This invention relates to a beverage cooling device, and has for its primary object and purpose to provide a device of simple and durable construction which can be readily applied to the open top of a pitcher or like container for maintaining a beverage contained therein at a desirably low temperature, as beer, water, or other contents.

It is also another important object of the invention to provide a cooling device for the above purpose having a detachable holder in which water may be frozen and converted into ice in the freezing chamber of a conventional automatic refrigerator, thus obviating the necessity of cracking or breaking ice cubes or blocks into small particles to be placed in the said holder.

It is also a further object of the invention in one embodiment thereof to provide a support for the ice holder having means which will enable the same to be easily and securely applied to or removed from connection with pitchers or other containers of different diameters.

With the above and other objects in view, the invention consists in the improved beverage cooling device, and in the form, construction and relative arrangement of its several parts as will be hereinafter more fully described, illustrated in the accompanying drawing and subsequently incorporated in the subjoined claims.

In the drawing wherein I have disclosed several simple and practical embodiments of the device, and in which similar reference characters designate corresponding parts throughout the several views.

Figure 1 is a side elevation showing one form of my present invention as applied to a pitcher or other beverage containing vessel; Fig. 2 is an enlarged fragmentary vertical sectional view thereof;

Fig. 3 is a similar section showing a slightly modified form of the device;

Fig. 4 is a fragmentary vertical section illustrating another alternative embodiment of the invention;

Fig. 5 is a perspective view illustrating a plurality of ice-holding tubes connected with a common supporting plate; and

Fig. 6 is a sectional view through the freezing chamber of an automatic refrigerator showing the tube carrying plate mounted therein.

Fig. 7 is a sectional view of another embodiment; and

Fig. 8 is a sectional view of a part of another.

Referring in detail to the drawing and for the present more particularly to Figs. 1 and 2 thereof, a pitcher 5 of conventional form such as is used in the serving of beer or other beverages, has the usual outwardly turned pouring mouth 6 at its upper open end.

My improved cooling device in one form thereof embodies the metal disc or plate 7 of larger diameter than the open end of the pitcher. This plate is formed at its underside in spaced relation to its periphery with spaced annular flanges indicated at 8 and 9 respectively between which the upper edge and body wall of the pitcher is adapted to be received. The outer flange 8 is cut away at one side of the disc or plate as shown at 10 where said disc overlies the pouring mouth 6 of the pitcher.

The disc or plate 7 is also further provided on the underside thereof and concentric with its axis with an internally threaded boss 11.

The ice holder consists of a thin walled tube 12, preferably somewhat conical in form, and it may be of other forms or shapes, said tube being of such length as to extend downwardly for the greater part of the depth of the pitcher 5 and terminating slightly above the bottom of the pitcher when said tube is connected with the plate 7. For this purpose, the wall of the tube 12 at its upper open end is externally threaded as at 13 for engagement with the internal threads of the boss 11. Of course, it will be understood that ice may be supplied to the tube 12 in any desired form, and when said tube, together with the plate 7, is applied to the pitcher 5, the said tube extending downwardly into the beverage, the latter will thereby be kept at the desired low temperature for an indefinite period of time.

The plate 7 being comparatively heavy, and the flanges 8 and 9 engaging closely against opposite surfaces of the wall of the pitcher, the beverage may be poured freely from the mouth of the pitcher without displacement of the cooling device from its applied position.

In Fig. 3 of the drawing, I illustrate a slightly different construction in which a sheet metal cover 14 is provided of annular concavo-convex form having an upstanding flange 15 at its inner edge, and a downwardly extending flange 16 at its outer edge which is adapted to resiliently grip the outer surface of the wall of the pitcher 5, said flange being also cut away as indicated at 17, where the cover overlies the mouth 6 of the pitcher.

A sheet metal cap member 18 is adapted to be frictionally telescoped upon the flange 15. The end wall of this cap internally thereof is centrally provided with an internally threaded collar 19 to
detachably receive the threaded end 13 of the ice-holding tube 12.

