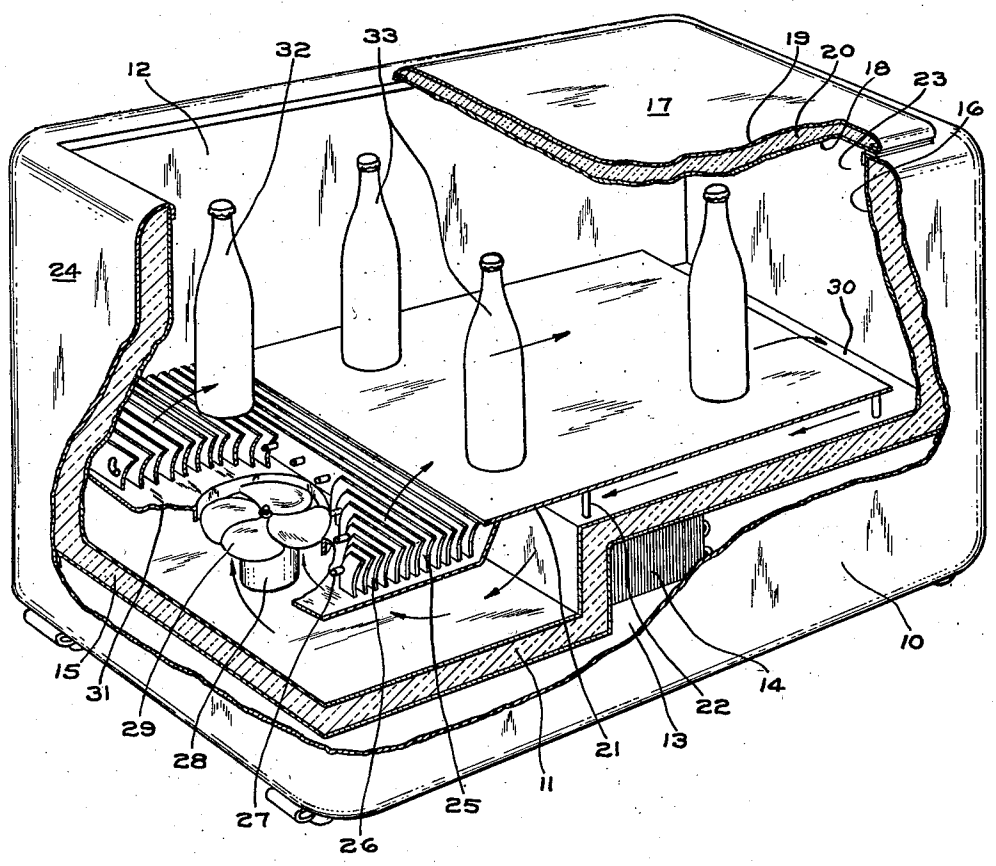
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BOTTLE COOLER

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BOTTLE COOLER

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7 Claims. (Cl. 62—102)

This invention relates to bottle coolers and more particularly to bottle coolers utilizing a forced circulation of chilled air for cooling the bottles. These coolers are commonly known as dry bottle coolers.

One object of the invention is to provide a dry bottle cooler in which the bottles are readily accessible.

Another object is to provide a dry bottle cooler in which the bottles are chilled rapidly.

Another object is to provide a dry bottle cooler having a compact arrangement of the several elements.

These and other objects are effected by my invention as will be apparent from the following description and claims taken in connection with the accompanying drawing, forming a part of this application, in which the single figure is a perspective view of the bottle cooler of this invention with its walls partly broken away to show the interior of the cabinet.

Referring now to the drawing, the reference numeral 10 designates an outer shell divided by a stepped partition 11 into an upper chamber 12 for cooling bottles and a lower compartment 13 for housing the refrigerant liquefying machinery 14. The upper chamber is lined with insulating material 15 and is provided with an inner shell 16. The upper edges of the outer shell 10 are rolled inwardly and then turned downwardly and are secured to the upper edges of the inner shell 16.

The chamber is provided with an insulated cover 17 comprising a lower plate 18 and an upper plate 19, the edges of the latter being rolled downwardly and then bent inwardly and secured to the edges of the lower plate 18. Insulating material 20 is packed between the two plates 18 and 19.

A metal shelf 21 is supported by standards 22 a spaced distance above the elevated step of the partition 11 and extends to within a short distance of the right hand vertical wall 23 of the chamber and beyond the elevated step and to within a somewhat greater distance of the left hand vertical wall 24 of the chamber 12.

