Feb. 25, 1936. W. H. ROWE 2,032,228

MULTIPLE COIN ACTUATED PLUNGER

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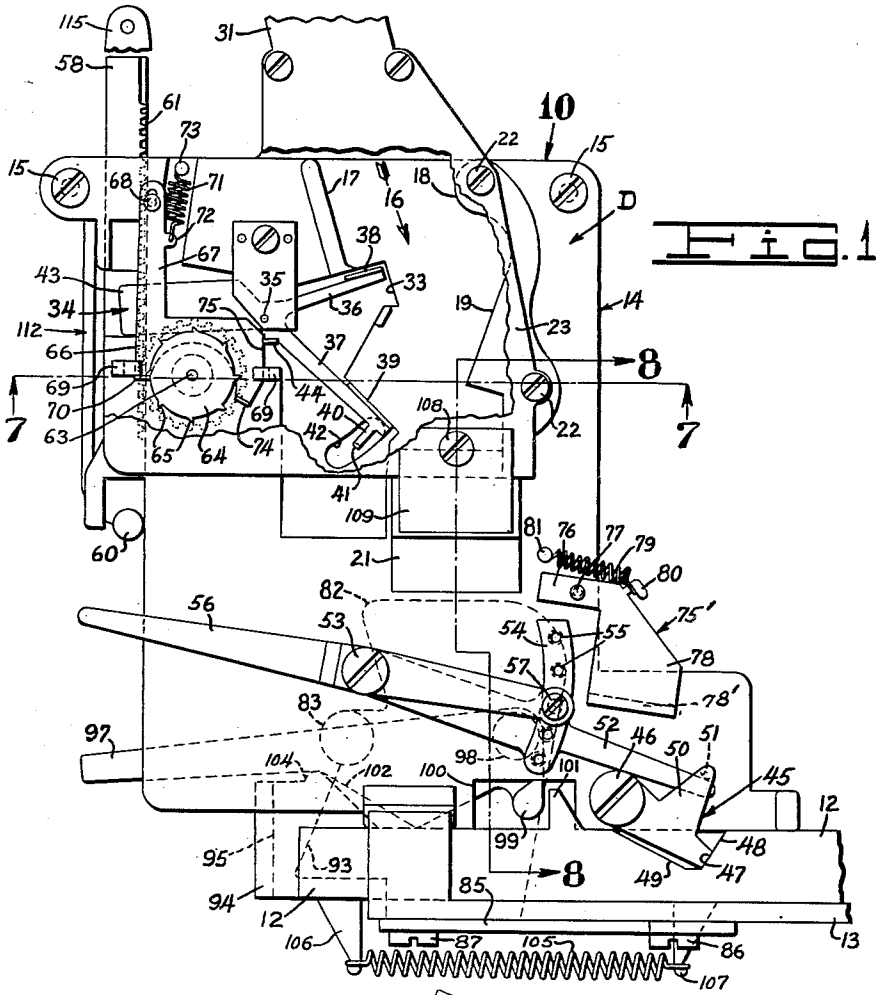


