Sept. 5, 1939. W. KLINE 2,171,934

CONTAINER

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Fig. 2.

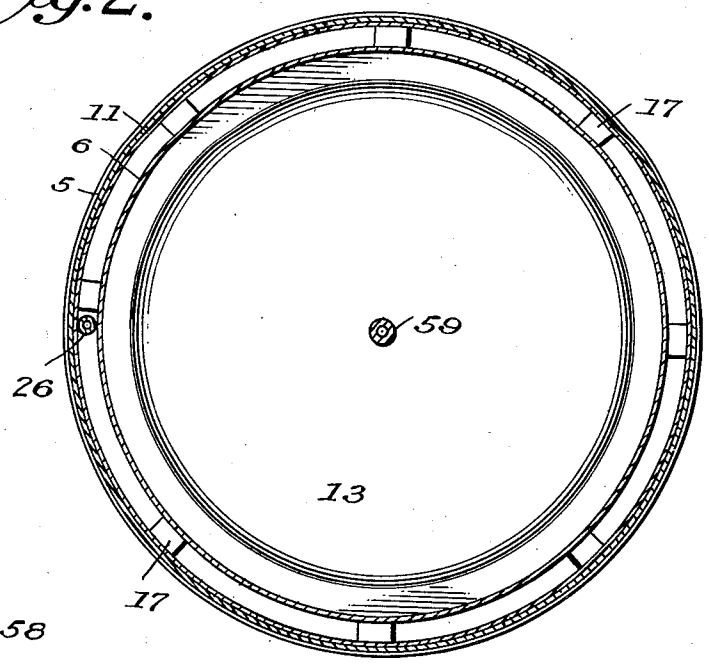


Fig. 1.

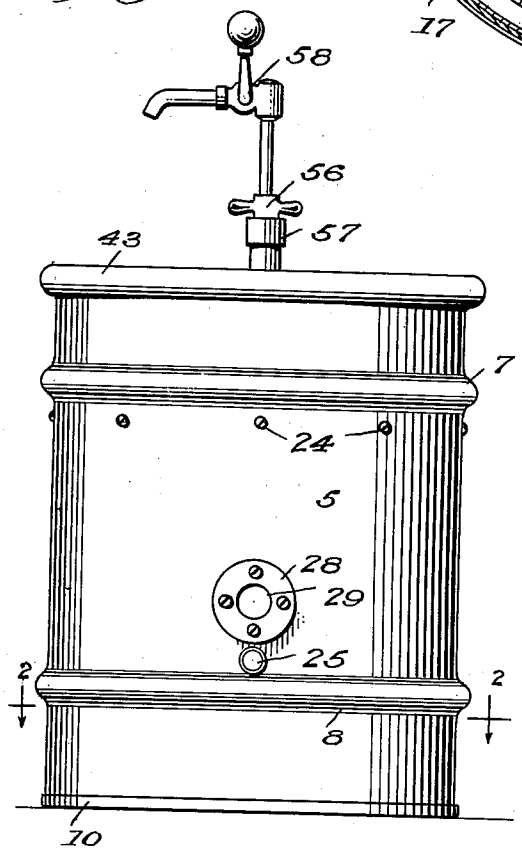


Fig. 4.

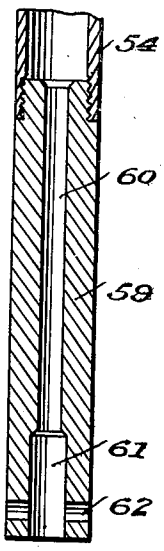
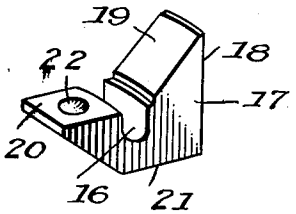


Fig. 3.



