Jan. 29, 1929. 1,700,218

C. E. EISENSTAT

BOTTLE COOLER

Filed July 21, 1927

Fig. 1

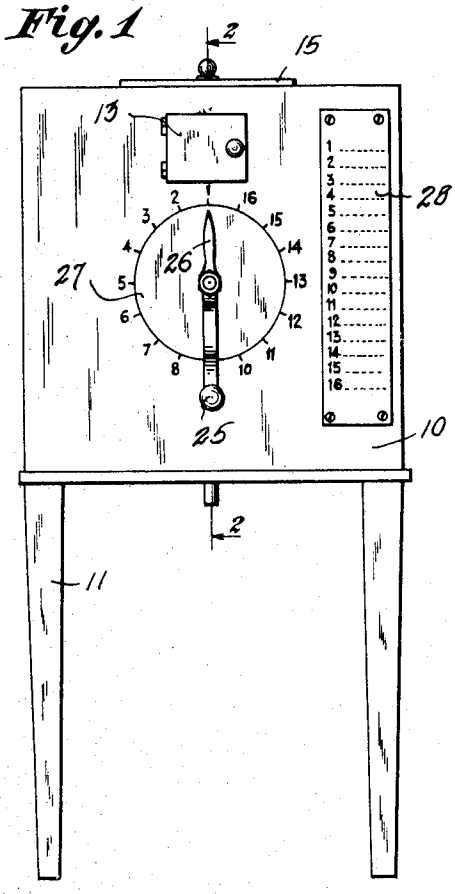
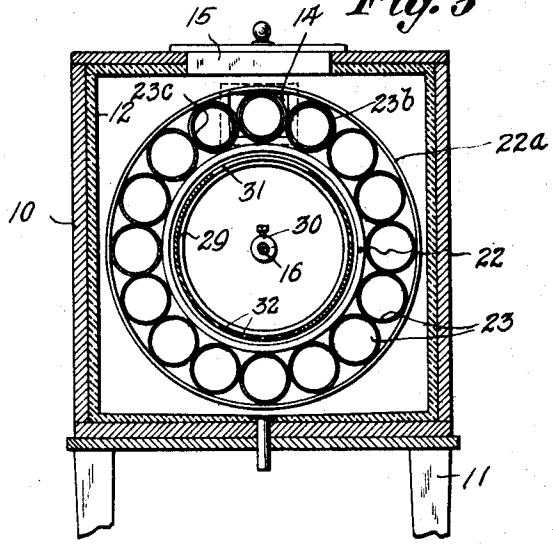



Fig. 3



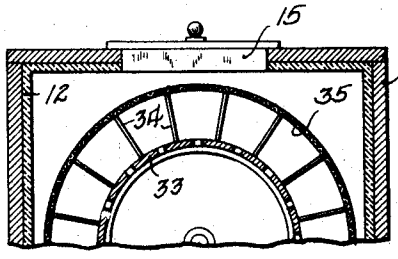




Fig. 4

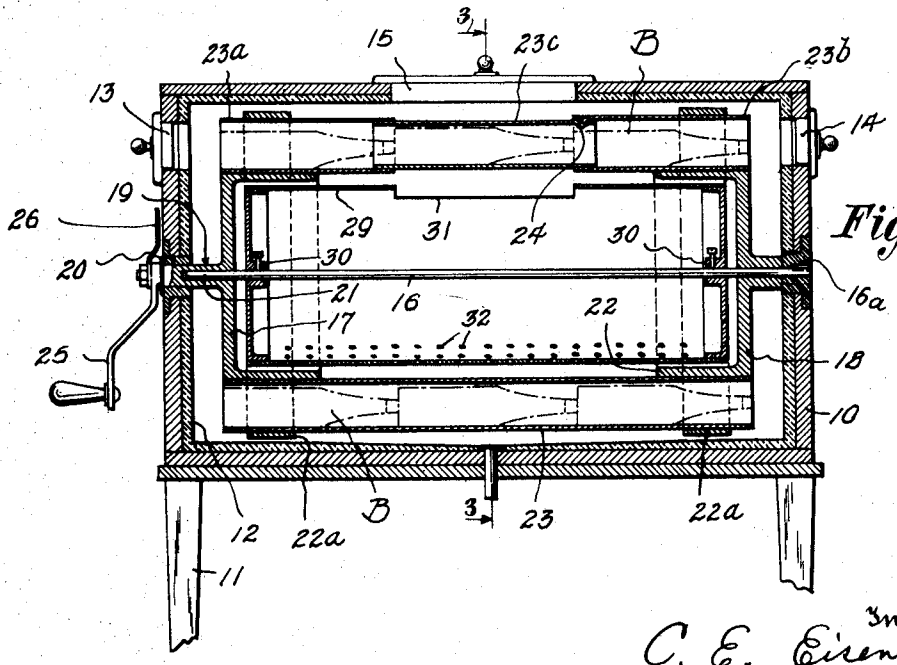



Fig. 2

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# UNITED STATES PATENT OFFICE.

