June 15, 1937. L. STEINER 2,083,928

COIN CONTROLLED DEVICE

Filed June 9, 1936

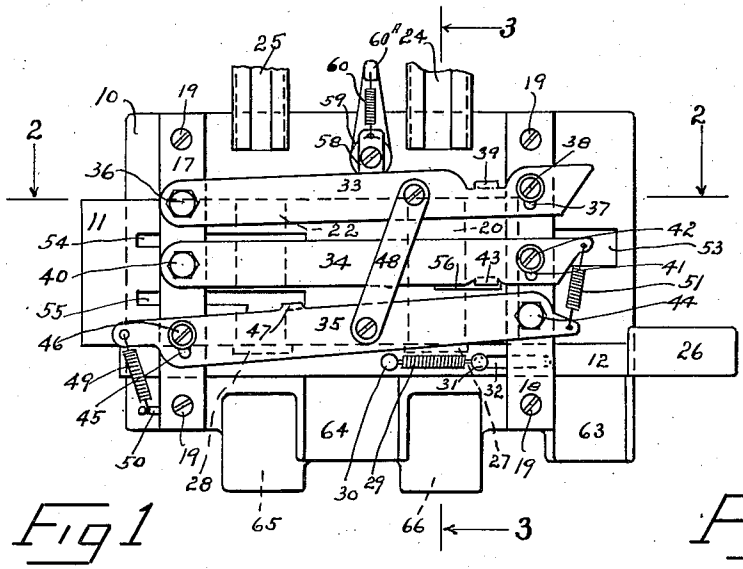


Fig 1

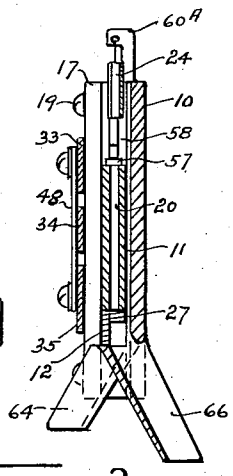


Fig 3

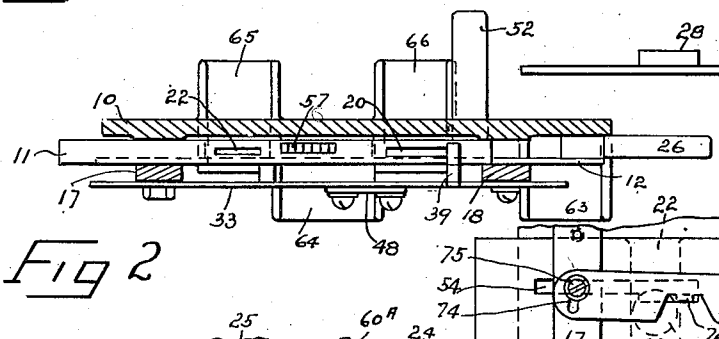


Fig 2

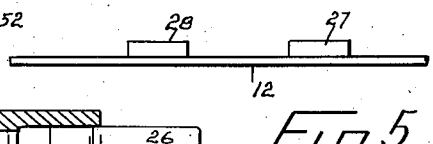


Fig 5

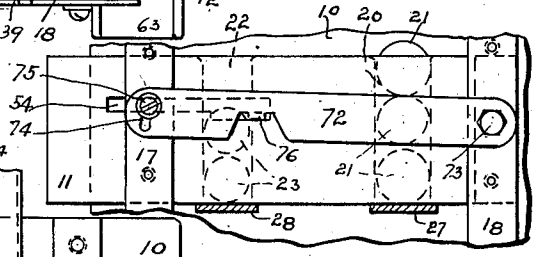


Fig 7

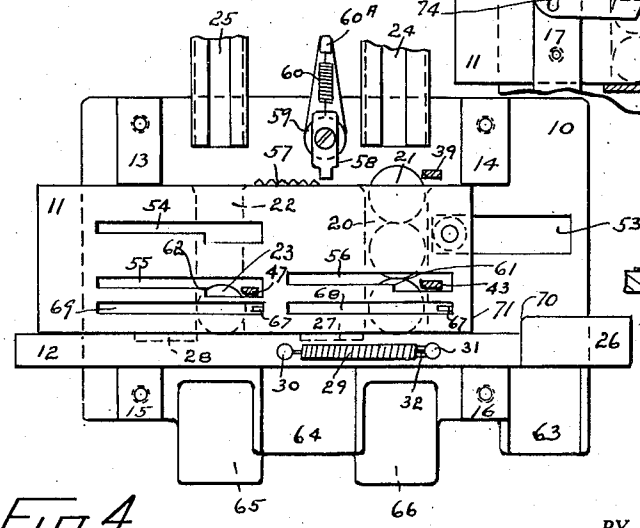


Fig 4

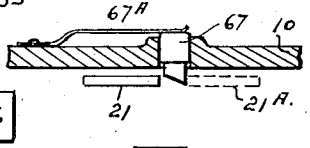


Fig 6

INVENTOR.
Louis Steiner
BY Harwick J. Schmeiser
ATTORNEYS.

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COIN CONTROLLED DEVICE

Louis Steiner, Brooklyn, N. Y.

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4 Claims. (Cl. 194—55)

The invention relates to coin controlled devices for vending or dispensing machines. It has for its object to provide a device in which several coins of the same denomination, or several coins of different denominations, may be used so as to compute the amount required for the purchase of the article being dispensed. Another object is to so construct the device that it may readily be changed from one amount to another.

A further object is to so construct the device that any coins erroneously inserted, or in an insufficient or excessive amount, may be removed from the device without operating the vending machine to which the device is attached. Additional objects are to provide a device of simple but rugged construction which has no parts easily broken or apt to get out of order, which may be used with vending machines of various types and kinds, which can not be tampered with, and which can be manufactured and installed at a relatively low cost.

These and various other objects and advantages will be readily understood from the following description and from the accompanying drawing of a preferred embodiment of the invention, in which, however, modifications may be made without departing from the scope of the appended claims. In the drawing

Fig. 1 is a side view of the device;

Fig. 2 is a top view taken approximately on the line 2—2 in Fig. 1;

Fig. 3 is an end view of Fig. 1, taken on line 3—3;

Fig. 4 is a side view similar to Fig. 1, but with certain parts removed;

Fig. 5 is a fragmental top view of one of the parts of the device;

Fig. 6 is a fragmental cross-sectional view of another part of the device; and

Fig. 7 is a fragmental side view of the device shown for a different arrangement of coins.

