W. H. HERMAN.

BOTTLE VENDING MACHINE.

APPLICATION FILED SEPT. 2, 1911.

1,013,015.

Patented Dec. 26, 1911.

2 SHEETS—SHEET 1.

FIG. 1

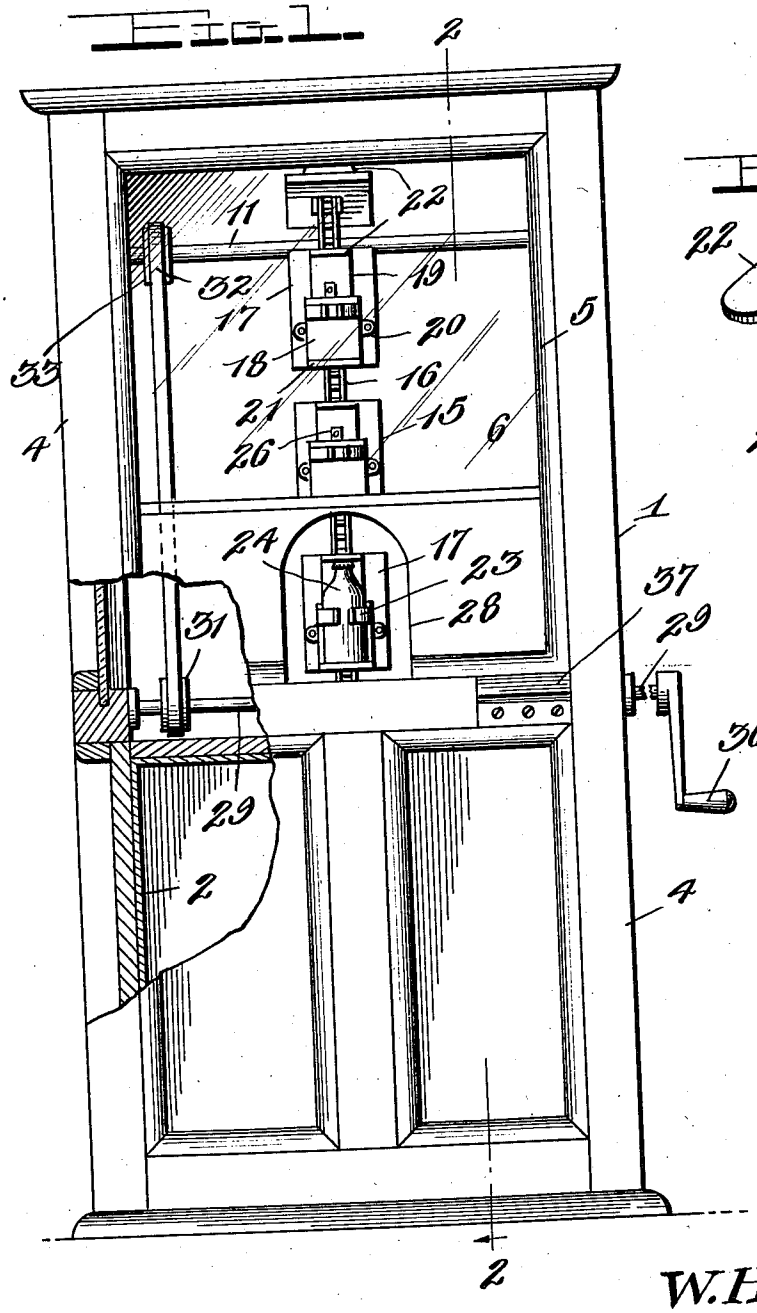
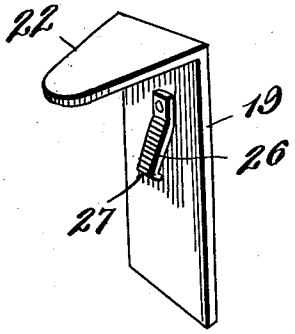


FIG. 5



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2 SHEETS—SHEET 2.

Fig. 2.

