

No. 889,615.

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R. JOHNSON.
LOCK.

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Fig. 1.

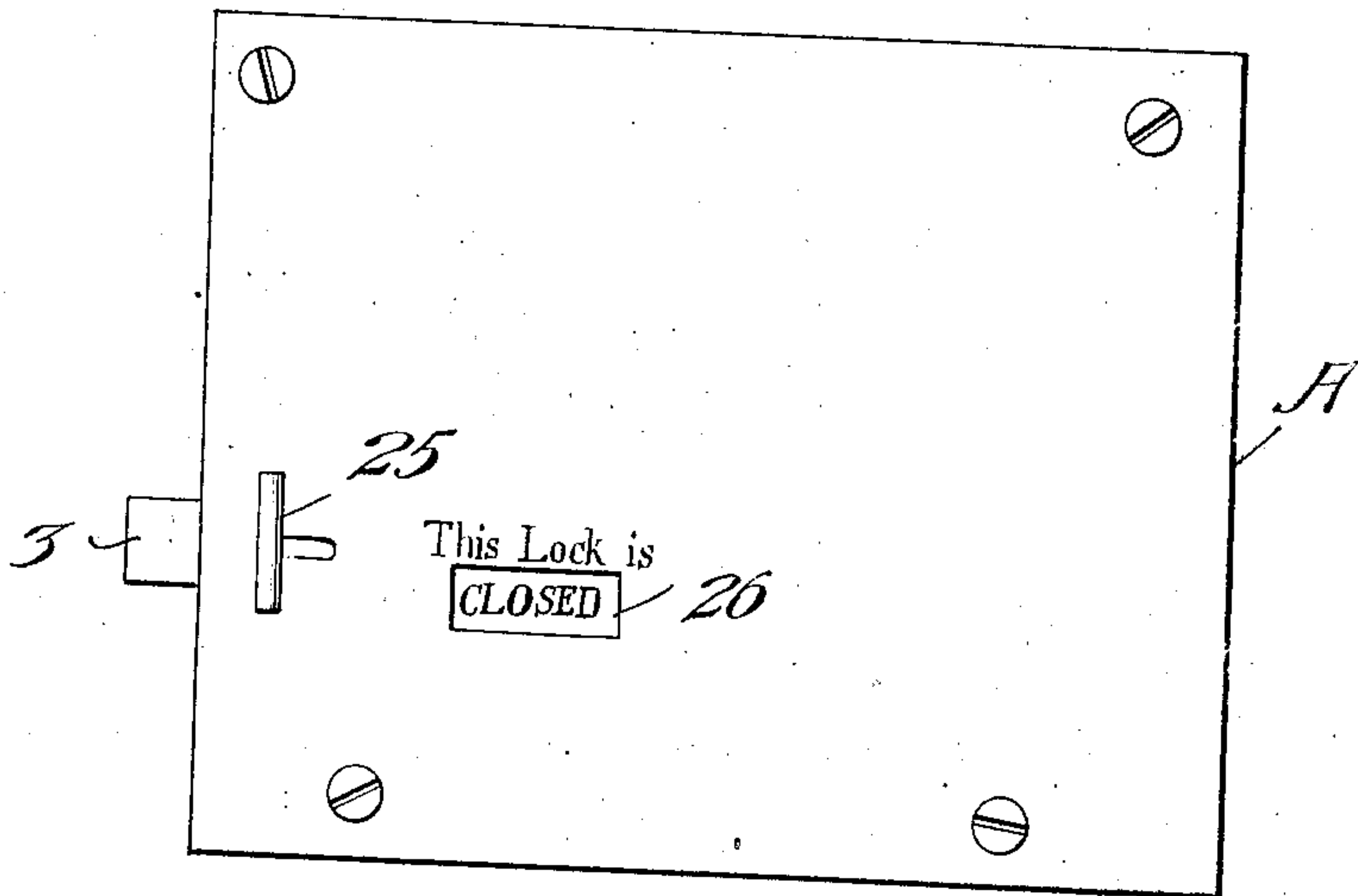


Fig. 2.

