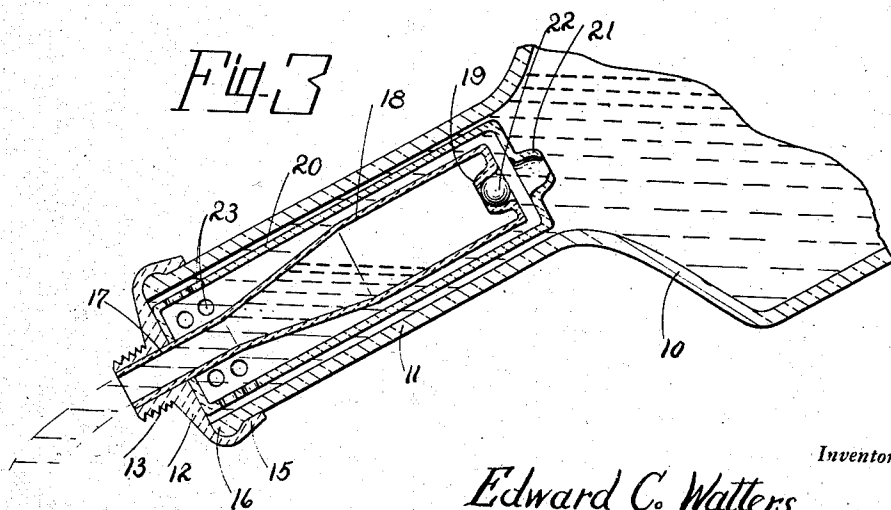
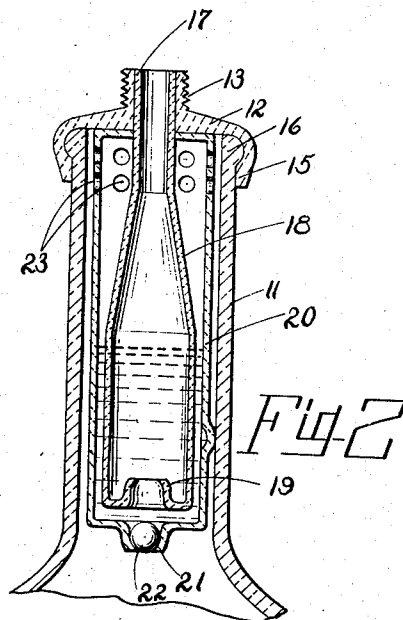
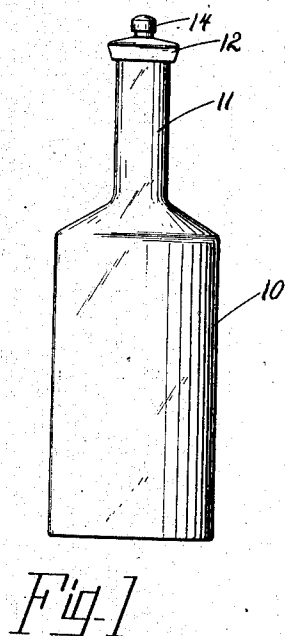


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E. C. WATTERS  
FLUID DISPENSING DEVICE

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Inventor

Edward C. Watters

By

Clarence A. O'Brien  
and Harvey B. Jackson  
Attorneys

## UNITED STATES PATENT OFFICE

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## FLUID DISPENSING DEVICE

Edward C. Watters, Silver Spring, Md.

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5 Claims. (Cl. 222-455)

This invention relates to a fluid dispensing device, and more particularly to such a device adapted for the dispensing of alcoholic beverages.

A primary object of this invention is the provision of an improved bottle having in association therewith a device for accurately pouring a predetermined quantity of liquid each time the bottle is inverted to pouring position.

An additional object of the invention is the provision of such a device which will measure out a predetermined quantity of liquid, identical in each operation, without the use of measuring cups, jiggers, or similar devices.

A still further object of the invention is the provision of such a device, having an internal receptacle associated therewith which, when emptied will be simultaneously positioned to receive an identical quantity of fluid for refilling, when the device is turned back to non-pouring or vertical position.

A further and more specific object of the invention is the provision of such a device adapted to effectively reduce and prevent waste in the beverage contained in the receptacle, through careless pouring or the like.

A further and more specific object is the provision of such a device which will remain permanently affixed to and associated with the bottle at all times.

Other objects reside in the combinations of elements, arrangements of parts, and features of construction, all as will be more fully pointed out hereinafter and disclosed in the accompanying drawing, wherein there is shown a preferred embodiment of this inventive concept.

In the drawing:

Figure 1 is a side elevational view of a dispensing bottle fitted with the device of the instant invention.

Figure 2 is a sectional view through the center line of the bottle of Figure 1, showing the parts in vertical or non-pouring position, and

Figure 3 is a view similar to Figure 2, but showing the parts in pouring position.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Having reference now to the drawing there is generally indicated at 10 a bottle, provided with an elongated neck 11. The neck 11 is adapted to be closed by a cap member 12 provided with an upwardly extending threaded projection 13, adapted to engage a threaded cap 14. A flange 15 of the cap 12 surrounds the exterior bead 16

of the neck 11 of the bottle. Interiorly of the projection 12 is a tube 17, extending into the interior of the neck and terminating in a flask-like receptacle 18, provided with a tapered substantially frusto-conical valve seat 19 at its base.

