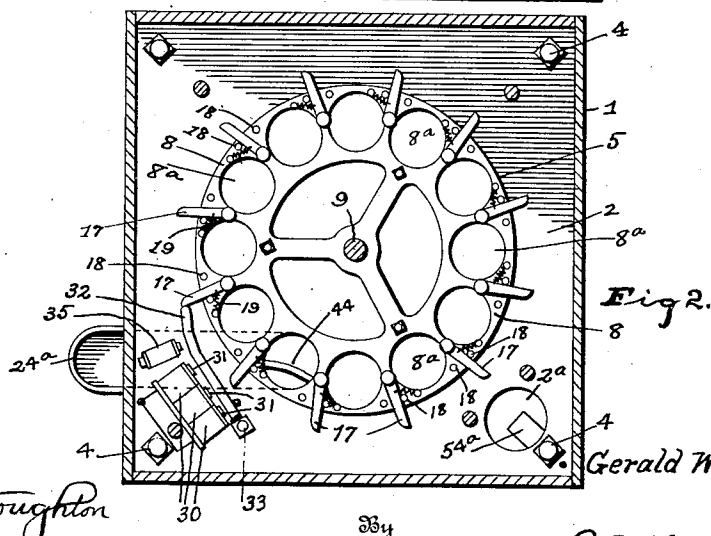
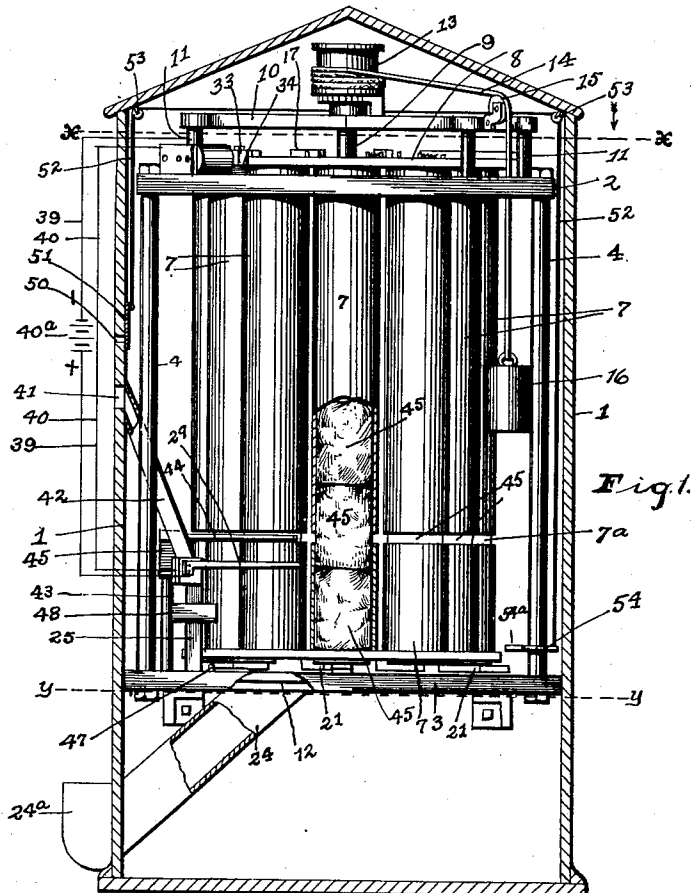


912,455.

2 SHEETS--SHEET 1.



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 COIN CONTROLLED VENDING MACHINE.
 APPLICATION FILED MAR. 23, 1908.

912,455.

Patented Feb. 16, 1909.

2 SHEETS—SHEET 2.

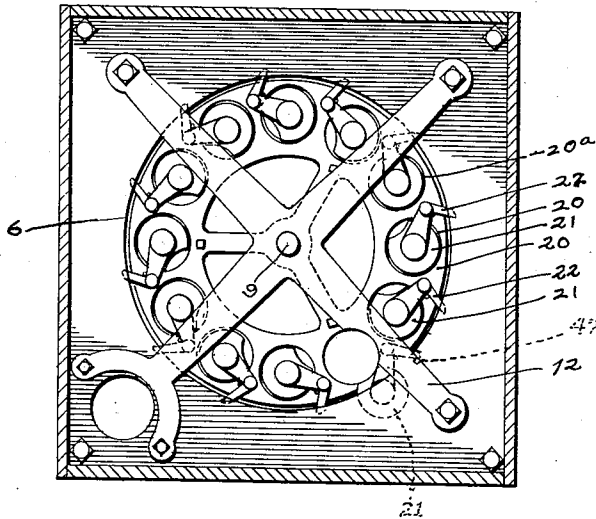


Fig. 3.