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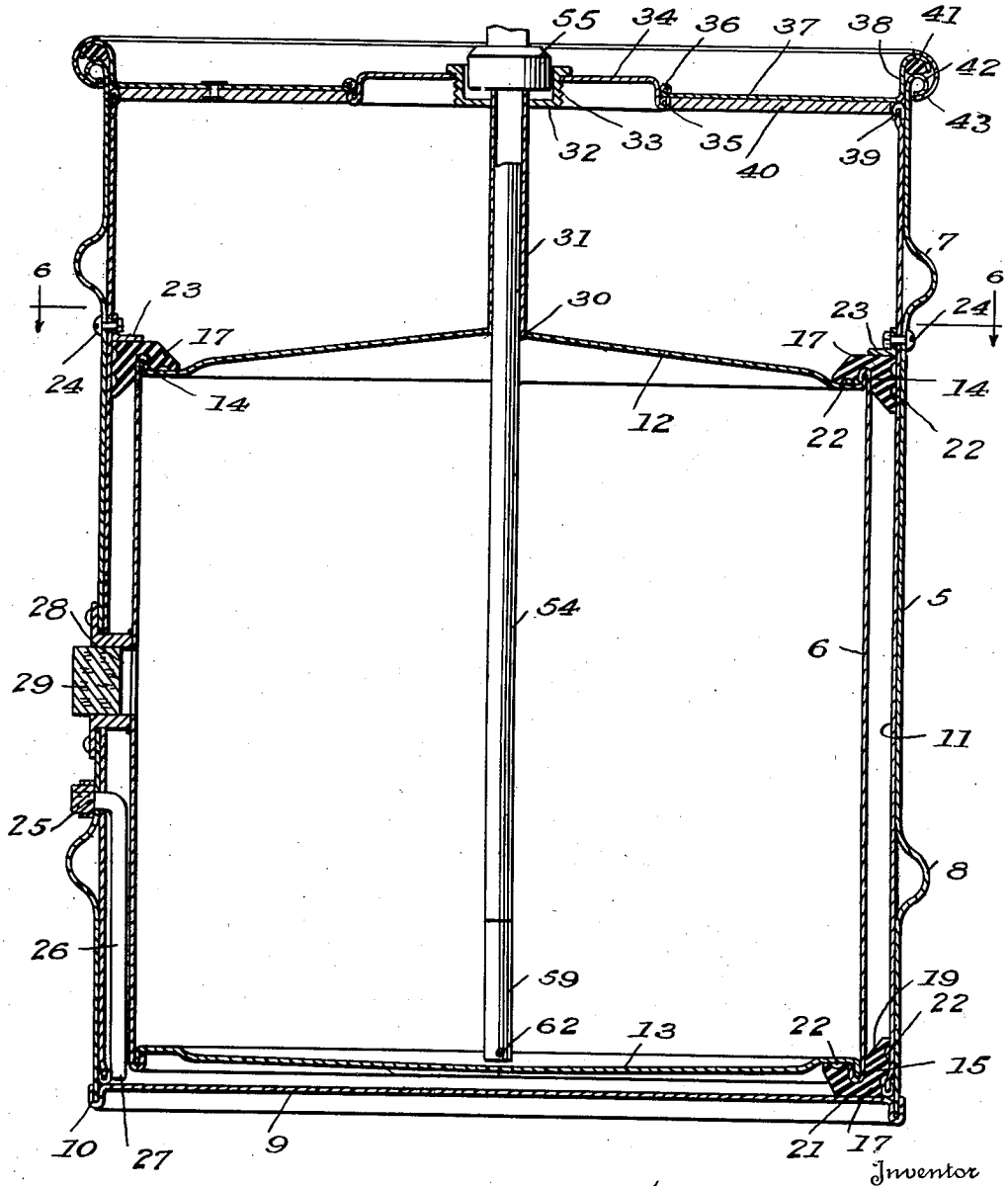
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CONTAINER

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Fig. 5.



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Fig. 7.