The receptacle 18 is surrounded by a second cylindrical receptacle 20 spaced slightly from the interior of the neck 11, and provided at its base with a valve seat 21 similar in configuration to the valve seat 19, but oppositely disposed with respect thereto. A ball valve 22 is adapted to seat in one or the other of the valve seats 19 or 21, in accordance with the position of the bottle in a manner to be more fully described hereinafter, the valve seats being so contoured and so spaced apart as to preclude sticking of the ball valve in an intermediate position. The upper portion of the receptacle 20 is provided with a plurality of apertures 23 extending there-through, at a point adjacent the lower extremity of the tubular portion 17 of the flask 18, and communicating with the space between the receptacle 20 and the interior of the neck 11.

From the foregoing the operation of the device should now be readily understandable. When it is initially desired to utilize the device, the bottle is turned in tilted position without removing the screw cap 14. This tilted position causes the ball valve 22 to move to the position shown in Figure 3, closing the valve seat 19. Fluid is then permitted to flow through the apertures 23 into the interior of the receptacle 20, until such time as the same is full. When the bottle is now returned to normal position the fluid passes upwardly through the valve seat 19, the ball valve 22 may now be seated in the valve seat 21, until the fluid level in the inner receptacle 18 and the outer receptacle 20 is equalized.

The inner and outer receptacles may be so dimensioned that the quantity of liquid now within the receptacle 18 may equal exactly one ounce, an ounce and half, or any other desired predetermined quantity. When it is now desired to pour a predetermined quantity of the fluid within the bottle the cap 14 is removed and the bottle tilted to the position shown in Figure 3. This causes the ball valve 22 to again close the valve seat 19, and the contents of the inner receptacle 18 may be poured out into a glass or the like. Simultaneously fluid passes from the interior of the bottle through the apertures 23, air being permitted to escape through the valve seat 21, or vice versa, until the outer receptacle 20 is again filled. As the bottle is now returned to vertical position the process is repeated and

an exact quantity of fluid to be dispensed is again positioned within the interior receptacle 18. Obviously, the process may be repeated as many times as necessary until the bottle is empty.

The device may be constructed of any desired material, such as glass, or a suitable transparent, or opaque plastic or the like, the ball valve 22 preferably being comprised of stainless steel or other suitable metal.

From the foregoing it will now be seen that there is herein provided an improved device accomplishing all the objects of this invention and others including many advantages of great practical utility and commercial importance.

As many embodiments may be made of this inventive concept, and as many modifications may be made in the embodiment hereinbefore shown and described, it is to be understood that all matter herein is to be interpreted merely as illustrative and not in a limiting sense.

I claim:

1. In a fluid dispensing device, in combination, a cap adapted to close the neck of a bottle, an inner receptacle secured to said cap and having a neck extending through said cap to provide an outlet, an outer receptacle of a diameter less than the neck of said bottle surrounding said inner receptacle, means forming openings in the base of each receptacle, and valve means alternately operable to open one of said openings and close the other.

2. In a fluid dispensing device, in combination, a cap adapted to close the neck of a bottle, an inner receptacle secured to said cap and having a neck extending through said cap to provide an outlet, an outer receptacle of a diameter less than the neck of said bottle surrounding said inner receptacle, means forming openings in the base of each receptacle, valve means alternately operable to open one of said openings and close

the other, and means forming vents through the walls of said outer receptacle and communicating with the space therebetween and the neck of said bottle.

3. In a fluid dispensing device, in combination, a cap adapted to close the neck of a bottle, an inner receptacle secured to said cap and having a neck extending through said cap to provide an outlet, an outer receptacle of a diameter less than the neck of said bottle surrounding said inner receptacle, oppositely disposed valve seats in the bases of said receptacles, and a ball valve alternately seatable in one of said seats.

4. In a fluid dispensing device, in combination, a cap adapted to close the neck of a bottle, an inner receptacle secured to said cap and having a neck extending through said cap to provide an outlet, an outer receptacle of a diameter less than the neck of said bottle surrounding said inner receptacle, oppositely disposed valve seats in the bases of said receptacles, a ball valve alternately seatable in one of said seats, and means forming vents through the walls of said outer receptacle and communicating with the space therebetween and the neck of said bottle.

5. In a fluid dispensing device, in combination, a cap adapted to close the neck of a bottle, an inner receptacle secured to said cap and having a neck extending through said cap to provide an outlet, an outer receptacle of a diameter less than the neck of said bottle surrounding said inner receptacle, oppositely disposed valve seats in the bases of said receptacles, a ball valve alternately seatable in one of said seats, said valve seats being so constructed and the bases of said receptacles being so spaced as to preclude stoppage of said ball valve in any intermediate position.

EDWARD C. WATERS.