Dec. 31, 1929. S. P. NEMETH 1,741,728

PACKAGE VENDING MACHINE

Filed Feb. 6, 1928 3 Sheets-Sheet 1

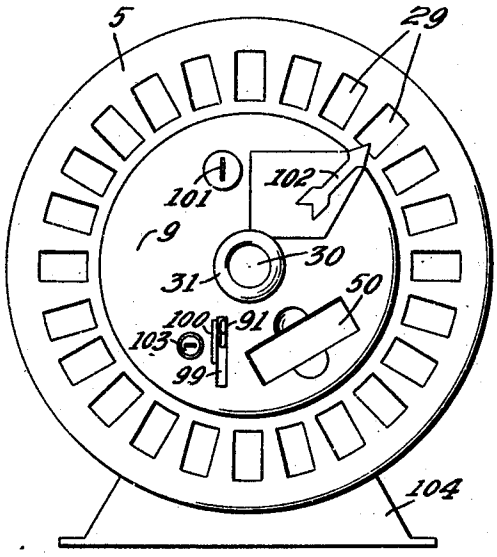

FIG. 1

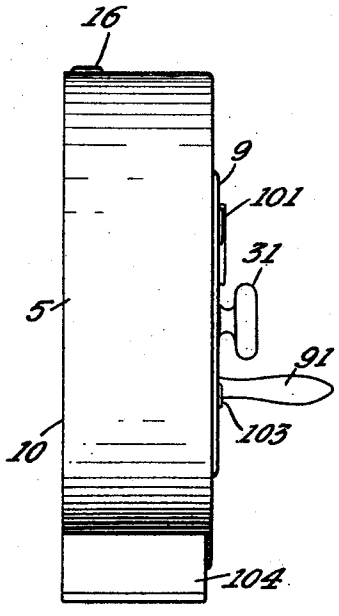

FIG. 2

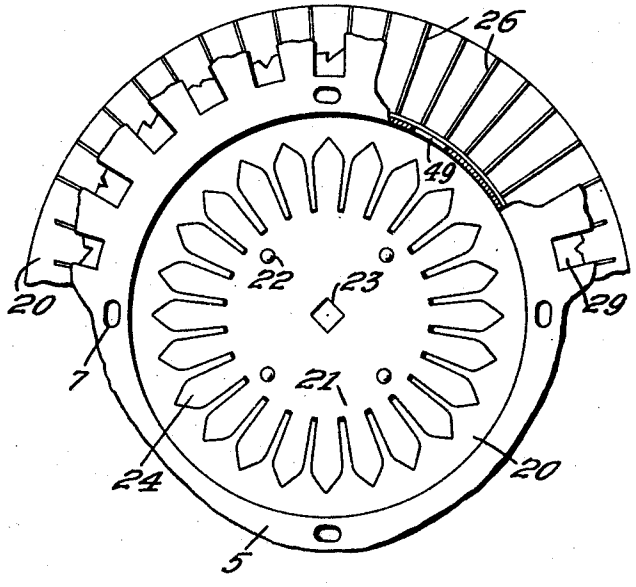

FIG. 3

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PACKAGE VENDING MACHINE

