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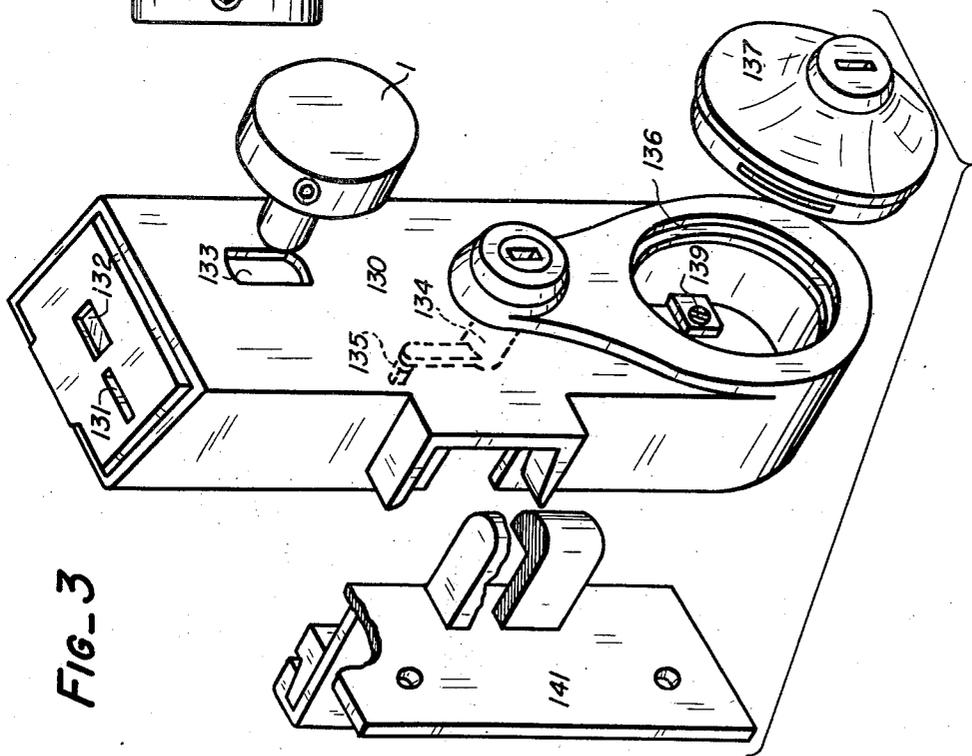
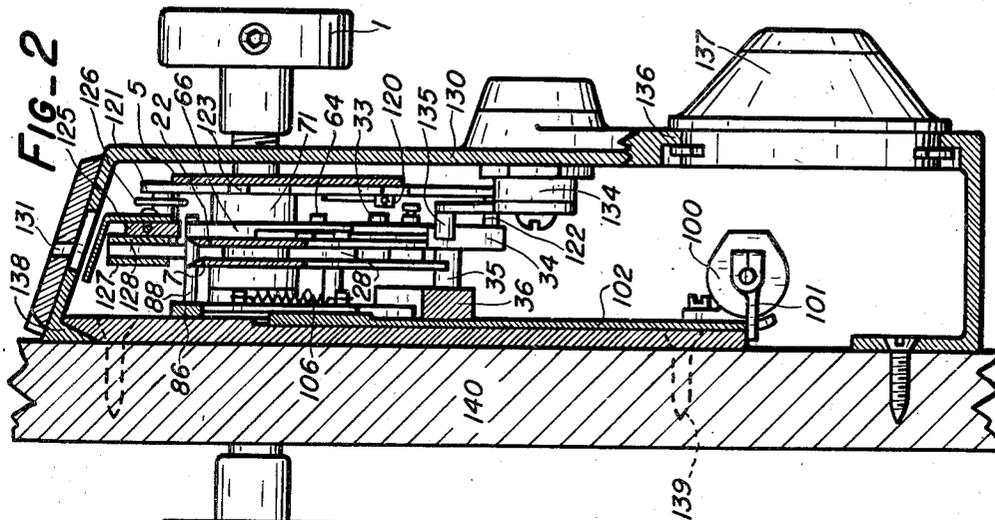
N. E. BOWEN

