Jan. 6, 1948. C. W. TAWNEY ET AL 2,433,873

VENDING MACHINE

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Fig. 1

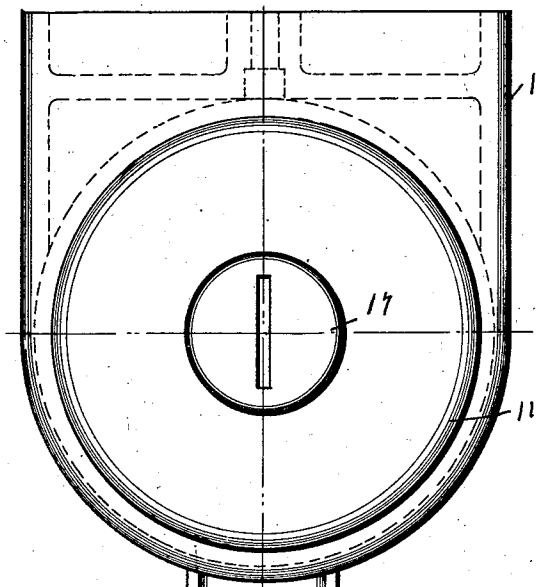
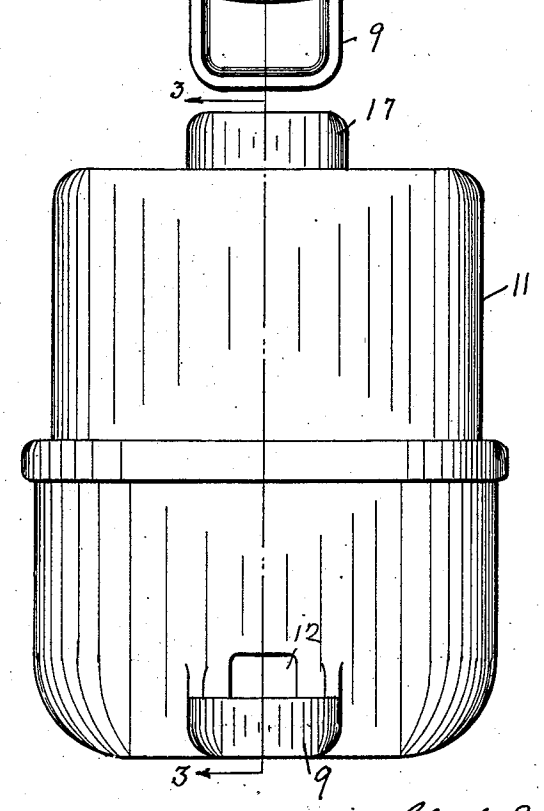


Fig. 2



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Jan. 6, 1948. C. W. TAWNEY ET AL 2,433,873

