June 5, 1956 W. T. HILTS ET AL 2,749,004

REFRESHMENT DISPENSER

Filed Nov. 17, 1952

Fig. 1.

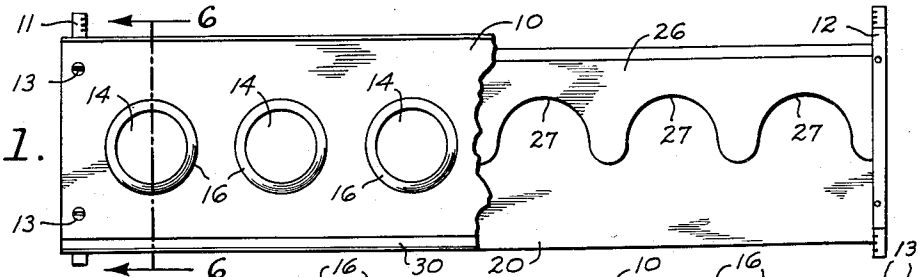


Fig. 2.

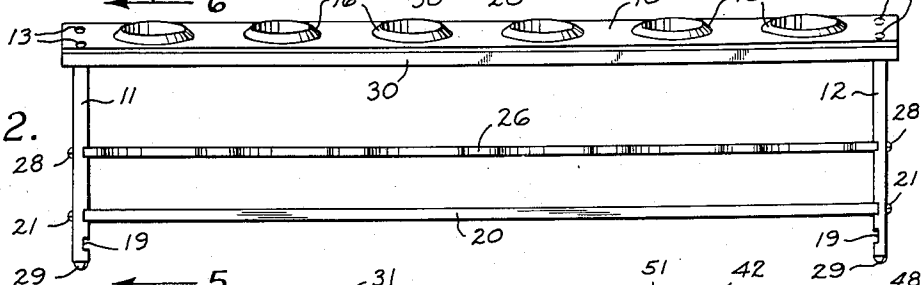


Fig. 3.

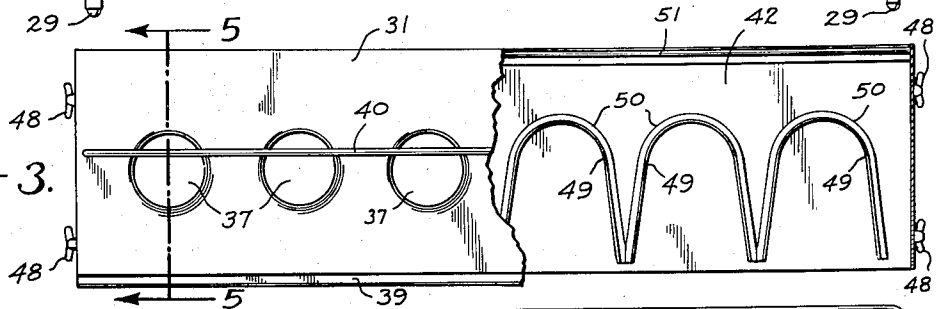


Fig. 4.

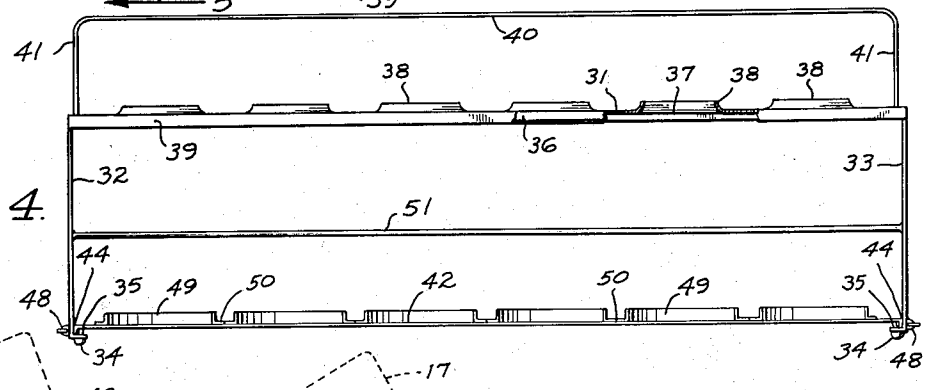


Fig. 5.