Referring now to all the views, simultaneously, the device consists of a frame member 10 in which a coin slide 11 and a release bar 12 are slidingly mounted between guides 13, 14, 15 and 16. The slide and the release bar are held in place by straps 17 and 18 mounted on the guides by screws 19. In the present embodiment of the invention, the device has been shown as adapted for coins such as nickels and dimes. A coin pocket 20 is made of a size to accommodate a plurality of nickels 21, while another coin slot 22 is made of a size to accommodate dimes 23. These pockets are spaced a distance apart and extend vertically, and parallel to each other, through the slide. Immediately above these coin pockets are shown the coin shutes 24 and 25 which constitute a regular part of the vending machine to which the device may be attached.

The release bar is provided with a push button 26, which, when the device is mounted on a machine, extends outside of the cabinet of such machine. A part of this bar is plainly shown in Fig. 5. It is provided with two rearwardly-extending members 27 and 28 which, when the bar is in its normal or inactive position, are located immediately under the coin slots 20 and 21 so that the coins inserted in these slots will rest on these members. The release bar is always held in its forward position by means of a spring 29 which is attached on a pin 30 secured on the bar and by another pin 31 which is secured on the frame 10 and projects through a slot 32 stamped in the bar.

As shown in Fig. 1, three levers 33, 34, and 35 are mounted on the straps 17 and 18. The lever 33 is pivoted at 36, while its movement of the other end is restricted by a slot 37 through which a screw 38 passes. This lever is provided with an inwardly extending latch 39. The lever 34 is pivoted at 40 and the movement of its other end is limited by a slot 41 through which a screw 42 passes. This lever is provided with an inwardly extending latch 43. The lever 35 is pivoted at 44 and the movement of its other end is limited by a slot 45 through which a screw 46 passes. This lever has an inwardly extending latch 47. The levers 33 and 35 are connected together by a link 48. A tension spring 49 is attached between the movable end of the lever 35 and a pin 50 which is secured on the guide 15, while the ends of the levers 34 and 35 are connected by a tension spring 51, as plainly shown in the view.

