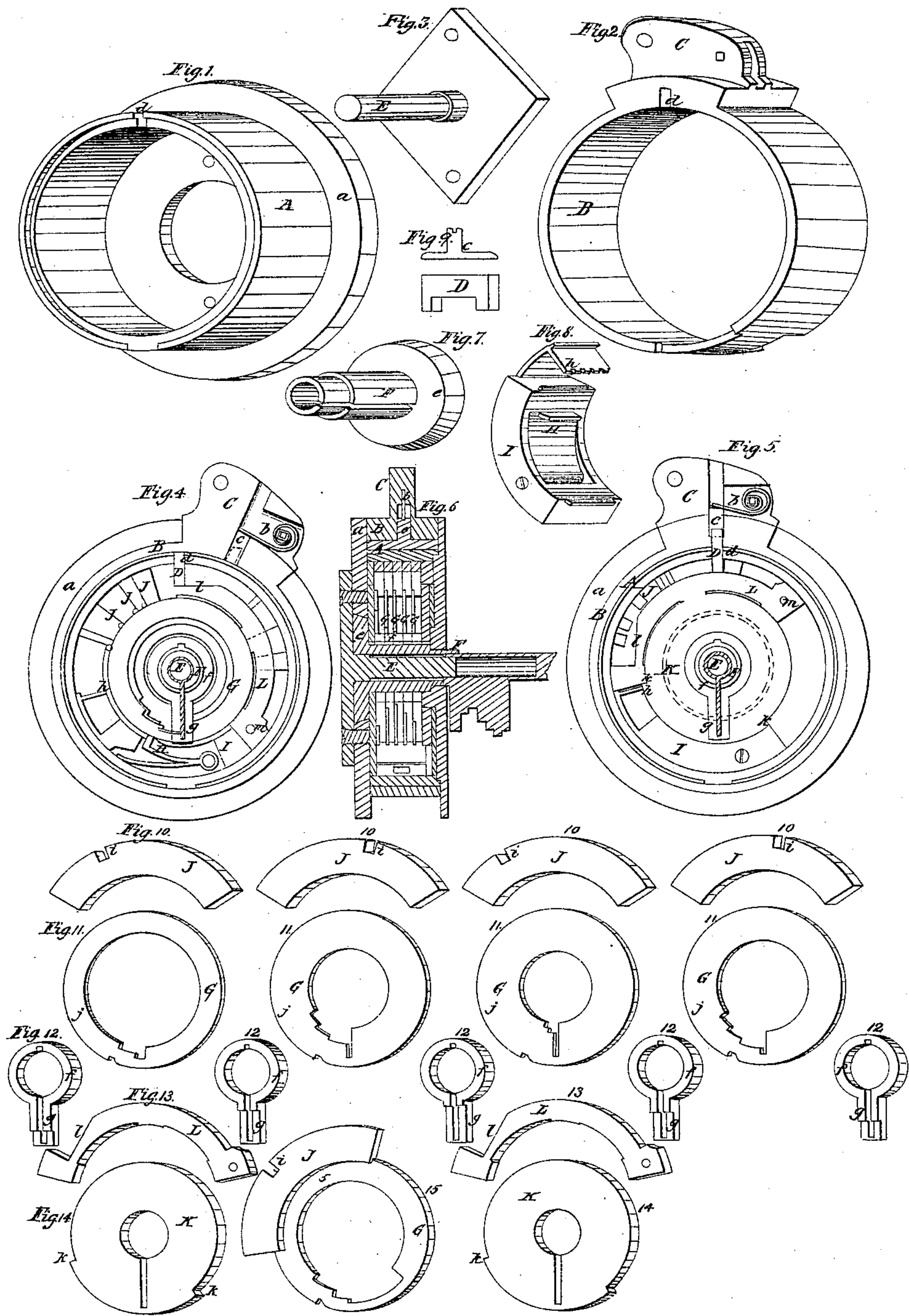


W. Maurer,

Lock,

N^o 12,957,

Patented May 29, 1855.



UNITED STATES PATENT OFFICE.

WILLIAM MAURER, OF NEW YORK, N. Y.

LOCK FOR BANK-VAULT, FIREPROOF-SAFE, AND OTHER DOORS.

Specification of Letters Patent No. 12,957, dated May 29, 1855.