VENDING MACHINE

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Fig. 3

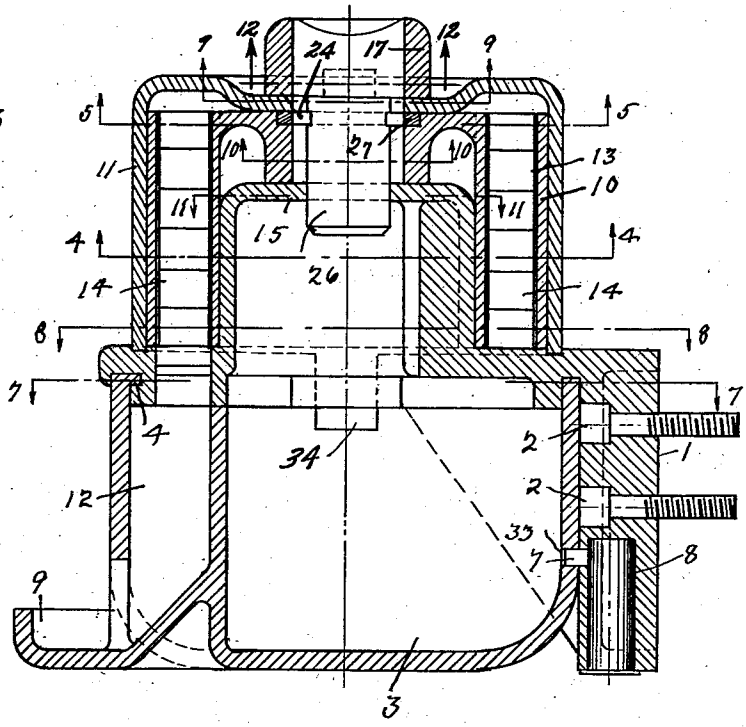


Fig. 4

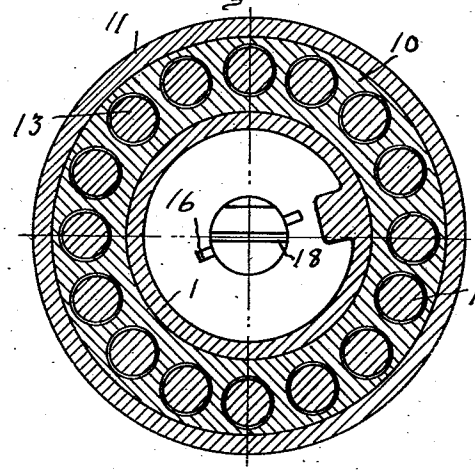
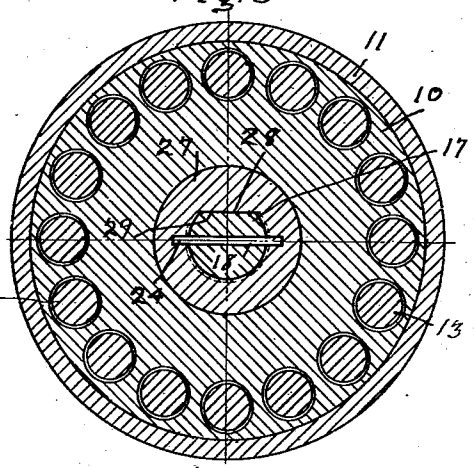


Fig. 5



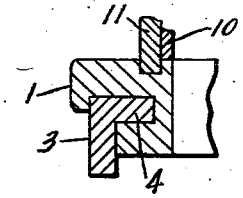


Fig. 13

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VENDING MACHINE

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Fig. 6

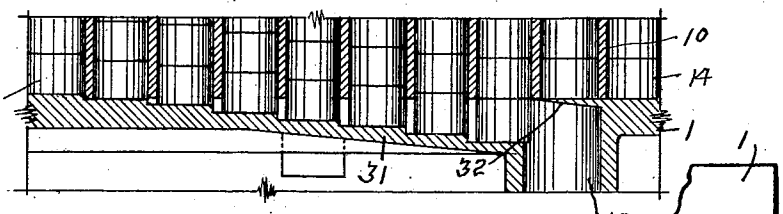
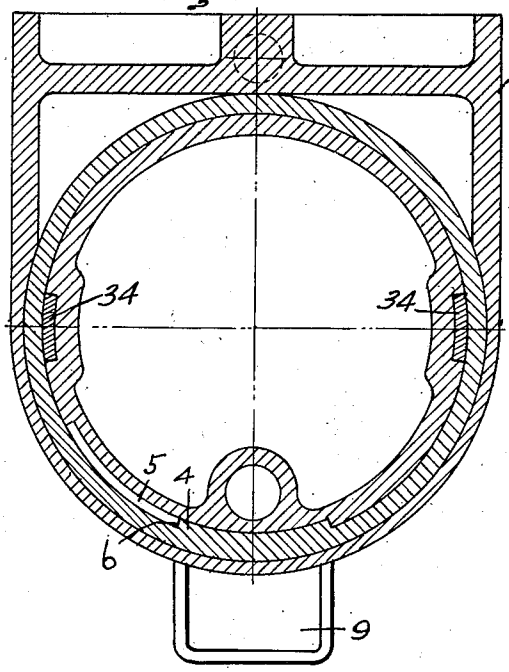


