

No. 805,087.

PATENTED NOV. 21, 1905.

J. J. McDONALD.  
NON-REFILLABLE BOTTLE.  
APPLICATION FILED FEB. 18, 1905.

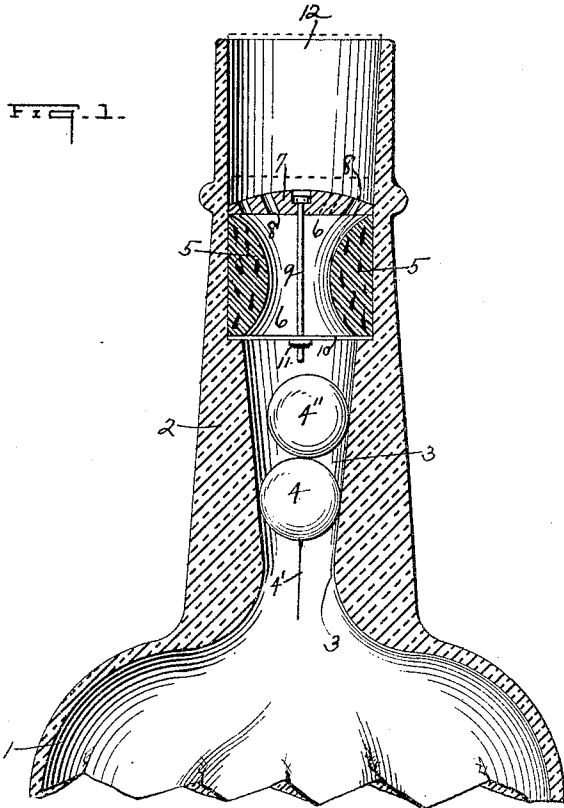


FIG. 2.

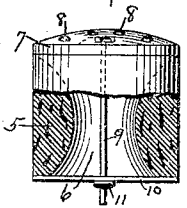


FIG. 3.

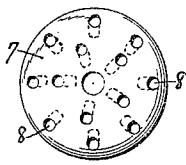


FIG. 4.

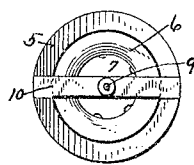


FIG. 5.



WITNESSES:

*J. C. Applinax*  
*J. J. Dowling*

INVENTOR

*John J. McDonald*  
by *H. W. Stevenson*

ATTORNEY

# UNITED STATES PATENT OFFICE.

JOHN J. McDONALD, OF ALLEGHENY, PENNSYLVANIA.

## NON-REFILLABLE BOTTLE.

No. 805,087.

Specification of Letters Patent.

Patented Nov. 21, 1905.

Application filed February 18, 1905. Serial No. 246,360.

*To all whom it may concern:*

Be it known that I, JOHN J. McDONALD, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to a new, novel, and useful improvement in non-refillable bottles, and has for its object the combination and arrangement of parts in the neck of the bottle that prevent refilling after the contents are run out.

In the accompanying drawings, forming a part of this specification, I have illustrated my invention by several views, in which—

Figure 1 is a sectional view of the neck portion of my bottle, showing the position and arrangement of the stopper-balls and cork in connection therewith. Fig. 2 is a side elevation and part-sectional view of the cork portion of my device. Fig. 3 is a top view of the cap portion of the cork, showing openings therein. Fig. 4 is an inverted view of the cork, and Fig. 5 the securing-stem portion of the same.

Numerals of reference designate like parts throughout the different views, in which the numeral 1 represents the body or receptacle portion of the bottle, and 2 the neck thereof, in which is formed a tapered passage-way 3, the narrow end of which communicates with the interior of the bottle. In this tapered passage-way is seated a ball-stopper 4, made, preferably, of cork or wood, being light enough to float, and is intended to crowd into the narrow end of the passage-way 3 and prevent the return of fluid to the interior of the bottle. A wire stem 4', attached to this ball and extending downward into the reservoir, will engage against the sides of the opening and prevent said ball from revolving outward or away from its seat in the narrow part of the passage-way 3. Also seated in the passage-way 3 is a second ball 4'', weighted sufficiently to force the lighter ball-stopper 4 into its seat during any attempt at refilling in a perpendicular position.

