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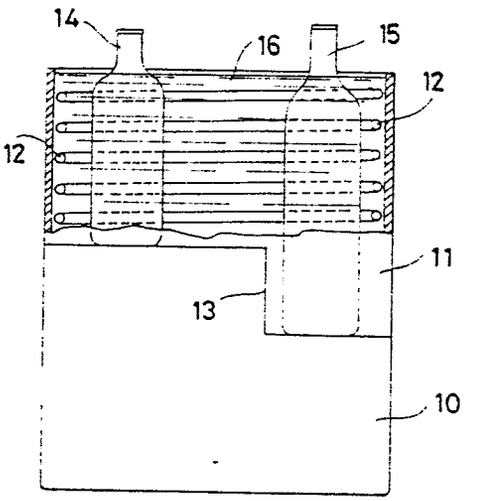
(54) **Equipment for the quick cooling of liquids in containers.**

(57) An equipment for the quick cooling of liquids in containers comprises a tank dimensioned in a manner as to be capable of containing a least a bottle and filled with a liquid for cooling the drink contained in the bottle; the cooling liquid contained in the tank is lapped by means which determine the cooling thereof.

Fig.1



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EQUIPMENT FOR THE QUICK COOLING OF LIQUIDS IN CONTAINERS

This invention relates to an equipment for the quick cooling of liquids in containers.

More particularly, the invention relates to a frigorific equipment intended to cool in very short times the content of one or more bottles, whether it is wine, beer, sparkling wine, liqueur, etc.

It is known to everybody that the cooling of a liquid contained in a bottle requires from half an hour to about two hours, depending on the type of liquid and on the type of frigorific equipment into which the bottle is introduced for being cooled therein.

It happens often,at house, in restaurants, hotels, bars, not to have wines, beer or liqueurs at the right temperature at which they should be served.

The restaurants, hotels and bars usually are provided with iceboxes capable of cooling these liquids in fairly short times, but these latter are never so short as to satisfy the customers which are waiting for the wine, liqueur or any other drink just ordered and which is found to be very far from having the right temperature at which it should be served.

It is sufficient to consider the case of a white wine which, when held out of the refrigerator, has a temperature of about 18°, whilst it should, instead, be served at a temperature of about 5°.

It is unthinkable that it could be possible to satisfy the requirement of the customer in less than half an hour, however efficient the iceboxe of the premise may be.

Even worse is the case of a vodca-like liqueur which has to be served at a temperature of about -20° and which, when held out of the refrigerator, before being served, has to be subjected to a reduction of the temperature by about 50°.

Owing to the necessity of leaving the bottles to cool for a long period of time, it is necessary for the public ambients to have even more than one icebox and all of them have to be full with bottles of all kinds, but it unavoidably happens always that some wine, liqueur, beer or other drink exhausts in the icebox or remains outside thereof owing to inattention.

The object of the invention is to provide an equipment intended to obviate such disadvantages by allowing to cool in very short times any drink contained in a bottle, even in case of having to produce in the liquid thermal variations of many degrees.

Another object of the invention is to provide an equipment which could be intended to be used not only in public ambients, but also by privates, without having to change anything in the characteristics of the invention independently from the uses to which it is intended.

To attain these and further objects which will be better understood later, the invention proposes to provide an equipment for the quick cooling of liquids contained in containers, characterized in comprising a tank, whose dimensions are capable of containing at least a bottle, filled with a liquid for cooling the drink contained in the bottle, the cooling liquid contained in the tank being lapped by means which produce the cooling thereof.

The equipment according to the invention will now be described with reference to the annexed drawings, in which:

FIGURE 1 is a partially sectional elevational view of the equipment according to the invention;

FIGURE 2 is a plan view of the equipment shown in Fig. 1.

In the embodiment shown, given as a mere and certainly non limiting example, it can be seen a base 10 containing the conventional motor elements of a frigorific equipment, which therefore are not shown.

Disposed above the base 10 is a tank 11, along whose inner walls a serpentine 12 extends.

The tank 11 has a step 13 to allow inserting therein low bottles 14 (of the type of beer bottles) and high bottles 15 (of the type of wine or sparkling wine bottles).

The tank 11 contains also a cooling liquid 16 intended to cool the drink contained in the bottles 14 and 15.

The tank may be closed at its upper portion by a easily removable cover.

Within the serpentines 12 there will circulate a gas of the type of freon or the like, whilst the liquid 16 contained in the tank will have to be a glycol or alcohol or another liquid having a freezing point of less than -30° and preferably less than -50°.

By means of this solution, by keeping the liquid 16 at the lowest possible temperature above the freezing point, when the bottles 14 and 15 are being introduced into the tank 11, the temperature of the liquid contained in the bottles will descend in very short times.

