July 30, 1929. H. H. PETERSON 1,722,942

VENDING MACHINE

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Fig. 1.

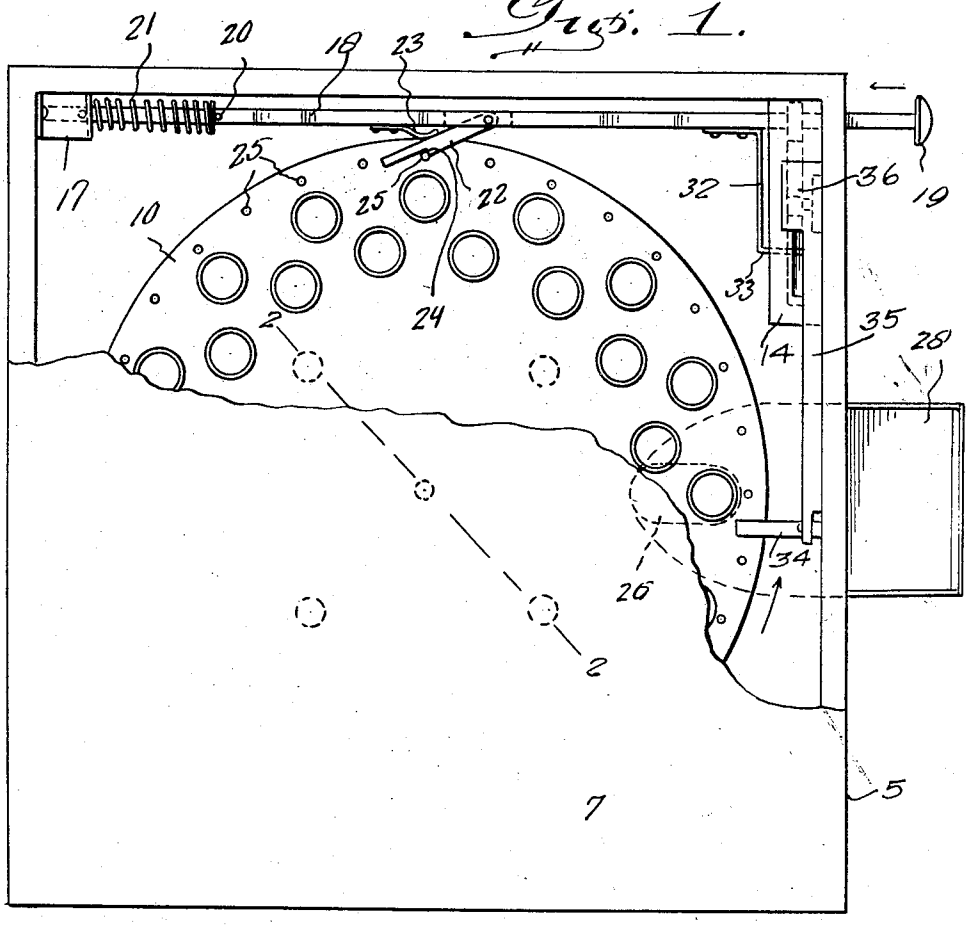
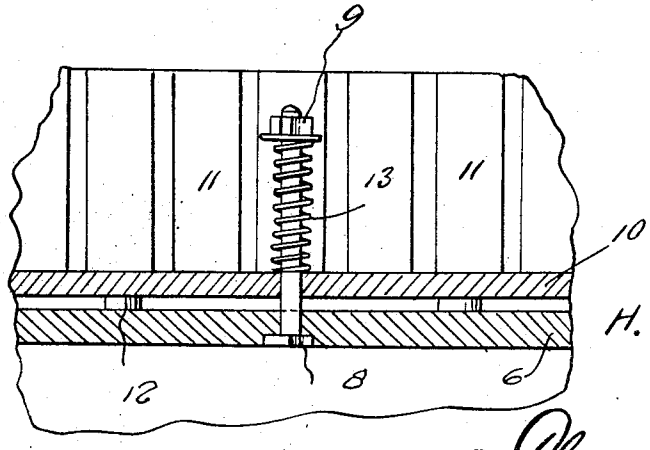


Fig. 2.



