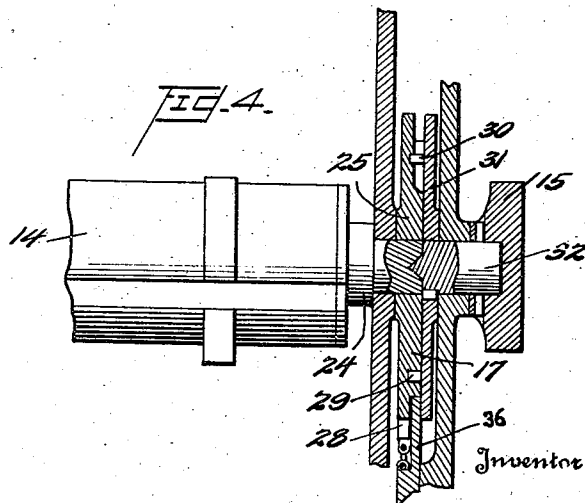
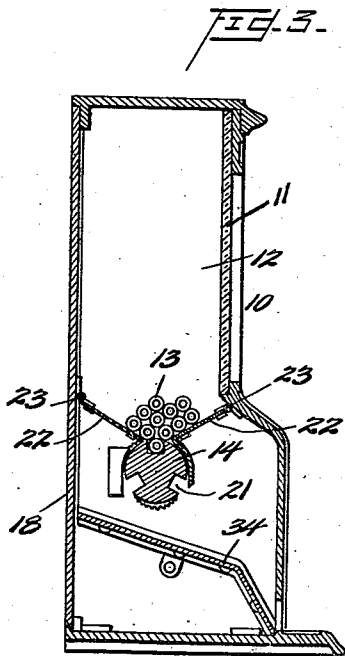
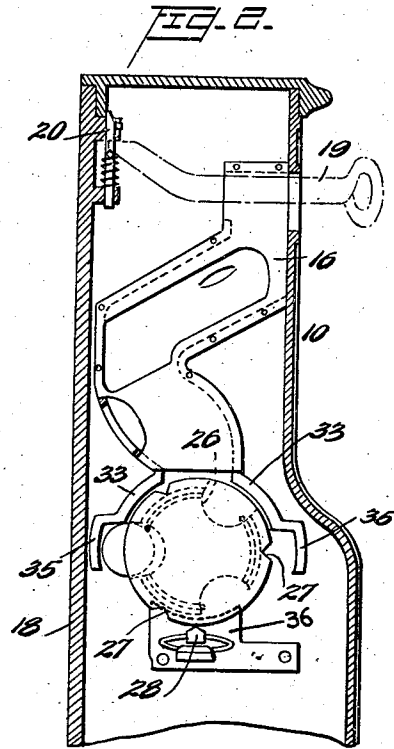
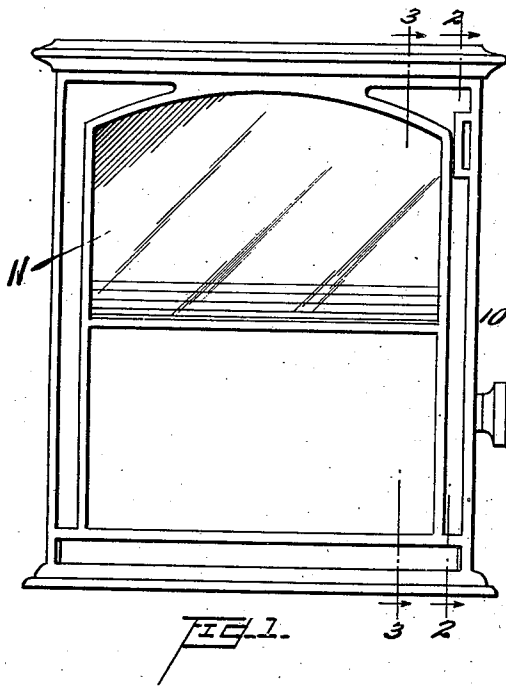


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VENDING MACHINE

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UNITED STATES PATENT OFFICE.

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VENDING MACHINE.

Application filed November 9, 1926. Serial No. 147,283.