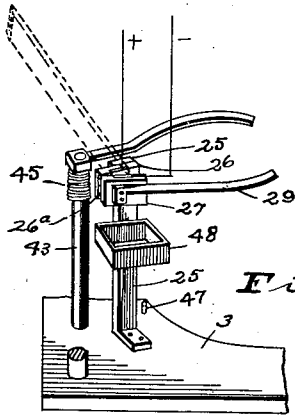


Fig. 4.

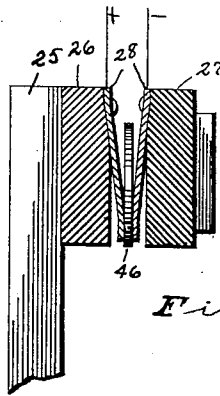


Fig. 5.

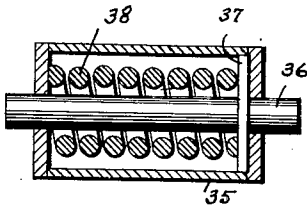


Fig. 6.

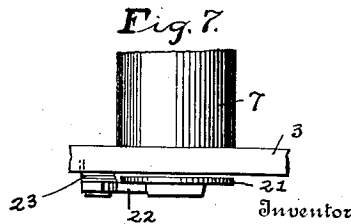


Fig. 7.

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UNITED STATES PATENT OFFICE.

GERALD W. FINNEY, OF JACKSON, OHIO.

COIN-CONTROLLED VENDING-MACHINE.

No. 912,455.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed March 23, 1908. Serial No. 422,670.

To all whom it may concern:

Be it known that I, GERALD W. FINNEY, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Ohio, have invented certain new and useful Improvements in Coin-Controlled Vending-Machines, of which the following is a specification.

My invention relates to the improvement of coin controlled vending machines, and the objects of my invention are to provide a construction of coin controlled vending device embodying improved means for automatically discharging from the machine, packages of peanuts or other goods, on the insertion of a coin into the machine, and to produce certain improvements in details of construction and arrangement of parts which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which:

Figure 1 is a central vertical section of the exterior casing of my device, showing the case containing and discharging means in elevation with portions of parts thereof broken away for the sake of clearness in illustration. Fig. 2 is a sectional view on line $x-x$ of Fig. 1, Fig. 3 is a sectional view on line $y-y$ of Fig. 1, Fig. 4 is a detail view in perspective of the coin receiving and discharging mechanism, Fig. 5 is an enlarged transverse section of the coin receiving elements which are illustrated in Fig. 4, Fig. 6 is an enlarged longitudinal section of a spring actuated pin and its case, which I employ in the manner hereinafter described; and, Fig. 7 is a view in elevation of the lower end portion of one of the package containing and discharging tubes.

Similar numerals refer to similar parts throughout the several views.

1 represents the external casing or housing of my device, which may be of suitable outline. Within this casing, I support a frame-work which comprises upper and lower or top and bottom parallel frame plates 2 and 3, these frame plates being connected by vertically disposed rods 4. Both the upper and lower frame plates have formed therein comparatively large circular openings which are indicated respectively at 5 and 6. Passing through the plate openings 5 and 6 are the upper and lower ends of a plurality of vertically arranged tubes 7, the upper ends of said tubes registering and communicating with openings 8^a of a circular plate 8 with

which said tubes are connected. As shown in the drawing, the openings 8^a are arranged in a circle adjacent to the outer surface or periphery of the plate 8, while the central portion of the plate 8 is rigidly connected with a vertical shaft 9, the upper end of which is pivoted in a spider frame 10 which by means of pins or bolts 11 rising from the frame plate 2, is supported horizontally above the plate 8. The lower end of the shaft 9 is pivoted as indicated more clearly in Fig. 3 of the drawing, in the central portion of a spider frame 12, which is supported in the depressed or recessed under-surface of the plate 3.

