

V. E. RANDALL.
VENDING MACHINE.
APPLICATION FILED JUNE 5, 1919.

1,381,135.

Patented June 14, 1921.
3 SHEETS—SHEET 1.

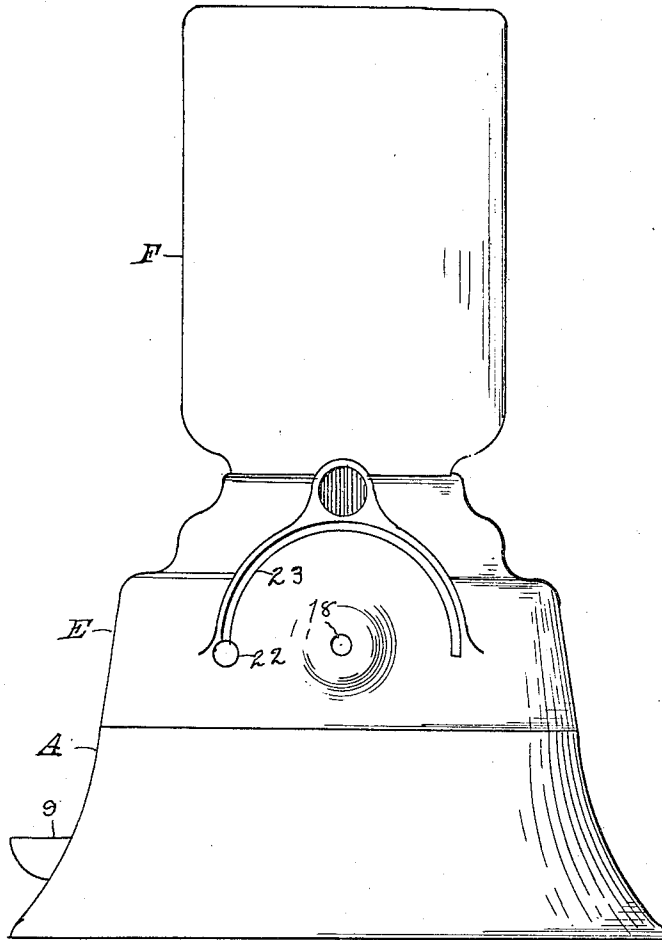
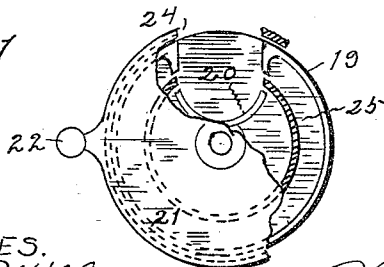


Fig. 1



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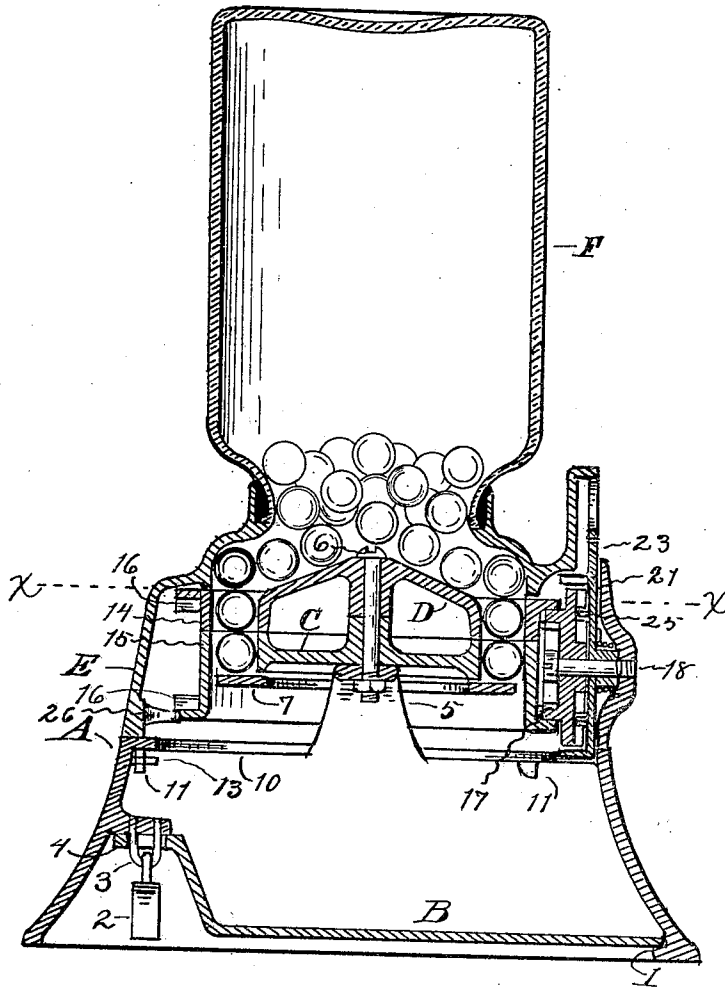
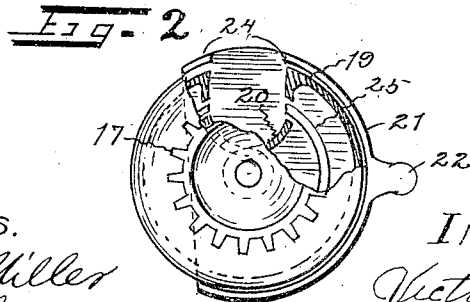
Fig. 5

