H. V. WESTERVELT.

VENDING MACHINE.

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916,514.

Patented Mar. 30, 1909.

FIG. 4.

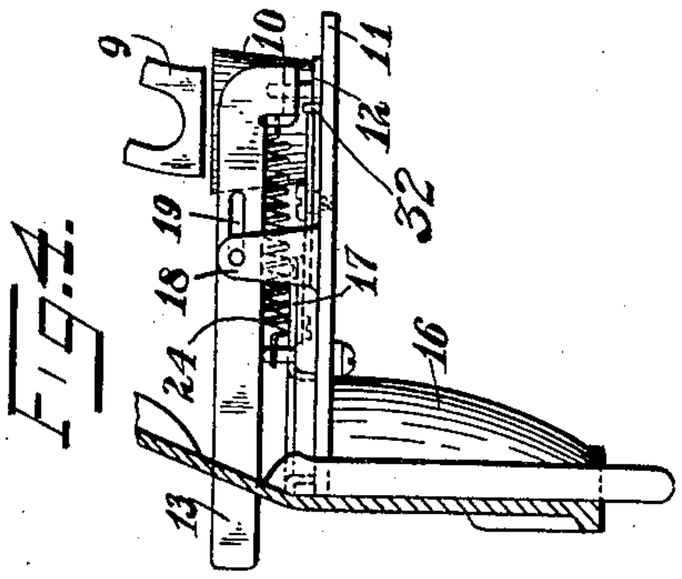


FIG. 5.

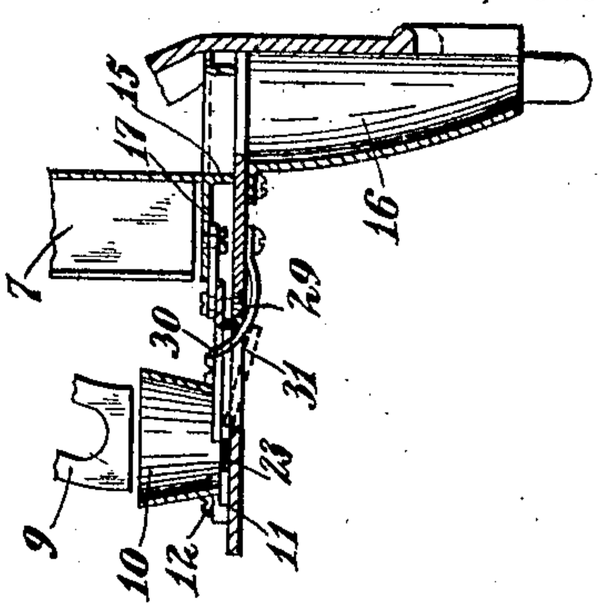


FIG. 2.

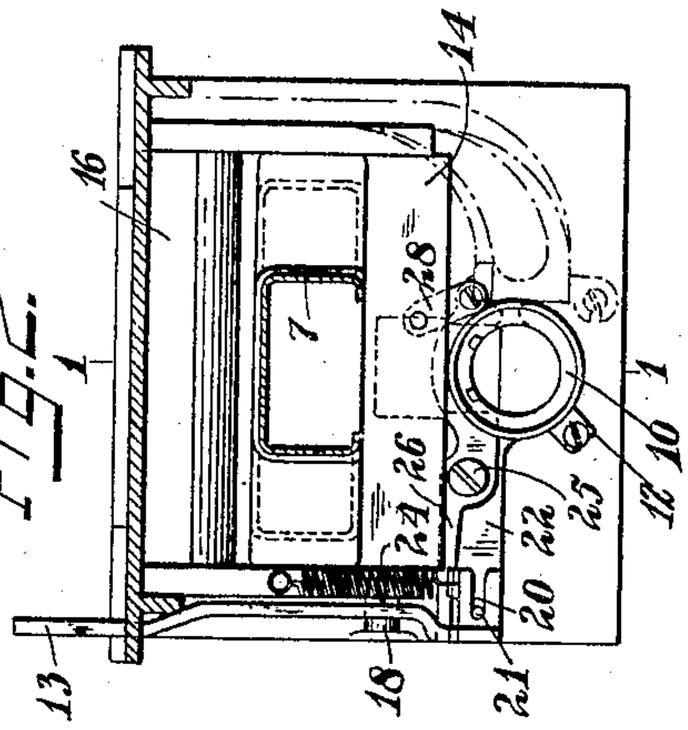


FIG. 3.

