

W. S. FARNSWORTH & W. H. REED.
COIN CONTROLLED LOCK.

APPLICATION FILED MAY 18, 1909.

948,212.

Patented Feb. 1, 1910.

2 SHEETS—SHEET 1.

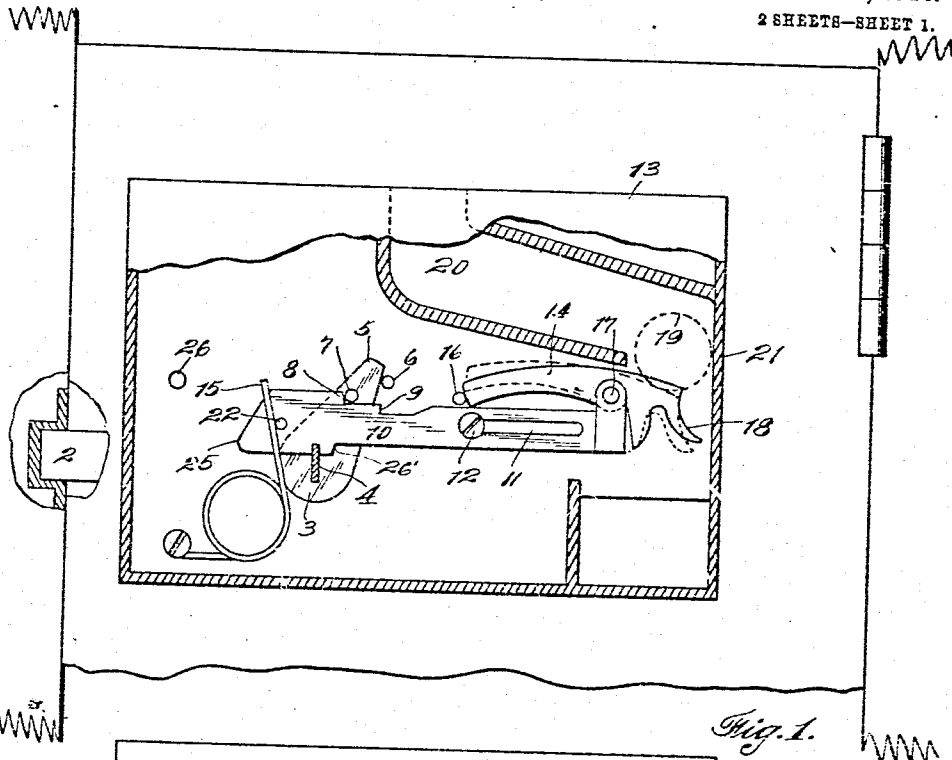


Fig. 1.

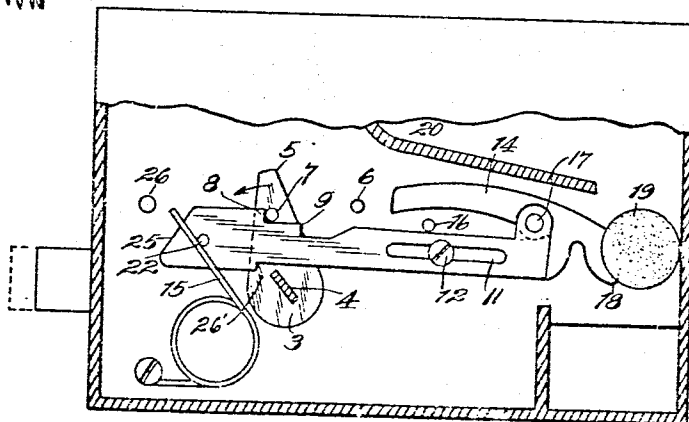


Fig. 2.

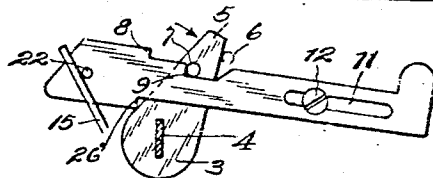


Fig. 3.