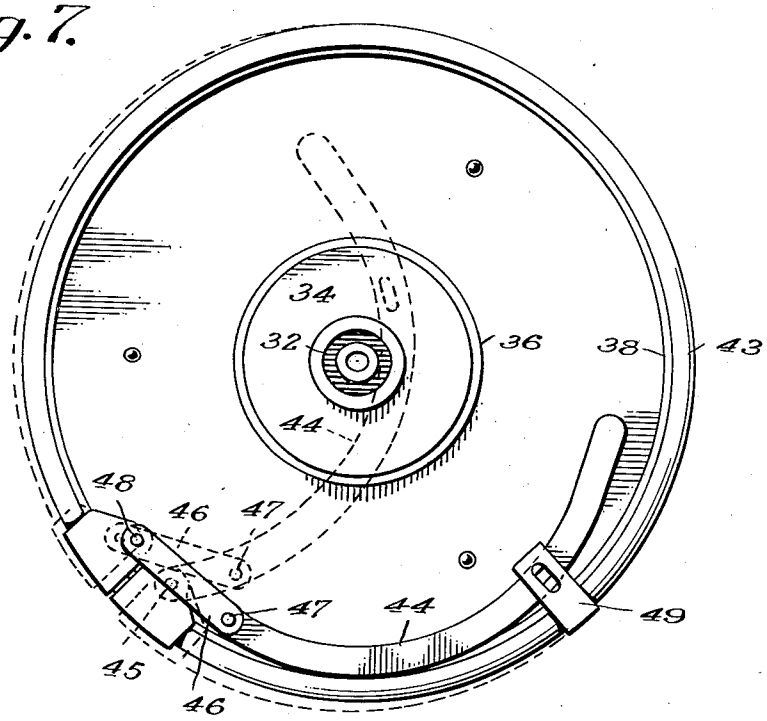
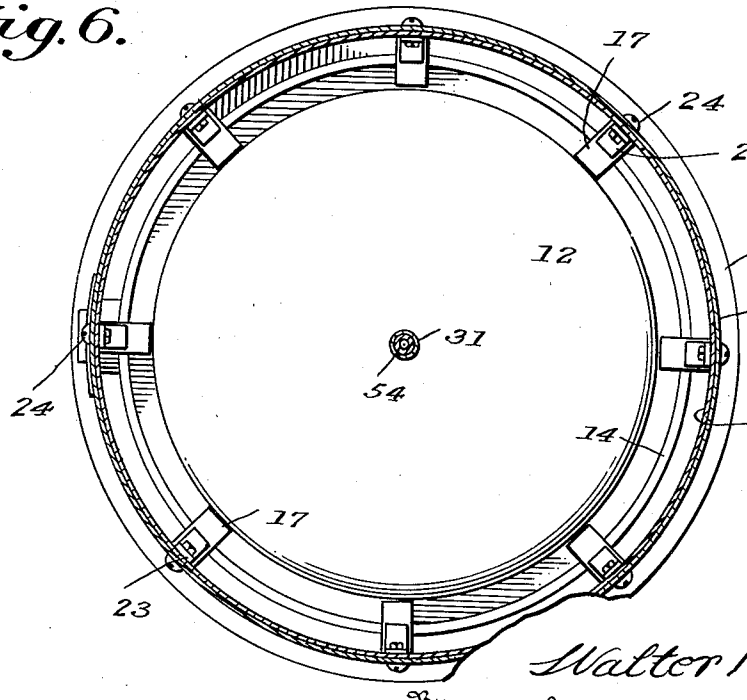


Fig. 6.