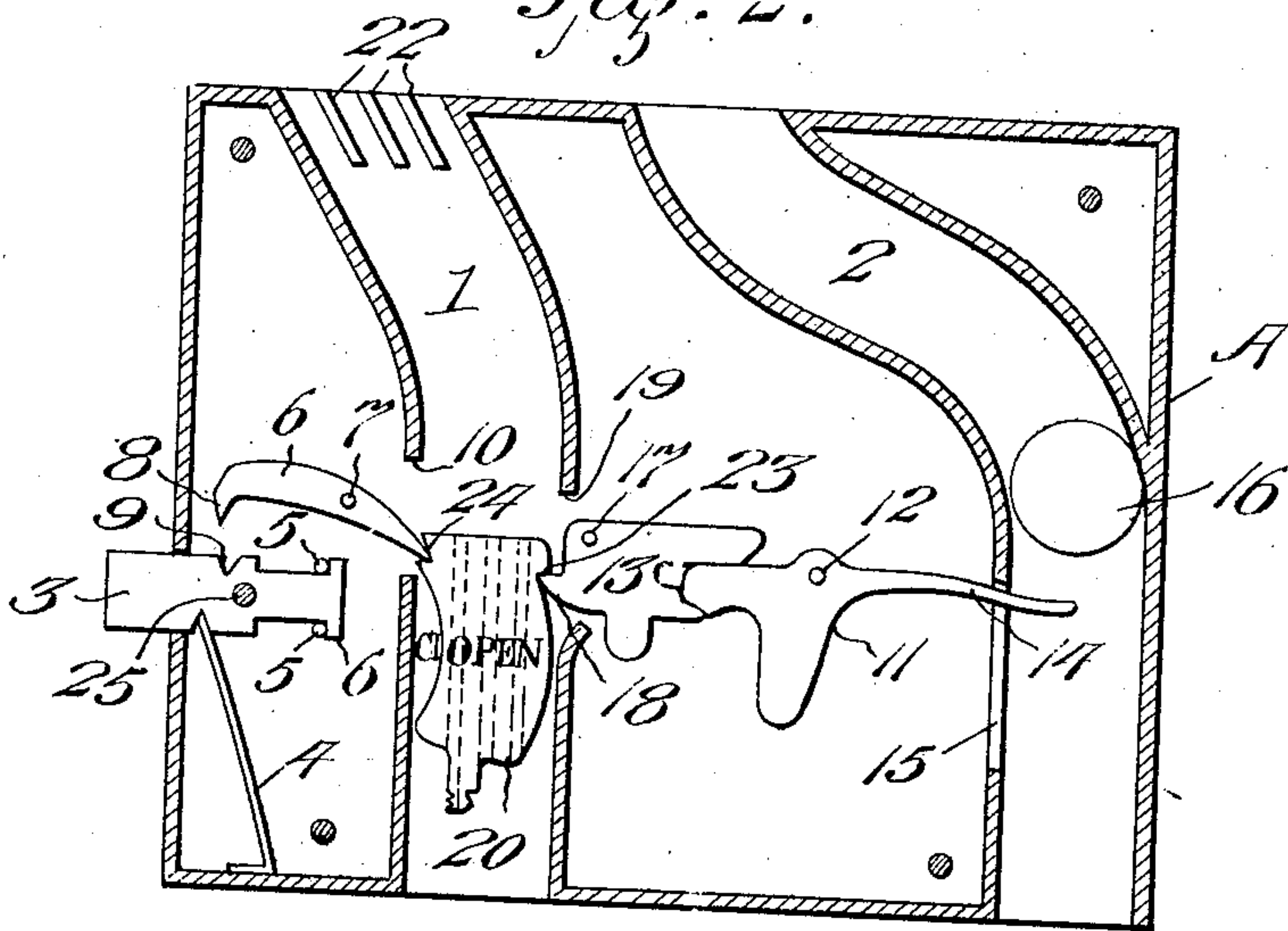


Fig. 3.



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LOCK.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, RANDALL JOHNSON, a citizen of the United States, residing at Houston, in the county of Harris and State of Texas, have invented new and useful Improvements in Locks, of which the following is a specification.