Fig. 7



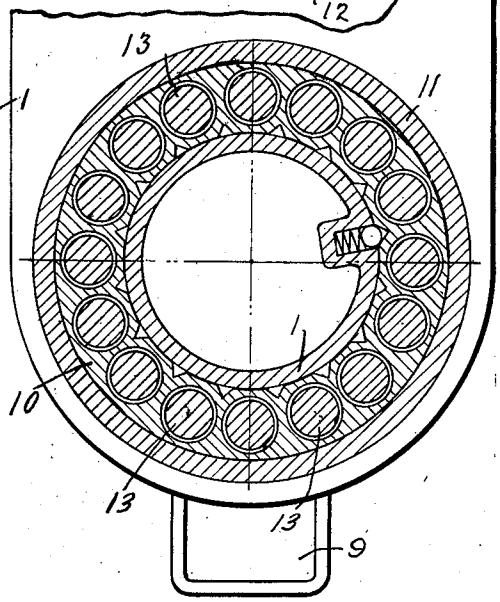


Fig. 8

Fig. 9

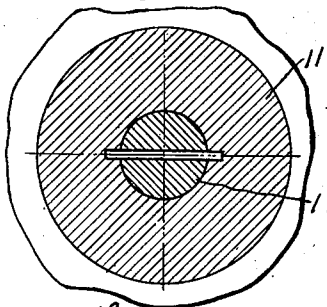
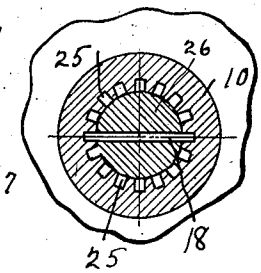


Fig. 10



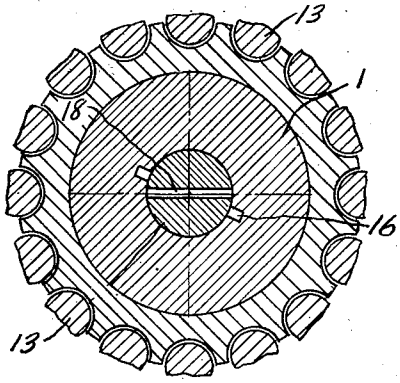


Fig. 11

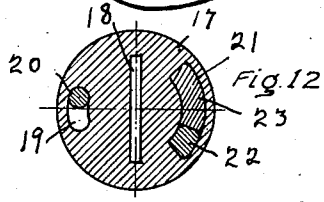


Fig. 12

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Patented Jan. 6, 1948 2,433,873

UNITED STATES PATENT OFFICE

2,433,873

VENDING MACHINE

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Application October 1, 1941, Serial No. 413,196

7 Claims. (Cl. 194—85)

1

This invention relates to improvements in vending machines and has for its object to provide a simple and efficient machine operated by a coin for vending medicinal or other tablets, either one at a time, or in packages. The device as illustrated and hereinafter described is for vending aspirin tablets, 2 in a package for a nickel, by means of which coin the machine is operated.

The invention consists of the novel construction and arrangement of the parts and combinations of parts hereinafter more fully set forth in the following specifications and pointed out in detail in the appended claims.

In the accompanying drawing:

Figure 1 is a plan view of our invention.

Figure 2 is a front elevation of Figure 1.

Figure 3 is a section on the line 3—3 of Figure 2.

Figure 4 is a section on the line 4—4 of Figure 3.

Figure 5 is a section on the line 5—5 of Figure 3.

Figure 6 is an enlarged schematic view showing how the packages step down as they approach the discharge end of the machine.

Figure 7 is a section on the line 7—7 of Figure 3.

Figure 8 is a secton on the line 8—8 of Figure 3.

Figure 9 is a section 9—9 of Figure 3.

Figure 10 is a section 10—10 of Figure 3.

Figure 11 is a section on the line 11—11 of Figure 3.

Figure 12 is a section of the lower end of the turning knob showing the pin for controlling the movement of the knob and the rubber, or spring, for returning the knob to its normal position when released.

Figure 13 is a detail in section of the clip used for holding the cover to the body.

Referring to the accompanying drawings, forming part of this specification, and in which like reference numerals designate like parts throughout the several views thereof, 1 designates the body of the machine which is held to a wall, or other suitable place, by the screws 2. The coin box 3 is placed in position on the body by pushing the flange 4 up through the slot 5 then turning it until it strikes the shoulder 6 at which point the keeper 7 of the lock 8 will spring into the aperture 33 in the coin box 3 and lock it in position. The magazine 10 is then placed in position and the magazine cover 11 placed over the magazine and held in position on the body 1 by clips 34. The clips are springy and engage an inner, thickened ring portion of body 1, which