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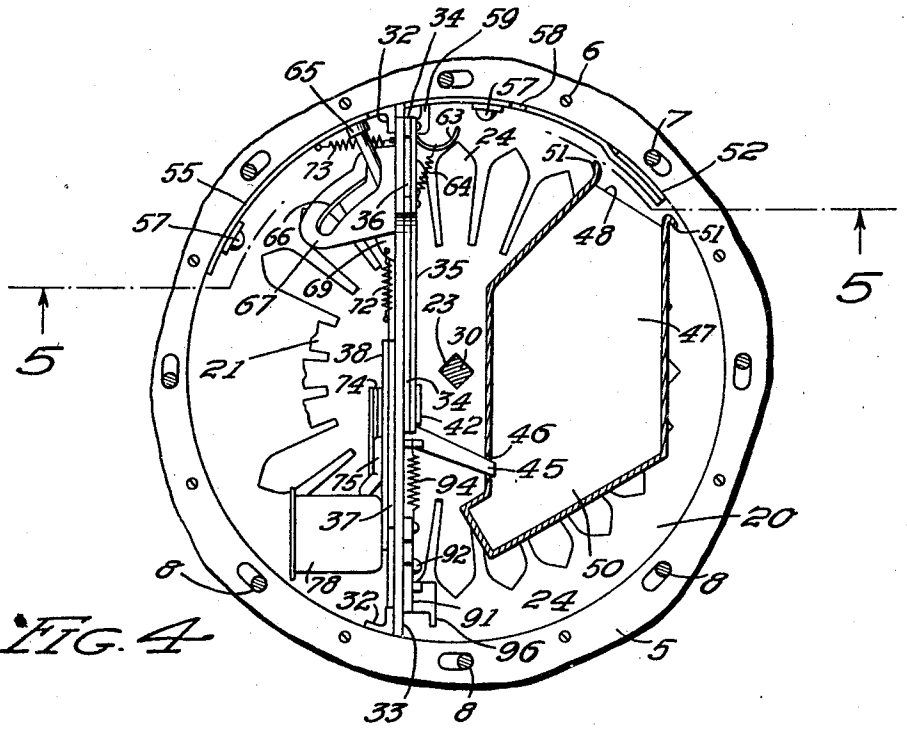

FIG. 4

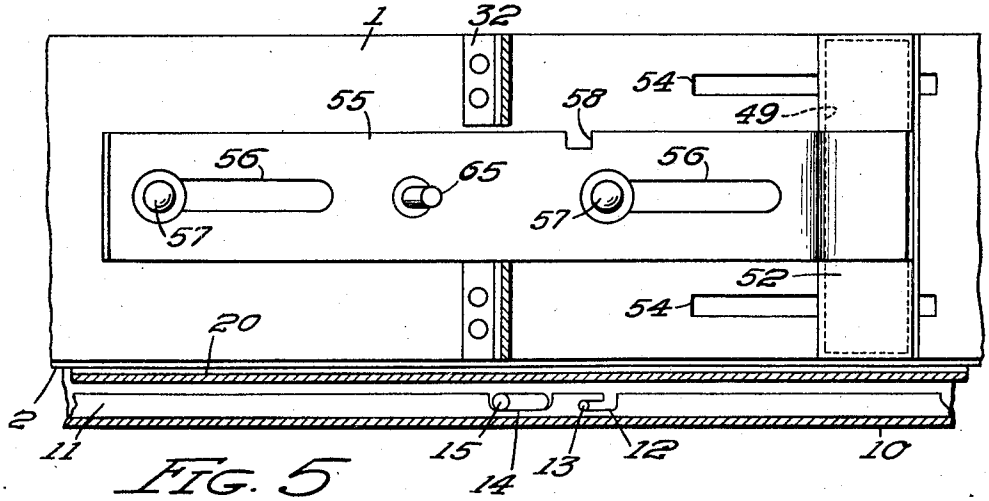

FIG. 5

FIG. 6

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PACKAGE VENDING MACHINE

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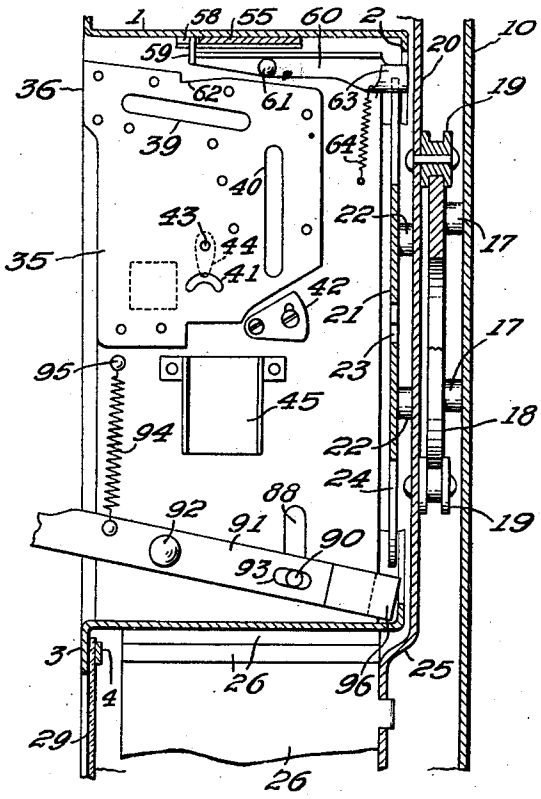