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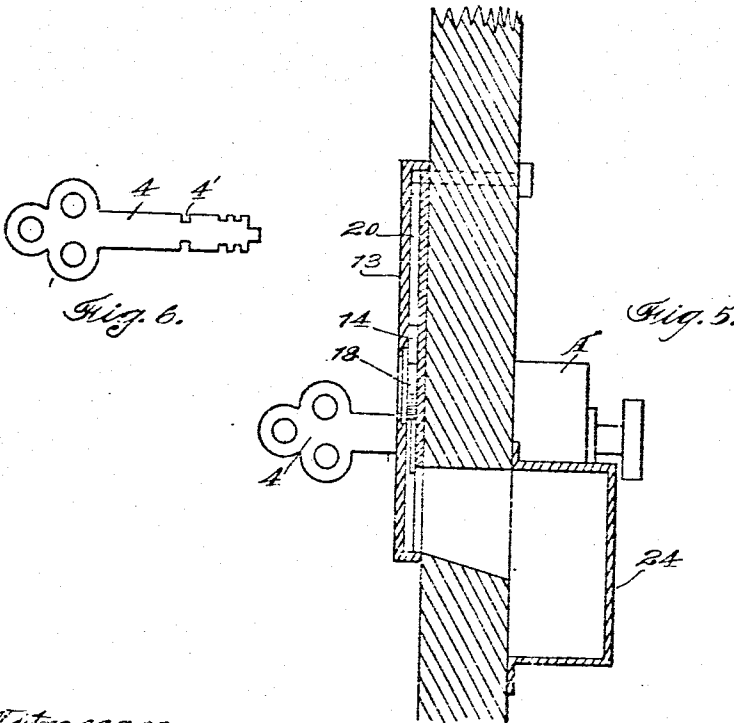
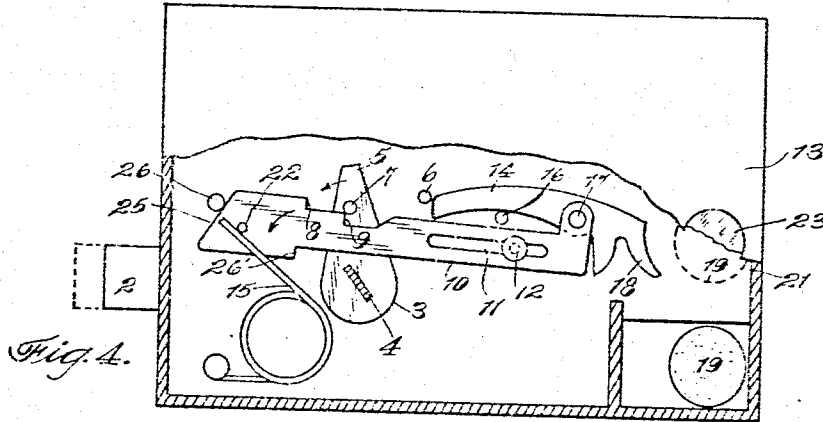
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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SIGNORS TO COIN CONTROLLED LOCK COMPANY, OF PETALUMA, CALIFORNIA, A
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COIN-CONTROLLED LOCK.

948,212.

Specification of Letters Patent.

Patented Feb. 1, 1910.

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To all whom it may concern:

Be it known that we, WILLIS S. FARNSWORTH and WILLIAM H. REED, both citizens of the United States, residing at Petaluma, in the county of Sonoma and State of California, have invented new and useful Improvements in Coin-Controlled Locks, of which the following is a specification.

This invention relates to locks, and pertains especially to a lock controlled by a slug, coin, or other token.

The object of the invention is to provide a simple, cheap, practical and efficient lock which can only be opened upon the depositing of a proper coin or token.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a front elevation of the invention with the front cover plate broken away and with the lock controlling mechanism in normal locked position, with the key in place, the key being shown in section. Fig. 2 is a similar view with the parts thrown forward in position to retract the bolt and allow the key to be removed. Fig. 3 is a detail of the key controlling mechanism with the key in position ready to unlock the lock the second time. Fig. 4 shows the parts the moment the coin is dropped and the key retaining means returning to initial position. Fig. 5 is a vertical section through the mechanism. Fig. 6 represents a suitable key.

In the embodiment of the invention we have applied it in conjunction with an ordinary spring lock A, of Fig. 5, having the usual spring projected bolt 2, Fig. 1, and the knob shank 3 provided with a keyhole into which a flat key 5 is inserted to operate the bolt in the usual fashion.

Carried by the knob shank or actuating shank 3 is a radial arm 5 which turns when the key turns. The backward motion of the arm 5 is limited by a suitable stop 6, and this arm carries a lug 7 adapted to engage successively the shoulders 8—9 on the sliding plate 10, on the successive oscillations of the arm due to the turning of the key. The plate 10 is slotted lengthwise, as shown at 11, and fulcrums in this slot on a pin 12 carried by a fixed part of the containing

means, here represented by the case 13. Pivoted on the rear end of the sliding and rocking plate 10 is a latch member 14 which is adapted, when the plate 10 is thrown backward under the impulse of the spring 15, to engage behind a fixed stop 16. Whenever the latch 14 is engaged behind the fixed stop 16, as shown in Fig. 1, it is impossible to move the bar 10 forward; and, in fact, it is impossible to remove the key, because the key 4 is provided with a slot 4' adapted to receive the lower edge of the sliding plate 10 when the parts are in the position shown in Fig. 1. The latch 14 is fulcrumed on bar 10, as shown at 17, the forward end being heavier so that it will naturally drop down into the path of the stop 16. The rear end of the latch 14 has a curved horn 18, or is otherwise suitably fashioned to form a seat for a coin or other token, as represented at 19, when the parts are in the position shown in Fig. 2.

