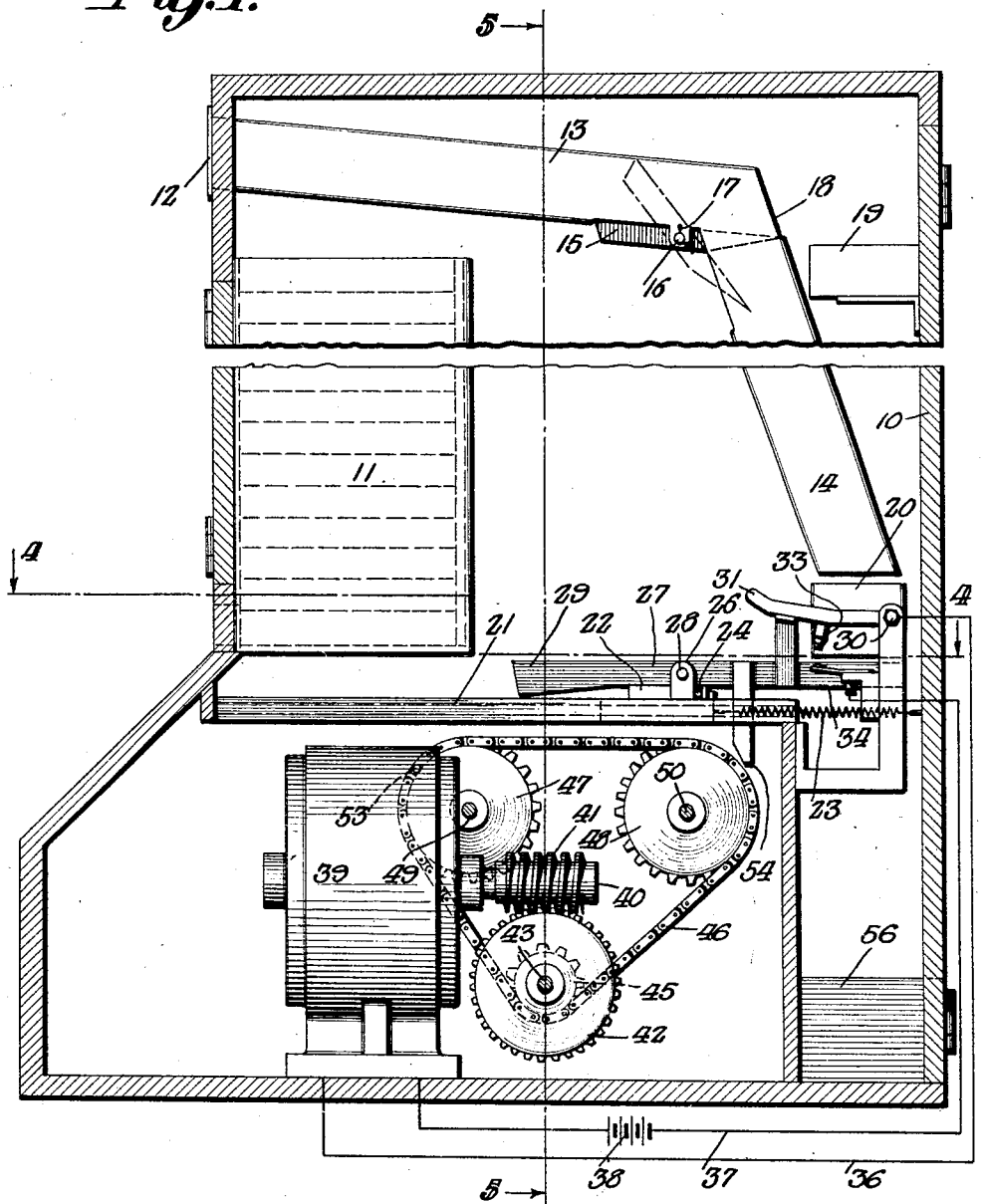
Dec. 10, 1929. R. B. KEEHNEL 1,739,238

VENDING MACHINE

Filed March 14, 1929 5 Sheets-Sheet 1

Fig. 1.



