

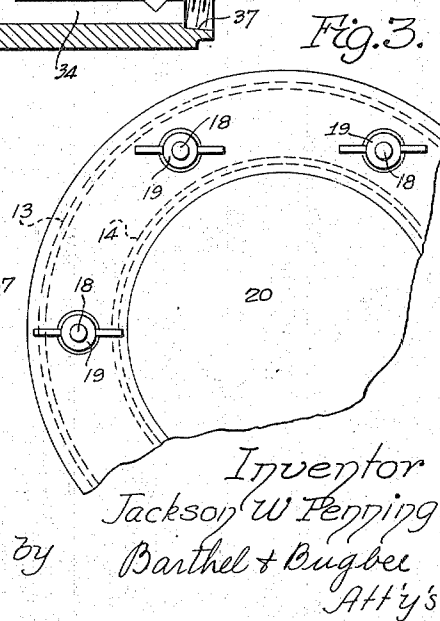
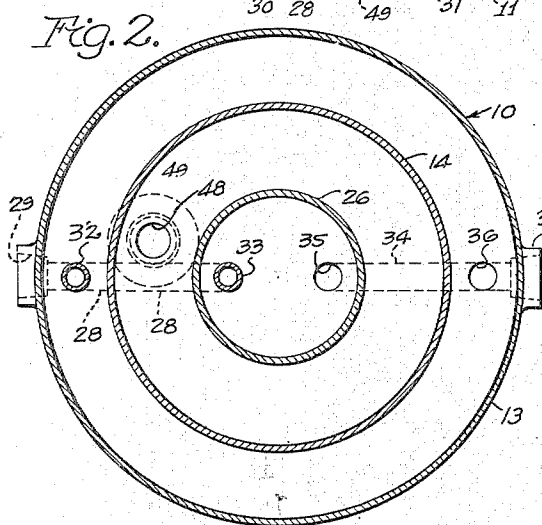
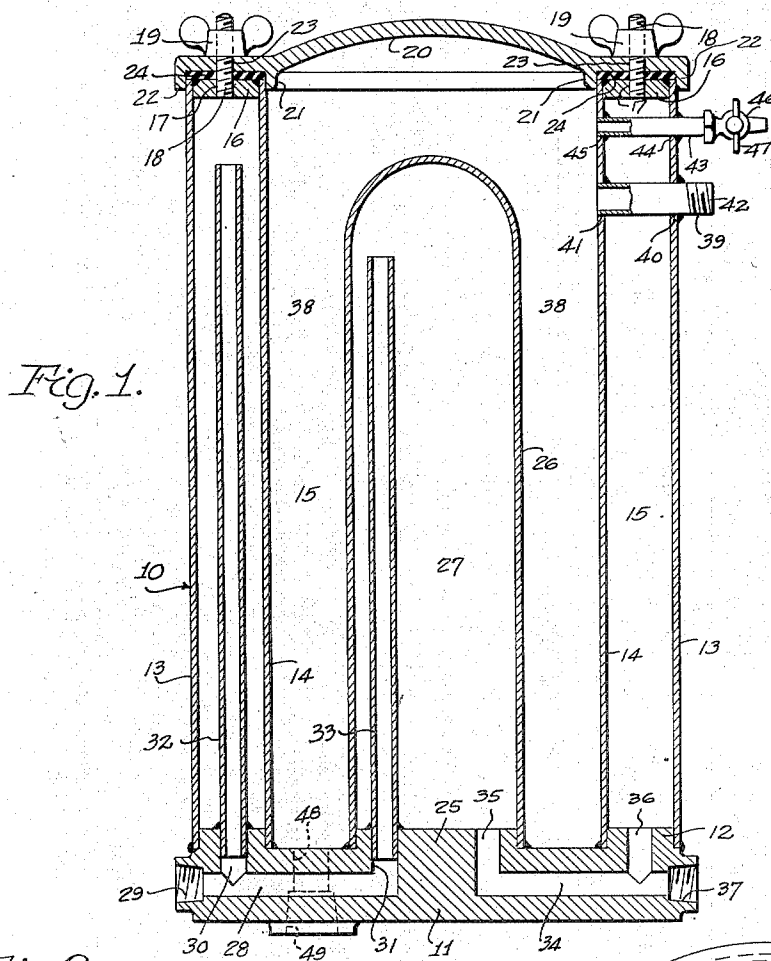
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J. W. PENNING

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BEVERAGE COOLER

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BEVERAGE COOLER

Jackson W. Penning, Roseville, Mich.

