No. 730,707. PATENTED JUNE 9, 1903.

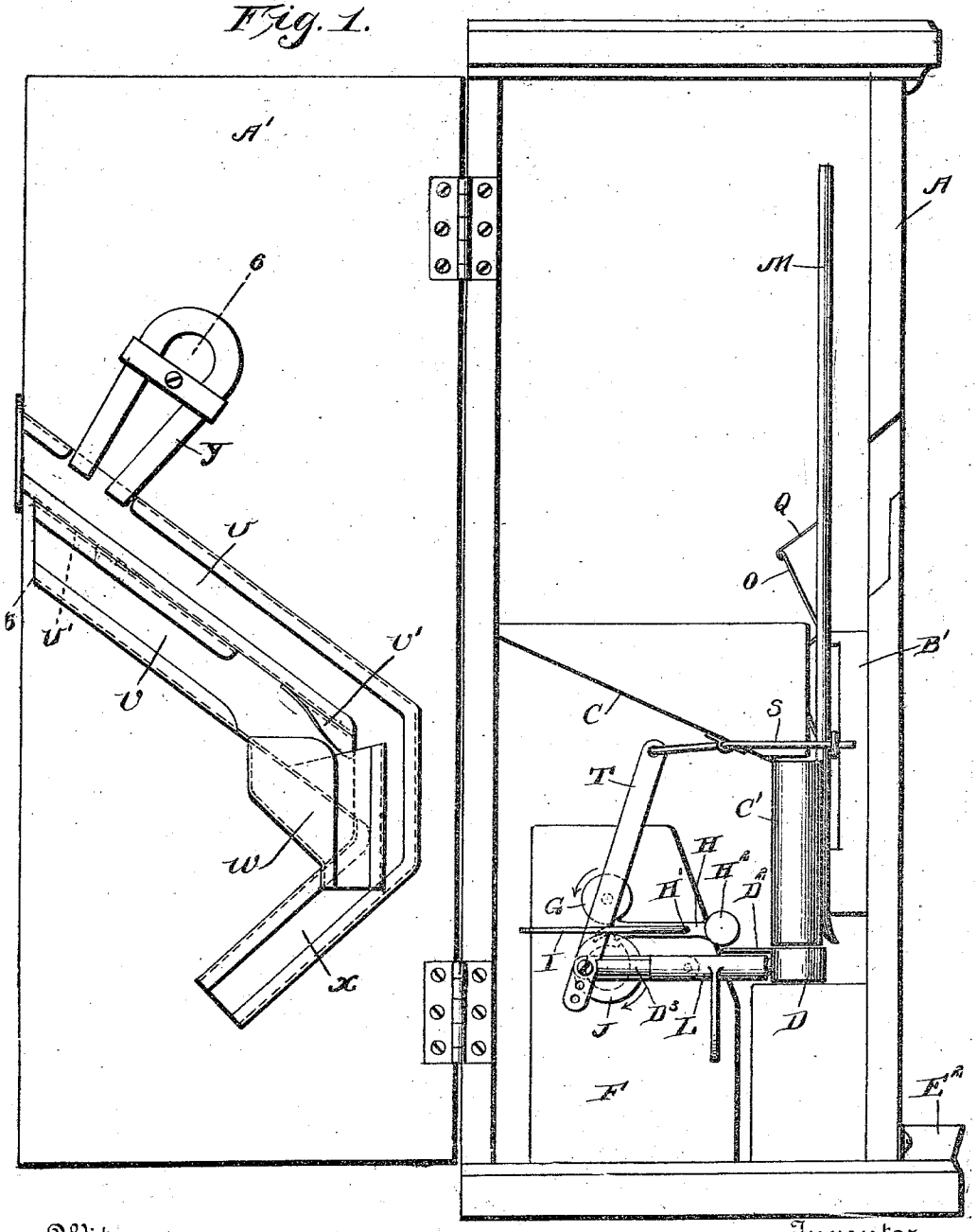
L. W. RUBRECHT.

VENDING MACHINE.

APPLICATION FILED AUG. 7, 1902.

NO MODEL. 3 SHEETS—SHEET 1.

Fig. 1.



Witnesses

Louis D. Heinrichs

L. H. Morrison

Inventor

Luther W. Rubrecht

By his Attorney

W. Parker Williamson

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NO MODEL. 3 SHEETS—SHEET 2.

Fig. 2.