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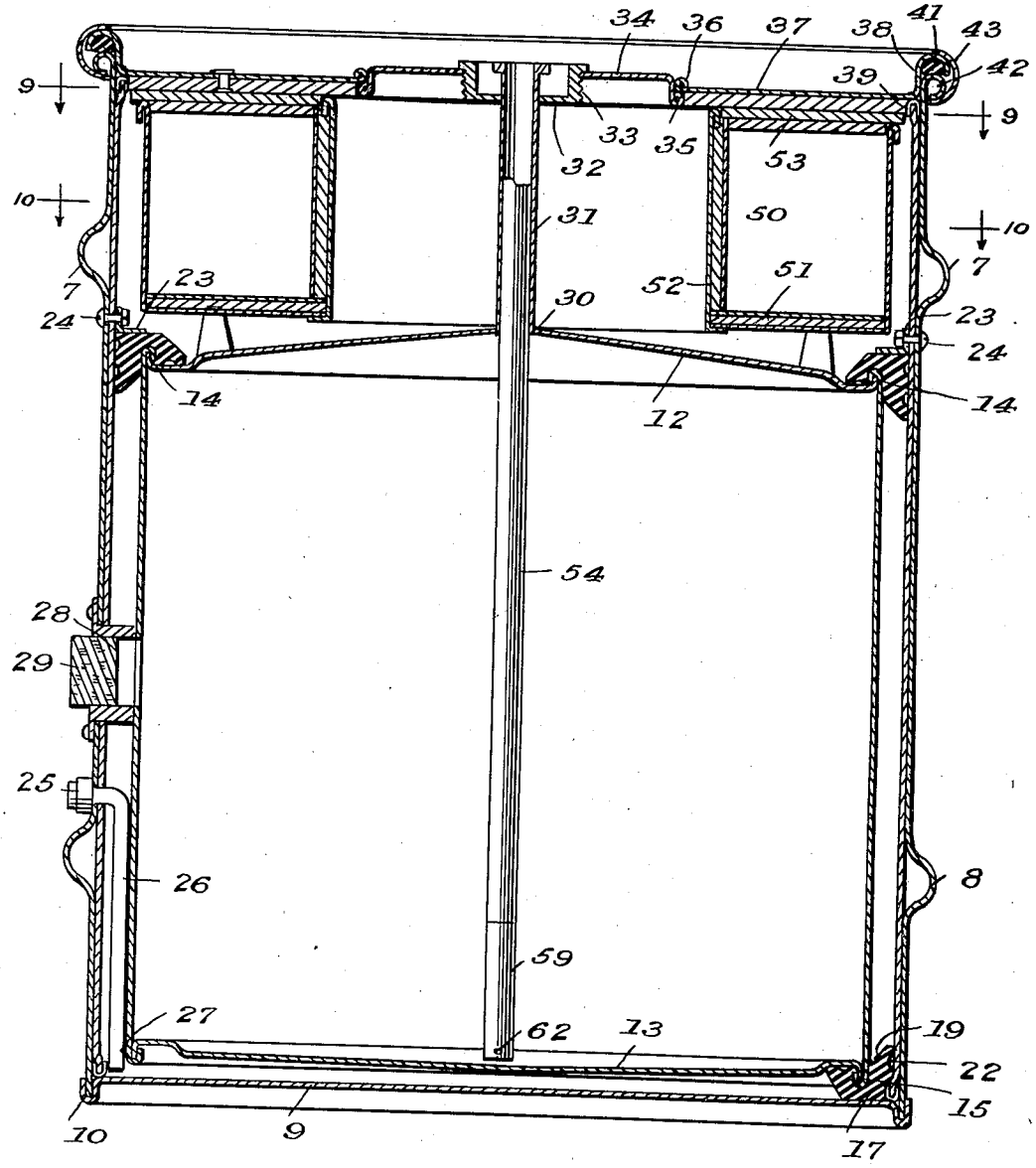
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Fig. 8.



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Fig. 9.

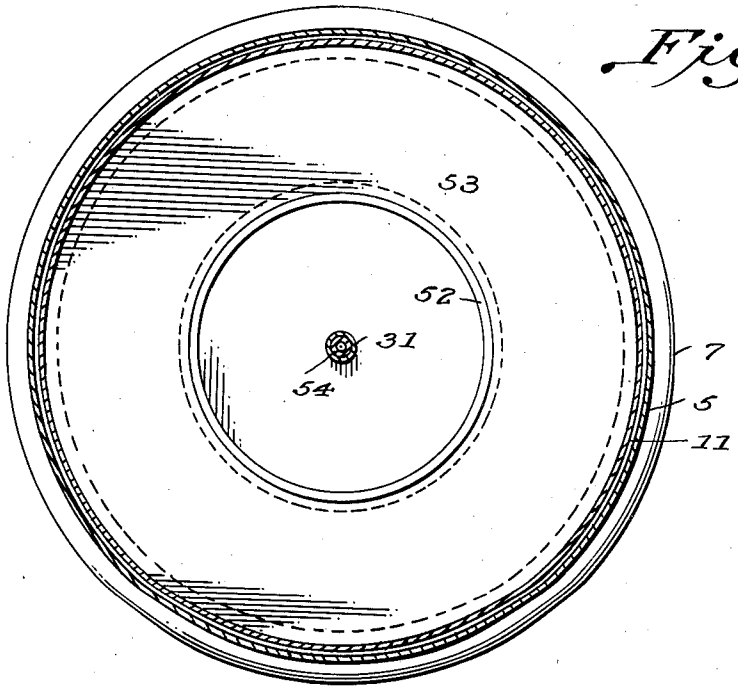
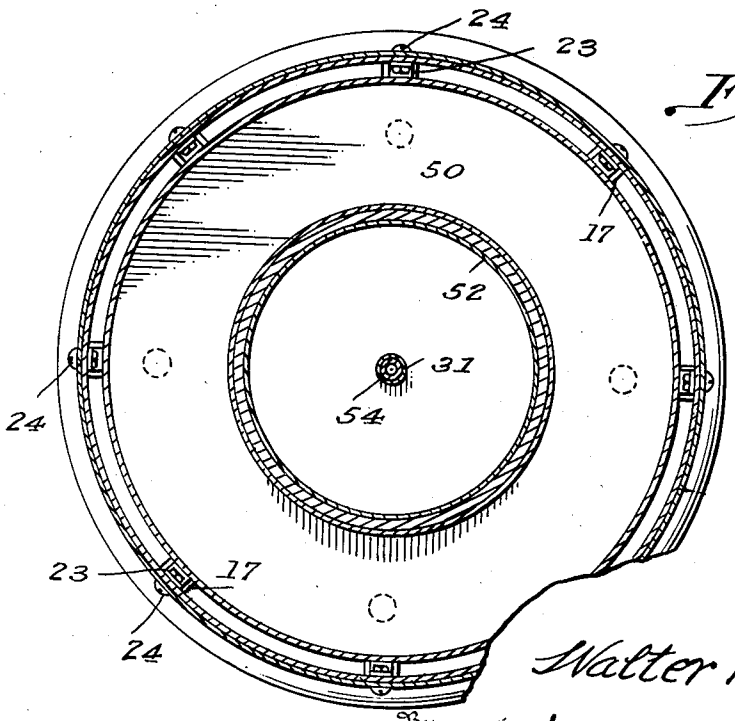


