F. J. ROWSE.

COIN CONTROLLED LOCKING MECHANISM.

APPLICATION FILED AUG. 21, 1912.

1,119,879.

Patented Dec. 8, 1914.

6 SHEETS—SHEET 1.

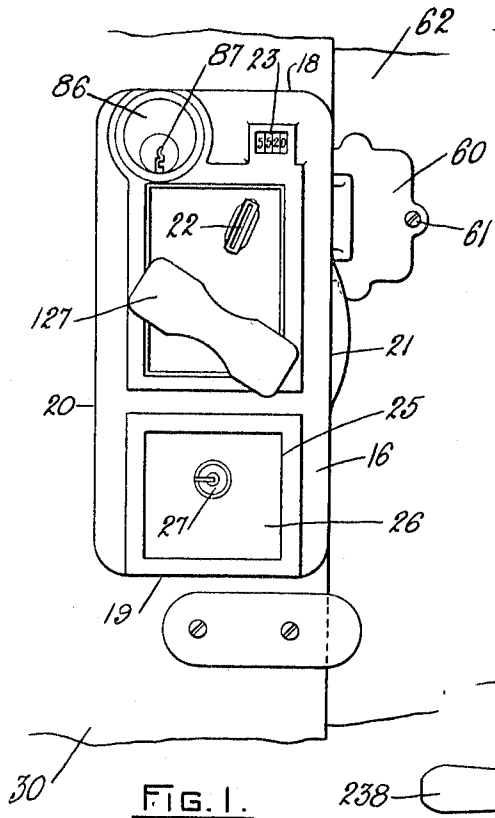


FIG. 1.

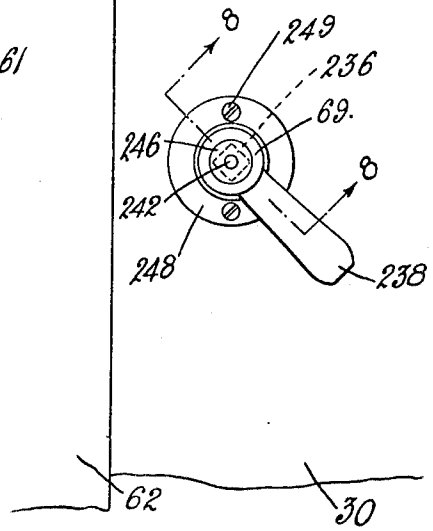


FIG. 2.

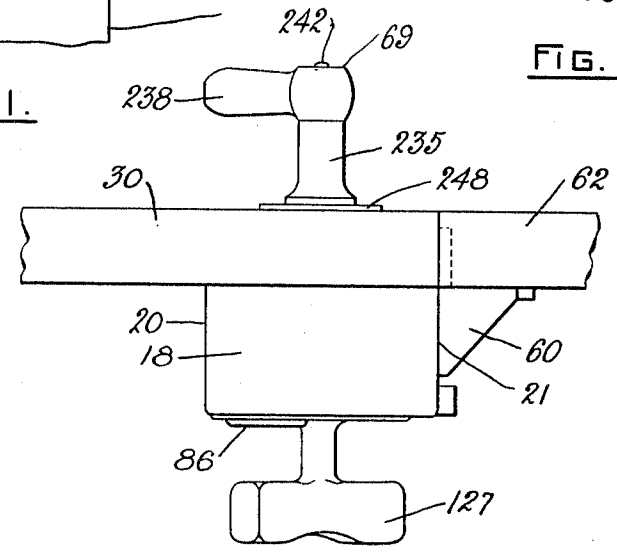


FIG. 3

WITNESSES.

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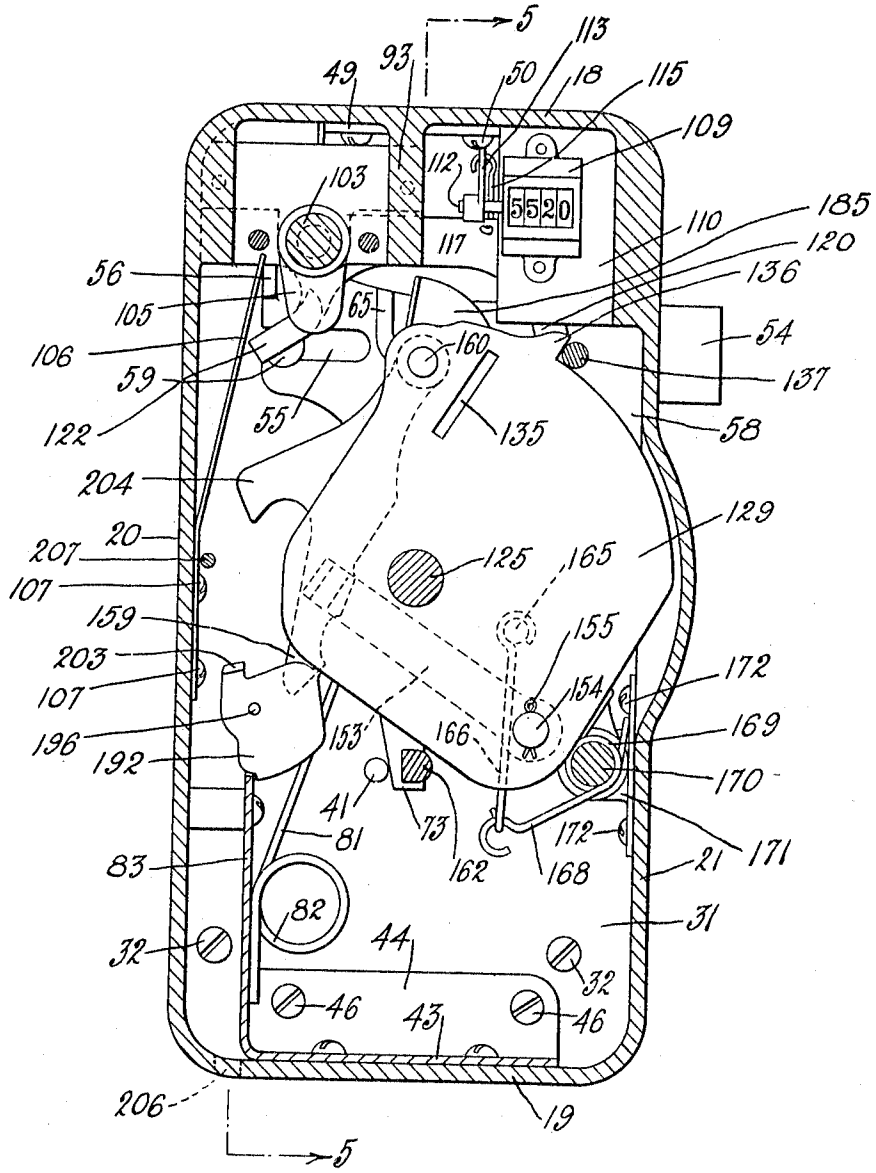


FIG. 4.

