Jan. 23, 1923.

1,442,953.

J. G. KEHOE.

BOTTLE VENDING MACHINE.

FILED FEB. 13, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

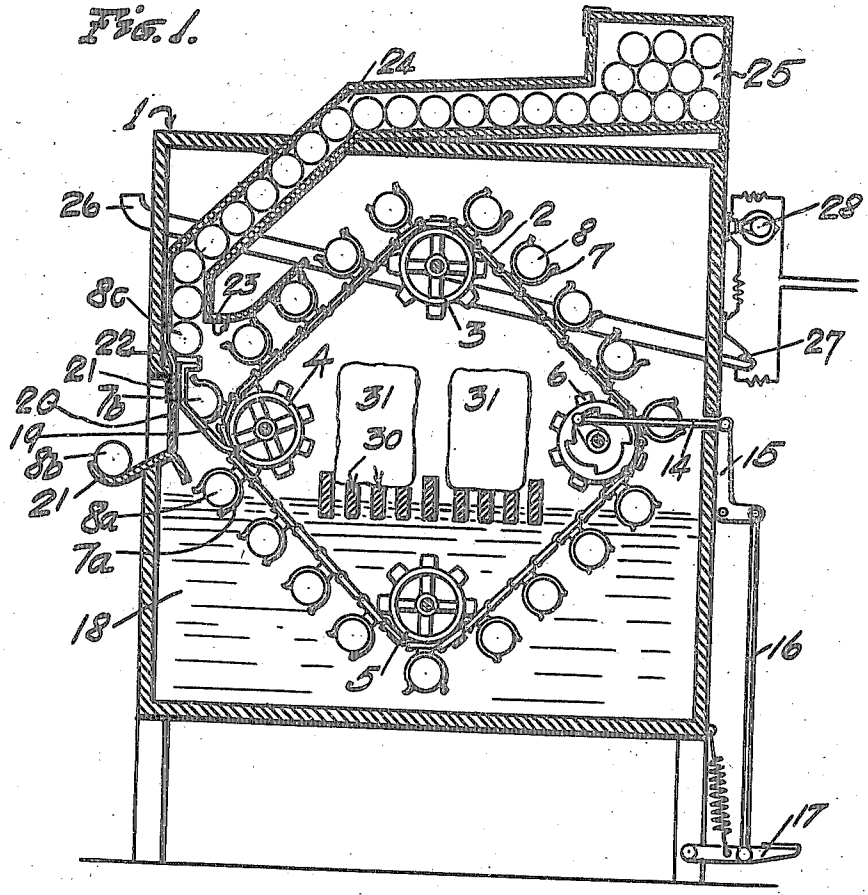


Fig. 2.

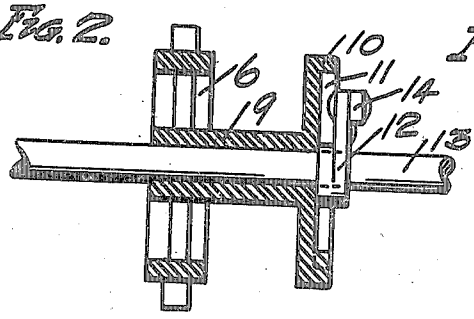
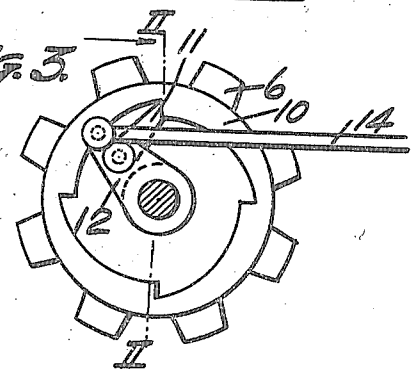


Fig. 3.