Above the spider plate 10, the shaft 9 carries a reel 13, with which is connected and upon which is adapted to be wound, a flexible cord, wire or cable 14, the latter running, as shown, outward from the reel and over a pulley 15 which is pivotally supported from a bracket of the spider frame 10. From this pulley wheel, the cord or wire passes downward through an opening 2^a in one corner of the plate 2 and carries upon its end a weight 16. Pivotally connected with the plate 8 at points between the openings 8^a, are outwardly projecting or radially extending fingers 17, each of these fingers extending between two short vertical pins 18 on the upper side of the plate 8 and being normally held in contact with one of said pins by a coiled spring 19, one end of which is connected to said finger and the other to a projection of the plate 8.

As shown in the drawing, I form each of the tubes 7 in two sections, the said sections being separated by a comparatively slight space such as is indicated at 7^a, said separation occurring, as shown, below the center of the height of the tubes.

The lower end of each of the lower tube sections is connected and communicates with an opening in a bottom ring plate 20, which corresponds in general form with the upper plate 8. These openings which are indicated at 20^a and are more clearly seen in Fig. 3 of the drawing, are arranged in a circle in the outer portion of the plate 20 and are normally substantially closed by valve plates 21, each of which is carried on one arm of a bell crank lever 22, said lever being pivoted at its angle to the plate 20 at one side of the opening 20^a. The outer arm of each of the bell cranks, has its termination beyond the periphery of the plate 20, and said valve

plate is normally held in the closed position shown in Fig. 3 through the medium of a spring 23 which connects the bell crank pin with said plate 20. Leading from a point 5 beneath the plate 20 and supported by the frame 3, is the upper end of an outwardly inclined delivery chute or package conductor 24, the outer end of which passes through the casing 1 and terminates in a cup-like extension 24^a on the outer side of said casing. 10

Rising from the bottom frame plate 3 at one side of the circular group of tubes 7 is a fixed standard 25, to the upper portion of which is secured an insulating block of fiber or other suitable material 26. To this block 15 26 is hinged at 26^a one end of a second insulating block 27 and to the upper portions of the inner faces of these insulating blocks are secured the upper end portion of electric contact strips 28, the lower and free ends of which are inclined toward each other as shown more clearly in Fig. 5 of the drawing. Secured to the outer side of the insulating block 27 is one end of an inwardly extending and slightly curved finger 29 which normally 25 partially embraces or engages the periphery of one of the tubes 7.

Upon the upper frame plate 2 at one side of the opening 5 therein, I provide electric magnet coils 30, of which 31 represent the core projections. 30

32 is an armature bar, one end of which is pivoted to a vertical pin 33 which rises from the frame plate 2 at one side of the magnet bodies 30. This armature bar which extends 35 in front of the core projections 31 of the magnets is extended beyond the line of said magnets and terminates in a bent portion which inclines in the direction of the plate 8 and which normally lies in the path of the outwardly projecting end portions of the spring actuated fingers 17. The armature bar is normally retained in the path of the projecting fingers 17 by means of a spring 34 40 which as indicated in Fig. 1 of the drawing, is coiled about the armature bar pin 33, said spring having one of its ends connected with said pin and the remaining end engaging said bar. At a point on the outer side of the bent 50 extension of the armature bar, I provide a fixed case 35, through which passes loosely a shaft 36 (see Figs. 2 and 6). This shaft carries on the inner side of the case a plate 37 between which and the opposite end of the 55 case is provided a coiled spring 38, the latter thus serving to normally press one end of the shaft 36 to its outward limit in the direction of the armature bar. The opposite poles of the magnets 30 are connected respectively 60 with the contact strips 28 through the medium of wires which may be run within the casing 1 in any suitable manner. For the sake of illustration we have shown these wires in a diagrammatical manner as running 65 on the outer side of the case and the

same being indicated at 39 and 40, one of said wires being connected with the poles of a battery 40^a.

Leading upward and outward to a slot 41 in the casing and from a point immediately 70 above the space between the two insulating blocks 26 and 27 is a coin conductor or chute 42.

From the frame plate 3 near one side thereof rises a vertical rod or standard 43 75 (see Figs. 1 and 4) and upon said standard is pivotally mounted one end of a slightly curved arm 44, the latter being through the medium of a spring 45 pressed toward the tubes 7. This arm 44 is so located as to extend 80 within the space 7^a between two sections of a tube 7, in which position it exerts a pressure against one of the sacks of peanuts or other goods, which sacks are indicated at 45 and which are contained, as shown, within 85 the tubes 7.