Fig. 1

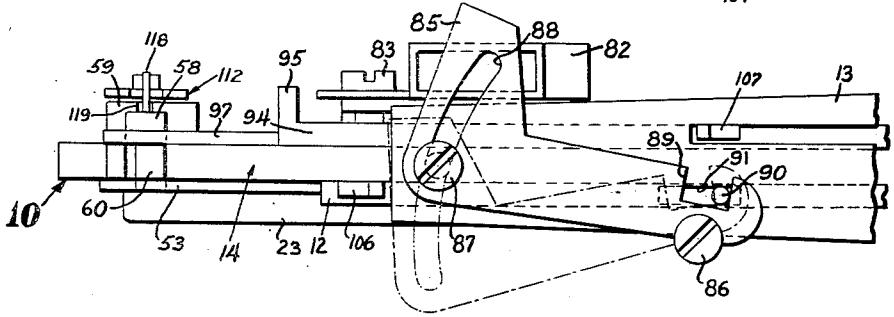


Fig. 2

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Fig. 3

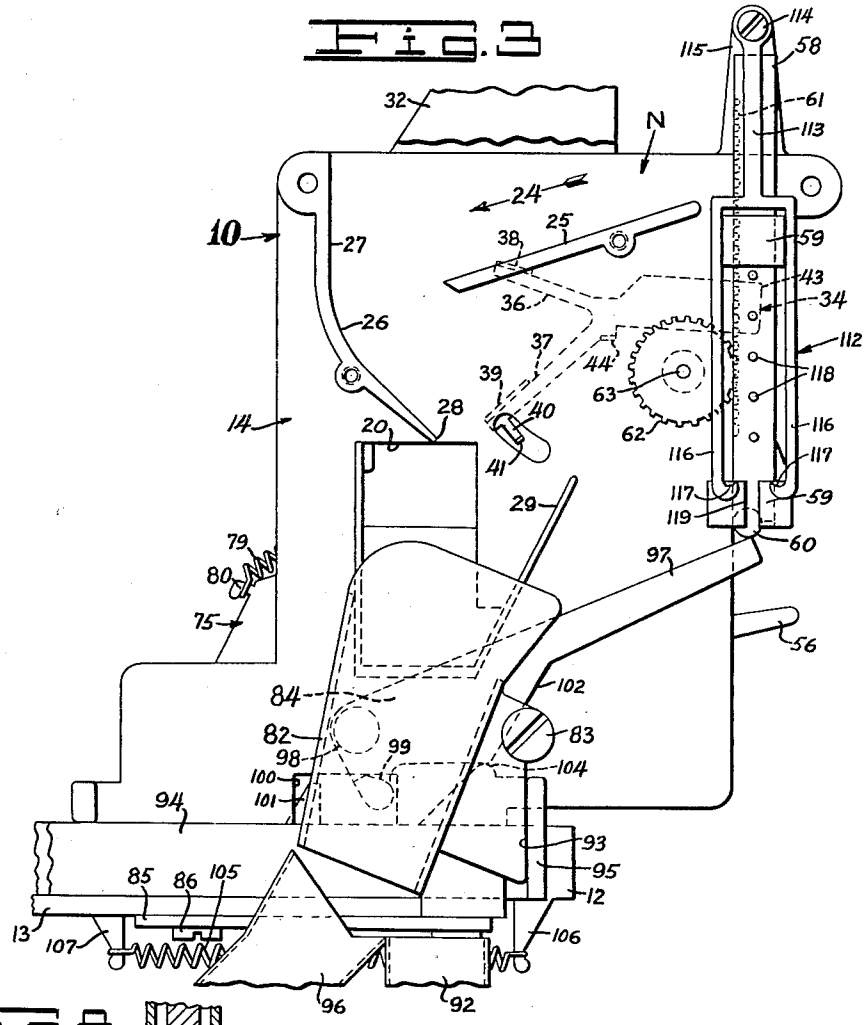


Fig. 8

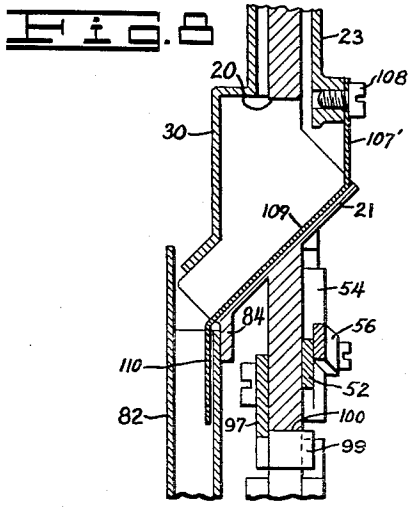
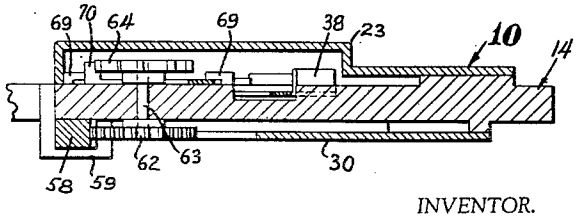