To all whom it may concern:

Be it known that I, WILLIAM MAURER, of the city, county, and State of New York, have invented a new and Improved Lock for Bank - Vault, Fireproof - Safe, and other Doors; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a detached perspective view of the casing of the lock. Fig. 2, is a detached respective view of the movable band which surrounds the casing. Fig. 3, is a detached view of the key pin. Fig. 4, is a front view of the interior of the lock represented in an unlocked state. Fig. 5, is the same view as Fig. 4, with the exception that the lock is represented in a locked state. Fig. 6, is a transverse section of the lock, the plane of section being through the center. Fig. 7, is a detached view of the tube which surrounds the key pin. Fig. 8, is a detached perspective view of the spring and guides which keep the annular plates in proper position when the key is withdrawn. Fig. 9, is a detached view of the pawl and spring plate. Fig. 10 are views of the segment tumblers. Fig. 11, are views of the annular plates. Fig. 12, are views of the slotted plates, which encompass the tube which surrounds the key pin. Fig. 13, are views of the segment bars which operate the pawl. Fig. 14, are views of the circular plates which act upon the segment bars. Fig. 15 is a view of the outer annular plate to which one of the tumblers is attached.

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

The nature of my invention consists in the arrangement of notched annular plates, segment tumblers, spring pawl, and a band which encompasses the casing of the lock, and segment bars as will be presently shown and described.

To enable others skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, represents a metallic cylindrical casing provided at its back end with a flanch (a) and B represents a metallic band which encompasses the casing A, and has a projection C attached in which a spring (b) is placed, said spring bearing upon a plate (c) see Figs. 4 and 5. In the casing A and also in the projection C of the band B, a slot (d) is

cut in which a pawl D is fitted and against which the spring plate (c) bears.

The bolt which is not represented is attached to the projection C on the band B.

E, represents a key pin which is secured within the casing A, at its center by a plate which is screwed to the back side of the casing. Around this key pin there is placed a tube F, which has a circular flanch (e) at its back end, see Figs. 6 and 7, and around the tube F, there is placed a series of plates (f) provided with slotted arms (g) which form the key hole.

G represents a series of annular plates having notches cut irregularly in their inner edges or peripheries, two or more notches in each plate, and in the outer edges of the plates one notch is cut in each, see Fig. 11. The ends of the slotted arms (g) fit between the plates G, as shown in Fig. 6.

H, Figs. 4 and 8 represents a spring catch fitted with a case I, the edge of the spring catch bearing against the outer edges or peripheries of the plates g, as shown clearly in Fig. 4. A series of guides (h) are attached to one end of this case I, in which the edges of the plates G fit.

J, represents a series of segment tumblers, the inner edges of which are provided with a rabbet or recess which fit over the edges of the plates G. The outer edges of the tumblers have recesses (i) cut in them at varying points as shown in Fig. 10. Each plate G has a small pin (j) upon it, see Fig. 11, by which the tumblers J are moved. The outer tumbler designated by the Fig. 5, see Fig. 15, permanently attached to the outer plate, but the others are detached from their plates.

K, K, are two circular plates which are fitted on the tube F, one at its back and the other at its front end, see Figs. 4, 5, 6 and 14. These plates have ledges or shoulders (k) on their peripheries.

L, L, are segment bars, the outer ends of which have inclined recesses (l) cut in them, these segment bars are fitted around the plates K, K, and are connected by a rod (m) see Figs. 4 and 5, in which the outer plate is shown. Both bars L, being connected move simultaneously as will presently be shown.

When the lock is in a locked state as shown in Fig. 5, the pawl D, projects within the slot (d) in the casing A and prevents the band B, from turning on the casing A, and consequently the bolt pin being withdrawn

or thrown back. To unlock the lock therefore the pawl D, must be thrown out of the slot (d). In order to effect this the key is placed in the key-hole and turned and the
5 several bits of the key act against their proper, notches in the inner edges of the plates G, and the plates G are turned and also the segment tumblers J, in consequence of the pins (j) acting against them, and the
10 slots (i) are brought in line, and the spring plate (c) forces the pawl D, into the slots (i) and freed from the slot in the band B, the bolt can then be thrown back as the band is allowed to turn on the casing A. To lock
15 the lock, the bolt is thrown forward by the usual knob, and the key is inserted in the key-hole just far enough to turn the plate K. This plate is turned from left to right and the shoulder (k) turns the segment bar L,
20 both bars L being moved in consequence of their connection, and the inclined recesses (l) throw the pawl D, back into the slot in

the band B. The bar (m) which connects the two segment bars, throws the segment tumblers back to their original positions, 25 and the spring catch H, keeps the plate G in proper position when the key is withdrawn from the lock.

Having thus described my invention, what I claim as new and desire to secure by Let- 30 ters Patent is—

The arrangement of the notched annular plates G, segment tumblers J, spring pawl D and band B, on the casing A of the lock, and segment bars L, L, as herein shown for 35 the purpose of connecting and disconnecting the band B from the casing A and allowing the bolt of the lock to be operated and secured as described.

WILLIAM MAURER

Witnesses:

JOS. GEO. MASON,
WILLIAM TUSCH.