FIG. 8

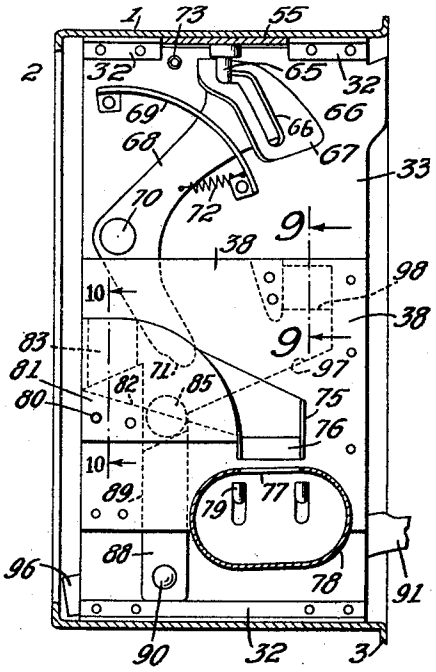

FIG. 7

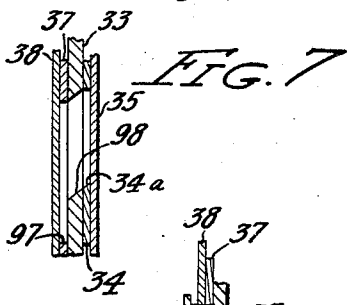

FIG. 9

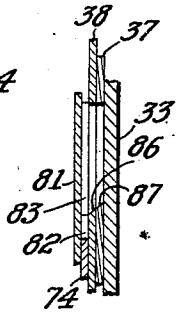

FIG. 10

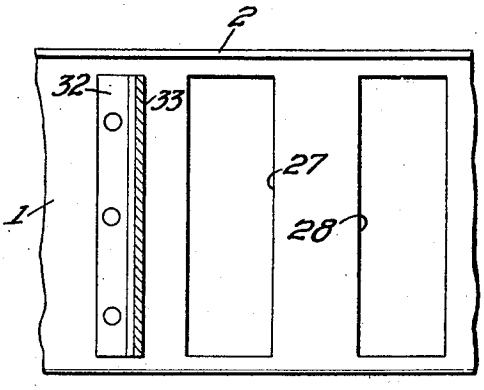

FIG. 11

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Patented Dec. 31, 1929 1,741,728

UNITED STATES PATENT OFFICE

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PACKAGE-VENDING MACHINE

Application filed February 6, 1928. Serial No. 252,274.

This invention relates to vending machines of the coin-controlled type and more particularly to package vending machines. One object is to provide a machine of this type that is selective so that any package, located at any point in the machine, may be released when desired and without disturbing any of the other packages. A further object is to provide a machine of this type that is theft-proof, positive and efficient in operation and cheap to manufacture. A still further object is to provide a machine that may be used as a counter machine, that is, disposed upon a show counter or that may be suspended from the wall upon a hook or the like, that is of light weight and attractive in appearance.

With the foregoing and other objects in view the invention consists in the combination and arrangement of parts to be hereinafter fully described, pointed out in the appended claims and illustrated in the accompanying drawings which form a part of this application for patent and in which—

Fig. 1 is a view of the machine in front elevation.

Fig. 2 is a side view of Fig. 1.

Fig. 3 is an enlarged fragmentary view of the machine, the face plate being removed.

Fig. 4 is a fragmentary view of the machine in front elevation and partly in section, the face plate being removed.