2,417,056

COIN OPERATED DEVICE

Filed March 2, 1942

3 Sheets-Sheet 2



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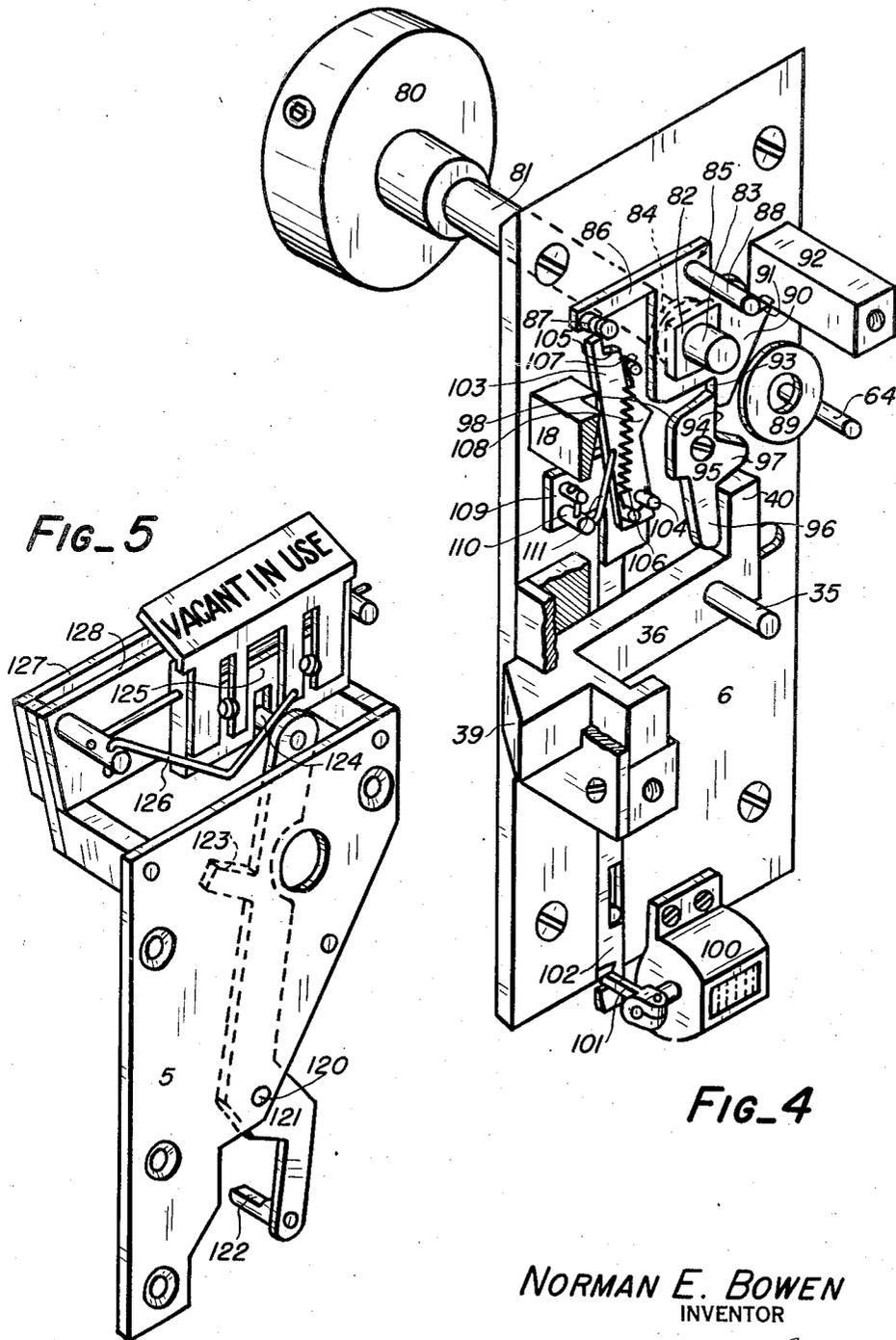


FIG. 5

FIG. 4

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2,417,056

COIN OPERATED DEVICE

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8 Claims. (Cl. 194—92)

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The present invention relates to improvements in coin operated devices and in more particular to a coin operated device adapted to be associated with a door lock, which will allow the door to be unlocked upon the insertion of a coin into the device.

In the use of the prior art devices the patrons have often been aggravated by the failure of the device to operate upon the insertion of a coin and by the passage of the coin through the device and into the coin receptacle. This defect has been occasioned by the fact that if the bolt part of the lock were to be partly retracted out of the keeper by the presence of foreign matter therein, or due to other causes, that the coin when inserted in the box passed through and into the coin receptacle without allowing the lock handle to be operated and the door to be opened. Furthermore, prior art locks have been unduly complicated and have required the use of many tools and much time in the assembly or disassembly of the various parts. Prior art devices have been difficult of adjustment, and have gotten out of adjustment easily.

