R. A. JOHNS AND F. L. MYERS.

COMBINED DISPENSING AND REFRIGERATING APPARATUS.

APPLICATION FILED FEB. 3, 1921.

1,378,792. Patented May 17, 1921.

2 SHEETS—SHEET 1.

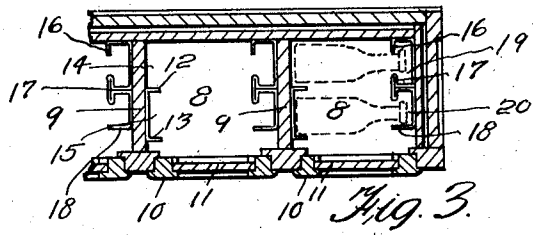


Fig. 3.

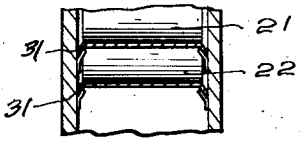


Fig. 4.

Fig. 1.

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2 SHEETS—SHEET 2.



Fig. 2.

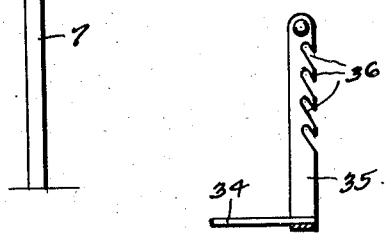


Fig. 5.

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COMBINED DISPENSING AND REFRIGERATING APPARATUS.

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To all whom it may concern:

Be it known that we, ROBERT A. JOHNS and FRANK LEROY MYERS, citizens of the United States, residing at Mobile, in the county of Mobile and State of Alabama, have invented certain new and useful Improvements in Combined Dispensing and Refrigerating Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of the present invention is to provide an improved dispensing and refrigerating device constructed in such manner as to save a great deal of time and labor in the dispensing of bottled drinks and arranged so that when the structure is opened for the removal of a bottle the outside air will not come in contact with the ice, whereby a great saving in ice is effected.

A further object of the invention is to provide a structure of the character indicated wherein means are provided for automatically withdrawing a bottle from beneath a body of ice water simultaneously with the opening of the door of the compartment in which said bottle is located, thus rendering it unnecessary for the storekeeper or clerk to plunge his or her hand into a body of ice water.

It has been found that many persons contract serious and painful cases of rheumatism, as a result of frequently plunging the hand and arm into the cold compartment containing bottles of soft drinks and the like.

It is a further object of the invention to provide a structure of the character indicated having magazines of such storage capacity that they will maintain a large number of bottles ready for use, thus insuring the storekeeper that during rush hours he will have an ample supply of chilled drinks to supply his trade.

A further object of the invention is to provide a structure of the character indicated wherein the height of the ice supporting tray is adjustable so that the extent to which the body of ice contacts with the water may be varied according to the condition of the weather and thus a further economy in ice be effected.

Further objects and advantages of the invention will be set forth in the detailed description which follows.

In the accompanying drawings:

Figure 1 is a vertical section of an apparatus constructed in accordance with the invention;

Fig. 2 is a transverse section upon line 2—2 of Fig. 1;

Fig. 3 is a horizontal section upon line 3—3 of Fig. 1;

Fig. 4 is a detail transverse section upon line 4—4 of Fig. 1; and

Fig. 5 is a detail view of a part of a stirrup hereinafter described.

Like numerals designate corresponding parts in all of the figures of the drawings.

Referring to the drawings it will be seen that the device is of cabinet-like formation of substantial L shape in cross section comprising a vertical rear part 5 and the horizontal bottom part 6, the whole being supported upon legs 7. The vertical rear portion 5 is divided into a plurality of compartments 8 by vertical walls 9, and the fronts of these several compartments are formed by panels 10 having glass or other transparent material 11 therein, so that the bottles stored in the compartments 8 and which compartments constitute magazines for the bottles, will be visible from the exterior of the cabinet and will present a pleasing and ornamental appearance. Guide strips 12 and 13 in conjunction with the rear wall of the vertical portion 5 constitute guideways 14 and 15 which receive the bottom ends of the bottles, and guide strips 16, 17 and 18 form guideways 19 and 20 which receive the tops of the bottles, as indicated in dotted lines in Fig. 3.

