N. KRETZER.

COIN CONTROLLED LOCK.

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Fig. 1.

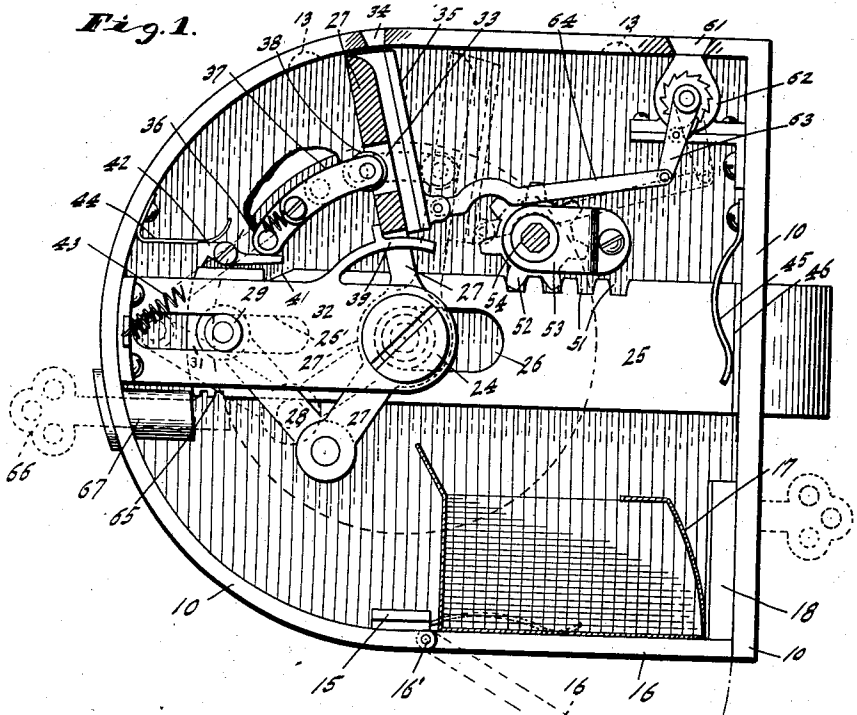
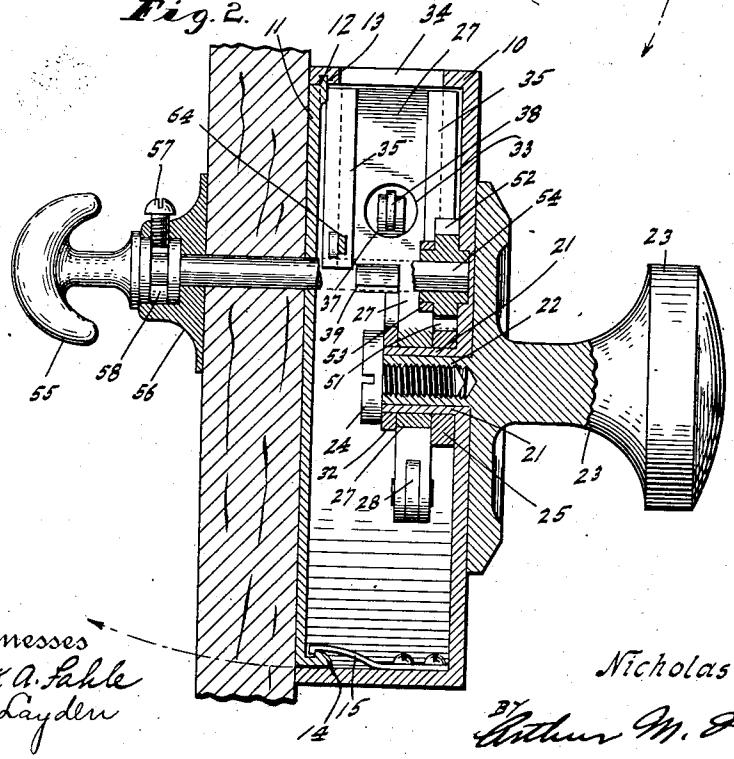


Fig. 2.



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UNITED STATES PATENT OFFICE.

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COIN-CONTROLLED LOCK.

1,025,143. Specification of Letters Patent. Patented May 7, 1912.

