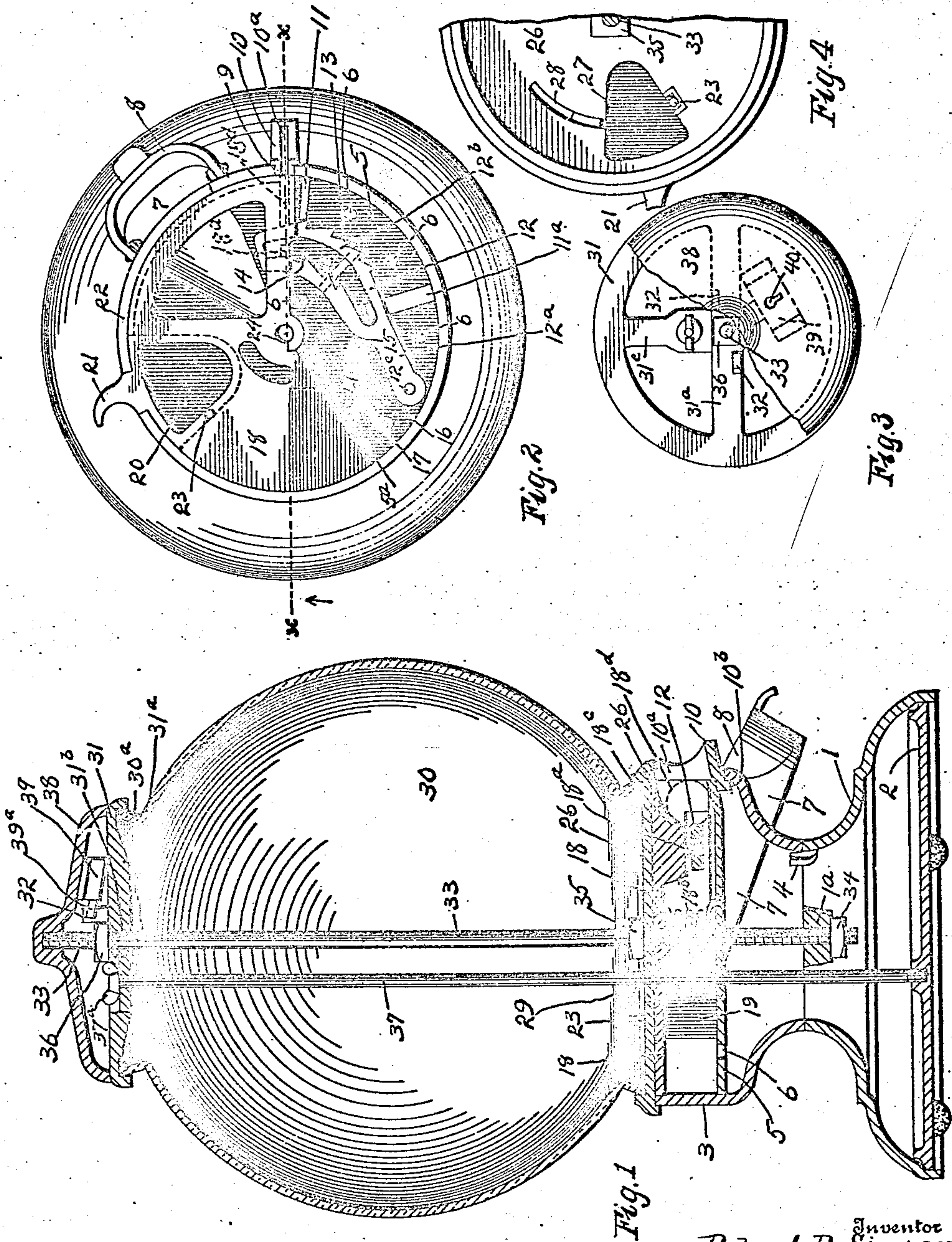


R. D. SIMPSON.
 COIN CONTROLLED VENDING MACHINE.
 APPLICATION FILED NOV. 6, 1907.

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COIN-CONTROLLED VENDING-MACHINE.

No. 898,995.