This invention relates to a lock of that type in which the bolt is locked by the dropping of a coin into the casing of the lock, whereupon a key is released for permitting the bolt to be unlocked when desired, and is especially adapted for drawers, doors or hat, coat or umbrella racks used in hotels, theaters, restaurants and other public places whereby articles can be securely locked by a person dropping a coin into the lock, thereby receiving a key for subsequently opening the lock to remove the article previously placed on the rack.

The invention has for one of its objects to improve and simplify the construction and operation of devices of this character so as to be comparatively easy and inexpensive to manufacture, thoroughly reliable and efficient in use, proof against tampering with, and composed of few parts.

A further object of the invention is the provision of a lock in which the bolt is locked by coin actuated means and unlocked by a key which is released during the locking of the bolt so as to be subsequently used for releasing the bolt to permit the lock to be opened when desired.

With these objects in view and others, as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawing, which illustrates one of the embodiments of the invention, Figure 1 is a front view of a lock. Fig. 2 is a longitudinal section thereof. Fig. 3 is a transverse section of the key.

Similar reference characters are employed to designate similar parts throughout the several figures of the drawings.

Referring to the drawing, A designates the lock casing which may be of any suitable construction and provided with chutes 1 and 2 for the reception of a key and coin, respectively. These chutes are preferably of irregular shape so as to prevent the insertion of a wire or other instrument for actuating the

locking mechanism. In the casing is arranged a reciprocatory bolt 3 which is preferably provided with a spring 4 for holding it in normal position. Spaced stops 5 serve as guides for the bolt and the latter is provided with projections 6 that engage with the stops to limit the outward movement of the bolt.

Arranged above the bolt is a gravity acting detent 6 fulcrumed at 7 and having a tooth 8 adapted to engage in a notch 9 in the top of the bolt. One end of the detent projects through an opening 10 in the adjacent wall of the key chute 1 so as to be actuated by a key passing through the chute. The chutes 1 and 2 are suitably spaced apart and between them is arranged a coin-actuated means for releasing the key. This means comprises a latch or actuating lever 11 fulcrumed at 12 and coöperating with a trigger or releasing member 13 that serves to suspend the key in a position to hold the detent 6 open or in unlocked position. The member 11 is provided with an arm 14 that extends through a slot 15 in the wall of the chute 2 so that the extremity of the arm will be in the path of the coin, check or other token 16, as it drops through the chute. The trigger 13 is fulcrumed at 17 and is provided with a nose 18 that protrudes through a slot 19 in the wall of the chute 1 opposite from that having the slot 10. The member 11 is so connected with the trigger or releasing member 13 that as the member 11 is actuated by a coin, the member 13 is moved so that the nose or projection 11 passes into the slot 19 and out of the chute 1. The key 20 has a suitably shaped body that is provided with a plurality of longitudinally-extending slots 21 that engage the ribs 22 at the upper end or mouth of the chute 1. These ribs and slots will be made of different sizes for different locks and a key for a given lock will be numbered to correspond therewith so that each lock will be opened only by its own key. The key is provided with a projection 23 arranged to engage the nose 18 so that as the key is dropped into the slot, it will be arrested by the trigger and suspended thereon. As the key passes down the chute, it will light on the end of the detent extending into the chute and raise the tooth 8 out of the notch 9 of the bolt and hold the detent in raised or inoperative position. The key is notched at 24 so as to receive the detent and hold it in unlocking position. When the detent is in the position shown in Fig. 2, the bolt 3 is free to move back and

forth to accomplish this, the bolt is provided with a handle 25, as shown in Fig. 1, whereby the bolt is readily withdrawn.

To indicate the condition of the lock, the front plate is provided with an opening 26 which discloses the word "Closed" or "Open", according to whether the bolt 3 is locked by the detent or unlocked by the detent being released therefrom. As shown in Fig. 1, the rear wall of the chute 1 has the word "Closed" affixed thereto, while on the front side of the key is the word "Open". When the key is in position, as shown in Fig. 2, the word "Open" registers with the slot 26. This means that the detent 6 is in raised position and the bolt 3 can be moved back and forth. When the key has dropped out as by actuating the locking mechanism by a coin, the word "Closed" will be viewed through the opening 26. This means that the detent 6 has been released from the key and engaged the bolt 3 for holding it locked.