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ring portion is inside of box 3, with the box 3 serving to lock the clips in place, but yet allowing the clips to be sprung apart for removal of cover 11 when the box 3 is removed from body 1. The coin box 3 has a cylindrical passage 12 which registers with the openings 13 of the magazine 10, and at the lower end of said passage 12 is a receiving cup 9 into which the packages 14 drop. The upper end 15 of the body 1 has a slot 16 through which the coin drops to the coin box 3 when the knob 17 is turned and the slot 18 therein registers with the slot 16. The knob 17 rests on the magazine cover 11 and has a slot 19 into which the pin 20 on the magazine cover projects to limit the movement of the knob 17. The said knob 17 also has a slot 21 into which a spring, or piece of live rubber, 23 is fitted and which operates against the pin 22 on the magazine cover to return the knob 17 to its normal position after the coin has dropped in the coin box 3. The knob 17 has a coin slot 18 which registers with the notches 25 in the magazine 10 and allows the coin to drop down into the notches so that when the knob 17 is turned the magazine 10 will turn with it far enough to discharge one package of the tablets 14. When the coin is dropped in the slot 18 in the knob 17, it falls down into the notches 25 of the magazine and rests upon the part 15 of the body 1, and when the knob 17 is turned and the slot 18 registers with the slot 16 in the upper part 15 of the body 1, the coin will drop in coin box 3 and the knob 17 will be returned to its normal position by the spring, or rubber 23 when released. The lower end of the knob 17 is contracted at 26 through which the slot extends. The knob 17 is held in position by the washer 27 when inserted in its slot and rests in a recess in the top of the magazine 10 and is held by the magazine cover 11. This washer 27 has a flat side 28 which fits against the flat side 29 of the contracted portion 26 of the knob 17, so that the washer revolves with the knob 17 and the slot 24 in said washer 27 will always be in line with the slot 18 in the knob 17. The tablets, in the present instance, are arranged two in a package 14 and rest one upon the other in the openings 13 of the magazine 10. The body of the machine is provided with steps, or ramps 31 which allow the packages to step down as they move toward the discharge opening, as shown in Figure 6 of the drawing, and, to prevent more than one package 14 from dropping into the discharge opening, a wedged shaped lip 32 projects just

above the discharge opening and separates the packages 14 and allows only one package to drop at a time.

The stepped arrangement at 14 indicated by the ramps or steps 31 serves to arrange the packages in a helically positioned series leading them progressively down to the discharge opening. This provides several features in the operation of the device which are advantageous and desirable. In conjunction with the wedge 32, the packages are dropped out one at a time, and in proper sequence. The steps carry the packages to a plane below the wedge that brings the lowest one under the latter.

The operation of the device is as follows:

The magazine being filled with packages of the tablets is in condition to be operated. A coin, such as a nickel, is placed in the slot 18 in the knob 17 and drops down with its sides projecting into two of the notches 25 until it rests on the upper portion 15 of the body 1. The knob 17 is then turned until it is stopped by the pin 20 when one package of the tablets 14 will be dropped through the opening 12 to the receiving cup 9 and the coin will drop through the slot 16 into the coin box 3, and when the knob 17 is released, the knob will be returned to its normal position by the spring, or rubber 23, ready to be operated again upon depositing another nickel.

Having thus described our invention, what we claim is:

1. A vending machine comprising in combination a body with holes therein for the insertion of fastening means to hold it to a stationary surface or wall, said body being enterable from underneath with a lateral hole passing from the side of its wall to the interior of the body, a coin box insertable into the body from underneath having flange means for engaging on the body for holding itself thereon and provided with an aperture adapted to align with the said lateral hole when in position, a keeper having a pin reciprocating therefrom through action of a spring and adapted to project through said hole and enter the aperture, so as to lock the coin box and body together at a position where the box covers the fastening means when holding the body to a surface, a magazine mounted above the body and encompassing the upper portion of the said body, and having a plurality of circular passages circularly arranged around the perpendicular axis of the body and coin box for holding articles to be dispensed from the machine, a knob slotted for a coin to be inserted therein and into adjacent portions of the magazine and hold the magazine and knob together for rotation of same until the slot in the knob is brought into registry with a predetermined portion of the body and deposited in the coin box, the rotation of the magazine through to such registry bringing successively the passages of the same into position for dispensing, said box having a receiving cup mounted thereon adapted to register with the magazine ready to dispense an article from its passage aligned for dispensing, for catching the article and holding same for manual removal, a cover fastened to the body and covering the magazine and passages thereof, said body having a stepped floor surface for progressively advancing the articles and cause same in the passages to ride on and arrange for gradual lowering and moving forward of the articles at the bottom of the passage and a wedged

shaped lip attached to the stepped floor to segregate and dispense one article at a time.

