

July 15, 1952

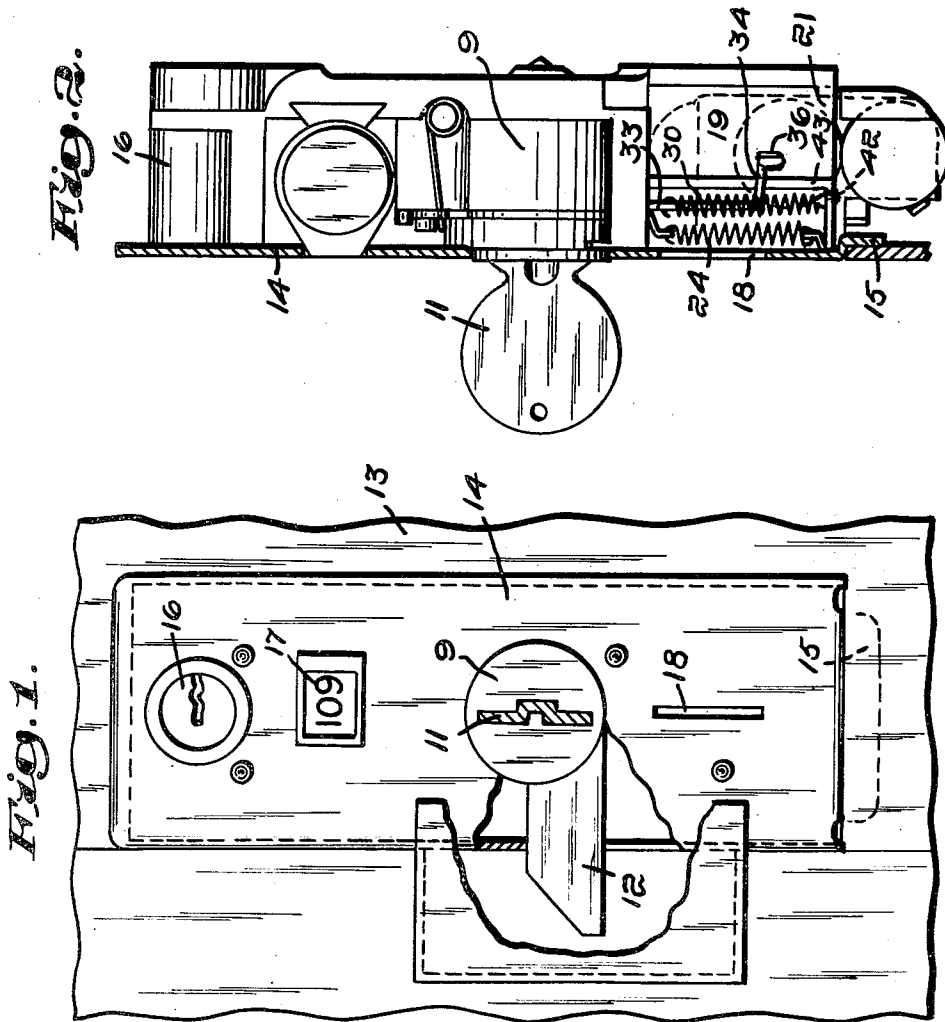
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2,603,335

MULTIPLE COIN ATTACHMENT FOR COIN-CONTROLLED LOCKS

Filed Oct. 18, 1949

2 SHEETS—SHEET 1



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2 SHEETS—SHEET 2

Fig. 3.

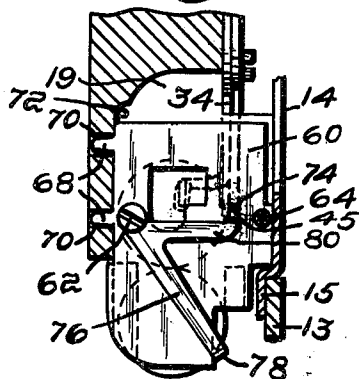


Fig. 4.

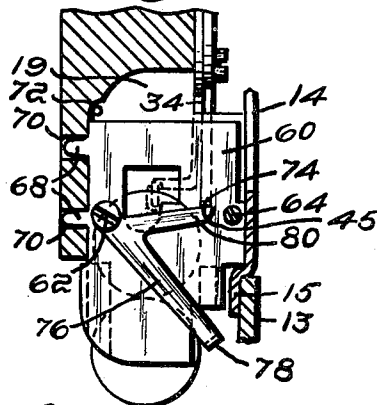


Fig. 6.