Roy B. Keehnel, Inventor

By A. F. Randolph Jr.

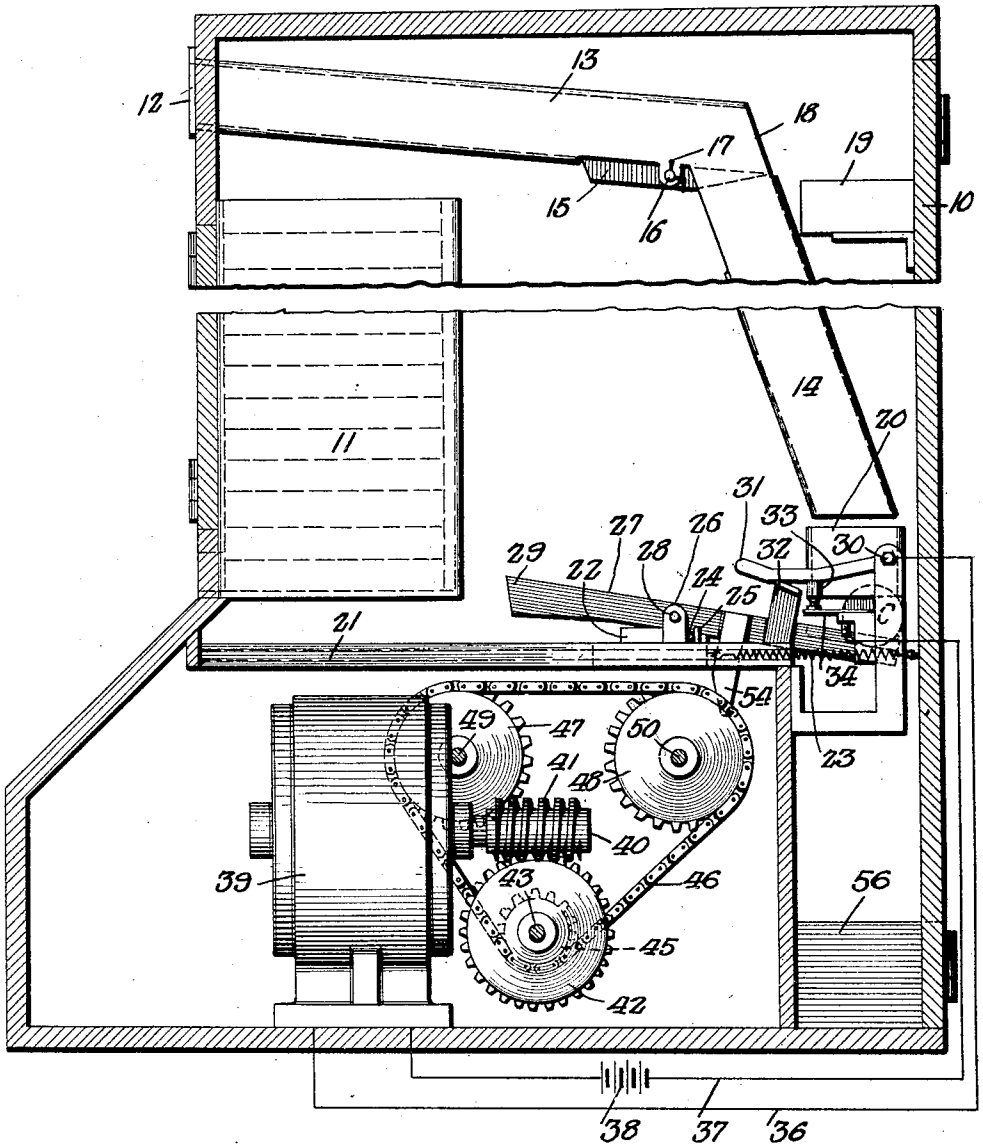
Attorney

Dec. 10, 1929. R. B. KEEHNEL 1,739,238

VENDING MACHINE

Filed March 14, 1929 5 Sheets-Sheet 2

Fig. 2.