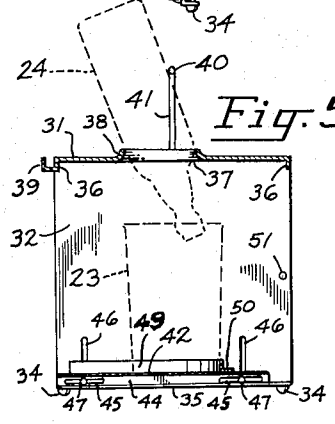
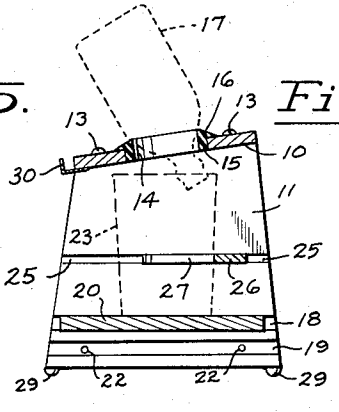


Fig. 6.



INVENTORS
William T. Hilts and
BY Joseph D. Meier
Oliver D. Olson
Agent

United States Patent Office

2,749,004

Patented June 5, 1956

2,749,004

REFRESHMENT DISPENSER

William T. Hilts, Portland, and Joseph D. Meier, Beaverton, Oreg.

Application November 17, 1952, Serial No. 320,936

7 Claims. (Cl. 226—94)

This invention pertains to dispensing apparatus, and relates particularly to a device by which liquid refreshments may be transferred from bottles into drinking cups with maximum facility and efficiency.

There are many instances in which the retail sale of beverages such as beer and soft drinks in bottles is either impractical or prohibited. For example, the recovery of bottles in parks and playgrounds generally renders the sale of bottled refreshments economically impractical. In stadiums the hazard of broken glass has prompted many cities to establish ordinances prohibiting the sale of bottled refreshments in such areas of activity.

It has been the general practice heretofore among concessionaries who serve liquid refreshments in areas such as those described above to open each bottle and simply transfer the contents thereof by hand into a paper cup. This procedure requires the time of the concessionaire while the contents of each botle is being drained therefrom, and thus valuable time which should be utilized in serving other partons is spent in waiting for the bottle to empty itself.

It is the principal object of the present invention, therefore, to provide a dispenser by which bottled liquid refreshments may be transferred to drinking cups without continual attendance by the concessionaire.

Another important object of this invention is to provide a liquid refreshment dispenser which is adjustable to accommodate bottles of various sizes and shapes.

A further important object of this invention is the provision of a liquid refreshment dispenser which is adjustable to accommodate drinking cups of various sizes and shapes.

A still further important object of this invention is the provision of a liquid refreshment dispenser which is constructed to position a drinking cup and a bottle in such cooperative relation that the transfer of the contents of the bottle to the cup is achieved rapidly and without excessive foaming.

Still another object of the present invention is the provision of a dispenser for transferring liquids from bottles to cups wherein the position of the bottle prevents removal of the cup until the emptied bottle is removed, thereby preventing spillage of the contents of the bottle and maintaining the dispenser free from emptied bottles.

The foregoing and other objects and advantages of this invention will be apparent from the following detailed description taken in connection with the accompanying drawing, in which:

Figure 1 is a plan view of one form of dispenser embodying the features of this invention, a part thereof being broken away to show details of construction;

Figure 2 is a front elevation of the dispenser shown in Figure 1;

Figure 3 is a plan view of another form of dispenser embodying the features of this invention, a part thereof being broken away to show details of construction;

Figure 4 is a front elevation of the dispenser shown in Figure 3, a part thereof being broken away to disclose details of construction;

Figure 5 is a sectional view taken along the line 5—5 in Figure 3, a bottle and a cup being shown in dotted lines to illustrate their cooperative relationship; and

Figure 6 is a sectional view taken along the line 6—6 in Figure 1, a bottle and a cup being shown in dotted lines to illustrate their cooperative relationship.

Referring to Figures 1, 2 and 6 of the drawing the dispenser therein illustrated includes an elongated top plate member **10** mounted adjacent its opposite ends upon the laterally spaced vertical side members **11, 12**. The top member and the side members are secured together by such means as the screws **13**. It is to be observed that the top edges of the side members are cut obliquely with respect to their bottom edges in such manner that the top member **10** is caused to slope downwardly toward the front of the dispenser. The purpose of this construction is explained in detail hereinafter.

A plurality of openings **14** are formed in the top member, said openings being arranged in spaced relation longitudinally of the top member. In the preferred construction a ring **15** of rubber or other resilient material is secured about the edge of each opening, the ring having an upwardly extending flange portion **16** which is adapted to support an upturned bottle **17** and provide a water tight seal therearound, for purposes fully explained hereinafter.

