May 7, 1929. O. E. GIESE 1,711,494

WATER AND BEVERAGE COOLER

Filed May 17, 1928 2 Sheets-Sheet 1

Fig. 1.

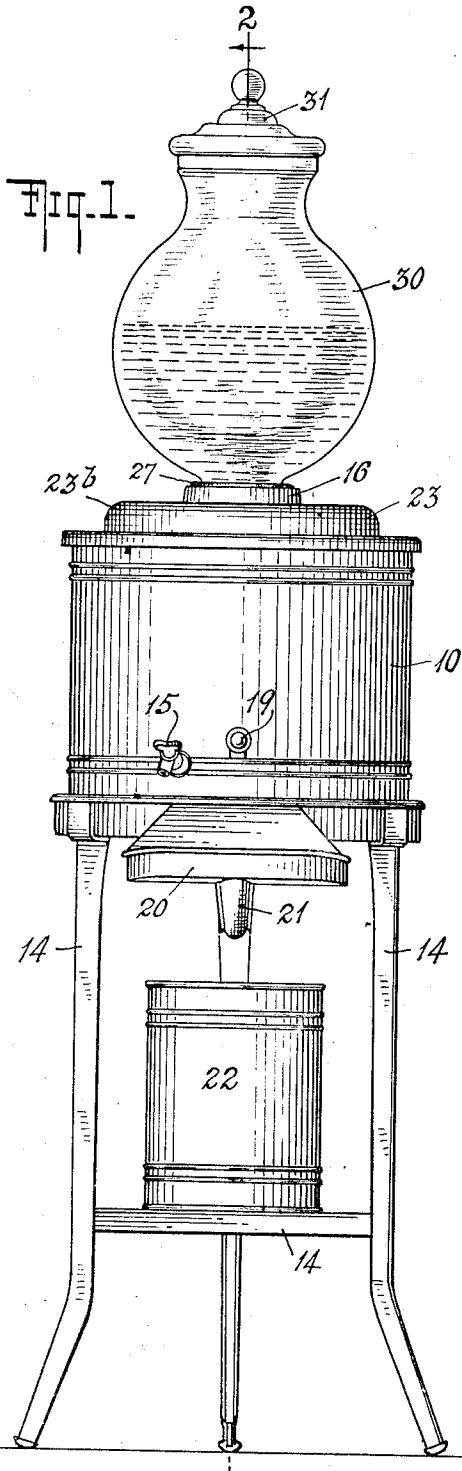
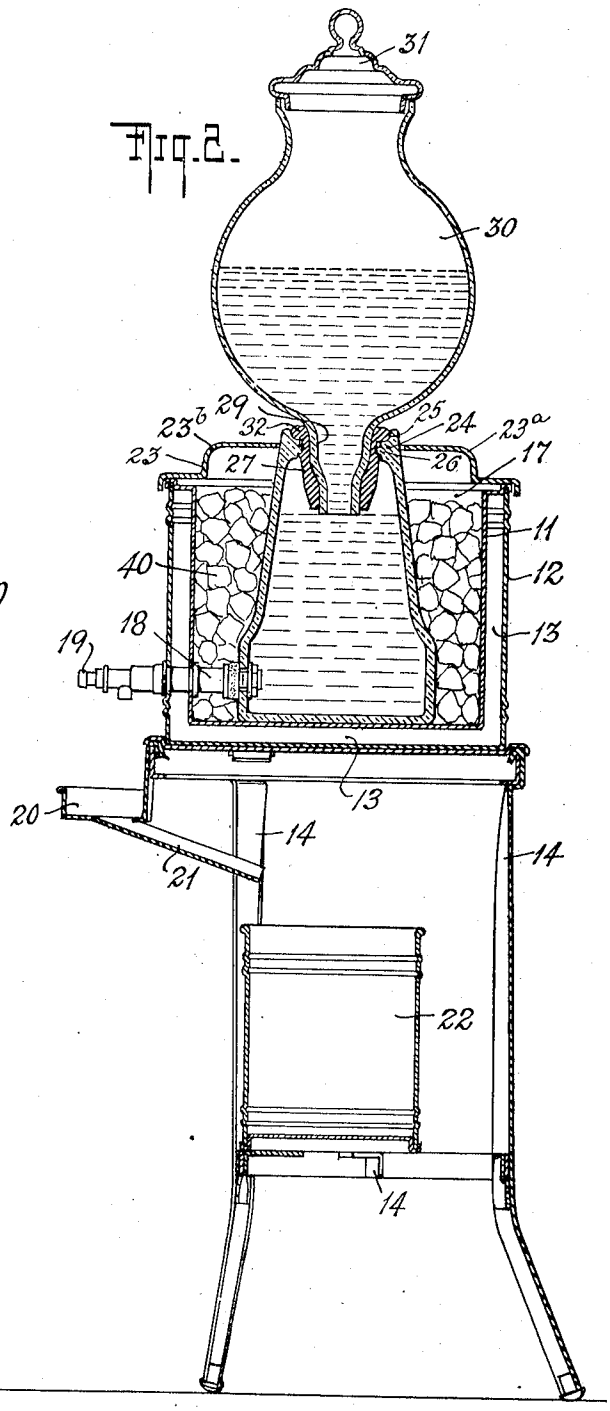


Fig. 2.