Fig. 7



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Fig. 4

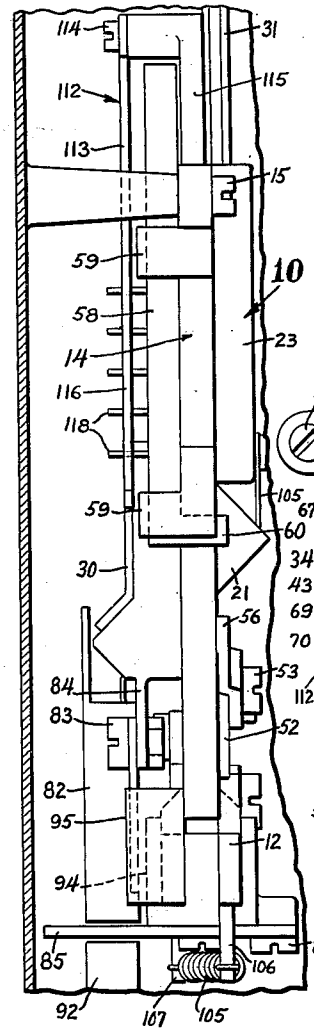


Fig. 6

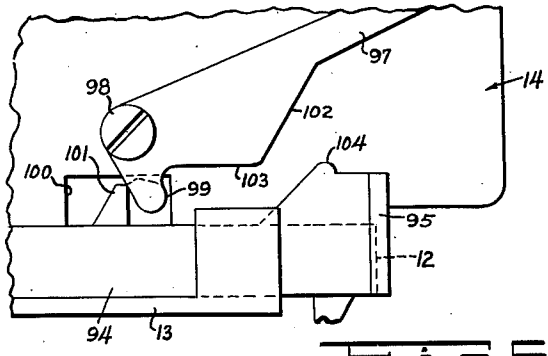
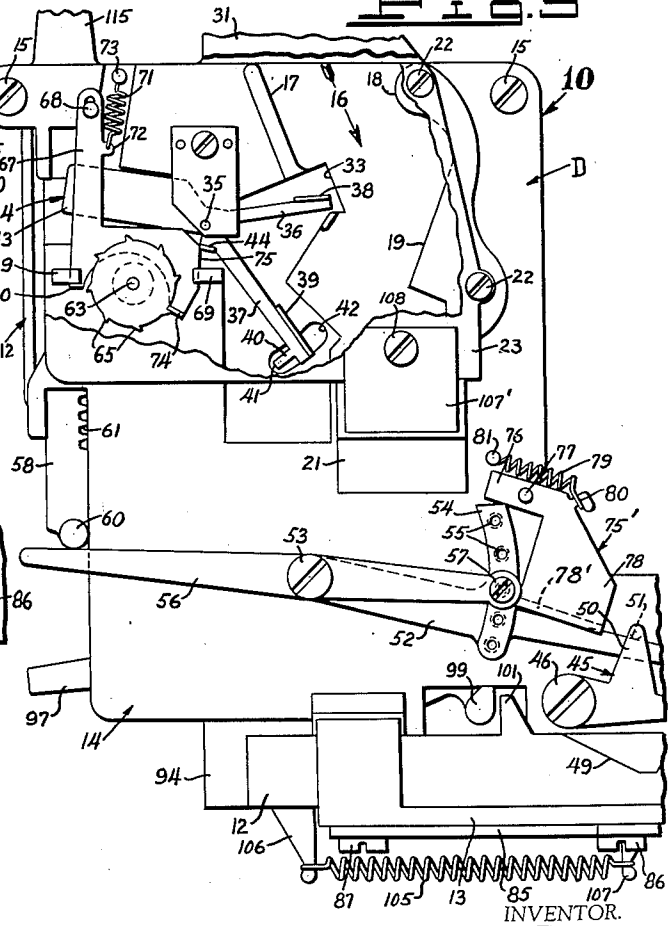


Fig. 5



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Patented Feb. 25, 1936

2,032,228

UNITED STATES PATENT OFFICE

2,032,228

MULTIPLE COIN ACTUATED PLUNGER

William H. Rowe, New York, N. Y.

Application December 15, 1933, Serial No. 702,488

16 Claims. (Cl. 194—48)

This invention relates to improvements in multiple coin actuated release devices for use in combination with a vending machine.

The general object of the invention is to provide an improved coin released mechanism wherein a plurality of coins are required to operate the device.

Another object of the invention is to provide an improved coin released mechanism wherein various combinations of coins of different denominations will operate the device.

A further object of the invention is to provide a device of the class described including novel means whereby should an operator after depositing coins in the device and before actuating the coin released mechanism desire to have the coins returned he may operate the device to return the deposited coins.

Other objects and the advantages of this invention will be apparent from the following description taken in connection with the accompanying drawings wherein:

Fig. 1 is an elevation of one side of the coin released mechanism with portions thereof broken away;

Fig. 2 is a bottom plan view of Fig. 1 with the plunger spring omitted;

Fig. 3 is an elevation of the side of the device opposite that shown in Fig. 1 and with the cover plate removed;

Fig. 4 is a rear view of the device shown in Fig. 1;

Fig. 5 is a view similar to Fig. 1 showing the device actuated to a released position;

Fig. 6 is a fragmentary view similar to Fig. 3 with portions of the device broken away;

Fig. 7 is a section taken on line 7—7 of Fig. 1; and,

Fig. 8 is a section taken on line 8—8 of Fig. 1.

Referring to the drawings by reference characters I have indicated my improved coin released mechanism generally at 10. As shown the device 10 is adapted upon insertion of the proper coins to release a plunger bar 12 which is a portion of the vending machine with which the device 10 is associated and is shown as slidably mounted in a bracket 13. The plunger bar 12 may act directly to discharge an article or it may act to release other plungers which when actuated discharge articles from the vending machine.

As shown the device 10 is adapted to actuate to release the plunger bar 12 by the insertion thereinto of dimes and nickels but it will be understood that it is adapted to any combination of one or two coins.

The device 10 comprises a body portion 14 which is shown as adapted to be secured to portions of the vending machine by bolts 15. One side of the body 14 such as indicated by D and shown in Figs. 1 and 5 will be designated as the dime side of the device and the opposite side such as shown in Fig. 3 and indicated by N will be designated as the nickel side of the device.

On the dime side of the body 14 I provide an entrance raceway 16 which is formed by raised guide portions 17 and 18. The guide portion 17 is inclined forwardly and downwardly and is adapted to direct coins towards a rearwardly and downwardly inclined guide portion 19. Spaced below the lower end of the guide portion 19 I provide an aperture 20 in the body 14 through which coins are adapted to be directed to the nickel side of the body by a downwardly inclined chute portion 21 which is integral with the body 14 (see Fig. 8).

Positioned on the raised guide portions and secured to the body by screws 22 I provide a cover member 23.