In practice, assuming that the parts are in the position shown in Fig. 1 and the key 4 inserted into the keyhole, in order to operate the lock a coin 19 is dropped into the chute 20 and rolls down until it strikes the top of the rear end of the latch 14, as shown in Fig. 1, and encounters the rear vertical wall 21 of the chute 20. The weight of the coin is sufficient to tip up the latch 14 into the dotted line position shown in Fig. 1. This releases the latch from interference with the fixed stop 16, so that the key can be turned in the direction of the arrow, Fig. 2, and to bring the parts into the position shown in Fig. 2; this forward movement of the bar 10 being accomplished by the engagement of the lug 7 with the front shoulder 8 on bar 10. This turning of the key is sufficient both to retract the latch bolt, so that the door or other sealed part may be opened, and at the same time it will allow the coin 19 to drop down a step into the position shown in Fig. 2; the shape of the horn 18, and the distance between it and the rear rigid wall 21 of the chute, however, being insufficient to let the coin fall farther on this first movement of the key. The key may then be removed. In this removal of the key, the ordinary spring (not here shown) in connection with the latch bolt 2 projects the bolt 2 forward again, so that the door will snap closed, and also returns the arm 5 into

the position shown in Fig. 3. In this return movement of the arm 5 the bar 10 does not move, except as its front end is acted on slightly and lifted by the action of the spring 15 on the lug 22 on bar 10; this lifting action serving to bring the lug 7 on the arm 5 into engagement with the second shoulder 9 on bar 10. The key is then removed.

At this point it may be stated that this locking device is particularly intended for use in cloak rooms and other places where each wardrobe or safety deposit box is provided with a special lock and key, and each guest or customer may have an individual wardrobe or box and look out for his own things or valuables, all that is necessary for him to do being to deposit a coin and turn the key once to open the box to put in his things, remove the key and close the box. Then when he wishes to take his things out again he reinserts his key into the keyhole; the coin previously deposited still being in the position shown in Fig. 2, and the coin showing through a transparency or window 23 in the casing 13 which houses the mechanism.

In unlocking this lock the second time, after inserting the key, the bar 10, by reason of the engagement of the lug 7 with the rear shoulder 9, is thrown forward a step farther than it was the first time, so as to allow the coin to drop down into the position shown in Fig. 4, and thence to be caught into a suitable box or receptacle 21, Fig. 5. In this second unlocking movement the bar 10 is thrust so far forward that its front beveled nose 25 engages a fixed pin 26 so as to press the front end of the bar 10 downward, rocking it on its pivot 12 and releasing the bar from the pin or lug 7 on arm 5, as shown in Fig. 4. Thereupon the spring 15 acts on the bar 10 to throw it back until the forward shoulder 8 is intercepted by the lug 7. Releasing the turning pressure on the key allows the bolt to again be projected outward, and the arm 5 and the several parts to be returned to initial position, represented in Fig. 1, and with the notch 4' in the key caught by the lower projecting edge portion 26' of the bar 10. In this position the key cannot be removed until a fresh coin has been deposited and the parts turned as shown in Figs. 2 and 3.

The housing 13 may take any suitable form, and may be attached to the door or other thing to which it is applicable, in any suitable manner.

From the foregoing it is seen that dropping the coin into the slot releases the latch 14 and allows the door to be opened and the key to be removed. The coin holds the latch in elevated position so that the door can be unlocked once more after the key is inserted. On the release of the coin from the latch the

key is prevented from withdrawal, and the lock cannot be again actuated until the latch is released by a fresh coin.

It is manifest that this little device is applicable to stock locks, or it may be made in conjunction with a special lock.

Keys may be numbered to correspond with the boxes, and preferably a glazed opening, as 23, is provided, so as to show that counterfeit tokens are not used.

It is manifest or possible that the construction herein specified may be varied without departing from the principle of the invention, and we desire it to be understood that the invention is not limited to any specific form or arrangement of parts, except in so far as such limitations or their mechanical equivalents are specified in the claims.