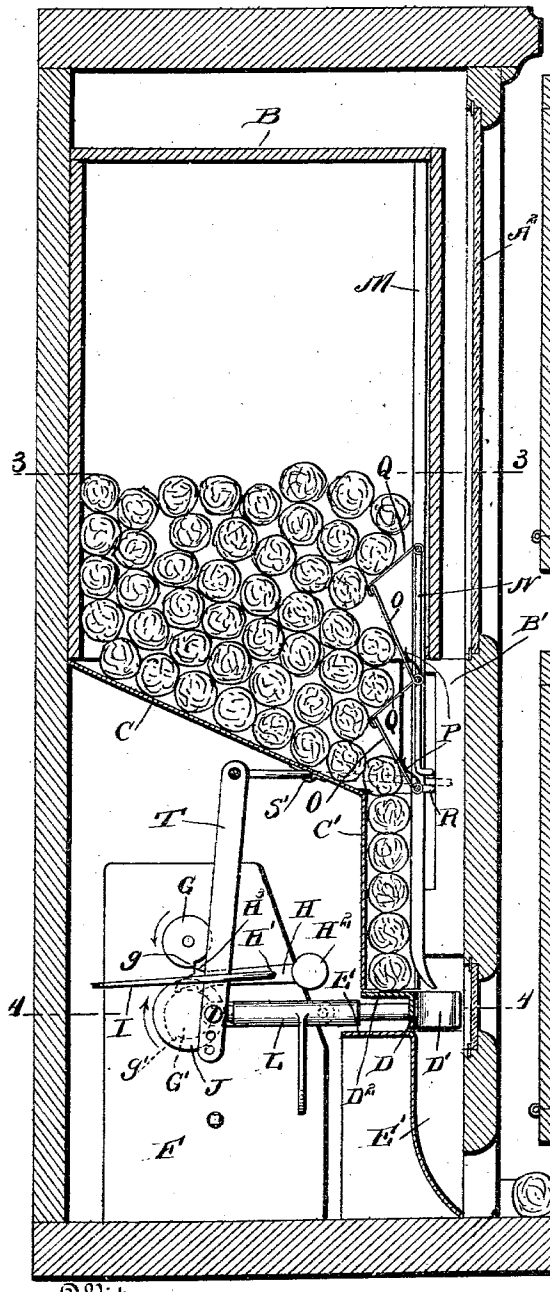


Fig. 3.

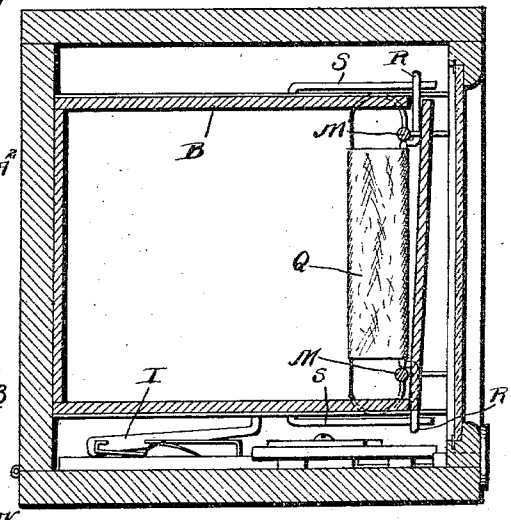
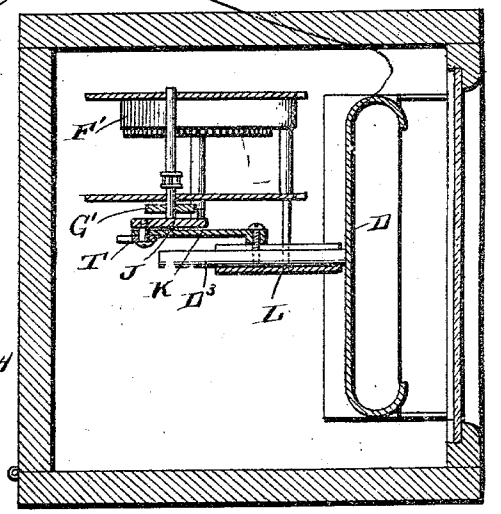


Fig. 4.



Witnesses

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No. 730,707. PATENTED JUNE 9, 1903.

L. W. RUBRECHT.

VENDING MACHINE.

APPLICATION FILED AUG. 7, 1902.

NO MODEL. 3 SHEETS—SHEET 3.

Fig. 6.

