pivoted to each side of a partition, L, which

is parallel with the bolt and below the same, and divides the lower part of the lock-casing into two halves longitudinally. These tumblers K are provided with curves for receiving the key, and the other ends are provided with projections m , which are adapted to pass into one of the recesses or notches b in the lower edge of the bolt A. A spring, M, secured to one side of the partition L, rests against the end of a tumbler, K, and is provided with a double recess to hold the tumbler in the raised or lowered position. A like spring M is secured to the opposite side of the partition L. The tumbler K on that side of the lock which is to the inside of the room or cell is provided at its end with a pin, n , which is passed into the forked end of a lever, O, mounted on a short shaft passing transversely through the lock-casing, and provided at the opposite end with a cross-arm or pointer, P. The nut Q for receiving the key in the lock is provided with a longitudinal slot, q , and with a middle transverse partition, R. A spring, S, secured on the upper edge of the partition L, passes into a groove, s , in the nut Q and prevents displacement of the said nut.

The operation is as follows: The side of the lock exposed in Fig. 1 is the side toward the inside of the room. If the door is unlocked and the same is to be locked, the key which is turned passes into the curve at that end of the tumbler K at the right-hand side of the pivot, and the tumbler D is raised to such an extent that the projection F of the bolt can pass to the front of the lug g of the tumbler when the bolt is thrown out by the key, during which movement the tumbler K is held locked in the lower position by the second curve or recess of the spring M, as shown in Fig. 1, and the lock has thus been locked. While the key is being turned downward the bit of the same presses against the arm k of the tumbler K, and thereby forces the stud m upward into the recess b of the bolt, as shown in dotted lines, thereby also preventing the bolt from being pushed inward after the lock has been unlocked. The stud m can be thrown into engagement with the notch b by turning it farther or beyond the key-aperture until it

strikes the projection *k* of the tumbler *K*, which will move the outer end of said tumbler upward, and, in unlocking the lock, the key, passing into the right-hand curve of the tumbler *K*, causes the stud *m* to move downward and out of the corresponding notch *b* in the lower edge of the bolt. The key can only be passed half-way through the lock on account of the partition *L* and the transverse partition *R* in the nut *Q*. If a person inserts a key from the other side of the lock than the one from which the lock has just been locked, the key can only move the tumbler *K* of that side and raise the tumbler *D* on the other side, but cannot lower the tumbler *K* of that side upon which the lock has been locked. Consequently the lock cannot be unlocked, for the bolt cannot be withdrawn until the studs *m* on both sides of the lock have been withdrawn from the notches *b*. The partitions *R* and *L* also prevent wires from being passed through the key-hole to raise the tumbler on the other side of the bolt. The cross-piece *P*, which is on the outer surface of the lock, always shows whether any one has been tampering with the tumbler *K* on the inner side of the lock. After an unsuccessful attempt has been made to lower the inner tumbler *K*, the cross-piece *P* will be inclined, as the arm *O* is moved upward by the pin *n* on the arm *l* of the tumbler *K*. The cross-piece *P* can also be used to lower the end of the tumbler *K* on the inner side in case it has been tampered with.

The above-described lock can be used for various purposes, but is designed for a prison-lock.

I do not confine myself to the exact form in detail of the tumblers shown and described, as the same may be varied, and any suitable key may be used with the lock.

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

1. The combination, with a tumbler, *K*, having the pin *n*, of the end-forked lever *O* and the shaft carrying the cross-arm *P*, as and for the purpose specified.

2. In a lock, the combination, with the sliding bolt *A*, of the united tumblers *D*, arranged on opposite sides of the bolt, and the independent tumblers *K*, pivoted to the opposite sides of a central partition, *L*, below the bolt, substantially as herein shown and described, and for the purpose set forth.

3. In a lock, the combination, with the bolt *A*, of the united tumblers *D*, arranged on opposite sides of the bolt, the independent tumblers *K*, pivoted to the partition *L*, and the springs *M* for locking the tumblers *K* in position, substantially as herein shown and described, and for the purpose set forth.

4. In a lock, the combination, with the bolt *A*, of the united tumblers *D*, arranged on opposite sides of the bolt, the springs *E*, the partition *L*, and the independent tumblers *K*, substantially as herein shown and described, and for the purpose set forth.

WILLIAM ROWE.

Witnesses:

GEORGE J. DEAN,
EDWARD B. GEORGE.