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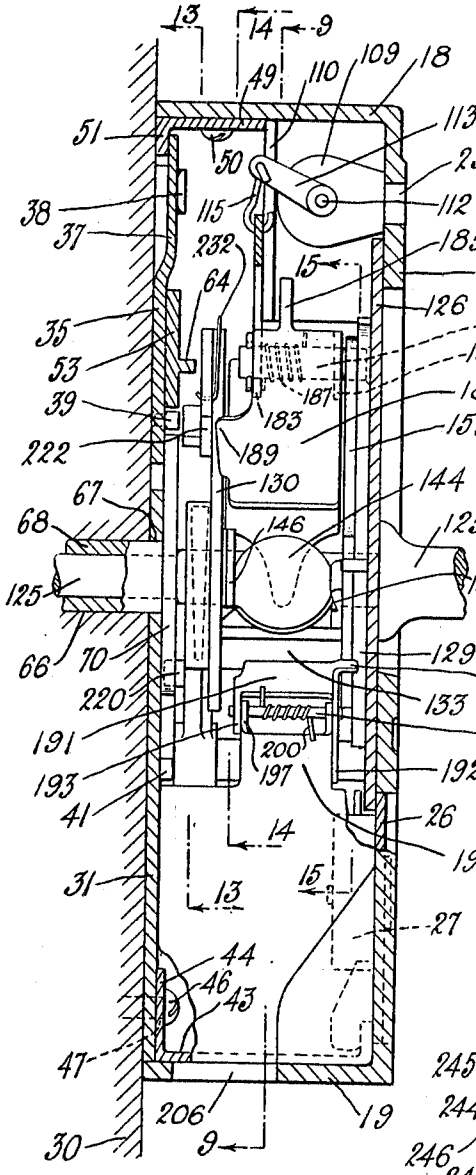


FIG. 5.

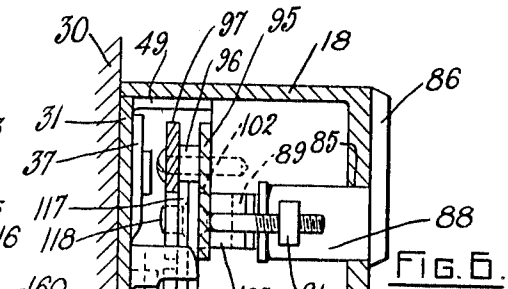


FIG. 6.

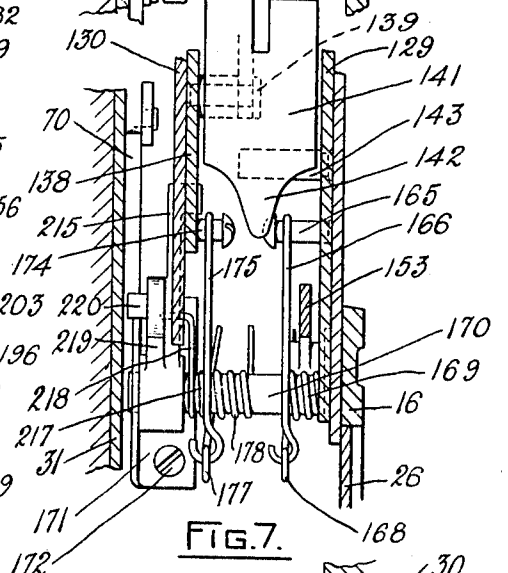


FIG. 7.

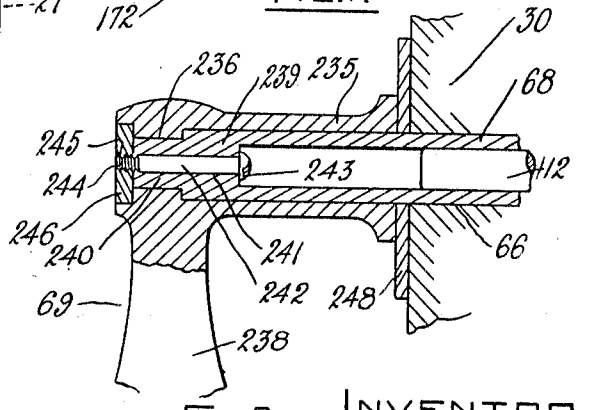


FIG. 8.

WITNESSES.

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6 SHEETS—SHEET 4.