WITNESS

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Fig. 3.

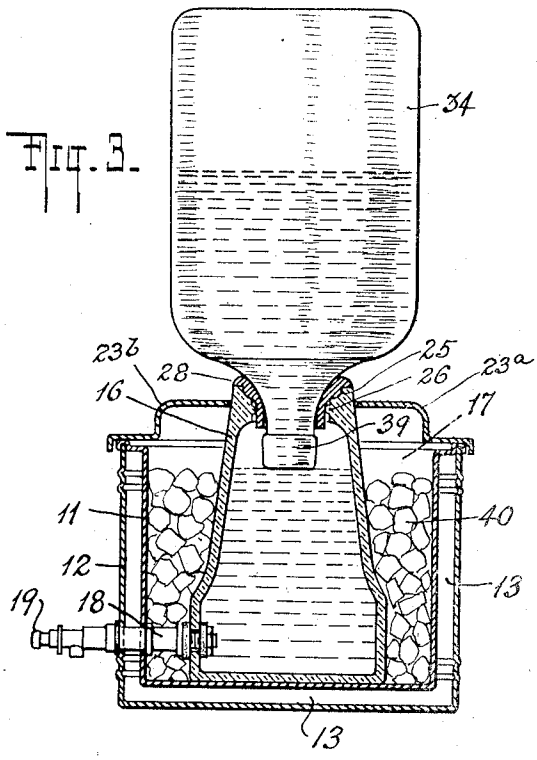


Fig. 4.

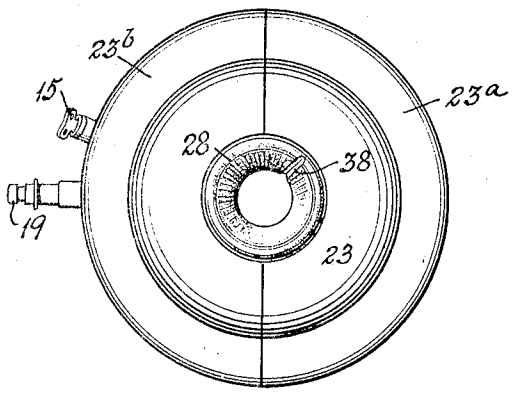


Fig. 6.

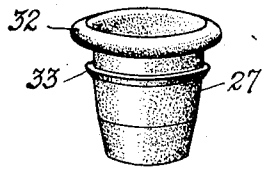


Fig. 5.

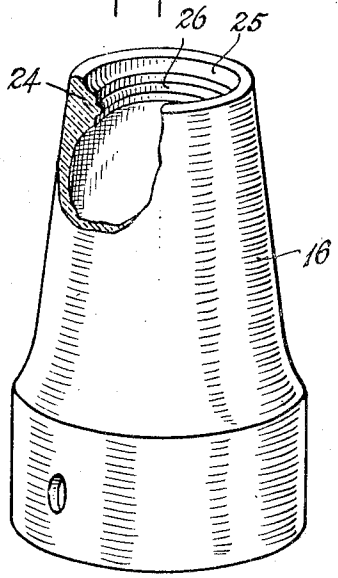
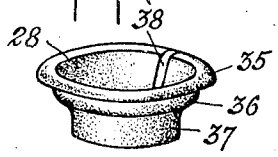


Fig. 7.



WITNESS

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UNITED STATES PATENT OFFICE.

OTTO E. GIESE, OF NEW YORK, N. Y.

WATER AND BEVERAGE COOLER.

Application filed May 17, 1928. Serial No. 278,500.

My invention relates to apparatus for cooling and dispensing beverages and more particularly to that type of apparatus which includes a bottle or similar vessel within which the water or other liquid is contained and from which the liquid is drawn, and a refrigerating chamber for cooling the liquid before it is discharged from the apparatus.