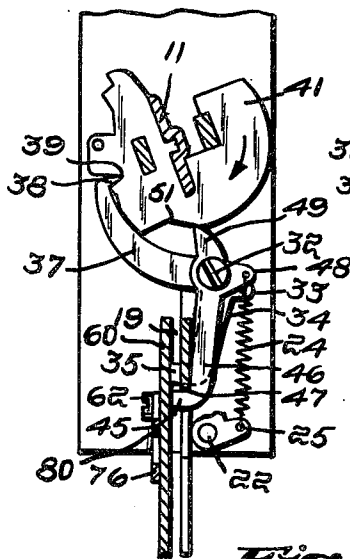


Fig. 7.

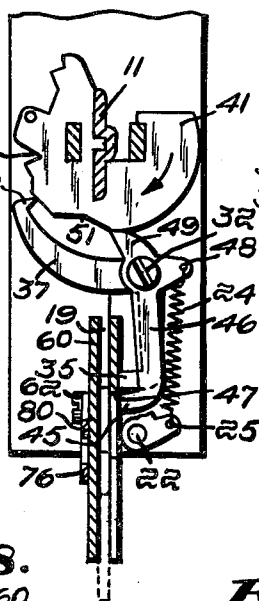


Fig. 5.

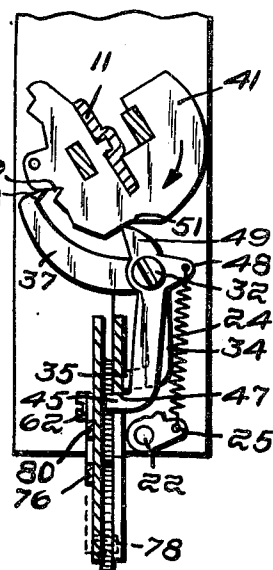


Fig. 8.

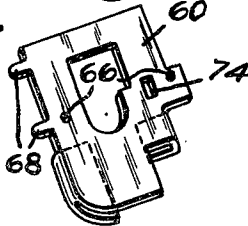


Fig. 10.

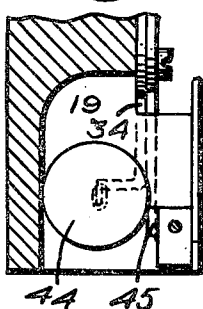
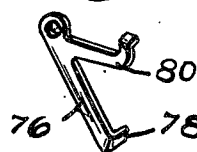


Fig. 9.



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UNITED STATES PATENT OFFICE

2,603,335

MULTIPLE COIN ATTACHMENT FOR COIN-CONTROLLED LOCKS

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2 Claims. (Cl. 194—92)

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This invention relates to a multiple coin attachment for coin controlled locks for increasing the number of coins necessary to effect operation of the lock. Dime checking cabinets and locks of the nature shown in Patent No. 1,640,605, dated August 30, 1927, for example, are constructed to require the insertion of a dime for releasing the lock for movement from the unlocked to the locked position. The object of the present invention is to provide an attachment whereby two or more dimes will be required to effect such releasing of the lock.

The attachment comprises a coin receiving magazine secured to the coin receiver of the lock in position to receive coins therefrom, and means associated with the magazine and lock is provided for retaining a predetermined plurality of coins in the magazine and receiver with the top coin in position to effect the usual releasing of the lock when a coin is present. Other cooperating means is provided for releasing the coins from the magazine and receiver when the lock is released and rotated to a predetermined position. The production of a novel combination of this nature for the purpose described comprises a further object of the invention.

These and other features of the invention will be best understood and appreciated from the following description of a preferred embodiment thereof selected for purposes of illustration and shown in the accompanying drawings, in which:

Fig. 1 is a front elevation of a lock embodying my invention,

Fig. 2 is a side elevation thereof,

Fig. 3 is a fragmentary view showing the coin receiving magazine attached to the coin receiver together with coin retaining means in coin retaining position,

Fig. 4 is a like view showing the coin retaining means in coin releasing position,

Fig. 5 is a fragmentary view of the lock mechanism showing the parts in normal unlocked position,

Fig. 6 is a similar view showing the cylinder locked against rotation when no coin is deposited in the receiver,

Fig. 7 is a similar view showing the position of the parts when the lock has been turned to locking position and the coin discharged from the receiver and magazine,

Fig. 8 is a perspective view of the coin receiving magazine,

Fig. 9 is a perspective view of a coin retaining lever which is pivotally associated with the magazine, and

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Fig. 10 is a sectional view through the coin receiver constructed to operate with a single coin as in said Patent No. 1,640,605.