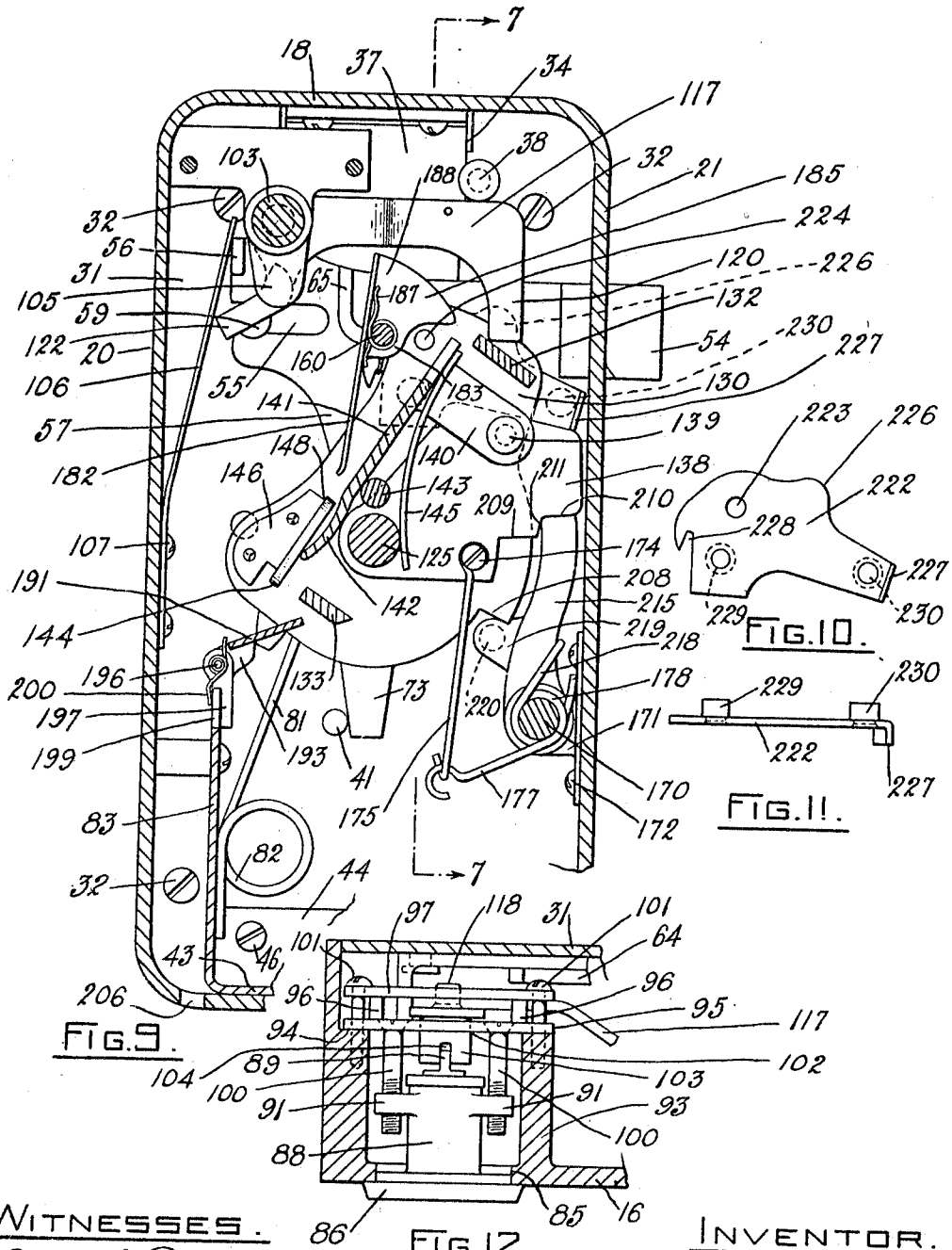


FIG. 9.

FIG. 10.

FIG. 11.

FIG. 12.

WITNESSES.

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6 SHEETS—SHEET 5.

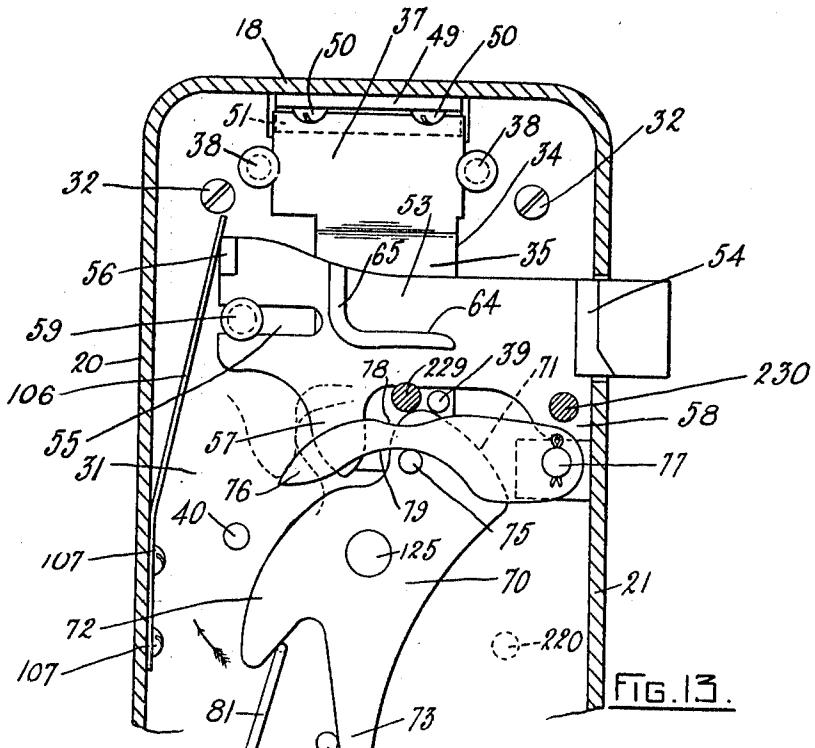


FIG. 13.

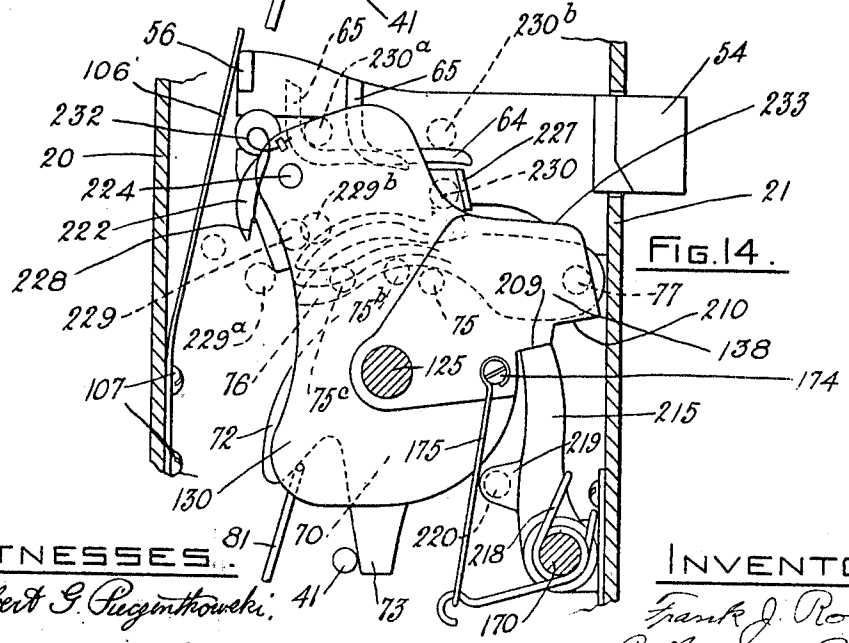


FIG. 14.