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FIG. 6

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3 SHEETS—SHEET 3.

Fig. 3

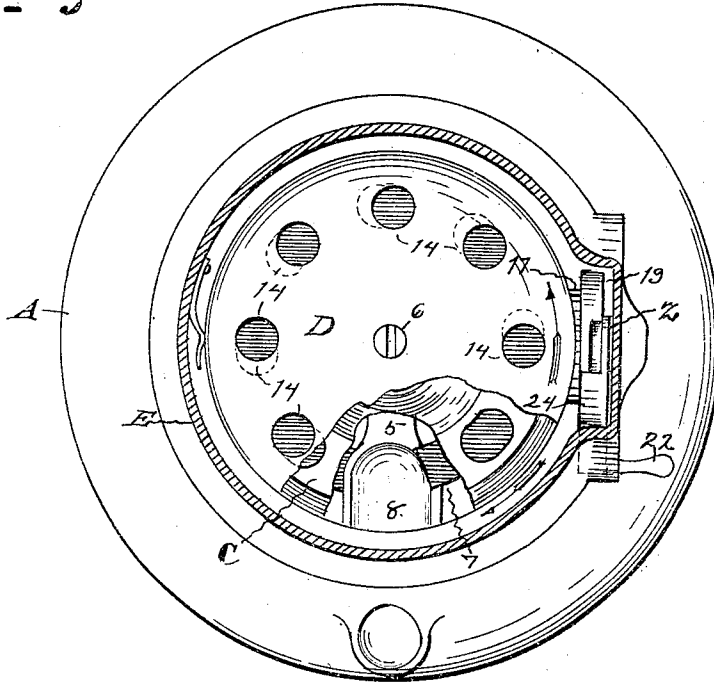
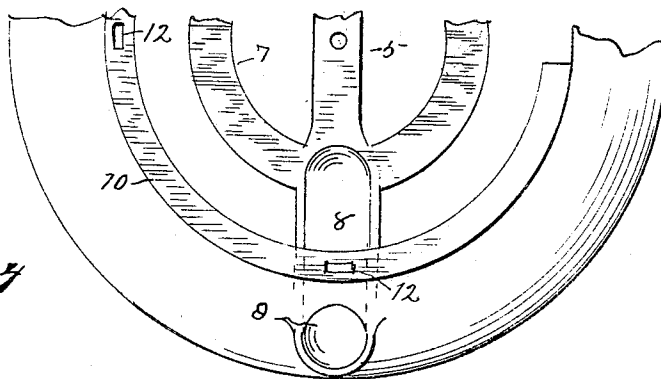


Fig. 4



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VENDING-MACHINE.

1,381,135.

Specification of Letters Patent. Patented June 14, 1921.

