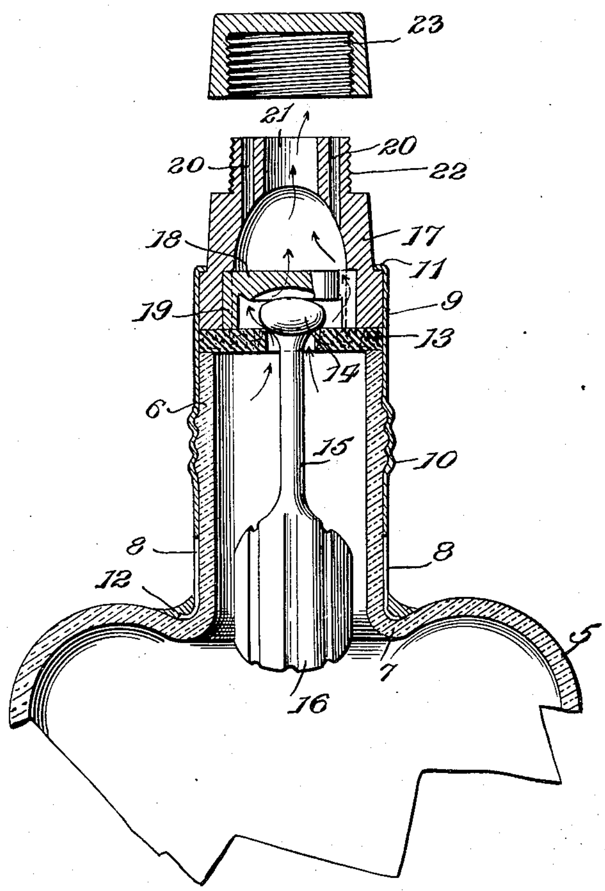
J. D. MULVEHILL.

NON-REFILLABLE BOTTLE.

APPLICATION FILED AUG. 26, 1914.

1,151,896. Patented Aug. 31, 1915.



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JOHN D. MULVEHILL, OF SPOKANE, WASHINGTON.

NON-REFILLABLE BOTTLE.

1,151,896. Specification of Letters Patent. Patented Aug. 31, 1915.

Application filed August 26, 1914. Serial No. 858,648.

To all whom it may concern:

Be it known that I, JOHN D. MULVEHILL, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to non-refillable bottles.

One of the objects of the present invention is to provide a simple and practical non-refillable bottle having few parts which will be cheap to manufacture.

Another object is to provide a non-refillable bottle of the above character in which the parts are so positioned and arranged as to permit a free outward flow of the contents of the bottle without splashing.

Other objects will be in part obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the device hereinafter described, and the scope of the application of which will be indicated in the following claim.

The accompanying drawing shows in sectional elevation one of various possible embodiments of the present invention.

This invention is an improvement over the construction shown in my co-pending application, Serial Number 819,612, filed February 19, 1914 and comprises as shown in the drawing a bottle 5 provided with a neck 6 separated by an annular depression 7 into which extend a plurality of prongs or legs 8 at the lower part of a cap 9 adapted to have a threaded engagement at the point 10 with the neck of the bottle. This cap 9 is flanged over at its upper part 11, thereby to hold the valve mechanism in place. The lower ends of the prongs 8 are firmly secured as by means of cement 12 into the annular recess 7 at the bottom of the neck of the bottle.

The valve mechanism is somewhat similar to that shown in my above mentioned application and comprises a disk valve seat 13 of cork or other suitable material which co-acts with a globular headed valve 14. This valve 14 is provided with a stem 15 and a weighted end 16 fitting well down within the neck of the bottle, thereby to hold the valve 14 firmly on its seat when the bottle is not in use. It is to be noted that this valve disk 13 rests at the top of the neck of the bottle 5 and is clamped in position by means of a protector 17 which in turn is engaged by the flanged over edge 11 of the cap 9. The protector 17 also incloses an auxiliary protector 18 which completely covers and protects the top of the valve, yet provides a slight annular space between itself and the protector 17, except where engaged by its two depending legs 19 fitting in co-acting grooves in the protector 17. The upper part of the protector is provided with a plurality of relatively small holes 20 surrounding a central and relatively large discharge opening 21, thereby to permit air to enter the bottle as the contents are poured out, regardless of the position of the bottle. The protector is provided with a threaded end 22 adapted to co-act with the correspondingly interiorly threaded cap 23 which takes the place of the usual cork.

The operation and method of use of this device is substantially as follows. After the bottle has been filled, the valve 13 is applied to the neck and the two-part cap 9 and 17 together with the co-acting valve mechanism put in place. The ends or prongs 8 of the cap 9 are sealed and the bottle is ready for use. In pouring out the contents of the bottle, the cap 23 is removed and the bottle tilted in the usual manner which permits the liquid to flow through the annular valve seat 13 past the valve 14 and auxiliary protector 18, thence out through the discharge opening 21. As the air is allowed to enter at the same time through one or more of the openings 20, the contents of the bottle may be rapidly discharged without any splashing. On restoring the bottle to normal position, the weighted end 16 will draw the valve 14 back into contact with its seat 9 thereby preventing a refilling of the bottle. The protectors 17 and 18, of course, clearly protect the valves from manipulation by means of a wire or the like through the opening 21.

It is thus seen that the present invention provides a simple and practical device adapted to accomplish, among others, all the objects and advantages above set forth.

As many changes could be made in the above construction and many apparently widely different embodiments of my invention could be made, without departing from the scope thereof, I intend that all matter

contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

What I claim is:

In a non-refillable bottle having a neck, in combination, a valve seat of a diameter substantially equal to the external diameter of the neck and resting thereon, a valve co-acting therewith comprising a spherical valve member adapted to rest on the upper surface of the valve seat and provided with a narrow neck passing through the valve seat opening and terminating in a weighted member within and near the base of the neck, an inner protector having a solid top and a plurality of legs about its outer edge resting on said valve seat to permit limited movement of the valve with respect to its seat, an outer protector supported by said valve seat and holding the inner protector in place, and a threaded cap for said outer protector having a threaded and sealed connection with the outer surface of the neck to hold the parts in operative position, said outer protector having a relatively large central discharge opening and a plurality of smaller circumferential openings thereabout adapted to prevent splashing of the liquid as the same is poured from the bottle.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN D. MULVEHILL.

Witnesses:

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