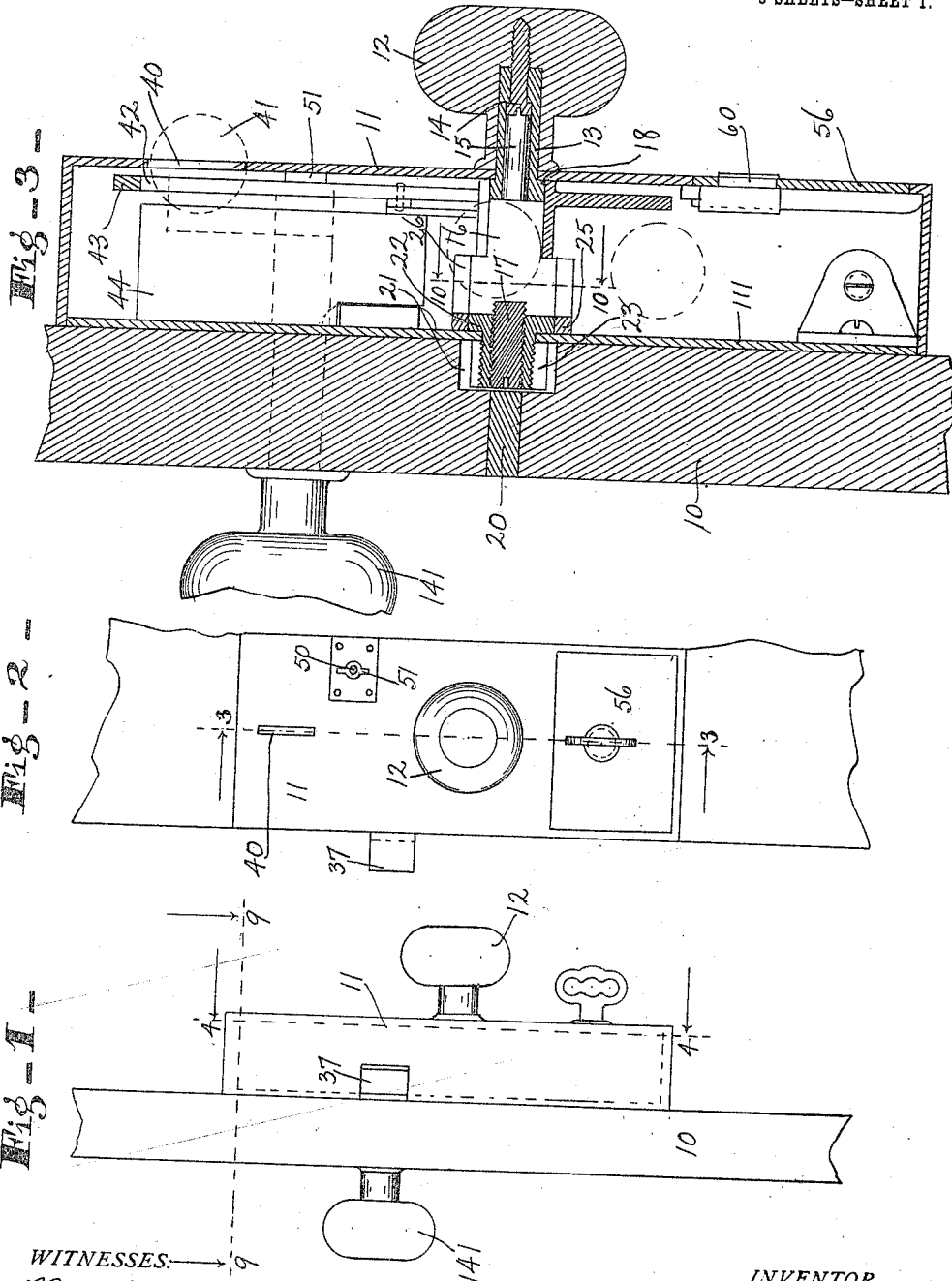


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 COIN CONTROLLED LOCK.
 APPLICATION FILED MAY 4, 1911.

1,039,090.

Patented Sept. 24, 1912.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 2.