On the nickel side of the body 14, I provide an entrance raceway 24 which is formed by a forwardly and downwardly inclined raised guide portion 25. The raceway 24 is adapted to direct coins towards a rearwardly curved section 26 of a guide portion 27 the lower end 28 of which is spaced a predetermined distance below the forward end of the guide portion 25 and a predetermined distance in the rear of the face of the guide portion 27.

Coins leaving the end 28 of the guide portion 27 are directed towards a forwardly and downwardly inclined guide portion 29 which directs them into the chute 21. Positioned on the raised guide portions and covering the chute 21, I provide a cover member 30.

As shown dimes are directed to the dime entrance raceway 16 by a suitable coin chute 31 and nickels are directed to the nickel entrance raceway 24 by a suitable coin chute 32.

Positioned in a recess 33 on the dime side of the body 14 I provide a coin actuated lever device which I have indicated generally at 34. As shown the device 34 is pivotally mounted intermediate its length as at 35. Forward of the pivotal joint 35 the device 34 includes an upwardly inclined arm 36 and a downwardly inclined arm 37. The arm 36 extends a predetermined distance forward of the guide portion 17 where it includes an outwardly bent portion 38 which

extends into the path of coins in the raceway. The arm 37 extends to a point a predetermined distance from the lower end of the guide portion 19 where it includes an outwardly bent portion 39 which extends into the path of coins in the raceway.

Adjacent the portion 39 and the arm 37 I provide a finger 40 which includes a right angularly bent lip portion 41 which projects through an arcuately shaped elongated aperture 42 in the body 14 to the nickel side of the body at a point spaced a predetermined distance in the rear of the end 28 of the guide portion 27 (see Fig. 3). At the side of the device 34 opposite the arms 36 and 37 I provide a counter weight arm 43, the weight of which normally retains the arms 36 and 37 in a raised position, as shown in Fig. 1. Adjacent the pivotal point 35 and positioned therebelow the device 34 includes an outwardly bent finger portion 44.

To prevent rearward movement of the plunger bar 12 I provide a locking dog 45 which is pivotally secured to the body 14 as at 46. The dog 45 includes an abutment face 47 which is adapted to be engaged by a face 48 of a notch 49 provided in the plunger bar 12. The dog 45 further includes an upwardly projecting portion 50 having thereon an inwardly extending finger portion 51.

For swinging the dog 45 about its pivot I provide a lever 52 which at one end is pivotally mounted on a bolt 53 and the opposite end of which engages the under side of the finger 51 of the dog 45. Intermediate the length of the lever 52 I provide an enlarged arcuately shaped portion 54 in which I provide a plurality of spaced threaded apertures 55.

For actuating the lever 52 I provide a lever 56 which is pivotally mounted intermediate its length on the bolt 53. On one side of the bolt 53 the lever 56 terminates adjacent the portion 54 of the lever 52 where it is provided with a screw 57 which is adapted to be positioned in any one of the threaded apertures 55 of the lever 52. The opposite end of the lever 56 extends rearwardly at an upward inclination a predetermined distance.

When the rear of the lever 56 is moved downwardly the screw 57 will move upwardly and swing the lever 52 upward which in turn will swing the dog 45 upward to a position wherein the abutment face 47 thereof moves out of the notch 49 in the plunger bar 12 whereupon the plunger bar is free to be moved rearwardly (see Fig. 5).

For moving the rear of the lever 56 downwardly I provide a vertically movable bar 58 which is slidably mounted in bearings 59 which are integral with the body 14 and extend outwardly from the face thereof on the nickel side. Adjacent its lower end the bar 58 includes a finger portion 60 which extends towards the dime side of the body. Extending along most of the length of the bar 58 I provide gear teeth 61 on the forward face thereof.

Intermediate the bearings 59 I provide a gear 62 (Fig. 7) which meshes with the gear teeth 61 on the bar 58. The gear 62 is secured to a shaft 63 which is rotatably supported in the body 14 and extends therethrough to the dime side where an escapement wheel 64 is secured thereto. The escapement wheel 64 includes a plurality of evenly spaced radially extending ratchet teeth 65.

Positioned between the face of the body 14 and the adjacent face of the escapement wheel 64 I provide a plate 66 which includes an upwardly extending arm 67. Adjacent its upper end the arm 67 is slackly mounted on a pin 68 and guide members 69 integral with the body 14 retain the plate 66 in position.

To normally prevent rotation of the ratchet wheel 64 in an anti-clockwise direction I provide a finger 70 on the plate 66 which is normally engaged by one of the teeth 65 of the escapement wheel. To normally retain the finger 70 in engagement with the escapement wheel I provide a coiled spring 71 one end of which is secured to the arm 67 of the plate 66 as at 72 and the opposite end of which is anchored to a pin 73 on the body 14. To prevent rotation of the escapement wheel 64 more than the distance between the ratchet teeth 65 when the finger 70 is moved out of engagement with a ratchet tooth I provide a finger member 74 on the plate 66 on the opposite side of the escapement wheel from the finger 70. Normally the finger 74 is out of engagement with the escapement wheel as shown in Fig. 1. The plate 66 further includes a working face 75 which is engaged by the finger 44 of the device 34.