Fig. 5 is a cross sectional view on line 5—5 of Fig. 4.

Fig. 6 is an enlarged fragmentary view of Fig. 5 illustrating the sliding door feature.

Fig. 7 is a vertical sectional view through the machine taken on one side of the drum partition.

Fig. 8 is a like view taken on the opposite side of that partition.

Figs. 9 and 10 are detail sectional views taken, respectively, on lines 9—9 and 10—10 of Fig. 8.

Fig. 11 is a fragmentary view, partly in section, of the drum disclosing the openings through which the pockets are filled with packages.

Like reference characters denote corresponding parts throughout the several views.

The machine comprises a drum having a stationary front or face plate and a rotary back plate that is integral with or operatively secured to a plurality of package pockets arranged in a circle that completely encircle the drum, the drum, back plate and pockets being encompassed by a casing having windows through which the contents of the package pockets are clearly visible, the drum being provided, further, with a vertical partition that, together with the face and back plates carries the actuating mechanism for the package pockets, the casing being provided either with a supporting base or with hook-receiving perforations to permit its support by an upright or the like.

The reference numeral 1 denotes the annular drum body formed with an inwardly extending flange 2 and a reverse or outwardly extending flange 3 and to the latter the flange 4 of the casing 5 is secured by screws 6 and alternating with said screws 6 are perforations 7 in the flange 4 to receive the cam bolts 8 that secure the face plate 9 to the casing, the material of the flange 3 being perforated in alignment with the perforations 7 to permit unobstructed passage of said cam bolts.

The casing 1 comprises a removable back 10 formed with an inwardly extending flange 11 formed with four angular slots 12 spaced 90 degrees apart to releasably receive the four similarly placed pins 13 of the casing, said flange 11 being formed also with the wide curved recess 14 affording clearance for the bolt 15 of the lock 16 whereby the back and casing proper may be releasably secured together.

Secured by studs 17 to the back 10 is an annular casting 18 about the periphery of which a plurality of rollers 19 ride that are secured to and support the back plate 20 of the drum to which plate the disc 21 is secured by studs 22, said disc being formed with a square central perforation 23 and peripherally with the teeth 24 spaced apart. To the back plate 20 the stems or handles 25 of the package pockets 26 are secured, said pockets extending transversely of the periphery of the drum body 1 about which they rotate as the back plate revolves, said pockets being

equal in number and directly opposite the teeth 24 aforesaid.

The drum 1 is formed with two twin transversely extending spaced perforations 27, 28 adapted to align with the mouths of the package pockets as they are rotated about the drum whereby said pockets may be filled with the packages, the packages being then visible through windows 29 in the casing. Arranged for rotation in a bearing in a central perforation in the face plate 9 is a shaft 30 provided with a knob 31, said shaft extending through the drum, its inner portion being square in cross section, and into the square perforation 23 in the disc 21 whereby said disc together with the back plate 20 and pockets 26 is caused to rotate.

Secured at its ends by angle plates 32 to the drum is a vertical partition 33 disposed to one side of the center of the drum. Spaced slightly from the partition 33 by insert pieces 34 is a right hand plate 35, a coin passageway 36 being formed between the members 33, 35 and the top spacer pieces 34, 34. Spaced slightly from the partition 33 by a spacer piece 37 is a left hand plate 38. The right hand plate is formed with an elongated obliquely disposed slot 39 and spaced slightly therefrom with a vertical slot 40 and spaced laterally and slightly downward from the lower end thereof with an arcuate slot 41, a rebound block 42 being adjustably secured to the partition 33 immediately below the lower end of the right hand plate 35. A pin 43 carried by the partition 33 extends through a perforation in the plate 35 and pivotally carries a tongue 44 suspended between the members 33, 35, the lower end of said tongue depending into the plane of the slot 41 and being visible through said slot. Also disposed below the lower line of the plate 35 and in line with the slot 41 is the return chute 45, secured to the partition 33, that opens into a perforation 46 in the rear wall of the delivery chute 47, the receiving mouth 48 of which is disposed contiguous to a transverse perforation 49 in the drum which aligns consecutively with the mouths of the several package pockets 26 as they are rotated about the drum, said delivery chute 47 being secured to the face plate 9 and being formed with the delivery mouth that registers with the delivery mouth 50 in the said plate. The delivery chute is formed at its receiving mouth with the outwardly curved lips 51 that serve as guards and prevent tampering, by vandals, with the sliding closure plate 52 for the drum perforation 49, said plate being formed with ribs or thickened portions 53 that ride in the parallel longitudinal slots 54 in the drum which slots register with the drum perforation 49 and serve as guides for the plate 52 in its movement.