Fig-6-

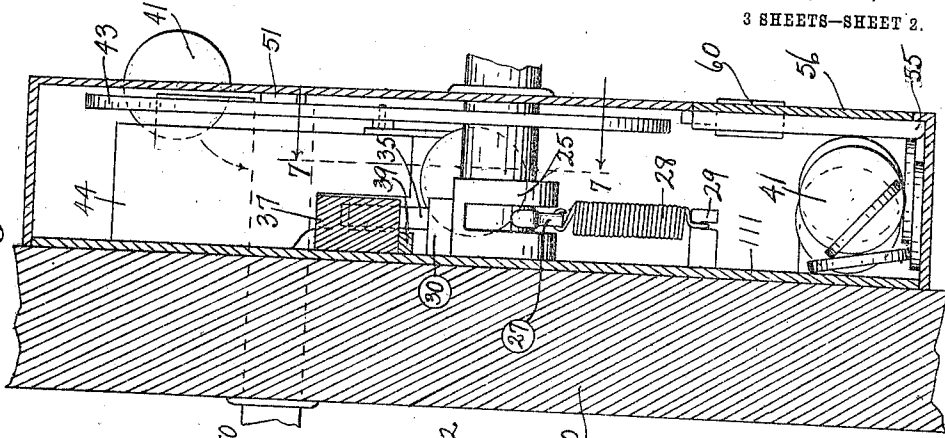


Fig-5-

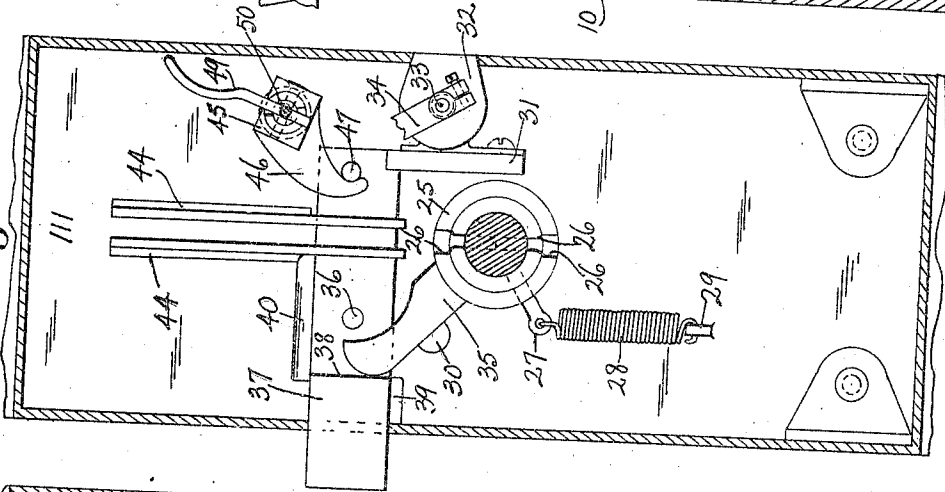
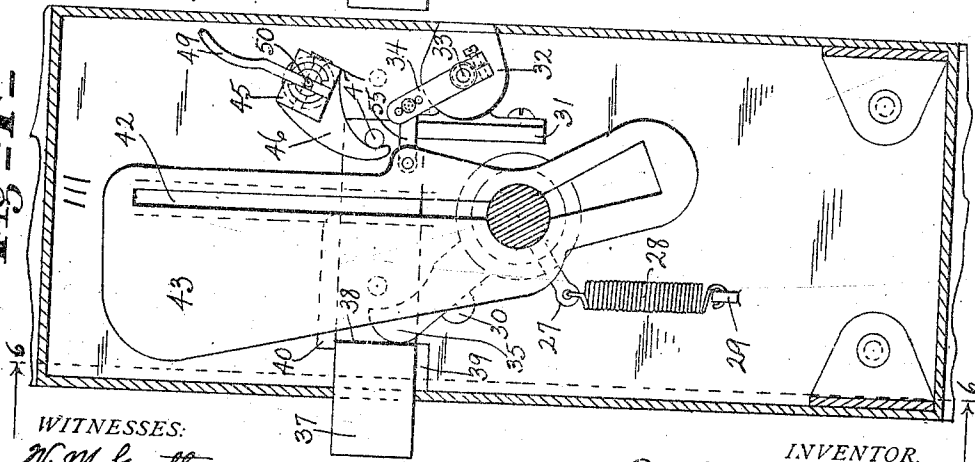