Assuming that the tubes are filled or partially filled with packages or sacks of peanuts or other goods to be vended and that the lower sack in each tube is bearing upon the 90 valve plate 21 thereof, the operation of my device, is as follows: A coin such as is indicated at 46 in Fig. 5 of the drawing, having been dropped through the casing slot 41, is delivered through the chute 42 to the space 95 between the insulating blocks 27 and between the lower portions of the contact strips 28. In this position the coin serves to produce a connection between the two strips which closes a circuit through the wires 39 100 and 40, battery 40^a and magnets 30. The magnet cores being thus magnetized, it is obvious that the armature bar 32 will be drawn out of contact with one of the fingers 17 thereby permitting a rotary motion of the 105 cage formed by the tubes 7 and their top and bottom plates 8 and 20, this motion being induced by the tendency of the weight 16 to move downward which through its connection with the reel 13 imparts rotary motion 110 to the shaft 9. This movement of the tube frame or cage results in the outer arm of one of the valve bell cranks 22 coming into contact with a pin 47 which projects from the upper side of the lower frame plate 3, such 115 contact resulting in the valve 22 with which this bell crank is connected, being swung outward a sufficient distance to permit the last sack in the tube thus opened, dropping downward into the chute 24 from which it is 120 delivered to the cup termination 42^a on the outer side of the case. During this operation of discharging the package or sack, the next higher sack in the tube is prevented from downward movement by the pressure 125 thereon of the spring actuated arm 44. The disengagement of the bell crank arm with the projecting pin 47, which follows the discharge of the sack, permits the valve plate 21 to return to its closed position and the out- 130

ward movement which is imparted to the finger 29 of the block 27, which movement is caused by the contact of one of the moving tubes 7, results in swinging the block 27 outward from the block 26 and permitting the coin to drop into a suitable receptacle 48 beneath said block. This dropping of the coin breaks the circuit by separation of the contact strips 28, resulting in the movement of the spring actuated armature bar 32 into position where it contacts with the next succeeding finger 17, thereby stopping the rotation of the tube frame. In order to insure this movement of the armature bar away from the cores and into the path of the fingers 17, I have provided the spring actuated pin 36, which said armature bar is pressed inward by its movement toward the magnet cores.

In order to provide a means of ascertaining whether or not the weight 16 is at its bottom limit and an indication that the tubes have been emptied of their contents, I provide a sight opening 50 in the exterior casing 1 and on the inner side of the casing is normally suspended by said sight opening, a plate 51, the latter being supported by a cord 52 which runs to the upper portion of the casing, thence across the casing over pulleys 53 thence downward to a point above the frame plate 3, at which point said cord is connected with a suitable trip plate 54, the latter being mounted to slide on one of the frame rods 4 and having a projecting portion 54^a with which the weight 16 is adapted to contact when said weight approaches its lowest position.

It is obvious that the contact of the weight with said trip plate projection, will result in a pull upon the cord 52 which in turn will result in an upward pull on the plate 51, thereby uncovering the opening 50. If it is not desired to uncover said opening, it is obvious that the plate 51 being of the desired length, may have its face lettered or painted

and the position of the weight indicated thereon, such indication being readily viewed through the opening 50.

From the construction and operation which I have shown and described, it will be seen that a comparatively simple, though effective mechanism is provided for automatically vending packages of peanuts or other goods and that said device is so constructed as to insure its proper operation on the dropping of a coin through the coin slot.

While I have shown and described no special means for retaining the peanuts or other goods in a heated condition, it is obvious that any well known heating means may be employed in the lower portion of the casing.

What I claim, is:

In a package vending machine, the combination with a rotatably mounted body comprising a frame work and a plurality of vertically arranged package receiving tubes, spring actuated members for closing the bottoms of said tubes, means normally tending to rotate the tube carrying frame, a discharge chute over which said tubes move, a friction member adapted to enter an opening in the sides of the tubes to frictionally engage one of the packages contained therein, while the lowermost package is being discharged, a plurality of spring actuated fingers mounted upon the tube carrying frame and projecting beyond the periphery thereof, stops for limiting the movement of said fingers in both directions, an arm which normally lies within the path of movement of said fingers, and means for withdrawing said arm from the path of movement of said fingers.

In testimony whereof I affix my signature in presence of two witnesses.

GERALD W. FINNEY.

Witnesses:

R. L. GRIMES,
L. SACHS.