Roy B. Keehnel, Inventor

By *L. F. Randolph Jr.*

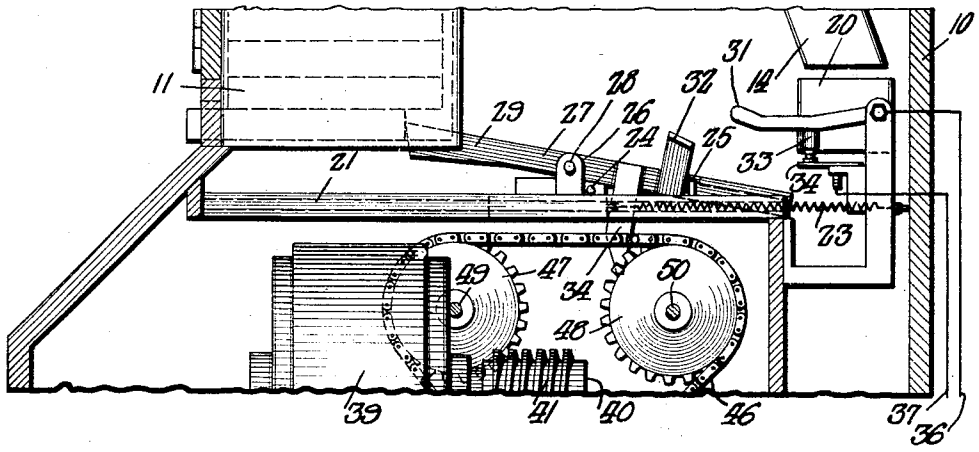
Attorney

Dec. 10, 1929. R. B. KEEHNEL 1,739,238

VENDING MACHINE

Filed March 14, 1929 5 Sheets-Sheet 3

Fig. 3.



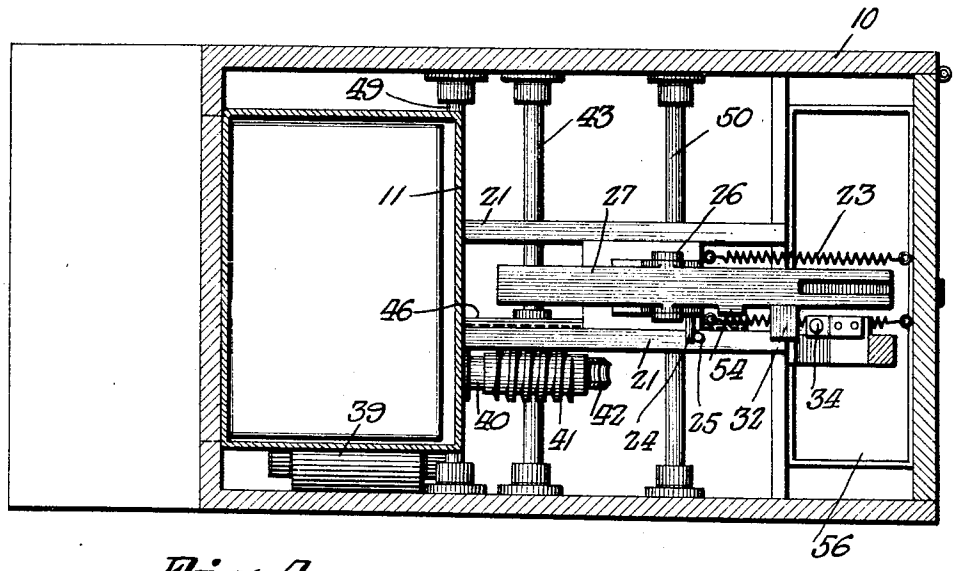


Fig. 4.

Roy B. Keehnel, Inventor

By R. F. Rembusch Jr.

Attorney

Dec. 10, 1929. R. B. KEEHNEL 1,739,238

VENDING MACHINE

Filed March 14, 1929 5 Sheets-Sheet 4

Fig. 5.

