Nov. 21, 1933. A. H. DU GRENIER 1,935,835

COIN CONTROLLED DISPENSING MACHINE

Filed Dec. 23, 1932

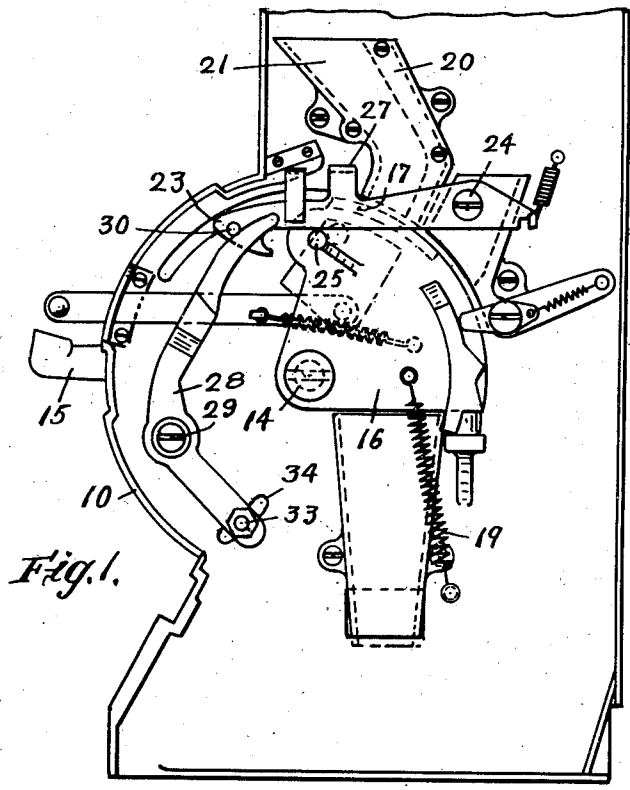


Fig. 1.

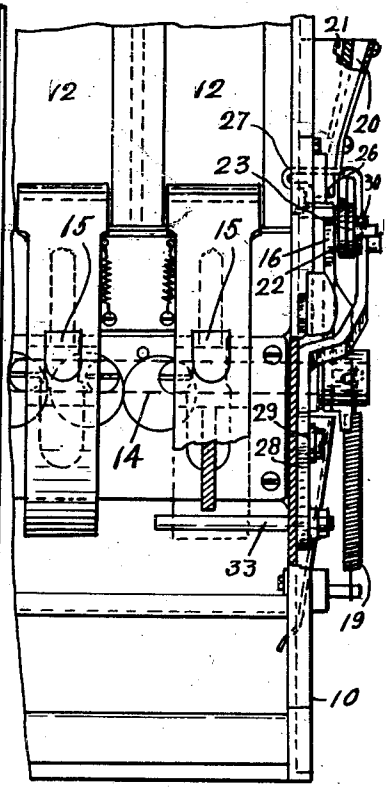


Fig. 2.

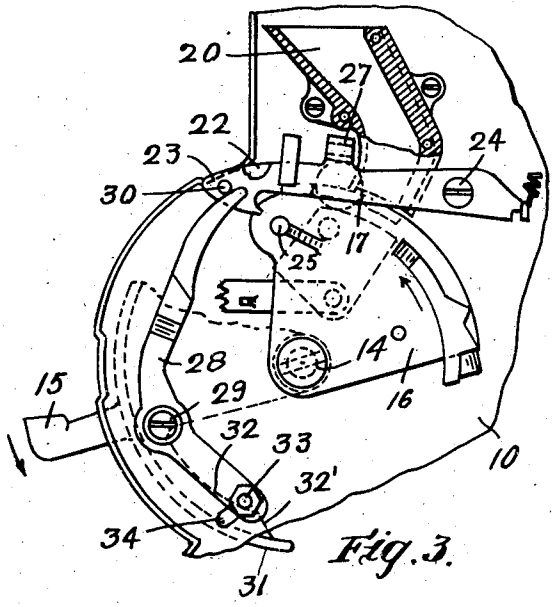


Fig. 3.