2. A vending machine of the class described comprising in combination, a magazine having a plurality of adjacent column recesses arranged therein in peripheral arrangement and adapted for rotation orbitally about a vertical axis, a base for supporting a coin box and the magazine, said coin box being provided with a passage for conducting articles dispensed from the said recesses, a knob journalled in a domed portion of the base and having a slot therethrough for the reception of coins, said slot in the knob being arranged to align the coin with a pair of slots or notches in the magazine rotatively before its passage into the coin box and dispense the article, means for supporting the device and fastening the coin box in a concealed manner.

3. A vending machine comprising a magazine for disc-like articles having a plurality of coin slots and with recesses provided peripherally therein to receive the articles a base member for carrying the magazine and permitting rotation thereof orbitally about a vertical axis and provided with a stepped path of travel for the same for dispensing articles from the magazine singly, a body member having a knob journalled in the domed portion thereof and having a slot therethrough for an operating coin to pass through to one of or pair of the slots in the magazine and move same one recess forward when aligned therewith by rotating the knob after insertion of the coin, a coin box having an outlet therein mounted on the said body member and having an open top and aligned so as to receive the coin passing through the knob and magazine, and at the same time permit the dispensing of one of said articles through said outlet, means for supporting the device and member to fasten the coin box in a concealed manner.

4. A vending machine comprising a magazine for disc-like articles having a plurality of coin slots and with recesses provided peripherally therein to receive the articles, a base member for carrying the magazine and permitting rotation thereof orbitally about a vertical axis and provided with a stepped path of travel for the same for dispensing the articles from the magazine singly, a body member having a knob journalled in the domed portion thereof and having a slot therethrough for an operating coin to pass through to a pair of the slots in the magazine when aligned therewith by rotating the knob after insertion of the coin, a coin box having an outlet therein mounted on the said body and having an open top and aligned so as to receive the coin passing through the knob and magazine, and at the same time permit the dispensing on an article through said outlet, means for supporting the device and member to the coin box in a concealed manner, and a wedge knife on the base member for separating the article to be dispensed from the others as they are rotated by the magazine past the wedge knife and guide same to the outlet.

5. A vending machine of the class described comprising in combination, a body arranged for wall mounting and fastening thereto having a circular form interiorly a slot therein with a ledge adjacent thereto, a lock provided for insertion in the said body having a resilient pin projecting from the side adapted for placement at a predetermined portion of the body for holding same thereto, a coin box having a flange provided

on its upper portion for insertion in the circular portion of the body through the slot and rotated therein to rest on the ledge and coact with the said resilient pin to lock the box and body together and cover the wall fastening thereof, a rotatable magazine mountable on the body having a plurality of passages concentrically arranged therein and a central opening therein for the coin to fall through on the way to the said coin box, a cover for the magazine, clips for fastening the magazine cover to the said body, knob and coin means for controlling the rotation of the magazine on the body to predetermined movements of limited travel, said knob surmounted on the magazine and movably affixed thereon so as to rotate on same, said knob having a coin slot therein for a coin to enter and pass through to the structure of the magazine so as to engage therein and permit turning of the same until a predetermined amount of travel is made and the coin is allowed to drop to the said box while the passages in the magazine are brought successively to a predetermined portion of the body for ejection of articles from each passage individually therethrough, the knob returning to its initial position after the dropping of the coin with its slot out of registry with the slot of the body.

6. In a device of the class described, the combination of a body mountable on the wall with fastening means interiorly disposed passing through the body into the wall, a coin box slidable up into the body and adapted to catch thereon and cover the said fastening means from external access thereto, a lock in the body having a projecting member therein for engaging with the coin box and locking same to the body against removal, a magazine mountable on the body over the coin box and in contact with the same so as to rotate on same, said magazine having passages circumferentially arranged therethrough for the reception of articles to be carried around the body for disposal successively therefrom, a cover for the magazine having a coin receiving knob with a slot positioned therein and arranged to position a coin to act as a key and turn the

magazine until aligned with a slot in the coin box and drop the coin therein the turning of the knob causing the turning of the magazine and the dispensing of an article from one of the passages therefrom one at a time, and means on the knob and the cover for holding same in position on the body.

7. In a coin box device of the class described, a body having a cylindrically formed interior and holes in the side for fastening means to pass through a stationary holding surface or wall from the inside, said body having an internal slot and openings in the top portion thereof, a coin box adapted to engage through underneath insertion through the slot and rest on the body, a keeper provided in the body and projecting into said box for locking same to the body and be covered by the box against external access, and dispensing structure over the body and coin box for receiving coins and dispensing articles from the structure in predetermined arrangement.

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