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Fig. 3.

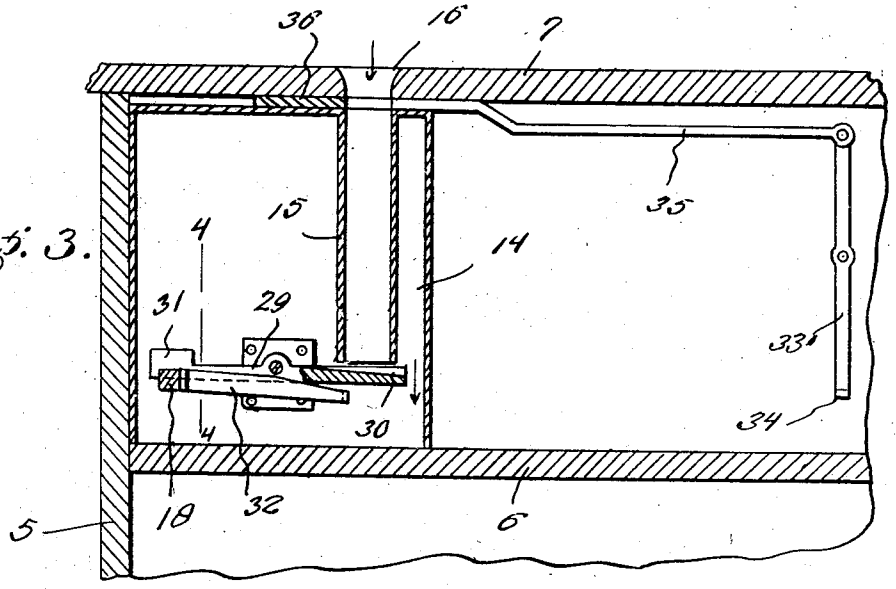


Fig. 4.

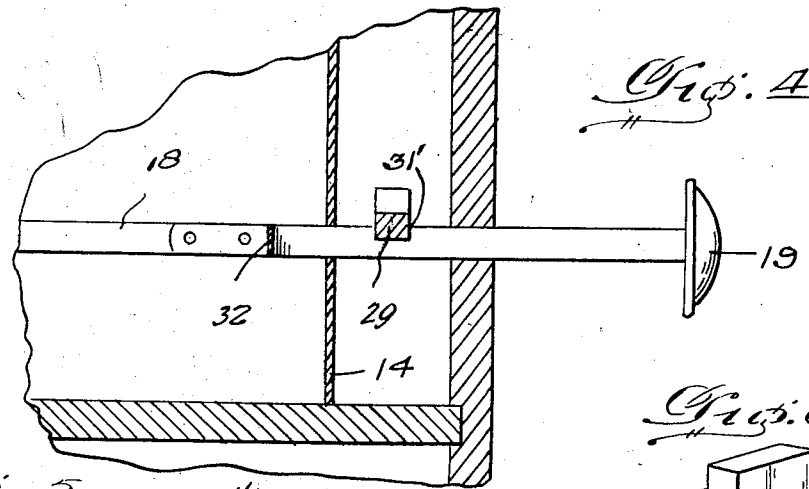


Fig. 5.

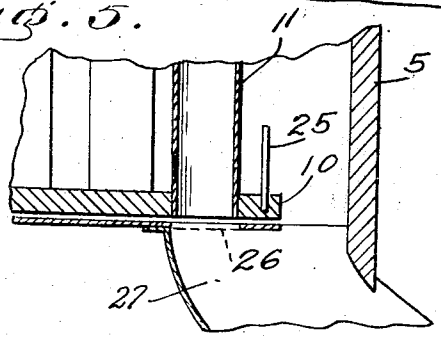
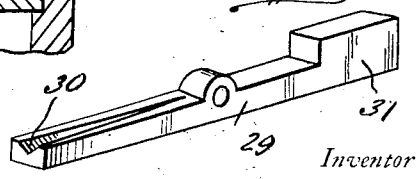


Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY H. PETERSON, OF EDMUND, WISCONSIN.