The closure plate 52 is carried by the curved sliding bar 55 formed with the longitudinal slots 56 through which the guide bolts 57 extend that slidably secure it to the drum, said bar 55 being formed also with the marginal recess 58 adapted, in one position of the bar, to releasably receive the heel 59 of the trigger 60 fulcrumed upon bolt 61 to the partition 33, the the upper edge of the plate 35 being formed with a marginal notch 62 to provide clearance for the said heel in its movements. The said trigger is formed, further, with the rounded head 63 that is connected by contractile spring 64 to the partition 33. A stud 65 carried by the sliding bar 55 projects downwardly and through the angular slot 66 in the laterally bent end 67 of the actuating lever 68 that rocks back and forth between the partition 33 and the arcuate guide bar 69, secured at its end to the partition, said lever being fulcrumed upon the pin 70 to the partition, the lower or toe-end of said lever extending down between the left hand plate 38 and partition 33 and being formed with the slightly recessed portion 71, said lever being connected by a spring 72 to the guide bar 69 to yieldingly retain it in a predetermined position with relation to said guide bar, and the sliding bar 55 being connected by a spring 73 to the partition 33.

Secured to the left hand plate 38 is a flanged plate 74, having the flange 75, terminating in the laterally extending chute 76 that leads into the coin opening 77 in the coin box 78 removably secured by studs 79 to the partition 33. Spaced slightly from the plate 74 upon screws 80 is the plate 81 between which and the plate 38 along the downwardly bevelled base 82 of an opening 83 in plate 74 the coin 85 travels, which coin has come through bevelled perforations 86, 87 in the plates 38, 37, said coin having been raised into the bevelled opening by a plunger 88 working in a vertical slot 89 in the partition 33, said plunger 88 being connected by pin 90 to the hand lever 91 fulcrumed upon pin 92 to said partition 33, the said pin 90 being received in an elongated slot 93 in the hand lever, said hand lever upon the side of its fulcrum opposite to that to which the pin 90 is secured being connected by spring 94 to a stud 95 fast in the partition 33, the handle end of the lever being thereby yieldingly retained in raised position, the forward end of the lever being formed with the offset finger 96 adapted for contact with the teeth 24 of the disc 21.

Referring again to the coin 85 which has been received upon the bevelled upper end of the plunger 88, said coin has traveled over the bevelled lower edge of a perforation 97 in the spacer piece 37, having come through a perforation 98 in the partition 33 and travelled from the coin passageway 36 between partition 33 and plate 35 and between insert pieces 34, its path being revealed through the slots 39, 40, 41, when the face plate is re-

moved. The handle of the said lever 91 extends out through a perforation 99 in the face plate, formed with an offset portion 100 so that a slight lateral movement of the face plate relative to the hand lever is possible when locking and unlocking the machine, this being necessary to properly secure the cam bolts 8 in the perforated portions 7 of the flange 4. The face plate is formed also with a coin receiving slot 101 that aligns with the coin passageway 36 aforesaid, and with an arrow 102 that points to one window 29 in the casing to show when the desired package is in position for delivery. The face plate is provided with a suitable lock 103 whereby it is releasably secured to the flange 4 of the casing, the lock bolt riding firmly against this flange in locked position. The casing may be either mounted upon a base 104 to which it is secured by screws or other fastening means or it may be suspended from hooks inserted in hook-receiving perforations in the back 10.

