ABSTRACT OF THE DISCLOSURE

A non-refillable bottle having a neck to which there is permanently secured a spout provided with a one-way valve which allows liquid to be poured from the bottle, but not to be poured into bottle. An air vent in the spout is designed to prevent pouring of liquid into the bottle.

Background of the invention

This invention relates generally to non-refillable bottles. It is generally well known that illicit business is conducted by unscrupulous persons who refill an inferior product a bottle carrying a quality brand label thereupon, thus misrepresenting the contents to a consumer who is made to pay a higher price for a low grade product. While such practice is known in the retail field, it is also known that many bartenders and cocktail lounges cheat the customers with "watered down" drinks; it being the practice to add water into a partly filled bottle of liquor, thereby increasing the profit by increasing the number of drinks received out of a single bottle. While this is sometimes done by the establishment management, it is also done by employees who cheat their employers by refilling with water the quantity of liquor removed for a drink and pocketing the money from the sale. Such practices while defrauding the customer are also damaging to the brand name of a quality liquor which thus is made to lack its distinctive full body taste. There is accordingly a need for improvement in this situation.

Accordingly it is a principal object of the present invention to provide an improved non-refillable bottle having self-contained means preventing the same from being refilled after the contents thereof has been partly or fully emptied.

Yet another object of the present invention is to provide an improved non-refillable bottle having a novel air vent that is designed to prevent admittance of liquid therethrough inward into the bottle.

Other objects are to provide an improved non-refillable bottle which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawing wherein:

FIG. 1 is a fragmentary perspective view of a bottle incorporating the present invention.
FIG. 2 is a cross sectional view taken on line 2—2 of FIG. 1.
FIG. 3 is an exploded perspective view partly in cross section showing the bottle top and spout assembly.
FIG. 4 is a view similar to FIGURE 2 showing the device in operative use.
FIG. 5 is a cross sectional view through a bottle spout assembly showing a modified construction.
FIG. 6 is an enlarged detail thereof shown in perspective and in operative use.
FIG. 7 is a detail view similar to FIGURE 6 and showing a further modified construction, and
FIG. 8 is a similar view of yet another modified construction.

Referring now to the drawing in detail, the reference numeral 10 represents a non-refillable bottle according to the present invention wherein there is a bottle 12 having a neck 14 to which there is permanently secured a spout assembly 16 over which a removal cap 18 may be screwed.

The bottle 12 is made preferably of glass or the like, and the neck 14 thereof is provided upon its outer side 20 with a plurality of vertically extending bayonet slots 22 each of which has a pair of sideward extending recesses 24 for receiving a pair of radially inwardly extending projections 26 formed on the spout assembly 16, as shown in FIGURE 3. Each bayonet slot emerges at its upper end on the upper edge or lip 28 of the bottle. A gasket (not shown) may be provided on top of the lip 28, for better sealing.

The spout assembly, made preferably of all plastic material comprises a tubular member having an upper end that is sidewardly inclined to form a spout 30 that is closed, when not in operative use, and a cover 32 pivotally movable on a pin 34 secured to ears 35 on the spout body 36. The lower end of the spout assembly comprises a pair of concentric cylindrical walls, the outer wall 38 of which is receivable over the outer side of the bottle neck 14, and the inner wall 40 of which is receivable within the opening 42 of the bottle neck. The above mentioned projections 26 extend from the inner side of the outer wall 38, as shown in FIGURE 3. The spout body is secured to the bottle permanently by an appropriate adhesive 44 between the outer side of the inner wall 40 and the inner side of the bottle neck. A cork gasket 44 is placed over the bottle lip before assembly of the spout body to the bottle.

The spout body 36 includes a central chamber 46 at the upper portion of the body, and a central chamber 48 at the lower portion thereof which are separated by a transverse wall 50 therebetween, which carries a one-way valve 52 to allow liquid to pass only outwardly of the bottle and not therein. A plurality of drain openings 54 are provided through the wall 50. An air vent is provided for improved pouring from the bottle, the air vent comprising a passage 56 in the body wall which is of inverted V-shape, and to which a tube 58 is connected extending through the wall 50 to the lower chamber 48, thus allowing air to enter the bottle while liquid is poured therefrom.

In a modified construction 60, shown in FIGURES 5 and 6, the transverse wall includes a modified type of one-way valve comprising a flapper 62 pivotally movable on a pin 64 secured to ears 66 molded on the wall 50, the flapper sealing an opening 68 through the transverse wall 50.

In a further modified construction 70, of the invention, shown in FIGURE 7, a hollow cylinder, 72 is integrally formed on the upper side of transverse wall 50, the cylinder comprising a cylindrical side wall 74 and top wall 76, there being an opening 78 in the side wall 74 that is retained closed, when not in operative use, by a depending door 80 hinged at its upper end on a pin 82 supported on the cylinder. A stop 84 is provided on the top wall to limit the travel of the door in open position.

In operative use, when the bottle is tilted into a pouring position such as shown in FIGURE 4, the door 80 is swung open by force of gravity to allow liquid therethrough. A similar action occurs in the structure shown in FIGURES 5 and 6, wherein gravity moves the flapper 62 to open the opening 68.

It is to be noted that the cap 18 is removably secured to the spout body by screw threads 100 on the spout body and threads 102 on the cap.

In FIGURE 8, a further modified construction 88 is shown, wherein a central opening 90 in the transverse...
wall 50 is sealed, when the bottle is in upright position, by a hemispherical shaped member 92 that rests over the opening, the member 92 having a plurality of downwardly extending posts 94 on its underside projecting downward through openings 96 in the wall 50, each post having an enlarged head 98 at its lower end to limit the movement of member 92 away from the opening 90, when the bottle is tilted over in a pouring position.

While various changes may be made in the detail construction, it is understood that such changes will be within the spirit and scope of the present invention, as is defined by the appended claims.

1. In non-refillable bottle, the combination of a bottle having a neck and an opening through said neck, a spout assembly permanently secured to said bottle neck, a removable cap secured over said spout assembly, and means carried by said spout assembly to prevent movement of liquid inwardly into said bottle, said bottle neck including on its outer side a plurality of vertically extending bayonet slots communicating with a lip on said neck, each of said bayonet slots having a pair of sidewardly extending grooves for receiving a pair of projections of said spout assembly, said spout assembly comprising a spout body having a spout at its upper end, a pair of concentric cylindrical walls at its lower end, the outer of said walls carrying said projections, said outer wall being adjacent the outer side of said bottle neck, said inner wall extending into said bottle neck and sealed by adhesive on its outer side thereto, said spout body having a centrally positioned transverse wall to form an upper chamber and lower chamber, a one-way valve carried on said transverse wall for allowing movement of liquid only from said lower chamber to said upper chamber, drain openings through said transverse wall, and an air vent comprising an inverted V-shaped passage through a wall of said body and a tube communicating therewith and extending downward through said transverse wall.

2. The combination as set forth in claim 1 wherein said one-way valve comprises a flapper hingedly carried over an opening through said transverse wall.

3. The combination as set forth in claim 1, wherein said one-way valve comprises a hollow spider formed on said transverse wall, said spider having hollow legs communicating with a hollow tower having an opening on its side wall normally closed by a depending, pivoted door.

4. The combination as set forth in claim 1, wherein said one-way valve comprises a hemispherical member over a central opening in said transverse wall, said member having downward extending posts through openings in said transverse wall and the lower ends of said posts having enlarged heads to limit the movement of said member away from said central opening.

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