Having thus described our invention, what we claim and desire to secure by Letters Patent is—

1. The combination in a lock, of a latch bolt and a key for operating the same, and coin-controlled mechanism operative only by successive movements of the key for controlling the lock.

2. The combination in a lock, of a latch bolt and a key for operating the same, and coin-controlled mechanism operative by the key for controlling the lock, said mechanism including means which permit of successive retractions of the latch bolt and means normally preventing the removal of the key from the lock.

3. The combination in a lock, of a latch bolt and a key for operating the same, and coin-controlled mechanism operative by the key for controlling the lock, said mechanism including means which permit of a limited number of retractions more than one of the latch bolt.

4. The combination in a lock, of a latch bolt and a key for operating the same, and coin-controlled mechanism operative by the key for controlling the lock, said mechanism including means which permit of successive retractions of the latch bolt.

5. The combination in a lock, of a latch bolt and a key for operating the same, and coin-controlled mechanism operative by the key for controlling the lock, said mechanism including means which permit the successive retractions of the latch bolt and which normally prevents the removal of the key, and which means is operative by the key first to retract the bolt and allow the removal of the key.

6. The combination in a lock, of a latch bolt and a key for operating the same, and coin-controlled mechanism operative by the key for controlling the lock, said mechanism including means which normally prevents the removal of the key, and which means is operative by the key first to retract the bolt and allow the removal of the key, said

means having a second movement again to retract the bolt and to reengage the key and prevent its removal.

7. In a lock, the combination of a turn-
5 able part having a keyhole, a key therefor, and coin-controlled mechanism normally engaging the key to prevent its removal, said mechanism including means operative by a coin to permit of two successive movements
10 only of the key with a single coin.

8. In a lock, the combination of a turn-
able part having a keyhole, a key therefor, a sliding rockable bar engageable by the key, and a coin-controlled means acting on the
15 bar normally to prevent the operation of the key, said last-named means including a pivoted latch on the bar, and a fixed stop normally in the path of the latch.

9. In a lock, the combination of a turn-
20 able part having a keyhole, with a key therefor, a sliding member engageable with the key, and a coin-controlled pivoted latch member on the bar normally preventing the operation of the key.

10. In a lock, the combination of a turn-
25 able part having a keyhole, with a key therefor, a sliding member engageable with the key, a coin-controlled pivoted latch member on the bar normally preventing the operation of the key, and means carried by
30 said rockable bar engaging said sliding member to actuate the latter.

11. In a lock, the combination of a turn-
able part having a keyhole, with a key
35 therefor, a sliding member engageable with the key, a coin-controlled pivoted latch member on the bar normally preventing the operation of the key, means carried by said rockable bar engaging said sliding member
40 to actuate the latter, and means by which said sliding part is capable of a plurality of successive movements in the same direction.

12. In a lock, the combination of a turn-
45 able part having a keyhole, with a key therefor, a sliding member engageable with the key, a coin-controlled pivoted latch member on the bar normally preventing the operation of the key, and means by which said
50 sliding member is capable of a plurality of successive motions in the same direction.

13. In a lock, the combination of a turn-
able part and a key engageable therewith to turn said part, a sliding member having

successive retractions imparted thereto by 55
the key, and a coin-controlled means normally preventing the movement of said sliding part.

14. In a lock, the combination of a turn-
able part and a key engageable therewith to 60
turn said part, a sliding member operative by the key, and a coin-controlled means normally preventing the movement of said sliding part, said last-named means including a
65 pivoted latch member on the sliding part, a coin chute, said latch member projecting normally into the path of said coin chute, and means on the latch member coacting with said chute to permit of a plurality of
70 successive motions of said sliding member in the same direction.

15. In a lock, the combination of a turn-
able part and a key for operating the same, a sliding member engageable by the key, said sliding member having both a sliding 75
and pivotal motion, a coin chute, a latch on the sliding member projecting normally into the chute, a stop normally in the path of the latch member to prevent the operation of the key, and means by which on the
80 release of the latch member from the stop said sliding member may be moved a plurality of times successively in the same direction.

16. In a lock, the combination of a turn- 85
able part and a key for operating the same, a sliding member engageable by the key, said sliding member having both a sliding and pivotal motion, a coin chute, a latch on the sliding member projecting normally 90
into the chute, a stop normally in the path of the latch member to prevent the operation of the key, and means by which on the release of the latch member from the stop
95 said sliding member may be moved a plurality of times successively in the same direction, said last-named means comprising a stop member on said turnable part engageable with successive stop members on said
100 sliding member.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

WILLIS S. FARNSWORTH.
WILLIAM H. REED.

Witnesses:

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RICHARD M. SKINNER.