Formed in the inner face of each side member **11, 12** adjacent and preferably parallel to the bottom edge thereof is a pair of vertically spaced grooves **18** and **19**. These grooves are adapted to receive the opposite ends of a base plate member **20**. The latter may be secured to the side members by such means as the screws **21** extending through holes **22** in the side members registering with the grooves. The base plate member is secured in the upper grooves **18** when the short neck bottles **17** are to be emptied in order to position the upper edge of the cup **23** properly with respect to the bottle, and the base plate is secured in the lower grooves **19** when longer neck botles **24**, as shown in Figure 5, are to be emptied, as explained in detail hereinafter.

It will be apparent that additional grooves may be provided if desired or necessary to accommodate other sizes of bottles or cups.

Another groove **25** is formed in the inner face of each side member intermediate the top member **10** and the uppermost groove **18**, the grooves **25** preferably extending parallel with the bottom edge of the side members. These grooves **25** are adapted to receive the opposite ends of an elongated cup positioning plate member **26**. This member is formed along its forward edge with arcuate indentations **27** spaced for complementary vertical alignment with the openings **14** in the top member **10**. Each indentation is adapted to receive a cup **23** which rests upon the base plate **20**, and the member **26** may be moved longitudinally in the grooves **25** to position the cups properly with respect to the openings **14**. The member **26** may be secured in any position of adjustment by such means as the screws **28**.

The dispenser is supported upon a counter or shelf within convenient access to the concessionaire. Rubber feet **29** secured to the bottom edges of the side members **11, 12** prevent displacement of the dispenser and prevent marring of the counter.

Referring in particular to Figure 6 of the drawing, it is to be noted that the dispenser is adjusted for use in transferring liquid refreshment from a short neck bottle **17**, such as are used by western breweries. The base plate **20** is therefore positioned in the upper groove **18** in order that the upper edge of the cup **23** extends slightly above the open end of the inverted bottle pro-

jecting through the opening 14. In this manner it is required that the emptied bottle be withdrawn from the dispenser before the filled cup can be removed. This construction prevents premature withdrawal of the cup before the bottle has been emptied and also prevents spillage of the liquid as the latter is transferred.

It is to be noted further that the inverted bottle 17 is inclined with the open end positioned adjacent the rearward side of the cup, the position of the cup being established by proper adjustment of the plate member 26. This arrangement is particularly advantageous in the dispensing of those liquid refreshments, such as beer and carbonated soft drinks, which tend to foam when poured. The liquid flow is directed obliquely against the side of the cup to prevent excessive agitation of the liquid.

The oblique position of the inverted bottle is achieved automatically by virtue of the inclined top member 10, for when the bottle is inverted in the opening 14 it tips forwardly until the neck abuts against the ring 15. Thus, the concessionaire is required merely to uncap the bottles and to quickly deposit them inverted in the openings 14. By the time he has filled the several openings in the dispenser the first bottles will have emptied. In this manner none of the concessionaire's time is wasted in waiting for the bottles to empty.

The primary purpose of the resilient ring 15 and its flange 16 is to provide a seal about the inverted bottle. This is desirable in such instances wherein the bottles are taken from a cold water bath. The ring prevents water from running off the bottle into the cup. Similarly, under certain conditions the outer surfaces of refrigerated bottles condense moisture from the air which would otherwise flow into the cups. In the preferred construction illustrated all such water is deflected by the ring 14 onto the top member 10 from which it flows into the drain trough 30 secured to the top member adjacent its forward edge.

The dispenser described hereinabove may be constructed of wood, as shown, or of metal, plastic or other material, or of combinations thereof, as desired.

The modified form of dispenser illustrated in Figures 3, 4 and 5 of the drawing is shown constructed of sheet metal, such as stainless steel, and includes a horizontal top plate member 31 supported at its ends by the spaced vertical side members 32, 33 carrying the rubber feet 34 at their lower inwardly flanged ends 35. The top member 31 is flat, as compared with the inclined arrangement of the top plate 10 of the embodiment first described, the front and rear edges thereof being offset to form reinforcing flanges 36. A plurality of openings 37 are formed in the top plate member in longitudinally spaced relation, the periphery of each opening being defined by the upwardly turned flange 38 which forms a part of the top plate. The forward edge of the top plate member is formed with a U-shaped drain trough 39.

