

May 22, 1956

E. D. MILLS

2,746,265

CONTAINER COOLING DEVICE

Filed Jan. 7, 1955

Fig. 1.

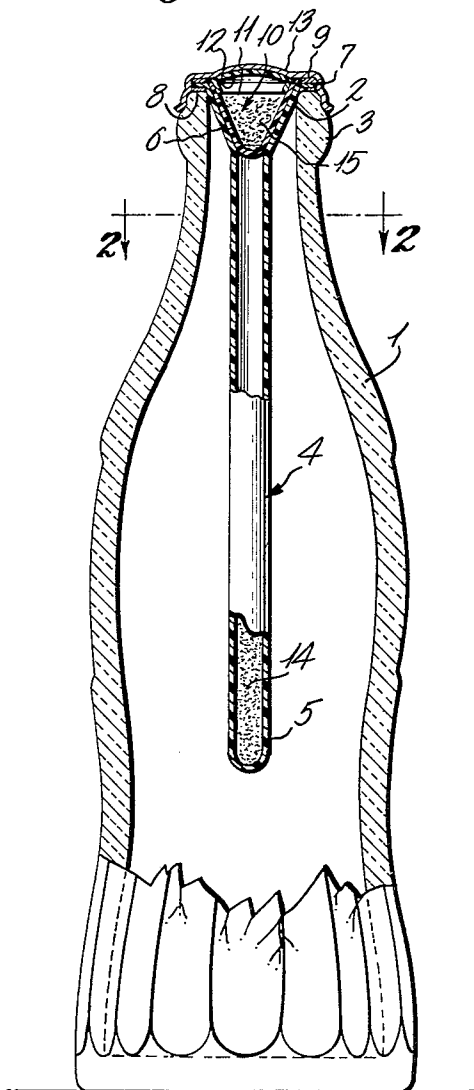


Fig. 2.

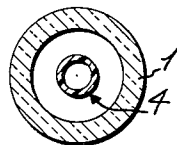


Fig. 3.

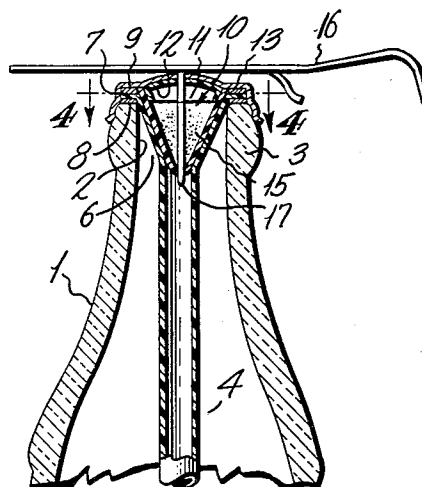
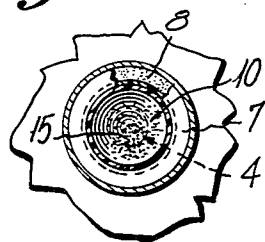


Fig. 4.



INVENTOR

Evann D. Mills

BY

Mason, Fenwick & Lawrence
ATTORNEYS

1

2,746,265

CONTAINER COOLING DEVICE

Evan D. Mills, Los Angeles, Calif.

Application January 7, 1955, Serial No. 480,442

2 Claims. (Cl. 62—94)

This invention relates to beverage cooling devices, and particularly to such devices which are incorporated in the bottle or container in which the beverage is sold.

The cooling of bottled or canned beverages in large quantities in the home, or even in small quantities outdoors away from home has always presented a problem. The average home does not have sufficient refrigeration space for the purpose. If cold drinks are to be served at a picnic, or other outdoor occasion, a container large enough to carry the beverage and a quantity of ice must be transported to the spot.

The object of the present invention is to provide means for insertion in a bottle at the time of filling, which may be activated when desired to cool the contents of the bottle or container.

A more specific object is the provision of such means which has separate compartments for holding materials which, when mixed, will absorb heat from the contents of the container.

Other objects of the invention will become apparent from the following description of one practical embodiment thereof, when taken in conjunction with the drawings which accompany, and form part of, this specification.

In the drawings:

Figure 1 is a vertical section through a bottle having means therein, incorporating the principles of the present invention, for cooling the contents of the bottle;

Figure 2 is a horizontal section through the bottle taken on the line 2—2 of Figure 1;

Figure 3 is a view showing the upper part of the bottle, with an opener having means for activating the cooling system in operative position; and

Figure 4 is a horizontal section taken on the line 4—4 of Figure 3.