From the foregoing description taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains. In operation, a coin is dropped into the chute 2 when it is desired to unlock the bolt, and this coin strikes the arm 14 of the actuating member 11, and moves the trigger 13 to disengage the nose 18 from the projection of the key 3. The key is then free to drop out through the bottom of the chute 1 into the hand of the person opening the lock as the key drops from its normal position when the detent is actuated, so as to lock the bolt in position. As long as the key is retained, the lock is closed, as will be indicated by the word seen through the opening 26. When it is desired to open the lock, the key is inserted into the chute 1 and permitted to drop from the same. This actuates the detent 6 and holds it open and the key comes to rest on the nose 18 of the trigger 13. The bolt 3 can then be withdrawn without the detent interfering. As long as the key is in position, the word "Open" is exposed through the opening 26 to indicate that the bolt of the lock can be actuated by the handle 25. A suitable receptacle may be arranged at the bottom of the chute 2 for receiving the coins that are used to lock the bolt, as will be readily understood.

I have described the principle of operation of the invention, together with the apparatus which I now consider to be the best embodiment thereof, but I desire to have it understood that the apparatus shown is merely illustrative and that such changes may be made when desired, as are within the scope of the claims.

Having thus described the invention, what I claim is:—

1. The combination of a casing, spaced

coin and key chutes therein, a bolt passing through one wall of the casing, a locking detent mounted to gravitate to locking position and disposed between the bolt and the key chute and arranged with one end disposed within the latter, a coin-actuated member pivotally mounted between the chutes and having a portion disposed within the coin chute and weighted to gravitate to normal position, a pivotally mounted key-supporting member tending to gravitate to normal position and engaging the first-mentioned member whereby each member serves to hold the other in normal position, said members being so disposed as to be actuated solely by the weight of a coin, and a key co-operating with the second member for unlocking the detent and holding the same in unlocked position while the members are in normal position.

2. In a lock, the combination of a casing, a key chute therein having opposite walls slotted, a coin chute having one of its walls slotted, a notched bolt in the casing, a detent having a tooth at one end to engage the notch of the bolt and arranged with its opposite end projecting into the key chute through one of its slots, an actuator fulcrumed between the chutes and having one end extending through the slot of the coin chute for actuation by a coin, a fulcrumed trigger connected with the actuator and provided with a projection extending into the key chute through one of its slots, and a key provided with a projection arranged to engage that of the trigger for holding the key in engagement with the detent.

3. In a lock, a casing having an opening, a key chute in the casing having the word "Closed" on its rear wall at a point opposite the opening, a key having the word "Open" on its front to be disclosed through the opening of the casing, a bolt, a detent arranged to hold the bolt locked when the word "Closed" is exposed through the opening and to unlock the bolt when the word "Open" is exposed, and a coin-actuated means for releasably suspending the key in a position to hold the detent in open position.

4. In a lock, the combination of a casing for separate coin and key chutes, a bolt, a gravitating detent for locking the bolt, a check key for holding the detent in unlocking position, a coin-actuated member pivoted and overbalanced to return to normal position by gravity, and a second member actuated by the first member and returned by gravity to normal position and arranged to hold the key in a position to retain the detent out of engagement with the bolt.

5. In a lock, the combination of a casing having separate coin and key chutes, a bolt mounted in the casing, a detent located above the bolt and having one end overbalanced to gravitate to lock position, a check

key movable through the key slot and adapted to engage one end of the detent for raising the heavier end thereof out of engagement with the bolt, a pivoted member adapted to automatically return to normal position by gravity and arranged to hold the key in a position to retain the detent in unlocking relation to the bolt, and a pivoted coin actuated member permanently engaging the first

member and cooperating therewith to return by gravity to normal position to be actuated by a coin.

In testimony whereof, I affix my signature in presence of two witnesses.

RANDALL JOHNSON.

Witnesses:

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