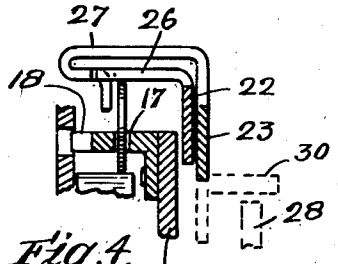


Fig. 4.

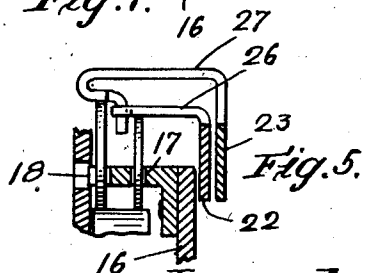


Fig. 5.

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UNITED STATES PATENT OFFICE

1,935,835

COIN CONTROLLED DISPENSING MACHINE

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Application December 23, 1932
Serial No. 648,613

7 Claims. (Cl. 194—63)

This invention primarily relates to coin-controlled dispensing machines of the type which require the insertion of two coins to release the dispensing apparatus, so that the goods desired may be secured, and also to that type of machine in which the articles to be vended are placed in a series of columns, from which they may be dispensed by operating a corresponding lever, so that different articles may be secured from the same machine by operating different levers.

In machines of this character, while it is common practice to provide a separate coin slot and coin testing means for each operation lever, such an arrangement is objectionable for several reasons, as coin testing mechanisms, which are satisfactorily effective, are expensive to manufacture and more than one of these mechanisms would take up valuable space in the cabinet, so that it is desirable to provide a single coin testing mechanism and a single releasing mechanism for all the operating levers. In addition to this requirement there is a demand for dispensing machines which vend articles which are sold at different prices. For example, cigarettes are sold at both 15 cents and at 10 cents per package, and the trade demands a machine which will dispense a 15 cent package when a dime and nickel have been placed in the machine and will dispense a 10 cent package when a dime only is placed therein.

A large number of machines of the character above referred to are in use which require the insertion of both a dime and a nickel to secure the delivery of a package from any one of a series of columns, and it is desirable to modify these machines so that, on the insertion of a dime only, a package may be secured from one or more of these columns, as well as to produce a machine having similar characteristics.

The objects of my invention are to produce a machine of the above described character which will enable a package to be secured from one or more compartments upon the insertion of two different coins, and a package to be secured from one or more different compartments of the same machine upon the insertion of one only of these coins. Also to provide a simple mechanism which may be readily incorporated at small expense in existing machines which release the dispensing apparatus only on the insertion of two coins, so that they will dispense a package from one or more of their compartments upon the insertion of a single coin.

I accomplish these objects by providing in a machine of the above described character in which a pair of locking devices are provided, each of which must be released by a separate coin to permit a dispensing operation, a releasing device which is arranged to be operated by the initial portion of the operative movement of certain operating devices of the machine, to move one of the locking devices to an inoperative position while a coin which has been inserted effects the movement of the other locking device to an inoperative position.

For a more complete disclosure of the invention reference is made to the following specification in connection with the accompanying drawing, in which:

Figs. 1 and 2 are views in side and front elevation, respectively, of a coin controlled mechanism embodying the invention.

Fig. 3 is a view similar to Fig. 1, showing the parts in a different position and

Figs. 4 and 5 are detail sectional views of the coin releasing means.

