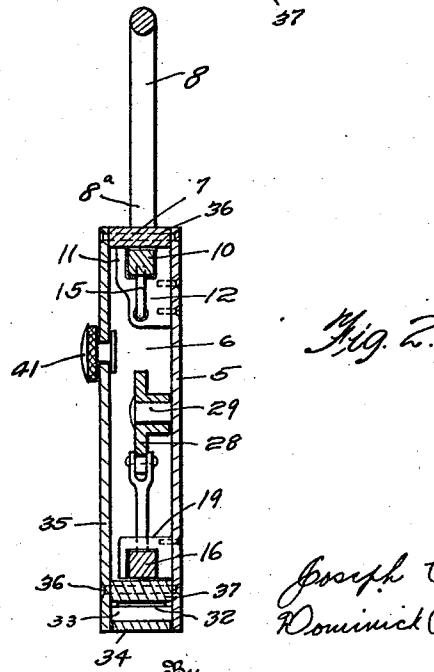
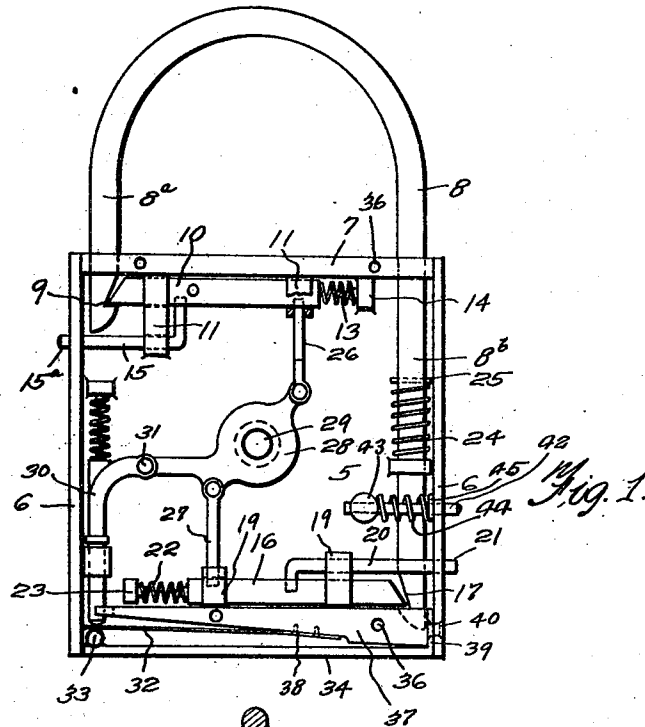


J. CIOTOLA AND D. POLIDORO.
SECRET COMBINATION LOCK.
APPLICATION FILED NOV. 7, 1921.

1,416,790.

Patented May 23, 1922.



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UNITED STATES PATENT OFFICE.

JOSEPH CIOTOLA AND DOMINICK POLIDORO, OF PHILADELPHIA, PENNSYLVANIA.

SECRET-COMBINATION LOCK.

1,416,790.

Specification of Letters Patent. Patented May 23, 1922.

Application filed November 7, 1921. Serial No. 513,433.

To all whom it may concern:

Be it known that we, JOSEPH CIOTOLA and DOMINICK POLIDORO, a citizen of the United States, and a subject of the King of Italy, respectively, both residing at 805 Sears Street, Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Secret-Combination Locks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a secret combination lock. It is intended primarily for use in connection with a theft preventing automobile wheel lock, such as that illustrated in our co-pending application, Serial Number 513,434 filed on the 7th day of November, 1921. However, as this description proceeds it will be seen that the lock is capable of general application and is useful in any relation in which a combination padlock may be employed.

In the accompanying drawing:

Fig. 1 is a front elevation of a lock constructed in accordance with the invention and with the front of the casing removed; and

Fig. 2 is a vertical sectional view through said lock.

Like numerals designate corresponding parts in both of the figures of the drawing.

In the particular lock which we have chosen to illustrate as descriptive of the invention, the rear wall 5 and side walls 6 are made of a single stamping. A filling block 7 constitutes the top wall of the lock casing and the shackle 8 moves through said filling block. The free leg 8^a of the shackle is notched, as indicated at 9, to be engaged by a latch 10 which is mounted for sliding movement in keepers 11, said keepers projecting from a bracket 12 secured to the rear wall 5. A spring 13 bears between the rear end of the latch 10 and a stop 14 carried by the rear wall of the lock and tends to move the latch 10 into engagement with the leg 8^a of the shackle. A push rod 15 is engaged with the latch 10 and its extremity 15^a projects through the side wall of the lock casing. The structure just described is duplicated at the lower part of the lock where a latch 16 is mounted for movement toward the right to engage a notch 17 formed in the leg 8^b of the shackle. The latch 16 moves through keepers 19. A push rod 20 is con-