Dispensing devices of this type have found extensive use in offices, homes, and public places for supplying drinking water, and it has been the usual practice for dealers in distilled or spring water to supply their customers, who are equipped with one or more of the cooling apparatuses, with bottles filled with water to replace the bottles that have been emptied. The bottles are placed in inverted position upon the cooling chamber so as to discharge into a cooling vessel located in the refrigerating chamber which is packed with ice. This vessel terminates below the top of the refrigerating chamber, and the bottle usually rests upon the top or cover of the chamber or upon both the cover and the vessel. The bottles are generally of standard form and are cylindrical in shape and of about five-gallon capacity. The top of the cooling vessel is accordingly designed to receive the quite uniformly shaped neck of such standard bottles and the utility of the cooling apparatus is limited to use in connection with such standard bottles, as it is generally difficult and often impossible to employ a non-standard bottle with the standard cooling equipment. For this reason, dealers have to keep on hand several forms of cooling apparatus for use with bottles of different shapes and sizes, as, for instance, the standard five-gallon water bottle and the usually spherically shaped fruit juice dispensing bottles which are often of less than five-gallon capacity. This is a burden and expense to dealers, who are compelled to keep a larger stock of cooling apparatus on hand, and also limits the usefulness of the apparatus to the consumer.

It is an object of the present invention to provide a liquid cooling and dispensing apparatus, the cooling equipment of which is capable of being used with bottles of either standard or non-standard shape and size and in which the adaptation of such cooling equipment to such different bottles may be effected in a simple and economical manner. It is a further object of the invention to provide an apparatus of the type referred to wherein the beverage or water bottle is supported free of the cover of the refrigerating chamber whereby such cover can be completely removed, while the bottle is in position, for the introduction of ice into said chamber. Other objects will appear from the following description taken in connection with the accompanying drawings and the features of novelty will be pointed out in the claims.

In the drawings, which show by way of example a form of my invention without defining its limits, Fig. 1 is a front view of the apparatus; Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1; Fig. 3 is a vertical section of a modification; Fig. 4 is a plan view of Fig. 3, the bottle being omitted; Fig. 5 is a perspective view partially in section of the crock or cooling vessel; Figs. 6 and 7 are perspective views of the adapters shown in Figs. 2 and 3 respectively.

Referring to the drawings, the numeral 10 designates a refrigerating chamber of any desired form but preferably cylindrical, having inner and outer walls 11 and 12 separated from each other by an insulating space 13 which may, if desired, be filled with insulating material such as cork, asbestos or other fibre, etc. The refrigerating chamber is adapted to be supported upon a stand 14 of any suitable type and is supplied with a drain cock 15.

Positioned within the refrigerating chamber 10 and preferably centrally thereof is a cooling vessel or crock 16. The vessel is of such dimensions that an annular ice chamber 17 is formed between the outer surface of the cooling vessel and the wall 11. A pipe 18 is attached to the cooling vessel near the bottom thereof and communicates with the interior of the same. The pipe 18 extends through the inner and outer walls 11 and 12 and has attached at the end thereof a faucet 19 of any suitable type. A drip pan 20 supported upon the stand 14 underlies both the drain cock 15 and the faucet 19 and is connected with a trough 21 sloping rearwardly and downwardly and discharging into a bucket 22 likewise supported upon the stand 14.

As clearly shown in Figs. 2 and 3, the cooling vessel 16 tapers upwardly from a point near its bottom and projects slightly above the cover 23 of the refrigerating

chamber 10. This cover is made preferably in two sections 23^a and 23^b whose meeting edges lie along a diameter or central dividing line as shown in Fig. 4. The cover is removable from and rotatable on the chamber 10, so that should one side of the apparatus be inaccessible, the cover can be rotated so that one or both sections can be removed from the other side. The wall of the cooling vessel is slightly enlarged inwardly near the top thereof as shown at 24 (Fig. 5). This enlargement 24 is bounded at its top by an annular groove 25 and has an annular rib 26 extending inwardly of the cooling vessel.

