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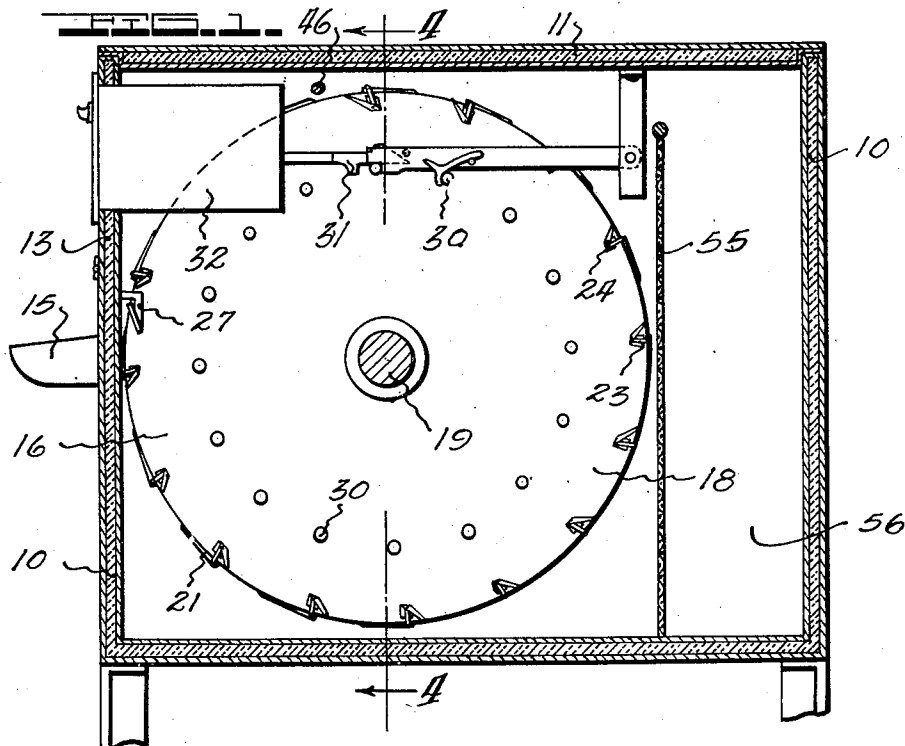
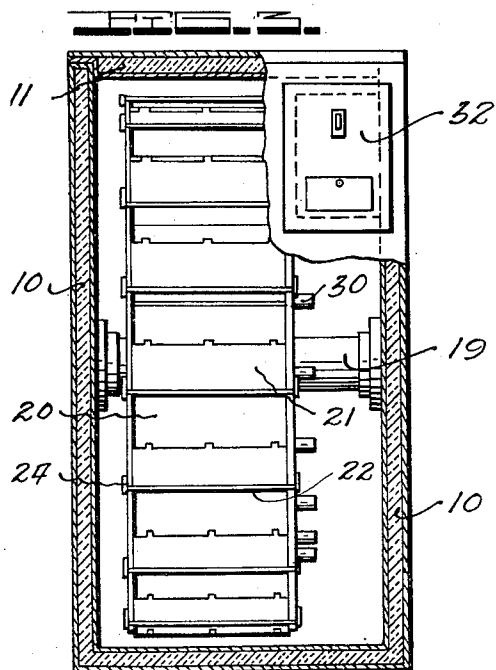
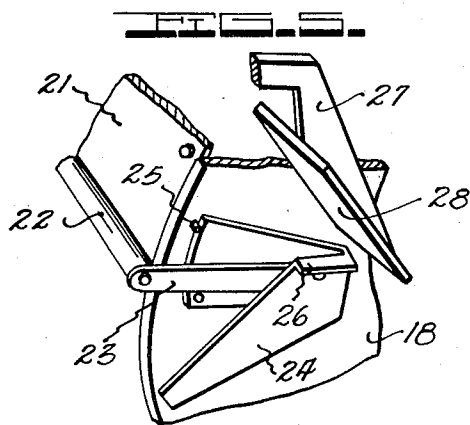
L. L. McNAIR