Fig. 10.



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Patented Sept. 5, 1939 2,171,934

UNITED STATES PATENT OFFICE

2,171,934

CONTAINER

Walter Kline, Wellington, Ohio, assignor of one-half to Ethel H. Morrison

Application January 31, 1938, Serial No. 187,962

10 Claims. (Cl. 225—40)

The present invention relates in general to containers and has particular reference to refrigerated shipping and/or storing containers.

The primary object of the invention is to provide a container of the class described which is especially suited to the brewery trade for handling beer. In this connection an important feature of the invention resides in equipping the container with means whereby it may be iced at the brewery, and thus stored or delivered to the customer at a temperature ready for consumption. A container equipped in accordance with the invention may be used to dispense beer at the proper temperature without the necessity of using the ordinary icing coils now commonly employed.

Another object of the invention is to provide an improved dispensing appliance for use with the container which will dispense the contents of the container in a condition to better satisfy the requirements of the customer.

Still another object of the invention is to provide a container having all the above advantages which may be handled in the same way os ordinary beer kegs now in use.

With these and other objects in view, the invention will now be further described with reference to the accompanying drawings, in which:

Figure 1 is a view in side elevation of the container with the dispensing appliance attached;

Figure 2 is a horizontal section taken along line 2—2 of Figure 1;

Figure 3 is a detail view in perspective of one of the cushioning blocks for the inner receptacle;

Figure 4 is a detail view in longitudinal section of the lower or intake end of the dispensing tube;

Figure 5 is a vertical section of the container;

Figure 6 is a cross section taken along line 6—6 of Figure 5;

Figure 7 is a top plan view;

Figure 8 is a view in vertical section of a modified form of the container;

Figure 9 is a cross section along line 9—9 of Figure 8; and,

Figure 10 is a similar view along line 10—10 of Figure 8.

Referring now to the drawings in detail, 5 represents an outer metallic drum-like shell in which is confined an inner spaced receptacle 6, thus producing inner and outer spaced receptacles. The outer receptacle or shell 5 may be fabricated from sheet metal of a gauge suitable for the purpose and should have at least two offset corrugations as at 7 and 8, to reinforce structure of the metal. The lower end or base of the shell 5 is closed by a circular plate 9 which is joined to the side walls by either a rolled joint or else in the manner shown as at 10. In any event, the purpose is to make a watertight joint. The inside of the shell should also be lined with some rust preventing material 11 selected for its suitability for this purpose.

The inner receptacle 6 is preferably produced from sheet metal having a closed top and bottom 12 and 13 respectively. These top and bottom pieces 12 and 13 may be joined to the side walls of the receptacle 5 in most any accepted manner except that it is desired to leave a continuous annular rim 14 around the top 12, and a similar rim 15 around the outer edge of the bottom piece 13. The primary purpose of these rims is to occupy the seats 16 formed in the rubber cushioning blocks 17. These blocks for supporting the inner receptacle at its base are made with straight sided outer faces 18 and bevelled inside faces 19 with horizontal lips 20 offset to the faces 19 on opposite sides of the seats 16. The lips 20, the faces 18, as well as the bottoms 21 are made with suction cups 22 where they impinge flush against the inside of the end closure 9 of the outer receptacle. Now by using, say six of these blocks 17 at spaced intervals in the bottom of the container, the inner receptacle will be supported in spaced relation to the outer receptacle and cushioned in a manner to be desired. The suction cups 22, above identified, will cooperate with the seats 16 in which the rim 15 is seated to hold the blocks in place without the necessity of other anchoring means. Another feature to be pointed out is the bevelled faces 19 which serve the purpose of guiding the rim 15 to its seats 16.

