

989,363.

Patented Apr. 11, 1911.

2 SHEETS-SHEET 1.

Fig. 1.

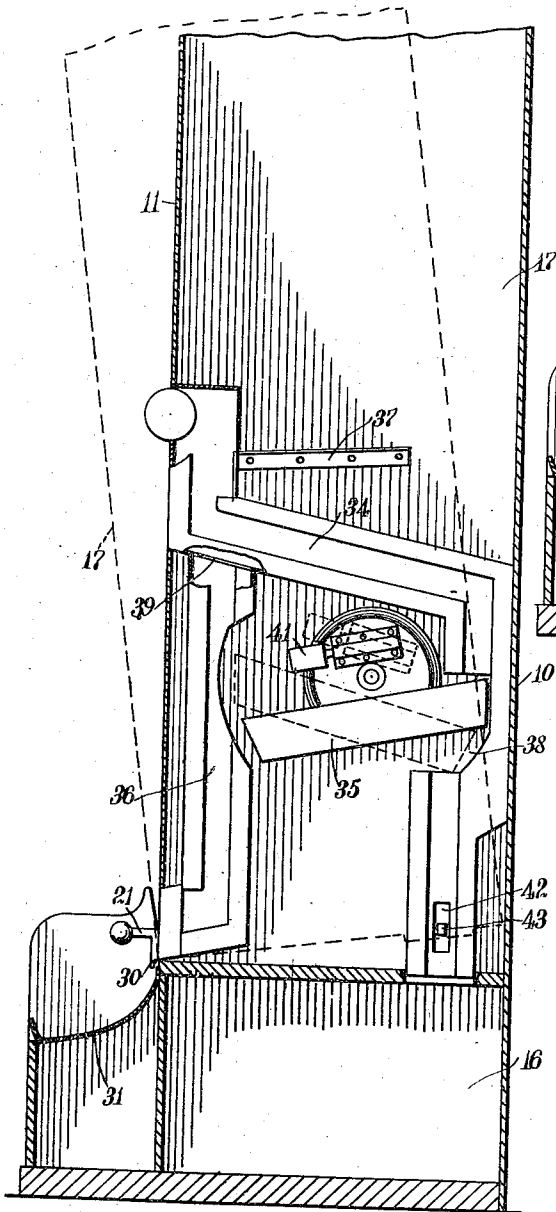


Fig. 2.

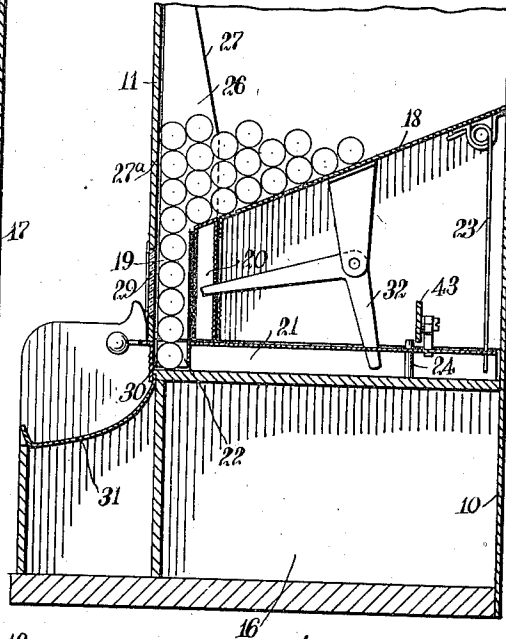


Fig. 3.

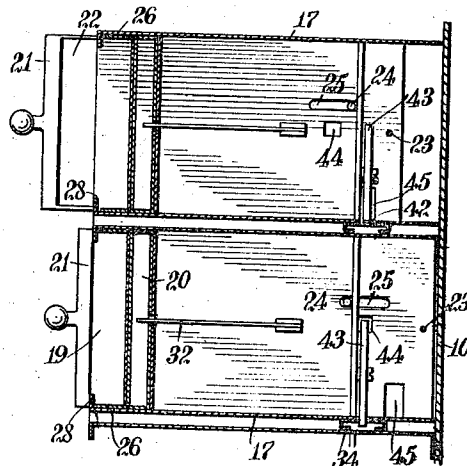
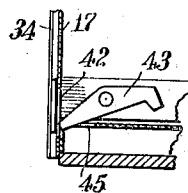
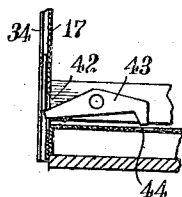


Fig. 4.

Fig. 5.



