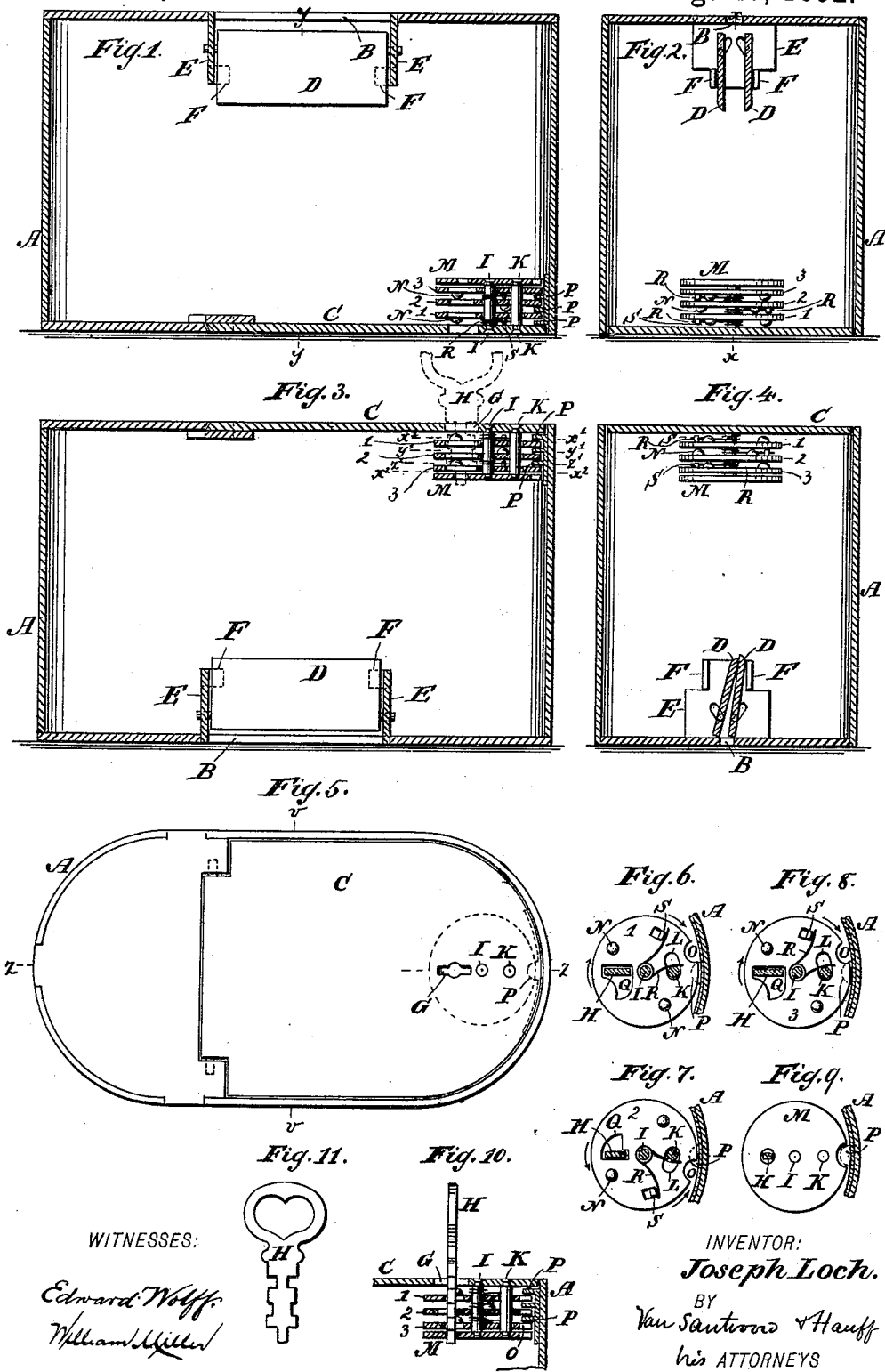


(No Model.)

J. LOCH.
LOCK.

No. 481,235.

Patented Aug. 23, 1892.



UNITED STATES PATENT OFFICE.

JOSEPH LOCH, OF BROOKLYN, NEW YORK.

LOCK.

SPECIFICATION forming part of Letters Patent No. 481,235, dated August 23, 1892.

Application filed October 8, 1891. Serial No. 408,154. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH LOCH, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Tumbler-Locks, of which the following is a specification.

This invention relates to an improved tumbler-lock which is intended particularly for portable boxes intended to receive the savings of children or grown people, but which can also be used with advantage for other purposes, and which has the advantage that the key cannot be withdrawn when the lock is open.