Application filed September 11, 1911. Serial No. 648,693.

To all whom it may concern:

Be it known that I, NICHOLAS KRETZER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Coin-Controlled Lock, of which the following is a specification.

The object of my invention is to produce a compact and efficient lock readily attachable to any sort of door by means of which entrance to the space controlled by the door may only be gained by the ordinary person by the deposit of a suitable coin in the structure, such deposit permitting but a single actuation of the bolt.

The accompanying drawings illustrate my invention.

Figure 1 is an elevation, in partial section of the interior of my lock and Fig. 2 a vertical section at right angles to the plane of Fig. 1.

In the drawings, 10 indicates the main casing composed conveniently of a single casting having a face wall and surrounding side walls of any desired contour. Mating with the casing 10 is a cover member 11 which, for convenience I prefer to provide with one or more projecting lugs 12 adapted to take into suitable formed sockets 13 in the inner face of one of the side walls of the member 10. Opposite the lugs 12, cover 11 is provided with an inwardly projecting hook 14 adapted to be engaged by a spring hook 15 carried by the interior of casing 10. The casing 10 is provided at its bottom with a swinging wall portion 16, pivoted at 16′ and adapted to coöperate with a lock so as to be normally held in position. The swinging portion 16 may conveniently carry a coin receptacle 17 into which the coins will be dropped. For convenience, the spring hook 15 is mounted closely adjacent the pivot 16′ so that it may be readily reached with a suitable prying tool when door 16 is opened. Casing 10 is provided internally with a sleeve 21 within which is journaled the shank 22 of an operating knob 23, said knob being conveniently held in place by the retaining screw 24 threaded into shank 22 and having sufficient size to extend beyond the circumference of sleeve 21 so as to retain various parts mounted upon said sleeve. Slidably mounted within casing 10 is the locking bolt 25 provided with a slot 26 which fits over the sleeve 21. Journaled upon sleeve 21 adjacent bolt 25 is an operating lever 27. The depending arm of lever 27 is connected by a link 28 with a pin 29 slidably mounted in slot 31 formed in a bracket 32 in order that the bolt may be properly guided. The pin 29 takes into a slot 25′ (shown in dotted lines in Fig. 1) formed in bolt 25, the arrangement being such that the engagement between link 28 and bolt 25 is in one direction only so that the said bolt 25 may be independently manipulated by a means which I shall describe. Bracket 32 is extended so as to slip over the end of sleeve 21 outside of lever 28 so as to hold said lever in place. The upper arm of lever 27 is perforated at 33 and at its edges, alongside of perforation 33 the said arm is provided with guides 35 adapted to receive a coin entered through the deposit slot 34 formed in the casing 10 opposite the normal position of the upper end of lever 27. The face plate of casing 10 is perforated at 36, concentric with sleeve 21 so as to permit reciprocation of a finger 37 which is carried by knob 23. The finger 37 is provided with a roller 38 upon its free end opposite the perforation 33 and the finger is so formed that it may be projected freely through said perforations so long as there is no obstruction supported opposite the perforation within the guides 35. Secured to or carried by bracket 32 concentric with sleeve 21 is a finger 39 which lies immediately beneath the lower ends of guides 35 when lever 27 is in its normal position indicated by full lines in Fig. 1. Formed in the upper edge of bolt 25 near its inner end is a notch 41 into which a retaining pawl 42 may drop when the bolt is retracted. Dog 42 is provided with a tail which extends into the path of movement of the finger 37 and is engaged by said finger so as to be retracted from notch 41 when the finger 37 is in its normal position to which it is normally drawn by spring 43. The spring 44 serves to drive the pawl 42, when permitted, into notch 41. Any suitable means may be provided for normally projecting bolt 25 and for this purpose I have shown a spring 45 engaging the shoulder 46 on the bolt. In order that the bolt 25 may be readily retracted by any person upon the inside of the door, without requiring a manipulation of the lever 27, I provide bolt 25 on one of its edges with a plurality of rack teeth 51 engaged by a pinion 52 journaled in the face plate of casing 10 and in a bracket 53. Pinion

52 is bored to receive a polygonal operating shaft 54 carried by an operating handle 55 which is journaled within an escutcheon plate 56, being rotatively held in said plate by a pin or set screw 57 which takes into a circumferential groove 58.