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 VENDING MACHINE.
 APPLICATION FILED APR. 28, 1910.

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2 SHEETS—SHEET 2.

Fig. 8.

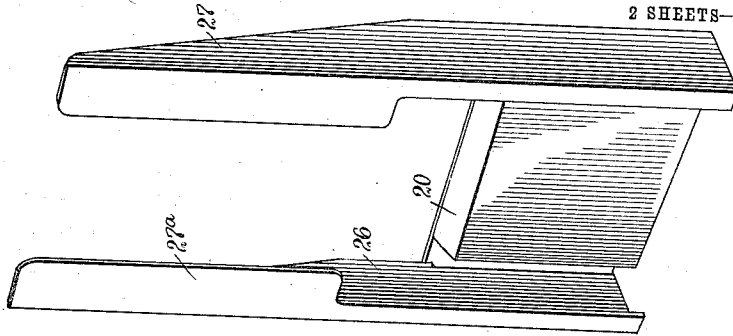


Fig. 7.

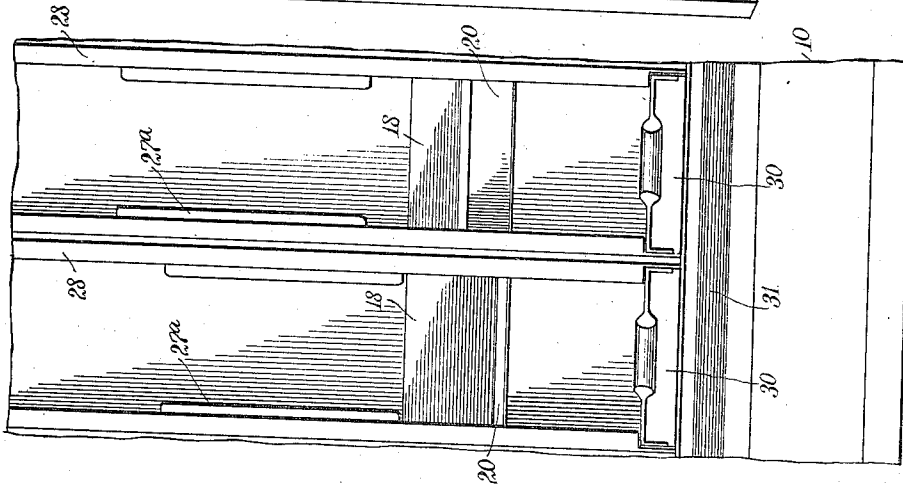
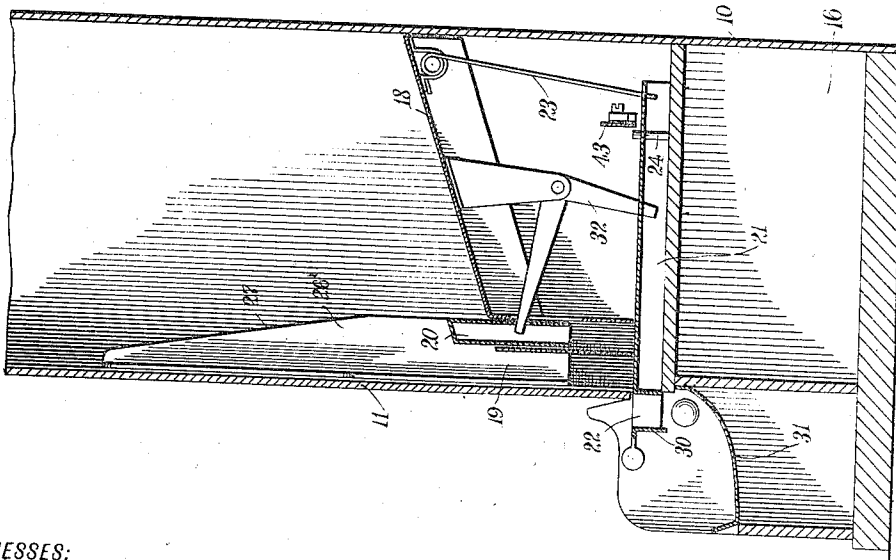


Fig. 6.



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LEONARD HORINKO, OF NEW YORK, N. Y.

VENDING-MACHINE.

989,363.

Specification of Letters Patent. Patented Apr. 11, 1911.

Application filed April 28, 1910. Serial No. 558,280.

To all whom it may concern:

Be it known that I, LEONARD HORINKO, a subject of the Czar of Russia, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Vending-Machine, of which the following is a full, clear, and exact description.