The several panels or doors 10 are hinged as indicated at 10^a to permit of their being individually opened and the bottles replenished in the guideways of any of the compartments. Curved guide plates 21 and 22 located at the lower ends of and connecting with the guideways in the vertical portion 5 conduct the bottles around the bend between the vertical and horizontal portions of the cabinet, the front row of bottles being delivered upon a supporting plate 23 and the rear row of bottles being delivered upon the metallic lining 24 which covers the bottom 25 of the horizontal portion 6. The metallic lining 24 in reality constitutes the bottom of a metal pan the sides of which are indicated at 27, and this pan maintains

a body of ice water at substantially the level indicated by dotted line 28. This level is maintained by the provision of an overflow pipe 29. Division walls 30 are located in the horizontal part of the cabinet and are alined with the division walls 9 of the vertical part of the cabinet, but the walls 30 are of such height that their upper edges lie below the water level. The plates 21, 22 and 23 are all rendered removable by having their side edges turned down, as indicated at 31, these down turned edges merely hooking over upwardly projecting edges of strips 32 which are secured to the division walls of the several compartments.

One or more ice boxes 33 located above the horizontal portion 5 receives the necessary ice to maintain the water iccecold. These ice boxes are provided with lattice or perforate bottoms 34 which are supported by vertically adjustable stirrups 35. These stirrups are provided with a plurality of notches 36, any one of which is adapted to engage screws or like projections 37 to thereby hold the stirrups and consequently the lattice bottom at any desired height with respect to the water level. Thus if the weather is cool and but little ice is needed, the bottom may be lifted and the ice may be lifted out of the water, thus conserving the ice supply. But if the weather is quite warm, then the ice may be lowered into the water and the water kept correspondingly colder. The ice boxes are provided with hinged covers 38 through which ice may be placed in them, and these ice boxes as well as the entire structure may be suitably insulated by packing material indicated at 39.

We do not limit ourselves to the particular location of the metallic lining, since the entire structure may be lined with metal or only parts of said structure may be lined with metal as the needs develop. From the foregoing it will be understood that in each of the compartments there are two rows of bottles and that these bottles are fed while lying in a position transverse to the several compartments, to the front of the horizontal part of the cabinet, the bottles being fed forward with a rolling motion while lying upon their side. Stop flanges 23^a at the front end of plate 23 bring the foremost bottles upon said plate to a position of rest beneath a hinged cover 40 that is provided with a handle 41. The bottles in the lower row are brought to a position of rest with the foremost bottle positioned beneath a cover 42 that is provided with a handle 43. These hinged covers carry spring clips 44 and 45, which are adapted to snap over the necks of the bottles when the covers are lowered and to withdraw the bottles from the body of ice cold water when the covers are lifted. Thus it is unnecessary for the storekeeper or clerk to plunge his or her hand into the body of ice cold water, but upon the contrary a bottle is automatically withdrawn whenever one of the covers is raised. The metallic linings 46 of the ice boxes are downwardly projected a sufficient distance so that their lower edges lie below the water level and thus no air can get into the ice when the covers are lifted for the purpose of withdrawing the bottles. Consequently the ice will melt very slowly.

The present device not only preserves a very large proportion of ice by maintaining the ice boxes substantially air tight but it also saves a very great deal of work. The method usually employed in the dispensing of soft drinks is for the storekeeper to place a number of bottles of assorted flavors in his ice boxes and to dump a large amount of crushed ice over them. If a customer wants a bottle of strawberry flavor, the storekeeper must fish around in the ice and ice water until he can find that particular flavor. During all of this time the outside heated air is coming into contact with the ice and rapidly melting the same, the storekeeper's time is being consumed and, in addition he is being subjected to the danger of contracting a painful case of rheumatism. The present apparatus obviates these several difficulties and provides a structure that will be neat and ornamental, will enable the desired flavor to be quickly secured and all without the air ever coming into contact with the ice.