With the screw 57 of the lever 56 positioned in the third aperture 55 from the lower end of the portion 54 of the lever 52 the device 10 is adapted to be actuated to release the plunger bar 12 by the insertion into the device 10 of fifteen cents in change. That is it may be actuated to release the plunger bar 12 by the insertion into the device 10 of one dime and one nickel or by three nickels.

When an operator inserts a dime in the dime coin chute 31 it is directed to the dime entrance raceway 16 of the device 10. As the dime moves downward in the raceway 16 it engages the finger 38 of the device 34 and the weight of the dime swings the arm 36 downward until the dime rolls off the finger 38. As the arm 36 of the device 34 is thus moved downward the finger 44 of the device 34 moves the plate 66 rearwardly against the action of the spring 71. As the plate 66 moves rearwardly the finger 70 thereof moves out of engagement with the escapement wheel whereupon the weight of the bar 58 moves the bar downward thereby rotating the gear 62 and the escapement wheel 64. The finger 74 of the plate 66 is so positioned that just after the finger 70 moves out of the path of the ratchet teeth it moves into the path of the ratchet teeth thereby preventing continued rotation of the escapement wheel (see Fig. 5). When the dime rolls off the finger 38 the spring 71 returns the plate 66 to its normal position wherein the finger 74 moves out of the path of the ratchet teeth in a position at the rear of one of the teeth thus the weight of the bar 58 again rotates the gear and the escapement wheel until the face of the next ratchet tooth engages the finger 70.

As the dime rolls off the finger 38 of the device 34 it moves into engagement with the guide portion 19 which directs it into engagement with the finger 39 of the device 34. When the dime engages the finger 39 the weight of the dime moves the arm 37 downward and actuates the device 34 to operate the plate 66 to release the escapement wheel 64, as previously described. As the arm 37 swings downwardly the dime rolls off the finger 39 into the chute 21.

From the foregoing it will be apparent that a single dime passing through the device 10 actu-

ates the mechanism thereof to allow the bar 58 to move downwardly two steps.

When an operator inserts a nickel in the nickel chute 32 it is directed to the nickel entrance raceway 24 which in turn directs it into engagement with the curved section 26 of the guide portion 27. As the nickel rolls down the curved section 26 it is directed into engagement with the finger 41 of the device 34 whereupon the weight of the nickel moves the finger 41 downward which in turn swings the arm 37 of the device 34 downward thereby actuating the device 34 to operate the plate 66 to thereby release the escapement wheel 63, as previously described.

Thus it will be seen that each nickel passing through the device 10 actuates the mechanism thereof to allow the bar 59 to move downwardly one step. As the finger 41 swings downwardly the nickel moves out of engagement therewith and falls into the chute 21.

It will thus be apparent that when one dime and one nickel have passed through the device 10 the bar 58 has moved downwardly three steps.

As the bar 58 is moving downward on its third step the finger 60 thereon engages the lever 56 and moves it downward thereby moving the dog 45 out of the notch 49 of the plunger bar 12 whereupon the plunger bar is free to be moved rearwardly.

Positioned above the lever 52 adjacent the portion 54 thereof I provide a stop lock device 75'. As shown the device 75' includes an arm 76 which is pivotally mounted intermediate its length on a pin 77. The portion of the arm 76 at the rear of the pivot is in the path of movement of the portion 54 of the lever 52 and the portion of the arm 76 on the opposite side of the pivot has a counter weight portion 78 which is inwardly bevelled at its lower edge as indicated at 78'. The device 75' is supported in a normal position by a coiled spring 79 one end of which is secured to the device 75' as at 80 and the opposite end is anchored to a pin 81 on the body 12. When the lever 52 swings upwardly the upper end of the portion 54 thereof engages the under face of the arm 76 of the device 75' and rocks the device 75' on the pin 77 whereupon the lower rearward corner of the counter weight portion 78 moves into engagement with the forward face of the portion 54 of the lever 52 thereby preventing further upward movement of the lever 52 as shown in Fig. 5.

When the coins enter the chute 21 they are directed thereby into a coin hopper 82 which is pivotally mounted on a bolt 83 secured to a lug 84 which is integral with the chute 21. When the coins reach the lower end of the hopper 82 they come to rest on a holder member 85 which is positioned adjacent the under face of the bracket 13 and is pivotally mounted on a bolt 86 which is secured to the bracket 13 (see Fig. 2).

To support the end of the holder 85 opposite the bolt 86 I provide a bolt 87 which is positioned in an elongated arcuate aperture 88 in the holder and secured to the bracket 13. Adjacent the bolt 86 I provide a notch 89 in the holder in which a pin 90 is positioned. The pin 90 is mounted on the plunger bar 12 and extends through an aperture 91 in the bracket 13.

When the plunger bar 12 moves rearwardly the pin engages the rear face of the notch 89 and swings the holder member 85 about the axis of the bolt 86 thereby swinging the holder member out from under the hopper 82 whereupon the coins pass out of the hopper 82 into a coin chute 92 which may direct them to a suitable receiver (see Figs. 3 and 4).