Having in mind these defects of the prior art, it is an object of the present invention to construct a coin operated lock in which the bolt may be fully retracted and yet in which the coin will be retained when inserted in the device, and the device operated as if the bolt were in its normal position.

Another object of the present invention is the construction of a coin operated lock in which the bolt can be actuated directly without affecting the ability of the device to receive and to retain coins in the coin chute, and for the lock to operate in a normal manner.

A further object of the present invention is the construction of a coin operated device having a coin release means loosely linked to a bolt so that operation of said bolt will not actuate said release, and having means responsive to the presence of a coin in said device for linking said release to said bolt so that operation of said bolt will actuate said release.

A further object of the present invention is the construction of a split coin retainer having means for moving one side of said retainer relative to the other to render said device non-operative.

The present invention has as a further object the construction of a coin operated device having a split coin retainer so arranged that an operative force is transmitted from one side to the other of said retainer when a coin is in such retainer, but that when a coin is not in said retainer movement

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of one side relative to the other renders it non-operative.

Having in mind these defects of the prior art, and these objects, applicant has devised a coin operated device adapted to be used with a lock wherein the outside lock handle is connected to a plate bearing a cam which will actuate one side of a coin receptacle, or chute, so that it will move relative to the other side if a coin is not in the chute and such movement will lock the handle from further movement and prevent movement of the bolt. Thus, movement of one side of a coin receptacle relative to the other side renders the device non-operative. If a coin is in the chute, motion will be transmitted through the coin from the handle actuated side of the chute to the bolt actuated side of the chute and the two sides of the chute will move as one to actuate the bolt. That is, the presence of a coin in the chute renders the device operative. Also, there is provided a loose link between the bolt and the bolt actuated side of the chute, so that in the normal position of the lock the bolt may be moved without moving the chute and a coin will be retained in the chute at any time regardless of the position of the bolt. Upon retention of a coin in the chute and movement of the chute, the bolt actuated side of the chute will then be rigidly linked to the bolt so that as the door closes and the bolt is actuated by the keeper, the coin will be released. If the coin is not released by the keeper striking the bolt, when the bolt is again moved by the inside handle to allow someone to pass out, this motion of the bolt will then release the coin and reset the lock so that the bolt will again be loosely linked to the bolt operating side of the chute, or retainer.

A coin operated device constructed to eliminate the above mentioned defects and obtain the above mentioned objects, and constructed in accordance with the above outline as it applies to a lock, is illustrated in the drawings presented herewith, in which:

Figure 1 is a schematic showing of the main mechanisms of the lock in extended form so that their operation may be easily understood.

Figure 2 is a vertical, sectional view in the plane 2—2 of Figure 1 showing the complete lock in assembled position.

Figure 3 is an isometric view of the lock housing and keeper, with the door of the bank removed.

Figure 4 is an isometric view of the back assembly of the lock shown in Figure 2.

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Figure 5 is an isometric view of a sub-assembly of the lock.

Figure 1 is an isometric view showing the main elements operated by the front, or outside handle, with these elements in extended relationship so that the various parts may be seen in their entirety without the use of numerous dotted lines. The several pins connecting the various parts are shown extended between the parts by characteristic broken lines so that the operative relationships of the parts may be easily understood from the drawing.

Coin guide and chute assembly:

An outside handle 1 (not shown in this figure) is secured to an outside, or front, spindle 2 which may be threaded to receive the handle and locked thereto by a set screw. The back end of this spindle has formed on it a square shank 3 with the edges of the square rounded off. A bearing recess 4 is formed in the inside of the back end of the shank to receive a front spindle supporting pin for supporting and centering the back end of the spindle. This supporting pin is not shown in this view. The front end of the spindle is bearing in a retaining plate 5 which is secured to a mounting plate 6 (see Figure 4) to retain the parts shown in this figure and others together in operative relationship. The front spindle 2 is passed through round openings in various arms and plates to provide these pieces with a pivotal bearing on the rounded edges of the square shank 3. These pieces are shown in alignment with the axis of the spindle. An outside operating, or back, plate 7 is provided with a square opening 8 which will snugly receive the square end of the front spindle 2. The outer edge of this plate has formed in it a T-slot with a stem part 9 and a head part 10. The upper part 11 of the back plate is curved backward to form with the body of the plate one side of a coin guide. A spindle spring 12 which is secured to a spring pin 13 projecting from the back side of the plate 7 and placed near the outer edge of the plate, urges the plate upwardly in a clockwise direction. The stem of the slot acts as a cam with respect to a cam follower pin 14 which is secured to the handle operated side 15, or part of a split coin chute, or coin retainer. The handle operated side of the chute is mounted on a handle operated side pivot 16. The upper end of the handle side of the chute has formed therein a catch 17 which upon counter-clockwise rotation of the side is adapted to engage a chute catch stop 18 secured to the mounting plate 6 of the lock. The lower end 19 of the handle side 15 of the chute is formed with a channel 20 adapted to receive the edge of a certain size coin. The back edge of the chute bears against a stop 21 which is also secured to the mounting plate 6 of the lock. The pivot 16 is secured in an operated, or front, plate 22, and the pivot extends from this front plate through the handle operated side of the coin chute and into the head 10 of the T-slot. Both the cam follower pin 14 and the pivot 16 have on their ends which extend through the T-slot, heads overlying the back plate to retain it in fixed spaced relationship to the front plate 22. The front plate has formed in one end a round opening 23 that is adapted to fit around the square shank 3 of the outside spindle 2. The upper portion 24 of this front plate is curved forward to form with the body of the plate one side of a coin guide. The back plate 7 and the front plate 22 are spaced apart

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to form a coin guide. The outer end of the front plate has a projecting finger 25 which engages the under side of a stop 26. The front plate is moved clockwise and has its finger 25 urged against the stop 26 by the spring 12 secured to the back plate. This is done through the cam and pin, 10 and 14, respectively, the handle operated side 15 of the coin chute as it is urged clockwise and as it bears upon the stop 21, and the pivot 16 secured in the front plate 22. Pressure applied to the lower edge 27 of the front plate also urges it against the stop 26.

Retained between the back plate 7 and the front plate 22 is the bolt operating side 28, or part, of the coin chute. One end of the bolt operating side is formed with a round opening 29 that fits snugly around the square shank 3 of the spindle 2 to allow pivoting of the side on the shank 3 of the spindle 2. The middle portion of the bolt operating side is formed with a channel 30 in opposition to the channel 20 of the handle operated side 15 of the chute, and forms with this channel the chute. The sides of the chute are so constructed and placed that they taper downwardly to prevent a coin of the proper size from dropping therethrough. One side of the chute has formed in it a coin retaining notch 31 in which the coin will be caught as it moves in or through the chute. This notch will prevent return of the coin back up the chute under the action of the lock mechanisms. On the front side of the bolt operating chute is formed a shoulder 32 that bears against the lower edge 27 of the front guide plate 22. The shoulder 32 acts as a stop to limit the clockwise movement of the bolt operating side of the chute. This movement of the side is obtained through the urging of the lever pin 33 which is secured in the side. The lower end of the bolt operating side has secured to it, as a continuation, a bolt operating finger 34. The left, or chute, side of this finger has bearing against it an arm from a pass key bolt. The right side of the finger is arranged to operate an "In use" indicator, and to contact the bolt pin 35 of the bolt 36, in which the pin is secured. The bolt 36 lies between the retaining plate 5 and the mounting plate 6 which may be formed with suitable guide portions for the bolt. The back of the bolt lies against the mounting plate and the projection 37 against the retaining plate 5. The bolt may be provided with a headed retaining screw secured to the back of the bolt with the underside of the head bearing against the back of the mounting plate 6 with the stem of the screw extending through a slot in the plate to hold the bolt against the mounting plate. The outer end of the bolt is provided with a beveled end 39 adapted to fit in a keeper, and the inner end has an upwardly projecting inside lug 40 for operating the bolt from an inside handle.

Operation of split coin chute.

The coin chute is maintained in proper alignment by means of the spring 12 attached to the back plate 7 which urges the handle operated side of the chute against its stop 21 which thus positions the guide, or back, plate 7 as well as the handle side of the chute. The bolt operating side 28 of the chute is urged clockwise by a spring force exerted upon the lever pin 33, and against the lower edge 27 of the front plate 22 whose finger 25 rests against its stop 26, thus holding the bolt side of the assembly in alignment. If the outside handle 1 is turned counter-clockwise

when there is not a coin in the chute, the back plate 7 will turn slightly, the stem 9 of the T-shaped slot will cam on the cam pin 14 attached to the handle side of the chute, and the chute will rotate in a counter-clockwise direction about its pivot 16. This rotation of the handle side 15 of the chute will bring the catch 17 at the upper end of the side into locking engagement with the stop 18 which is attached to the mounting plate, and the lock will be rendered non-operative. Release of the handle will allow the parts to return to normal position under the urging of the spring 12 attached to the back plate 7.