An elongated rod 40, having downwardly extending end sections 41 secured to the opposite ends of the top member 31, extends longitudinally of the top member in spaced relation above the latter in a vertical plane which intersects the openings 37, as best shown in Figures 3 and 5. The rod 40 functions to engage the side of a bottle 17 or 24, when the latter is inverted in the opening 37, and thereby to tilt the bottle obliquely with its open end directed downwardly toward the rear side of the dispenser.

A base plate member 42 extends between the side members 32, 33 below the top plate 31. The opposite ends of the base plate are offset downwardly to provide flanges 44. These flanges are, in turn, preferably provided with elongated slots 45 adjacent their front and rear ends and extending parallel to the plane of the base plate 42. Vertical slots 46 are provided in the side members 32, 33 for cooperative registration with the slots 45, whereby to form openings through which securing bolts 47 may be passed. In this manner the base plate is rendered adjustable in a vertical plane by the slots 46 and in a horizontal plane by the slots 45. Means such as the wing nuts 48 may be employed to secure the base plate flanges 44 and the side members 32, 33 together in any desired position of adjustment.

Mounted upon the base plate 42 are a plurality of upstanding cup positioning ribs 49 each of which is substantially U-shaped in plan view, the open ends thereof diverging slightly and extending toward the front side of the base section, as best shown in Figure 3. The ribs are spaced longitudinally of the base plate for cooperative vertical alignment with the openings 37 in the top member 31. In the construction illustrated each rib is provided with an outwardly projecting bottom flange 50 by which to secure the rib to the base plate, by such means as rivets, welding, screws, etc.

A rod 51 is secured at its ends to the side members 32, 33 adjacent the rearward edges of the latter about midway between the top and bottom edges thereof. This rod functions to prevent unauthorized withdrawal of the drinking cup 23 from the rearward side of the dispenser.

The dispenser illustrated in Figures 3, 4 and 5 operates to transfer the contents of a bottle to a drinking cup in substantially the same manner as the dispenser first described herein. The vertical and horizontal position of the base plate member 42 is first adjusted to properly position the cup and inverted bottle, as described hereinbefore. As shown in Figure 5, the dispenser is adjusted to accommodate the transfer of liquid from a long neck bottle, such as the type used by eastern breweries, to the same size cup shown in Figure 6. The inverted open end of the bottle is directed toward the rearward side of the cup and terminates below the upper edge of said cup.

It will be apparent to those skilled in the art that various changes in the structural details described hereinbefore and illustrated in the drawing may be made without departing from the scope and spirit of this invention. For example, the top plate members 10 and 31 may be supported adjustably rather than the base plate members 20 and 42, because the adjustment involves the relative displacement of these members. The rubber ring 15 encircling the opening 14 may also be utilized for the opening 37. The top plate member 31 may be inclined in the manner of the top plate 10. The structural arrangement of the adjustable base plate member 42 may be utilized in the embodiment shown in Figures 1, 2 and 6. And any number of bottle and cup compartments may be provided in the dispenser as may be desired. It is to be understood, therefore, that the foregoing description is merely illustrative and is not to be considered in a limiting sense.

It will be further recognized that the dispenser of the present invention may be used to transfer liquids from any type of container having a restricted neck and opening. Such containers are made of glass, plastic, or metal, and in various sizes and shapes. For purposes of definition the term neck-type bottle as employed in the appended claims is intended to include all such containers. In addition, the container intended to receive the liquid content of the botle may be a drinking cup or glass or any other similar device which has an open mouth. These, too, are made of paper, glass, plastic, metal, etc. and are intended to be included in the term open mouth container as employed in the claims.

From the foregoing discussion it will be apparent that the present invention provides for the dispensing of liquid refreshments from bottles into drinking cups with maximum efficiency and ease. It has been found that the quantity of bottles dispensed with the present invention is considerably greater than twice the number dispensed by the conventional hand procedure. This is a particularly important advantage in those instances wherein the demand for refreshments is greatest a short intervals of

time, for example between innings of a baseball game or at time out periods or intermissions of various other activities.

The dispenser of the present invention is fully and readily adjustable to accommodate various sizes and shapes of bottles and drinking cups, thereby affording its use in dispensing various kinds of liquid refreshments. Spillage of liquid is reduced to a minimum, and all accidental spillage and other unflow such as water condensate on the bottles is diverted from the drinking cups. The simplified construction affords economical manufacture and requires a minimum of maintenance.

