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BOTTLE COOLER AND DISPENSER

Filed Feb. 16, 1926

2 Sheets-Sheet 1

FIG. 1.

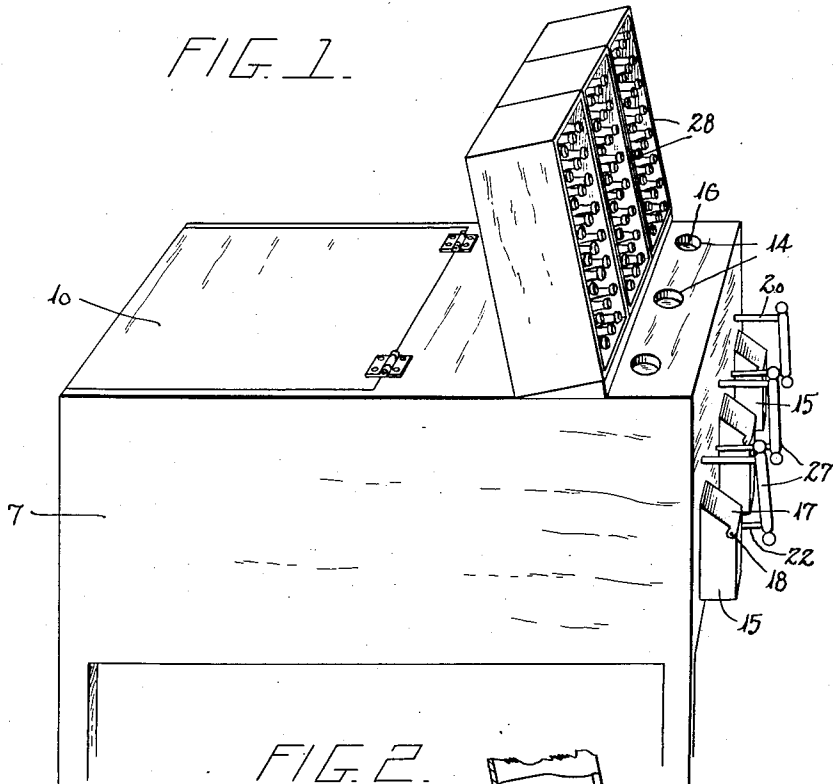
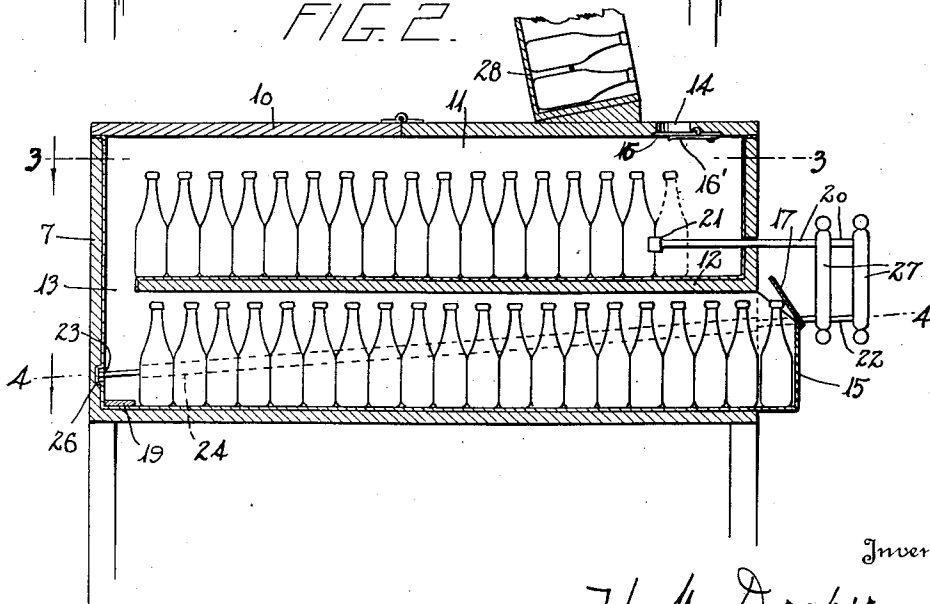


FIG. 2.



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FIG. 3.

