J. RZESZUTO.

PERMUTATION LOCK.

APPLICATION FILED JULY 27, 1917.

1,250,668.

Patented Dec. 18, 1917.

Fig. 1.

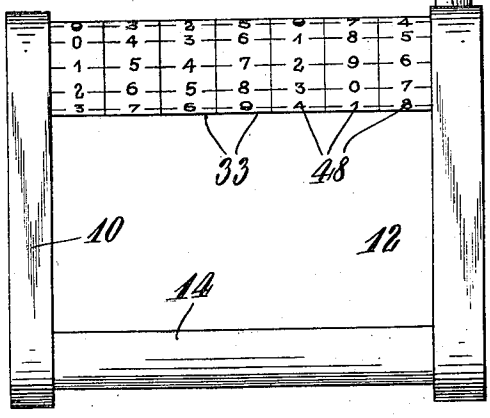
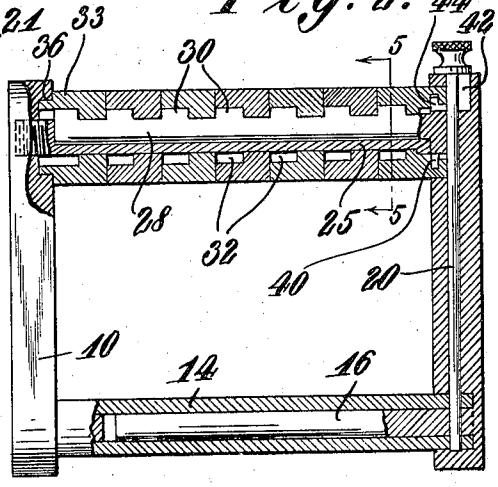


Fig. 2.



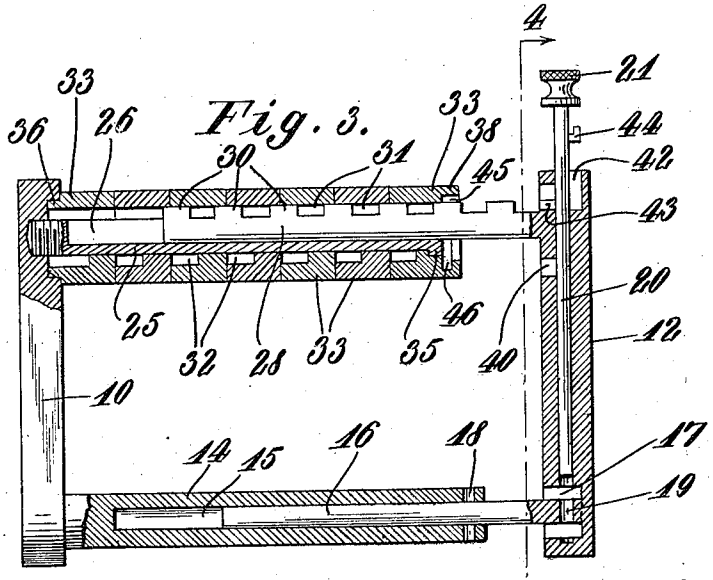


Fig. 3.

Fig. 4.

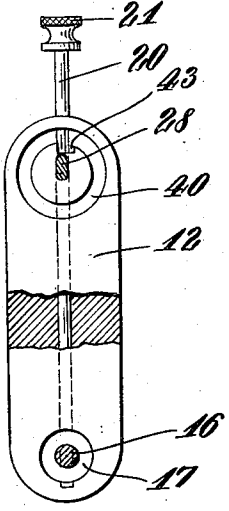


Fig. 5.

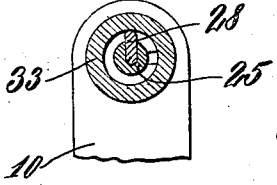
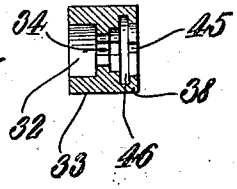
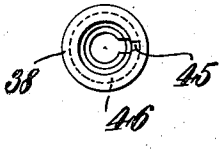


Fig. 6.



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Fig. 7.



INVENTOR

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UNITED STATES PATENT OFFICE.

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PERMUTATION-LOCK.

1,250,668. Specification of Letters Patent. Patented Dec. 18, 1917.

Application filed July 27, 1917. Serial No. 183,056.

To all whom it may concern:

Be it known that I, JACOB RZESZUTO, a citizen of Poland, resident of North Chicago, county of Lake, and State of Illinois, have invented certain new and useful Improvements in Permutation-Locks, of which the following is a specification.

This invention relates to improvements in locks, and particularly to those of a portable nature known as padlocks, which may further be divided into types called keyless, the operation of locking and unlocking being done by the movement of permutative elements.

The principal object of the invention is to provide a lock of the class described with a supplementary securing means whereby additional safety is secured.

This and other like objects are attained by the novel construction and combination of parts hereafter described and shown in the accompanying drawing, forming a material part of this disclosure, and in which—

Figure 1 is a side elevational view of a lock made in accordance with the invention.

Fig. 2 is a similar side elevational and vertical sectional view taken through the center of the same.

Fig. 3 is a like sectional view, the parts being shown in another position.