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To all whom it may concern:

Be it known that I, ROBERT D. SIMPSON, citizen of the United States, residing at Columbus, in the county of Franklin 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 coin controlled vending machines and has particular relation to that class of vending machines which are adapted to dispense salted peanuts and similar confections.

The objects of my invention are to provide a vending machine of improved construction and arrangement of parts; to provide an improved coin controlled mechanism; to provide improved means for connecting and locking together the various parts of 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 drawing, in which—

Figure 1 is a vertical section of my improved vending machine on two planes as indicated by dotted line $x-x$ of Fig. 2, Fig. 2 is a plan view with the receptacle and connecting rods removed, Fig. 3 is a plan view of the cap plate, the same being broken away and disclosing a portion of the receptacle top frame, and, Fig. 4 is a plan view of a portion of the receptacle supporting plate.

Similar numerals refer to similar parts throughout the several views.

In carrying out my invention, I employ a hollow base section 1, the lower and larger end portion of which embraces a bottom plate or disk 2 held in position by the means hereinafter described. Upon the base section 1 rests the downwardly extending neck portion of a casing 3, the base section having formed on its inner side the desired number of upwardly projecting lugs 4, the outer sides of which are engaged by the inner surface of the casing neck.

In its upper portion the casing 3 is formed with a horizontal transverse partition plate 5 which is preferably provided with perforations or openings 6. This perforated plate is formed on one side with an outlet pocket or channel-like chute 7 the bottom of which inclines downwardly and outwardly from the center of the plate and the outer open ter-

mination of which is, as shown, extended through an opening in the casing wall. To the sides of this outward extension are hinged the ends of a yoke 8, the lower side of which bears upon the bottom of the pocket or extension of the chute 7.

The vertical wall of the casing 3 at a point above the wall of the partition 5, is slotted at 9 to receive the reduced inner portion of a slot mouth piece 10, the latter consisting of a suitably shaped metallic body having a vertical recess 10^a extending throughout the greater portion of its height and being held in place at its lower end by having an inward and downward extension 10^b which, as shown in Fig. 1, engages an opening in the casing section 3 below the partition 5. Near one side of the slot mouth piece, I form in the plate 5 a short radially slotted opening 11 which is of slightly less length than the diameter of a penny. I also form in the plate 5 a second slot 11^a somewhat larger than the slot 11 and which is arranged radially at a distance from and in circular alinement with said slotted opening 11.

12 represents a rigid plate which comprises a substantially straight shank portion 12^a from which extends a curved body portion 12^b, the latter having a longitudinally curved opening extending throughout the greater portion of its length. The outwardly bowed side of the body portion of the ratchet plate is formed with a plurality of inclined projecting teeth which are indicated at 13, while the inner surface of the inwardly bowed side of the plate is provided with projecting teeth 14. The shank portion 12^a of the ratchet plate is pivoted at its outer end to a pin 12^c which rises from the plate 5 at a point adjacent to the periphery thereof. On its inner side the ratchet plate is provided with a projecting pin 15 about which is coiled the end of a spring 16, the outer end of the latter abutting against a stop lug 17 which rises from the plate 5, said spring tending to force the ratchet plate outward toward the outer side of the casing.

Rotatably mounted within the casing 3 above the plate 5 is an operating member 18 which, as shown, is in the form of a disk segment and comprises an upper horizontal plate portion from a portion of which extends downwardly a wall 19 which bears loosely on the plate 5. Adjacent to its outer side the member 18 has formed therein a pocket or

vertical chute 20, the walls of which extend to the plate 5. Projecting from the member 18 opposite the upper portion of the pocket 20 is a handle piece 21, the latter when in its normal position abutting against a shoulder formed in the vertical wall of the casing 3, which is produced by cutting away a section of the upper side of said casing as indicated at 22. The plate 18 is provided on one side of the opening or pocket 20, with an upwardly projecting agitating pin 23. Said plate is also formed with a central rod opening 24. Depending from the underside of the member 18 at a point opposite the slot opening 10^a, is a lug 18^a which extends within the elongated opening of the ratchet plate 12, the outer tooth 14 of said ratchet plate being normally in the path of said lug when the plate 18 is rotated as hereinafter described.