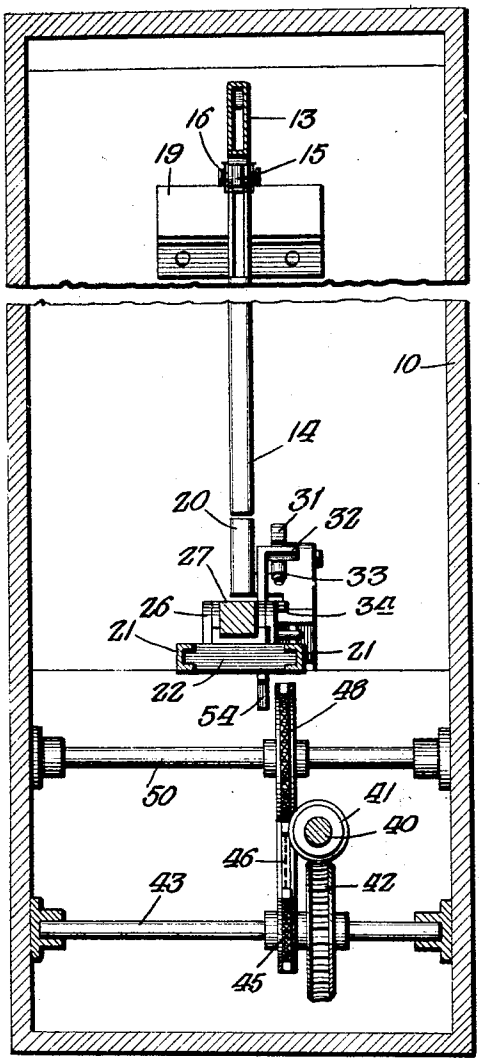
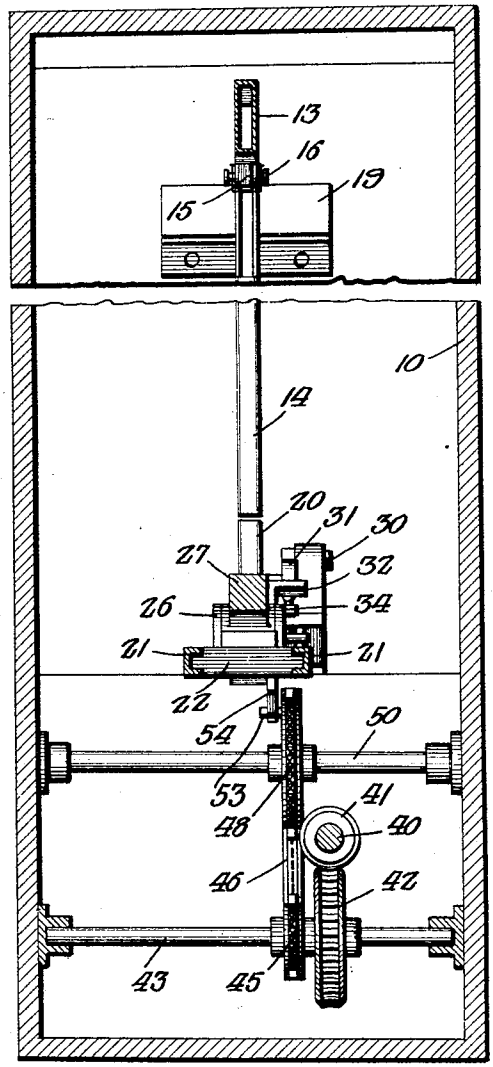


Fig. 6.