nected to the latch 16 and its end 21 is exposed outside of the right-hand wall of the lock casing. A spring 22 bears between the left-hand end of the latch 16 and a stop 23 carried by the rear wall 5 of the lock casing. A spring 24 encircles the leg 8^b of the shackle and bears against a collar 25 carried by said leg, said spring normally tending to move the shackle to open position. It is manifest that if by pressing upon the exposed ends 15^a and 21 of the push rods 15 and 20 the latches 10 and 16 are moved inwardly the shackle will be released and the spring 24 will act to throw it to open position. However, it is not possible to thus move these latches inwardly until bolts 26 and 27 which project into said latches, are withdrawn. These bolts are connected to the opposite ends of a rocking lever 28, the latter being pivoted at 29 intermediate said bolt. A plunger 30 is pivotally connected at 31 to the lever 28 and the lower end of this plunger bears upon a leaf spring 32. An anti-friction roller 33 is disposed between said leaf spring and the bottom wall 34 of the lock casing. The front wall 35 of the casing is secured in place by rivets or like fastening devices, indicated at 36 which pass through the filling block 7 and through a second rigid filling block 37 to the under side of which the leaf spring 32 is secured at 38. Thus the bottom wall 34 lies snugly in place between the side walls 6, the rear wall 5 and the front wall 35, but this bottom wall 34 is secured only at its right-hand end. Its right-hand end is upturned, as indicated at 39 and is secured in place by a rivet 40 which passes through the adjacent side wall 6. Thus the left-hand end of the bottom wall 34 is free to move but since the lower face of the bottom wall 34 lies just flush with the lower edges of the front, rear and side walls, no one would imagine from the mere inspection of the lock that this lower wall is capable of movement. But as a matter of fact the left-hand end of the lower wall being free and the lower wall as a whole being made of resilient material, the operator may, by pressing upwardly upon the left-hand end of the bottom wall 34, force the plunger 30 upwardly and rock the lever 28 upon its pivot to withdraw the bolts 26 and 27 from their engagement with the latches 10 and 16. When this is done pressure upon the push rods 15 and 20 will result in moving these latches to re-

lease the shackle and to permit said shackle to move to open position. When the pressure upon the bottom wall 34 is released, the leaf spring 32 causes said wall to resume its former position and lie exactly flush with the lower edges of the remaining walls of the casing. At this time the casing appears to be an ordinary padlock casing and gives no evidence that a part thereof is movable to effect an initial release of the combination latches located inside of said casing.

So far as we are aware, we are the first to provide a lock wherein a part of the outside casing is movable to effect an initial unlocking of the remaining elements of the lock.

It is manifest that this idea could be carried out in many ways. While in the particular embodiment of the invention shown it is the bottom wall of the case that is movable, it is manifest that it would be well within the skill of a mechanic to make some other part of the case movable to effect the same result.

It is, therefore, to be understood that the invention is not limited to having the bottom wall the movable element of the lock casing.

The invention further contemplates the provision of certain dummy elements manipulation of which accomplishes nothing but the presence of which confuses a dishonest person who attempts to operate the lock. To this end we have mounted upon the front wall 35 a rotative button 41 which has no connection with any of the elements of the lock but its presence leads a would-be thief to conclude that the release of the lock is effected by manipulation of the button and he thus wastes time and confuses himself in manipulating said button. At 42 we have indicated a dummy push rod which slides through a stud 43 carried by the rear wall 5 and is forced outwardly by spring 44 which bears between said stud and a collar 45 on the push rod. This push rod manipulates nothing but its presence confuses the thief. In order to operate the lock the person operating the same must know just which push rod to press upon at the time that the bottom wall 34 is forced upwardly to release the latches and the presence of these dummy push rods renders it possible to effect a large number of combinations.

Having described our invention what we claim is:

1. A lock of the character described comprising a locking element, a latch for holding the same in closed position, a detent for said latch and a movable casing section connected to said detent and operating the same to release the latch upon movement of said casing section.

2. A lock of the character described comprising a locking element, a plurality of

latches for holding said locking element in closed position, detents engaging said latches and preventing their movement until withdrawn from engagement therewith and a movable casing section accessible from the exterior of the lock and connected to one of said detents to simultaneously operate them upon movement of the casing section to cause their withdrawal from engagement with the latches.

3. A device of the character described comprising a casing, a shackle mounted for movement therein, a latch engaging said shackle and holding the same in locked position, a detent, a bodily movable wall constituting a part of the casing and connections between the wall and the detent operable upon movement of said wall with respect to the remainder of the casing to withdraw said detent from engagement with the latch to permit the operation of said latch and means accessible from the exterior of the casing for operating said latch.

4. A device of the character described comprising a casing having a movable wall section, a shackle movable in said casing, spring means tending to move said shackle to open position, a plurality of latches engaging said shackle and holding it in locked position, push rods for said latches having portions exposed outside of said casing, bolts engaging said latches and connections between said bolts and the movable wall section acting to withdraw said bolts from their engagement with the latches upon movement of said wall section with relation to the remainder of the casing.

5. A device of the character described comprising an enclosing casing having one of its walls movable with respect to the remainder of the casing, a shackle mounted for movement in said casing, a spring tending to throw said shackle to open position, a pair of latches for engaging said shackle for holding the same in locked position, push rods for said latches exposed at the outside of the casing, spring means tending to move said latches into engagement with the shackle and to project the push rods outwardly, a lever pivoted intermediate its end, bolts pivotally connected to said lever upon the opposite sides of its pivot, said bolts engaging said latches to prevent the movement of said latches until said bolts are withdrawn and a connection between said lever and the movable wall through which said lever is rocked upon its pivot upon movement of said wall with respect to the remainder of the casing to withdraw said bolts.

In testimony whereof we hereunto affix our signatures.

JOSEPH CIOTOLA.
DOMINICK POLIDORO.