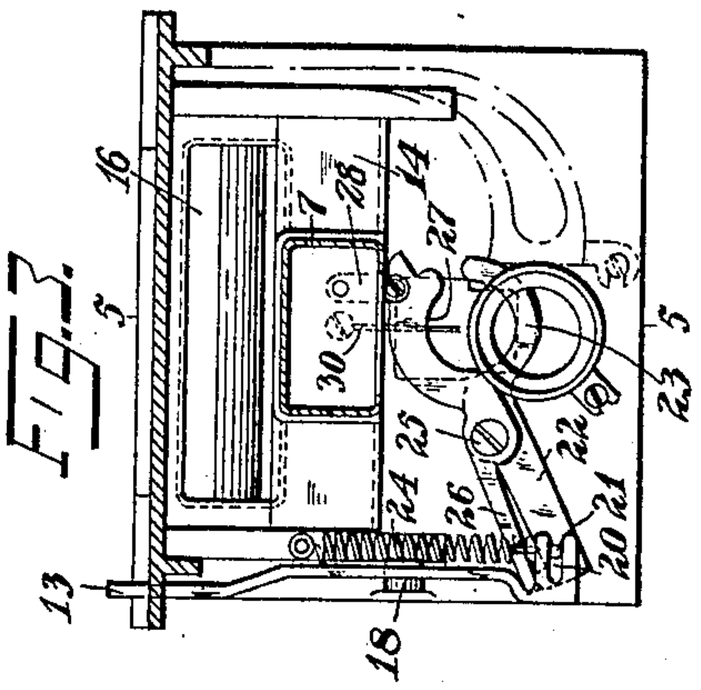
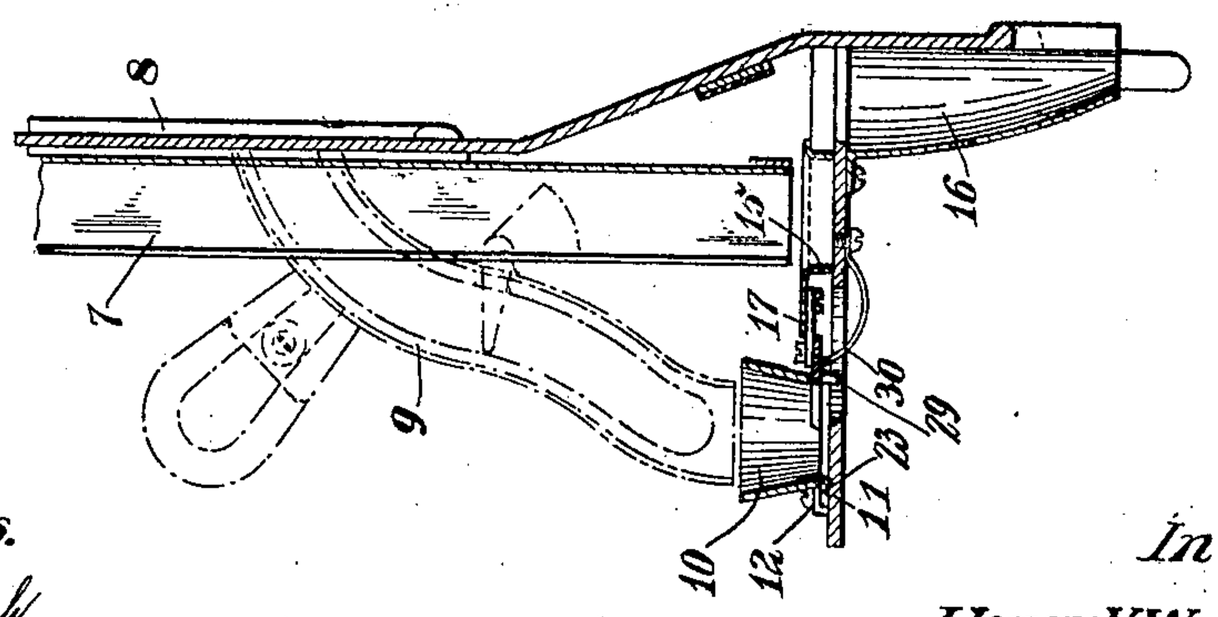


FIG. 1.



