

May 19, 1925.

1,538,483

F. C. GRANTHAM

LIQUID COOLING DISPENSING DEVICE

Filed Oct. 15, 1924.

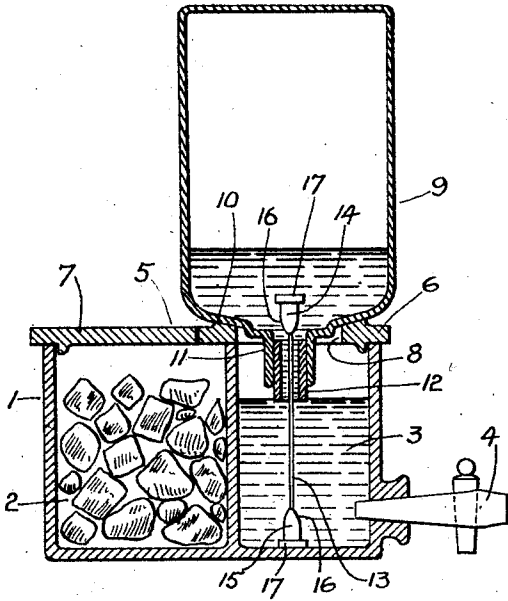


Fig. 1.

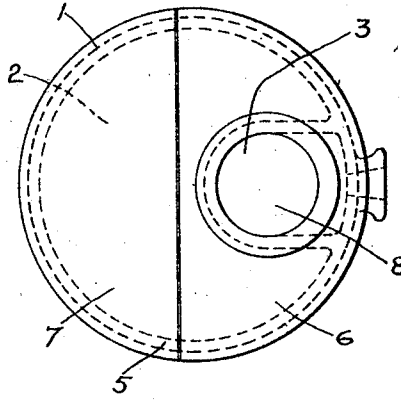


Fig. 2.

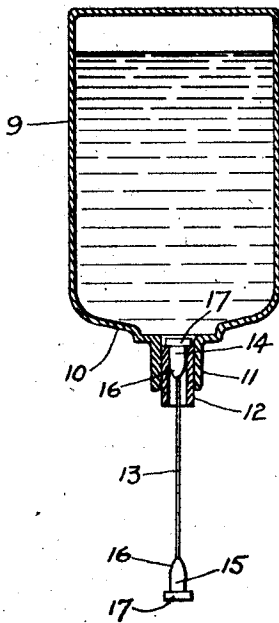


Fig. 3.

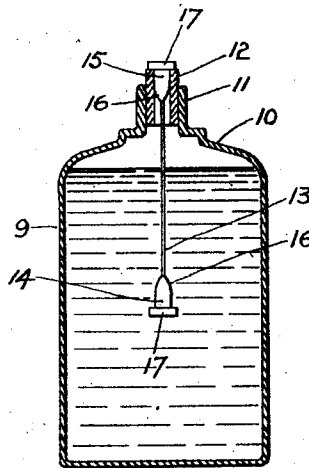


Fig. 4.

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Patented May 19, 1925.

1,538,483

UNITED STATES PATENT OFFICE.

FREDERIC CHARLES GRANTHAM, OF VANCOUVER, BRITISH COLUMBIA, CANADA.

LIQUID-COOLING DISPENSING DEVICE.

Application filed October 15, 1924. Serial No. 743,828.

To all whom it may concern:

Be it known that I, FREDERIC CHARLES GRANTHAM, a subject of the King of Great Britain, and a resident of the city of Vancouver, in the Province of British Columbia, Canada, have invented certain new and useful Improvements in Liquid-Cooling Dispensing Devices, of which the following is a specification.

My invention relates to improvements in liquid cooling and dispensing devices, the objects of which are to provide means for replenishing the ice to the cooling chamber without removing the liquid container supported thereover, to provide means whereby the liquid container may be effectively sealed to prevent the discharge of liquid therefrom when being raised in an inverted position, and further to provide a sealing means for the liquid container which will, by gravity, engage the neck of the container with sufficient force to prevent its accidental removal when handling.