2,217,962

DISPENSING MACHINE

Filed Jan. 16, 1939

2 Sheets-Sheet 1



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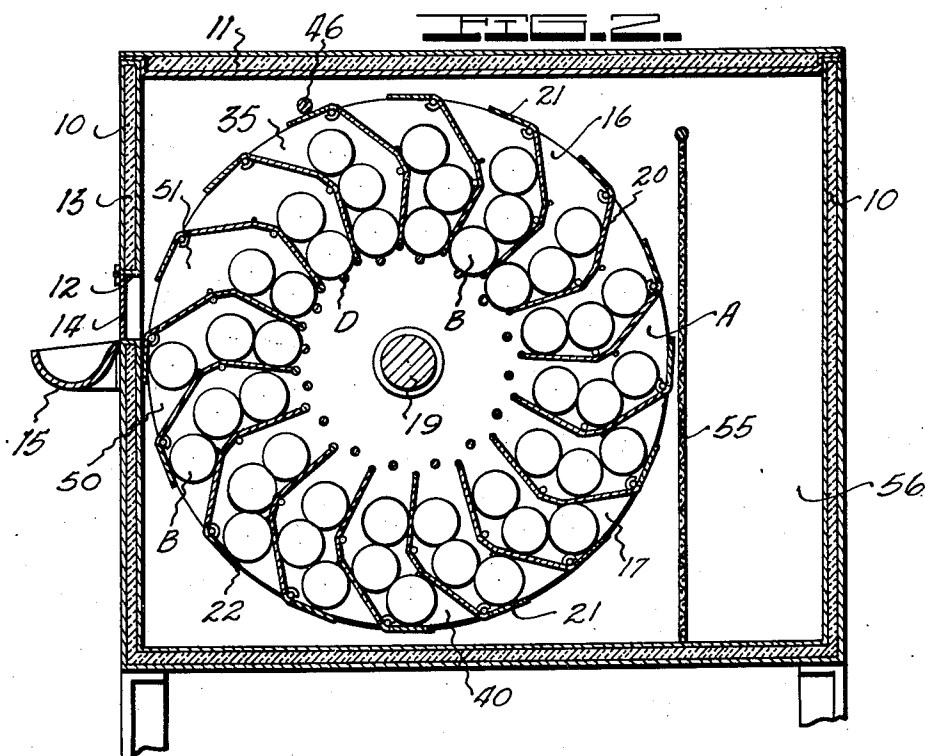
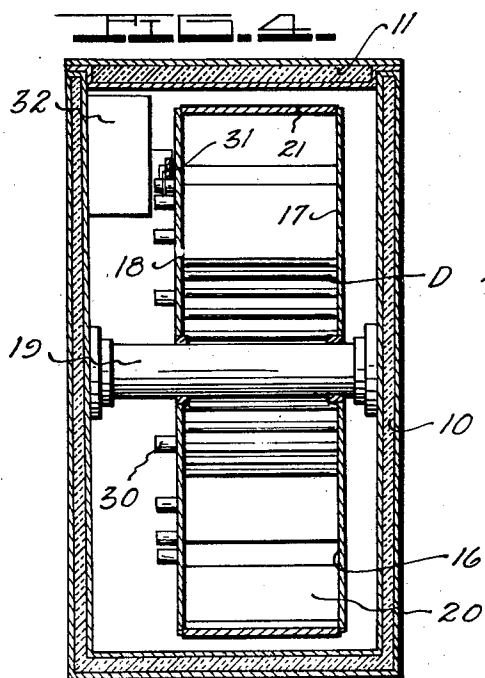
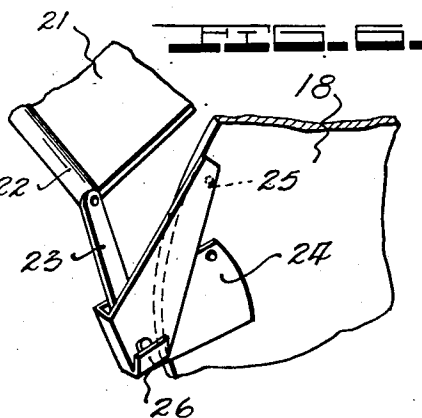
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UNITED STATES PATENT OFFICE

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DISPENSING MACHINE

Lloyd L. McNair, Dallas, Tex.