Witnesses.

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VENDING-MACHINE.

No. 916,514. Specification of Letters Patent. Patented March 30, 1909.

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To all whom it may concern:

Be it known that I, HENRY V. WESTERVELT, a citizen of the United States, residing in Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification.

This invention relates to and has for its object to provide an improved automatic vending machine, one of the principal objects of the invention being to provide mechanism in which the purchasing coin forms a connection between an actuating device and the package ejector, and wherein at the completion of the ejecting operation the coin will be engaged and positively removed from its operative position.

In the drawings accompanying and forming a part of this specification Figure 1 is a central vertical section of a form of my present improvement, the section is taken at about the plane of line 1—1 of Fig. 2. Fig. 2 is a horizontal section of the mechanism shown in Fig. 1, taken at about the plane of the top of the coin hopper. The parts in Fig. 2 are shown in idle position. Fig. 3 is a view similar to Fig. 2 showing the parts in position after a package has been ejected, the coin disengaged and removed from the operative position, but with the actuating bar still pressed in. Fig. 4 is a side view of the mechanism illustrated in Fig. 3 looking at this from the left hand end; and Fig. 5 is a central section at about the line 5—5 of Fig. 3.

In practice the operative parts of the device will be contained within a proper casing or housing, not only for the purpose of supporting the parts, but also for incasing the package chute 7 in which the merchandise which is to be distributed by the machine will be stored.

In operating the machine the coin will be passed through a suitable opening in the front plate 8 and will traverse a coin passage in a guiding structure illustrated in dotted lines, and designated by the reference character 9, which coin chute will carry the coin into a hopper 10, which hopper will cause it to lie flat upon the base plate 11 to which the hopper is secured by means of its foot 12. The coin after it finds entrance into the hopper and is lying flat upon the base plate 11 will be between two movable parts, which form a connection between the push-bar 13, which will be actuated by the purchaser, and a package ejector 14, which package ejector in the present instance comprises a portion 15 for engaging a rear portion of the package. The fact may here be noted that the form of the opening in the ejector will correspond substantially with the outlines of the package. The ejector upon being pushed forward with a package which it has received from the chute 7 will bring this package over the discharge chute 16 from which it will fall to some convenient position where the purchaser may receive it. When the ejector is in its forward position the plate portion 17 of the ejector will assume a position under the lowermost package in the chute 7 and upon the retraction of the ejector the opening in the ejector will come under the package chute and will receive the package which rested upon the plate 17.

The push bar 13 is shown as guided upon a stud 18 which runs in a longitudinal slot 19 in such bar. The rear end of this push bar is provided with a pair of fingers, making a slot 20, which engage a pin 21 upon one end of a lever 22. The other end of the lever at 23 is bent in a segment of a circle corresponding to the coin which it is intended shall operate the mechanism. An extension spring 24 is fastened to the push bar and to some fixed part of the framework for drawing the bar forward to its idle position. The same pivot screw 25 which acts as the fulcrum for the lever 22 will also act as a fulcrum for a lever 26, which has one end 27 curved to correspond to the curvature of the coin, and this end 27 is fastened by means of a link 28 to the ejector. The portion 23 of the lever 22 passes under the rear portion of the hopper and the rear portion of the lever 26 at 27 also passes under the hopper. In the present instance the lever 26 is pivoted on top of the lever 22 and has downwardly projecting fingers 29 between which and the portion 23 of lever 22 the coin will be received. After the coin has found entrance into the hopper between the engaging fingers 29 and the lever end 23 pressure upon the push bar 13 will, through means of the levers 22 and 26 which are united by the coin, force the ejector forward and carry a package above the discharge chute 16, after which the coin will drop from between the engaging faces. To assure the coin getting out of its operative