When a proper size coin is placed in the lock, it will pass between the front and back plates 7, 22, and enter the coin chute 15, 28 through which it will be guided by the coin chute channels 20, 30 and will stop with its edge in the retaining notch 31 in the bottom of the channels.

With a proper size coin in the chute, the outside handle 1 may be turned counter-clockwise, the handle side 15 of the chute will tend to turn counter-clockwise on its pivot 16, as described above, but will be prevented from doing so by the presence of the coin in the chute against which it will bear, and a counter-clockwise turning force will be transmitted to the bolt operating side 28 of the chute through the coin and from the back plate 7 through the cam pin 14, the handle side of the chute 15, the pivot 16, the front plate 22, and from the lower edge 27 of the front plate to the shoulder 32 of the bolt operating side. These forces upon the bolt operating side will cause it to turn in a counter-clockwise direction about the shank 4, and the bolt operating finger 34 of the bolt side will be brought against the bolt pin 35 to retract the bolt 36 from the keeper. When the handle 1 is released, these parts will return to their normal position described above, with the coin still retained in the chute.

Coin release assembly

The front ends of the bolt pin 35 and the lever pin 33 carry a floating or loose link or lever 50, a link adapted to link together the bolt 36 and the bolt operating side 28 which has the coin retaining notch 31. That is, the link does not rigidly at all times secure the parts together in fixed relation but is so constructed that at appropriate times it may be so fixed. The lever has in its middle portion an elongated slot 51 through which the lever pin 33 passes, that has in its lower end an open slot 52 through which the bolt pin passes, and that has its upper end formed with a catch 53 facing in a counter-clockwise direction. The lever is urged counter-clockwise by a lever spring 54 secured at one end to the lever by a pin 55. The back side of the lever lies against the bolt operating side 28 of the coin chute, and is held there by means of a keeper 56 that has near its mid portion an open slot 57 that hooks into an annular groove 58 formed adjacent the end of the lever pin 33. The lower end of the keeper has formed in it an open slot 59 in which the bolt pin 35 fits. The keeper is placed in position by sliding the end slot 59 onto the bolt pin, and then sliding the mid portion slot 57 in the annular groove 58. The back side of the keeper then bears upon the lever to hold it in place. The keeper is held in place by the keeper spring 60, the other end of which is secured to the stop 21, a part of the mounting plate 6. The lever spring 54 has its other end secured to a pin 61 mounted on a sear 62. The sear is provided

with a catch 63 for cooperation with the catch 53 of the lever when the lever is moved clockwise. The right end of the sear is pivoted on a pin 64 which is secured to the mounting plate 6. The left end of the sear is formed as a release finger 65 which raises the sear and releases the lever so that it may move counter clockwise and to its normal position. The sear 62 is held against the front faces of the front guide plate 22 and the bolt operating side 28 of the coin chute by the upper portion of the keeper 56. A sear release arm 66 is provided with a round opening 67 which is placed around the square shank 3 of the front spindle to allow pivotal movement of the arm about the axis of the spindle. Engagement of the sear release arm with the sear is had through a pin 68 secured in the arm and bearing upon the underside of the sear release finger 65. The sear release arm 66 carries on its front face near the outer end a pin 69 arranged to operate a "Vacant" indicator. The sear release arm is held in position and rotated by means of a sear release arm actuating pin riding in an operating slot 70 in the upper portion of the release arm.

Bearing against the front face of the sear release arm 66 and against the back side of the retaining plate 5, while it surrounds a portion of the square shank 3 and a portion of the threaded portion of the spindle, is the spacing collar 71.