The preferred embodiment of my invention is herein disclosed in connection with coin controlled dispensing mechanism similar to that disclosed in the pending application of F. C. Du Grenier, Serial No. 565,325, filed September 26, 1931, and comprises a frame 10 having a plurality of vertical package receiving compartments 12 therein. A main shaft 14, having a correspondingly plurality of operating levers 15 thereon, is mounted horizontally in the sides of the frame and the right hand end of the shaft extends beyond the frame and has a sector shaped coin-receiving and actuating member 16 secured thereon, which is provided with two coin receiving chambers, or compartments 17 and 18 in its peripheral portion, so arranged that, when in the normal position of Fig. 2, to which the member is returned by spring 19 after each operation, said chambers will be held directly beneath a pair of coin passages 20, and 21, so that, when a dime, for example, is inserted in the passage 20, it will pass into chamber 17 and when a nickel is inserted in passage 21, it will pass into chamber 18.

A pair of locking pawls 22, 23 are mounted side by side on a pivot 24, and are normally held down by springs against a projecting abutment 25 on the member 16, and each pawl is provided with a hook on the under side of its front end, which is normally held in position to prevent operative movement of the member 16 beyond a certain point, the arrangement being such that when any one of the operating levers 15 is depressed the member 16 will be swung

for a short distance, usually thereby acting to operate certain coin-restoring devices, and then, if suitable coins have not been placed in the machine, the abutment 25 will engage either one, or both of the hooks of pawls 22, 23, so that further operative movement is prevented. Such movement is permitted, when suitable coins have been inserted, by means of arms 26, 27, which are mounted on pawls 22, 23, respectively, and have depending end portions, so arranged that when the member 16, having a dime and a nickel in the coin chambers 17, 18 thereof, is swung forward on depression of any one of the operating levers, the coins will be carried into engagement with the arms 26, 27, as shown in Fig. 5, causing the pawls 22, 23 to be lifted above the path of movement of abutment 25, so that full operative movement will be permitted, but, with the construction above described, unless a suitable coin has been placed in each chamber of the coin actuating member 16, this movement will not be permitted, so that, with such an arrangement, a dime and a nickel must be placed in the machine before a package can be secured from any one of the compartments.

The construction as thus far described does not embody the present invention, and for reasons already explained, it is desirable to permit a package to be dispensed from one or more of the compartments after a single coin has been inserted.

According to my present invention, a lever 28 is mounted on a pivot 29 in the frame, directly beneath the locking pawls 22, 23. In the present instance it is desired to permit a package to be dispensed when a dime only is inserted. To this end the pawl 23, which is normally lifted by a nickel, when propelled by the member 16, is provided with a rigid projecting pin 30 in one side, and the top end portion of lever 28 is so arranged that, when this portion is swung forwardly, it will engage said pin 30 and lift the pawl 23 out of the path of movement of the abutment 25 on member 16. All of the operating levers 15 are provided with depending shields 31 which close the slots in which the levers 15 swing, and which are curved on arcs having the axis of shaft 14 as a center, and concentric ribs 32 are formed on the inner side of said shields, the lower ends 32' of which are inclined, as shown in Fig. 3. A rigid rod 33 is firmly secured in the lower end of lever 28 and extends thru a slot 34 in the frame, so that it is normally held against the inclined end 32' of the rib 32 on the shield of the right hand lever 15.

As thus arranged, when the right hand lever 15 is depressed, the inclined end 32' will be forced against the side of the rod 23 and will push the latter to one side of its path, as shown in Fig. 3, and will hold it in this position during the continued movement, thereby causing the lever 28 to be swung from the position of Fig. 1 to the position of Fig. 3, and causing the pawl 23 to be lifted to an inoperative position, this action taking place either before, or by the time the other pawl 22 would be engaged and lifted to its inoperative position by a dime being forced thereagainst by the member 16, as shown in Fig. 4, so that the operative movement of the lever 15 may be continued, so as to dispense a package from the right hand compartment 12, the operation above described being thereby permitted after a dime only has been placed in the machine.