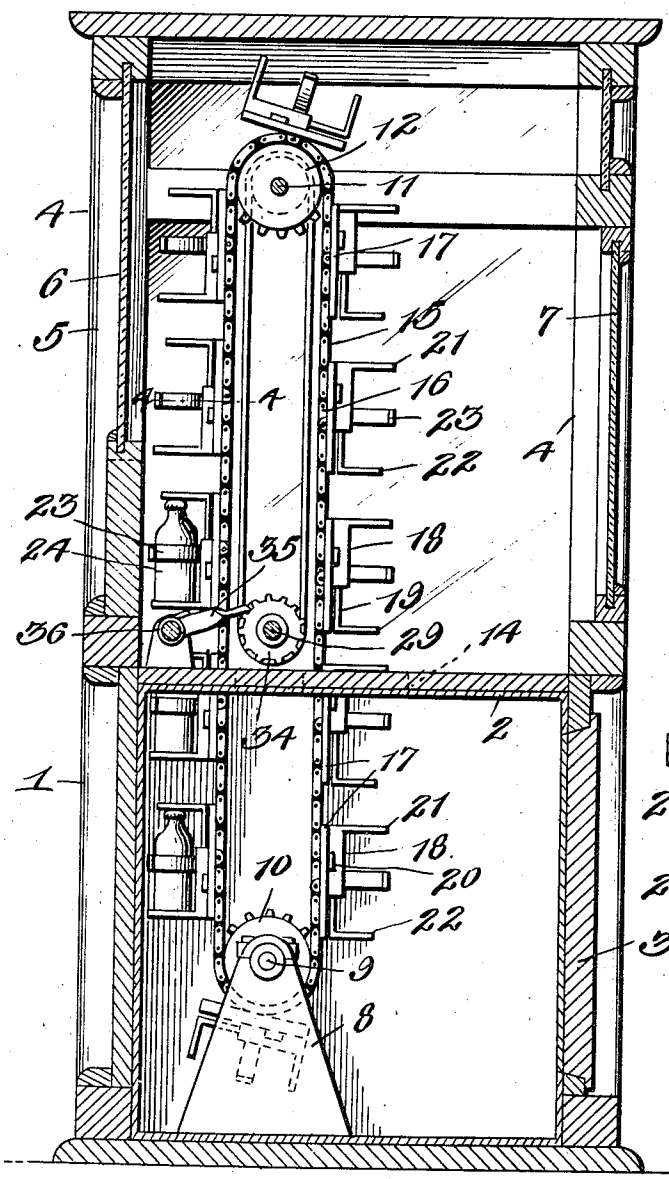


Fig. 3.

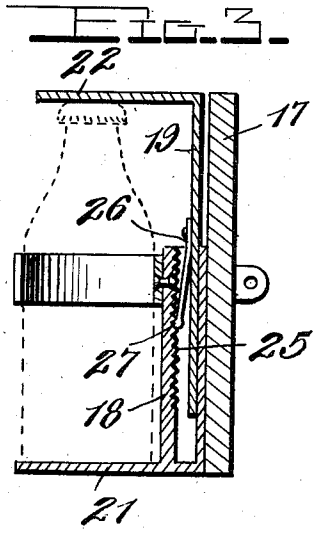
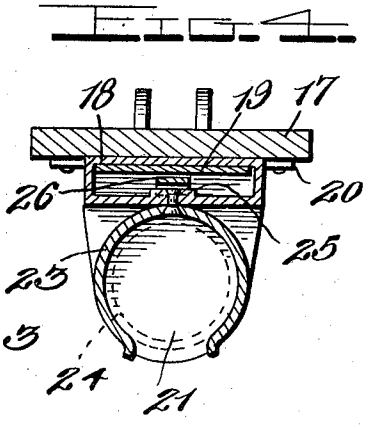


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIE H. HERMAN, OF WESSON, MISSISSIPPI.

BOTTLE-VENDING MACHINE.

1,013,015. Specification of Letters Patent. Patented Dec. 26, 1911.

Original application filed July 22, 1911, Serial No. 639,981. Divided and this application filed September 2. 1911. Serial No. 647,363.

To all whom it may concern:

Be it known that I, WILLIE H. HERMAN, a citizen of the United States, residing at Wesson, in the county of Copiah and State of Mississippi, have invented certain new and useful Improvements in Bottle-Vending Machines, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to new and useful improvements in vending machines and more particularly to a bottle vending machine, the same being a division of my pending application Serial No. 639,981, filed July 22, 1911, and my object is to provide a device of this character wherein an endless carrier has removably mounted thereon, a plurality of bottles which are adapted to be brought into position to be removed one by one.

A further object of the invention resides in providing means whereby the contents of the bottles mounted on the endless carrier may be kept cool.

A further object of the invention resides in the provision of means whereby said carrier may be readily rotated, and a still further object resides in providing improved means for removably securing the bottles to the carrier.

Still another object of the invention resides in the provision of means for retaining the bottles on the carrier, which means is capable of adjustment to accommodate various sized bottles.

A still further object of the invention resides in providing a device which is comparatively simple in construction, thereby inexpensive to manufacture, one which is durable in construction, and very effective and useful in operation.