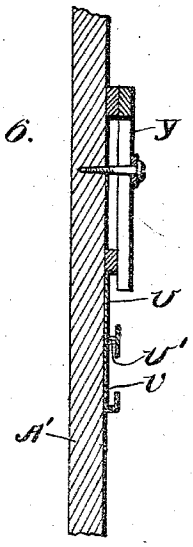
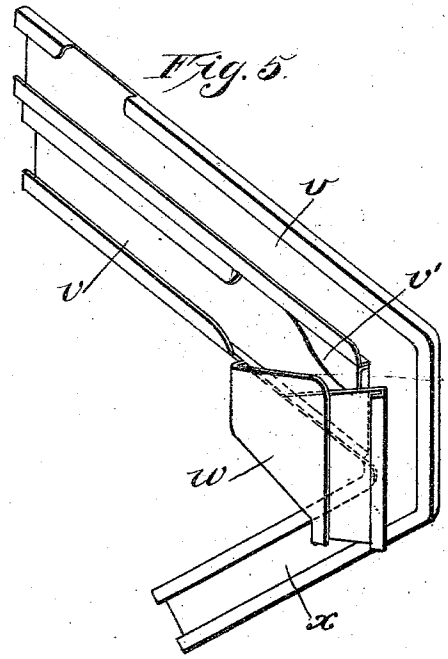


Fig. 5.



Witnesses
Louis D. Heinrichs
L. H. Monson

Inventor
Luther W. Rubrecht
By his Attorney
W. Prescott Williamson

No. 730,707. Patented June 9, 1903.

UNITED STATES PATENT OFFICE.

LUTHER W. RUBRECHT, OF RIVERTON, NEW JERSEY.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 730,707, dated June 9, 1903.

Application filed August 7, 1902. Serial No. 118,702. (No model.)

To all whom it may concern:

Be it known that I, LUTHER W. RUBRECHT, a citizen of the United States, residing at Riverton, county of Burlington, and State of New Jersey, have invented a certain new and useful Improvement in Vending-Machines, of which the following is a specification.

My invention relates to a new and useful improvement in cigar-vending machines, and relates to that class of machines called "automatic" machines, in which a motor is utilized to operate the mechanism, the weight of the coin tripping the release mechanism of the motor and allowing the same to act so as to deliver one cigar.

The object of my invention is to provide an apparatus in which the cigars may be vended from the original package and to provide mechanism which will act upon the cigars so as to keep them loosened and allow them to feed properly to the delivery-slide.

A further object of my invention is to provide a coin mechanism so constructed that iron or steel slugs the same size as the proper coin cannot be utilized to operate the machine and coins smaller than the proper coin will be discharged in the machine without operating the same.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of a vending-machine, showing the door open; Fig. 2, a vertical section through the vending-machine, showing the mechanism in the position of delivering a cigar to the receiver; Fig. 3, a section on the line 3 3 of Fig. 2; Fig. 4, a section on the line 4 4 of Fig. 2; Fig. 5, a perspective view of the coin-chute; Fig. 6, a section on the line 6 6 of Fig. 1.

A represents the casing of the machine, which may be of any suitable shape or design, but is preferably rectilinear. One side of the casing is hinged, so as to form a door A′, and to this door is secured the coin-chute.

B represents the cigar-box, which is inserted in the upper end of the machine. The front of the casing A is provided with an opening which is closed by a pane of glass A^2, through which the outside of the cover of the box may be inspected, or if the cover is removed the cigars themselves will be in view, and, if desired, openings can be made through the casing on all sides, so that all sides of the box may be inspected. The cigar-box B rests upon the frame B′ at the forward end of the casing and at the rear rests upon the rear of the inclined platform C, located beneath the box. The lower end of the cigar-box B is removed, thus allowing the cigars to fall upon the inclined platform C, from which they may roll into the vertical passage C′. At the lower end of the vertical passage C′ is arranged the delivery-slide D, which slide consists of the pockets D′ and a horizontal plate D^2. This delivery-slide rests and slides upon a short platform E, which when the slide is in its normal position forms a bottom for the pocket D′, and when the slide is in its normal position the pocket D′ is directly underneath the passage C′, and therefore receives the lowest cigar. When the delivery-slide is pressed forward, this lower cigar will be carried with the slide forward of the platform E and allowed to drop through the passage E′ out of the machine into the receiver E^2. When this delivery-slide D is thus forced forward for the delivery of the cigar, the plate D^2 will then be underneath the lower end of the chute C′ and close this lower end, so that the cigars cannot descend until the delivery-slide has returned to its normal position. For the purpose of operating this delivery-slide I provide upon the interior of the machine a spring-motor F, which consists of a suitable coil-spring F′ and gear-wheels for the proper operating of the movable parts. Upon the outside of the spring-motor F are journaled the two release-wheels G and G′. Each of these wheels G and G′ is provided with one tooth g and g', respectively, and these wheels revolve in opposite directions to one another.