The peculiar and novel construction of my lock is pointed out in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 represents a longitudinal vertical section along $x x$, Fig. 2, of a portable money-box in an inverted position and provided with my lock, the lock being shown in section. Fig. 2 is a transverse section along $y y$, Fig. 1, of the same, showing a side elevation of the lock. Fig. 3 is a longitudinal vertical section along $z z$, Fig. 5, of the money-box in an upright position, showing the lock in section with the key inserted when the tumblers are in their locking position. Fig. 4 is a transverse section along $v v$, Fig. 5, of the money-box, showing the side elevation of the lock. Fig. 5 is a plan or top view of the money-box. Figs. 6, 7, 8, and 9 are horizontal sections, respectively, in the planes $x' x'$, $y' y'$, $z' z'$, and $x^2 x^2$, Fig. 3. Fig. 10 is a central vertical section of the lock, showing the key in position after the same has been turned so as to throw the tumblers into their open or unlocking position. Fig. 11 is a side view of the key detached.

In the drawings the letter A represents a box having a slit B for inserting savings and a cover C for emptying the box. At the slit or opening B are the plates D D, hinged in slots or eyes in the lugs E, so that when the box is turned with the cover up, Fig. 4, the plates D close the opening B and prevent the contents of the box being shaken or taken out through said opening. When in the position shown in Fig. 2, the plates D do not obstruct the opening B. The stops or shoulders F on the

lugs E limit the motion of the plates D. The cover C has a keyhole G for the key H. When the key is in its unlocking position, Fig. 10, it cannot be withdrawn, but must remain in the cover until moved to its locking position, Fig. 3. The cover has a pin or stud I, on which are mounted a number of tumblers 1 2 3, and a pin or stud K, projecting from the cover, passes through slots L in the tumblers, so as to limit their motion. The tumblers are confined between the cover C and between a plate M, secured to the pins I K. The tumblers are provided with projections N, which keep the tumblers a certain distance apart from one another. The tumblers when in their unlocking position have their depressions O, Figs. 6, 7, and 8, in alignment and coinciding with the tongues P, extending from box A so that the cover can be opened. When the tumblers have their depressions O to one side of the tongues P, the tumblers catch against the tongues and hold the cover C closed. The tumblers have holes Q for the insertion of the key H. By having the hole Q of tumbler 2 of a different shape from the hole of tumbler 1, as seen in Figs. 6 and 7, the key when turned in the direction of the arrow, Fig. 6, will turn the tumbler 1 in the direction of said arrow, while the tumbler 2 will be turned in the opposite direction, as indicated by the arrow in Fig. 7. In other words, the movement of the key will impart to the tumblers positive motions in opposite directions so as to bring the tumblers to their unlocking position, Fig. 10. When the key is turned back to its locking position, Fig. 3, it moves the tumblers positively to their locking position. To prevent the tumblers being accidentally moved, I provide springs R placed about the pin I and braced against the pin K, and against lugs S, projecting from the tumblers. These springs press the tumblers toward their locking positions so that the tumblers cannot be accidentally shaken or turned from such position, since the insertion of the key would be prevented if any one of said tumblers should be moved from its locking position when the key is withdrawn.

If the box is used to receive savings, and the cashier of a savings-bank holds the key of the box, said box is taken to the cashier to

be opened and emptied, after which the cashier must again lock the cover in order to close it before taking charge of the key, since the latter cannot be withdrawn until the lock is moved to its locking condition.

5 What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a box having internal projections P, of a cover having a key-
10 hole G and a pin I, the tumblers journaled on the pin and having depressions O in their peripheries, and a key H, which stands transversely to the keyhole in the cover when rotated to turn the tumblers and register their
15 depressions with the internal projections of the box, substantially as described.

2. The combination, with a box having internal projections P, of a cover having a key-
20 hole G and a pin I, the tumblers journaled on the said pin and having reversely-arranged keyholes G and slots L, and provided with peripheral depressions O, a pin K, secured to

the cover and extending through the slots in the tumblers, and a key H, which by its single movement to unlock the lock turns the tum- 25
blers in reverse directions, substantially as described.

3. The combination, in a tumbler-lock, of the pin I, the tumblers journaled on the pin and provided with keyholes G, slots L, and
30 studs s, the pin K, extending through the slots in the tumblers, and the springs R, engaged with the pivot-pin of the tumblers and bearing against the studs of the latter, and the pin
35 which extends through the slots thereof, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOSEPH LOCH.

Witnesses:

WM. C. HAUFF,

E. F. KASTENHUBER.