The slide 11, which is actuated by a handle member 52 which extends rearwardly through a slot 53 formed in the frame, is provided with three slots 54, 55 and 56. The purpose of the slot 54 will be explained later. The rearwardly extending latch 43 of the lever 34 engages in the slot 56, while the rearwardly extending latch 47 of the lever 35 engages in the slot 55. The slots are located and shaped as plainly shown in Fig. 4. The latch 39 of the lever 33 extends inwardly over the top of the slide. A plurality of ratchet teeth 57 are provided on the upper edge of the slide and in these teeth a pawl 58 engages. This pawl is mounted on a boss 59 and actuated by a spring 60 which has one end connected to the pawl and the other end to a bracket 60A cast on

the frame 10. The purpose of the pawl and ratchet teeth will be explained later.

The device operates in the following manner. The embodiment shown in Figs. 1 to 4, has been arranged to operate with the sum of fifteen cents, either with three nickels or with one dime and one nickel. The operation for three nickels will first be described. The three nickels are inserted in the coin shute 24 and from this shute they drop into the pocket 20. When the slide is now pulled forward the uppermost nickel will engage with the latch 39 while the lowermost nickel will engage with the latch 43, thus lifting the levers 33 and 34. Inasmuch as the lever 33 is connected to the lever 35 by the link 48, the lever 35 will also be lifted. Thus, the latches 43 and 47 will be free to pass into the narrow parts of the slots 56 and 55 instead of being caught by the corners 61 and 62 formed in these slots.

The slide is connected with the merchandise dispensing-device in any suitable manner so that when the slide is pulled forward the merchandise will be dispensed. As the slide is pulled forward the nickels are supported on the part 27 of the release bar 12 and are finally, after the slide has been pulled completely forward, discharged through a coin shute 63 which deposits the coins in a receptacle inside of the machine.

The operation will now be described when one dime and one nickel is used. In this instance, when the slide is pulled forward, the nickel engages with the latch 43 and thus lifts the lever 34, while the dime lifts the latch 47 and consequently the lever 35, thus allowing the latches to pass into the narrow parts of the slots. In this case the nickel is discharged through the shute 63 as in the former case, while the dime 23, after riding over the part 28 on the release bar 12, is discharged through a coin shute 64 and into a receptacle in the machine.

If coins should be inserted in the machine erroneously, as for example two dimes instead of one dime, or two nickels and one dime, and the user discovers his mistake and wants the money returned, the release bar 12 is pushed in by means of the push button 26. As the bar moves, the parts 28 and 27, which were normally under the coin slots, are now moved to one side of the coin slots so that the coins will drop into coin shutes 65 and 66. These coin shutes are formed on the opposite side of the frame member 10 from that on which the shutes 63 and 64 are placed, and they discharge the coins into an open receptacle on the outside of the machine so that the money may be recovered.

To prevent any coin from being stuck in the coin slots and thus possibly be carried back with the slide when this is returned to its normal position, the means shown in Fig. 6 are employed. These consist of a plunger 67 which operates in a hole formed in the frame 10 and which is held forward by means of a spring 67A secured to the rear of the frame. The forward end of this plunger is angularly shaped so that as the coin, for example one of the nickels, is pulled against it it will be forced rearwardly against the spring 67A until the coin has passed the plunger, as shown by the dotted lines 21A, after which the plunger will again spring forward, back of the coin. The forward ends of these plungers, of which two are shown, extend into slots 68 and 69 milled in the slide 11, as plainly shown in Fig. 4.

From a study of Fig. 4 it will be noted that the release bar can not be moved inwardly and the slide outwardly at the same time as the inside corner 70, of the push button 26, would engage with the edge 71 of the slide. It will also be noted that once the slide has been started in an outward direction, the pawl 58, owing to its engagement in the teeth 57, will prevent the slide from being returned until the complete movement of the slide has been made and the pawl has dropped down in its inactive position on the opposite side of the teeth. Similarly, the movement of the slide, when once started in the opposite direction, can not be changed until the full stroke has been made.

From the foregoing it will be seen that the embodiment shown in Fig. 1 can be used for operating either with three nickels or one nickel and one dime.