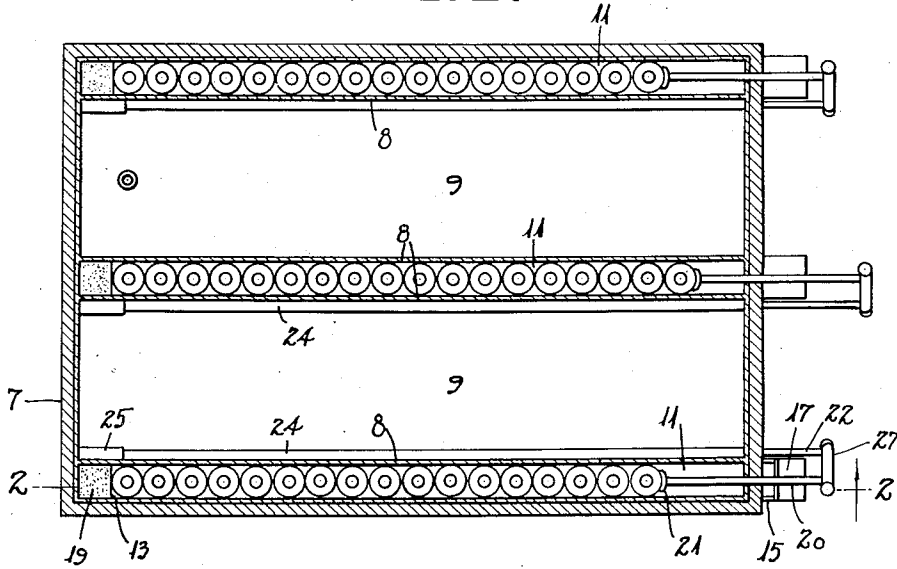
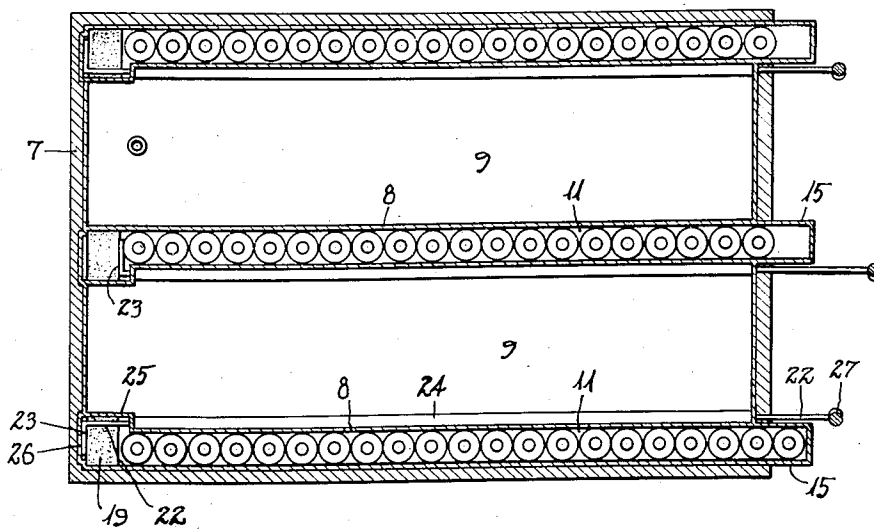


FIG. 4.



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UNITED STATES PATENT OFFICE.

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BOTTLE COOLER AND DISPENSER.

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The present invention relates to bottle coolers or refrigerators, such as are used for holding and cooling bottles containing beverages, and the invention aims to provide
5 a novel and improved bottle cooler and dispenser.

An object of the invention is the provision of a cooler or refrigerator cabinet having provisions for receiving the bottles and dispensing or discharging same.

Another object of the invention is the provision of a bottle cooler and dispenser having novel provisions for the movement of the bottles therein from the points where
15 the bottles enter to the points where the bottles are discharged, and a further object is to provide novel means for moving the bottles to feed them to the exit.

A still further object is the provision of
20 dispensing or discharging portions for the bottles having normally closed doors which are automatically opened when the bottles are delivered to said portions, in order that the bottles may be readily withdrawn.

With the foregoing and other objects in view, which will be apparent as the description proceeds, the invention resides in the construction and arrangement of parts, as hereinafter described and claimed, it being understood that changes can be made
30 within the scope of what is claimed, without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of the improved bottle cooler and dispenser.

Figure 2 is a vertical section thereof taken on the line 2—2 of Fig. 3, illustrating a
40 bottle in delivery or dispensing position.

Figs. 3 and 4 are horizontal sections on the respective lines 3—3 and 4—4 of Fig. 2.