It will be apparent that if it should be desired to dispense a package from both the first and second compartments, at the right hand side of the machine, when a dime only is inserted, it will be merely necessary to lengthen the rod 33, so that it will be engaged by the lever 15 of the second compartment, as already described with relation to the lever of the first compartment. It will also be observed that there is no particular limitation as to the number of compartments from which a package may be dispensed after a single coin has been inserted, as it will be merely necessary to arrange the releasing mechanism so that one of the locking pawls will be moved to an inoperative position by an operative movement of the corresponding operative lever, the arrangement in no way interfering with the operation of the other levers which are permitted to operate only when two coins have been inserted. It will be understood that, while for the purpose of illustration, it was considered sufficient to show only two dispensing levers, in practice at least four and ordinarily six of said levers, with their corresponding compartments, are employed in one machine.

The construction above described, which moves one of the locking devices to an inoperative position by an operative movement of one or more of the operating levers, may be readily incorporated in existing machines at small expense.

I claim:

1. In a coin controlled dispensing machine having a plurality of operating devices, a pair of independent locking devices each normally operative to lock all of said operating devices against operative movement, coin controlled means for releasing both of said locking devices by an initial movement of said operating devices when corresponding coins have been received by the machine, and means arranged to be actuated by an initial movement of another of said operating devices to move one of said locking devices to an inoperative position, to permit continued operative movement of the operating device when the other locking device is moved to inoperative position by the coin controlled means.

2. In a coin controlled dispensing machine having a plurality of operating devices, a pair of independent locking devices each normally operative to prevent operative movement of all of said operating devices, a pair of coin receivers, means arranged to be actuated by an initial movement of any one of said operating devices to move said locking devices to an inoperative position when a coin has been placed in each coin receiver, and means arranged to be operated by an initial movement of one of said operating devices to move one of said locking devices to an inoperative position by the time the other locking device is moved to its inoperative position when a coin has been placed in its corresponding receiver.

3. In a coin controlled dispensing machine having a plurality of operating devices, a pair of independent locking devices each normally operative to prevent operative movement of all of said operating devices, a coin actuator having a pair of coin receiving compartments and arranged to be operated by an initial movement of any one of said operating devices to engage the coins carried thereby with said locking devices and move the latter to an inoperative position, and means arranged to be operated by an initial movement of one of said operating devices to move one of said locking devices to its inoperative position by the time the other locking device

is moved to its inoperative position by the coin actuator.

4. In a coin controlled dispensing machine having a plurality of operating devices, a plurality of independent locking devices each normally operative to prevent complete operative movement of all of said operating devices, coin-controlled means arranged to move each locking device to an inoperative position when a corresponding predetermined coin has been received by the machine, and means arranged to be actuated by an initial portion of the operative movement of certain of said operating devices to move certain of said locking devices to an inoperative position in time with the movement of the other locking devices to inoperative positions by the coin controlled means.

5. In a coin controlled dispensing machine having a plurality of operating devices, a pair of independent locking devices each normally operative to prevent operative movement of all of said operating devices, coin controlled means for moving both of said locking devices to inoperative positions, and a releasing device arranged for actuation by one of said operating devices to move one of said locking devices to an inoperative position by the time the other locking device is moved to an inoperative position by the coin-controlled means.

6. In a coin controlled dispensing machine having a plurality of operating devices, a pair of independent locking devices each normally operative to prevent operative movement of all of said operating devices, coin-controlled means for moving both of said locking devices to inoperative positions by an initial movement of any one of said operating devices, and a releasing device mounted adjacent said locking devices and arranged for actuation by the initial movement of one of said operating devices, to move one of said locking devices to an inoperative position.

7. In a coin controlled dispensing machine having a plurality of operating devices, a pair of independent locking devices each normally operative to prevent operative movement of all of said operating devices, coin-controlled means for moving both of said locking devices to inoperative positions by an initial movement of any one of said operating devices, and a releasing lever pivotally mounted adjacent said locking devices, and having one arm thereof arranged to be engaged by one of said operating devices and moved by the initial movement of the latter to cause the other arm thereof to move one of said locking devices to an inoperative position.

ARTHUR H. DU GRENIER.