Fig-4-



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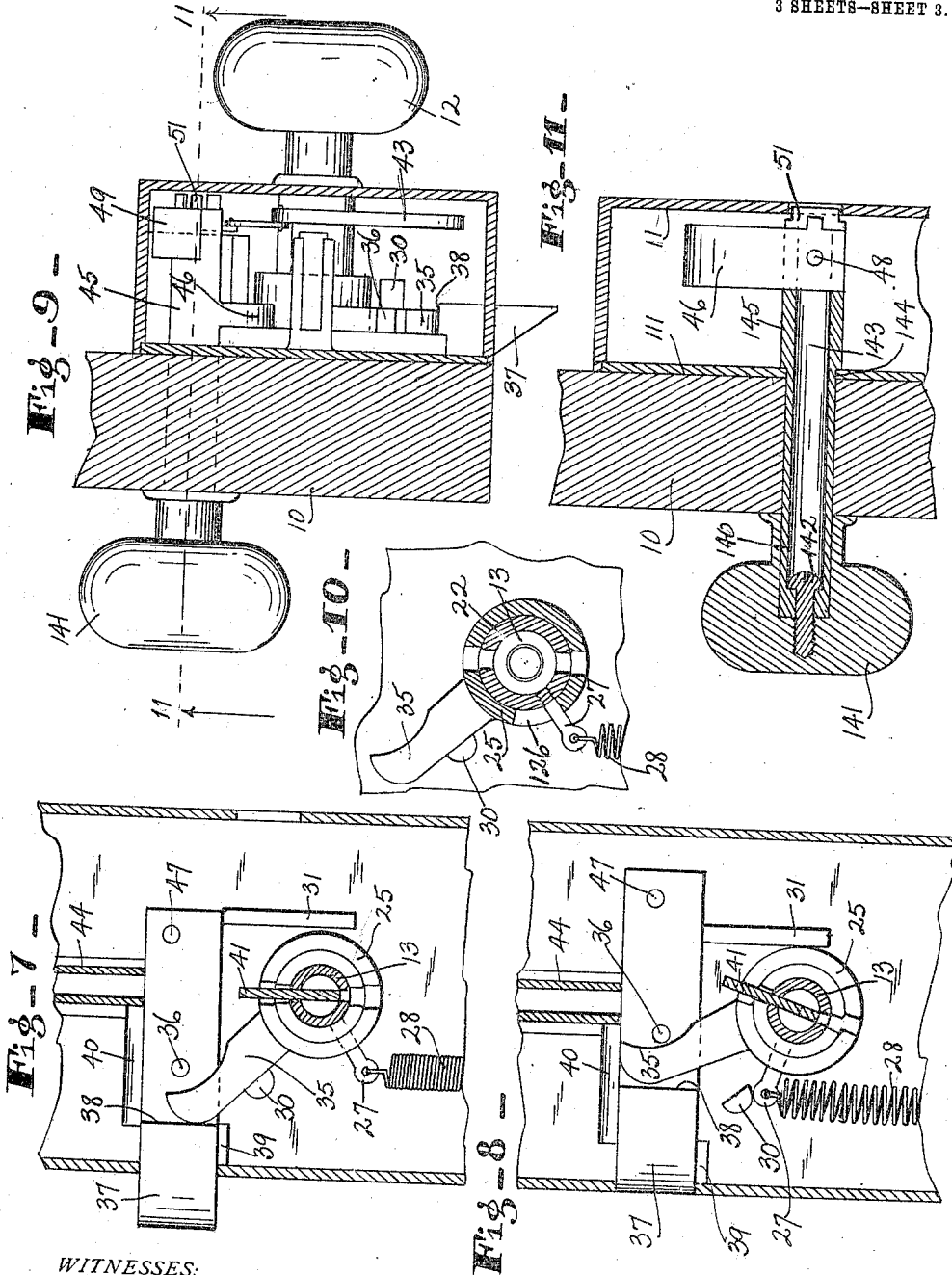
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UNITED STATES PATENT OFFICE.

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COIN-CONTROLLED LOCK.

1,039,090.

Specification of Letters Patent.

Patented Sept. 24, 1912.

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To all whom it may concern:

Be it known that I, GEORGE G. F. BOSWELL, a citizen of the United States, and a resident of Indianapolis, county of Marion, and State of Indiana, have invented a certain useful Coin-Controlled Lock; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings.

The object of this invention is to provide an improved coin-controlled lock for check rooms, toilet rooms, telephone booths and the like.

The nature of the invention will be understood from the accompanying drawings and the following description and claims.

In the drawings, Figure 1 is an elevation of the front edge of the door and lock thereon, the upper and lower parts of the door being broken away. Fig. 2 is the outside elevation of the lock and the portion of the door attached thereto. Fig. 3 is a section on the line 3—3 of Fig. 2 but on a larger scale showing the different positions of the coin by dotted lines, and the parts being shown in their operative position. Fig. 4 is a section on the line 4—4 of Fig. 1 through the lock but on an enlarged scale, and showing the lock in normal condition. Fig. 5 is the same with the means for indicating and also controlling the coin slot being omitted. Fig. 6 is a section on the line 6—6 of Fig. 4. Fig. 7 is a section on the line 7—7 of Fig. 6, showing the coin in the locking position. Fig. 8 is the same as Fig. 7 with the knob actuated and the bolt withdrawn. Fig. 9 is a horizontal section on the line 9—9 of Fig. 1, through the lock and a portion of the door and showing the parts in normal position. Fig. 10 is the same as the central part of Fig. 7 with the parts in position after the door has been closed or locked and the coin discharged. Fig. 11 is a section on the line 11—11 of Fig. 9.