Operation of coin release

The coin release assembly is in its normal, or ineffective, position when the lever catch 53 is out of engagement with the sear catch 63, and the lever has moved counterclockwise so that the right hand end of the elongated slot 51 in the middle of the lever is against the lever pin 33. In this normal position, the bolt 36 may be moved back and forth without moving the bolt operating side 28 of the coin chute, as the lever catch 53 will only slide to the left along the under edge of the sear and away from the sear catch 63. However, when a coin is in the chute and the outside handle 1 is operated counterclockwise, the coin chute assembly will rotate about the spindle 2, and the bolt operating finger 34 will contact the bolt pin 35 to move the bolt to the right. This counterclockwise rotation of the coin chute will carry the lever pin 33 to the right, and cause the lever catch 53 to engage with the sear catch 63, the sear being held down on the lever by means of the lever spring 54. The coin chute assembly may move a small distance before the bolt operating finger 34 will contact the bolt pin 35. This allows the lever to pivot clockwise and the lever and sear catches to engage. When the lever is engaged with the sear, that is, the lever 50 is in its effective position, and the coin chute is in its normal position against its stops, movement of the bolt, as when the bolt strikes the keeper upon closure of a door carrying the lock, will carry the bolt pin 35 to the right, will pivot the lever counterclockwise about its catch 53, and the left end of the lever's middle slot 51 will contact the lever pin 33 to move it to the right, to move the bolt operating side 28 of the coin chute to the right, and to release a coin held in the chute. Clockwise rotation of the sear release arm 66 by motion of a pin in the slot 70, will lift the sear, disengage the catches 53, 63, and allow the lever to return to its normal position. This release arm actuating pin is controlled by motion of the inside handle. Tension is maintained upon the lever by the lever spring 54, and tension is maintained upon the keeper 56 and the bolt

operating side 28 of the coin chute by means of the keeper spring 60. The bolt operating side 28 may also be called the bolt connectible side, or part, of the coin chute.

Inside and counter assembly

An inside, or back, handle 80 (Figure 4) is secured to an inside, or back, spindle 81 that is bearinged in the mounting plate 6. The front end of the inside spindle has an enlarged square shaft portion 82 which will overlie the mounting plate to retain the spindle in the lock. The front end of the spindle is formed with a front spindle supporting pin 83 that fits in the bearing recess 4 at the back end of the front spindle 2. Between the square shaft portion and the mounting plate 6 is placed a back spacing washer 84 to space the square shaft portion from the mounting plate, and to act as a thrust washer. The back end of the spindle may be threaded for reception of the handle. The handle may carry a set screw for holding it in place. Fitting around the square shaft portion is an inside operating plate 85 that has a spring supporting arm 86 with a spring pin 87 in the end thereof to which one end of the spindle spring 12 (Figure 1) is secured. The opening in the plate that fits around the spindle is square to conform to the square portion of the spindle. In the upper part of the inside operating plate is secured one end of a sear release arm actuating pin 88 which has its other end placed in the operating slot 70 (Figure 1) of the sear release arm 66. An inside and outside operating plate spacing washer 89 is placed around the front spindle supporting pin 83, and lies upon the inside operating plate 85 to hold it against the back spacing washer 84. Across the square opening in the plate from the spring supporting arm 86 is a boss 90 which has an upwardly facing portion 91 that bears against the under side of a stop 92 secured to the mounting plate 6, when the inside operating plate is in normal position. The boss 90 also has a downwardly extending edge 93 that engages an edge 94 on the upper end of a bolt operating crank 95. The other, or lower, end 96 of the crank engages the left side of the inside lug 40 of the bolt 36. The crank 95 is pivoted at its midpoint to the mounting plate 6. The bolt crank also has a stop portion 97 that engages the top of the inside lug 40, which limits the outward motion of the bolt and the turning of the crank 95. The crank also has a shoulder 98 that acts as a counter release cam.

The counter 100 has an operating lever 101 that is actuated by means of a counter operating link 102 that is guided in a groove in the front face of the mounting plate 6. The upper end of the counter operating link 102 carries a latch 103 that pivots about a latch pin 104. The upper end of the latch has a portion cut away to form a latch catch 105. The latch is urged clockwise by means of a latch spring 106 against a latch catch pin 107. The latch spring 106 has its other end secured to this catch pin. The latch has on its right hand edge a release cam follower lug 108 adapted for contact with the latch release cam 98. The upper end of the counter operating link has a shoulder 109 whose upper edge bears against the under side of the stop 18 secured to the mounting plate 6. This shoulder 109 also carries a spring arm pin 110 to which is secured a spring arm 111. This spring arm 111 is adapted to be contacted and the operating link 102 moved downwardly by the outside operating plate spindle spring pin 13 (Figure 1).