In general, the invention consists of a tubular container, closed at one end, which is insertable in a bottle, or other container, to hang from the top thereof, and holds a material which when activated with absorb heat. The tubular container has a chamber at the top to receive a cartridge in which there is a second material to mix with the material in the tubular container to start the chemical action.

Referring to the drawings in detail, there is shown a bottle 1 of the usual type in which beverages are sold. Although a bottle is shown, this is merely illustrative of a beverage container and the invention is applicable to any of the usual containers. The bottle has the conventional mouth 2 surrounded by the lip 3.

The cooling apparatus consists of an elongated tubular member 4 which is closed at the bottom and extends well down into the bottle. The tube forms a chamber 5 to receive a chemical, to be described, and serves as a conductor tube to transfer the heat of the beverage to the cooling chemical. The conductor is preferably formed of plastic, or similar material. The upper part 6 of the tube is of inverted cone shape, flaring outwardly to the inside diameter of the bottle mouth. The tube terminates at the top in a horizontal annular flange 7 which overlies, and rests upon the lip 3. In practice, an annular cork gasket will be placed upon the bottle lip and the flange 7 will rest upon the gasket. A second gasket 9 will be placed on top of the flange.

The upper conical portion of the tube forms a chamber to receive a cartridge 10. The cartridge will contain a

2

second material which, when mixed with the material in the tube, will react to absorb heat. The cartridge also will be made of plastic, and consists of a cup portion 11, of similar shape and size to the upper part of the conductor tube so that it will fit snugly therein, and a cap 12 to close and seal the cup. The cap will be crowned and have a peripheral flange 13 to fit tightly within the upper rim of the cup.

When the cartridge is in its chamber the bottle is closed with the usual bottle cap 13. No cork is used in the top of the bottle cap as the gaskets 8 and 9 will form a complete seal and it is desirable that the cartridge cap be in contact with the top of the bottle cap.

Two materials are placed in the tube and cartridge. The materials may be any substances which are themselves inert but, when mixed, react to absorb heat. An inorganic salt and water are examples of such substances. Such materials are shown at 14 and 15 in the tube and cartridges.

It will be seen that the tube flange and gaskets will seal the beverage in the bottle when the bottle cap is in place. It is essential, of course, that the materials in the tube and cartridge be permitted to mix before the bottle cap is removed. To accomplish this, any sharp instrument may be used to puncture the bottle cap, cartridge cap and cartridge cup bottom so that the materials may mix. A can opener 16, of conventional type, may be provided with a prong 17 for this purpose.

When the cooling apparatus has been punctured and the beverage has been cooled to the desired degree, the bottle cap is removed and the cap, cartridge and tube disposed of. The beverage may then be poured from the bottle in the normal manner.

While one practical embodiment of the invention has been disclosed herein, it will be understood that the details of construction described and shown are merely for purposes of illustration, and the invention may take other forms within the scope of the appended claims.

What is claimed is:

1. A cooler for bottled beverages comprising, a closed bottom conductor tube having an outwardly flaring upper portion and a peripheral flange about its top to seat upon the rim of said bottle, said tube having a chemical therein, a cartridge of similar size and shape to the flared top portion of said tube to seat within said upper portion of said tube and seal the tube, said cartridge having a chemical therein which when mixed with said first-mentioned chemical will react to absorb heat from said beverage, a gasket between said bottle rim and tube flange, a gasket on said tube flange, and a bottle cap over said tube, cartridge and bottle rim.

2. A cooler for beverage in a container comprising, a closed-bottom conductor tube for insertion in the container before closing, said tube containing a chemical, a cartridge for insertion in said tube, said cartridge containing a chemical which when mixed with said first mentioned chemical will react to absorb heat from the beverage, said tube having an outwardly flaring upper portion to form a chamber to receive said cartridge, said cartridge being of similar size and shape to said upper portion of said tube to seat within and seal said tube, and said tube having a peripheral flange at the top to seat upon the top of said container.

References Cited in the file of this patent

UNITED STATES PATENTS

1,467,462	Codelli	Sept. 11, 1923
1,897,723	Free	Feb. 14, 1933

FOREIGN PATENTS

513,015	France	Feb. 5, 1921
649,558	France	Dec. 24, 1928