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7 Claims. (Cl. 62-141)

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This invention relates to beverage coolers.

One object of this invention is to provide a beverage cooler which is free from cooling coils, thereby eliminating the difficult and troublesome operations of cleaning such coils.

Another object is to provide a beverage cooler, the interior of which is quickly exposed merely by removing a cover plate.

Another object is to provide a beverage cooler which is compact and requires very little space beneath the bar or other location where it is installed.

Another object is to provide a beverage cooler for beer and other beverages wherein the beer passes through an annular chamber which is cooled at the inner and outer walls by a refrigerant passing through a central chamber and an outer annular chamber respectively.

Another object is to provide a beverage cooler as set forth in the preceding objects wherein the beer enters near the top of the annular chamber and is drawn off at the bottom thereof, thereby avoiding the drawing off of foam which collects at the top of the chamber.

Other objects and advantages of the invention will become apparent during the course of the following description of the accompanying drawings, wherein:

Figure 1 is a central vertical section through the beverage cooler, according to a preferred embodiment of the invention;

Figure 2 is a horizontal mid-section through the beverage cooler shown in Figure 1; and

Figure 3 is a fragmentary top plan view of the beverage cooler shown in Figures 1 and 2.

Referring to the drawings in detail, Figure 1 shows a preferred embodiment of the beverage cooler 10 of this invention as consisting of a base plate 11 having an annular peripheral ridge 12 to which are secured, as by welding, cylindrical outer and inner casings 13 and 14 together forming an outer refrigerant container and spaced apart from one another to provide an annular outer refrigerant chamber 15. The upper end of the refrigerant chamber 15 is closed by an annular end ring 16 which is provided at intervals with threaded bores 17 in which are mounted threaded studs 18 carrying wing nuts 19. The latter are adapted to hold down a cover plate 20 having inner and outer flanges 21 and 22 respectively engaging the inner and outer walls of the inner and outer casings 14 and 13. The cover plate 20 is bored as at 23 for the passage of the studs 18 and an annular gasket 24 is mounted between the end ring 16 and the cover plate 20 to prevent leakage therebetween.

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The base plate 11 at its center is provided with a circular boss 25 to the periphery of which a dome-shaped closed central casing or container 26 is secured, as by welding, thereby providing

a central refrigerant chamber 27. Refrigerant is withdrawn from the central and outer refrigerant chambers 27 and 15 through a passageway 28 having a threaded outlet opening 29 for connection to the refrigerating system and a pair of transverse vertical bores 30 and 31 leading into the outer and inner refrigerant chambers 15 and 27 respectively. Riser pipes 32 and 33 are secured, as by welding, within the bores 30 and 31 respectively for conducting refrigerant out of the upper portions of the refrigerant chambers 15 and 27 respectively. The base plate 11 is likewise provided with a refrigerant supply passageway 34 with transverse vertical bores 35 and 36 leading therefrom to the central and outer refrigerant chambers 27 and 15 respectively. The passageway 34 at its outer end leads to a threaded inlet opening 37 to which a refrigerant supply conduit is connected for conveying the refrigerant thereto from the refrigerating system. The gaseous refrigerant, after it has cooled the beverage in the annular beverage chamber 38 located between the outer and inner refrigerant chambers 15 and 27 respectively, returns to the refrigerating system through a conduit connected to the opening 29. A beverage inlet conduit 39 leads through bores 40 and 41 in the outer and inner casings 13 and 14 respectively and is secured thereto as by welding, the outer end 42 being threaded for connection to the beverage supply line leading, for example, to the beer kegs. An air vent conduit 43 passes through holes 44 and 45 in the casings 13 and 14 and is secured thereto as by welding. The air vent conduit 43 on its outer end carries a cock 46 having an operating handle 47 for opening and closing the same. The base plate 11 is provided with a beverage outlet passageway 48 leading to a threaded beverage outlet opening 49 to which an outlet conduit is connected through which the beer or other beverage passes on its way to the dispensing faucet at the bar. The refrigeration system for the beverage cooler 10 is of any conventional type and forms no part of the invention.