The invention is an improvement in vending machines, particularly such machines as are constructed for dispensing articles of cylindrical form, such, for example, as chewing gum, candy, cigarettes and cigars; and has for its purpose to insure the proper and certain feeding of the articles into and from the feed chute to the discharging carrier.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a vertical section of the machine, showing the coin chute and controlling mechanism; Fig. 2 is a similar section of the machine, showing the coin carrier and agitator; Fig. 3 is a fragmentary horizontal section of the machine with the front removed; Fig. 4 is a fragmentary vertical section, showing the initial position taken by the locking lever of the carrier when struck by a coin; Fig. 5 is a similar section, showing the second position of the lever after the carrier has been partially withdrawn; Fig. 6 is a sectional view similar to Fig. 4, showing the carrier pulled out and the agitator lifted; Fig. 7 is a partial front elevation of the machine with the front removed; and Fig. 8 is a perspective view of the agitator.

The lower portion of the case of the vending machine, as is the usual practice, is devoted to a coin receptacle or money drawer 16, above which is supported one or more upright boxes or cases 17, each having a downwardly and forwardly inclined hopper 18, a feed chute 19, an agitator 20 and a discharging carrier 21, the latter being slidable through the front of the case and arranged approximately horizontally adjacent to the top of the coin receptacle, and having a vertical opening or tubular portion 22 arranged to register with the feed chute 19 when the carrier is in its innermost position, the carrier being normally forced to this position by a spring 23, and guided in its sliding movement not only by the side walls of the

case 17, but by a vertical pin 24 passing through a guide slot 25 formed therein.

The agitator 20 is vertically slidable in a pocket or well formed adjacent to the inner wall of the feed chute 19, and, as shown in Fig. 2, forms the terminus of the hopper 18, the top of the agitator, when the latter is in its depressed position, being continuous with the bottom of the hopper. Attached to the opposite sides of the agitator and extended to form the sides of the feed chute, are feed plates 26, the latter being extended above the feed chute and agitator a substantial distance within the hopper and having downwardly and rearwardly inclined inner edges, as indicated at 27, and inwardly turned, vertical feed flanges 27^a at the front.

The sides of the inner cases 17 have inwardly-turned flanges 28 at the front to prevent the articles which are to be dispensed from rolling out of the hopper and feed chute when the front of the case is removed, this front, when in place, forming the front wall of the several cases 17, and, as shown in Fig. 2, having a number of peep-holes 29 at the bottom of the feed chutes, through which it may be seen when the articles of any of the feed chutes are exhausted.

Each carrier 21 has a projecting lip or other suitable member 30, serving as a stop when it is moved to its innermost position by its respective spring 23, and discharges, when drawn outwardly, into a trough 31 arranged thereunder and between the side walls of the extended front of the case. The agitator 20 is operatively connected to the carrier by a bell-crank lever 32, one end of this lever extending into an opening of the carrier and the opposite end extending into the agitator, by which arrangement, when the carrier is drawn out to discharge the article which is passed into the opening or tube 22, the agitator, together with the feed plate 26, will be vertically arranged and break the articles apart adjacent to the feed chute so that there will be no hitch or clogging as these articles pass from the hopper into the chute. The flanges 27^a are disposed with relation to the top of the agitator 20 to form between the lower end of said flanges and the top of the agitator, an opening of somewhat contracted dimensions through which the packets being vend- ed are passed into the chute 19. The agitator 20 is raised by means of the bell crank

lever 32 above the upper end of the chute 19. When so raised, the packets directly above the agitator are lifted and the column directly above the chute 19 between the front wall of the agitator and the front wall of the case is caused to roll by the frictional contact with the front wall of the agitator 20. As the agitator 20 is lifted, so also is lifted the flanges 27^a. The packets contained in the case above the chute 19 rest against the flanges 27^a. As the said flanges are lifted by the operation of the bell crank lever 32 the packets contact with the flanges and are caused to roll or rotate, being held from lifting with the flanges by reason of the hold of the other packets contained in the case. It is the rolling action thus imparted to the packets immediately adjacent to and in position to be delivered to the said chute 19 that prevents the clogging or jamming of the packets at the lower or contracted end formed by the inclined bottom and the face of the said case. On releasing the knob or handle of the carrier after the article has been discharged, the carrier is quickly returned to normal position, with the opening 22 in register with the feed chute, where another article drops within it, the articles above the feed chute obviously being prevented from falling down when the carrier is withdrawn, by reason of the inner portion of the carrier passing under and supporting them. In this return movement of the carrier the lower edges of the flanges 27^a cause the downward feeding of the articles within the chute to positively take place.