In carrying out the invention there is provided a cabinet or casing 7 of suitable dimensions, which may be composed of wood lined with sheet metal, or of any other suitable construction. The cabinet has the vertical partitions 8 extending from the front wall to the rear wall, and providing the ice chambers 9. The top of the cabinet has a hinged ice door 10 which may be raised for introducing the ice into the chambers 9. The partitions 8 also provide bottle compartments 11, and the ice chambers and bottle
55 compartments are alternated between the sides of the cabinet, said chambers and com-

partments extending forwardly and rearwardly. The bottle compartments are of a width corresponding with the diameters of the bottles in order that the bottles may
60 move in rows in said compartments. Horizontal partitions 12 are provided in the compartments 11 between the top and bottom of the cabinet and terminate short of the back wall of the cabinet to provide open-
65 ings 13 at the rear ends of the partitions 12 establishing communication between the upper and lower sections of the bottle compartments. Thus, a row of bottles is supported on the partition 12 of each com-
70 partment and a lower row of bottles is supported on the bottom of the cabinet in each compartment, as seen in Fig. 2. The top of the cabinet has an entrance opening
75 14 near the forward end of each compartment through which the bottles may be introduced or deposited into the bottle compartment, and the front wall of the cabinet has an outstanding delivery or dispensing
80 portion 15 for each bottle compartment and forming an extension of the forward end of the lower section or portion of such compartment, as seen in Figs. 2 and 4. The
85 openings 14 are normally closed by hinged trap doors 16 seating upwardly against the top of the cabinet below said openings, and held closed by leaf or other suitable springs
16'. Said doors 16 are moved downwardly when the bottles are deposited in the cabinet through said openings, and the doors
90 close after the bottles have passed into the cabinet, so as to prevent warm air entering the cabinet or cold air escaping therefrom through said openings 14. The delivery
95 portions 15 are open at the top, and the upper openings thereof are normally closed by doors or flap valves 17 which are hinged, as at 18, to the portions 15 to swing rearwardly and downwardly against the inclined
100 upper ends of said portions 15. The doors 17 swing rearwardly and downwardly by gravity to close the discharge openings so as to prevent warm air entering or the cold air leaving the cabinet.

The upper row of bottles in each bottle
105 compartment is moved rearwardly step by step as the bottles are introduced into said compartment, and the rearmost bottle of the upper row, when moved rearwardly off the partition 12, drops through the opening
110 13 onto the bottom of the cabinet at the rear of the lower row of bottles. A cushion

or pad 19 of rubber, leather or other resilient material is disposed on the bottom of the cabinet below each opening 13 so as to cushion the shock or jar when the bottle drops.

5 In order to move the upper rows of bottles rearwardly, push rods 20 are slidable through the front wall of the cabinet above the partitions 12 and have portions 21 at their inner or rear ends to contact with the last bottles deposited in the cabinet. In order to move 10 the lower rows of bottles forwardly pull rods 22 are slidable through the front wall of the cabinet and have hooks or fingers 23 at their rear ends at the back wall of the cabinet to engage the rear bottles of the lower rows. 15 The rods 22 are slidable through tubes 24 which, as shown, are disposed in the chambers 9 along the corresponding partitions 8 and extend from the front wall of the cabinet to offsets 25 in the corresponding partitions 20 8. The back wall of the cabinet has recesses 26 to receive the hooks 23 when the rods 22 are moved rearwardly so that said hooks will not be in the way of the bottles which drop 25 through the openings 13. A handle 27 is connected to the forward ends of each pair of rods 20 and 22 for simultaneously moving said rods.

30 Racks or boxes 28 are mounted on the top of the cabinet in rear of the openings 14 and in front of the door 10, for holding surplus bottles on display, and from which the bottles may be readily removed and deposited in the cabinet.

35 As shown, the cabinet is provided with three bottle compartments, although there may be any number of them according to the varieties of bottled beverages to be dispensed. The water level, especially if the bottle compartments communicate with the ice chambers, is below the discharge openings in order 40 to prevent the water overflowing through said discharge openings. The lower rows of bottles may thus be partially submerged in the cold water, if desired, although the partitions 8 may be water tight so that the compartments 11 do not contain water or ice. The tubes 24 are also inclined so that their upper forward ends are above the water 45 level, to prevent the water leaking outwardly through said tubes.

50 In operation, assuming the upper and lower portions of a compartment 11 to be filled with bottles, as seen in Fig. 2, when it is desired to dispense a bottle, the corresponding handle 27 is moved forwardly, and the pull rod 22 being pulled forwardly will, by the contact of the hook 23 with the rear- 55 most bottle of the lower row, move the lower row of bottles forwardly one step. The foremost bottle is moved into the discharge portion 15, and the cap or head of the bottle will contact with the door 17, thereby swinging same open by cam action, as seen in Fig. 60 2. This enables the door to be swung open