VENDING MACHINE.

Application filed October 27, 1927. Serial No. 229,213.

This invention relates to new and useful improvements in vending machines primarily adapted for use in the vending of cigars. However, the invention may equally as well be employed for the vending of other articles such as candy bars and the like.

In carrying out the present invention there is provided a highly novel, simple, and relatively inexpensive vending machine that comprises but few parts and these so corelated as to reduce the possibility of disarrangement to a minimum.

The invention further aims to provide a vending machine of the coin controlled type that is equipped with automatically operable means to make it impossible to deposit a coin therein after all the articles have been discharged from the machine.

In the drawings wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a plan view of my improved vending machine, the top wall of the casing being partially broken away for disclosing the interior construction thereof.

Figure 2 is a fragmentary horizontal enlarged section taken substantially upon the line 2—2 of Figure 1.

Figure 3 is a fragmentary longitudinal section for more clearly disclosing the coin actuated releasing member whereby the machine may be operated for the dispensing of an article.

Figure 4 is an enlarged fragmentary vertical section taken substantially upon the line 4—4 of Figure 3.

Figure 5 is a fragmentary vertical section through that part of the machine where the article is discharged from the carrying unit, and

Figure 6 is a perspective of the coin trip lever.

Now having particular reference to the drawings, my novel vending machine consists of a casing 5 of suitable design, having a false bottom wall 6 and a top wall 7. At the center of this false bottom wall 6 there is arranged a vertically extending pivot pin 8 threaded at its upper end for the reception of a nut 9. Mounted for turning movement upon this pivot pin 8 is a relatively large circular plate 10 formed adjacent its perimeter with concentric circular rows of openings within which are rigidly arranged the lower ends of vertically extending tubes 11. The inner and outer openings are arranged in staggered relation as clearly indicated in Figure 1. The false bottom wall 6 is provided at its top surface with a plurality of properly arranged protuberances 12 upon which the plate 10 rests so as to be supported in horizontal spaced position and in slight spaced relation with the false bottom wall 6. For maintaining a slight pressure upon this plate 10, an expansible coil spring 13 surrounds the pivot pin 8 between the nut 9 and said plate as clearly indicated in Figure 2. This spring will prevent the free turning movement of the plate upon said pin for a purpose presently to be described. Arranged within the casing 5 at the back wall thereof is a sheet metal housing 14 from the top wall of which depends a coin chute 15, the top wall 7 of said casing being formed with a coin slot 16 in registration therewith, see Figure 3. The opposite corner of the casing 5 is equipped with a suitable bracket 17 through which is slidable one end of a control bar 18, the opposite end thereof being slidable through the housing 14 as well as an opening in the back wall of the casing 5. The outer end of this bar is provided with a thumb button 19. Surrounding this bar 18 between the bracket 17 and an abutment 20 associated therewith is an expansible coil spring 21, the purpose of which is to normally maintain the outer end of the bar in projected relation with respect to the back wall of the casing 5 as clearly disclosed in Figures 1 and 4.

Pivoted at its inner end to the bar 18 at a point substantially intermediate the ends thereof and extending toward the opposite side wall of the casing is a finger 22, the outer end of which is normally swung outwardly of the bar 15 through the medium of a suitable spring 23. The outer surface of this finger 22 is formed with a shoulder 24, while arranged around the perimeter of the plate 10 are spaced vertically extending pins 25 equal in number to the number of the article receiving tubes 11 and these pins are adapted to be engaged by the shoulder 24 of the finger 22 so that when the bar 18 is forcibly moved inwardly in the direction of the arrow in Figure 1, the plate 10 will be caused to turn upon its pivot 8. The degree of movement of the bar 18 is equivalent to the distance between adjacent article tubes

11 of the inner and outer rows of tubes for a purpose presently to be described.

