C. MAY.

VENDING MACHINE.

APPLICATION FILED MAY 28, 1919.

1,375,226. Patented Apr. 19, 1921.

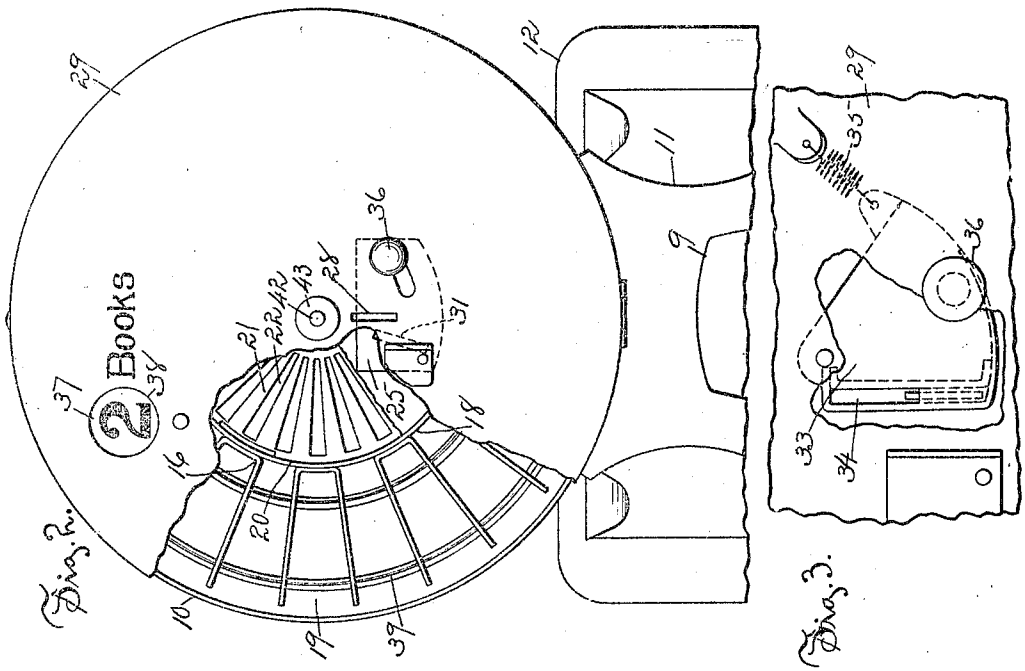


Fig. 2.

Fig. 3.

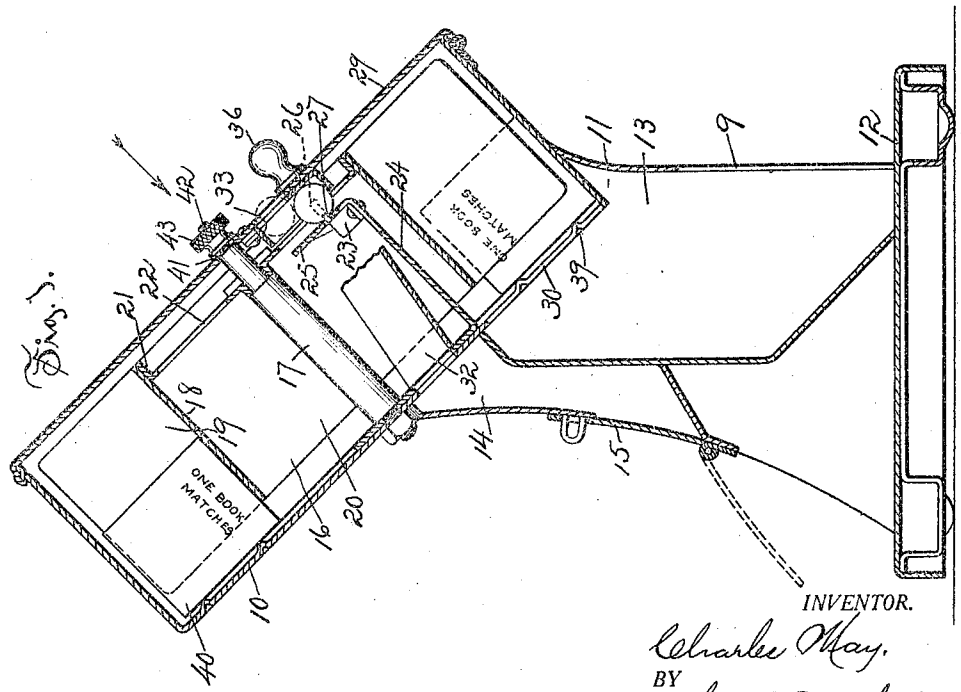


Fig. 1.

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VENDING-MACHINE.

1,375,226. Specification of Letters Patent. Patented Apr. 19, 1921.

Original application filed November 6, 1918, Serial No. 261,348. Divided and this application filed May 28, 1919. Serial No. 300,457.