A refrigerant evaporator or cooling unit 25 is located in the space between the shelf 21 and the vertical wall 24. The unit 25 comprises a series of spaced apart curved plates 26 through which a refrigerant carrying tube 27 is passed back and forth. The tube 27 is connected to the refrigerant liquefying apparatus 14 in the machine compartment, which apparatus is of conventional design and is not shown in detail in the drawing. A motor 28 is secured to the partition 11 below the refrigerant evaporator 25, which motor drives a fan 29 for moving the air upwardly through a shroud 31 which conducts the air through the evaporator 25.

The evaporator 25 and the shelf 21 form a platform for storing bottles 32 and 33. The air passing through the evaporator 25 is deflected by the curved plates 26 diagonally across the bottles 32 stored upon the evaporator 25 and passes substantially horizontally past the bottles 33 on the shelf 21.

The air then passes downwardly through the space between the shelf 21 and the wall 23 and returns through the space below the shelf 21 to the fan 29 and to the evaporator 25. Bottles placed on the evaporator 25 are cooled most rapidly because of the cold air blowing across them and because of their contact with the cold plates 26. The bottles placed on the metal shelf 21 are cooled by both the cold air blowing across them and by contact with the cold metal shelf 21 which is cooled by the air wiping both its upper and its lower surface.

In using the bottle cooler, the bottles to be dispensed are taken from the shelf nearest the wall 23 and all bottles are then periodically moved closer to this wall as vacancies occur. The new and warm bottles which are inserted in the cooler are placed directly on the evaporator 25 where their chilling is accomplished most rapidly.

It will be apparent from the foregoing description that this invention provides a bottle cooler in which the bottles are readily accessible and are cooled quickly. The various elements of the cooler are also arranged compactly in the cabinet.

While I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are imposed by the prior art or as are specifically set forth in the appended claims.

What I claim is:

1. In a dry bottle cooler, the combination of an insulated chamber, a substantially horizontal shelf therein for supporting bottles, said shelf being spaced from the bottom and from two opposite vertical walls of said chamber, a cooling unit in the space between the shelf and one of said vertical walls, said cooling unit having substantially vertical air passages and a broad upper sur-

face adapted to support bottles, and means for circulating air through said air passages, over said shelf, through the space between the shelf and the other of said vertical walls, and below the shelf to the cooling unit.

2. In a dry bottle cooler, the combination of an insulated chamber, a substantially horizontal shelf therein for supporting bottles, said shelf being spaced from the bottom and from two opposite vertical walls of said chamber, a cooling unit in the space between the shelf and one of said vertical walls, said cooling unit having substantially vertical air passages and a substantially horizontal portion for storing bottles, and means for circulating air through said air passages, over said shelf, through the space between the shelf and the other of said vertical walls, and below the shelf to the cooling unit.

3. In a dry bottle cooler, the combination of an insulated chamber, a substantially horizontal shelf therein for supporting bottles, said shelf being spaced from the bottom and from two opposite vertical walls of said chamber, a cooling unit in the space between the shelf and one of said vertical walls, said cooling unit having a broad upper surface adapted to support bottles and curved air passages, shaped to pass air diagonally upward and into the area above said shelf, and means for circulating air through said air passages, over said shelf, through the space between the shelf and the other of said vertical walls, and below the shelf of the cooling unit.

4. In a dry bottle cooler, the combination of an insulated cabinet and a platform therein for supporting bottles comprising a cooling unit and a shelf disposed at one side thereof, said cooling unit having substantially vertical air passages therein, and means for passing the air in said cabinet through said passages and over and under said shelf.

5. In a dry bottle cooler, the combination of an insulated cabinet and a platform therein for supporting bottles comprising a metal cooling unit and a metal shelf disposed at one side thereof, said cooling unit having substantially vertical air passages therein, and means for passing the air in said cabinet through said passages and over and under said shelf, said metal shelf assisting in the cooling of the bottles by absorbing heat from the bottles by conduction.

6. In a dry bottle cooler, the combination of an insulated cabinet, an opening in the top thereof, a closure for said opening, a platform in said cabinet for supporting bottles, said platform covering substantially the entire horizontal cross-sectional area of said cabinet and comprising a cooling unit having substantially vertical air passages therein and a shelf disposed at one side of the cooling unit, and means for passing the air in said cabinet through said passages and over and under said shelf.

7. In a dry bottle cooler, the combinatioin of a cabinet, a stepped partition dividing said cabinet into an upper storage compartment and a refrigerating machinery compartment below the elevated portion of said stepped partition, a cooling unit located in the storage compartment adjacent the depressed portion of the stepped partition, said cooling unit having vertical air passages therein, a shelf extending sidewardly from said cooling unit and disposed a spaced distance above the elevated portion of the stepped partition to provide an air duct with said elevated portion, and means for circulating the air in the storage compartment successively through said air duct and through the vertical air passages of the cooling unit.

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