Having now described our invention and the manner in which the same may be used, what we claim as new and desire to secure by Letters Patent is:

1. A dispenser for transferring liquid from a neck-type bottle to an open mouth container, comprising a top plate member, an opening in the top member adapted to receive therethrough the neck only of an inverted bottle whereby to support the bottle upon the top member, a base plate member disposed below the top member and adapted to support an open mouth container thereon, open sided guide means disposed below the opening in the top member in cooperative relation thereto and adapted to receive an open mouth container laterally through the open side thereof for positioning the container in cooperative relation with said top opening, and support means supporting the top and base members in vertical spaced relation a distance such that the inverted bottle is supported in a position inclined downwardly toward the side of the underlying open mouth container with the open end of the bottle terminating below the upper edge of the open mouth container.

2. A dispenser for transferring liquid from a neck-type bottle to an open mouth container, comprising a top plate member, an opening in the top member adapted to receive therethrough the neck only of an inverted bottle whereby to support the bottle upon the top member, a base plate member disposed below the top member and adapted to support an open mouth container thereon, open sided guide means disposed below the opening in the top member in cooperative relation thereto and adapted to receive an open mouth container laterally through the open side thereof for positioning the container in cooperative relation with said top opening, and support means supporting the top and base members adjustably in vertical spaced relation at selected distances such that inverted bottles of varying dimensions may be supported in a position inclined downwardly toward the side of underlying open mouth containers of varying dimensions with the open end of the bottle terminating below the upper edge of the open mouth container.

3. A dispenser for transferring liquid from a neck-type bottle to an open mouth container, comprising a top plate member, an opening in the top member adapted to receive therethrough the neck abutment of an inverted bottle whereby to support the bottle upon the top member, a base plate member disposed below the top member and adapted to support an open mouth container thereon, open-sided guide means disposed below the opening in the top member in cooperative relation thereto and adapted to receive an open mouth container laterally through the open side thereof for positioning the container in cooperative relation with said top opening, means securing the guide means upon the base plate member, and means supporting the top and base members adjustably in vertical and horizontal relation with respect to each other to accommodate bottles and open mouth containers of varying dimensions.

4. A dispenser for transferring liquid from a neck-type bottle to an open mouth container, comprising a top plate member, an opening in the top member adapted to receive therethrough the neck only of an inverted bottle whereby to support the bottle upon the top member, a base plate member disposed below the top member and adapted to support an open mouth container thereon, open sided guide means disposed below the opening in the top member in cooperative relation thereto and adapted to receive an open mouth container laterally through the open side thereof for positioning the container in cooperative relation with said top opening, means supporting the top and base members in vertical relation with respect to each other, and abutment means disposed in a vertical plane which intercepts the opening in the top member for abutment by the inverted bottle.

5. A dispenser for transferring liquid from a neck-type bottle to an open mouth container, comprising a top plate member, an opening in the top member adapted to receive therethrough the neck only of an inverted bottle whereby to support the bottle upon the top member, a base plate member disposed below the top member and adapted to support an open mouth container thereon, open sided guide means disposed below the opening in the top member in cooperative relation thereto and adapted to receive an open mouth container laterally through the open side thereof for positioning the container in cooperative relation with said top opening, means supporting the top and base members in vertical relation with respect to each other, and rod means above the top member disposed in a vertical plane which intercepts the opening in the top member for abutment by the inverted bottle.

6. A dispenser for transferring liquid from a neck-type bottle to an open mouth container, comprising a top plate member disposed in a plane inclined downwardly toward the front edge thereof, an opening in the top member adapted to receive therethrough the neck only of an inverted bottle whereby to support the bottle upon the top member, a base plate member disposed below the top member and adapted to support an open mouth container thereon, open sided guide means disposed below the opening in the top member in cooperative relation thereto and adapted to receive an open mouth container laterally through the open side thereof for positioning the container in cooperative relation with said top opening, and means supporting the top and base members in vertical relation a distance such that the inverted bottle is supported in a position inclined downwardly toward the side of the underlying open mouth container with the open end of the bottle terminating below the upper edge of the open mouth container.

7. A dispenser for transferring liquid from a plurality of neck-type bottles to a plurality of open mouth containers, comprising a top plate member, a plurality of openings in the top member arranged in spaced relation longitudinally thereof and each adapted to receive therethrough the neck only of an inverted bottle whereby to support the bottles upon the top member, a base plate member disposed below the top member and adapted to support a plurality of open mouth containers thereon, open sided guide means disposed below each opening in the top member in cooperative relation thereto and adapted to receive an open mouth container laterally through the open side thereof for positioning the container in cooperative relation with said top opening, means adjustably supporting the guide means below the top plate member for adjusting the guide means horizontally with respect to the openings in the top member, and means supporting the top and base members adjustably in vertical relation with respect to each other.

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