Roy B. Keehnel, Inventor

By *R. F. Randolph Jr.*

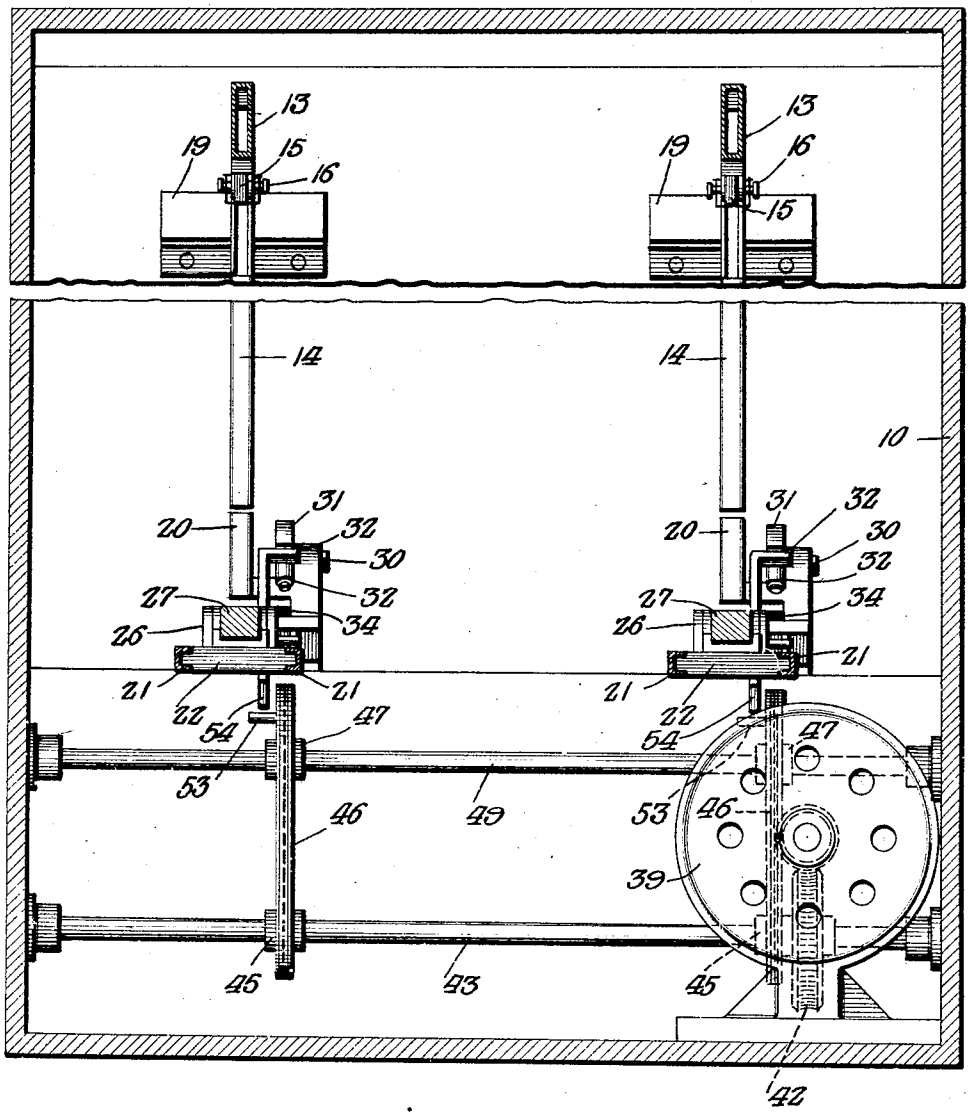
Attorney

Dec. 10, 1929. R. B. KEEHNEL 1,739,238

VENDING MACHINE

Filed March 14, 1929 5 Sheets-Sheet 5

Fig. 7.



Roy B. Keehnel, Inventor

By *A. F. Kunstadt Jr.*

Attorney

Patented Dec. 10, 1929 1,739,238

UNITED STATES PATENT OFFICE

ROY B. KEEHNEL, OF INDEPENDENCE, MISSOURI

VENDING MACHINE

Application filed March 14, 1929. Serial No. 347,117.

This invention relates to a vending machine.

It is aimed to provide a novel construction of vending machine which can be operated by the deposit of a proper coin only and which has its operating parts driven by an electric motor whose circuit is under control of the coin.