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## BOTTLE COOLER.

Application filed July 21, 1927. Serial No. 207,346.

This invention relates to the dispensing of beverages in bottles and has particular reference to simple, reliable, easily manipulatable, sanitary devices for the cooling storage of soft drinks or other analogous goods in bottles and to be dispensed to the retail trade in bottles as called for.

Among the objects of the invention is to provide a container in the nature of a refrigerator or cooler, into which bottled goods may be inserted for cooling purposes and from which bottles previously cooled may be dispensed in like number.

Another object of the invention is to provide a cooler for bottles of soft drinks or the like that is neat in appearance and of such a nature as to be always clean and sanitary.

With the foregoing and other objects in view the invention consists in the arrangement and combination of parts hereinafter described and claimed, and while the invention is not restricted to the exact details of construction disclosed or suggested herein, still for the purpose of illustrating a practical embodiment thereof reference is had to the accompanying drawings in which like reference characters designate the same parts in the several views, and in which—

Figure 1 is a front elevation of a preferred embodiment of the invention.

Fig. 2 is a vertical sectional view of the same on the line 2—2 of Fig. 1.

Fig. 3 is a vertical transverse section on the line 3—3 of Fig. 2.

Fig. 4 is a vertical transverse sectional central detail of a modification.

Referring now more specifically to the drawings I show a casing or cabinet 10 of any suitable size, design, or cross sectional form and adapted to be supported in any convenient place or by any desired means as, for example, upon legs 11. This casing 10 is suitably built to include ample thickness for the conservation of ice so as to insure the maximum efficiency of the cooling medium, whatever it may be, and to this end I indicate that the casing is lined at 12 with any suitable packing or insulating material. At the front end and adjacent to the top there is provided an inlet door or opening 13 and the rear end in alignment with said opening is provided with a similar door or opening 14 as an outlet. At any convenient or desired place as at the center of the top, the casing is provided with a lid or door 15 removable for the admission of ice.

Mounted substantially centrally of the casing 10 is a supporting rod 16 fixed from rotation as at $16^a$ at the rear end of the casing and extending forward thence to a point adjacent to the front wall of the casing. Mounted within the casing and journaled for rotation around the axis of the rod 16 is a bottle carrier in the nature of a cage of generally cylindrical form and comprising front and rear spiders 17 and 18, the latter being journaled directly upon the rod, while the former is provided with a downwardly extending journal 19 mounted for rotation in a bearing 20 fixed in the front wall of the casing and within which the forward end of the rod 16 has bearing support at 21. The spiders 17 and 18 are in the nature of drum heads, each being provided with an annular or hollow cylindrical flange 22 upon and around which are arranged a circular series of tubular compartments 23. The majority of these compartments or tubes are coextensive in length with the carrier and are fitted in direct contact with one another circumferentially. A group of these campartments are arranged as indicated at the top of Figs. 2 and 3 so as to be separable or each composed of a series of members having telescopic relation to one another, each of these compartments comprising fixed front and rear sections $23^a$ and $23^b$ respectively, between which extends a movable section $23^c$ and which under normal conditions each of these containers or compartments is equivalent to those first mentioned. I show a series of three jointed compartments which when the carrier is turned to bring these sections upright or at the top of the receptacle, a passage way is provided for the insertion of ice through the door 15 when the movable sections $23^c$ are slipped endwise either forward or backward, making a clear opening between the top 15 and the interior of the receptacle or cabinet. The section $23^c$ and either of the other sections may be suitably indented at 24 to provide temporary holding means to insure that the movable section shall not be displaced accidentally during the usual operation of the machine. These tubular and telescopic compartments are made preferably of sheet metal so that the jointed members are in effect practically of the same caliber as those that are unitary.

While I indicate a series of sixteen of these tubular compartments, it is obvious that the number might be greater or less as may be required in the trade. Furthermore, they

are of a length to receive a plurality, three as shown, of bottles of soft drinks or the like indicated in broken lines at B.

The bottle carrier is adapted for rotation around the axis of the rod 16, and as a suitable means for effecting this operation, I provide a crank 25 in connection with which is provided an index or pointer 26 co-operating with a circular scale 27 with numbers or other indicia to identify the several bottle compartments 23 and associated with which scale may be provided a schedule as at 28 with similarly arranged numbers or indicia to indicate the kinds of drinks that may be found in the several compartments.

Cooling means may be provided in any suitable form or by any desired means, but as indicated I show a cylindrical ice chamber 29 having end walls with hubs fixed at 30 to the rod 16 and thereby held from rotation. This chamber is provided with an open top 31 and may be provided with any suitably arranged holes 32 along its bottom for the passage of water. When the jointed compartments are at the top and the movable sections thereof $23^c$ slipped endwise, a clear opening through the door 15 and opening 31 is provided for the introduction of ice in broken, cracked, or other form as may be required, filling the chamber 29. This charging of the apparatus with ice takes place only once every day or so according to the weather and other conditions, and obviously for the purpose of securing access to the ice chamber, some of the bottles that may be in the telescopic compartments may have to be removed temporarily for this purpose.