Application filed June 5, 1919. Serial No. 302,051.

To all whom it may concern:

Be it known that I, VICTOR E. RANDALL, a citizen of the United States, residing at Battle Creek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Vending-Machines, of which the following description and appended claims, taken in connection with the accompanying drawings, form the specification.

The present invention relates to vending machines more particularly adapted for vending globular materials as, for instance, gum or candy.

Characteristic features of the present invention are double oppositely-rotatable vending plates, a positive and simple coin-actuating device, an inexpensive and readily procured receptacle chamber, a removable bottom without hinges and with adequate room for an attaching padlock. Other features of novelty and objects of said invention are to provide an efficient, economical and tasty appearing vending machine and will be more fully set forth in the following specification and shown in the accompanying drawings, in which:

Figure 1 is an elevation of the machine from the operating side.

Fig. 2 is an elevation in cross section on a line through the operating mechanism.

Fig. 3 is a broken plan of the machine on the line $x-x$ of Fig. 2, showing the coin-actuating mechanism, the oppositely-revoluble vending plates, the guard below the plates and the exit chute from said guard.

Fig. 4 is a broken plan view of the base.

Fig. 5 is a detail broken side view of the coin-actuating mechanism.

Fig. 6 is a reverse view of the coin-actuating mechanism.

Like marks of reference refer to corresponding or equivalent parts throughout the views, in which A represents the base section within which a portable bottom B is fitted, the same being held therein by introducing one edge above an intumed rim 1 of said base and securing its opposite edge by means of a padlock 2 engaging a staple 3 fitted in or forming a part with said base and extending through a hole in an offset edge 4 of an upturned portion of said bottom.

Fitted to or forming a part of the base in its upper portion is a cross-girt 5 to which the oppositely-revoluble vending plates C

and D are journaled to a central bolt 6 extending through the parts, a guard or table 7 over which the vending plates operate, and an exit chute 8 leading from a depression in said plate to a pocket 9 on the exterior of the base, and a rim 10 upon which the detachable upper section E of the base is seated.

The upper base section E at intervals on its lower inner edge is formed with depending bayonet hooks 11 which when the base sections are intact extend through apertures 12 in the rim 10, and locked in the usual manner by the turning of the one section upon the other a pin, as 13, afterward being introduced into a hole in the lower base section and to the back of a hook for preventing the unlocking of the sections. The section E is indrawn at its upper end and formed with an opening into which the neck of a glass container F is cemented or otherwise fixed. In the drawings a common glass fruit jar is shown as a receptacle or container.

Preferably the upper vending plate D is higher in its center and slopes toward its rim and so formed that but a single tier of balls of gum or the like will occupy the space within the indrawn or overhanging top of the upper base section, as shown. This plate has a row of open-ended cups 14 near its outer edge and they are arranged to coincide with a corresponding row of elongated arc-shaped cups 15 formed in the lower vending plate C.

Formed on the under rim of the plate D and the upper rim of the plate C are cog races 16 which intermesh with the coin-actuated vending gear 17 journaled on a side stud 18 in an offset portion of the base.

The gear 17 has a rim somewhat larger than the circumference of its teeth line and on its reverse side is formed with an outer broken rim 19 and a loop-shaped broken-sided coin receptacle 20, and the hand operating mechanism 21 journaled on the stud 18 is a circular-shaped body having a crank 22 which extends through an arcuate slot 23 of the base for operating the machine, and a broken inwardly-extending flange 24 concentric with and fitted to inclose the outer rim 19 of the gear 17. A broken concentric rib 25 is formed on the mechanism 21 and when the parts are in assembled position is arranged to operate through the cut-out side

