

977,674.

FIG. 1.

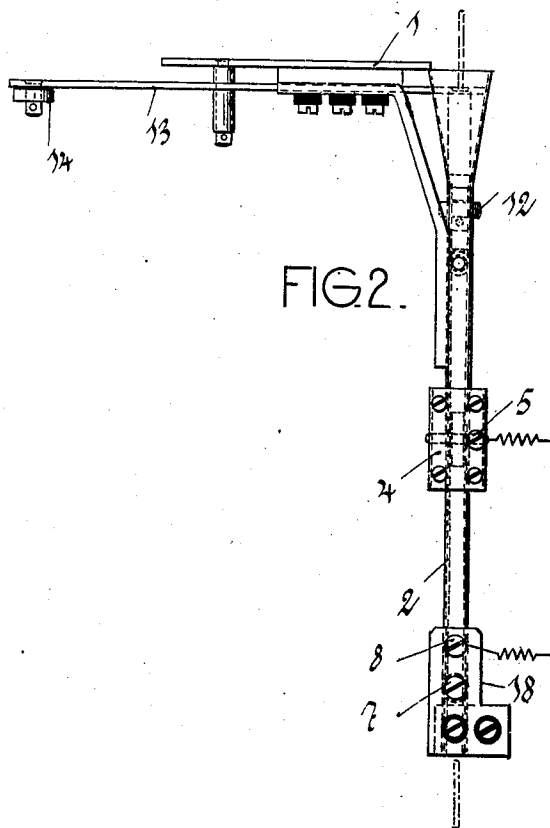
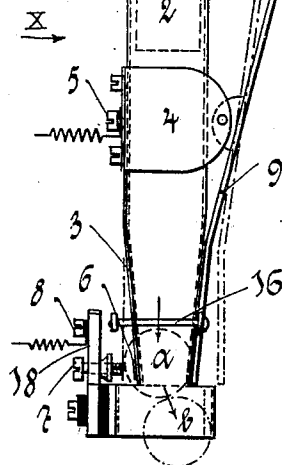


FIG. 2.

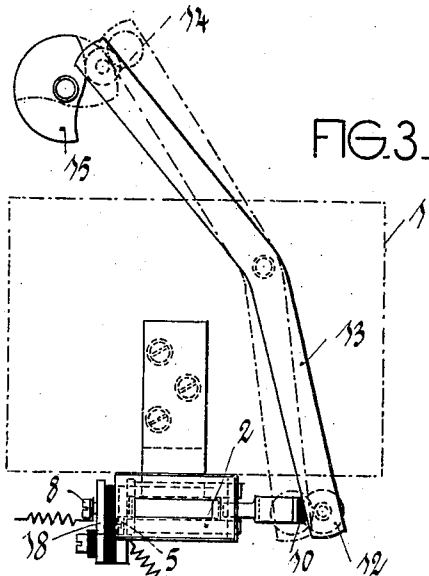


FIG. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

OSCAR OEHRING, OF BERLIN, GERMANY, ASSIGNOR TO AMERICAN STAMP & TICKET VENDING MACHINE CO., OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

RELEASING DEVICE FOR AUTOMATIC VENDING-MACHINES.

977,674.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed March 3, 1910. Serial No. 547,067.

To all whom it may concern:

Be it known that I, OSCAR OEHRING, a subject of the Emperor of Germany, and resident of 100 Urbanstrasse, Berlin, Germany, have invented new and useful Improvements in Releasing Devices for Automatic Vending-Machines, of which the following is a specification.

This invention relates to automatic vending machines operated by an electric motor, the current for vitalizing the same being interrupted by mechanism operated by the coin deposited in the machine.

The object of this invention is to provide a simple, and positively controlled mechanism operated by a coin for closing an electric circuit through a motor for a predetermined time, after which means controlled by said motor is caused to release the coin from the position whereby said circuit is held closed, breaking the electric contact and permitting the coin to fall into the receptacle provided for it.

In the accompanying drawings forming a part of this specification, Figure 1 is a side elevation of the coin chute and operative mechanism connected thereto; Fig. 2, an elevation of the same, looking in the direction of the arrow *a* Fig. 1; Fig. 3, a top plan view of the same.

In electrically operated vending machines of a certain type the circuit through the motor is closed by the metal coin itself passing between contact points, but in machines of this type, because of the different kinds of metal of which the coins are made, and the fact that they are more or less oxidized and covered with dirt, satisfactory conductivity between the parts is difficult to obtain and hence the operation of such machines is uncertain; also in said class of machines the period of time within which the circuit is closed, is but momentary because of the more or less rapid movement of the coin between the contacting points. It is therefore desirable to provide means for closing the circuit operated by the coin and held closed for a certain period of time before the circuit is broken. For this purpose the present invention has been devised, which in general comprises a chute into which a coin is deposited and in passing therethrough it operates means for closing the circuit through the motor, and retain-

ing said coin in position to keep said closing means in contact for a predetermined time, after which, mechanism operative by the motor releases the coin and permits the circuit closing mechanism to break the contact thus bringing the motor to a stop. It will be seen therefore, that the coin itself is not used to close the circuit positively or through its own conductivity but operates certain devices for this purpose.