Reference is now made to Fig. 7 in which the parts similar to those previously described have been similarly numbered. In the case first to be described in connection with this view the levers 33, 34 and 35 have been removed and a lever 72 substituted. It is secured in the same threaded holes where the lever 34 was formerly mounted and is pivoted at one end at 73. The movement of its other end is limited by a slot 74 in which a screw 75 engages. This lever has an inwardly extending latch 76. This latch extends into the slot 54 shown in Fig. 4. When two dimes are inserted in the coin slot 22 and the slide is pulled forward the latch will be lifted and thus be free to slide along in the slot 54. With this single lever the device will operate with two dimes.

It is also evident that the slide may be made higher so that the pockets might hold more coins and that the pockets may be made of sizes to hold coins other than nickels and dimes. Thus, the device may be made to operate with any combination of coins.

Having described the invention and its objects, what I claim as new and wish to protect by Letters Patent is:—

1. In a device of the class described; a frame; a vertical slide reciprocatingly mounted on said frame; two coin pockets formed vertically in said slide and aligned with the coin shutes contained in the machine in which the device is employed; each of said pockets having a depth sufficient to accommodate a plurality of coins; a plurality of notched slots formed in the slide; levers mounted on the frame and having coin-contacting detents engaging in said notched slots; another slide mounted under the first-mentioned slide and provided with coin-supporting members normally aligned with the coin pockets; and two discharge shutes, located below the last-mentioned slide and in front of the coin-supporting members, for discharging the coins from the coin pockets, when the first-mentioned slide is moved and the levers lifted by the coins contained in the pockets engaging with the said detents.

2. In a device of the class described; a frame; a vertical slide reciprocatingly mounted on said frame; two coin pockets formed vertically in said slide and aligned with the coin shutes contained in the machine in which the device is employed; each of said pockets having a depth sufficient to accommodate a plurality of coins; a plurality of notched slots formed in the slide; levers mounted on the frame and having coin-contacting detents engaging in said notched slots; another slide mounted under the first-mentioned slide and provided with coin-supporting members normally aligned with the coin pockets; two discharge shutes, located below the last-mentioned slide and

in front of the coin-supporting members, for discharging the coins from the coin pockets, when the first-mentioned slide is moved and the levers lifted by the coins contained in the pockets engaging with the said detents; two other discharge slots located below said coin-supporting members for discharging the coins from the coin pockets when the last-mentioned slide is moved.

3. In a device of the class described; a frame; a vertical slide reciprocatingly mounted on said frame; two coin pockets formed vertically in said slide and aligned with the coin shutes contained in the machine in which the device is employed; said coin pockets being of different sizes to accommodate coins of different denominations; each of said pockets having a depth sufficient to accommodate a plurality of coins; a plurality of notched slots formed in the slide; levers mounted on the frame and having coin-contacting detents engaging in said notched slots; another slide mounted under the first-mentioned slide and provided with coin-supporting members normally aligned with the coin pockets; two discharge shutes, located below the last-mentioned slide and in front of the coin-supporting members, for discharging the coins from the coin pockets, when the first-mentioned slide is moved and the levers lifted by the coins contained in the pockets engaging with the said detents; two other discharge slots located below said coin-supporting members for discharging the coins from the coin pockets when the last-mentioned slide is moved.

4. In a device of the class described; a frame; a vertical slide reciprocatingly mounted on said frame; two coin pockets formed vertically in said slide and aligned with the coin shutes contained in the machine in which the device is employed; each of said pockets having a depth sufficient to accommodate a plurality of coins; a plurality of notched slots formed in the slide; levers mounted on the frame and having coin-contacting detents engaging in said notched slots; another slide mounted under the first-mentioned slide and provided with coin-supporting members normally aligned with the coin pockets; two discharge shutes, located below the last-mentioned slide and in front of the coin-supporting members, for discharging the coins from the coin pockets, when the first-mentioned slide is moved and the levers lifted by the coins contained in the pockets engaging with the said detents; two other discharge slots located below said coin-supporting members for discharging the coins from the coin pockets when the last-mentioned slide is moved; and spring-actuated means for restoring the last-mentioned slide to its normal position.

LOUIS STEINER.