March 3, 1936. F. X. SCHWAB 2,032,722

BEER CONTAINER

Filed July 6, 1934

Fig. 1.

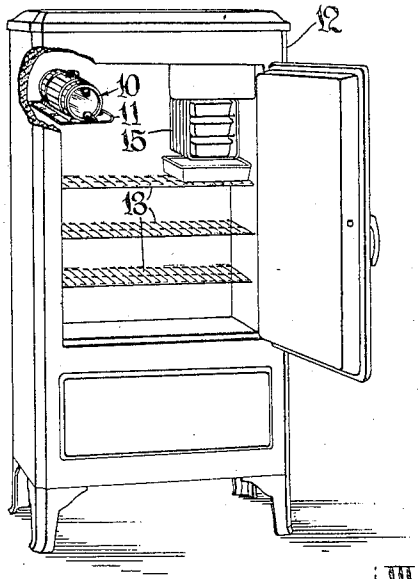


Fig. 3.

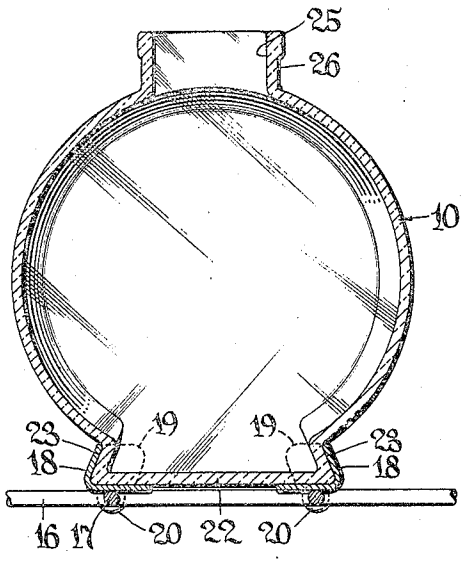


Fig. 2.

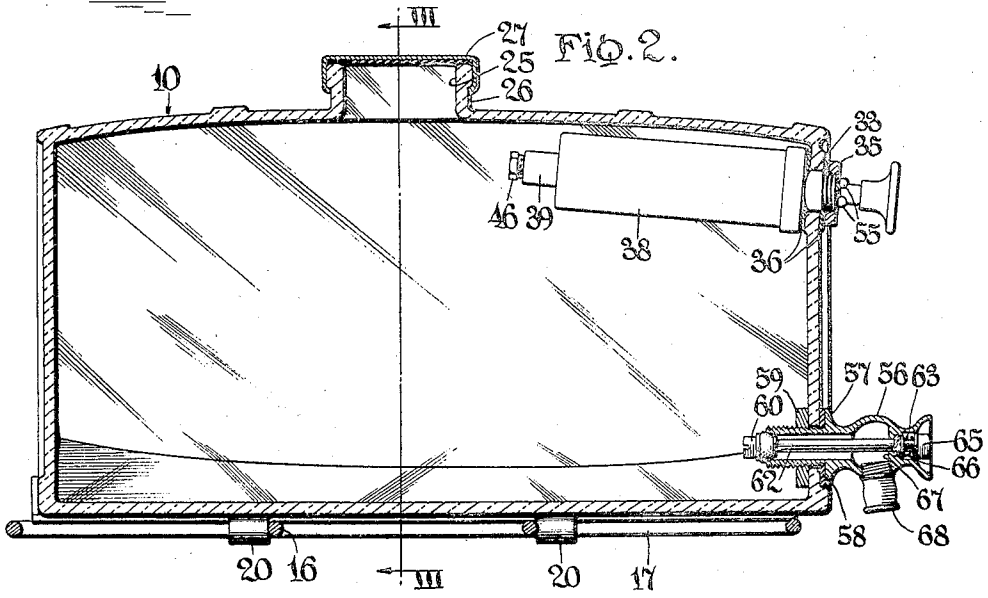
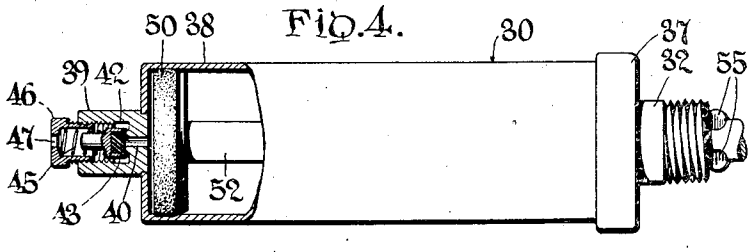


Fig. 4.