To all whom it may concern:

Be it known that I, CHARLES MAY, a citizen of the United States, residing in New Britain, in the county of Hartford and State of Connecticut, have invented a new and Improved Vending-Machine, of which the following is a specification.

My invention relates to the class of devices above named, and an object of my invention, among others, is to provide a machine of this class that shall be extremely simple in construction and simple and effective in operation.

One form of vending machine embodying my invention and in the construction and use of which the objects herein set out, as well as others, may be attained, is illustrated in the accompanying drawings, in which—

Figure 1 is a view in central vertical section through a vending machine embodying my invention.

Fig. 2 is a view looking in the direction indicated by the arrow in Fig. 1, the bottom portion of the machine being broken off.

Fig. 3 is a detail view, scale enlarged, illustrating the construction of the carrier.

My improved vending machine is not limited in the nature of its use and may be employed for vending merchandise or articles of various descriptions, but, as I have found it particularly useful for vending matches put up in the so-called "book-form" I have illustrated and described my invention herein as embodied in a machine constructed to receive such packages of matches or articles of a similar nature, which machine comprises a case 10 mounted on a standard 11 rising from a base 12. These parts may be constructed of any suitable material preferably sheet metal, bent to proper form, and they may be of any desired form or shape in cross section. As shown herein the case is round and it is mounted on the standard in an inclined position, the exact angle of such inclination not being of extreme importance, an angle of approximately forty-five degrees having been found by me to produce the best results. The standard has a recess 13 with an opening 9 to the front into which recess the articles fall when released from the case and through which opening 9 they may be obtained. A coin chamber 14 is formed in the back part of the standard, the bottom of this chamber preferably sloping rearwardly so that the coins are caused to slide outwardly from the chamber when the door 15 is opened.

A package carrier 16 is rotatably mounted in the case, preferably upon a post 17 secured to the bottom of the case in any suitable manner, as herein shown a nut fitting the threaded end of the post being employed. This carrier comprises a drum 18 having plates extending radially therefrom, said plates forming pockets 19 radially disposed about the drum. The plates extend nearly to the inner surface of the wall of the case and as herein shown they are formed in pairs, each pair of plates comprising a piece of metal bent into U-shape as shown in Fig. 2 of the drawings.

The drum incloses an inner chamber 20 at the center of the case and an indexing plate 21 is secured within the outer end of said drum and at the mouth of the chamber 20. This indexing plate has indexing slots 22, equal in number to the pockets 19, said slots being preferably disposed in radial lines.

Any suitable means may be employed for imparting a step-by-step movement to said drum by means of said indexing slots, the device herein illustrated being especially adapted for use in connection with coins or tokens and embodying a detent lever 23 pivotally mounted on a support 24 secured to the bottom of the case and rising therefrom, said support having a coin table 25 at its upper end. The detent lever is mounted underneath said table and has a detent 26 (see dotted lines in Fig. 1) located at one end and projecting through an opening in the table and into the indexing slots 22. A trip 27 also projects from the lever nearer its pivot and through an opening in said table into a position in the path of movement of a coin along the table, said trip being beveled on its upper edge and against which beveled surface the coin rests when in position on the table. The coin is inserted through a slot 28 in the cover 29 of the case 10 and a discharge opening 30 is formed through the bottom of the case of a width approximately that of the pockets 19. A coin discharge opening 31 is formed through the table 25 at a point near the trip 27, and a coin chute 32 extends from said coin dis-

charge opening into the chamber 14. A coin carrier 33 is pivotally attached to the under side of the cover 29, this carrier having a coin opening 34 for the reception of a coin inserted in the slot 28. The carrier may be moved in one direction by means of a spring 35 and an actuating knob 36 may be employed for manual operation of the carrier in opposition to said spring. This carrier may be of any suitable construction and it will be seen that a coin inserted through the coin slot and resting in the position shown in Fig. 1 may be moved by the carrier across the trip 27 which will depress the lever 23 and release the detent 26 from engagement with the slots in the indexing plate 21. The pockets in the carrier being filled with books of matches, say two to each pocket, as the carrier is rotated, as just described, through the medium of the coin, a pocket containing packages will be located directly over the opening 30 through which opening the packages will fall into the recess 13, and after the coin has passed the trip 27 the detent will engage the next succeeding slot in the indexing plate 21.

My improved machine is especially adapted for vending goods in variable quantities, in the structure herein shown the pockets being capable of receiving one, two or three packages, either number of which it may be desired to vend for a single coin, a pocket being entirely emptied of its goods in each step-by-step movement of the package carrier. In order to denote to the purchaser the amount of goods that may be obtained for a single coin I provide an indicator comprising an indicator disk 37 rotatably mounted on the under surface of the cover 29, said disk bearing numerals, one of which is disclosed through an opening 36 in the cover. This indicator disk may be rotated in any suitable manner to display that numeral to indicate the number of packages to be obtained for the deposit of a coin.