Application January 16, 1939, Serial No. 251,217

4 Claims. (Cl. 312—36)

This invention relates to new and useful improvements in dispensing machines.

One object of the invention is to provide a dispensing machine which accommodates a larger number of cylindrical articles in a smaller space.

Another object of the invention is to provide a dispensing machine which eliminates the necessity of the operator's person coming into contact with the cooling fluid in any manner.

Another object of the invention is to provide a dispensing machine electrically or manually operated having a battery of units in one housing, each unit containing a specific brand of merchandise thus facilitating the dispensing of said merchandise.

Still another object of the invention is to provide a dispensing machine capable of handling merchandise contained both in bottles and cans.

A further object of the invention is to provide a dispensing machine which is arranged to be actuated either by coin operated mechanism or manually.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawings, wherein:

Figure 1 is a transverse vertical sectional view of a dispensing machine constructed in accordance with the invention.

Figure 2 is a view similar to Figure 1 showing the wheel in section.

Figure 3 is a view partly in section and partly in elevation of one end of the device.

Figure 4 is a transverse vertical sectional view taken on the line 4—4 of Figure 1.

Figure 5 is an isometric view of one of the actuating members in a closed position, and

Figure 6 is a view similar to Figure 5 showing the member in its other position.

In the drawings the numeral 10 designates an insulated rectangular housing having a suitable top 11. An opening 12 is formed in one end 13 of the housing, this end shall be referred to as the front end hereafter.

A trap door 14 closes the opening 12 and may be opened only by a pressure from within said housing.

A receiving tray 15 is disposed immediately below the opening 12 whereby the article dispensed may be retained therein and cannot be retrieved therefrom until such time as the door 14 again closes (Fig. 2).

A wheel 16 having flanges 17 and 18 forming the sides thereof, is mounted on a shaft 19 and positioned centrally in a vertical plane and for-

wardly in a horizontal plane within the housing 10.

Relatively angular walls 20 extend transversely between the side flanges 17 and 18 thereby forming a plurality of separate compartments A. Each compartment has a door 21 hinged thereto at the outer ends of each wall, the free ends 22 of said doors extending slightly beyond the outer periphery of the flanges 17 and 18. Thus a connecting link 23 may have one end fastened to one side of the free end 22 of the door 21 (Figs. 5 and 6).

The other end of the link is pivotally secured to an actuating member 24, said member being pivoted to the outer side of the flange 18. A lug 25 forms a stop for the member 24 in its closed position, while a projecting portion 26 of the member 23 is arranged to be engaged by a member 27 having an angularly disposed face 28. As the wheel 16 is rotated in a clockwise direction, the projection 26 will strike the face 28. Due to the angular disposition of the face 28 a forward and downward movement of the member 24 is caused.

The result of this movement may be clearly seen in Figure 6. In the position shown in Figure 6 the door 21 is in its open or releasing position, whereby an object may be dispensed therefrom as will be hereinafter explained.

It is to be noted that members 24 and 23 engage each of the doors 21 and on both sides thereof.

Lugs 30 extend outwardly of the flange 18 providing means whereby a driving mechanism 31 may transmit motion to the wheel 16.

In Figure 1 the driving mechanism is shown as being actuated by an electrically controlled, coin-operated device 32. It is to be noted that a manually operated mechanism being coin controlled or otherwise (not shown) may be substituted for the mechanism 32, thus the device may be used merely as a cooler and a dispensing aid.

In operation, for purposes of illustration, two or more cylindrical objects, representing a bottled beverage, are inserted into each compartment. By observing Figure 2 it may be seen that there are sixteen compartments shown, and each compartment is capable of accommodating three cylindrical bottles B.