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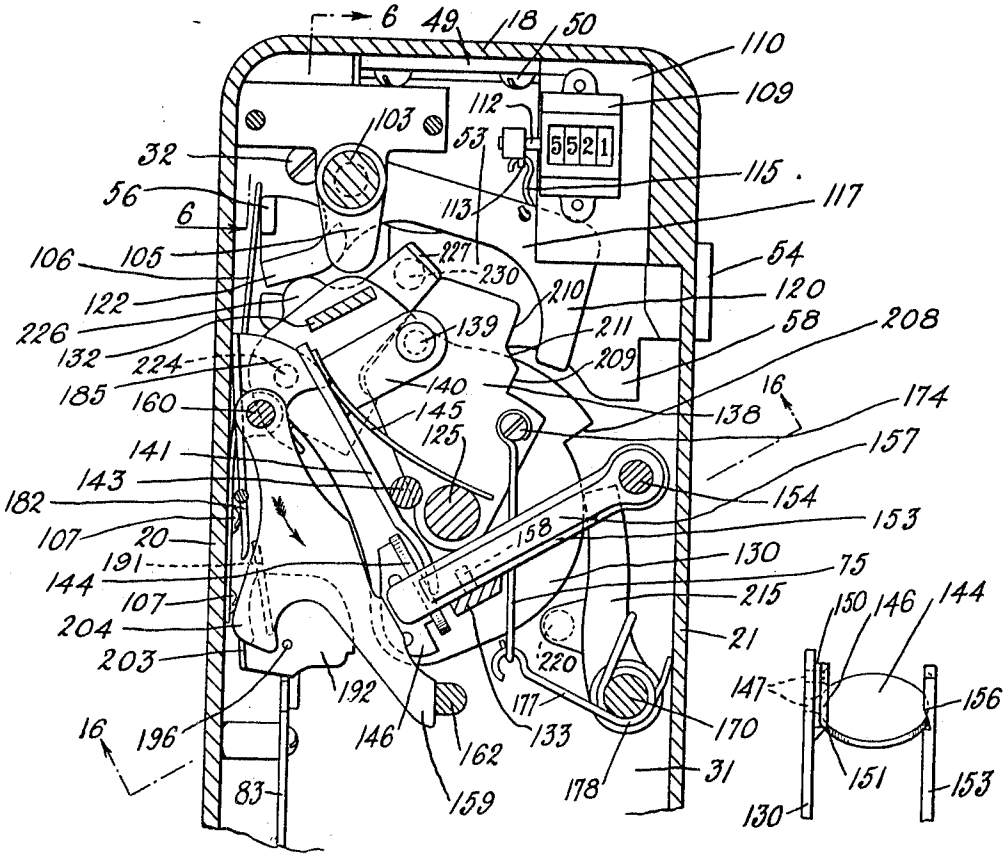


FIG. 15.

FIG. 17.

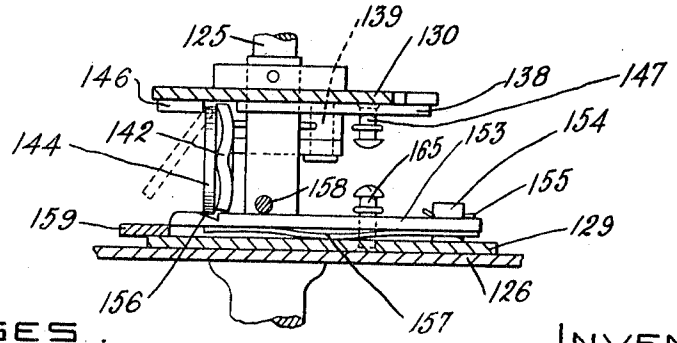


FIG. 16.

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UNITED STATES PATENT OFFICE.

FRANK J. ROWSE, OF PAWTUCKET, RHODE ISLAND.

COIN-CONTROLLED LOCKING MECHANISM.

1,119,879. Specification of Letters Patent. Patented Dec. 8, 1914.

Original application filed June 12, 1911, Serial No. 632,716. Divided and this application filed August 21, 1912. Serial No. 716,195.

To all whom it may concern:

Be it known that I, FRANK J. ROWSE, a citizen of the United States, residing at Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Coin-Controlled Locking Mechanisms, of which the following is a specification.

My invention relates to a locking device controlled by a mechanism in which a coin inserted in the casing constitutes one of the operative elements, and the present application is a division of patent application, Serial No. 632,716, filed in the United States Patent Office June 12, 1911.

The essential objects of my invention are to prevent the possibility of the insertion of a coin in the slot in the front of the casing after the door to which the casing is attached is closed; to make it possible to reciprocate the locking bolt at will after a coin has been inserted and discharged, and before the door is closed so that the turning of the knob at such a time will not involve the necessity of inserting a second coin; to render the bolt operation and control available only to the person behind the door after the door is closed; to guard against accidental manipulation of the parts by the person behind the door whereby the coin slots will register in the front of the casing; to provide means for locking the casing to the door which shall be inaccessible to a person without a key to the door of the casing; and to make the mounting or detaching of the operating handles subject to like conditions of accessibility.

Further objects are to provide a facile means for disengaging the coin from the coin guide; to provide a certain means for guarding the discharged operative coin, and insure the discharge and separation of an inoperative coin without operation of the mechanism.

Other objects and advantages will be hereinafter referred to in connection with the description of the mechanism.

To the above ends essentially my invention consists in such novel parts and arrangement and combination of parts as fall within the scope of the appended claims.

In the accompanying drawings which form a part of this specification, Figures 1, 2 and 3, are front, rear, and plan elevations respectively of my device shown mounted in a door, showing adjacent parts of the latter broken away, Fig. 4, a front elevation of the same with the front wall removed, Fig. 5, a section on line 5, 5, of Fig. 4, Fig. 6, a section on line 6, 6, of Fig. 15, Fig. 7, a section on line 7, 7, of Fig. 9, Fig. 8, a section on line 8, 8, of Fig. 2, Fig. 9, a section on line 9, 9, of Fig. 5, Figs. 10, and 11, detail views of the bolt operating pawl, Fig. 12, a plan of the Yale locking mechanism showing the adjacent parts in section, Figs. 13 and 14, views taken on lines 13, 13, and 14, 14, respectively of Fig. 5, Fig. 15 is a view taken on line 15, 15, of Fig. 5, Fig. 16, a transverse section of the coin controlled mechanism taken on line 16, 16, of Fig. 15, and Fig. 17, a detail view of the pressure plate.