H is a lever pivoted at H′ to the motor-casing, and this lever is counterbalanced by a

weight H^2 upon one end. Extending from the pivotal point H′ of this lever laterally across the machine is a lever I, which upon the opposite side of the machine is bent at right angles upon itself and extends underneath the exit of the coin-chute. The end of the lever H opposite the weight H^2 is provided with a projection H^3, adapted to contact the tooth *g* of the wheel G when the lever H is in its normal position. When the coin drops upon the outer end of the lever I, the weight of the coin will rock the lever H and bring the projection H^3 out of engagement with the tooth *g* and allow the motor to operate; but the motor can only operate long enough to turn the wheel G′ one revolution, because the tooth *g*′ upon the wheel G′ will come in contact with the outer end of the lever H and raise such lever, so that the projection H^3 will again engage the tooth *g* and stop the motor. Secured upon the same shaft as the wheel G′ is a crank-wheel J, to the wrist-pin of which is connected a pitman K. The other end of this pitman is pivoted to the rod D^3, which extends rearward from the delivery-slide. This rod D^3 slides in the guideway L, which is supported in any suitable manner by the framework. Thus each time the wheel J makes a complete revolution the delivery-slide is forced forward and backward, thus delivering the cigar and returning to its normal position.

Cigars when packed in the box are subjected to pressure, which causes them to be wedged in between one another and adhere to one another in a more or less degree. It is therefore necessary to agitate the cigars in the box, so as to allow them to separate one from the other and to be fed downward into the chute C′. For this purpose I have provided the two standards M, which extend upward from the stationary framework and lie upon the inside of the box just in front of the cover. If the cover is removed, these standards then extend in front of the cigars and hold them in place. Arranged between these standards M is a framework N, which is adapted to slide vertically upon the standards, and to this framework N is pivoted the flaps O, which incline inward toward the cigars and are held in their normal position by means of the light springs P. These flaps O are joined at the top with the framework N by flexible pieces Q. The framework N has secured to it the extensions R, which extend outward from each side of the same and are in engagement with the forward ends of the lever S, which lever is pivoted to the under side of the platform C at the point S′, and the inner end of this lever is pivotally connected to the upper end of a link T, the lower end of this link being pivoted to the wrist-pin upon the crank-wheel J. Thus each time the crank-wheel J makes one revolution the lever S will be rocked, so as to cause the framework N to travel upward and then downward, which will agitate the cigars and keep them in the proper condition for insuring an accurate feed. The framework N in traveling up will simply lift the cigars and cannot injure them in this upward movement. In traveling downward the flaps O may be pressed inward toward the standards M by the friction against the cigars, and thus the cigars will not be injured in the downward movement. For the purpose of regulating the movement of the framework N, I provide several holes in the lower end of the link T, so that said link may be adjusted upon the crank-pin as desired.

The coin-chute is attached to the cover A′ and consists of the two separate incline-chutes U and V. The proper-sized coin is inserted in the chute U and falls through the opening U′ into the chute V and in traveling down the chute V will strike the bent-out portion V′ and be deflected into the supplementary chute W and fall from said supplementary chute upon the lever I, which will trip the release mechanism of the motor, as before described, and allow one cigar to be delivered. If a smaller coin than the proper size is inserted, it will travel in the same way down the chute V, but will not be of sufficient diameter to engage the bent-out portion V′ and will travel underneath the same into the chute X and be deposited in the bottom of the casing without operating the machine.

For the purpose of guarding against the insertion of iron or steel disks of the same size as the proper coin I have provided the magnet Y, which projects into the chute U, and if such iron or steel disk is inserted in the chute it will adhere to the magnet Y, and thus cannot drop through the opening U′, and will remain in contact with the magnet until a coin is inserted into the chute, which coin will push the iron or steel disk from out of contact with the magnet, and this iron or steel disk will then be below the opening U′ and will travel down the chute U and into the chute X and be deposited upon the bottom of the casing without operating the mechanism.

Of course I do not wish to be limited to the exact construction here shown, as slight modifications could be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

1. In a vending-machine the combination of a merchandise-holder, open at its lower end, a chute below the merchandise-holder, a delivery-slide, a sliding frame, flaps pivoted to the sliding frame and flexible pieces extending from the sliding frame to the ends of the flaps and means for moving the frame.

2. In a vending-machine, the combination of a merchandise-holder, open at its lower end, a chute below the merchandise-holder, a delivery-slide, a sliding frame, flaps pivoted to the sliding frame, springs pressing the

flaps inwardly and flexible pieces extending from the sliding frame to the ends of the flaps and means for moving the frame.

3. In a vending-machine, a merchandise-holder, a chute communicating with the merchandise-holder, a delivery-slide, a sliding frame, flaps pivoted to the sliding frame, means for connecting the ends of the flaps to the frame, means for reciprocating the delivery-slide and sliding frame simultaneously as and for the purpose described.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

LUTHER W. RUBRECHT.

Witnesses:

H. B. HALLOCK,

L. W. MORRISON.