It is to be understood that the invention is not limited to the precise construction set forth but that it includes within its purview whatever changes fairly come within either the terms or the spirit of the appended claims.

Having described our invention, what we claim is:

1. A device of the character described of substantial L shape in cross section and divided longitudinally into a plurality of compartments, guideways in each of said compartments adapted to maintain bottles transversely of said compartments and conduct them by a rolling motion upon their sides from the vertical to the horizontal part of the compartment, means for maintaining water at a predetermined level in the horizontal portions of said compartments and at a level to cover the bottles therein and an ice box having an open bottom for which the water in said compartments constitutes a water seal, said horizontal part of the compartment being wider than the ice box to provide a projecting portion outwardly of said ice box, closures hinged for vertical swinging movement upon said projecting portions and bottle gripping elements carried by said closures of a length to dip beneath the water level and grip a bottle about its circumference to remove the same when the closure is opened.

2. A structure as recited in claim 1 wherein said ice box is provided with a vertically adjustable bottom to adjust the extent to which the ice will depend into the body of water maintained in the horizontal part of the compartment.

3. A device of the character described comprising a cabinet of substantial L shape in cross section having a vertical portion and a horizontal portion and divided longitudinally into a plurality of compartments which lie partly in the vertical portion and partly in the horizontal portion, means for maintaining water at a predetermined level in the horizontal portion, an ice box having an open bottom depending below the water level in the horizontal portion and for which the water in the horizontal portion constitutes a water seal and guideways adapted to support bottles in a plurality of rows in each compartment and conduct the bottles upon their sides and with a rolling motion from the vertical to the horizontal portion and beneath the water level in the latter and beneath the bottom of the ice box to points entirely outwardly of said ice box, and outlet openings at said points through which said bottles may be removed.

4. A device of the character described comprising a cabinet of substantial L shape in cross section having a vertical portion and a horizontal portion and divided longitudinally into a plurality of compartments which lie partly in the vertical portion and partly in the horizontal portion, means for maintaining water at a predetermined level in the horizontal portion, an ice box having an open bottom depending below the water level in the horizontal portion and for which the water in the horizontal portion constitutes a water seal, guideways adapted to support bottles in two rows in each compartment and conduct the bottles upon their sides and with a rolling motion from the vertical to the horizontal portion and beneath the water level in the latter, said horizontal portion being wider than the ice box to constitute a forwardly projecting portion into which said guideways extend, a pair of exit openings in the top of the forwardly projecting portion one above the terminal end of each of said guideways, closures for said openings and bottle gripping elements carried by said closures and adapted to grip the bottles in the respective guideways about their circumference and lift said bottles when the closures are opened.

5. A device of the character described comprising a cabinet of substantial L shape in cross section having a vertical portion and a horizontal portion, a plurality of division walls in both the vertical and the horizontal portion of the cabinet dividing said cabinet into a plurality of compartments which lie partly in the vertical portion and partly in the horizontal portion, an overflow pipe leading from the horizontal portion of the cabinet the upper end of which projects above the level of the division walls therein to maintain water at a level above the top of said division walls, an ice box above the horizontal portion, having closed sides and open bottom the lower edges of said sides projecting below the upper end of the overflow pipe so that the water in the horizontal portion of the cabinet is caused to constitute a water seal for the bottom of the ice box, guideways carried by the side walls of the several compartments adapted to support bottles in rows in the several compartments and conduct the bottles upon their sides and with a rolling motion from the vertical to the horizontal portions of the compartments and beneath the water level in the latter, the horizontal portion of the cabinet being wider than the ice box to provide a portion which projects forwardly of said ice box, said guideways extending into said forwardly projecting portion there being outlet openings for the bottles formed in the top of said forwardly projecting portion, closures for said outlet openings and bottle gripping elements carried by said closures of a length to dip beneath the water level in the horizontal portion of the cabinet to grasp the bottles and remove them when the closures are opened.

In testimony whereof we hereunto affix our signatures.

ROBERT A. JOHNS.
FRANK LEROY MYERS.