From the foregoing specific description of the mechanism, its mode of operation may be briefly summarized as follows: The chamber 29 being suitably filled with ice, the movable sections $23^c$ at the top of the carrier being closed as shown in Fig. 2, and the lid 15 replaced, the machine is ready to be filled with bottled goods. The sixteen compartments may be charged with as many different kinds of drinks if there are as many as that on sale, or any desired groupings of drinks may be disclosed on the schedule 28. The operator will then open the front door 13 and insert into each compartment in turn, three bottles of the drink specified on the schedule according to the number of the compartment until the compartments are all filled, it being understood that the bottle carrier will be kept filled at all times with bottles which will be kept cooled and ready to be dispensed. It will be understood that the entire interior of the casing will be cold because of the insulation from the outside heat, and so when a bottle of any particular drink is called for to be sold, the operator simply grasps the handle 25 and rotates the carrier until the pointer 26 registers with the indication of the kind of drink called for. He will then introduce through the door 13 a fresh or warm bottle of the same kind of drink, with the result that the bottle previously cooled in that same compartment and adjacent to the delivery door 14 will be projected through the door 14 and delivered to the customer. The front and rear doors obviously may be provided with spring hinges or other means to insure that they will not be left open inadvertently.

The tubular compartments 23, both unitary and sectional, may be secured to the drum flanges 22 by soldering, brazing, or any other convenient means, but preferably they are all surrounded by hoops $22^a$ which hold them in place firmly and do not interfere with the free rotation of the bottle carrier.

In the modification of Fig. 4, the bottle carrier is shown as comprising a cylindrical drum 33 having spaced radial partitions 34 taking the place of the tubular compartments above described. The bottles are held in place therein by a wire mesh covering 35 or its equivalent. This drum 33 may take the place of the ice chamber and be filled directly with ice which may be inserted thereinto through any suitable opening not shown. The construction and operation of the machine may otherwise be practically the same as that already set forth in detail.

I claim:

1. In a bottler cooler, a casing, a cylindrical bottle carrier journaled for rotation in said casing, and comprising a circular series of bottle compartments, means to introduce a cooling medium into the casing for cooling the bottles carried by the carrier, and means to introduce a fresh or warm bottle of drink into any selected compartment and for delivering from the same in the same direction a bottle already cooled, the introduction and delivery of the bottle being in a direction parallel to the axis of the carrier.

2. In a bottle cooler, a casing, means to introduce into the casing a cooling medium for keeping the interior thereof cold, a bottle carrier journaled for rotation around a horizontal axis in the casing, said carrier comprising a circular series of individual compartments arranged parallel to the axis of the carrier, the casing having inlet and delivery openings in alignment with which any one of the compartments may be brought upon rotation of the carrier for delivering therefrom a cooled bottle in the direction as it is introduced, and means to rotate the carrier.

3. In a bottle cooler, a casing, means to supply a cooling medium to the interior thereof for keeping it cold, a bottle carrier movably mounted within the casing and comprising a series of tubular bottle compartments, said casing having inlet and delivery openings registering with the several compartments in succession according to the position of the carrier, and combination rotating and

indicating means on the outside of the casing but connected with the carrier for determining its position and the kind of drink registering with the openings.

4. In a bottle cooler, a casing having an opening at the top for the admission of ice, a bottle carrier mounted for movement within the casing and comprising a series of tubular compartments, some of which are separable to provide a passage for the ice to the interior of the car, means external of the casing to determine the position of the carrier with respect to said openings, and means to receive the ice within the carrier.

5. A device as set forth in claim 4 in which the means to receive the ice is a stationary chamber within the carrier.

6. A refrigerator having a compartment having openings at both ends thereof for access from outside the refrigerator, said compartment being of elongated form to comparatively closely receive a plurality of objects to be cooled in end to end relation to one another to permit the objects to be passed through the compartment in the same direction, the insertion of an object in one end of the compartment causing a movement of the other objects in the compartment and a delivery of an object at the other end of the compartment, whereby a uniform and continuous cooling action is obtained.

7. A refrigerator having a compartment having end openings and being of elongated form to receive in end to end relation a plurality of articles to be cooled, said articles being inserted into the compartment through one end thereof and being in abutment relation with each other, the periodic insertion of an article causing a delivery of a cooled article at the other end of the compartment.

8. A refrigerator as set forth in claim 7 wherein the same comprises a rotatable carrier in which a plurality of the compartments are formed, the refrigerator having openings adapted to register with the end openings of the compartment when the carrier is rotated into a predetermined position, the refrigerator openings constituting inlet and delivery ports.

In testimony whereof I affix my signature.

CARL E. EISENSTAT.