In the operation of the invention, a beverage, such as beer, is supplied to the beverage chamber 38 through the beverage inlet pipe 39 and is permitted to substantially fill the chamber. While filling is taking place, the air vent cock 46 is opened by turning the handle 47, thereby permitting the air displaced by the rising level

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of beverage in the chamber 38 to be discharged to the atmosphere. When the filling operation has been completed, the handle 47 is turned so as to close the vent cock 46. Meanwhile, refrigerant is admitted through the passageway 34 into the outer and central refrigerant chambers 15 and 27 respectively, cooling the walls 14 and 26 thereof, and thereby extracting heat from the beverage contained in the chamber 38. As the latter is dispensed, it is drawn off through the outlet conduit connected to the threaded opening 49 and passes to the faucet at the bar.

The beverage, if beer, deposits a scum on the walls of the chamber 38 which scum, if not removed every day or two, injuriously affects the taste of the beer. Accordingly, the beer cooler of the present invention is very useful in that it is easily cleaned at such frequent intervals. To clean the scum and other foreign matter from the chamber 38, the wing nuts 19 are unscrewed from the studs 18 and the cover plate 20 lifted off, exposing the chamber 38. The latter may then be cleaned out in the usual manner, removing the scum and keeping the chamber 38 in a clean and sanitary condition. The pipes connected to the opening 49 and conduit 39 may likewise be removed and cleaned, also the passageway 48 and interior of the pipe 39. After cleaning, the cover plate 20 is reinstalled upon the studs 18 and clamped in place by the wing nuts 19, whereupon the beverage cooler is again ready for filling in the previously described manner.

While I have shown and described my invention in detail, it is to be understood that the same is to be limited only by the appended claims, for many changes may be made without departing from the spirit and scope of my invention.

What I claim is:

1. A beverage cooler comprising a base member, an annular outer refrigerant container connected to said base member, a central refrigerant container likewise connected to said base member, the walls of said refrigerant containers defining a beverage chamber therebetween, means for supplying refrigerant to said refrigerant containers, and removable closure means engaging the open end of said beverage chamber, said base member having a beverage outlet passageway therethrough.

2. A beverage cooler comprising a base member, an annular outer refrigerant container connected to said base member, a central refrigerant container likewise connected to said base member, the walls of said refrigerant containers defining a beverage chamber therebetween, and removable closure means engaging the open end of said beverage chamber, said base member having a refrigerant supply passageway therethrough leading to said refrigerant containers, said base member having a beverage outlet passageway therethrough.

3. A beverage cooler comprising a base member, an annular outer refrigerant container connected to said base member, a central refrigerant container likewise connected to said base member, the walls of said refrigerant containers defining a beverage chamber therebetween, and removable closure means engaging the open end of said beverage chamber, said base member having a refrigerant supply passageway therethrough

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leading to said refrigerant containers and a refrigerant discharge passageway therein leading outwardly from said refrigerant containers, said base member having a beverage outlet passageway therethrough.

4. A beverage cooler comprising a base member, an annular outer refrigerant container connected to said base member, a central refrigerant container likewise connected to said base member, the walls of said refrigerant containers defining a beverage chamber therebetween, and a removable cover plate clamped to said cooler and engaging the open end of said beverage chamber, said base member having a refrigerant supply passageway therethrough leading to said refrigerant containers.

5. A beverage cooler comprising a base member, an annular outer refrigerant container connected to said base member, a central refrigerant container likewise connected to said base member, the walls of said refrigerant containers defining a beverage chamber therebetween, means for supplying refrigerant to said refrigerant containers, and a removable cover plate clamped to said cooler and engaging the open end of said beverage chamber, said base member having a beverage outlet passageway therethrough.

6. A beverage cooler comprising a base member, an annular outer refrigerant container connected to said base member, a central refrigerant container likewise connected to said base member, the walls of said refrigerant containers defining a beverage chamber therebetween, and a removable cover plate clamped to said cooler and engaging the open end of said beverage chamber, said base member having a refrigerant supply passageway therethrough leading to said refrigerant containers and a refrigerant discharge passageway therein leading outwardly from said refrigerant containers.

7. A beverage cooler comprising a base member, an annular outer refrigerant container connected to said base member, a central refrigerant container likewise connected to said base member, the walls of said refrigerant containers defining a beverage chamber therebetween, and a removable cover plate clamped to said cooler and engaging the open end of said beverage chamber, said base member having a refrigerant supply passageway therethrough leading to said refrigerant containers and a refrigerant discharge passageway therein leading outwardly from said refrigerant containers, said refrigerant discharge passageway having riser pipes connected thereto and extending upwardly to the upper portion of said refrigerant containers.

JACKSON W. PENNING.

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