The invention consists essentially of a cooler having a liquid chamber and a cooling chamber, by which a liquid container is supported in inverted position, and a sealing means for the liquid container, as will be more fully described in the following specification in which:—

Fig. 1 is a sectional view of my invention.

Fig. 2 is a plan of the cooler.

Fig. 3 is a sectional view of the liquid container sealed in inverted position.

Fig. 4 is a sectional view of the liquid container sealed in normal position.

In the drawings like characters of reference indicate corresponding parts in each figure.

The numeral 1 indicates a cooler having an ice chamber 2 and a liquid chamber 3, which is provided with a discharge tap 4. Upon the cooler 1 a cover, generally indicated by the numeral 5, is fitted, the cover being formed in two sections 6 and 7. The section 6 which covers particularly the liquid chamber 3 may be formed integrally with the cooler 1 and is provided with an aperture 8 which forms a seat for the liquid container 9. The section 7 of the cover is fitted over a portion only of the ice chamber 2, that it may be readily removed from the cooler as required to replenish the ice supply without disturbing the liquid container 9.

The numeral 9 indicates a liquid con-

tainer having a substantially horizontal shoulder 10 which permits the container to be firmly carried upon the cover section 6 when inverted. The neck 11 of the container is preferably parallel and is tightly fitted with a sleeve 12 of rubber or other resilient material. Extending through the sleeve is a rod 13 which is somewhat greater in length than the distance between the bottom of the liquid chamber 3 and the inner end of the sleeve 12 when the liquid container 9 is in position upon the cooler. The rod is provided at each end with slightly tapering stoppers 14 and 15 respectively, each having a quick taper as at 16 that they may readily lead into the sleeve 12, the combined weight of the rod 13 and the stoppers 14 and 15 being sufficient to draw the descending stopper into sealing engagement with the sleeve, so that some force is required to dislodge it therefrom. The outer end of each of the stoppers 14 and 15 is provided with a cap flange 17 which prevents the stoppers from extending beyond its length into the sleeve, and provides means whereby the upper stopper may be withdrawn. The cap on the lower stopper, when in engagement with the lower end of sleeve, permits the sleeve to be readily withdrawn from the container neck 11 by exerting an upward pull on the rod 13. Prior to setting a container 9 into position upon the cooler 1, the lower stopper is drawn up into sealing engagement with the sleeve, the container is inverted and lowered into position on the cover 6. The upper stopper coming into contact with the bottom of the cooler unseats the lower stopper from the sleeve during the final lowering movement of the container and permits the liquid to flow into the liquid chamber 3 until an air lock in the container 9 is formed.

Should it be necessary to remove the container before its contents have been discharged into the chamber 3 it suffices to raise it vertically, allowing the weight of the stoppers 14 and 15 and the rod to seal the container from the inner end of the sleeve.

The container 9 may be refilled either by pulling the rod 13 upwards and withdrawing the lower stopper 14 and the sleeve 12, or by raising the upper stopper and pouring through the sleeve.

What I claim as my invention is:

1. In a device of the class described, a liquid container having a top opening and

- adapted to be supported upon a cooler and to discharge liquid when in inverted position, a sleeve fitted to the top opening, a pair of oppositely disposed stoppers end-wise movable to engage opposite ends of the sleeve to seal the container, and means upon one of the stoppers to engage the end of the sleeve to remove it from the container.
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2. In a device of the character described,
- 10 a liquid container having a discharge opening, a sleeve fitted in said opening, a rod slidable through said sleeve and stoppers at opposite ends of the rod engageable alternately with corresponding ends of the sleeve, the inner stopper being smaller than the aforesaid opening but held against escape therethrough by engagement with said sleeve. 15

Dated at Vancouver, B. C., this 15th day of September, 1924.

FREDERIC CHARLES GRANTHAM.

Witnesses:

H. B. MARRIAN,
J. J. JOHNSTON.