Similar blocks are used at spaced intervals around the top of the receptacle 6 only in an inverted position. Here however, angle plates 23 are bolted as at 24 to serve as hold downs. With this arrangement the inner receptacle is positively held in spaced relation to the outer shell under the tension of the resiliency of the blocks.

As will be readily seen in Figure 5, the inner receptacle terminates short of the top of the outer receptacle thus leaving a space to accommodate ice. As the ice melts, the water may trickle down the side of the inner receptacle to the bottom where it will run off only after it raises to the height of the outlet end 25 of the drain pipe 26. This pipe is set in place within the space between the receptacles with its in-

take end 27 positioned just above the bottom 9 and with its discharge end 25 projected through an opening in the side of the outer shell. The length of the pipe may be determined by the height of ice water desired to be accumulated in the bottom of the container.

To fill the inner receptacle, a bung-hole 28 is provided in the side of the container and a suitable bung 29 closes the same in the manner of the conventional assembly for beer kegs. The inner receptacle is further provided with a top center opening as at 30 to which is connected a sleeve 31. This sleeve carries an adapter 32 threaded outside as at 33 for attaching and supporting the center disk 34. This disk has an inverted depression around the rim of which is formed a bead 35 thus providing a supporting step or knee for the beaded inside annular edge 36 of the cover 37. The outside edge of this cover is made with an upstanding flange 38 to snugly fit with the outer shell where it rests as at 39 upon the upper end of the lining 11 of the shell. The under side of the cover 37 is equipped with thicknesses or a thickness of insulating material 40 and the flange 38 carries a bead 41 which embraces a complimentary bead 42 on the shell.

To hold the cover 37 in place, a half-round split retaining ring 43 is used to embrace both the beads 41 and 42. This ring is made from spring metal so that it springs away from its bead embracing position when released. To manipulate this ring a curved arm 44 is pivoted as at 42, to one end of the split and a fulcrumed link 46 is pivoted as at 47 to the arm and connects it to the other end of the split as at 48. A latch 49 with a lug on its under side behind which the arm is sprung will hold the arm in locked position, and the split ring firmly embracing the beads 41 and 42, thus the cover 37 is held in place yet readily removed when occasion demands.

While the construction of the container so far described is intended for wet ice, it can be used just as well for dry ice by inserting a circular drawer 50 in the ice space (see Figure 8). This drawer is a circular compartment insulated at its bottom and its inside wall 52 having a cover 53 which rests on the top of the drawer but not making a tight closure so that the gas from the dry ice may escape from the drawer and occupy the space between the receptacle where it will ultimately escape through the drain pipe 26.

From the above it will be seen that a container embodying the features of the invention while having all the requisites of the ordinary beer keg, has the added advantage of maintaining the beer under direct influence of a critical temperature range within limits which enable it to be dispensed in a condition to best meet the requirements of the consumer. Furthermore, by using the dispensing appliance to be presently described, beer may be dispensed direct from the keg thus doing away with the conventional icing coils. It might be mentioned here however, that the use of such coils are not prohibited with the present container if there should be any reason to use them. In fact the ice compartment of the container could, if occasion demands, very well accommodate a brine coil. These possibilities are mentioned in order to show the rather wide range of use to which the container may be put to in the brewery trade.

Referring now to the dispensing appliance, which as will be later pointed out, includes a new departure from existing types, 54 represents a tube which extends from near the bottom 13 of the inner receptacle, through the opening 30, the sleeve 31 of the adapter 32. At the adapter the tube carries a plug 55 which fits the inside dimension of the adapter to serve as a stop as well as a holder for the tube.