With these and other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawings forming a part of this application, Figure 1 is a front elevation of the machine. Fig. 2 is a vertical section therethrough as seen on line 2—2, Fig. 1. Fig. 3 is a vertical section through one of the means for removably securing the bottle to the carrier. Fig. 4 is a horizontal section therethrough as seen on line 4—4, Fig. 2. Fig. 5 is a detail perspective view of the slidable section of the bottle-holding means.

In carrying out my invention, I shall refer to the drawings in which similar reference characters designate corresponding parts throughout the several views and in which—

1 indicates a housing of any desired size and shape, the same being preferably square in horizontal section, the inner walls of said housing being lined with porcelain or any other desired material 2 to cause the same to be water-tight, and thus, said housing may form an ice chest or the like. One wall of said housing is provided with a hinged door 3, whereby entrance may be had to the housing, and extending upwardly from the corners of said housing, are the uprights 4 which form a frame-work for the upper casing 5. This upper casing has the walls thereof formed of transparent panes 6, which are mounted between said uprights 4, and one of the walls of this last referred to casing is provided with a hinged door 7, whereby entrance may be gained to said casing, and if desired, both doors 3 and 7 may be provided with any desired securing means (not shown) to lock the same in their closed positions.

Mounted in the floor of the housing 1, is a pair of supporting blocks or the like 8, between which is rotatably mounted a shaft 9 which carries thereon, a sprocket wheel 10, and rotatably carried between the frame of the upper casing 5 adjacent the top thereof, is an additional shaft 11, upon which is mounted to rotate therewith, an additional sprocket 12. Extending over the sprockets in the casing and the housing and through openings 14 in the bottom of said casing, or what may be termed the top of said housing, is an endless carrier 15, said carrier comprising an endless chain 16, the links of which are adapted to engage the teeth of the sprocket and a plurality of blocks or plates 17 carried on the outer faces of the links of said chain.

Each plate or block 17, except one, is provided with a pair of hollow rectangular telescoping sections 18 and 19, respectively, the section 18 being provided on its rear face with the integral and laterally extending ears 20, whereby the same may be secured

to the front face of the plate or block 17. The sections 18 and 19 are each formed of a single piece of material, the lower section 18 having its lower edge provided with a laterally extending flange 21, while the upper section 19 has its upper edge provided with a similar laterally extending flange 22, which flanges form substantially a top and bottom, respectively, for any desired device, such as a bottle, which is adapted to be held therebetween, and the front face of the section 18 is provided with a spring clamping member 23 adapted to receive therein, a bottle or the like 24. This bottle is adapted to rest on the lower flange or bottom 21, while the spring clamping member 23 is adapted to encircle the same to retain it in position, and as the upper section 19 is telescoped within the lower section 18, the same may be adjusted to accommodate various sized bottles, so that the top flange 22 may be always allowed to engage the top or neck of the bottle. It is extremely essential that some means be provided, such as these flanges 21 and 22, to allow the bottles to rest on some firm means and to protect the same, as the bottles on the carrier are drawn through crushed ice which is carried in the housing 1 to cool the contents of said bottles, and which would doubtless tend to release the bottles from their securing means should no such protection be provided.

As stated, the upper section 19 is adjustably mounted within the lower section 18 so as to compensate for various sized bottles and in order to retain the section 19 in any adjusted position, so that the flange 22 thereof will engage the upper periphery of the neck of the bottle, the inner face of the outer wall of the section 18 is provided with a rack or the like 25, and the outer face of the front wall of the section 19 is provided with a leaf spring 26, one end of which is secured therto, while the free end is disposed outwardly somewhat to form an engaging pawl or the like. The extreme free end of said spring member 26 is bent around, as shown at 27, so that the same may readily pass over the notches or teeth of the rack, and it will be seen that when the section 19 is positioned within the section 18, the free end of this spring 26 is adapted to engage said rack to retain said section 19 in any adjusted position. The engagement, however, of the spring 26 with the rack 25 is merely sufficient to prevent the casual movement of the section 19 with respect to the section 18 during the operation of the device, but the said sections may be readily separated by manual operation.