In the compartment numbered 35 it may be seen that all the bottles are forced by gravity to the bottom of the compartment, resting upon a transverse rod D, which rod serves as a bottom for the compartment.

In circling the wheel in a clockwise direction, it will be seen that the bottles are in a varied position to each other, due to the change of the angles of the walls 20 and the action of gravity upon the bottles. By observing the compartment 40 it will be seen that the bottles are retained within the compartment by the door 21 of that compartment.

Continuing in a clockwise direction it will be seen that a definite shifting of the articles B has occurred in the compartment 50. Due to the angles of the wall 20 one article has remained in intimate contact with the door 21, while the remaining articles have shifted to be dependent upon the transverse rod D.

Thus in the compartment 51 immediately adjacent the compartment 50, it may be seen that the door 21 has been released by the members 24 and 27 as has been explained. The weight of the object will, through gravity, cause said object to open the door 14 of the opening 12, thereby allowing the object B to rest within the receiving tray 15.

A transverse rod 46 is provided whereby a positive closing action is given the doors 21.

For cooling the articles B, water is provided. A level is automatically maintained at a point immediately below the bottom edge of the opening 12. Ice may be provided to cool said water, and a screen-wire 55 is provided between the back wall of the housing 10 and the wheel 16. This partition forms a chamber 56 in which the ice is kept, thus preventing said ice from interfering with the rotation of the wheel 16. It is to be noted that an electric cooling unit may be substituted for commercial wet or dry ice.

It is to be noted that the article to be dispensed remains in the cooling fluid until such time as it is dispensed. Also the articles contained within the compartments above the water level are cooled to some degree by a heat-exchange between the metal flanges 17 and 18 of the wheel 16 and the articles B.

It is to be noted that an automatic water level control is provided to cover the addition of articles to the container or loss of space through dispensing. Also the rods D provide a means of drainage from the compartments within the wheel whereby the articles dispensed are comparatively dry. Further the dumping mechanism 27 is so constructed as to be manually movable to prevent the dumping operation during the process of loading the machine.

Attention is called to the fact that a plurality of wheels, individually operated, each wheel containing specific brands of merchandise therein, may be mounted in one housing.

From the foregoing it may be seen that a de-

vice for cooling and dispensing not only bottles, but any suitable cylindrical object, may be had. It may be seen that any suitable means for rotating the wheel 16 to accomplish the dispensing operation may be employed.

Manifestly, the construction as shown and described is capable of some modification and such modification as may be construed within the scope and meaning of the appended claims is also considered to be within the spirit and intent of the invention.

What is claimed is:

1. In a vending machine, a housing, a rotary dispensing element in said housing comprising a multiplicity of radially disposed compartments adapted to contain a plurality of packages and defined by partitions for supporting a predetermined number of said packages and bent intermediate their ends to separate a single one of said packages from the others supported thereby when said dispensing element assumes a predetermined position, means operated at said predetermined position of said element to release said separated package from its compartment, means for receiving said package and means for closing said releasing means upon further movement of said dispensing element.

2. In a dispensing machine, a rotary dispensing element comprising a series of compartments for containing a predetermined number of articles separated by partitions bent intermediate their ends, said compartments being substantially closed at their ends by circular flanges secured to the ends of said partitions, means for holding said articles against release from said compartments preparatory to the release of a single article separated by said bend in said partitions from the companion article in their compartment, means actuating said holding means when said dispensing element assumes a predetermined position and means adapted to receive the dispensed article.

3. In an article dispensing machine, a rotary dispensing element having a series of radial partitions defining compartments, said partitions being bent intermediate their ends to separate one article from the companion articles in each compartment for delivery when said dispensing element attains a predetermined position, means for retaining the articles in their respective compartments preparatory to individual release, means for actuating said latter means and means for receiving the individually released articles.

4. A machine as set forth in claim 3 in which the article retaining means is returned to normal position upon further movement of the rotary dispensing element.

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