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BEER CONTAINER

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3 Claims. (Cl. 225—16)

This invention relates to beverage compartments or containers for use in refrigerators or for other purposes, and it has particular relation to containers for beer or other brewed or carbonated beverages for use in the household where it is desirable to keep on hand a supply of cooled beverage, which may be drawn off from time to time without the usual result of the remaining portion deteriorating or "going flat". This invention makes practicable for example, the keeping on hand in the average household of draught beer, without the usual nuisance and problems and inconveniences attending the present forms of kegs, pumping apparatus, and cooling systems; or of empty bottles.

It is well known that bottled beer is inherently of a quality or characteristic which makes it less palatable to lovers of good beer. This condition is necessarily caused by the pasteurization treatment which must be given to beer after it is bottled, and the result is an unavoidable modification of flavor and delectability. This fact accounts for the continued widespread toleration by the consumers of the inconvenience, muss and equipment problems associated with the use of draught beer.

The present invention provides means whereby untreated draught beer which has been drawn into the container portion at the brewery under the most favorable atmospheric and temperature conditions, may be transported to the consumer in convenient quantities and in such manner that the beverage will be kept cooled during transportation.

Upon delivery, the device may be inserted in the consumer's refrigerator so that the beverage is kept in proper condition and available at all times. The device is sanitary and convenient to use; and is a harmonizing accessory part of the modern refrigerating unit. It lends itself readily to artistic designing; and being readily withdrawable from the refrigerator it may be placed directly upon the dining or party table, where it adds a decorative touch as well as being a means for keeping the beverage conveniently available for use and at the proper temperature.

Fig. 1 is a perspective of a refrigerator having a device embodying the invention incorporated therein.

Fig. 2 is a longitudinal section illustrating the construction of a beverage container;

Fig. 3 is a cross section taken substantially along the line III—III of Fig. 2; and

Fig. 4 is a view, on a larger scale, partially in elevation and partially in section, of a compressor for controlling the pressure on the fluid in the beverage container.

In practicing the invention a beverage container 10 is mounted upon a support 11 that is rigidly secured in a refrigerator 12 having conventional shelves 13 and cooling unit 15. This cooling unit may be in the form of cooling coils, or an ice compartment in which bulk ice is inserted for cooling purposes.

The support 11 is in the form of an open grid having transverse and longitudinal bars 16 and 17, and is provided with a pair of angular guides 18 which are composed of relatively thin material, the upper angular portions of which converge upwardly. Flanges 19 are formed upon the rear ends of the guides to serve as stops, and suitable fastening devices 20 secure the guides rigidly to the intermediate longitudinal bars 17. The support can be installed as a permanent part of the refrigerator or it can be detachably mounted therein.

The beverage container proper is substantially cylindrical in form and is provided with a lower offset base 22 having upwardly converging side surfaces 23 which slidably engage the guides and extend continuously from one end of the container to the other. As best shown in Fig. 2, the rear end of the corner portions abut the rear flanges 19 of the guides and prevent further rearward movement of the container. However, the container can be withdrawn as desired forwardly from the guides, but cannot be displaced in any other direction.

A suitable opening 25 formed in a boss 26 upon the upper portion of the container provides for convenient filling of the container with the beverage to be held therein, and a fluid tight cap 27 is secured upon the boss over the opening in such manner as to seal the container. The cap is capable of withstanding fifty or more pounds per square inch of pressure and must be mutilated in order to remove it. Hence, the cap can be used only once.

A compressor 30 mounted in the upper part of the container comprises a plug 32 that is secured in fluid tight relation in an opening 33 in the container end wall and a nut 35 threaded upon the outer end portion of the plug tightens it firmly in its proper position. Suitable washers 36 provided upon opposite sides of the end wall facilitate the positioning of the plug therein in fluid tight relation. The inner end of the plug constitutes a cylinder head 37 for a cylindrical body 38 of the compressor which is screwthreaded thereto. At the end of the cylinder body opposite the head 37, a valve plug 39 is rigidly mounted

in fluid tight relation and is provided with an axial duct **40** leading into a valve chamber **42** formed in the end of the valve plug.

A check valve **43** is mounted in the chamber **42** for normally covering the duct **40** and is resiliently held in place by means of a spring **43** having one end engaging the valve and the other end engaging a cap **46** that is screwthreaded into the outer end of the chambered plug. An opening **47** in the end of the cap provides for fluid communication with the duct and interior of the cylinder when the valve **43** is open.