In both of the above described constructions, the tube 12 may be readily detached from

5 the plate 7 or the cap 18. A plurality of such tubes, after being partly filled with water, may be
detachably engaged at their threaded ends 13 in the threaded openings 20, or the tubes may be dropped into the open-

ings, in which case the shoulder of the tubes holds onto the plate. After removing the ice

cube freezing trays from the freezing chamber 22 in an automatic refrigerator as shown in Fig.

6 6, the upper tray supporting plate 29 may then be arranged upon the upper tray supporting shoulders or ribs on the opposite side walls of said chamber, so that the series of tubes 12 are thereby supported in suspended re-

lation to said plate within the freezing chamber.

20 The water contained in said tubes will thus be quickly frozen into ice, and the tubes may then be singly removed from the supporting plate and attached to the cover plate of the device in the manner above described, as may be required.

25 Thus, a device of this construction readily lends itself to a continuous ample supply of ice for the purpose of cooling as beverage, and with a minimum of expense and labor for the individual user.

In Fig. 4 of the drawing, I show another alter-

ative embodiment of the device, wherein the

cover member may consist of a thin metal disc or plate 23 having a central opening therethrough surrounded by an internally threaded boss 24 projecting from one side of said plate. The plate 23 at its outer edge is provided with a plu-

rality of spring arms 25 which readily yield to accommodate themselves to pitchers or vessels of various diameters within certain limits to re-

tain said plate 23 in its applied position and rest-

ing at its outer edge upon the upper edge of the

pitcher.

In this construction, the ice-holding tube 12'

at its upper open end is formed with a relatively

thick outwardly projecting annular flange 26 ex-

ternally threaded as at 29 to engage the boss 24. Above this flange, which may be dispensed with, and the external threads placed in the exterior of the tube itself, the internal threads 30 of the boss 24, are engaged by the external threads 30 of a cover 26" which seats on the plate 23. The peripheral face of the flange 26" is preferably knurled or serrated so as to provide a finger

5 grip, whereby the cover 26" may be easily at-

tached to or detached from the boss 24 on the

plate 23.

In the construction shown in Fig. 4, it will be readily understood that the ice-holding tubes may be detached from the cover plate without

removing the latter from the upper end of the pitcher and replaced by another tube containing

ice. Also, in this form of the device, if desired, the plate 20 for suspending the tubes in a vertical position within the freezing chamber of the refrigerator need not be used, but since the tubes are tightly closed at their open ends by the plugs 28, they may be hori-

zontally positioned within the freezing chamber. Also, this construction enables a very simple and

inexpensive form of the cover member 23 to be employed.

The container 5 may be either provided with a spout as in Fig. 2, or be circular and entirely closed by the cover as in Fig. 4.

5 It will thus be noted that in each embodiment,
I claim:
1. A beverage cooling device, comprising a cover plate proportioned to fit over the open top of a pitcher or other vessel for closing the same, said cover plate having at its underside and at its central portion an internally threaded boss, and an ice holding tube externally threaded at its upper end for detachable engagement in the boss to close the tube and suspend the same in a pitcher or other vessel for immersion in a beverage to be cooled, said cover plate also having at its underside and at its marginal edge portion spaced concentric flanges to embrace the upper edge of the pitcher or other vessel and hold the cover plate thereto, said tube cooperating with said flanges to retain the cover plate in place when the pitcher is tilted to pour the beverage.

2. A beverage cooling device, comprising a cover plate shaped to the configuration of the upper open end of a pitcher or other vessel for beverages and adapted to close the pitcher, said cover plate having a relatively small diameter boss on its under side and providing a solid closure wall within the boss, said boss being internally threaded, said cover plate also having adjacent its outer marginal edge portions concentric depending flanges for embracing the opposite sides of the wall of the pitcher to hold the cover plate thereto, and an ice carrying tube open at its upper end and having external threads adapted to engage in the boss for closing the upper end of the tube and suspending the tube from the cover plate in the beverage in the pitcher.

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