In order to provide for a free sliding movement of the packages, as the package carrier is rotated, and hence a minimum amount of friction to the movement of the latter, I employ ribs 39 on the floor of the case and upon which the packages 40 rest and along which they move as the package carrier is rotated.

As a means of firmly supporting the cover 29 a recess 41 is formed therein at or near its center into which the upper end of the post 17 extends and if desired the post 17 may be extended through an opening in the bottom of this recess and outside of the cover, such extension 42 being threaded to receive a thumb nut 43. It will be understood, however, that the extension 42 and the thumb nut may be dispensed with if desired, in which case the recess 41 will have no opening to the outside of the cover, the post 17 will terminate within said recess, and the cover will be held closed by the lip at its edge, as shown in Fig. 2 of the drawings.

This case is a division of my copending application of Serial Number 261,348, filed November 6th, 1918, and reference is hereby made to said parent case for an understanding of such mechanism illustrated in the drawings as may not be specifically described and which coin mechanism forms the subject matter of the claims of said parent application.

In accordance with the provisions of the patent statutes, I have described the principles of operation of my invention, together with the device which I now consider to represent the best embodiment thereof; but I desire to have it understood that the device shown is only illustrative, and that the invention may be carried out by other means.

I claim—

1. A vending machine comprising a case, a shaft within said case, a carrier rotatably supported by said shaft, a standard located underneath and supporting said case at one side of the center thereof and also supporting said case and its shaft in an inclined position, and means for controlling the operation of said carrier.

2. A vending machine comprising a tubular standard with its axis vertically arranged, a case having one edge comprising the bottom and side projecting into the otherwise open upper end of said standard, said case being secured in said standard, a shaft within said case, a carrier rotatably supported by said shaft, and means for controlling the operation of said carrier.

3. A vending machine comprising a case, a standard located underneath one edge of said case and supporting it in an inclined position, a shaft having one end secured to the bottom of said case, a carrier rotatably supported by said shaft, fastening means for said shaft located outside of the case at the bottom thereof and at one side of the standard, and means for controlling the operation of said carrier.

4. A vending machine including a standard, a case mounted on the standard in an inclined plane, and with its lower bottom and side edge projecting into the otherwise open upper end of the standard, a package carrier rotatably mounted in the case with its axis in an inclined position, said carrier having pockets for the reception of merchandise that rests on the bottom of the case, and means for controlling the operation of said carrier.

5. A vending machine comprising a case having a closed bottom with a discharge opening therethrough, adjacent to one edge a standard to support said case that is received in an inclined position in the otherwise open upper end of said standard, the

latter having a chamber with which said opening communicates, a package carrier rotatably mounted in the case upon an obliquely disposed axis, and means for controlling the operation of said carrier.

6. A vending machine comprising a case having a closed bottom with a discharge opening therethrough next to the side and with a coin discharge opening between the first mentioned opening and the axial center of the case, a standard with its axis vertically arranged, said standard receiving the bottom and side edge of said case in its otherwise open upper end and at one side of the center of said case, said standard having a recess to register with said package opening and a chamber to register with said coin discharge opening, a package carrier rotatably mounted in the case upon an obliquely disposed axis, and means for controlling the operation of said carrier.

7. A vending machine including a case, a package carrier movably mounted in the case and comprising a drum, U-shaped members separately formed from said drum and secured thereto and projecting outwardly therefrom forming pockets for the reception of merchandise, means located within the drum to control the movement thereof, and means for discharging merchandise from said pockets.

8. A vending machine including a case, a package carrier movably mounted in the case and comprising a drum, U-shaped members secured to said drum to form pockets between the branches of said members, the latter being spaced a distance substantially equal to that between the branches of said members forming pockets between said members, means to control the movement thereof, and means for discharging merchandise from said pockets.

9. A vending machine including a case having vending mechanism therein, a hollow standard upon which said case is mounted, a partition dividing the chamber in the standard vertically into two compartments, an inclined bottom for one of said compartments located above the bottom of the standard, and a door closing an opening into said compartment adjacent to said bottom and adapted to have its inner face disposed in substantially the plane of said inclined bottom to form a slide for coins flowing from said compartment, the other compartment being open to the front of the case.

10. A vending machine comprising a case having vending mechanism therein, a hollow standard supporting said case between its center and periphery, said case being mounted in an inclined position, with one edge projecting into the otherwise open upper end of said standard.

11. A vending machine comprising a case having vending mechanism therein, a hollow standard to support said case, that is received in the otherwise open upper end of said standard, the chamber in the standard being divided by a vertically arranged partition forming one wall of a merchandise discharge chamber and also one wall of a coin receptacle, said case having openings into said chamber and receptacle.

12. A vending machine comprising a case, a standard to support said case in an inclined position and between the center and one edge thereof, the edge of said case comprising a part of the bottom and the side being received in the otherwise open upper end of said standard, a package carrier rotatably mounted upon a shaft obliquely disposed and projecting from the center of said case, and mechanism for controlling the movements of said carrier, said mechanism being located vertically above said standard.

CHARLES MAY.