Adjacent the bolt 83 and therebelow the coin hopper includes a downwardly and rearwardly inclined cam face 93 by means of which the lower end of the hopper is adapted to be swung forwardly to return the coins contained therein to the operator.

To actuate the hopper 82 to return coins therein I provide a return plunger 94 which is slidably mounted in the bracket 13 parallel to the plunger bar 12. Adjacent the rear end of the return plunger 94 I provide an outwardly and upwardly extending portion 95 which is normally spaced at the rear of the cam face 92 of the coin hopper 82 as shown in Fig. 1.

When an operator desires to have the coins in the hopper returned he pulls the return plunger 94 forwardly. As the return plunger is thus moved the portion 95 thereof engages the cam face 93 of the hopper and swings the hopper about the axis of the bolt 83 to the position shown in Fig. 3 wherein the lower end of the hopper passes beyond the holder member 85. Whereupon the coins pass out of the hopper 82 into a coin return chute 96.

To reset the bar 58 when the return plunger 94 is operated to actuate the hopper 82 or when the plunger 12 is moved rearwardly after being released I provide a lever 97 which is pivotally mounted adjacent one end on a bolt 98 secured to the body 14. The opposite end of the lever 97 extends rearwardly to within the path of movement of the bar 58. The lever 97 includes a finger portion 99 which extends through an aperture 100 in the body 14 and is adapted to be engaged by an upwardly projecting lug 101 on the plunger bar 12 (see Fig. 6). The lever 97 further includes an inclined cam face 102 and an oppositely inclined cam face 103. The cam face 102 of the lever 97 is adapted to be engaged by an upwardly extending portion 104 on the return plunger 94.

When the plunger bar 12 is moved rearwardly after being released the lug 101 thereon engages the finger 99 of the lever 97 and upon continued movement swings the lever 97 about the axis of the bolt thereby moving the rear end of the lever 97 upward which engages the lower end of the bar 58 and moves the bar upward to its initial raised position.

To retain the plunger bar 12 to its initial position after it has been moved rearwardly I provide a coiled spring 105 one end of which is secured to a downwardly projecting lug 106 on the plunger bar 12 and the opposite end is secured to a similar lug 107 on the return plunger 94.

When the return plunger 94 is moved forwardly to actuate the hopper 82 the cam portion 104 on the plunger 94 engages the cam face 102 of the lever 97 and upon continued movement forces the lever 97 to swing about the axis of the bolt 98 thereby raising the bar 58 to its initial position, as previously described.

To form a cover for the dime side of the chute 21 I provide a plate 107' which is secured to the cover 23 by a screw 108 (see Fig. 8). The plate 107' includes an inclined section 109 which lies on the bottom of the chute and forms a wear plate therefor. The lower end of the plate 107' includes a vertical section 110 which extends downwardly into the coin hopper a predetermined distance.

By positioning the screw 57 of the lever 56 in different apertures 55 of the lever 52 the device 10 may be adjusted to actuate to release the plunger bar 12 on different amounts of coins.

To prevent the release bar 58 from actuating when the device 10 is tilted forwardly or rearwardly I may provide a latch device indicated generally at 112 in Fig. 3. As shown the device 112 includes a depending arm 113 which is pivotally mounted as at 114 on a bracket 115 which is integral with the body 14. Extending downwardly from the arm 112 I provide a forked portion which includes a pair of spaced arms 116. Adjacent the lower ends of each of the arms 116 I provide inturned hook-like portions 117. Mounted on the bar 58 and extending outwardly from the outer side thereof I provide a plurality of spaced pins 118 and in the lower bearing member 59 I provide a slit 119 through which the pins may pass.

When the device 10 is tilted either forwardly or rearwardly the latch device 112 remains in a vertical position whereupon when the release bar 58 moves downwardly one of the pins 118 thereon engages one of the hooked ends 117 of the device 112 thereby preventing further downward movement of the release bar 58 until the device 10 is again righted to its correct vertical position.

From the foregoing description it will be apparent that I have provided a novel coin released device which is simple in construction and highly efficient in use.

Having thus described my invention, I claim:

1. In a coin freed device, a plunger bar movable to operating position, locking means to prevent movement of said plunger bar in one direction to operating position, coin actuated means to release said plunger bar locking means, a separate coin return plunger, means operable before said plunger bar movement is initiated and after said coins have actuated said release, when said coin return plunger is moved in one direction, to return said coins to an operator and means operable upon the same movement of said return plunger to reset said locking means to again prevent movement of said plunger bar.

2. In a coin device, a plunger bar, locking means to prevent movement of said plunger bar in one direction, coin actuated means to release said plunger bar locking means, an open bottomed coin hopper into which said coins are deposited after actuating said release means, a movable holder plate positioned under the open bottom of said hopper and upon which coins in said hopper rest, a coin release plunger and means operated by movement of either of said plungers to cause relative movement between said holder plate and said hopper whereupon coins in said hopper pass therefrom.