This invention relates to an article vending machine, and particularly to such a machine adapted to dispense commodities upon the insertion of a coin within the machine and upon operation of the dispensing mechanism.

The object of the invention is the production of a machine of this character, which is simple in design and construction, which cannot be readily tampered with, and which will insure the delivery of but a single article upon the insertion of one coin within the machine.

Other objects and advantages of the invention will hereinafter appear in the following description and the novel features thereof will be particularly pointed out in the appended claims.

Like reference characters indicate like parts throughout the several figures of the drawings, in which

Figure 1 is a front elevation of the vending machine,

Figure 2 is a section on an enlarged scale taken on the line 2-2 of Figure 1,

Figure 3 is a section taken on the line 3-3 of Figure 1, and

Figure 4 is a section on an enlarged scale through the operator and clutch mechanism.

Referring to the drawings the vending machine casing is indicated by the numeral 10, which preferably has a reinforced glass face 11. The casing is divided into two compartments, a relatively narrow compartment for containing the coin chute and the clutch mechanism, and a relatively wide compartment for the commodity and the dispensing roller. The two compartments are formed by the provision of a partition 12 within the casing, located to one side of the glass face 11. For the purpose of illustration the commodity is indicated by lead pencils 13. A rotatable commodity dispensing roller 14 is actuated by the operator 15 when a coin of proper denomination has been inserted into the coin chute 16 and has passed into one of the pockets of the clutching mechanism 17 between the operator and the commodity roller. The casing has a removable back 18, which is locked to the casing and released through the medium of the key 19 acting through the coin slot upon the latch 20.

A more detail description of some of these parts will now be given in order to point out the invention.

The commodity roller 14 is provided with a plurality of article receiving pockets 21, which are shaped and designed to receive the particular article to be dispensed. Shelves 22 and 23 are pivoted to the walls of the casing, rest normally upon suitable supporting lugs and form a bottom for the commodity chamber. Suitable projections are formed on the commodity roller to lift the free ends of the shelves in the rotation of the roller to secure agitation of the articles and to insure the dropping of an article into the pocket of the roller as it passes beneath the shelves.

The commodity roller is mounted in the casing by any suitable means, for instance by the stub shaft 24, which has fast to it the coin disk 25 forming a part of the clutching mechanism between the operator 15 and the commodity roller.

The coin disk has formed in one face coin pockets 26 adapted to receive coin of proper denomination from the coin chute 16. In its periphery it has notches 27, with which a spring detent 28 coacts when the commodity roller is in the position shown in Figure 3 ready to receive an article within the article pocket. The detent 28 thereby holds the commodity roller against frictional movement.

The coin disk is also provided with a groove 29 to receive pins 30 upon the operator disk 31 fast upon a shaft 32 which carries the operator 15 in the form of a knob.

It will be appreciated that when a coin falls within a coin pocket 26, and the knob 15 is rotated in either direction, one of the pins 30 traveling in the groove 29 will engage the coin in the pocket and force the coin disk to revolve with the operator disk. It is obvious that this movement of all the parts may take place in either direction, so that a user of the machine will be able to operate it without having to determine the proper direction of rotation.

Guards 33 are provided for the coin disk to hold the coin within the pocket for a sufficient period to enable the coin disk to reach a position where it will be held by the spring detent 28 snapping into one of the notches 27. At this point the coin is dropped from the pocket 26 and any further movement of the operator disk will not produce a corresponding movement in the coin disk.

It will be appreciated, however, that be-

fore this movement of the coin disk is completed an article may be dropped from an article pocket of the commodity roller upon the inclined base 34 and delivered from the casing. Immediately upon the delivery of such article, if it were possible to reverse the direction of rotation of the operator 15, a second article might be secured by the user of the machine. To prevent this reverse operation, means have been provided for locking the coin disk against reverse rotation as the commodity roller approaches delivery position.

In the guards 33 are provided offsets 35 into which the coin drops or is forced by one of the pins 30 when it reaches that point, as clearly shown in Figure 2 of the drawing. After the coin occupies the offset 35, the delivery of the article may safely take place, as the operator is then locked against reverse rotation. It is obvious that should reverse rotation of the operator 15 be attempted, a second pin acting upon the lower portion of the coin would force the coin into the offset of the guard and maintain it there. A plate 36 extending between the disks 17 and 31 will eject a coin which may become wedged in a pocket 26.