My invention is particularly applicable to coin controlled locks of the nature shown in said Patent No. 1,640,605 and, for purposes of description, I have herein disclosed the same as an attachment to the lock shown in this patent. The following described mechanism is common to both this application and said patent.

In the drawings, 9 indicates generally a key cylinder equipped with the usual locking tumblers adapted to be manipulated by a key 11, which in the type of lock illustrated serves as an identifying check by which the customer may recover or obtain access to the belongings which he has deposited in a parcel locker.

The key cylinder is provided near its outer end with a locking bolt 12, adapted to be moved with the cylinder from the unlocked position shown in Fig. 5 to the locked position shown in Fig. 1. A fragment of the front plate of the locker cabinet frame is shown in Fig. 1, and indicated by reference character 13. The front plate 14 of the lock proper is disposed over an opening in the plate 13, its lower end being provided with a lip 15 engaging the inner face of the plate 13 and its upper end being equipped with a lock 16, by which the plate 14 and the parts assembled thereon are detachably located in position in the cabinet. A recorder 17 may be connected to the lock so as to be operated by each actuation of the lock, and whereby the number of lock actuations, and consequently the number of coins deposited, is recorded.

The front plate 14 is provided beneath the key cylinder with a coin slot 18, through which a coin may be inserted edgewise into the coin receiver 19 at the back of the plate. As shown in Fig. 10 and in said patent, the coin is retained in this receiver, as will be explained, until the lock has been moved to locked position, whereupon the coin will be released and permitted to drop into a coin box or coin chute 21.

Upon a screw stud or pin 32 there is pivotally mounted a locking member, comprising a projection 33, to which the upper end of a spring 30 is attached; an arm 34 provided at its lower end with a finger 35, adapted to project into the coin receiver 19 through an opening 36 in the rear wall thereof; and an arm 37 equipped at its upper end with a tooth 38, adapted to engage in a notch 39, formed in the perimeter of a plate 41 carried by and forming a part of the key cylinder 9. The cylinder, when the lock is in unlocked position,

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is disposed in the position shown in Fig. 5, with the tooth 38 just above the notch 39. When the cylinder is turned in a clockwise direction, in an endeavor to lock the lock, this tooth rides into the notch 39 and locks the cylinder against rotation, as will be apparent from an inspection of Fig. 6.

The arm 37 is normally urged in a clockwise direction about its fulcrum 32 by the spring 30, which is connected at its lower end at 42 to a stationary member 43 of the lock casing. This action takes place, however, only in the event that no coin is present in the receiver 19, when the finger 35 is permitted to enter the receiver, as illustrated in Fig. 6. The coin receiver illustrated in Fig. 10 and in said patent is constructed to operate upon the insertion of a single coin 44. If the coin 44 has been deposited in the receiver through the slot 18 prior to turning the key cylinder, this coin will prevent the entrance of the finger 35 into the receiver, thereby preventing the tooth 38 from entering the notch 39, with the result that the key cylinder is free to turn to fully locked position.

The coin is retained in the receiver 19 by a coin-retaining means comprising the tail 45 of a lever 46, also fulcrumed upon the stud 32, this tail being adapted to enter the receiver through an aperture 47 in the rear wall thereof. The upper end of a spring 24 is attached to a lateral extension 48 of this lever, whereby the lever is urged in a clockwise direction about its fulcrum. The upper arm 49 of the lever is adapted to engage the perimeter of the cylinder plate 41, which is shaped to provide a cam depression 51 into which the arm 49 falls when the lock is in unlocked position, as shown in Figs. 5 and 6. When, however, the cylinder has been turned in a clockwise direction nearly to completely locked position, the high portion of the cam will engage the arm 49, swinging the lever in a counter-clockwise direction to withdraw the finger 45 from the coin receiver, thereby permitting the coin to drop from the receiver into the coin box beneath, this position of the parts being shown in Fig. 7 of the drawings. Upon return movement of the key cylinder to unlocked position, the finger 45 will again enter the receiver in position to hold the next coin deposited therein until the lock approaches fully locked position.

