

W. C. WILSON.
 NON-REFILLABLE BOTTLE.
 APPLICATION FILED APR. 19, 1909.

959,186.

Patented May 24, 1910.

Fig. 1.

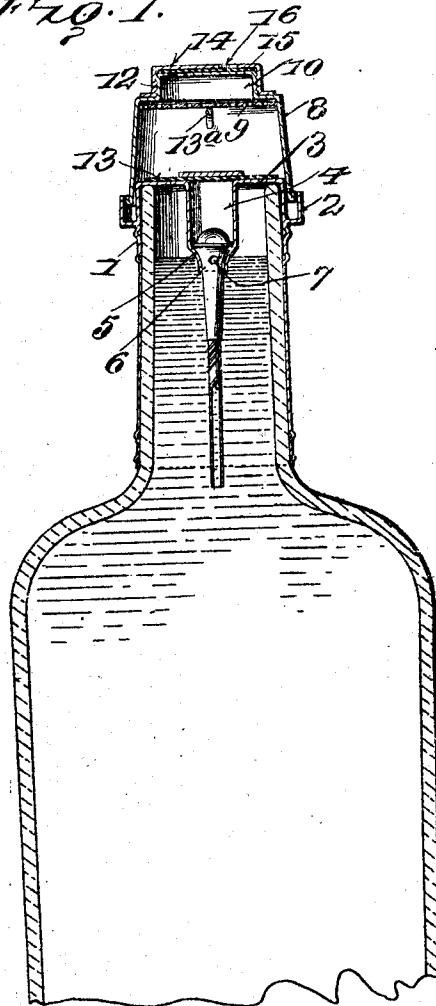


Fig. 2.

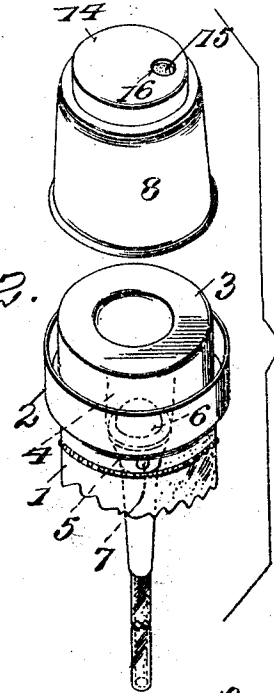


Fig. 3.

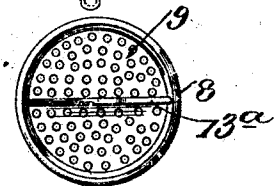
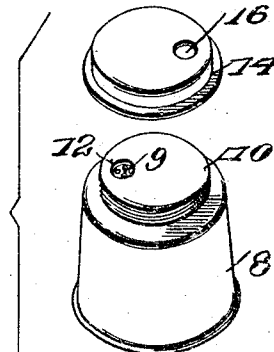


Fig. 4.



Inventor

W. C. Wilson.

By Edward W. Whitaker,

Attorney

Witnesses

W. A. Williams.
 Francis Chagnier,

UNITED STATES PATENT OFFICE.

WILLIAM COTTER WILSON, OF BROOKLYN, NEW YORK.

NON-REFILLABLE BOTTLE.

959,186.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed April 19, 1909. Serial No. 490,976.

To all whom it may concern:

Be it known that I, WILLIAM COTTER WILSON, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide a non-refillable bottle from which the contents may be readily discharged, without the possibility of its being refilled unless the closure be destroyed. And a further object is to locate all the parts of the closure within a capsule which is fixedly secured to a bottle neck.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical longitudinal section. Fig. 2 is a view of the valve casing and its top detached. Fig. 3 is an inverted view in perspective of the inclosing cap. Fig. 4 is a view of the removable screw cap.

Referring to the drawings, 1 designates a capsule which is cemented to the exterior of a bottle neck and which at its upper end has a circular enlargement in the form of a band 2. Within the space inclosed by this band is fitted the cone-like top 3 of a tubular valve casing 4, which latter at its lower end has an inwardly extending valve seat 5 for a valve 6. This valve has a cone-like end which is designed to fit against seat 5, the remaining portion of the valve being tubular and open at the inner end. An air vent 7 is formed in that portion of the valve which is normally in engagement with seat 5. When, however, the bottle is inverted the weight of the cone-end of the valve will cause it to fall from its seat and the liquid will freely flow from the bottle by reason of the air admitted through vent 7 and the tubular portion of the valve. The cone-like top 3 of the valve casing is cemented within the top of the capsule, with a surrounding space between itself and band 2.

8 designates a cap, of slightly tapered formation, which at its lower end fits in the space between band 2 and the top 3, and wherein it is held by cement, or other suitable means. This cap has a perforated diaphragm 9 and an externally threaded ex-

tension 10 formed, to one side of its center, with an outlet opening 12. Between the top 3 and the diaphragm 9 is located a disk 13, of mica, celluloid, or other suitable material, which normally closes the outer end of valve casing 4. When the bottle is inverted this disk will be prevented from closing the openings in the diaphragm by a cross rod 13^a located beneath the diaphragm. The opening 12 of the cap is normally closed by a smaller secondary cap 14 which is screwed on extension 10. This cap also carries a disk 15 of mica, celluloid or the like, so that the outlet opening 12 will be securely closed. When the cap 14 is removed to discharge the contents of the bottle the disk 15 may be removed before the secondary cap 14 is replaced, and thereafter when a portion of the contents is to be emptied it is necessary to only turn cap 14 sufficiently to cause an opening 16 therein to coincide with opening 12.

In practice, the bottle may be filled before any part of the closure is secured thereto, but if desired the capsule 1, together with its band 2 and the valve casing 4 at its top 3, may be cemented to the bottle neck before the bottle is filled. In this event valve 6 is dropped into place after the bottle is filled, and the disk 13 being positioned over the outlet opening of the valve casing cap 8 is secured in place by cement or solder so as to prevent the parts from being separated other than by absolute destruction. To discharge the contents the secondary cap 14 is removed, or an opening may be punctured in disk 15 when openings 12 and 16 are coincident, in which event the liquid may be discharged without having to remove cap 14, and the seal may be formed by slightly turning such cap.

The advantages of my invention will be apparent to those skilled in the art, and foremost among these is the fact that it may be readily and easily applied to various styles and forms of bottles.

I claim as my invention:

1. A bottle closure comprising a capsule designed to be permanently secured to the exterior of a bottle neck, a valve casing depending within said capsule and having a seat at its normally lower end, a valve fitted in said casing and having a tubular portion extending into the bottle and open at its lower end, said valve having a vent communicating with its tubular portion, a cap permanently secured to the upper end of said

capsule inclosing said valve casing and having an outlet, a disk located within the cap for normally closing the outlet from the valve casing, and means within the cap for
5 preventing such disk from interfering with the outlet of the cap when the bottle is inverted.

2. The herein described bottle closure comprising a capsule designed to be permanently secured to a bottle neck, a valve casing located within said capsule and having
10 a valve seat at its lower end, a valve of cone-like formation having a tubular portion and a vent which is normally closed by said
15 valve-seat, a cap inclosing said valve casing,

said cap being permanently secured within the upper end of said capsule and having an outlet opening and a perforated diaphragm, a disk between said valve casing and said diaphragm, and a secondary cap for normally closing the outlet of the first mentioned cap. 20

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

WILLIAM COTTER WILSON.

Witnesses:

FREDERICK CRONERT,
A. LUDLOW PERKINS.