By the construction described means are provided in a machine of this type for permitting rotation of an operator in either direction in order to actuate the vending machine, and at the same time prevent a user from operating it in such a way as to secure a double delivery of articles upon the insertion of a single coin.

It will be appreciated that in a vending machine of the type in which operation is accomplished only by a one-way rotation, there is some danger of clogging of the machine, especially by a commodity such as pencils, which may be warped or become tipped up, so that the purchaser will not receive the commodity for which he has inserted his coin. This difficulty is avoided in machines embodying an operation in either direction of rotation, when by the reversal of the direction of rotation, the pencils may be re-agitated and delivery thereafter secured by rotation in either direction. The chance of faulty operation is therefore greatly minimized, and the failure of delivery of the commodity obviated. It is well known that failure of a vending machine to make proper delivery results in a prejudice against vending machines generally, and often in the destruction of the particular machine so failing.

What is claimed is:

1. In a vending machine, a rotatable commodity delivery roller, a rotatable operator therefor, and an interposed clutching mechanism to engage the delivery roller and operator in the presence of a coin, said mechanism being rotatable in either direction to

secure discharge of the commodity, and means cooperating with the coin for locking the clutching mechanism against reverse movement as the commodity roller approaches delivery position.

2. A vending machine comprising a commodity discharge roller, an operator and clutching means between the discharge roller and operator functioning to lock them together when a coin is present therein, said discharge roller and operator being capable of rotation in either direction to deliver articles, and means for forcing said coin into a position to prevent reverse rotative movement of the parts as the discharge roller approaches delivery position.

3. In a vending machine comprising delivery mechanism and an operator therefor, a clutching device between the operator and delivery mechanism comprising a disk having coin receiving pockets, and guards holding coins in said pockets and having coin receiving offsets for the reception of the coin to prevent reverse movement of said mechanism.

4. In a vending machine comprising delivery mechanism and an operator therefor, a clutching device between the delivery mechanism and operator comprising companion disks rotatable in either direction, one provided with coin receiving pockets and the other with means for engaging the coin in the pockets to advance the coin disk, guards for holding the coin within the pocket, and offsets in said guards into which the coin is partially received to prevent reverse rotative movement of the delivery mechanism as it approaches delivery position.

5. In a vending machine comprising a commodity delivery roller, an operator and an interposed coin controlled clutching device, the delivery roller and operator being capable of rotative movement in either direction to discharge position, a coin chute, a disk provided with coin receiving pockets, a companion disk provided with devices to engage a pocketed coin to move the coin disk, and means cooperating with the coin for preventing reverse movement of said coin disk as the delivery roller approaches delivery position.

6. In a vending machine, a commodity chamber, a delivery roller rotatable in either direction, an operator exterior of the chamber normally rotatable in either direction, and clutching mechanism between the delivery roller and operator for locking the two together when a coin is present in said mechanism, said clutching mechanism comprising a pocketed coin receiving disk rotatable with the delivery roller, an operator disk having pins traversing the pockets of the coin disk and rotatable with said operator, and means operable at the time of

dropping a coin from a coin pocket to hold the coin disk in position to receive another coin. taken place and before the coin has been dropped.

7. In a vending machine, a clutching mechanism between delivery and operating devices comprising a disk having coin receiving pockets, an operator for said coin disk rotatable to actuate said coin disk in either direction when a coin is pocketed therein, and a guard for said coin on either side of said coin disk, said guard being so formed as to lock said coin disk against reverse rotation at the time the commodity roller approaches delivery position to prevent reverse movement of the commodity roller after delivery of the commodity has

8. A vending machine comprising a delivery roller; an operator therefor, and a clutch between said delivery roller and operator, said clutch composed of disks between adjacent faces of which coin pockets are formed, means cooperating with the coin to cause rotation of the delivery roller and operator in either direction, means for locking the clutch against reverse movement as the commodity roller approaches delivery position, and means for ejecting a coin from the pocket.

In testimony whereof I affix my signature.
ORSON N. KELLY.