The operation of the above described mechanism, with the single coin receiver shown in Fig. 10, is briefly as follows. Assuming the parts to be in the unlocked position illustrated in Fig. 5, if attempt be made to turn the key cylinder in a clockwise direction without previously depositing a coin in the receiver, locking movement of the lock will be prevented by the entrance of the tooth 38 into the notch 39. If, however, a coin has been deposited in the receiver through the slot 18, such coin will prevent entrance of the finger 35 into the slot, and consequently the entrance of the tooth 38 into the notch 39; the key cylinder is therefore free to turn to locked position. As the lock approaches locked position, the lever 46 will be rocked in a counter-clockwise direction, withdrawing the tail 45 from the receiver so as to permit the discharge of the coin therefrom into the coin box. Upon unlocking movement of the lock, the parts are all restored to the normal position previously described.

The object of the present invention is to provide a relatively simple attachment for the above described single coin lock which will convert it into a lock requiring two or more coins to effect

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the operations heretofore requiring but a single coin.

The attachment comprising the invention embodies a coin receiving magazine 60 constructed to be secured to the coin receiver 19 by means of two screws 62 and 64 extending through holes 66 in the magazine and threaded into the coin receiver. As thus attached the magazine is disposed to receive coins thereinto from the receiver 19. The magazine is furthermore properly located and secured by two fingers 68 integral therewith and extending into two holes 70 in the receiver. Also, as illustrated in Figs. 3 and 4, one wall of the receiver is cut away at 72 to widen the coin slot sufficiently to permit the inserted coin to pass the coin retainer 45 and drop downwardly into the magazine. The magazine is recessed at 74 to receive the retainer 45 there-through.

Pivoted to the screw 62 is a lever having a coin retaining arm 76 provided with a coin engaging finger 78 on its free end. An arm 80 also integral with the lever extends outwardly to the recess 74. When the lever is in the position of Fig. 3 the arm 80 is disposed beneath the recess 74 and projecting of the retainer 45 through the recess and above the arm prevents upward pivotal movement of the arm and lever. In this position of the lever, the finger 78 is in the coin retaining position of Fig. 3 and the uppermost coin is held in position to be contacted by the finger 35. When the retainer 45 is retracted the lever is free to pivot upwardly and release the coins. The operation is the same as already above described except that a plurality of coins is required to effect operation of the lock.

It will be understood that considerable sums are invested in the thousands of single coin controlled locks in present use and the employment of my invention for the purpose of increasing the number of coins required to operate the lock, when and if such increase becomes necessary, eliminates the discarding of these locks and the very substantial loss that such action would entail.

Having thus disclosed my invention what I claim as new and desire to secure by Letters Patent is:

1. In a coin controlled lock having a rotary key cylinder, a coin receiver, a cylinder locking member comprising a portion adapted to enter said receiver and a portion adapted to lockingly engage said cylinder, means for yieldingly urging said member into locking position, the presence of a coin in predetermined position in said receiver being adapted to render said member inoperative, means for retaining a coin in said predetermined position in the receiver, and means cooperating with the last named means for releasing the coin when the cylinder lock is disengaged and the cylinder is rotated to a predetermined position; an attachment comprising the combination of a coin receiving magazine adapted to be attached to said coin receiver in position to receive coins therefrom, and mechanism associated with the magazine and adapted to cooperate with the coin retaining means for retaining a plurality of coins in the magazine and receiver with the top coin in said predetermined position in the receiver, movement of said coin retaining means to coin releasing position being operative through said mechanism to release said coins from the magazine and receiver.

2. The attachment defined in claim 1 in which said mechanism comprises a pivoted lever having a coin retaining arm adapted to be in position

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to retain said plurality of coins when said coin retaining means is in coin retaining position and a second arm for engaging the coin retaining means and holding the first-named arm in coin retaining position when the coin retaining means is in coin retaining position. 5

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
546,265	Williams -----	Sept. 10, 1895
1,256,181	Smith -----	Feb. 12, 1918
1,933,263	Hofmann -----	Oct. 31, 1933