

**Sept. 5, 1933.**

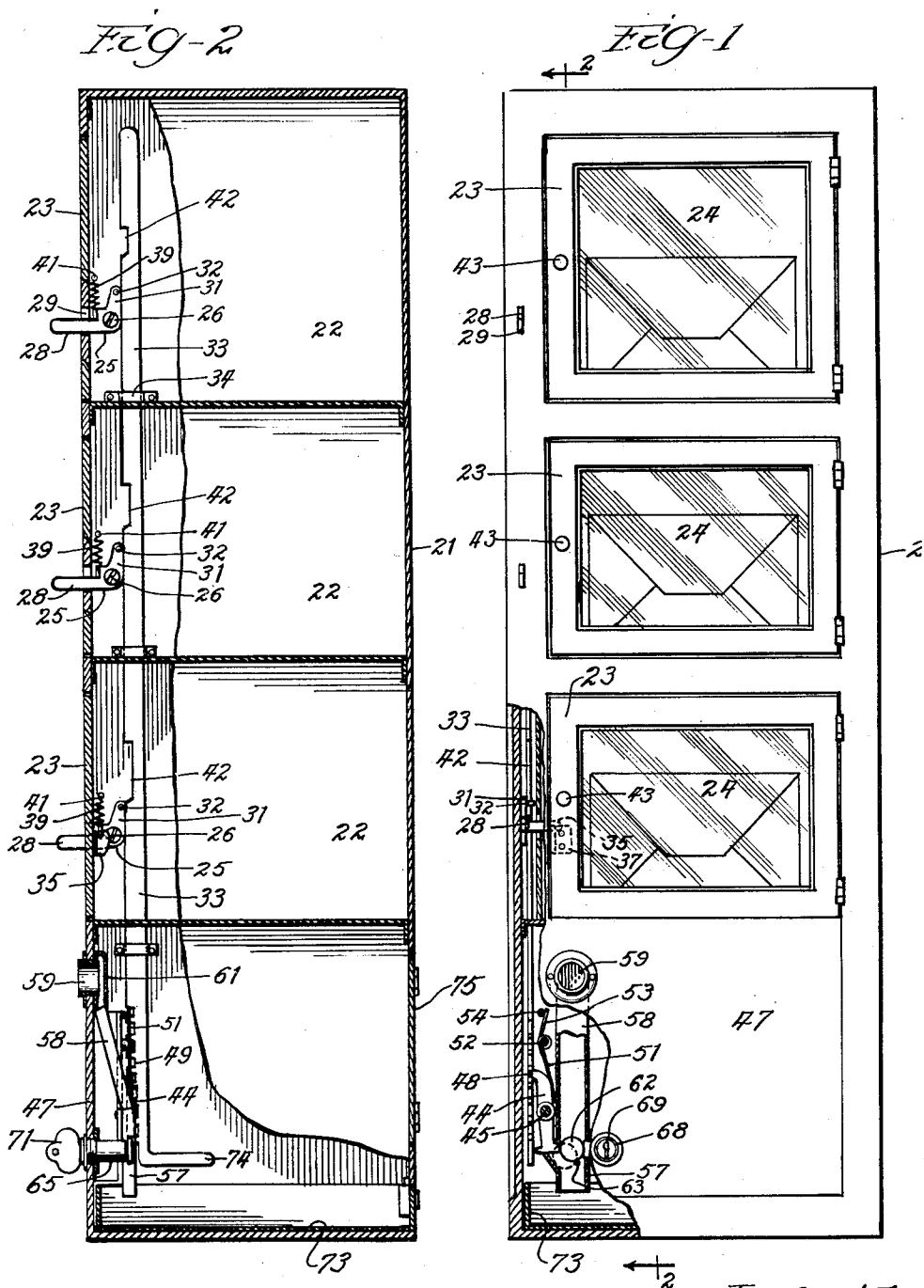
**F. L. MILLS**

**1,925,199**

## VENDING MACHINE

Filed May 4, 1929

2 Sheets-Sheet 1



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*Catty.*

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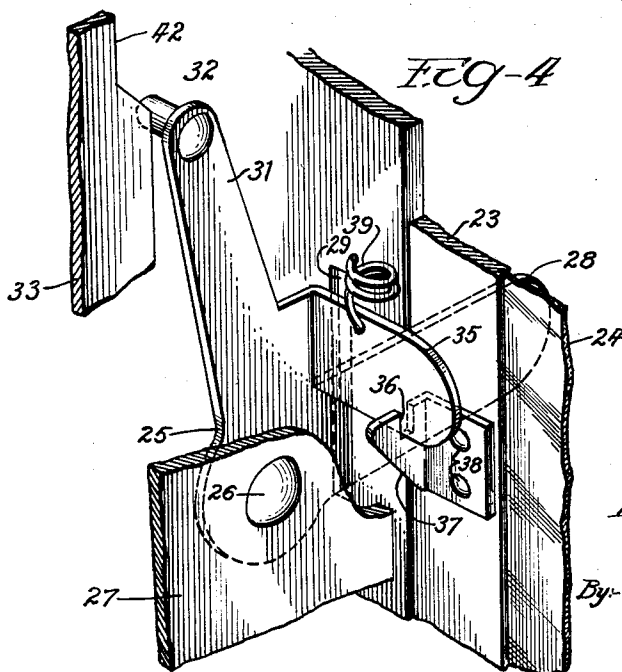
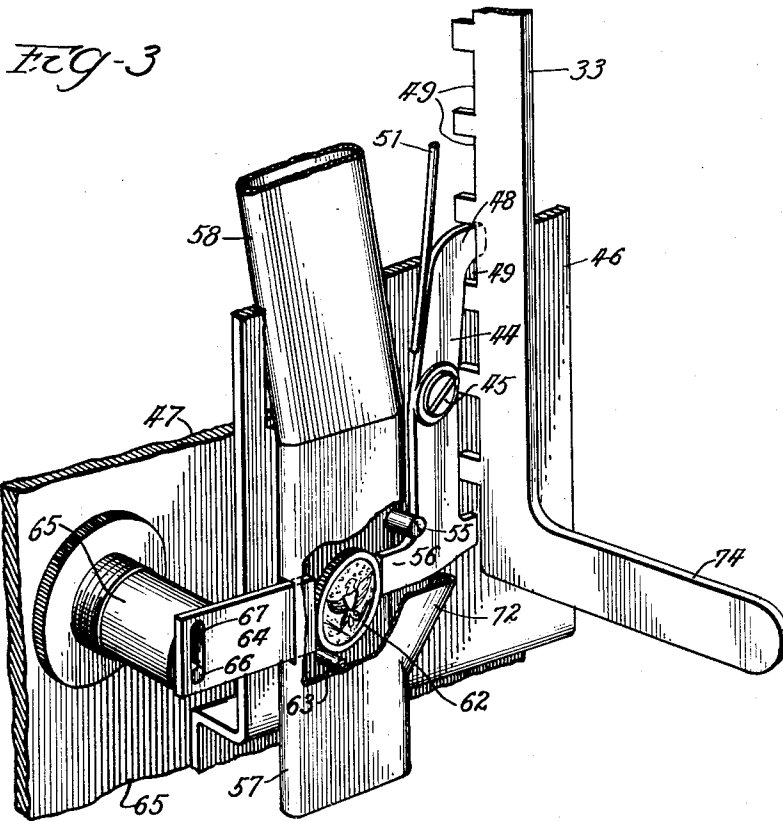
F. L. MILLS

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VENDING MACHINE

Filed May 4, 1929

2 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE

1,925,199

## VENDING MACHINE

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of Illinois

Application May 4, 1929. Serial No. 360,366

8 Claims. (Cl. 194—59)

This invention relates to vending machines and has for its object the provision of a machine particularly suited for vending commodities at apartment houses and like places, the plan being that the machine shall be kept stocked with staple commodities which may be obtained therefrom by tenants of the building upon the insertion of a proper coin in the machine. This plan of merchandising has formerly been proposed but the objection has arisen that there was danger of loss due to the use of slugs by people in the neighborhood or by the home owner or apartment dweller himself to obtain the merchandise fraudulently. To overcome this objection, I have devised a machine which requires the use of both a key and a coin in order to obtain an article of merchandise therefrom, thus making it impossible for one who does not have a key to operate the machine by means of a slug, and inasmuch as the keys will be in the possession of the home owner or apartment dweller only, it will be known that he used the slug if one is found in the machine. This means of identifying the responsible party in case a slug is used will serve as an effective deterrent to such practice and it is believed will render feasible the use of vending machines at homes and apartments for dispensing commodities such as coffee or any other staple articles, thus avoiding the heavy cost of delivery by the merchant of merchandise of this character in small quantities.