This top portion of the vessel 16 is designed to support any one of a number of interchangeable adapters 27 and 28, two of which are shown as made of rubber or similar material and annular in cross-section, so that bottles of different size or shape may be supported upon the cooling vessel as shown in Figs. 1 and 3. These adapters are so formed that their exterior surfaces will mate more or less completely with the top surfaces of the cooling vessel 16 and of the enlargement 24 and with the side or lateral surfaces of the latter so as to form an air-tight connection therewith. The internal dimensions of these adapters are such as to enable the adapters to receive the neck of the bottles for which they were designed in such manner as to form an air-tight connection therewith. The adapter 27 shown by way of example in Figs. 2 and 6 is designed to receive the discharge neck 29 of a beverage bottle 30 having a more or less spherical body portion and provided with a loosely fitting cover 31 which may be removed in order to permit filling or refilling of said bottle while in position in the cooling apparatus. The adapter 27 is provided with an annular flange 32 which is adapted to seat within the groove 25 and is provided with an annular lip 33 of greater external diameter than the internal diameter of the rib 26 and positioned such a distance from the flange 32 that when the adapter is fitted into the cooling vessel the lip 33 will be compressed by the rib 26 and then will spring into place below said rib so as to engage the under side thereof. In this way the adapter is yieldingly held against vertical movement upon and within the enlargement 24. The adapter 28 is designed to receive the neck of the well-known form of water bottle 34 shown in Fig. 3. This adapter is provided with a flange 35 adapted to rest upon the top of the cooling vessel, and also with a rib 36 which is designed to engage the groove 25, the remaining portion 37 being of more or less cylindrical form and engaging the inner surface of the rib 26. As shown in Figs. 2 and 3 the interior surfaces of the adapters taper more or less either along straight or curved lines toward the bottom so as to adjust themselves automatically to slight variations in the shape of the neck of the bottle. The adapter 28 is provided with a groove 38 which establishes communication between the interior air space 39 of the cooling chamber and the external atmosphere. As the vessel 16 projects above the top of the chamber 10, the adapters can be quickly and easily inserted therein or removed therefrom.

It will be observed from Figs. 1, 2 and 3 that the bottles, of whatever form they may be, are completely supported by the cooling vessel 16 and are completely out of contact with the cover 23 of the refrigerating chamber. By virtue of this construction both of the sections 23^a, 23^b of the cover 23 can be removed so as to open completely the interior 17 of the refrigerating chamber so that chopped or broken ice 40 may be easily charged into the ice space.

Because of the fact that the bottle containing the water or other beverage rests upon the top of the cooling vessel 16 the latter is closed to the atmosphere, so that the entry of dust or other foreign matter into said vessel is prevented. However, in order to insure proper flow of the liquid, it is necessary to provide a communication between the interior of the bottle and the atmosphere. In the apparatus shown in Fig. 3, this communication is effected by providing the groove or slit 38 in the adapter 28. The adapter 27 need not be so grooved as the cover 31 of this type of bottle generally fits rather loosely on the bottle and permits the passage of a stream of air into the bottle to maintain atmospheric pressure therein.

The cooling vessel 16, as stated above, extends above the top of the refrigerating chamber and is consequently out of communication with the ice chamber 17. Ice, dirt and other foreign matter cannot therefore enter said vessel through the ice chamber, as is the case in cooling apparatus wherein the cooling vessel terminates short of the top of the refrigerating chamber.

It will be understood that adapters of different form and size may be employed other than those shown and described to adapt the cooling apparatus for use with any type of bottle desired. With the aid of these adapters it becomes unnecessary to design the cooling apparatus and especially the cooling vessel 16 to conform to any particular type of bottle. By the use of my invention, therefore, one and the same cooling apparatus can be used with a plurality of different types of bottles regardless of their form and size, it being only necessary to fit the corresponding adapter into the cooling vessel. My invention is capable of effecting great economies in the field of beverage dispensing apparatus as in accordance with my

invention it is necessary only to have a number of relatively inexpensive adapters on hand which are easily fitted within the top of the cooling vessel to adapt a given and standard form of cooling apparatus to a plurality of types of beverage-containing bottles.

I claim:

1. An apparatus for cooling and dispensing liquids comprising a refrigerating chamber, a cover therefor having an opening therein, a cooling vessel positioned in said chamber and having its top portion extending through and above said opening, said top portion having an annular shoulder on the interior spaced from the top thereof, an adapter fitted within said top portion, said adapter being composed of resilient material and having an outwardly extending annular lip of greater external diameter than the internal diameter of said shoulder, said lip being adapted to be compressed by said shoulder when the adapter is fitted within said vessel and to expand upon passing said shoulder to engage the under side thereof, and a beverage bottle having a neck section positioned within said adapter, whereby said bottle is supported by said cooling vessel.

2. An apparatus for cooling and dispensing liquids, comprising a refrigerating chamber, a covering therefor having an opening therein, a cooling vessel positioned in said chamber and having its top portion extending through and above said opening, said top portion having an annular inwardly extending ridge on the interior spaced from the top thereof and being therefore capable of having fitted therein either an adapter composed of resilient material and having an outwardly extending annular lip of greater external diameter than the internal diameter of said ridge and adapted to be compressed by said ridge when the adapter is fitted within said vessel and to expand upon passing said ridge to engage the under side thereof, or capable of having fitted therein an adapter provided with a rib which may rest upon said ridge.

OTTO E. GIESE.