18^b represents a vertically disposed coiled spring, the lower end of which is connected with the partition plate 5 and the upper end of which is connected with the member 18 and which spring serves to normally hold the member 18 in the position indicated in Fig. 2 of the drawing, or in such position that the lug 18^a is projecting within the outer end of the slotted ratchet plate 12 and the opening or pocket 20 of the member 18 is beyond or out of registration with the chute 7. That side of the member 18 which is on the outer side of and adjacent to the depending lug 18^a has its downwardly extending portion 18^c provided with a vertical penny-way or slot 18^d which is adapted to register with the inlet slot 10^a of the mouth piece 10.

Upon the top of the casing 3 is mounted a plate 26, said plate 26 having a central opening therein and having an opening 27 which is adapted to register and which is of corresponding shape with the pocket 20. Leading from one side of the opening 27 and in the circular path of the pin 23 is a slotted opening or recess 28. The plate 26 is also provided at one side of and adjacent to its central rod opening with a second rod opening which is indicated at 29 in Fig. 1 and which opening is designed to register with the curved slot 25 of the member 18.

Within the upturned rim of the plate 26 is supported the lower cylindrical end of a suitably shaped reservoir or globe 30 which is preferably formed of glass and which is provided at its upper end with a short upwardly extending neck portion 30^a. Upon this neck portion is designed to bear a ring 31 having a central cross bar 31^a which is provided with a central rod opening 31^b. This cross bar has projecting upwardly therefrom on opposite sides of its width and on opposite sides of said central opening, lugs 32 (see Figs. 1 and 3). From the central portion of the cross bar 31^a leads outward an arm 31^c in which is formed a rod opening.

The parts of the structure heretofore de-

scribed are designed to be connected as follows: A central tie-rod 33 which has its upper end portion threaded, extends downward through the central opening 31 of the ring bar 31^a, thence through the globe 30, through the central openings in the plate 26, 18 and 5 and has its lower threaded portion engaging and passing through the threaded opening in a transverse bar 1^a which is formed in the upper part of the base section 1. Beneath this bar 1^a the rod 33 carries a detachable nut 34 and above the plate 26 and ring bar 31^a, said rod carries nuts 35 and 36, the latter being adapted to be screwed downward until in contact with said ring bar, as shown.

37 represents a locking rod which passes downward through the opening in the ring bar arm 31^c and has a head 37^a which bears upon said bar arm. The rod 37 also passes through the plate opening 29, and an opening 5^a in the plate 5 having its lower threaded end engaging a threaded socket in the bottom plate 2.

38 represents a cap plate which, as shown, is of an inverted dish form and has its central portion provided with a threaded socket which admits of said cap plate being screwed on to the upwardly extending threaded end portion of the central rod 33, until the outer lower edge of said cap plate bears upon the outer portion of the ring 31. At one side of the center the underside of the cap plate 38 carries a suitable lock mechanism 39 to the operative parts of which access is gained by a key hole 40 formed through the cap plate. The bolt 39^a of the lock 39 is adapted as indicated when thrown outward, to lie in the path of the ring lugs 32, thus locking the cap plate from sufficient rotation to permit of its removal.

In utilizing my invention, the receptacle or globe 30 is designed to be filled with salted peanuts, small candies or other suitable confections, which consequently fill the pocket 20 of the member 18. In its normal position the rotation of the member 18 is prevented through consequent contact of the lug 18^a with a tooth 14 of the ratchet plate. However, by the insertion of a penny through the slot mouth piece and into the slot 18^d of the member 18, said penny will assume a position against the untoothed outer side of the outer end portion of the ratchet plate 12. By now grasping the handle 21 and pulling the same toward the opposite end of the recess 22, it will be understood that the penny will be carried by the projection 18^c along the outer side of the ratchet plate 12, the edge of the penny by successively contacting with the inclined outer faces of the teeth 13, serving to force the ratchet plate inward, thereby permitting the lug 18^a to pass the inwardly projecting teeth 14 and permitting of the member 18 being

swung until its pocket 20 is immediately above the chute 7, thereby dropping the contents of the pocket into said chute and delivering said contents into the outward extension of the chute from which the same may be readily removed by temporarily raising the yoke 8.