Other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings,

Fig. 1 is a front elevation, partially broken away and with certain parts shown in section, of a vending machine in which my invention is embodied;

Fig. 2 is a sectional view taken substantially on the section line 2—2 of Fig. 1;

Fig. 3 is a perspective view of the key-and-coin-operating mechanism; and

Fig. 4 is a perspective view of the latching device for one of the compartments of the machine.

In said drawings, which are to be taken as merely illustrative of one type of machine in which the principles of my invention may be embodied, the reference character 21 indicates a casing in which there are provided a number of compartments 22, each having a separate door 23, the doors being normally locked and being

provided with glass panels 24 through which the commodity contained within the compartment may be seen by the customer. Latching devices are provided for said doors and each of said devices comprises a bell crank member 25 pivoted at 26 to a frame part 27, one arm 28 of said bell crank extending outwardly through a slot 29 in the front of the casing and being adapted to be actuated by the customer to unlatch the door when the locking mechanism has been released in manner which will be hereinafter described. The other arm 31 of said bell crank extends upwardly within the casing and is provided at its end with a stud 32 which normally bears against the front edge of a bar 33 mounted within said casing and retained in position by means of keepers 34 secured to one of the side walls of the casing. Said bell crank member 25 is formed with a laterally extending lug 35 which normally engages in a slot 36 in a keeper 37 secured to the inner side of the door 23 by means of rivets 38. A spring 39 secured at one end to said lug 35 and at the other end to the side wall of the casing above said lug, as indicated at 41, serves to hold the stud 32 in the upwardly extending bell crank arm 31 against the front edge of the bar 33.

Said bar 33 is provided with a series of notches 42, which, when brought into registration with the studs 32 in manner which will presently appear, permit the bell crank member 25 to be turned on its pivot, disengaging the lug 35 from the notch 36 in the keeper 37 on the interior of the door, whereupon said door may be opened, a knob 43 being preferably provided on the exterior of the door for this purpose.

Said bar 33 is normally held in raised position by means of a control member or finger 44 which is pivoted at 45 upon the inner face of a supporting plate 46 provided on the interior of a lower front wall 47 of the casing, the parts now being described being clearly shown in Fig. 3 of the drawings. The upper end of said member 44 is hooked, as indicated at 48, and is normally held in forward position and within one of a series of notches 49 in the lower part of the bar 33 by means of a coil spring 51 which is wound around a stud 52 protruding from the supporting plate 46, the upper end 53 of said spring bearing against a second stud 54, as shown in Fig. 1.

The lower end of the member 44 bears against a stud 55 on the supporting plate 46 and is formed with a laterally extending arm 56 disposed beneath said stud 55 and extending into a coin chute indicated by the reference character 57. The

upper part 58 of said coin chute angles forwardly to a point adjacent the lower front wall portion 47 of the casing in which there is provided a coin slot 59, a guide 61 being located on the interior of the casing behind said coin slot to direct coins inserted in the latter into the coin chute in manner which will be readily apparent from viewing Fig. 2. Coins inserted in said slot drop to the position shown in Fig. 3 of the drawings, from which it will be observed that the coin indicated by the reference character 62 rests upon the stud 63 provided in the coin slot and is disposed between the arm 56 on the lower part of the member 44 and a bolt 64 of a key lock, the cylinder of which is indicated by the reference character 65, said cylinder being provided with an eccentric stud 66 extending into a slot 67 in one end of said bolt 64. The exterior of the key lock is indicated at 68 in Fig. 1 and is provided with a keyhole 69 adapted to receive a key 71 shown in Fig. 2, the lock construction being of any ordinary or preferred form and the operation thereof to actuate the bolt 64 being obvious.

When a coin has been inserted in the machine, the key lock may be actuated by one having a suitable key, thereby projecting the bolt 64 toward the right, viewing Fig. 3, and forcing the coin 62 against the arm 56 of the pivoted member 44, thereby withdrawing the upper hooked end 48 of said member from the particular notch 49 in the bar 33 in which it has been engaged, permitting the bar to drop one step or until said hooked end 48 of the member 44 engages in the succeeding notch in said bar into which it is urged by means of the spring 51. The coin chute 57 is enlarged laterally, as indicated at 72, so that the coin when moved laterally by the lock bolt 64 may be freed from the stud 63 and after actuating the member 44 will drop into a coin box indicated at 73 in Fig. 1.