In order that an accurate account may be made of the number of entrances made into the inclosure controlled by the lock, I mount, within casing 10, opposite a suitable sight opening 61, a common form of counter 62 which is manipulated by a lever 63 connected by a link 64 with lever 27.

It is desirable that bolt 25 be retracted by a properly qualified person without the deposit of a coin within the apparatus and for that purpose I provide bolt 25 near its inner end with one or more notches 65 adapted to receive a key 66 which may be introduced through a suitable key hole structure 67.

In use, knob 23 may be freely reciprocated, so long as there is no coin within the guides 35, the finger 37 projecting freely through opening 33 and as a consequence, there will be no retraction of bolt 25. Upon the deposit of a coin within the guides 35 finger 37 may be projected against the coin, which will be retained opposite opening 33 by a finger 39, therefore permitting lever 27 to be driven forwardly to the position indicated in dotted lines in Fig. 1. When this position is reached, pawl 42 may drop into notch 41 and hold the bolt 25 retracted so that the operator may let loose of the knob 23. The knob 23 is then drawn back to its normal position by spring 43, thus immediately freeing the coin so that it may drop from the guides 34 into receptacle 17. When knob 23 is drawn back to its normal position, its finger 37 will engage the tail of dog 42 so as to retract the dog 42 from the notch 41 and permit spring 45 to drive bolt 25 and lever 27 to their normal positions indicated by full lines in Fig. 1. When the person who has manipulated the structure desires to depart from the inclosure, he may readily retract the bolt 25, without operating lever 27, and, consequently, without operating the counter 62, by means of the handle 55 and pinion 52.

I claim as my invention:

1. A coin controlled lock comprising a main casing, a bolt slidably mounted in said casing, a coin receiving lever pivotally mounted in the casing and operatively connected with the bolt by means of a link pivoted at one end to the lever and at the other end engaging the bolt, said lever having a coin guide and a perforation transverse to the coin guide, means for retaining a coin within the coin guide of the lever when the lever is in normal position, means for automatically returning the lever to normal position, an operating knob accessible from the exterior of the casing, a finger carried by said knob within the casing and adapted to be projected freely through the perforations of the lever in the absence of a coin within the coin guide, and means controlled by the operating knob for temporarily retaining the lever in projected position.

2. A coin controlled lock comprising a main casing, a bolt slidably mounted in said casing, a coin receiving lever pivotally mounted in the casing and operatively connected with the bolt, said lever having a coin guide and a perforation transverse to the coin guide, means for retaining a coin within the coin guide of the lever when the lever is in normal position, means for automatically returning the lever to normal position, an operating knob accessible from the exterior of the casing, a finger carried by said knob within the casing and adapted to be projected freely through the perforations of the lever in the absence of a coin within the coin guide, and means controlled by the operating knob for temporarily retaining the lever in projected position.

3. A coin controlled lock comprising a main casing, a bolt slidably mounted in said casing, a coin receiving lever pivotally mounted in the casing and operatively connected with the bolt by means of a link pivoted at one end to the lever and at the other end engaging the bolt, said lever having a coin guide and a perforation transverse to the coin guide, means for retaining a coin within the coin guide of the lever when the lever is in normal position, means for automatically returning the lever to normal position, an operating knob accessible from the exterior of the casing, and a finger carried by said knob within the casing and adapted to be projected freely through the perforations of the lever in the absence of a coin within the coin guide.

4. A coin controlled lock comprising a main casing, a bolt slidably mounted in said casing, a coin receiving lever pivotally mounted in the casing and operatively connected with the bolt, said lever having a coin guide and a perforation transverse to the coin guide, means for retaining a coin within the coin guide of the lever when the lever is in normal position, means for automatically returning the lever to normal position, an operating knob accessible from the exterior of the casing, and a finger carried by said knob within the casing and adapted to be projected freely through the perforations of the lever in the absence of a coin within the coin guide.

5. A coin controlled lock comprising a main casing, a bolt slidably mounted therein, an operating member accessible from one side of the exterior of the casing, a coin

receiving member movably mounted within the casing and operatively connected with the bolt, a member carried by the operating member within the casing and arranged to coöperate with the coin receiving lever only with a coin therein, a second operating member accessible from the opposite side of the structure and connections between said second operating member and the bolt permitting manipulation of the bolt by said second operating member without manipulation of the coin receiving member.