and the delivered or discharged bottle readily lifted or withdrawn through the discharge opening. The door 17 is then closed, and while the rods 20 and 22 are disposed forwardly, another bottle is delivered into the 70 compartment by depositing the bottle down through the opening 14 to the dotted line position shown in Fig. 2, the rod 20 being moved or withdrawn forwardly so as not to interfere with the depositing of the bottle 75 into the compartment. Then, when the handle 27 is moved rearwardly, the push rod 20 contacting with the foremost bottle of the upper row, which was just deposited in the cabinet, will shift the upper row of bottles 80 rearwardly, and, at the same time, the lower rod 22 is moved rearwardly so as to move the hook 23 into the recess 26. The upper row of bottles being moved rearwardly will slide the rearmost bottle thereof off the partition 85 12, so that it will drop down through the opening 13 in front of the hook 23 and at the rear end of the lower row of bottles. As the bottles move rearwardly on the partition 12 and then forwardly on the bottom of the 90 cabinet they are cooled, so that when the foremost bottle of the lower row is discharged it is cold.

Each compartment must be kept full of bottles in order to dispense the bottles there- 95 from, inasmuch as the bottle must be dropped from the upper row to the rear end of the lower row in order that the lower row of bottles will be fed forwardly by the pull rod 100 22, after the foremost bottle of the lower has been removed.

The bottles remain upright while in the cabinet and are deposited in the cabinet at the front thereof where the bottles are also discharged, so that the device may be con- 105 veniently operated.

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

1. A bottle cooler and dispenser comprising a cabinet having a bottle compartment 110 for holding a row of upright bottles, an outstanding discharge portion at the delivery end of said compartment provided with an upper opening, and an inclined hinged door for said opening arranged for contact 115 of the upper end of a bottle moved into said discharge portion to swing the door open by cam action.

2. A bottle cooler and dispenser comprising a cabinet having a bottle compartment 120 for holding a row of upright bottles, an outstanding discharge portion at the delivery end of said compartment provided with an inclined open upper end, and a hinged door on said portion to swing downwardly 125 over said open end thereof and arranged to be swung open by a bottle moving into said discharge portion.

3. A bottle cooler and dispenser comprising a cabinet having a bottle compartment 130

with upper and lower portions for holding upper and lower rows of bottles, with an opening between said portions at the rear end of the compartment arranged for the dropping of the bottles through said opening from the upper to the lower rows, the cabinet having a bottle entrance at the forward end of the upper portion of said compartment, and having an outstanding discharge portion at the forward end of the lower portion of the compartment, said discharge portion being adapted to receive the foremost bottle of the lower row and having an upper opening through which said bottle may be lifted, and means for moving the upper and lower rows of bottles rearwardly and forwardly, respectively.

4. A bottle cooler and dispenser comprising a cabinet having a bottle compartment with a horizontal partition forming upper and lower portions for upper and lower rows of bottles, with an opening at one end of said partition through which the bottles may drop from the upper row to the lower row, the cabinet having an entrance opening arranged for depositing bottles on said partition near the end thereof opposite to the first named opening, the cabinet having an outstanding discharge portion at that end of the lower portion of the compartment opposite to the first named opening, said discharge portion having an upper opening, and means for moving the upper row of bottles from the entrance opening toward the first named opening and for moving the lower row of bottles from the first named opening to said discharge portion.

5. A bottle cooler and dispenser comprising a cabinet having a bottle compartment with upper and lower portions for upper and lower rows of bottles, with an opening be-

tween said portions at the rear end of the compartment arranged for the dropping of the rearmost bottle of the upper row to the rear end of the lower row, the cabinet having a bottle entrance and a bottle exit for the upper and lower portions of the compartment, respectively, at the forward end of the compartment, a push rod movable through the front wall of the cabinet arranged to push the upper row of bottles rearwardly, a pull rod movable through the front wall of the cabinet and having a hook at its rear end movable below said opening for moving the lower row of bottles forwardly, and a handle connecting said rods.

6. A bottle cooler and dispenser comprising a cabinet having a bottle compartment with a horizontal partition providing upper and lower portions for upper and lower rows of bottles, with an opening at the rear end of said partition through which the rearmost bottle of the upper row may drop to the rear end of the lower row, the cabinet having an entrance opening for depositing a bottle into the upper portion of the compartment at the forward end of the upper row of bottles, the cabinet having an outstanding discharge portion at the forward end of the lower portion of the compartment provided with an upper opening, a push rod slidable through the front wall of the cabinet for pushing the upper row of bottles rearwardly, a pull rod slidable through the front wall of the cabinet and having a hook at its rear end movable below the first named opening for moving the lower row of bottles forwardly, and a handle connecting the forward terminals of said rods.

In testimony whereof I hereunto affix my signature.

HAROLD M. DRAPER.