The false bottom wall 6 of the casing 5 is formed adjacent the front wall thereof with an oval shaped slot 26 from which extends a chute 27 that extends through the front wall of the casing 5 and that is equipped at its end with an article receiving trough 28.

Obviously as the plate 10 is turned to bring the various tubes 11 into registration with the slot 26 the articles within the tubes will drop therethrough into the chute 27 and thence pass to the trough 28 where they may be removed by the purchaser.

Pivotally disposed within the housing 14 within said casing 5 beneath the lower end of the coin chute 15 is a horizontal trip lever 29, one end of which extends beneath the chute 15 and that is formed at its top surface beneath said chute with a V-shaped channel 30. The opposite end of this trip lever is formed with a weighted head 31 that normally rests within a notch 31′ in the push bar 18 for locking the push bar against movement. However, when a coin is deposited within the machine the same will strike against the end of the trip lever beneath the chute 15 to overcome the weight of the head 31 for releasing the lever from the control bar 18 whereupon the same may be pushed inwardly for causing the turning of the article carrying plate 10. To prevent the dropping of the coin from the lever 29 before the bar 18 has been pushed inwardly, said bar is equipped at a point in front of the housing 14 with an inwardly extending horizontal arm 32 formed at its inner end with a laterally extending finger 33 that is normally arranged beneath the coin receiving end of the trip lever 29 and that will permit the lever to swing to such an extent as to cause the disengagement of the inner end thereof from the bar 18 but to prevent the dropping of the coin therefrom, which coin will be partially supported by the coin chute 15. As soon as the bar 18 is forced inwardly against the action of the spring 21 the arm 32 and finger 33 will be caused to move inwardly, thereby entirely releasing the lever 29 so that the coin may drop from the lever.

Pivotally disposed upon the inner side of the front wall of the casing 5 substantially at the center of the machine is a vertically arranged trip lever 33′, equipped at its lower end with an inwardly extending trip arm 34. Pivotally secured to the upper end of this lever 33′ is a right angularly extending arm 35, the free end of which has slidable engagement between the top wall of the housing 14 and the top wall 7 of the casing 5 between the coin chute 15 and coin slot 16, and at the rear edges thereof. Formed upon the extreme inner end of this arm is a plate 36 that is adapted to move into position between the slot 16 and chute 15 when the lever 33′ is tripped in a manner hereinafter described to prevent the dropping of a coin into the coin chute. One of the pins 25 of the plate 10 is of somewhat greater length than the other pins and is adapted to strike the arm 34 of the trip lever 33′ at the time the last article is being dispensed for obviously moving the plate 36 into position between the slot 16 and coin chute 15.

In view of the foregoing description when considered in conjunction with the accompanying drawings it will at once be apparent that I have provided a highly novel, simple and extremely efficiently operating vending machine that is well adapted for all the purposes heretofore designated, and even though I have herein shown and described the invention as consisting of certain detail structural elements it is nevertheless to be understood that some changes may be made therein without affecting the spirit and scope of the appended claim.

Having thus described the invention, what I claim as new is:—

In a dispensing device of the class described, a casing, a false bottom in the casing provided with an article discharge opening, a discharge chute leading from the opening to the outside of the casing, a spindle extending upwardly from the false bottom, a circular plate for rotation on the spindle directly above the false bottom, said circular plate being provided with an annular series of openings adapted to be successively brought into registration with the discharge opening in the false bottom, article holding magazines open at their lower ends and fitted in the respective openings in the circular plate, and means for rotating the plate to successively move the article holding magazines into position over the discharge opening in the false bottom comprising a plurality of spaced pins extending upwardly from the periphery of the circular plate, a sliding bar extending through the casing adjacent the edge of the circular plate, spring means associated with the ends of the bar and the adjacent portion of the casing to normally urge said bar outwardly, an actuating knob on the outer end of the bar, a pivoted dog carried by the bar, a shoulder formed on the dog for engagement with said pins, one at a time, and a leaf spring attached to the bar, the free end thereof engaging with the dog to hold the shoulder in operative engagement with the adjacent pin.

In testimony whereof I affix my signature.

HENRY H. PETERSON.