Like characters of reference indicate like parts throughout the views.

The casing inclosing my device may be of any form best adapted to carrying the operative parts. In the form thereof herein shown it comprises a front wall 16, top and bottom walls, 18 and 19, and side walls 20 and 21. The front wall 16 is provided with a coin slot 22 in an intermediate portion below a visual orifice or window 23 at one side, and a Yale or other well known lock upon the other side. In the lower portion of this wall is an opening 25 closed by a removable door 26 also provided with a lock 27.

Fixed to the face of the door 30, which is typical of any door leading to a small room or cabinet, is a plate 31 which constitutes the back wall of the casing, and which is fastened to the door by screws 32. The plate 31 has its upper portion cut away as at 34 to receive therein a vertically slidable plate 35 having an offset upper portion 37 resting against guide pins 38. Upon the lower portion of the plate 35 is a stud 39, and upon the plate 31, stop pins 40 and 41.

The front wall 16 of the casing, together with its integral side walls, are removable from the back plate 31, and may be detached by one having access through the door 26 by virtue of the following connections. In the bottom wall is fixed a plate 43 whose upturned flange 44 is perforated to receive

screws 46 which enter openings 47 in the back plate. The upper portion of the casing is connected by virtue of a plate 49, fixed to the top wall 18 by screws 50, and provided with a downturned lip 51 which engages the back face of the offset portion 37 of the slide 35.

Resting against the plate 31, as shown in Fig. 13, is a horizontally disposed bolt comprising a flat shank 53, and a head 54; the former having its rear end provided with a longitudinal guide slot 55, an outturned finger or projection 56, and a downward finger 57. The forward portion of the body 53 is also downwardly extended as at 58. The bolt is guided by a pin 59 in the plate 31 extending through the slot 55, and the bolt head is movable into and out of a bolt receiver 60 fixed by screws 61 or otherwise to the door jamb 62. The face of the bolt is provided with a horizontal track 64 terminating in a vertical contact edge 65. Passing through openings 66 and 67, in the door 30 and plate 31 respectively is a hollow shaft 68 provided with a handle or lever 69 on its outer end, and upon whose inner end is fixed a disk 70 provided upon its upper edge with an elevated curved cam shoulder 71 contacting with the stud 39, and having two downwardly inclined projections 72 and 73. On the upper margin of this disk is a stud 75 upon which rests a pawl 76 pivoted at one end upon a pin 77 in the plate 31. The pawl has a concavity 78 in its upper edge and another 79 in its lower edge. The stud 40 is a stop to the travel of the disk in one direction, and a spring 81, provided with an intermediate coil 82, and fixed by solder or otherwise to a partition plate 83 in the casing presses with its free end against the arm 72 of the disk forcing the arm 73 against the stop screw 41, which is for operative purposes the limit of the travel of said disk in the direction of the arrow. Under certain conditions the screw 41 is removed, in which case the pin 40 is the stopping agent. Under operating conditions the cam edge 71, through the pin 39, keeps the slide 35 elevated, thus locking the housing against the back plate. When, however, it is desired to remove the housing the door 26 is removed, and the operator, through the opening 25 unscrews and removes the member 41 whereupon the disk swings against the pin 40, and the pin 39 drops from its elevation permitting the slide 35 to fall and disengage the lip 51. The bottom portion of the casing is readily detached because the screws 46 are directly accessible through the opening 25.

It is sometimes desirable to operate the bolt 53 independently of the coin operated mechanism. To this end a key operated lock is employed. In this instance a Yale lock mounted in an opening 85 in the front wall, comprising the usual parts including the front plate 86, key way 87, cylinder 88 and cam 89, best shown in Figs. 6 and 12. The cylinder 88 is provided with perforated lugs 91 and adjacent the latter is a horizontal post 93 integral with the front plate. Resting against the end of the post and a shoulder 94 upon the wall 20 is a plate 95 separated by spacing blocks 96 from a second plate 97. The plates 95 and 97 are perforated to admit binding screws 100 and 101, whose threaded ends engage respectively the perforated lugs 91 and the shoulder 94 and post 93. Rotatably mounted in an opening 102 in the plate 95 is a hub 103 provided with a diametrical slot 104 in one end to receive the cam 89, and provided at its other end with an arm 105 contacting with the inner face of the lug 56 on bolt 53, against whose outer face presses a flat spring 106 fixed by screws 107 to the wall 20 of the casing. It will be seen that the described lock through the arm 105 coöperates with the spring to reciprocate the bolt.

For the purpose of registering the number of coins employed in operating the machine a common registering device 109 is fixed, adjacent the locking device, to a plate 110 extending from the casing wall and behind the opening 23. Its operating shaft 112 has upon its end an arm 113 from whose free end pivotally depends a hook or link 115 connected with an intermediate portion of a counter operating lever 117 pivoted near one end upon a stud 118 in the plate 97, and having at its other end a downwardly inclined cam edge 120. Upon the pivoted end of this lever is an offset downwardly inclined finger 122. This lever is vertically vibrated by mechanism hereinafter described, so that at each vibration the operating shaft 112 of the register is oscillated.

Referring more particularly now to the bolt actuating mechanism which is of the coin controlled type wherein the coin becomes an element of operation, 125 is the main shaft mounted in a plate 126 constituting a part of the front wall 16 of the casing and extending loosely into the hollow shaft 68. Upon its outer end is a handle or knob 127. Mounted upon the shaft 125 and oscillatory therewith is a coin carrier, comprising parallel side plates or disks 129 and 130 fixed to the shaft and rigidly connected by upper and lower bars 132 and 133. The disk 129 is provided with a coin slot 135 adapted when in normal position to register with the slot 22 in the front wall of the casing, and has a marginal shoulder 136 upon its upper portion adapted to contact with a stop 137 in the front wall of the casing.

