H. R. Towne,

Permutation Lock,

No. 111,587. Patented Feb. 7. 1871.

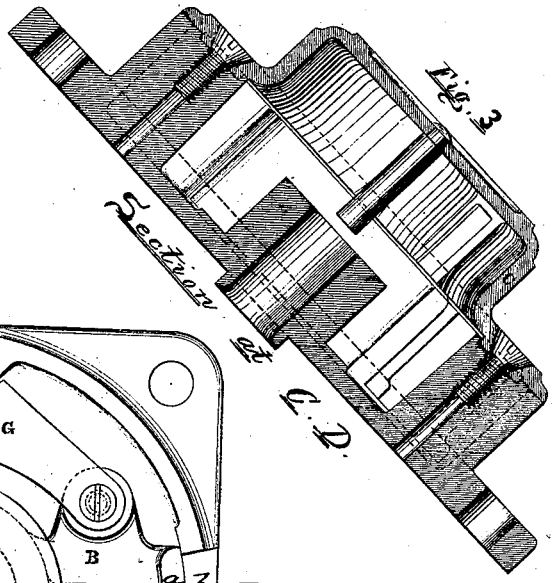
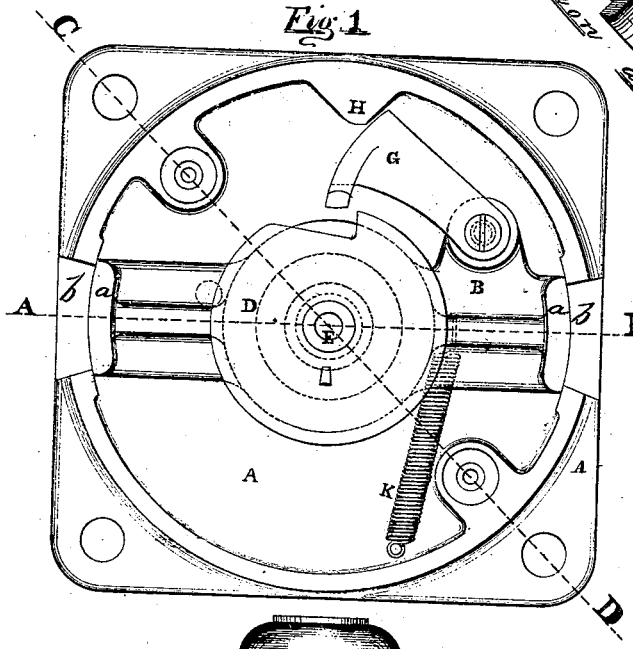


Fig. 1



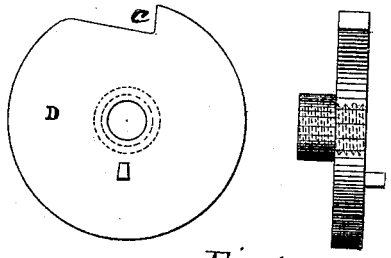
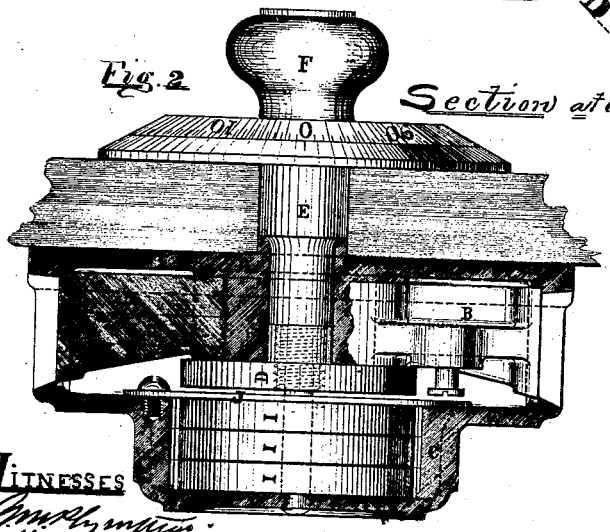


Fig. 4

Fig. 2



Section at a. b.

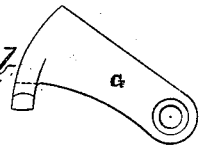
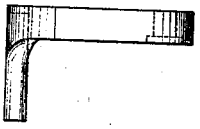
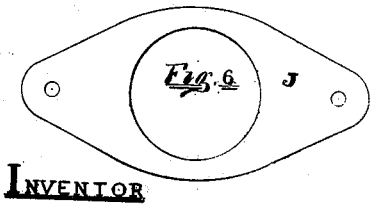


Fig. 5





WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY R. TOWNE, OF STAMFORD, CONNECTICUT.

IMPROVEMENT IN PERMUTATION-LOCKS.

Specification forming part of Letters Patent No. **111,587**, dated February 7, 1871.

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 Improved Dial-Lock; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

This invention consists in the combination of a case having apertures in its opposite sides with an oscillating bolt or bar arranged to close said apertures simultaneously, as hereinafter more fully described.

In the accompanying drawing, Figure 1 is a plan of the lock with the cover and tumblers removed; Fig. 2, a horizontal section on the line A B, showing the operating-spindle dial and section of door; Fig. 3, a diagonal section on the line C D, showing the interior of the lock with the shaft-cam, tumblers, and bar removed. Fig. 4 represents the cam. Fig. 5 represents the fence-lever, and Fig. 6 represents the bridge.

Similar letters of reference indicate corresponding parts in the several figures.

A represents the shell or case; B, the oscillating bar or bolt; C, the cover; D, the cam; E, the shaft; F, the dial; G, the fence-lever; H, the stump; I I I, the tumblers; J, the bridge; K, the spring.

Heretofore it has been found necessary, when applying to safe-doors hung to open on the left side locks of the dial or permutation class, to make to the lock cumbrous and expensive additions.

With any lock, however, as herein described, it will be observed that it may be applied indiscriminately to right or left hand doors.

To accomplish this valuable result the bar or bolt B is formed with a hole in its center, through which passes the shaft E in such manner as will admit said shaft turning freely therein, the end of said shaft which passes through said hole having fixed to it in any desirable manner a cam, D, so that when the shaft is turned it will revolve said cam until the fence-lever G engages in the notch *c* of the cam D, one end of said fence-lever being secured to the bar or bolt B, as shown in Fig. 1, when the oscillating bar or bolt B will be turned from the openings *b b*, and thus permit the projection from the string-bar, attached to the bolt-work on the safe-door, to enter one of the openings *b b* in the shell or case A, and allow the door to be opened; and when said oscillating bar or bolt is relieved from tension by releasing the shaft E from the grasp, the spiral spring K, attached to said bar or bolt, will, by its action, restore the mechanism to its locked position, and cause the openings *b b* to be covered by the heads *a a* of the bolt or bar B.

This bolt or bar B, it will be observed, has two arms at right angles to the axis of the shaft E, these arms extending to the inner face of the shell or case A, and terminating in suitable heads, *a a*.

The locking and unlocking motion of the bar or bolt is, of course, dependent upon the tumblers I I I having been properly adjusted through the means of a combination, as is common to locks of the permutation class. To these tumblers and their operation I therefore lay no claim, and do not particularly describe them.

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

The case A, containing apertures *b b* in its opposite sides, in combination with an oscillating bolt or bar, B, arranged so as to close said apertures simultaneously.

HENRY R. TOWNE.

Witnesses:

H. C. WATTENBERG,

G. M. PLYMPTON.