Josephine Griffith Kehoe. INVENTOR

BY

J. H. Weatherford

ATTORNEY

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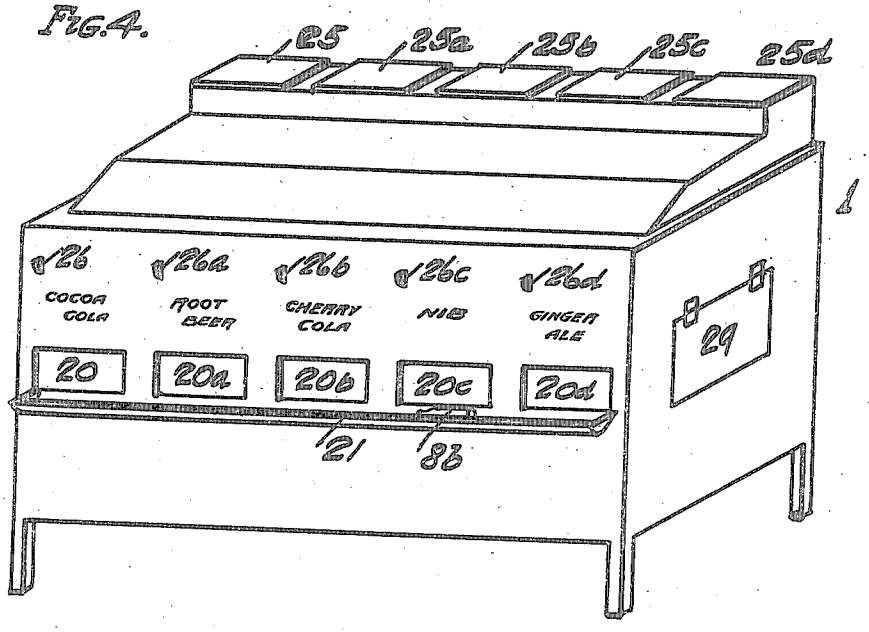
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2 SHEETS—SHEET 2.

FIG. 4.



JOSEPHINE GRIFFITH KEHOE INVENTOR

BY J. H. Weatherford

ATTORNEY

Patented Jan. 23, 1923.

1,442,953

UNITED STATES PATENT OFFICE.

JOSEPHINE GRIFFITH KEHOE, OF MEMPHIS, TENNESSEE.

BOTTLE-VENDING MACHINE.

Application filed February 13, 1922. Serial No. 536,077.

To all whom it may concern:

Be it known that I, JOSEPHINE GRIFFITH KEHOE, a citizen of the United States, residing in Memphis, in the county of Shelby and State of Tennessee, have invented a certain new and useful Improvement in Bottle-Vending Machines, of which the following is a full, clear, and exact description, such as will enable anyone skilled in the art to make and use the same.

My invention relates to machines for dispensing small packages, especially bottles which it is desired to keep ice cold and which will dispense one at a time.

The objects of my invention are to provide such a device which can be economically iced, which will keep a large number of the bottles cold, which will dispense the bottles one at a time, and which will automatically feed in an additional bottle as each bottle is taken out; it is further the object of my invention to do this so that the bottles will be handled without danger of breaking and that the dispensing of the bottles will be under the control of an operator. A further object to provide means of notifying the operator when a bottle has been paid for so that he may deliver the bottle to the purchaser.

I accomplish these objects as will be more fully hereinafter set out in the drawings, specifications and claims.

In the drawings:

Figure 1. Is a cross section of my machine showing one of the dispensing devices.

Figure 2. Is a section on the line II—II, of Figure 3.

Figure 3. Is an end elevation on an enlarged scale showing the control mechanism for feeding the bottles forward.

Figure 4. Is a mechanical perspective of the outside of the machine showing same arranged for dispensing five different kinds of bottled goods.

In the drawings in which I have used reference numerals to indicate the same or like parts in all the views, 1, is a cabinet arranged to hold a plurality of bottle dispensing devices all of similar nature. These dispensing devices consist of a chain 2, running over sprocket wheels 3, 4, 5, and 6, the latter of which is arranged to operate the device, the other three sprocket wheels preferably being idlers. This chain carries spring clips 7, which are adapted to hold securely bottles 8, these bottles being forced into the clips and when dispensed being forced out of the clips. The chain 2, is moved forward by rotating the driving sprocket 6. The method by which this movement is accomplished is more clearly shown in Fig. 2 and Fig. 3 in which it will be seen that the sprocket wheel 6, has a hub 9 which extends over and has fastened thereto a ratchet wheel 10. Engaging with this ratchet wheel is a ratchet pawl 11 which is carried by an arm 12, journaled on the shaft 13 on which the sprocket wheel 6 is also journaled. This arm 12 is moved by means of a rod 14 which extends outward thru an opening in the back of the cabinet 1. This rod is connected thru a bell crank lever 15 to a second rod 16 which is operated by a foot lever 17 so that when the attendant presses down on the foot lever 17, the ratchet wheel 10 is moved forward one space, in this case one quarter of a revolution, and with it the sprocket wheel 6 is moved a like amount carrying with it the chain 2. When this is done the bottle 8^a is moved upward out of the ice cold water 18 in the bottom of the cabinet and comes into contact with fingers 19, one of which is on each side of the sprocket wheel 4. These fingers 19 strip or pull the bottle out of the holder 7^a and in so doing force it outward thru a trap door 20 in the front of the cabinet allowing the bottle to roll forward in a receiving trough 21 where it is within reach of the purchaser. The bottle 8^b showing a bottle which has been so delivered. The trap door 20 is hinged by means of hinges 21 to the cabinet 1, and may be provided with a spring in order that it will be closed after the bottle passes thru the opening. When the door 20 swings outward, fingers 22 integral with the door and extending there above engage the bottle 8^c and push it forward so that it will come in contact with the opening of the clip 7^c from which the bottle 8^c has been previously forced. As the chain moves further it will come against the under surface of the guard 23 and will be forced downward into place in the said spring clip to be thereafter carried by the clip forward and eventually dispensed. Bottles may be fed thru the channel 24 from a hopper 25 which is preferably at the back of the cabinet and within reach only of the attendant. If it be more convenient however, this hopper can of course be moved for-