Operation of the inside and counter assemblies

Clockwise movement of the inside handle will retract the locking bolt 36 from the keeper through actuation of the inside operating plate 85, its boss 90, and the crank 95 operating against the inside lug 40 on the bolt. If the lever catch 53 is in engagement with the sear catch 63, this movement of the inside operating plate will carry with it the sear release arm actuating pin 88 resulting in clockwise movement of the sear release arm 66, disengagement of the sear and lever, and placing the bolt operating side 28 of the coin chute in loosely linked relationship to the bolt 36. The inside handle is returned to its normal position by actuation of the spindle spring 12 in forcing the inside operating plate counterclockwise and the edge 91 of the its lug 90 against the under side of the stop 92 secured to the mounting plate 6.

Actuation of the outside handle and counterclockwise motion of the outside operating plate 7 will force the outside operating plate spindle spring pin 13 down against the latch spring arm 111 to move the counter operating link 102 downwardly and to actuate the operating lever arm 101 of the counter 100 in one direction. This downward movement of the operating link will allow the latch catch 105 to engage the latch pin 107. Clockwise movement of the inside operating plate 85 will move the latch release cam 98 of the bolt operating crank 95 against the cam follower 108 of the latch to release the latch catch 105 from the latch pin 107 and to allow the counter and the operating link 102 to return to normal whereby the counter will have been actuated.

"Vacant" and "in use" assemblies

As shown in Figure 5, the retaining plate 5 has pivoted on its back side on a pin 120 an indicator arm 121 that carries near its lower end an "in use" operating finger 122 that is adapted to be engaged by right hand side of the operating finger 34 of the bolt operated side 28 of the coin chute when the side is operated, and to move the arm in a counter clockwise direction. Above the pivot of the indicator operating arm and on the left edge thereof is a "vacant" operating finger 123 that is adapted to be engaged by the "vacant" operating pin 69 that is carried by the sear release arm 66 (Figure 1). The upper end of the indicator arm 121 has secured to it a backwardly extending pin 124 that engages an indicator slide 125 that is adapted to slide back and forth across the top of the retainer plate upon or in suitable guides. The slide is urged toward either edge of the retaining plate by means of a biasing spring 126. The guides for the slide 125 are carried on an offset portion of the retaining plate that is formed of two parallel spaced apart plates 127, 128 that form a fixed coin guide for guiding coins from the opening in the lock case and between the outside operating and operated plates 7, 22. The retaining plate 5 is spaced from the mounting plate 6 and secured thereto by screws passed therethrough into the chute catch stop 18, the inside operating plate stop 92, and the bolt guides.

Operation of "vacant" and "in use" assembly

The case for the lock has a small opening therein adjacent the coin opening that allows either the word "Vacant" or the phrase "In use" to be seen therethrough. The word "Vacant" normally appears in the opening in the lock case. The phrase "In use" is placed in position to be

seen through the opening in the lock case by the action of the engagement of the operating finger 34 of the bolt operating side 28 of the coin chute coming into engagement with the "in use" operating finger 122 to thereby rotate the indicator arm 121 counter clockwise. The slide and arm are returned to normal position by the operation of the inside handle and the raising of the sear release arm 66 so that the "vacant" operating pin 69 contacts the under side of the "vacant" operating finger 123, which is secured to the upper part of the indicator operating arm 121, and moves the arm in a clockwise direction to carry the slide to a position where the word "Vacant" will be displayed. The slide is also so arranged that a part thereof will block the coin opening in the case when the phrase "In use" is displayed. The slide will be held in either position by the biasing spring 126.

Lock case

The lock is housed in a case 130 (Figure 3) that has in its top end a coin opening 131 in registry with the opening between the fixed coin guide plates 127, 128 secured to the top of the retaining plate 5. Also in the top end of the case is an indicator opening 132 adapted to register with a part of the indicia carried by the indicator slide 125. The front of the case is provided with an outside spindle opening 133 that is adapted to receive the spindle 2. Placed in the mid portion of the case is a pass key locking device that carries a stem 134 which may be rotated upon insertion of a proper pass key in the lock. Rotation of the stem 134 will swing a crank and pass key pin 135 carried by the stem. Movement of the pass key pin 135 will cause it to contact the left side of the operating finger 34 of the bolt operated side of the coin chute. This movement of the bolt operated side of the coin chute will retract the bolt from the keeper and open a door to which the lock is applied. The spindle spring 12 will return the side to its normal position. Use of a pass key will set the "in use" indicia and require operation of the inside handle to again reset the lock to its normal position. The lower front face of the case has a bank opening 136 therein that is adapted to receive a bank door 137 that may be opened and closed by means of a bank key and lock. The case is held in position by means of a locking lip 138 (Figure 2) placed at the back top of the case and adapted to fit in back of the top edge of the mounting plate 6, and by means of screws 139 or bolts securing the case to a door panel 140 (Figure 2), which screws can only be reached through the bank opening 136. Coins which have been received by the lock may be removed through the bank opening. A keeper plate 141 of appropriate shape may be secured to the door chasing in registry with the bolt.