Loosely mounted on the shaft 125 is a cam plate 138 in slidable contact with the disk 130. Pivoted upon a pin 139 upon the upper margin of the cam plate is a lug 140 integral

with the upper end of a downwardly inclined guide plate 141 located below the coin slots, provided with a dished and pointed lower end portion 142, and resting against an eccentrically disposed pin 143 upon the disk 129. The plate 141 serves as a coin guide, holder, and presser, the coin 144 dropping from the coin slots travels down its inclined face. The plate 141 is normally pressed against the pin 143 by a flat spring 145 fixed to its upper end and pressing against shaft 125. Coöperating with this plate is a pressure plate 146 fixed by screws 147 or otherwise to the disk 130, and a bearing edge 148 parallel with the plate 141 and normally interspaced therefrom a distance equal to the thickness of a coin. The plate, shown in Fig. 17, comprises two parts including an inner plate 150 provided with a bent projection or lip 151 underlying the coin below the horizontal diametrical line thereof.

Coöperating with the pressure plate 146 is a coin holding lever 153, as shown in Fig. 16, loosely pivoted upon a stud 154 in the plate 129 and held thereon in this instance by a cotter pin 155. Near its outer end upon its inner face the lever is provided with a transversely disposed beveled groove 156 to form a coin rest. A flat spring 157 underlying the lever 153 presses the same toward the coin. A stop pin 158 in the bar 133 determines the extent of outward movement of the arm 153. A key piece or lever 159 is pivotally mounted on a stud 160 extending from the disk 129 and is adapted to oscillate to a position intermediate the lever 153 and the disk 129. A stud 162 on the front wall 16 projects into the path of the lower extremity of the lever 159 so that contact therewith near the close of an oscillation of the carrier disks serves to disengage the lever 159 from the coin holding lever 153.

The oscillatory coin carrier is held in upright normal position with the coin slots registering by means of a spring device consisting of a pin 165 on the disk 129 from which depends a link 166 engaging the free end 168 of a coiled spring 169 fixed on a bar 170 fastened at one end in the front wall of the casing, and at the other end in a lug 171 held by screws 172 to the wall 21 of the casing.

The cam plate 138 is normally downwardly pressed through a pin 174 supporting a link 175 which engages the free end of a spring 177 whose coil 178 is fixed on the bar 170.

The coin carrier, which is adapted to operate with a particular kind of coin only, is shown in normal inoperative position in Fig. 9. The coin is inserted through the slots 22 and 135 and slides down the plate 141 until it is stopped by the pressure plate 146, 150, the projection 151 and the beveled seat of the coin holding lever 153, as shown in Figs. 9, 16 and 17. The handle 127 is now turned part of a revolution till the parts approach the position shown in Fig. 15. This movement, combined with the downward pull of spring 178 and the relative pressure of the stud 143 upon the plate 141, forces the coin 144 into firm contact with the pressure plate 146, locking the parts together. The delivery of the coin, which is continuous with the described operation, is effected by the transverse movement of the coin holding lever 153, shown in Fig. 16, which is disengaged or released by the removal of the key lever 159 when the latter came in contact with the stud 162 during the oscillatory movement, so that the coin assumes the position indicated in broken lines in Fig. 16. The simultaneous pressure of the end 142 of the coin plate contributes to the forcible expulsion of the coin which drops to the bottom of the casing. The carrier is now returned to normal position by its spring, and the auxiliary parts assume the positions shown in Fig. 14.

A coin guard comprises an inclosed plate 182 with rearwardly bent lateral ear 183 near its upper end journaled on the stud 160, and with a vertical rearwardly directed projection 185 adapted to operate as an obstacle clearer. A coil spring 187 fixed on the stud 160 presses with one end 188 against the upper portion of the plate 182 and normally keeps a lateral lug 189 on said plate in contact with the edge of disk 130.

In Fig. 15 where the carrier is shown in the extreme of its oscillation the plate 182 is shown overlapping a guide plate 191 with which it coöperates to prevent an operative coin from passing behind the partition 83. The plate 191 is fixed at one side to a plate 192 and is provided at its other side margin with an ear 193. The plate 192 and ear 193 are perforated to loosely receive a pintle 196 fixed in lug 197 on the vertical extension 199 or the partition 83. The plate 192 is normally pressed downwardly by a spring 200 fixed to the pintle and bearing against said plate and the extension 199. As shown in Fig. 4 the plate 192 is provided with a horizontal lug 203 located in the path of a finger 204 on an intermediate portion of the key lever 159. As shown in Fig. 15 the downward travel of the finger 204 at the end of the oscillation of the carrier elevates the plate 191 into overlapped position. If, however, a non-operative coin passes down the plate 141 it drops from said plate down upon the inclined surface of the plate 191 whereby the coin is deflected to fall down between the partition 83 and the wall of the casing and pass through a coin slot 206 in the bottom wall of the casing. A stud 207 on plate 16 contacts with finger 204 to swing lever 159 during the return oscillation of the parts.