The descent of the bar 33 by this operation of the locking mechanism will permit the stud 32 of the bell crank member 25 of the latching mechanism for the lowermost compartment 22 to enter the lower notch 42 in the bar 33, thereby unlocking the door for that compartment and enabling the customer to open the same and remove the package for which he has paid. The notches 42 in said bar are so related that the first coin inserted serves to open only the lowermost compartment, the next coin serving to open the compartment next above and the third coin the next higher compartment, it being understood that any desired number of compartments might be provided and that the compartment arranged and the mechanism for unlatching the doors might be varied widely, the form shown being merely an exemplification of one of many particular forms which this part of the machine might take.

A handle 74 is provided on the lower end of the bar 33 for lifting the latter to initial position after the compartments have been emptied, this being accomplished by an authorized person who may have access to the machine through a rear door 75 shown in Fig. 2 of the drawings.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention, or sacrificing all of its material advantages, the construction hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A vending machine comprising a normally locked container for the commodity to be dispensed and locking mechanism therefor requiring the simultaneous use of both a key and a coin for the operation thereof to unlock said container, said locking mechanism including a movable control member, a release member operatively connected with said control member, a key-operated member positioned adjacent said release member, and means for introducing a coin to afford an operative connection between said release member and said key-operated member, said machine having a plurality of compartments for different commodities, and said locking mechanism being successively operable to give access to said compartments in predetermined order.

2. A vending machine comprising a container for the commodity to be dispensed, a door for said container, a latch for said door, means normally preventing the operation of said latch, and means requiring the use of both a key and a coin for the operation thereof to render said last-mentioned means ineffective and to thereby permit operation of said latch to open the door.

3. A vending machine comprising a normally locked commodity container and a key-and-coin-operated locking mechanism for said container, said locking mechanism including a movable control member, a release member operatively connected with said control member, a key-operated member positioned adjacent said release member, and means for introducing a coin to afford an operative connection between said release member and said key-operated member, said machine having a plurality of compartments for different commodities, and said locking mechanism being successively operable to give access to said compartments in predetermined order.

4. A vending machine comprising a normally locked commodity container, locking mechanism therefor including a movable control member and actuating means operable by a key and a coin for operating said control member to unlock said container, said actuating means including a release member operatively connected with said control member, a key-operated member positioned adjacent said release member, and means for introducing a coin to afford an operative connection between said release member and said key-operated member, said machine having a plurality of compartments for different commodities, and said locking mechanism being successively operable to give access to said compartments in predetermined order.

5. A vending machine comprising a commodity container provided with a door and a lock mechanism therefor requiring the use of both a key and a coin for the operation thereof, said lock mechanism including a latch, a movable control member for preventing operation of said latch and means operable to render said control member ineffective and to thereby permit operation of said latch to open the door, said means including a release member operatively connected with said control member, a key-operated member positioned adjacent said release member, and means for introducing a coin to afford an operative connection between said release member and said key-operated member.

6. A vending machine comprising a commodity container, locking mechanism therefor including a movable control member and actuating means operable only by a key separable from the machine and an inserted coin for operating

said control member to unlock said container, said actuating means including, a release lever having operative engagement with said control member, a key-operated member positioned adjacent said release lever, and means for introducing a coin to afford an operative connection between said release lever and said key-operated member.

7. A vending machine of the character set forth comprising, a commodity container, a door for said container, a latch for said door, a movable control member for preventing operation of said latch, and means requiring the use of both a key and a coin for the operation thereof to render said control member ineffective and to thereby permit operation of said latch to open the door, said means including a release lever having operative engagement with said control member, a key-operated member positioned adjacent said release lever, and means for introducing a coin to afford an operative connection

between said release lever and said key-operated member.

8. A vending machine of the character set forth comprising, in combination, a locker cabinet provided with a top wall, a bottom wall, and a series of intervening partitioning walls affording compartments for holding articles of merchandise, doors for said compartments, latches for said doors, a movable control member normally preventing operation of said latches, and actuating means operable by a key and a coin for operating said control member to render it ineffective as to one of said latches, thereby permitting access to one of said compartments while maintaining the other compartments in locked condition, said control member being operable upon succeeding operations of said actuating means to successively give access to the remaining unopened compartments of the cabinet in predetermined order.

FRED L. MILLS.

25	100
30	105
35	110
40	115
45	120
50	125
55	130
60	135
65	140
70	145
75	150