At one side of each inner case 17 is a coin-sorting and delivering mechanism comprising the coin chute 34, tilting coin chute 35, discharging coin chute 36 and shelf 37, the coin chute 34 as best shown in Fig. 1, leading from the front of the case, where it has a vertical drop, thence to the rear of the case, where it discharges into the coin receptacle and has a gap 38, the vertical drop at the front of the coin chute 34 being open at the rear directly opposite the coin-receiving opening at the front of the case and above the shelf 37, so that should paper or cardboard be inserted within the coin chute, as is often done by mischievous boys, the same instead of clogging the chute will pass over and rest on the shelf without interfering with the operation of the machine. The shelf inclines slightly downwardly and forwardly so that should the coin be forcibly inserted and pass thereon, the coin will again roll back into the coin chute. At the bottom of the front vertical drop of the chute 34, the latter is provided with a discharge slit 39, relatively narrower than the regulation coin or check for operating the machine, and discharging into the chute 36, the latter discharging at the front of the

case, as indicated at 40. The tilting coin chute 35 is pivotally supported to swing in a vertical plane, and is arranged so that one end projects into the gap 38 into the coin chute 34, and the opposite end discharges into the coin chute 36, the tilting coin chute being normally downwardly and forwardly inclined by means of a counterweight 41, the latter being adjustable so that the chute can be made to swing to the downwardly and rearwardly-inclined dotted position shown in Fig. 1, and discharge into the lower portion of the chute 34 under the impact and weight of a coin or check of a valid character.

The lower portion of the chute 34 is provided with a slot 42, through which one end of a locking lever 43 extends, this lever, as best shown in Figs. 4 and 5, having a toe or projection at its opposite end, arranged to normally engage within an opening 44 formed within the carrier 21, and lock the said carrier against movement, the carrier being also provided with a slot or opening 45, arranged to register with the coin-engaging arm of the lever and release the coin after the carrier has been slightly withdrawn, as shown in Fig. 5, the lever in the initial position of the coin resting on the edge of the carrier, as shown in Fig. 4. When the locking lever releases the coin, the lever can not reengage with the opening 44 and lock the carrier until the latter has been returned to its innermost position, and, accordingly, there is no danger of the carrier being relocked after the deposit of the coin before an opportunity is had to withdraw the carrier and receive the article.

In passing a worn coin or check in the coin slot of the machine, the latter drops through the slit 39 and is discharged at the front. If the coin be too thick to pass through the slit 39, but lighter than a coin of the proper character, the same drops from the upper portion of the coin chute 34 onto the tilting chute 35, and as it is not sufficiently heavy to overcome the counterweight 41, it rolls down into the chute 36 and is likewise discharged at the front of the machine. A coin of the proper character rolls by the slit 39, and as it drops from the upper portion of the coin chute 34 it strikes the tilting chute 35, overcoming the counterweight 41 and moving the tilting chute to the dotted position shown in Fig. 1, in which position of the tilting chute the coin is discharged into the lower portion of the chute 34 and drops against the inwardly-projecting end of the locking lever 43.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In a vending machine, embodying a containing case, a reciprocating discharge carrier, an inclined supporting bottom for

said case, and a feed chute disposed above the receptacle of said carrier; an agitator comprising a member slidably mounted in said case having a front wall to support the
5 articles contained in said case, said agitator being further provided with a second wall parallel with the said front wall and disposed at the rear of said chute, the lower edge of said front wall and the upper edge
10 of said rear wall forming a delivery passage for said chute; and means operatively connecting said carrier and said agitator for lifting said agitator.

2. In a vending machine, embodying a
15 containing case, a reciprocating discharge carrier, an inclined supporting bottom for said case, and a feed chute disposed above the receptacle of said carrier; an agitator comprising a member slidably mounted in
20 said case adjacent said chute having side walls and inwardly-turned flanges arranged to form a front wall to support the articles

contained in said case and to roll the same as said agitator is lifted, said agitator being further provided with a box-like member, 25 the top whereof serves to elevate the articles contained in said case adjacent said chute, the front wall of said box-like member serving to rotate the articles adjacent said chute and in line therewith, the lower edge of said 30 front wall and the top of said box-like member disposed to form a passage for the entrance of the articles vended into said chute; and means operatively connecting said carrier and said agitator for lifting said agi- 35 tator.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEONARD HORINKO.

Witnesses:

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PHILIP D. ROLLHAUS.