It is desirable that the coin slots should not register with each other to admit a coin after the door has been closed until the operator makes the condition possible. Certain of the structure employed in this connection is the following: The disk 130 is provided with a shoulder 208 upon its edge as shown in Fig. 15. Upon the lower margin of the cam plate 138 is a marginal inner shoulder 209, adapted to coincide with the shoulder 208, and an outer shoulder 210, connected with the inner shoulder by an inclined edge 211. The shoulder 210 is outside the path of the shoulder 208. The shoulders 208, 209 and 210 coöperate with an upright lever or pawl 215 provided with a broad flat top or end face upon which the shoulder 210 normally rests under pressure of spring 177 as shown in Fig. 9. The pawl 215 is loosely mounted at its lower end upon the bar 170 and is inwardly pressed by a coil spring 217 fixed to the bar and having its free end 218 resting against the back of the pawl. The lower portion of the pawl is laterally extended as at 219 and on the extended portion is a stud 220 projecting into the path of the arm 73 of the disk 70. When the coin carrier has reached the limit of its oscillation as shown in Fig. 15, the pawl has already been thrown inwardly by the spring 217 into the path of both the shoulders 208 and 209 so that when the handle 127 is released said shoulders return under spring pressure to rest on the top end of the pawl 215, so that the coin slots do not register, and the shoulder cannot be released to return the carrier to normal position until the arm 73 is swung against the stud 220 thereby forcing the pawl 215 back into the position shown in Fig. 9. The original retraction of the bolt 53 is effected by the return oscillation of the coin carrier through the following agency. A pawl 222 shown in detail in Figs. 10 and 11 is provided with a perforation 223 near its forward end to receive a pivot pin 224 in the elevated portion of the rear face of the disk 130, whereby the pawl is slidably mounted adjacent the bolt 53. This pawl has an intermediate cam edge 226, and an inturned lug 227 upon its outer end. Its pivoted end is provided with a marginal cavity 228. Below the pivotal point is a stud 229, and near its forward end, a stud 230. A looped spring 232 has one end engaged in the cavity 228 of the pawl and the other end fixed to the disk 130 whereby the rear end of the pawl, the end provided with the lug, is downwardly pressed, keeping the lug 227 down upon the cam edge 233 of the cam plate 138. In Figs. 13, 14, and 15 the operation of this pawl is best disclosed. The studs 229 and 230 are normally below the track 64, of the bolt, the lug 227 resting on the cam edge 233 of cam plate 138, and the stud 229, as shown in Fig. 13, projecting above the pawl 76. When locked by a coin the carrier is turned by the handle 127 in the direction of the arrow shown in Fig. 15 to its extreme forward position, the lug 227 being elevated by the rising of the cam edge 233 to the position shown in the last mentioned figure. The described movement carries the stud 230 up upon track 64 and along the same against the edge 65 forcing the bolt 53, against the the opposite pressure of spring 106, to the left to position 230^a in Fig. 14, thus disengaging the bolt head 54 from its receiver 60, the position of the stud 229 being at 229^a. This position of the track is shown in broken lines in Fig. 14. This movement has permitted the pawl 215 to be pressed inwardly by its spring 217 into the path of the shoulders 208 and 209, so that when the handle 127 has been released by the operator the carrier returns a slight distance only and is checked by the pawl 215 in contact with said shoulders. This slight return of the carrier also carries the stud 230 to the right which permits the bolt and its track under the pressure of spring 106 to pass to the right into its receiver, the final position of the stud 230 being above and near the free end of the track as at 230^b. Thus even after the discharge of the coin from the carrier the bolt 53 may be reciprocated at will any number of times without inserting a new coin until the door is once closed. During the described reciprocations the stud 229 has moved into a position such as 229^b in Fig. 14, so that its contact at that point with the top edge of the pawl 76 will depress the latter to such an extent that the stud 75 cannot move to the left along its curved lower edge further than the point 75^b, in Fig. 14. This condition insures against the leg 73 of the plate 70 by accident contacting with the stud 220 during this reciprocatory condition of the bolt 53 whereby the pawl 215 would be tripped. When however the door closed the bolt is thereby thrown toward the left moving the track 64 from beneath the pin 230 at 230^b and permitting the latter to be forced by its spring 232 back to its original position and slightly moving the stud 229 to the left so that the pawl 76 may rise to its highest dotted position in Fig. 14, and the stud 75 move easily to the left if necessary, to the position 75^c.

The described conditions make it impossible for a person in front of the door to insert a coin, and his manipulation of the handle 127 operates nothing. The person behind the door can whenever he desires throw back the bolt by turning the handle 69 which throws the shoulder 71 of the disk 70 against the finger 57 on the bolt.

By reference to Fig. 15 it will be seen that when the coin carrier is near the end

of its advance the cam edge 226 of the pawl 222 strikes the finger 122 of the counter operating lever 117 and depresses the free end of the latter and operates the register 109 through the hook 115 and arm 113.

In Figs. 2, 3 and 8 is shown a preferred connection of shaft and handle for use upon the back face of the door. The handle 69 comprises in detail sleeve 235 provided near its outer end with an internal squared shoulder 236. The sleeve has integral with its outer end and at a right angle thereto a handle or arm portion 238. The tubular shaft 68 has a solid portion 239 terminating in a squared shoulder 236. The portions 239 and 240 are longitudinally bored as at 241 to admit a screw 242 whose head 243 abuts against the portion 239, and whose opposite or threaded end 244 engages the threaded central perforation 245 of a locking disk 246 abutting against the shoulder 236 flush with the end of the sleeve. It will be observed that the handle 69 is detached only by access through the interior of the casing by means of a screw driver operating on the head 243. A collar 248 may be fixed by screws 249 to the rear face of the door around the shaft 68 if desired.

What I claim is:—

1. In a device of the character described, the combination with a slidably mounted spring actuated bolt, of a casing in which said bolt is mounted, an inner handle, a spring actuated member mounted upon said inner handle and adapted when said inner handle is turned, to directly engage said bolt to move the same into the casing, an outer handle, a plate mounted upon said outer handle, means for locking said plate to the outer handle, a pivoted pawl engaging said plate, means carried by said pawl for engaging the bolt, said pawl moving bodily with the outer handle, and means for maintaining said pawl in a bolt engaging position after the outer handle is released.

2. In a device of the character described, the combination with a slidably mounted spring actuated bolt, of a casing in which said bolt is mounted, an inner handle, a spring actuated member mounted upon said inner handle and adapted when said inner handle is turned, to directly engage said bolt to move the same into the casing, an outer handle, a plate mounted upon said outer handle, means for locking said plate to the outer handle, a pivoted pawl engaging said plate, means carried by said pawl for engaging the bolt, said pawl moving bodily with the outer handle, means for maintaining said pawl in a bolt engaging position after the outer handle is released, and means for restoring said pawl to a disengaged position when the bolt is moved inwardly by the closing of the door.

3. In a device of the character described, the combination with a slidably mounted spring actuated bolt, of a casing in which said bolt is mounted, an inner handle, a spring actuated member mounted upon said inner handle, and adapted when said inner handle is turned, to directly engage said bolt to move the same into the casing, an outer handle, a plate mounted upon said outer handle, means on said plate coöperating with means to lock the outer handle to the plate, a pivoted pawl engaging said plate, means carried by said pawl for engaging the bolt, said pawl moving bodily with the outer handle, means for preventing the return of the outer handle to a normal position, and means controllable by the inner handle for removing said return preventing means out of engagement with said plate.

4. In a device of the character described, the combination with a slidably mounted spring actuated bolt, of a casing in which said bolt is mounted, an inner handle, a spring actuated member mounted upon said inner handle, and adapted when said inner handle is turned, to directly engage said bolt to move the same into the casing, an outer handle, a plate mounted upon said outer handle, means for locking said plate to the outer handle, a pivoted pawl engaging said plate, means carried by said pawl for engaging the bolt, said pawl moving bodily with the outer handle, means for preventing the return of the outer handle to a normal position, and means controllable by the inner handle for removing said return preventing means out of engagement with said plate.