Another object is to provide a novel construction utilizing a swinging and sliding lever under control of the coin which in turn controls the closing of the electric circuit to the motor and the vending of merchandise.

Various additional objects and advantages will partly be pointed out or become apparent from a consideration of the description following taken in connection with accompanying drawings illustrating an operative embodiment.

In said drawings:

Figure 1 is a view in vertical section through a vending machine embodying my invention;

Figure 2 is a view similar to Figure 1 showing a coin in coacting relation with the control lever;

Figure 3 is a fragmentary view similar to Figures 1 and 2 but showing the lever in merchandise ejecting position;

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 1, a position above the lever;

Figure 5 is a vertical sectional view taken on the line 5—5 of Figure 1;

Figure 6 is a view similar to Figure 5 showing the parts in position with a coin deposited; and

Figure 7 is a sectional view showing a multiplicity of the vending machine operated from the same motor.

Referring specifically to the drawings the machine has its parts embodied in a suitable cabinet 10 having a container 11 for the merchandise. A suitable coin is adapted for deposit through a slot forming an entrance to a chute or tube 13 having a downward extension 14. Pivoted to the chute 13 is a trap member 15, the pivot being designated 16 and a spring 17 being employed to maintain the trap in normal position extending across the branch 14 so that a coin cannot descend into the latter. The trap is balanced and arranged so that the forward end thereof will be displaced only when a coin of the proper size and weight engages the same. If a coin of improper size and weight is deposited, it will continue through the chute 13 and out of a slot 18 in the forward end thereof and enter an upper collecting receptacle 19 fastened to the wall of the cabinet. A proper coin, however, after passing the trap 17 falls through the branch 14 and into a coin retainer 20, suitably supported within the casing 10.

A supporting wall 21 is mounted within the cabinet 10 above the base and below the container 11 having a slide 22 mounted for movement longitudinally of the member 21 and in a groove thereof. The slide is connected with a contractile spring 23 which in turn is fastened to a wall of the cabinet and the spring tends to maintain the slide in a rearmost or retracted position, movement thereof being limited by the abutment of a pin 24 on the slide with a pin or stop 25 on the support 21. A stud 26 rises from the slide 22 and has a control lever 27 pivoted thereto at 28. One end of said lever 27 is weighted as at 29 so that the lever is normally positioned with one end thereof under the coin container 20 and is urged thereby to that position when displaced.

Pivoted to the container 20 as at 30 is a switch arm 31 which is normally held in an open position by a lug 32 extending upwardly from the lever 27. Said lever has a contact 33 thereon adapted for engagement with a contact 34 suitably supported as on a bracket 35 secured to the container 20. Said contacts are in an electric circuit having conductors 36 and 37 in connection with a source of electric current 38, and operatively connected to an electric motor 39 located within the cabinet 10.

The electric motor 39 has its main shaft 40 equipped with a worm 41 in mesh with a worm wheel 42 carried by a shaft 43 appropriately journaled in bearings 44 within the cabinet. Said shaft 43 also operates a sprocket wheel 45 over which a sprocket chain 46 is trained. Said chain 46 is also trained over

sprocket wheels 47 and 48 carried by shaft 49 and 50 appropriately journaled in bearings 51 and 52 within the cabinet.

A pin 53 extends laterally from one of the links of the sprocket chain 46 and is adapted for engagement with a depending finger 54 on the lever 27.

A coin tray or receptacle 56 is provided within the cabinet directly under the coin receiving member 20.