A pumping piston **50** is reciprocable in the cylinder body and a piston rod **52** rigidly secured to the piston extends through the plug **32** to the outside of the container where it is provided with a manually operable handle **53**. Suitable lugs **55** formed upon the piston are adapted to contact the outer end of the plug **32** to gauge the inward stroke of the piston.

The lower portion of the container is provided with a spigot **56** comprising a tubular shell extending through the container wall. A flange **57** formed upon the spigot has a washer **58** between it and the container wall and is tightened thereagainst in fluid tight relation by means of a nut **59** screwthreaded upon the inner end of the spigot. A valve **60** closing the inner end of the spigot is formed upon a valve stem **62** which projects from the outer end of the spigot. It is of course to be understood that the size of the valve stem is such that fluid may flow freely through the spigot when the valve is open. A spring **63** surrounding the outer end portion of the valve stem has one end abutting a head **65** at the valve stem end and the other end of the spring abuts a washer **66** surrounding the valve stem to provide a fluid tight connection therewith. The washer rests upon a shouldered portion **67** of the interior of the spigot. A suitable spout **68** communicates with the interior of the spigot and with the interior of the container when the valve **60** is open.

In utilizing the invention, the container **10** is filled at a beverage plant, such as a brewery, by conventional filling devices through the opening **25** and then a cap **27** is crimped in sealed relation on the boss **26** by a conventional sealing or capping machine. Thus, each of the containers is filled, for example, with beer or ale under ideal atmospheric and temperature conditions to avoid any bacteria that might be harmful to the product. Then the filled containers are sealed and packed in such manner as to preserve these conditions until the contents are consumed. The container can be packed in a carton with dry ice, or the like, for preserving its contents during delivery.

Upon delivery to the consumer the container is guided into the refrigerator upon the guides **18**, and is then ready for use. The beverage can be drawn from the spigot while the container is in the refrigerator, or the container can be removed and placed upon a table, or otherwise positioned for convenient access and service.

The compressor **30** is provided for the purpose of maintaining pressure upon the surface of the beverage as portions of it are withdrawn. Thus, the escape of the gases characteristic of the beverage is prevented and the original desirable qualities and flavor are preserved until the entire contents are consumed.

While the compressor is being operated by the user, the guide members **18** hold the container rigidly in place on its support.

It should be observed that the outlet opening **47** of the compressor is disposed at a location closely adjacent the upper inner wall of the container. This arrangement is important because the air pumped into the container is not passed through the body of the beverage. If the air were passed through or bubbled through the beverage it would absorb and carry off some of the beverage flavor, and otherwise adversely affect the beverage.

Although only one form of the invention has been shown and described in detail, it will be apparent to those skilled in the art that the invention is not so limited but that various changes can be made therein without departing from the spirit of the invention or from the scope of the invention defined by the accompanying claims.

I claim:

1. A beverage cooler comprising a fluid tight container, the lower portion of the container having upwardly converging guide portions, a support having upwardly converging guide portions cooperating with the first mentioned guide portions for securing the container upon the support, refrigerating means surrounding the support for cooling the container, said container being slidably removable from the support guide portions, a manually operable air pump mounted in the upper portion of the container and discharging into a space above the beverage level in the container, said guiding portions cooperating with the container to hold the latter firmly during operation of the pump, and means for withdrawing beverage from the container at a location adjacent the lower portion of the container.

2. A beverage cooler comprising a fluid tight container, the lower base portion of the container having guiding surfaces for connection of the container in removable relation upon a support, a manually operable air compressor having a handle and being mounted inside the container in the upper portion thereof free from its beverage contents to render the body of the beverage free of air bubbles from the compressor, a handle for the compressor extending outwardly from the wall of the container while the body of the compressor remains inside the container, said compressor having an outlet located in the upper portion of the container above the normal level of beverage therein whereby compression of air above the beverage will avoid passing any of the air through the body of the beverage, and means for drawing the contents of the container from the lower portion thereof below the substantially empty level of the container.

3. A beverage container comprising a fluid tight container having a normally sealed opening for receiving beverage therethrough prior to sealing, a manually operable compressor insertable through the opening and connected rigidly to an inner wall portion of the container spaced from said opening, said compressor having a handle extending in fluid tight relation through said wall for operating the compressor, the compressor and its outlet being disposed in the upper portion of the container free from its beverage contents to render the body of the beverage free of air bubbles from the compressor, and means for drawing the contents of the container from the lower portion thereof below the substantially empty level of the container.

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