In detail, there is shown in the drawings a door 10 to which there is secured a lock case 11 and 12 is the outside knob which is secured on the knob shaft 13 by a screw 14, as shown in Fig. 3. The outer end of the knob shaft 13 has a tubular opening 15. The central part of the knob shaft has normally a vertical slot 16 through it and the inner end of the knob shaft is likewise tubular and internally threaded to hold the

adjusting screw 17. The knob shaft has a shoulder 18 which engages the inner surface outside of the casing so as to prevent the outward withdrawal of said knob shaft, and the screw 14 has its head located in said tubular opening 15, and the body of the screw passes through a reduced opening in the extreme outer end of the knob shaft, whereby it is impossible for anyone to remove the knob from the outside. In order to operate the screw 14, the screw-driver is inserted through the door and the knob shaft from the inside before the adjusting screw 17 is in place and before the plug 20 has been inserted in the opening through the door which leads from the inner surface of the door through to a chamber 21 therein. There is an enlargement of the knob shaft 22 which fits against the inner surface of the inner wall of the casing. The extreme inner end of the knob shaft is externally threaded for a nut 23 which lies in the recess 21 of the door. Therefore, the knob shaft cannot be moved in either direction and it is firmly held in place in the walls of the casing, and the knob shaft also holds the walls of the casing in place and suitably spaced apart. The width of the coin slot 16 in the knob shaft is modified by the screw 17 to suit coins of any denomination. On the inner half of said knob shaft within the casing there is a sleeve or tumbler 25 which has longitudinal slots 26 on the opposite sides of it to correspond and register with the coin slot 16 in the knob shaft. Said tumbler and knob shaft have independent rotary movement limited by the length of the slot 126, see Fig. 10, through which the arm 27 from the knob shaft extends and to which the spring 28 is connected, said spring extending downward and being secured at 29 to the inner wall of the casing. The function of the spring 28 is to return the parts to their normal position after they have been operated.

There is a plate 31 secured to the inner wall of the casing and extending toward the outer wall. To said plate 31 a counter 32 is secured which projects through the opening in the end wall of the casing and there discloses numerals indicating the number of times the lock has been operated. The counter has a shaft 33 which is actuated by movement of the arm 34.

The tumbler 25 has a bolt-withdrawing

arm 35 projecting radially therefrom, as shown in Fig. 5, with one surface curved in position to engage the pin 36 on the bolt 37 and withdraw it when the knob 12 is turned.

- 5 When the spring 28 returns the parts to their normal position the arm 35 engages the shoulder 38 of the bolt and throws it into locking position. The bolt is guided by the usual opening in the end wall of the casing and also by lugs or projections 39 and 40
10 on the inner wall of the casing, see Fig. 5. The bolt is held against the inner wall of the casing by the arm 35. The return movement of the arm 35 is limited by the stop lug 30
15 which extends from the inner wall of the casing, see Fig. 5.

- In the outer wall of the casing, near the upper end, there is a coin slot 40, see Fig. 3, through which a coin 41 may be inserted.
20 When said coin is inserted it extends through a slot 42 in a plate 43 which serves to close and open said slot as well as to indicate when it is closed or opened. Normally said slot in the plate 43 coincides with the slot 40 where-
25 by the coin can be inserted. The coin moves between two parallel guide plates 44 which extend outwardly from the inner surface of the inner wall of the casing, as shown in Fig. 5, and extend down to a point lower than the
30 bolt 37, but where they extend over the bolt 37 they extend over so as not to interfere with the movement of the bolt. This coin chute forms a vertical passageway for the coin, which registers with the coin slots 26
35 and 16 in the tumbler 25 and the enlarged portion of the knob shaft.