6. A coin controlled lock comprising a main casing, an operating knob journaled on one face thereof, a bolt slidably mounted in the casing, a lever pivoted within the casing and provided with coin receiving guides, said lever having a perforation transverse to said coin receiving guides, a finger carried by the operating knob within the casing and projectable through said perforation, a link connected to said lever, a pin and slot connection between said link and the bolt permitting freedom of movement of the bolt independent of said connection, a second operating member projecting from the opposite side of the casing, and an operating connection between said second operating member and the bolt.

7. A coin controlled lock comprising a main casing having a sleeve therein, an operating member mounted upon one side of the casing and journaled within said sleeve, a bolt slidably mounted within the casing and slotted over said sleeve, a lever journaled on the sleeve adjacent the bolt and provided with coin guides and with a perforation transverse of the coin guides, a retainer carried by the operating member and retaining said operating member and the bolt and lever in position, a link connected to said lever, a pin and slot connection between the lock and bolt permitting freedom of manipulation of the bolt independent of the link, a finger carried by the operating member within a casing and projectable through the perforation of the lever, a finger serving to retain a coin within the coin guides when the lever is in normal position, a spring means for normally drawing the operating member to normal position and for projecting the bolt from the casing, a retaining dog arranged to retain the bolt in retracted position, said dog being also arranged to be retracted by the operating member when said operating member is in normal position, and a second operating member accessible from the opposite side of the casing and operatively connected with the bolt.

8. A coin controlled lock comprising a main casing having a sleeve therein, an operating member mounted upon one side of the casing and journaled within said sleeve, a bolt slidably mounted within the casing and slotted over said sleeve, a lever journaled on the sleeve adjacent the bolt and provided with coin guides and with a perforation transverse of the coin guides, a retainer carried by the operating member and retaining said operating member and the bolt and lever in position, a link connected to said lever, a pin and slot connection between the lock and bolt permitting freedom of manipulation of the bolt independent of the link, a finger carried by the operating member within a casing and projectable through the perforation of the lever, a finger serving to retain a coin within the coin guides when the lever is in normal position, a spring means for normally drawing the operating member to normal position and for projecting the bolt from the casing, and a second operating member accessible from the opposite side of the casing and operatively connected with the bolt.

9. A coin controlled lock comprising a main casing having a sleeve therein, an operating member mounted upon one side of the casing and journaled within said sleeve, a bolt slidably mounted within the casing and slotted over said sleeve, a lever journaled on the sleeve adjacent the bolt and provided with coin guides and with a perforation transverse of the coin guides, a retainer carried by the operating member and retaining said operating member and the bolt and lever in position, a link connected to said lever, a pin and slot connection between the lock and bolt permitting freedom of manipulation of the bolt independent of the link, a finger carried by the operating member within a casing and projectable through the perforation of the lever, a finger serving to retain a coin within the coin guides when the lever is in normal position, a spring means for normally drawing the operating member to normal position and for projecting the bolt from the casing, a retaining dog arranged to retain the bolt in retracted position, said dog being also arranged to be retracted by the operating member when said operating member is in normal position.

10. A coin controlled lock comprising a main casing having a sleeve therein, an operating member mounted upon one side of the casing and journaled within said sleeve, a bolt slidably mounted within the casing and slotted over said sleeve, a lever journaled on the sleeve adjacent the bolt and provided with coin guides and with a perforation transverse of the coin guides, a retainer carried by the operating member and retaining said operating member and the bolt and lever in position, a link connected to said lever, a pin and slot connection between the lock and bolt permitting freedom of manipulation of the bolt independent of the link, a finger carried by the operating

member within a casing and projectable through the perforation of the lever, a finger serving to retain a coin within the coin guides when the lever is in normal position, and a spring means for normally drawing the operating member to normal position and for projecting the bolt from the casing.

In witness whereof, I have hereunto set my hand and seal at Indianapolis, Indiana, this 9th day of September, A. D. one thousand nine hundred and eleven.

NICHOLAS KRETZER. [L. S.]

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