portions in the loop-shaped coin receptacle. When the parts are in a normal position or a position for receiving a coin, as shown in the views, the sides of the coin receptacle 20, the ends of the flange 24 and the rib 25 are coincident and permit of a coin being inserted in a slot, as Z, (Fig. 3), between the rim of the gear 17 and the hand-operating mechanism. If a coin is in the pocket thus formed, by turning the crank 22 toward the right the rib 25 will press said coin against the opposite broken side of the coin receptacle 20 and turn the gear 17, which in turn will cause the vending plates C and D to rotate in opposite directions. To yieldingly hold the plates and cooperating parts in predetermined position, a flat spring 26 fixed to the base engages at its free end within notches in the rim of the plate C the same results would be effected, however, if a similar spring engaged notches in the rim of the gear 17. By the arrangement of the coincidentally-passing cups in the vending plates, the upper plate will deposit a ball of gum or the like within a semi-circular pocket or cup in the lower plate, and the lower plate in turn, when such pocket coincides with the depression formed by the upper end of the exit chute 8 will permit said ball to enter the exterior cup 9 at the lower end of said chute on the exterior of the lower base section A.

An object in providing double vending plates is to insure an almost infallible filling of the cups in the lower vending plate (as must be obvious) as, for instance, if a ball of gum or the like enters a cup of the upper plate it necessarily will drop into a cup of the lower plate when the cups pass in the operation of the machine. However, should a cup in the upper plate fail to fill in one instance the probability is it would fill in the next instance, and as the lower row of cups when filled will only fill once during a revolution of their plate, the lower cups would not take a second ball even though the cup above was in position to deposit a ball therein when moved to so do or, in other words, should the lower cups be filled or partially so, the occasional jamming of balls over an upper cup in all probability would be removed and insure the lower cups being filled antecedent to depositing a ball in the exit chute.

About the hub of the mechanism 21 a coil spring 27 is placed, one end of the spring being secured to the base casting and its opposite end 28 into a small depression in said mechanism, its object being to return the hand crank 22 to a starting position and the operative parts so that a coin may be placed in the vending chamber of the machine. As will be obvious, if a coin is not in the coin chute z, or a coin is inserted in its mouth when the crank has been turned toward the

right, the rim 24 will cut off the mouth of the pocket 20 and preclude the entering of said coin into said pocket until a normal position has been restored.

From the foregoing explanation of the construction and operation of the machine, a more elaborated explanation is believed not to be necessary.

Having, therefore, set forth my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a vending machine, the combination of a base having an inturned rim partially about its lower edge, a hasp eyelet above said lower edge on the opposite side of said base, a removable bottom conforming in outline to the inside of said base adapted to rest on said inturned rim, an opposite side of said bottom curving upwardly and having an aperture engaging over said eyelet, and a padlock engaging said eyelet within the open space between the base and the upwardly-curving portion of said bottom.

2. In a vending machine, the combination of a base comprising an upper and a lower section, the lower section having a removable bottom and an indrawn neck rim with arc-shaped openings, the upper section having bayonet lugs engaging through the holes in the rim of the lower section, and an inverted glass container cemented within an upper indrawn neck portion of said upper base section, substantially as set forth.

3. In a vending machine, the combination of oppositely-revoluble vending plates operative from a common axis, said plates having vending cups therethrough in equal spaced relation with one another, the cups of the lower plate being elongated in the direction of rotation, the cups of the plates being coincident intermittently and arranged to permit the contents of cups from the upper plate to pass into the cups of the lower plate, and means to simultaneously actuate said plates.

4. In a vending machine, the combination of oppositely-revoluble vending plates operative from a common axis, rim gears formed on the inner faces of said plates, a gear interposed between the rim gears of said plates whereby said plates will revolve in opposite directions, said plates having correspondingly-spaced cup openings formed therethrough whereby the cups of one plate will be coincident with the cups of the other at regular intervals, the cups of the lower plate being elongated in the direction of their movement, and a stationary table forming a race-way below said lower plate, a depression in said race-way, and a chute leading from said race-way, substantially as set forth.

5. In a vending machine, the combination of a base having an indrawn neck top and a glass receptacle fitted therein, a vending

plate rotably mounted in said base and extending beyond the neck portion of said receptacle, the indrawn portion of said base being spaced above said plate sufficient only
5 to permit a single layer of articles to be vended therebetween, and the vending apertures in said plate being near the inner wall of said neck, means to intermittently revolve

said plate, a table below said apertures having a depression and a chute leading from 10 said depression.

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Witnesses:

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