3. In a coin device, a plunger, holding means to engage said plunger and normally prevent movement thereof in one direction, releasing means engaging a portion of said holding means to move the latter out of engagement with said plunger, means to operate said releasing means, said last means including a release bar, means to give said release bar a step by step movement, said last mentioned means including a ratchet device coacting with said bar, a coin chute, a single pivoted lever, a pair of coin engaging members on said lever and disposed in the path of movement of a coin in said chute, means whereby said lever when rocked advances said bar one step, and means whereby a coin after striking one coin engaging member in the chute and operating the bar one step advances and strikes the other coin engaging member in the chute, whereby the same coin actuates the bar another step.

4. In a coin device, a plunger, means engaging said plunger to normally prevent movement thereof in one direction, means to release the first means, said last mentioned means including a step by step device, a coin chute, a single pivoted lever, a pair of members on said lever projecting into each coin chute, means whereby said lever when rocked advances said step by step device one step, and means whereby a coin after striking one projecting member in the other chute and operating the bar one step advances and strikes the other projecting member in the chute, whereby the same coin actuates the step by step device another step.

5. In a coin device, a plunger bar, locking means to prevent movement of said plunger bar in one direction, coin actuated means to release said plunger bar locking means, a coin hopper into which said coins are deposited after actuating said release means, means to hold coins in said hopper, means whereby when said plunger bar is moved in the direction originally prevented by said locking means said plunger bar moves said holding means whereupon coins in said hopper pass therefrom, a coin return plunger, and means whereby when said return plunger is operated in one direction said holding means is released to allow coins to pass from said hopper.

6. In a coin freed device, a plunger bar, locking means to prevent movement of said plunger bar in one direction, coin actuated means to release said plunger bar locking means, an open bottomed coin hopper into which coins are deposited after actuating said release means, a movable holder plate positioned under the open bottom of said hopper and upon which coins in said hopper rest, means whereby when said plunger bar is moved in the direction originally prevented by said locking means said plunger bar moves said holder plate away from said hopper whereupon coins in said hopper pass therefrom, a coin return plunger, a coin return chute, and means whereby when said return plunger is operated in one direction, before said plunger bar is actuated, to move said holder plate said return plunger will actuate said coin hopper to direct coins therein to said coin return chute.

7. In a coin device, a plunger bar, locking means to prevent movement of said plunger bar in one direction, coin actuated means to release said plunger bar locking means, an open bottomed coin hopper into which said coins are deposited after actuating said release means, a movable holder plate positioned under the open bottom of said hopper and upon which coins in said hopper rest, means whereby when said plunger bar is moved in the direction originally prevented by said locking means said plunger bar moves said holder plate away from said hopper whereupon coins in said hopper pass therefrom, a coin return plunger, a coin return chute, means whereby when said coin return plunger is operated in one direction before said plunger bar is actuated to move said holder plate said return plunger will actuate said coin hopper to direct coins therein to said coin return chute, and means operable upon the same movement of said coin return plunger to reset said locking means to prevent movement of said plunger bar in said first direction.

8. In a coin device, a sliding plunger, a pivoted

dog engaging said plunger to normally prevent movement thereof in one direction, a lever engaging said dog to move it out of engagement with said plunger, a second lever having means engaging said first lever to move the latter, a release bar slidably mounted and movable into engagement with said second lever, means to give said release bar a step by step movement, said last mentioned means including a ratchet device coacting with said bar, a coin chute, a pivoted lever adjacent said coin chute, means whereby said lever when rocked advances said bar one step, a freely pivoted, pendant, latch device having a hook thereon and spaced pins on said release bar engageable by said hook when the latch device is tilted relative to the release bar.

9. In a coin operated device, a plunger bar, locking means to prevent movement of said plunger bar in one direction, means to release said plunger bar locking means, a release bar, means to mount said release bar for movement into engagement with said releasing means in step by step movement, locking means to prevent movement of said release bar means whereby a plurality of coins cause step by step movement of said release bar to free said plunger bar, a coin hopper adapted to receive coins after they cause said release bar to free said plunger bar, a coin receiver, means whereby when said plunger bar is moved in one direction it actuates said hopper to direct the coins therein into said receiver, means whereby upon movement of said plunger bar in the said direction said release bar will be returned to its initial position, and means to return said plunger bar to its initial position, a separate coin return plunger and means operable on movement of said coin return plunger to move said release bar to its initial position.

10. In a coin operated device, a plunger bar, locking means to prevent movement of said plunger bar in one direction, means to release said plunger bar locking means, a release bar, means to mount said release bar for movement into engagement with said releasing means in step by step movement, locking means to prevent movement of said release bar means whereby a plurality of coins cause step by step movement of said release bar to free said plunger bar, a coin hopper adapted to receive coins after they cause said release bar to free said plunger bar, a coin receiver, means whereby when said plunger bar is moved in one direction it actuates said hopper to direct the coins therein into said receiver, means whereby upon movement of said plunger bar in the said direction said release bar will be returned to its initial position, means to return said plunger bar to its initial position, a coin return plunger, a coin return chute, means whereby when said coin return plunger is moved in one direction, before said plunger bar is actuated to operate said hopper, said coin return plunger actuates said hopper to direct coins in said hopper into said coin return chute, means operable at the same time the coin return plunger operates to return said release bar to its initial position and means to return said return plunger to its initial position.