In operation the package desired for delivery is caused to move into the position opposite the arrow 102. This is done by rotating the knob 31 which causes the square inner portion of the shaft 30 disposed in the square opening 23 in the disc 21 to rotate the disc and the package pockets. With the desired package in position a dime is dropped in the coin slot 101, the coin passing through the passageway 36 between upper and lower insert pieces 34 and between partition 33 and right hand plate 35 and to fall upon the rebound block 42 from which member the dime will bound back between the members 33, 36 and past the slot 41, striking the tongue 44, oscillating the same, and passing over the edge 34[a] of an insert piece 34 and through the perforation 98 in the partition 33, through the passageway 97 and will lodge upon the bevelled end of the plunger 88. The handle of the lever 91 is now depressed thus raising the plunger 88 in its slot, the limit of this movement being reached in one direction when the pin 90 rides against the edge of the left hand plate 38 and in the opposite direction when the plunger rides down against the angle plate 32 against which member it is yieldingly retained by the action of the spring 94 upon the hand lever. The upward movement of the plunger deposits the dime through the inclined openings 87, 86 and over the incline 82 and out through the chute 76 into the coin box. Should a coin other than a dime be used it will not rebound properly from the block 42 and will therefore fail to ride past the slot 41 but will drop from between the members 33, 35 into the chute 45 from which it will pass through opening 46 in the chute 47 from which it may be removed by the depositor. As the coin rides on top of the plunger 88 it will, after passing through perforations 34[a], 98 etc. engage with the recessed portion 71 of the actuating lever 68 oscillating it upon its fulcrum 70 and causing stud 65 to ride through the angular slot 66 in the lever thus moving the sliding bar 55 to cause the closure plate 52 to uncover the drum perforation 49 when the package will drop, through gravity, into the delivery chute 47 from which it may be manually removed. This sliding movement of the bar 55 will have so positioned its recess 58 that it will be occupied by the heel 59 of the trigger thus permitting the spring 64 to further depress the head 63 of the trigger into such position that further rotary movement of the disc 21 will cause one of the teeth 24 to contact with the head 63 and raise same to disengage the heel 59 from the recessed portion 58 of the bar 55. The spring 72 will now return the actuating lever 68 which, together with spring 73, will return the sliding bar to position and dispose the closure plate 52 again over the drum perforation 49. When the package has been evacuated from its pocket the pocket will be shown empty through window 29. When the knob 31 is again rotated a tooth 24 will at once engage with the head 63 of the trigger and raise it thus releasing the heel 59 from the bar 55, thus closing the plate 52 again. When, for any reason, the mouth of a pocket containing a desired package is not disposed in alignment with the drum perforation 49 it is but necessary to oscillate the hand lever which will cause the finger 96 to engage with one of the teeth 24 to slightly move the disc 21 to correctly position and align the pocket.

What is claimed is:—

1. In a package vending machine, a perforated drum, a package delivery chute carried thereby, a frame receiving said drum, a rotary multiple package carrier surrounding said drum and comprising a plurality of pockets arranged peripherally of said drum, package delivery mechanism connecting said drum and package carrier whereby said pockets may be selectively disposed contiguous to said drum perforation, a sliding door normally closing said drum perforation, and guards for said sliding door at the receiving mouth of said delivery chute.

2. In a package vending machine, a perforated and slotted drum, a package delivery chute carried thereby, a frame receiving said drum, a rotary multiple package carrier surrounding said drum and comprising a plurality of pockets arranged peripherally of said drum, package delivery mechanism connecting said drum and package carrier whereby said pockets may be selectively disposed contiguous to said drum perforations, a sliding door normally closing said drum perforation, ribs for said door riding in the slots in said drum, and outwardly curved lips at the receiving mouth of said chute forming guards for said sliding doors.

3. In a package vending machine, a casing, a removable back therefor, means for locking said back and casing together, an annular casting secured to and spaced from said back, a drum supported in said casing and comprising a back plate, and rollers secured to said back plate and riding about said casting.

In testimony that I claim the foregoing as my own I have hereto affixed my signature.

STEFFEN P. NEMETH.