By experiments carried out it has been ascertained that by introducing a bottle of 72 cl. containing a liquid at 20°, in a tank 11 containing a liquid having a temperature of 30°, the temperature of the wine has dropped to 5° in 3 minutes and 30 seconds.

For a bottle containing vodca the time required for reducing its temperature at least to -20° are instead required about 10 minutes.

Obviously, the case of the vodca is a limit case, inasmuch as the wines, the beer, the sparkling wines and most part of the other drinks which are served cold must be subjected to temperature variations from 5 to 20 degrees on the average, depending on the temperature at which they have to be served and on the temperature which they have in the ambient prior to their introduction into the equipment.

It can therefore be considered that by means of this equipment almost all the drinks used at present time can be cooled to the right temperature in times from 1 to 5 minutes.

The equipment according to the invention may also be provided with timers which maintain in operation the motor only for the time required for the liquid to reach the desired temperature, as well as timers for signalling the time of maintaining the various bottles 14 and 15 in the tank, in order to avoid that their stay in the tank for a period of time longer than the required time makes drop the dring temperature below the correct value, which in some cases could give rise to their freezing and, consequently, the burst of the bottle.

It has thus been noticed that by means of this equipment it is possible to cool in very short times all the most common drinks, so that not only the public ambients may derive a benefit from this equipment, but also the further private person, in case of having unexpected guests or in case of noticing at the last moment an inadverted oversight, knows that usually in 3 - 4 minutes he can serve a wine, a beer, a sparkling wine or another drink at an optimal temperature, though having held the bottle up to that moment outside the refrigerator at the ambient temperature.

The construction shown in Figures 1 and 2 is given by way of example, since in the public ambients the tank will preferably be capable of containing even more than two bottles contemporaneously, whilst for the domestic necessities two bottles are already sufficient owing to the shortness of the time required for the cooling.

In order to further accelerate the cooling it would be possible to provide a device capable of stirring the liquid 15 or making the bottle rotate in the tank, so that the content of the bottle will be subjected to a slight agitation.

Claims

1.-An equipment for the quick cooling of liquids contained in containers,characterized in comprising a tank, whose dimensions are capable of containing a bottle, filled with a liquid for cooling the drink contained in the bottle, the cooling liquid contained in the tank being lapped by means which produce the cooling thereof.

2.-An equipment as claimed in Claim 1, characterized in that the means which produce the cooling of the cooling liquid are formed by a gas circulating in serpentines which extend along the inner walls of the tank, said gas being made to circulate by motor means disposed outside the tank.

3.-An equipment as claimed in Claim 2, characterized in that the cooling liquid is of such a type as to have a freezing point of less than at least -20°.

4.-An equipment as claimed in Claim 1, characterized in that the tank is dimensioned in such a manner as to contain one or more bottles of different heights, so that when they are disposed vertically in the tank the neck of the bogtles will project from the surface of the cooling liquid.

5.-An equipment as claimed in Claim 2, characterized in that the gas is freon.

6.-An equipment as claimed in Claim 1, characterized in that the cooling liquid is an alcohol.

Fig.1

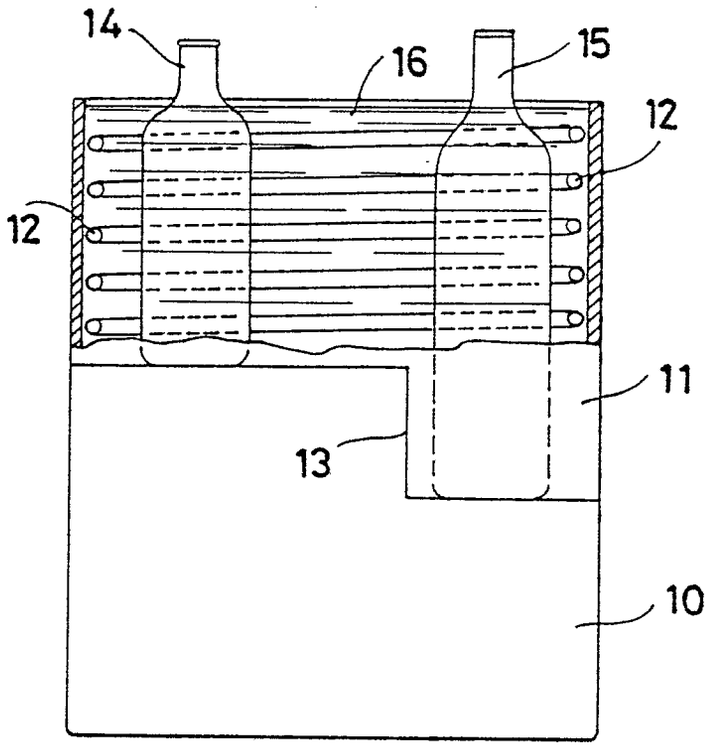

Fig.2