In order to allow the bottles to be readily removed from the clamping members and holding means on the endless carrier, an opening 28 sufficiently large to admit of the entrance of the hand therein, is provided on the front wall or face of the casing 5, and in order to rotate the endless carrier so that said bottles may be brought into position adjacent the opening 28 to be removed, a shaft 29 is provided which extends transversely through the walls of the machine just above the floor of the casing 5. One end of this shaft extends beyond one side of the machine and is provided with a crank or handle member 30, whereby said shaft may be readily turned, and said shaft has mounted thereon within the casing 5, a pulley 31 over which extends a belt 32, said belt also extending over a pulley 33 in the upper shaft 11. As the crank or handle member 30 is turned to correspondingly rotate the shaft 29, the shaft 11 will also be rotated which will cause the endless carrier 15 to be also rotated, and in order to prevent the backward movement of the shaft 29, the same is provided with a pinion or the like 34 with which is engaged the effective end of a pawl 35 pivotally carried on one wall of the casing 5. This pawl is held by means of a spring 36 so that the same is normally in engagement with said pinon, and under these conditions, it will be appreciated that the shaft 29 can be rotated in but one direction, so that those tampering with the machine with malicious intent, will not find their attempt successful. This pinion 34 may also be used in connection with some form of check-controlled apparatus, but as this does not form any part of my invention, I do not desire to describe or illustrate the same.

In practice, bottles filled with any liquid which is desired to be vended, are first applied to all but one of the plates on the endless carrier and ice placed in the housing or chest 1, whereupon the carrier is then rotated so that the empty plate will be disposed opposite the opening in the front wall of the device. The doors of the device are then locked so that no one may enter with malicious intent, and if some check-controlled mechanism has been applied to the device, it will be seen that in this position, it will be impossible for anyone to obtain a bottle from the machine until such check-controlled mechanism has been properly operated. When no check-controlled apparatus has been applied, however, such as in this instance, it will only be necessary for the operator to turn the crank or handle 30 in one direction which will turn the carrier 15 so as to dispose a bottle in position adjacent the opening 28. The hand may then be readily entered through said opening and the bottle grasped and removed from its engagement with the spring clamp. A bottle opener or the like 37 is also provided on the front wall of the device, whereby the purchaser of the bottle may readily remove the cap or closure therefrom to drink

the contents of the bottle, if desired, and when the bottle has been emptied, the same is again positioned in the spring clamping member. The placing of the ice in the housing in the lower portion of the device and the disposing of the carrier therethrough so that the bottles carried thereby may pass through this housing before being obtained by the purchaser, makes it possible for the contents of the bottles to always be cold when purchased, and after one bottle has been emptied, the handle member 30 may be turned to dispose another bottle in position adjacent the opening, and so on until all the bottles have been emptied.

From the foregoing, it will be seen that I have provided a bottle vending machine with improved means for delivering the contents thereof. It will further be seen that the delivering mechanism comprises an endless carrier, upon which are removably engaged bottles of liquid content which may be removed one by one. Furthermore, it will be seen that I have provided means on the endless carrier for removably securing bottles thereto, which means is capable of adjustment to accommodate bottles of various sizes. It will still further be seen that this device is extremely simple in construction, containing comparatively few parts, whereby the same may be readily and cheaply manufactured, one which is durable in construction, and very effective and useful in operation.

What I claim is:—

1. In a vending machine of the class described, the combination with a housing and a casing formed thereabove, said casing being provided with an opening in one face thereof; of an endless carrier mounted within said casing and housing, means to removably carry a plurality of bottles on said carrier, said means being capable of adjustment to accommodate bottles of various sizes, and means to rotate said carriers, whereby the bottles thereon will be disposed in position adjacent the opening in said casing.

2. In a vending machine of the class described, the combination with a housing and a casing formed thereabove, said casing being provided with an opening in one face thereof; of an endless carrier mounted within said casing and housing, spring clamping members mounted on the carrier adapted to receive bottles in engagement therewith, additional adjusting means to accommodate bottles of various sizes, and means to rotate said carrier.

3. In a vending machine of the class described, the combination with a housing and a casing formed thereabove, said casing having an opening provided in one wall thereof; of an endless carrier mounted in said casing and housing, a plurality of plates carried on said carrier, a pair of telescoping sections carried on each plate, each section being provided with a laterally extending flange, spring clamping members carried on one of the sections adapted to receive bottles in engagement therewith, and means to rotate said carrier.

4. In a vending machine of the class described, the combination with a housing and a casing formed thereabove, said casing being provided with an opening in one face thereof; of an endless carrier mounted within said casing and housing, a plurality of plates carried on said carrier, a pair of telescoping members carried on each plate adapted to receive a bottle therebetween, means to retain said sections in any adjusted position, spring clamping members in connection with said telescoping sections, and means to rotate said carrier.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIE H. HERMAN.

Witnesses:
R. W. CARTER,
W. H. FOSTER.