In the drawings, the numeral 1 indicates a plate, to the under-side of which a chute 2 is fastened by means of a bracket or other suitable support. This chute throughout the greater part of its length is interiorly slightly larger than the coin to be deposited therein and narrows or tapers at its lower end or outlet, which is of less width than the diameter of said coin. The chute is preferably insulated from the rest of the mechanism and contains a coin tester arranged therein in any well known manner.

A spring 3 is attached to a support 4 mounted on the chute 2 and extends downwardly on one of its narrow tapered sides to the outlet, said tapered side being open. The opposite tapered side is also open but normally closed by a lever 9 pivoted to swing on the support 4 and carrying at its upper end a block 10 having an insulating surface. Between the chute 2 and the upper end of the lever 9 is a spring 11 tending to force said upper end outwardly for the purpose of closing the open tapered side of the chute 2.

Fixed to the bottom of the chute 2 is an insulated plate 18 through which passes a screw 7 which forms one of the contact points, the other being formed by a platinum strip 6 attached to the lower end of the spring 3, said spring normally closing the open tapered side of the chute opposite the lever 9, thereby holding the platinum strip 6 out of contact with the screw 7. One of the lead wires is fastened to the plate 18 by a screw 8. The other wire is attached to the support 4 for the spring 3 by a screw 5.

Pivoted to a stud on the underside of the plate 1 is a horizontal lever 13, one end of which is provided with a roller 12 arranged to bear against the insulated surface of the block 10, while at the opposite end of said lever is a roller 14, bearing against the sur-

face of the peripheral cam 15, the shaft of which is rotated at any desired speed by an electric motor, not shown.

In order that the contact spring 3 may be prevented from accidentally coming into contact with the contact screw 7 through the inserted coin becoming jammed or stuck when the releasing movement of the lever 9 takes place, the latter is connected with the spring 3 by means of an intermediate rod 16, arranged to engage the spring 3 and positively actuate it and thereby break the contact whenever a releasing movement of the lever 9 occurs.

In the operation of the machine, a coin dropped into the chute passes through the coin tester and as it approaches the tapered lower end of the chute comes in contact with the lever 9 and the spring 3, the latter yielding to the weight of the coin and its momentum is forced outwardly until the platinum strip 6 contacts with the screw 7. At this time, the coin is in a position indicated by *a* and as the space between the lever 9 and the spring 3 is less than the diameter of the coin, the latter is retained in such position and holds the two contact points closed, the circuit therefore passing to the motor which operates the mechanism for delivery of the article vending and at the same time rotates the shaft carrying the eccentric 15, the latter, as it rotates rocks the horizontal lever 13, and causes the roller 12 on its upper end to move the lever 9 to the position indicated by dotted lines, thereby swinging its lower end away from the chute and compressing the spring 11. As the lever 9 leaves the chute, the coin heretofore detained by said lever in the position indicated by *a* is released and drops into the coin receptacle. The release of the coin also releases the spring 3, which, returning to its initial position, gives the coin a slight lateral movement so that it drops in the direction indicated by the arrow and the dotted line circle *b*. The circuit being now broken between the screw 7 and platinum strip 6 the motor comes to a stop and spring 11 returns the lever 9, and roller 12 and horizontal lever 13 to initial position, the machine being then ready to receive a second coin.

By changing the position of the eccentric 15 on its shaft the time for opening the cir-

cuit may be regulated with absolute precision, thereby regulating the duration of time within which the circuit is to remain closed. All possibility of the coin forming a contact is by this means positively prevented, and none of the impurities which may adhere to the coin can be transferred to the contact.

What I claim is:—

1. In a vending machine operated by an electric motor, a chute tapered at its lower end on opposite sides and open, a resilient member adapted to cover one of said open sides and close the electric circuit through the motor and hold it closed by the pressure of a coin in said chute, a cam operated by the motor, a lever normally closing the opposite tapered side of the coin chute, and a second lever between the cam and the first named lever for releasing said coin and breaking said circuit.

2. In a vending machine operated by an electric motor, a coin chute open on opposite sides at its lower end, movable members adapted to cover said open sides one of said members closing the circuit through the motor and holding it closed by the pressure of a coin in said chute, means operated by the motor for moving the other member to release said coin, and means connecting said members for positively breaking said circuit when the coin is released.

3. In a vending machine operated by an electric motor, a coin chute open at its lower end on its opposite side, movable members adapted to cover said open sides, one of said members being resilient and normally holding the circuit through the motor open but adapted to close said circuit and hold it closed by the pressure of the coin in said chute, means operated by the motor for moving the other member to release said coin and break said circuit, and a connection between the two movable members for positively breaking the circuit through the motor when the coin is released.

The foregoing specification signed at Berlin, Germany, this fifth day of February, 1910.

OSCAR OEHRING.

In presence of—

HENRY HASPER,
WOLDEMAR HAUPT.