Presuming operation, a coin such as that at B is deposited in the slot 12 and if of the proper size and weight, it displaces the trap 15 and falls through the tube 14 into the container 20 where it engages the lever 27, thus moving the latter from the position shown in Figure 1 to that shown in Figure 2, the weight of the coin overcoming the additional weight of the end 29 of the lever. Such movement of the lever 27 disposes the finger 54 in the path of travel of the pin 53 upon movement of the chain 46. Such movement of the lever 27 also lowers arm 32 so that arm 31 will fall by gravity and its contact 33 will engage that at 34 whereby an electric circuit from the battery 38 is closed through the motor 39. The motor 39 through the medium of gear 42, and sprockets 45, 47 and 48, drives the chain 46 in the direction of the arrow. Through this movement, the pin 53 engages finger 54 thereby sliding the slide 22 and lever 27 as a unit to the left in Figure 1 against the tension of the spring 23, thus moving the lever from beneath the receptacle 20 so that the coin will fall therefrom into the receptacle 56. Such lever 27 moves forwardly a sufficient extent to engage an article of merchandise in the container 11 and expel or vend it, after which the spring 23 retracts the slide and accordingly the lever 27, moving the lug 32 upwardly and accordingly the arm 31 and breaking the electric circuit at the contacts 33 and 34. At the same time the arm 54 is raised. Upon the breaking of the electric circuit, the motor 39 ceases operation and the parts are automatically reset for operation upon the deposit of the succeeding coin.

Various changes may be resorted to provided they fall within the spirit and scope of the invention.

What is claimed is:—

1. A machine of the class described having a device adapted to receive a coin, a lever arranged for engagement by the coin and to be tilted through said engagement, electric circuit means engageable upon the displacement of the lever, and means operable through the closing of the electric circuit means to impart a bodily movement to the lever to effect a vending operation.

2. A vending machine having a weighted lever adapted to be engaged by a coin to displace the same, means operable to bodily move the lever for a vending operation, electric means to operate the latter means, and circuit closing means for the electric means under control of said lever.

3. A vending machine having a weighted lever adapted to be engaged by a coin to displace the same, means operable to bodily move the lever for a vending operation, electric means to operate the latter means, circuit closing means for the electric means under control of said lever, and spring means normally urging retraction of the lever.

4. A vending machine having a weighted lever adapted to be engaged by a coin to displace the same, means operable to bodily move the lever for a vending operation, electric means to operate the latter means, circuit closing means for the electric means under control of said lever, a container to receive the coin as it contacts with said lever, the bodily movement of said lever being sufficient to move the same away from the coin container so as to permit the release of a coin therefrom.

5. A vending machine having a coin controlled lever, means mounting the lever for bodily vending movement, a finger depending from the lever, an endless driven element movable in contact with the finger when the lever is displaced to move the lever bodily, and means controlled by the lever to operate said element.

6. A vending machine having a coin controlled lever, means mounting the lever for bodily vending movement, a finger depending from the lever, an element movable in contact with the finger when the lever is displaced to move the lever bodily, an endless device carrying said element, and means driving said device.

7. A vending machine having a coin controlled lever, means mounting the lever for bodily vending movement, a finger depending from the lever, an element movable in contact with the finger when the lever is displaced to move the lever bodily, an endless device carrying said element, means driving said device, consisting of an electric motor, and a switch to control the circuit of said motor adapted for closing upon the displacement of said lever.

8. A vending machine having a coin container, a lever weighted at one end and having its other end disposed under said container, means pivotally and slidably mounting said lever, a switch arm maintained in open position by said lever, a contact engageable by the switch arm upon displacement of the lever through engagement of a coin therewith, a finger depending from the lever, an operating member engageable with said finger to slide the lever for a vending operation and to release a coin from the container, means to operate said device comprising an electric motor under control of said switch arm and contacts.

9. A vending machine having a coin con-

tainer, a lever weighted at one end and having its other end disposed under said container, means pivotally and slidably mounting said lever, a switch arm maintained in open position by said lever, a contact engageable by the switch arm upon displacement of the lever through engagement of a coin therewith, a finger depending from the lever, an operating member engageable with said finger to slide the lever for a vending operation and to release a coin from the container, means to operate said device comprising an electric motor under control of said switch arm and contacts, a slide carrying said lever, a support for the slide, a contractile spring engaging the slide and urging the same to retracted position, and coacting stops on the support and slide to limit the latter to normal position.

In testimony whereof I affix my signature.

ROY B. KEEHNEL.