- The inner knob shaft 140 is located somewhat above and to the right of the outer knob shaft 13. Said shaft 140 has a squared
40 outer end fitting into a corresponding slot in the inner knob 141 which is held on said shaft by a screw 142 against the shoulder in the outer end of the tube 143 through the center of said knob shaft, as shown in Fig.
45 11. This shaft has rounded portions 144 thereon to form bearings in the walls of the casing 11 and 111. That portion 45 inside the casing is square in cross section and near the rear wall 111 of the casing a finger 46
50 projects in a downward and inward direction to engage a lug or projection 47 on the inner end of the bolt 37, and will, when the inner knob is turned, cause the withdrawal of the bolt. That end of the shaft near the
55 outer wall of the casing 11 is slotted to receive and hold, by means of the screw 48, a piece of sheet metal 49 similar in shape to the ward of a key. This strip is adapted to clear the walls of the casing and has a pro-
60 jection 50 concentric with the tube 143 and projecting even with the end thereof, which projection serves as a pivot for the key which may be inserted through the key-hole 51 in the casing 11, whereby the bolt may be with-
65 drawn without inserting a coin in the slot

40. The ward-like strip 49 serves to engage and move the plate 43 back to its normal position and open the coin slot 40 when the inner knob is turned. The plate 43 is pivotally connected by the link 55 with the arm 34 on the shaft of the counter 32. Thus, as the plate 43 is moved by the movement of the outer and inner knob, the counter will be caused to register.

A door 56 at the lower front portion of the casing has downwardly projecting lugs 58 on the rear side which will engage a rim of the casing, and by means of a lock 60 on the upper and inner side of said door the door may be held in place in the front casing 11 and will lie flush with said casing. This door affords means whereby the coins which have been used to operate the lock and have dropped to the rear portion of the casing may be removed.

To operate the lock by anyone who has not a key, a coin must be inserted in the slot 40. Said coin will pass through the plate 43 and fall through the coin chute into the coin slot 16 of the knob shaft 13 where it will be held against an edge on the lower side of said coin slot 16, as shown in Fig. 7. When the outer knob 12 is turned, the edges of said coin-slot will pinch or engage the coin, and by turning the knob farther the coin will engage the edges of the slots through the tumbler 25 and the plate 43 and will cause them to turn. When the knob 12 is turned to its extreme position the plate 43 will close the coin slot and throw the lever 34 of the counter to the right, while the bolt-withdrawing arm 35 on the tumbler 25 will cause the withdrawal of the bolt and allow the door to be opened. Upon releasing the knob the spring 28 will cause the return of the bolt 37, the knob shaft and tumbler to their normal positions and the coin will drop through the slot in the tumbler 25 and into the lower portion of the lock case at the rear of the door 56. But the plate 43 will not be returned to its normal position and will keep the coin slot 40 closed until the rear knob is turned. This action will push the plate 43 to its normal position and open the slot 40 and will give the final or registering stroke to the arm 34 of the counter and cause it to register.

I claim as my invention:

1. A coin-controlled lock including a case with a coin slot in the side wall thereof, a chute secured to the side wall leading from a position near said slot, a knob shaft with a coin slot diametrically through it, a sleeve on said knob shaft with a diametric slot therethrough registerable at times with the slot in the knob shaft and with one edge of said slot normally adapted to engage and maintain the coin when in said slot in said knob shaft, an arm extending from said sleeve for withdrawing the bolt of the lock

when a coin is in the slots in said sleeve and knob shaft and the knob shaft is actuated, and a plate oscillatably mounted on said knob shaft with a slot therein registering with the chute and said slots in the sleeve and knob shaft, whereby a coin can move into position with the knob shaft and be held in such position and when the knob shaft is actuated said plate will be actuated and close the coin slot in the case and indicate its closure.

2. A coin-controlled lock including a case with a coin slot in the side wall thereof, a chute secured to the side wall leading from a position near said slot, a knob shaft with a coin slot diametrically through it, a sleeve on said knob shaft with a diametric slot therethrough registerable at times with the slot in the knob shaft and with one edge normally adapted to project beyond the edge of said slot in said knob shaft and maintain a coin in said slot, an arm extending from said sleeve for withdrawing the bolt of the lock when a coin is in the slots in said sleeve and knob shaft and the knob shaft is actuated, a plate oscillatably mounted on said knob shaft with a slot therein registering

with the chute and said slots in the sleeve and knob shaft, whereby a coin can move into position with the knob shaft and be held in such position and when the knob shaft is actuated said plate will be actuated and close the coin slot in the case and indicate its closure, and another knob shaft for returning said plate to its normal position after the coin is discharged and means for adjusting the dimensions of said slot in said knob shaft.

3. The combination with a door, of a lock case, a knob shaft extending through the case having a coin slot therein, a screw in the inner end of the shaft for adjusting the dimensions of the coin slot in the shaft, said door having an opening through it to render said screw adjustable, and a plug in said hole to render the screw non-accessible.

In witness whereof, I have hereunto affixed my signature in the presence of the witnesses herein named.

GEORGE G. F. BOSWELL.

Witnesses:

H. J. WELLS,

O. M. McLAUGHLIN.