relation with these levers a spring finger 30 is secured to the lower side of the plate 11 and presses against the underside of the lever end 27, and as soon as this lever comes to a predetermined position the spring finger will pass between the upper surface of the coin and the lower surface of said lever end (it being remembered that the coin is engaged by the lugs or fingers 29 which depend from the lever end 27) and tip the coin into the position illustrated by the dotted lines 31 in Fig. 5. The coin will then drop away from the parts and thus be effective for but one operation of the ejecting mechanism. After a package has been ejected and the coin unseated from the engaging faces, the spring 24 will return the push bar 13 and lever 22 to their initial positions. Without some means for returning this, the lever 26, with the connected ejector, would remain at the position to which it had been moved by the package ejecting movement; means for engagement between the levers 22 and 26, however, is provided. The end of lever 22 is shown turned up in the form of a leg 32 for engaging the end of lever 26 and causing its return with the lever 22. A slight amount of lost motion will be permitted between the levers so that after return to initial position, they will be sufficiently far apart to permit the entry of the coin between their coin engaging faces.

By reference to the drawings, more particularly Fig. 3, it will be seen that the pivot 25 of the levers is nearer to the pin 21, which affords connection between such lever and the actuator, than it is to the point of connection of the lever with the actuator, the push bar in the present illustration.

Having described my invention I claim:

1. In a coin controlled apparatus, the combination with a push rod and a package ejector, of a pair of levers having faces coöperative for holding a coin between them, one of these levers being connected to the ejector and one to the push rod, and a spring finger normally in engagement with one of said levers and positioned for passing between it and a coin held thereby at a predetermined point of its movement for ejecting the coin.

2. In a coin controlled apparatus, the combination with a push rod and an ejector, of a horizontally disposed plate, a coin hopper carried by said plate and effective to lay a coin flat on said plate, a pair of levers having faces normally disposed upon the respective sides of the coin position, said levers being respectively connected to the ejector and to the push rod, said lever face being effective to maintain a coin in a horizontal plane, and a spring finger normally engaging the lower side of one of said levers and so timed that at the point of completion of the movement of the ejector said finger will pass above the coin and disengage it from the lever face.

3. In a coin controlled apparatus, the combination with an actuator mounted for reciprocation in a straight line path, of a package ejector mounted for reciprocation in a straight line path, a pair of pivotally mounted levers having coöperative coin engaging faces, linkage connecting one of these levers to the ejector, means connecting the other lever to the actuator, means for returning the actuator and the connecting lever to initial position, means for causing the lever connected to the actuator to engage in its return movement the lever connected to the ejector for returning the ejector and connected lever to initial position.

4. In a coin controlled apparatus, the combination with a reciprocatory actuator, of a plate, ways on the plate, a slide mounted for reciprocation on said ways and embodying an ejector, means effective to lay a coin on said plate, a pair of levers provided with coin engaging faces and pivoted to the plate for swinging in a plane parallel to the plane of the plate and being respectively connected to the ejector and to the actuator, and means for returning the levers to idle position with said coin engaging faces disposed upon the respective sides of the said coin position.

5. The combination with a package ejector, of a push bar, a lever pivoted medially of its ends and having at one end a coin engaging face and at its other end a connection with the push bar, and a lever having a cooperative coin engaging face and a connection with the ejector at the same end.

6. The combination with a plate, of a hopper constructed and adapted to lay a coin flat on said plate, an ejector, a pair of levers concentrically pivoted to the plate and provided with coöperative coin engaging faces normally located at opposite sides of the coin position on the plate, one of said levers being connected adjacent its coin engaging face to the ejector and the other extending beyond said pivot at the end opposite the engaging face, and an actuator engaging the said extending end.

7. The combination with a plate, of a hopper constructed and adapted to lay a coin flat on said plate, an ejector, a pair of levers concentrically pivoted to the plate and provided with coöperative coin engaging faces normally located at opposite sides of the coin position on the plate, one of said levers being connected adjacent its coin engaging face to the ejector, and an actuator connected to the other lever.

8. The combination with a plate, of a hopper carried by said plate with a space between it and the plate and having a coin opening constructed and adapted to lay a coin flat on said plate, an ejector, a pair of levers concentrically pivoted to the plate for swinging between said hopper and plate and provided with coöperative coin engaging

faces normally located at opposite sides of the coin position on the plate, one of said levers being connected adjacent its coin engaging face to the ejector, an actuator connected to the other lever, means for returning the actuator and connected lever to normal position, and means of connection between the levers for returning the ejector lever with the actuator lever.

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Witnesses:
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