5. In a device of the character described, the combination with a casing, of a longitudinally movable spring actuated bolt mounted therein, a track comprising a horizontal portion and a vertical wall carried by said bolt, an outer operating handle, spaced disks carried by said outer operating handle, a cam plate loosely mounted upon the operating handle between said disks, a pawl pivotally mounted upon one of said disks and bodily movable therewith, a stud carried by said pawl, means for locking the cam plate to the outer operating handle, said stud riding up over the horizontal portion of the track and contacting with the vertical wall of the bolt when the operating handle is turned, to thereby reciprocate said bolt.

6. In a device of the character described, the combination with a casing, of a longitudinally movable spring actuated bolt mounted therein, a track comprising a horizontal portion and a vertical wall carried by said bolt, an outer operating handle, spaced disks carried by said outer operating handle, a cam plate loosely mounted upon the operating handle between said

disks, a pawl pivotally mounted upon one of said disks and bodily movable therewith, said pawl having a portion which overhangs and rests upon said cam plate, a stud carried by said pawl, means for locking the cam plate to the outer operating handle, said stud riding up over the horizontal portion of the track and contacting with the vertical wall of the bolt when the operating handle is turned, to thereby reciprocate said bolt, and means for preventing the complete return of the operating handle and pawl, whereby said stud is maintained in a position above the horizontal portion of the track until the return preventing means is released.

7. In a device of the character described, the combination with a casing, of a longitudinally movable spring actuated bolt mounted therein, a track comprising a horizontal portion and a vertical wall carried by said bolt, an outer operating handle, spaced disks carried by said outer operating handle, a cam plate loosely mounted upon the operating handle between said disks, a pawl pivotally mounted upon one of said disks and bodily movable therewith, said pawl having a portion which overhangs and rests upon said cam plate, a stud carried by said pawl, means for locking the cam plate to the outer operating handle, said stud riding up over the horizontal portion of the track and contacting with the vertical wall of the bolt when the operating handle is turned, to thereby reciprocate said bolt, means for preventing the complete return of the operating handle and pawl, whereby said stud is maintained in a position above the horizontal portion of the track until the return preventing means is released, an inner handle, and means carried by said inner handle for engaging and releasing the return preventing means.

8. In a device of the character described, the combination with a casing, of a longitudinally movable spring actuated bolt mounted therein, a track comprising a horizontal portion and a vertical wall carried by said bolt, an outer operating handle, spaced disks carried by said outer operating handle, a cam plate loosely mounted upon the operating handle between said disks, a pawl pivotally mounted upon one of said disks and bodily movable therewith, said pawl having a portion which overhangs and rests upon said cam plate, a stud carried by said pawl, means for locking the cam plate to the outer operating handle, said stud riding up over the horizontal portion of the track and contacting with the vertical wall of the bolt when the operating handle is turned, to thereby reciprocate said bolt, means for preventing the complete return of the operating handle and pawl, whereby said stud is maintained in a position above the horizontal portion of the track until the return preventing means is released, an inner handle, and means carried by said inner handle for engaging and releasing the return preventing means, inward movement of the bolt caused by the closing of the door, moving the horizontal portion of the track from beneath said stud and permitting the pawl to move into engagement with the cam plate.

9. In a device of the character described, the combination with a casing, of a longitudinally movable spring actuated bolt mounted therein, a track comprising a horizontal portion and a vertical wall carried by said bolt, an outer operating handle, spaced disks carried by said outer operating handle, a cam plate loosely mounted upon the operating handle between said disks, a pawl pivotally mounted upon one of said disks and bodily movable therewith, said pawl having a portion which overhangs and rests upon said cam plate, a stud carried by said pawl, means for locking the cam plate to the outer operating handle, said stud riding up over the horizontal portion of the track and contacting with the vertical wall of the bolt when the operating handle is turned, to thereby reciprocate said bolt, means for preventing the complete return of the operating handle and pawl, whereby said stud is maintained in a position above the horizontal portion of the track until the return preventing means is released, an inner handle, means carried by said inner handle for engaging and releasing the return preventing means, inward movement of the bolt, caused by the closing of the door, moving the horizontal portion of the track from beneath said stud and permitting the pawl to move into engagement with the cam plate, and means controllable by said pawl for preventing accidental movement of the inner handle to release the return preventing means.

10. In a device of the character described, the combination with a reciprocatory spring actuated bolt, of an outer operating handle, a cam plate loosely mounted upon said operating handle, means for locking the cam plate to the operating handle, a pair of spaced disks between which said cam plate is located, a pivoted pawl, shoulders formed upon the cam plate and one of the disks and adapted to be engaged by said pawl to prevent the complete return of said cam plate and said disks until said pawl is moved out of engagement with said shoulders, an inner operating handle, a second pivoted pawl, a cam disk carried by the inner operating handle, a pin carried by said cam disk and engaging said pawl, a third pawl pivoted to one of the first named disks and bodily movable therewith, means carried by this third pawl for engaging and moving the bolt

when the outer operating handle is turned, means carried by said last named pawl for engaging the second named pawl to prevent, during such engagement, the movement of the disk carried by the inner operating handle, and means upon the last named disk for engaging the first named pawl to move said pawl out of engagement with and to permit the complete return of the cam plate, the outer operating handle, and the disks carried thereby.

11. In a device of the character described, the combination with a slidably mounted spring bolt, of a casing in which said bolt is mounted, an inner handle, a spring actuated member mounted upon said inner handle and adapted when said inner handle is turned, to directly engage said bolt to move the same into the casing, an outer handle, a cam plate loosely mounted upon said outer handle, means for locking said plate to the outer handle, operative connections between the cam plate and bolt, a lug upon the bolt, a frame in the casing, a rotary lock hub in the frame, and an arm upon the hub adapted to contact with the lug upon the bolt when the hub is rotated.

12. In a device of the character described, the combination with an operating shaft, of disks carried thereby, coin supporting members mounted upon said disks, a cam plate loosely mounted on said shaft, a coin holding member upon the cam plate, a pawl mounted upon the cam plate, a cam edge upon the pawl, a registering device in the casing, an operating lever pivotally mounted in the casing adjacent the registering device, operative connections between the registering device and the operating lever, a cam edge upon one end of the lever in the path of the pawl, and a finger upon the other end of the lever in the path of the pawl cam edge.

In testimony whereof I have affixed my signature in presence of two witnesses.

FRANK J. ROWSE.

Witnesses:
HORATIO E. BELLOWS,
CLIFFORD S. TOWER.

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