11. In a coin device, a plunger, means to engage said plunger and normally prevent movement thereof in one direction, means including a release bar to move said plunger engaging means, gear teeth on said release bar, a gear meshing with said bar gear teeth, a rotatably mounted shaft, said gear being secured to said shaft, an escapement wheel, means whereby said escapement wheel causes said gear to move step-by-step, a pivotally mounted actuating member, said member including a pair of divergent arms, a finger portion on each of said arms, said finger portions adapted to be successively engaged by a falling coin to rock said actuating member, means whereby each time said actuating member is operated by said coins said escapement wheel moves step-by-step to allow said bar to move forward and free said plunger engaging means.

12. In a coin freed device, a plunger, a pivoted dog adapted to engage said plunger and normally prevent movement thereof in one direction, a lever pivoted adjacent one end, the opposite end of said lever engaging a portion of said dog to move it out of engagement with said plunger, a second lever pivoted intermediate its length, means adjacent one end of said second lever engaging said first lever to move the latter, a release bar slidably mounted and movable into engagement with said second lever, gear teeth on said release bar, a gear meshing with said bar gear teeth, a rotatably mounted shaft, said gear being secured to said shaft, an escapement wheel secured to said shaft, said escapement wheel including a plurality of spaced ratchet teeth, a movable plate adjacent said escapement wheel, a finger on said plate, a second finger on said plate, resilient means engaging said plate and normally swinging said first finger into engagement with said escapement wheel to prevent rotation of said escapement wheel, said second finger when said first finger engages said escapement wheel being out of engagement with said escapement wheel, a pivotally mounted actuating member, said member including a pair of divergent arms and a finger portion on each of said arms.

13. In a coin device, a plunger, a pivoted dog adapted to engage said plunger and normally prevent movement thereof in one direction, a lever pivoted adjacent one end, the opposite end of said lever engaging a portion of said dog to move it out of engagement with said plunger, a second lever pivoted intermediate its length, means adjacent one end of said second lever engaging said first lever to move the latter, a release bar slidably mounted and movable into engagement with said second lever, gear teeth on said release bar, a gear meshing with said bar gear teeth, a rotatably mounted shaft, said gear being secured to said shaft, an escapement wheel secured to said shaft, said escapement wheel including a plurality of spaced ratchet teeth, a movable plate adjacent said escapement wheel, a finger on said plate, a second finger on said plate, resilient means engaging said plate and normally swinging said first finger into engagement with said escapement wheel to prevent rotation of said escapement wheel, said second finger when said first finger engages said escapement wheel being out of engagement with said escapement wheel, a pivotally mounted actuating member, said member including a pair of divergent arms, a finger portion on each of said arms, said finger portions being adapted to be successively engaged by a falling coin to rock said actuating member, means whereby each time said actuating member is operated by said coins said plate is actuated to free said escapement wheel to allow said bar to move downward, said bar being adapted to engage said second lever after a predetermined number of releases of said escapement and move said second lever whereupon said second lever moves said first lever and said first lever moves said dog out of engagement with said plunger and means whereby when

said bar is moved in one direction said bar will be returned to its initial position.

14. In a coin device a plunger bar, locking means to prevent movement of the plunger bar in one direction, means to release said plunger bar, said release means including a single pivotally mounted member, said member having a pair of arms thereon, said arms projecting from said member in spaced angular arrangement, a pair of coin chutes, one of said arms projecting into the path of movement of a coin in one chute, the other arm projecting into the path of movement of a coin in the other chute, said arms being adapted to be rocked by coins in the chutes to actuate said coin release means.

15. In a coin control, a partitioned housing forming separate passages for different coins, an escapement device including a control arm swingably disposed in one of said passages, the arm having a finger projecting through a slot in the partition of the said housing to extend into another of said passages, the finger being disposed to be hit by a coin of a certain value, and the arm having other fingers disposed in the same passage with the arm to be hit by a coin repeatedly the value of the first named coin, the number of the last named fingers being corresponding to the number of times that the value of the first named coin is repeated in the value of the second named coin.

16. In a coin device, a plunger bar, locking means to prevent movement of said plunger bar in one direction, coin actuated means to release said plunger bar locking means, an open bottomed coin hopper, means to direct coins into said hopper after actuating said release means, a coin receiver below said hopper, a coin return chute below said hopper, a movable holder positioned below said coin hopper and upon which coins in said hopper rest, and means operable when said plunger bar is moved in the direction ordinarily prevented by said locking means to move said holder away from beneath said hopper whereupon coins in said hopper pass therefrom to said coin receiver, and means including said hopper whereby coins resting upon the holder may be directed into the coin return chute.

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