Mounted on the outside end of the tube 54 by a wing nut assembly 56 is an air valve device 57 which enables air under pressure to be introduced into the inner receptacle and above this is mounted the usual faucet 58. The parts of the dispensing appliance so far described are all conventional and pretty much in every day use. Now the invention of the appliance consists in mounting, preferably threading, a short length of tubing 59 on the end of the tube 54 to considerably reduce the port area of the passage through the tube for a limited length near its intake end as best shown in Figure 4. This extension 59 has a reduced bore 60 terminating in an enlargement 61 which continues to the end of the tube and connects with a pair of opposed radial orifices 62. The purpose of this reduction in diameter of the tube bore is to admit the beer under a comparatively high head of pressure which then becomes relatively lowered as it reaches the large bore of the tube. It has been found in practice that this arrangement delivers the beer at the faucet in a condition which makes it more suitable for consumption. In other words, while it develops a so-called head on the beer in the glass, yet does not cause an aerated condition which makes an undue amount of foam.

What I claim is:

1. A container embodying in its assembly inner and outer spaced receptacles, the inner receptacle terminating short of the end of the outer receptacle to form an ice accommodating compartment and a closure for said compartment comprising a disk-like plate supported centrally of the outer receptacle, a companion plate closing the opening around said disk-like plate and retaining means for said companion plate.

2. A container embodying in its construction inner and outer spaced receptacles, assembled to from an ice accommodating compartment at the top of the inner receptacle and a closure for said compartment comprising a normally fixed plate, a sleeve communicating with the inner receptacle and supporting said plate, and a companion plate having a central opening fitting around said normally fixed plate and means for holding said companion plate in place.

3. Inner and outer spaced receptacles assembled to form an ice accommodating compartment at the top of the inner receptacle, and means for closing said compartment comprising a normally fixed center plate, a removable companion plate and means for retaining said companion plate in place.

4. Inner and outer spaced receptacles assembled to form an ice accommodating compartment at the top of the inner receptacle and a closure for said compartment comprising a center plate, a sleeve communicating with the inner receptacle for the reception of a dispensing appliance and on which said plate is normally fixed, and a companion plate centrally supported by the normally fixed plate and outwardly by the rim of the outer receptacle and means embracing both the outer edge of the companion plate and the rim of the outer receptacle for holding said closure in place.

5. Inner and outer spaced receptacles assembled to form an ice accommodating compartment

at the top of the inner receptacle, an ice holder for said compartment comprising a center plate, a sleeve communicating with the inner receptacle for the reception of a dispensing appliance and on which said plate is normally fixed, and a companion plate centrally supported by the normally fixed plate and outwardly by the rim of the outer receptacle and means embracing both the outer edge of the companion plate and the rim of the outer receptacle for holding the closure in place.

6. A container of the class described embodying in its construction inner and outer receptacles, cushioning means spacing the walls of said receptacles apart, the top of the inner receptacle terminating short of the end of the outer receptacle to form an ice accommodating compartment and a closure for said compartment, comprising a normally fixed center plate and a companion plate encircling the center plate and means holding said companion plate in place readily removable when access to the ice compartment is desired.

7. Inner and outer spaced wall receptacles fashioned and assembled to form an ice compartment above the inner receptacle, a closure for said compartment and cushioning members disposed at intervals around the top and bottom of the inner receptacle for maintaining the spaced relation of the receptacles and resiliently supporting the inner receptacle, said cushioning members comprising rubber blocks formed with seats for the reception of rims on the inner receptacle, and suction inducing indentations contacting both the inner and outer receptacles.

8. Inner and outer spaced wall receptacles as set forth in claim 7 and in which the closure for the ice compartment comprises a normally fixed plate, a readily removable plate encircling said fixed plate and means for holding said removable plate in place.

9. Inner and outer spaced wall receptacles fashioned and assembled to form an ice compartment at the top of the inner receptacle, block-like cushioning members at spaced intervals around the top and bottom of the inner receptacle for maintaining the spaced relation of the receptacles and resiliently supporting the inner receptacle; a drain in the space between the receptacles determining the depth of the water accumulated in the space between the receptacles from the melted ice and drawing off the excess and a closure for said ice compartment.

10. Inner and outer spaced wall receptacles fashioned and assembled to form an ice compartment at the top of the inner receptacle, block-like cushioning members at spaced intervals around the top and bottom of the inner receptacle for maintaining the spaced relation of the receptacles and resiliently supporting the inner receptacle; a drain in the space between the receptacles determining the depth of the water accumulated in the space between the receptacles from the melted ice and drawing off the excess and a closure for said ice compartment comprising a sleeve carried by the inner receptacle for the reception of a dispensing appliance, a center plate on said sleeve and a companion plate encircling said center plate.

WALTER KLINE.