Fig. 4 is a transverse sectional view taken on line 4—4 of Fig. 3.

Fig. 5 is a fragmental transverse sectional view taken on line 5—5 of Fig. 2.

Fig. 6 is a longitudinal sectional view taken through one of the tumblers, and

Fig. 7 is an end view of the same.

The lock is comprised of a pair of similarly shaped side members 10 and 12, the same being of substantially parallel thickness and width, and having rounded ends.

Formed or rigidly attached to one of the side members 10, is a cylindrical bar 14, containing an axial bore 15, in which may be slidably engaged the rod 16, formed with the opposite member 12, and around the base of which is an annular groove 17, receptive of the extreme outer end of the bar 14, near the end of which is a transverse passage 18, alinable with a similar drilled opening 19, passing longitudinally through the side element 12, and in which is slidably engaged a spindle 20, having an extending head 21, the arrangement being such that when the bar 14 has entered the bottom of the recess 17, it may be locked therein by pressing downward the spindle 20 in an obvious manner.

Rigidly engaged at the other end, on the inner side of the side element 10 is another bar 25, containing a longitudinal slot 26, in which is slidably engaged the ward bar 28, formed with the other side member 12, parallel to the rod 16, the ward bar carrying upon its upper surface a plurality of wards 30, interposed with spaces 31, each of the wards being engageable in appropriate spaces 32, formed in the tumblers 33, all of which are freely rotatable upon the fixed bar 25 and held in place by the extended projection 35, formed at its end, the first of the tumblers 33 having an extending annulus 36, engaging in an opening formed in the face of the side element 10, concentric to the bar 25, while the last tumbler 33 has an extending portion 38, receivable in an appropriately formed annular recess 40 in the inner side of the side member 12.

Formed in the top of the side member 12 is a longitudinal slot 42, terminating at the inner diameter of the annular recess 40, which also has an interior slot 43, and secured to the spindle 20 near the head 21, is a hook detent 44, adapted to slide in the slot 42 as the spindle is moved downward, after which it may be turned so that the hook will engage through the opening or passage 45, within the annular recess 46 formed in the outer tumbler 33, all of these tumblers carrying a series of numerals 48 upon their exterior, the same being placed relatively to their interior longitudinal slots 34, receptive of the wards.

In operation, the parts having been assembled, and the lock in a closed position as shown in Fig. 1, let it be desired to open the same. This is accomplished by turning the tumblers 33, so that the selected numbers are in a uniform row, and at the same time the slots 45 and 34 are in an uppermost position, whereupon it will be possible to rotate the knob 21 so as to release the hook 44 from engagement in the annular recess 46, permitting the lock elements 10 and 12 to be separated after first raising the spindle 20, all of the several tumblers being retained upon the slotted bar 25.

When it is desired to close the lock, the bars 16 and 28 are inserted in their appropriate openings, the two sides 10 and 12 pressed together, the spindle 20 pushed

down as far as it will go and partially rotated so as to reëngage the hook 44 within the annular recess 46, and all of the several tumblers turned in such manner as to maintain the wards 30 within the annular grooves 32 and the hook 44 within the recess 46 so that it cannot be turned by operating the knob 21.

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

1. In a lock of the class described, the combination with a pair of separable side elements, a cylindrical bar rigidly attached to one of said side elements, a slotted bar attached to the same element at the opposite end thereof, a rod engageable in said cylindrical bar, attached to the other of said side elements, a ward bar carried by the said second side element operable in the mentioned slot, a plurality of wards formed with said ward bar, cylindrical tumblers engageable with said wards encircling said bar, the outermost of said tumblers having an interior annular recess and an opening leading thereto, a spindle movable longitudinally in the second named side element, said spindle being engageable in the mentioned cylindrical bar, and a hook formed with said spindle engageable in the mentioned recess in the outermost tumbler.

2. In a lock of the class described, the combination with a pair of separable side elements, a cylindrical bar secured to one of said side elements, said cylindrical bar having a perforation in the outer end, a slotted bar engaged with the same side element opposite to said cylindrical bar, a rod formed with the second named side element, enterable in said cylindrical bar, a ward bar carried by said second named side element slidable in said slotted bar, a plurality of tumblers encircling said bar, a spindle slidable longitudinally in said second element, a hook formed with said spindle and means formed with the outermost of said tumblers by means of which said spindle may be held in operative position or released therefrom.

3. In a lock of the class described, the combination with a pair of flat side elements, a cylindrical bar formed with one of said side elements, said cylindrical bar being enterable within an annular recess formed in the opposite side element, a rod formed on the second named side element engageable within said cylindrical bar, a bar rigidly engaged with the first named side element, said bar being slotted longitudinally, a ward bar formed with the second named side element adapted to slide in the mentioned slot, a plurality of rotatable tumblers encircling said bar, said tumblers having recesses engageable with said wards, a spindle slidable longitudinally in the second named side element, said spindle being adapted to pass through a perforation formed in said cylindrical bar, a hook formed with said spindle, an annular recess having a slot leading thereto formed in the outermost of said tumblers receptive of said hook, and a knob for operating said spindle.

In testimony whereof I have affixed my signature.

JACOB RZESZUTO.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."