Having thus described the construction and operation of my device, I claim:

1. A coin chute, coin retaining means for retaining a coin in said chute, a bolt, a link adapted to link together said bolt and said retaining means, and outside-handle operated means operative upon the presence of a coin in said chute for withdrawing said bolt and for rendering said link effective to transmit motion from said bolt to said coin retaining means whereby subsequent withdrawal of said bolt by other means than said outside-handle operated means will operate said coin retaining means to release a coin that may be in said chute.

2. A coin support having a first and second part for supporting a coin, a bolt, a link adapted to link together said bolt and said second part, and outside-handle operated means operative upon the presence of a coin on said parts for withdrawing said bolt and for rendering said link effective to transmit motion from said bolt to said second part whereby subsequent withdrawal of said bolt by other means than said outside-handle operated means will operate said second part with respect to said first part to release a coin supported by said parts.

3. In a coin controlled device: first and second parts for supporting a coin; a bolt; a link adapted to link together said bolt and said second part; outside-handle operated means operative upon the presence of a coin on said parts for moving said parts, for withdrawing said bolt, and rendering said link effective to transmit motion from said bolt to said second part whereby subsequent movement of said bolt independent of said outside-handle operated means will move said second part and not said first part to release a coin supported by said parts; and inside-handle operated means for releasing said link from its effective position between said bolt and said second part.

4. A coin operated device, comprising: a two part coin chute having a coin retaining portion, a handle operated part, and separate therefrom a bolt connective and operative part, whereby upon operation of the handle part the bolt operative part is made operative by thrust through a coin spacing said parts and retained in said chute by said portion; a bolt; a normally ineffective lever adapted to act as a connective between said bolt and bolt operative part; a pivot carried by said bolt operative part and carrying said lever, a portion of said bolt being in contact with said lever; and a sear rendering said lever effective upon movement of said bolt operative part to operate said bolt, whereby subsequent direct operation of said bolt will, through said lever, move said bolt operative part relative to said handle part, all whereby a coin which has been placed in said chute will be released independently of said handle part.

5. A coin operated device, comprising: a two part coin chute having a coin retaining portion, a handle operated part, and separate therefrom a bolt connective and operative part, whereby upon operation of the handle part the bolt operative part is made operative by thrust through a coin spacing said parts and retained in said chute by said portion; a bolt; a normally ineffective lever adapted to act as a connective between said bolt and bolt operative part; a pivot carried by said bolt operative part and carrying said lever, a portion of said bolt being in contact with said lever; a sear rendering said lever effective upon movement of said bolt operative part to operate said bolt, whereby subsequent direct operation of said bolt will, through said lever, move said bolt operative part relative to said handle part, all whereby a coin which has been placed in said chute will be released independently of said handle part; an inside handle; and a sear release operated by said inside handle for releasing said sear and rendering said lever ineffective.

6. In a coin controlled lock, a bolt, a coin release, a link adapted to link together said bolt and said release, and outside-handle-operated means for withdrawing said bolt and for rendering said link effective to transmit motion from said bolt to said coin release whereby release of

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said bolt and subsequent withdrawal thereof by other means than said outside-handle operated means will operate said coin release.

7. In a coin controlled lock, a bolt, a coin release, a link adapted to link together said bolt and said release, outside-handle operated means for withdrawing said bolt and for rendering said link effective to transmit motion from said bolt to said coin release whereby release of said bolt and subsequent withdrawal thereof by other means than said outside-handle operated means will operate said coin release, and inside-handle operated means for rendering said link ineffective to transmit motion from said bolt to said coin release.

8. A coin controlled lock, having: a bolt; a two part coin chute pivoted for rotation; said coin chute being divided into a bolt operating side, and a handle operated side having a pivot mounted for motion with said coin chute and about which the handle operated side may rotate when there is no coin in said chute; a stop for engaging with said handle operated side upon

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rotation of such side on said pivot to prevent further motion of said coin chute; a handle; means operated by said handle through the handle operated side of said chute for rotating said chute upon the presence of a coin therein; and means whereby said chute engages said bolt so that rotation of said chute will withdraw said bolt.

NORMAN E. BOWEN.

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