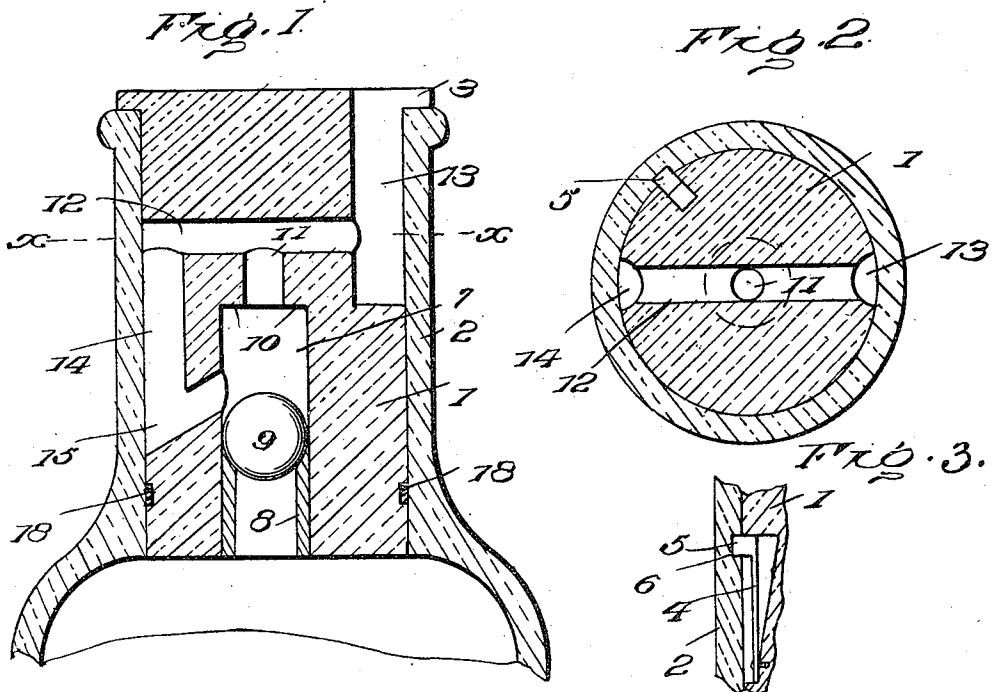


W. M. WAY.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JUNE 16, 1908.

961,822.

Patented June 21, 1910.



Inventor

Witnesses

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WALTER M. WAY, OF DENVER, COLORADO.

NON-REFILLABLE BOTTLE.

961,822.

Specification of Letters Patent. Patented June 21, 1910.

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To all whom it may concern:

Be it known that I, WALTER M. WAY, citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention has for its object, a simple, durable and efficient construction of bottle stopper designed to be inserted in the neck of a bottle of the proper size and shape so as to render the bottle incapable of being refilled, thereby insuring the integrity of the original contents of the bottle and preventing fraud, and the invention consists in certain constructions, arrangements, and combinations of the parts that I shall herein-after fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which;

Figure 1 is a vertical sectional view of a portion of a bottle equipped with the improved stopper of my invention; Fig. 2 is a horizontal sectional view thereof on the line $x-x$ of Fig. 1; Fig. 3 is a detail sectional view illustrating the spring lug employed to secure the stopper within the bottle neck.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates my improved bottle stopper which may be constructed of any desired non-corroding substance or material and which is designed to be secured by cement or other means in the neck of the bottle. Preferably, the stopper 1 is formed at its upper edge with an outstanding flange 3 designed to engage the rim of the bottle mouth so as to prevent the stopper from being forced too far into the neck, and the stopper is provided within a recess formed in its outer wall, with a spring 4, said spring being formed at its free end with a head 5 designed to snap into an interior recess 6 in the bottle neck so as to assist in securely holding the stopper in place.

The stopper 1 is formed with a longitudinally extending chamber 7, preferably centrally disposed and extending outwardly from the inner end of the stopper as shown, and a bushing 8 is formed by any desired

means within the inner end of said chamber, the outer edge of the bushing being beveled as shown and forming a valve seat for the ball valve 9. This ball valve is preferably of less specific gravity than the contents which it is intended the bottle shall have. The ball valve 9 fits snugly within the chamber 7 but is freely movable therein, and the outward movement of the ball valve is limited by means of an inwardly facing shoulder 10 forming one end of the chamber. The stopper 1 is further formed with a relatively narrow channel 11 extending outwardly from the outer end of the chamber 7 and communicating with a transversely extending passage 12. One end of the passage 12 communicates with an outwardly leading passage 13 which opens at the outer end of the stopper as clearly illustrated in the drawings. Extending inwardly from the transverse passage 12 at a point therein opposite that portion thereof which communicates with the outward passage 13, is a by-pass passage 14, the innermost end of which is angularly disposed as indicated at 15, (the angle in that embodiment of the invention illustrated in Fig. 1 being an acute one) and the angularly disposed inner end of the by-pass passage 14 communicates with the interior of the chamber 7 between the valve seat and the shoulder 10.

In the practical use of a bottle equipped with the improved stopper of my invention, after the bottle has been filled with its contents the stopper is secured in the neck thereof, in the manner hereinbefore set forth. So long as the bottle is standing upright, it is obvious that the ball valve 9 rests upon the valve seat formed by the bushing 8, and in order to pour out the contents it is necessary to almost completely invert the bottle so as to permit the ball valve 9 to leave its seat and allow the contents of the bottle to flow around the by-pass passage 14 and out through the transverse passage 12 and outlet passage 13. If any attempt be made to refill the bottle by pouring liquid therein while the bottle is upright, it is obvious that this attempt will be frustrated by the seating of the ball valve 9 on the bushing 8. If, again, the bottle be inverted and an attempt be made to refill the bottle it is obvious that the ball valve 9 will be forced by the incoming liquid up against its seat so as to prevent the ingress of the liquid to the body portion of the bottle.

This action will be effected not only by the liquid coming in from the passages 13 and 12 and the channel 11 but also by the liquid flowing around by the by-pass 14 to its angularly disposed inner end 15.

As a measure of precaution the stopper 1 may be formed with a gasket 18 of rubber or the like to assist in securing a tight seal.

Having thus described the invention, what is claimed as new is:

A bottle having a stopper formed with a central opening terminating in the lower end of the stopper, a bushing secured in the lower end of the opening and having an upper beveled edge, a ball-valve disposed in the opening against said bushing, said stopper having a transversely formed passage located upwardly of the upper end of said opening, and a channel forming an ex-

tension of the opening for communicating the opening with the transverse passage, said stopper also having an outwardly leading passage formed in its periphery at the upper end thereof and communicating with one end of the transverse passage, said stopper being further provided with a by-pass in the periphery thereof and communicating with the opposite end of the transverse passage, the by-pass being extended inwardly at its lower end and terminating in said opening, and means carried by the stopper for securing the same in the bottle.

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

WALTER M. WAY. [L. S.]

Witnesses:

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