ward and placed directly over the front of the cabinet or at any other point on the top thereof which may be desired.

26 is a coin chute in which the necessary coin to pay for the bottle is placed. The coin 27 rolls backward and downward thru the chute eventually appearing at the back of the cabinet in full view of the attendant who is enabled to see whether the proper coin has been put in the slot. When the coin reaches the position shown, it preferably closes an electric circuit diagrammatically illustrated and lights a signal light 28 thru which the attendant is notified. When the attendant sees the light flash on he inspects the coin and preferably removes same then steps on the foot lever 17 and delivers the bottle purchased in the manner hereinbefore described.

A plurality of these dispensing devices may be included in the one cabinet. In Fig. 1, I have shown this cabinet with hoppers, 25, 25^a, 25^b, 25^c, 25^d and correspondently with five doors, 20, 20^a, 20^b, 20^c and 20^d. In this view I also show the bottles 8^b delivered ready for the purchaser to remove same.

The cabinet is iced thru a door 29 at the end of the cabinet, a similar door may be placed at the other end if so desired. Ice is pushed thru this door and received on an ice rack 30 which extends from end to end of the cabinet. In Fig. 1 two cakes of ice 31 are shown though these may represent of course additional cakes directly in line therewith. It will be seen that by having a chain passing around the sprocket wheels as shown, it is possible to provide this extra icing feature and enable the cabinet to be effectually iced at a minimum of trouble.

It will of course, be understood that each of the dispensing chains is similar to the one shown.

In the detailed view of the ratchet wheel shown in Fig. 3 it has not been thought necessary to show a spring for holding the pawl 11 in engagement with ratchet wheel 10 as such springs are well known and do not need detail illustration.

Having now described my invention what I claim and desire to secure by Letters Patent in the United States is:

1. In a bottle vending machine, a cabinet, a bottle holding carrier means for advancing the said carrier step by step, a discharge opening through the front of the said cabinet, a door normally closing the said discharge opening, fingers attached to the said cabinet for stripping a bottle from the said carrier and forcing the said door open, fingers extending above the said door for forcing a bottle into loading position relative to the said carrier and means for forcing the bottle into the said carrier.

2. In a bottle vending machine, a cabinet, a carrier mounted within the said cabinet, a plurality of bottle holders attached to the said carrier, means for advancing the said carrier step by step, an opening through the front of the said cabinet, a door normally closing the said opening and hinged at its top to the said cabinet, fingers within the said cabinet attached thereto above the said door and extending downward and backward on each side of the said carrier for removing a bottle from each of the said holders in succession as the carrier is advanced, and forcing the said bottle outward through the said door, fingers extending upward from the top of the said door adapted to place a bottle in loading position relative to a holder on the carrier where the said door is forced open by means for forcing the bottle so placed into the said holder.

3. In a bottle vending machine, a cabinet, a carrier mounted within the said cabinet, a plurality of spring clips attached to the said carriers, means for advancing the said carrier step by step, a discharge opening through the front of the said cabinet, a door normally closing the said discharge opening, fingers within the said cabinet and attached thereto for stripping a bottle from each of the said clips as the latter are advanced opposite the said door and thereby forcing the said door open, fingers carried by the said door and operated by the opening of the same for forcing a bottle into loading position and means for forcing the bottle into the said carrier.

4. In a bottle vending machine, a cabinet, a bottle carrier, means for loading the same and means for discharging the same, means for advancing the said carrier step by step, comprising a gear driving the said carrier, a ratchet wheel attached to the said gear, a pawl engaging the teeth of the said ratchet wheel, an arm conveying the said pawl, a bell crank lever mounted on the back of the said cabinet, and extending from the said arm to the said bell crank lever, a lever adapted to be depressed by foot pressure, a spring normally holding the said lever in a raised position and a rod connecting the said bell crank lever and the said foot lever.

In testimony whereof I have hereunto set my name.

JOSEPHINE GRIFFITH KEHOE.

Witnesses:

JAMES G. ROSS,

W. A. GATINS.