At the completion of the above described operation, the penny will have been carried to the slot 11^a through which it drops to the bottom plate 2 of the machine. When the pressure of the penny on the ratchet plate is thus discontinued, it is obvious that the spring 16 will operate to return the ratchet plate to its normal position and that the spring 18^b will operate to return the member 18 to its normal position in which position it will be again locked until the insertion of a second penny within the slot mouth piece.

In order to provide against the insertion of "slugs" or other devices in lieu of pennies, I have provided the slotted opening 11 through which is adapted to drop disks which may be slightly smaller than the penny.

Heretofore, considerable difficulty has been experienced in machines of this class, arising from the fact that peanuts or other goods contained in the receptacle or globe, become projected through the outlet opening and do not fill the discharging pocket. In order to obviate this difficulty, I have provided the vertical pin 23 on the member 18, which as said member is rotated will work through the body of peanuts immediately above the pocket breaking any bridge-like accumulation of the peanuts over the pocket and in order that this pin may not interfere with the proper operation of the machine, I have provided the slot 28 in the plate 26 within which said pin may move without interference with said plate.

It will be observed that the base section 1, the casing section 3, the receptacle 30 and the top ring 31, will be held together by the rod 33 and that this rod is so protected by the cap 38 as to prevent access being gained thereto until said cap is removed.

In order to open the base of the machine for the purpose of removing the peanuts or salt accumulations, a key may be inserted in the lock 39 and the bolt 39^a withdrawn from contact with the lugs 32, after which the cap 38 may be readily unscrewed from the upper threaded end of the rod 33. This being accomplished the rod 37 may be rotated until its lower threaded end is out of engagement with the bottom plate 2, permitting the bottom plate on which the pennies rest, being readily removed.

From the construction and operation which I have described, it will be observed that not only is a novel coin controlled mechanism provided, but that the machine embodies simple and effective means for connecting the various parts thereof and locking

the same against separation by unauthorized persons.

What I claim, is—

1. In a vending machine, the combination with a casing having a coin slot leading therein and having an outlet chute inclined therefrom, and a reservoir surmounting said casing, of a horizontally disposed rotatably mounted member within the casing having a pocket therein, a spring actuated pivoted locking plate within the casing normally holding said rotatable member against rotation said plate having two rows of teeth formed thereon, and means whereby a preliminary rotary movement of said rotatable member against an inserted coin, results in sufficient pressure of said coin on said locking plate to release the latter from engagement with said rotatable member and permit the continued rotation of said last named member.

2. In a vending machine, the combination with a casing having a coin slot and outlet chute, and a receptacle surmounting the casing, of a spring actuated plate pivoted in the casing said plate having a plurality of teeth formed thereon, a rotatable pocket carrying member in said casing with which said toothed plate is adapted to normally engage, a coin receiving recess in said rotatable member adapted to receive a coin inserted through said coin slot, said coin adapted by the rotary movement of said rotatable member to press upon said toothed plate and force the latter out of locking engagement with the rotatable member permitting a free rotative movement of said last named member.

3. In a vending machine, the combination with a casing having a discharge chute, a coin inlet slot and a coin outlet slot, and a receptacle surmounting said casing, of a pivoted and spring actuated plate within said casing, said plate having inner and outer rows of teeth and being normally pressed toward the outer wall of the casing, a spring actuated rotatable member mounted in said casing and having a depending lug adapted to normally engage one of the inner teeth of said toothed plate when movement is imparted to said rotatable member, and having a coin receiving recess, a coin inserted therein adapted by a preliminary movement of said rotatable member to press said toothed plate out of engagement with said rotatable member and permit the movement of the coin thereby to the discharge opening.

4. In a device of the character described, the combination with a fixed, horizontally disposed plate of a movable horizontally disposed disk having a coin receiving pocket formed therein, a member having a plurality of teeth formed thereon, carried by the fixed plate, means for normally forcing said toothed member toward the coin receiving pocket and a member carried by the movable disk

and adapted to engage the toothed member
until a coin is inserted in the coin receiving
pocket—said coin serving when so inserted
to throw the toothed member out of engage-
5 ment with the member of the movable disk,
there being a coin discharging slot formed
through the fixed plate.

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

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