At the upper or wider end of the passage-way 3 is formed a seat for the cork portion of

my device. This cork consists of a body portion 5, the sides of which are straight and not tapered like the ordinary cork. Formed through the center of the cork is a passage-way 6, the ends of the same being reamed out in order to form a wider mouth for the expulsion of the liquid from the bottle. Seated on the top of the cork portion is a metallic cap 7, having angled openings 8 8 formed there-through, said openings diverging from the center. Passing down through the central opening in the cork is a stem 9, the head portion of which is countersunk in the center of the metallic cap, while the lower end thereof passes through a brace-bar 10 and is prevented from slipping out of its seat by a pin or wedge 11. This stem serves to hold the cap portion securely to the cork, while the inner end of the same acts as a check against the ball 4'' dropping into the passage-way 6 when the contents of the bottle are being removed. The top of the metallic cap is made slightly convex, so that it will make it very difficult for any one tampering with the bottle to dig out said cap with a sharp tool in order to get at the cork 5. The openings 8 8 are formed at an angle in order that no hooked instrument can be inserted through the cap to draw out the cork. Also the sides of the cork are made straight, so as to fit tight into the upper opening in the neck portion.

In the use and operation of my device the liquid is first poured into the bottle, and then the ball-stopper 4 is dropped into its seat in the tapered opening 3, lodging in the narrow end of the same, after which the weighted ball 4'' is likewise dropped into position, where it rests on top of the stopper 4. The cork portion, consisting of the combined parts, as shown in Fig. 2, is next inserted in the neck 2 and forced into the same until it finds lodgment in its seat at the top of the passage-way 3. An ordinary cork 12 (shown by dotted lines in Fig. 1) may then be inserted as a preventive to the escape of gases or fumes and the latter capped in the usual manner. The contents of the bottle may be run out by simply removing the top cork 12. Then by slightly inverting the bottle the ball 4'' will roll away from contact with the stopper-ball 4 and the latter be forced away from its seat by the pressure of liquid from within the bottle. The fluid can then freely pass around the two balls through the opening 6 in the cork 5 and out through the ports 8 8, formed in the metallic cap portion.

In the event of any attempt being made to refill the bottle the following obstacles would have to be overcome, which in themselves constitute what I consider as an absolute preventive to any successful attempt at refilling. It will be impossible to refill the bottle in a perpendicular position by pouring the liquid into the neck portion, or the customary method of filling a bottle, as the ball 4 will lodge so tightly in the narrow part of the passage-way 3 and be held in this position by the weighted ball 4" that no liquid can get past the stopper into the reservoir. Again, any attempt to force the liquid in by means of pressure will only wedge the ball-stopper tighter into its natural seat, while the openings in the metallic cap on account of their angled form will serve as a check to this pressure method, owing to the well-known fact that it is very difficult to force any liquid matter through a perforated wall. To fill the bottle by immersing the same in a body of liquid in an inverted or horizontal position, the ball 4, being constructed of cork or wood, but preferably the former, will be floated by the incoming current into its seat, and thus block the way for the passage of any liquid into the reservoir. The stem 4' inserted in the stopper-ball will, as heretofore described, engage against the sides of the opening into the reservoir, and thus prevent said ball from revolving outward. Any one attempting to remove the inner cork 5 will be compelled to break the neck of the bottle, as it will be impossible to dig out said cork, owing to the metallic cap or guard covering the same, which I intend making out of a hard metal in order to resist a sharp tool.

Having thus fully shown and described the construction and workings of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a receptacle having a neck, a suitable valve within the neck, a plug having an opening therethrough arranged within the neck above the valve, a perforated cover for the plug, and means passing through the opening of the plug for holding the cover to the plug.

2. In combination with a receptacle having a neck, a suitable valve within the neck, a plug having an opening therethrough arranged within the neck above the valve, a cover for the plug having an inclined passage-way there-through and means passing through the open-

ing of the plug for holding the cover to the plug.

3. In combination with a receptacle having a neck, a suitable valve within the neck, a plug having an opening therethrough arranged within the neck above the valve, a perforated cover for one end of the plug, a cross-bar at the opposite end of the plug, and a connection between the cover and the cross-bar for holding the said cover to the plug.

4. In combination with a receptacle having a neck, a suitable valve within the neck, a plug having an opening therethrough arranged within the neck above the valve, a perforated cover for one end of the plug, a cross-bar at the opposite end of the plug, and a connection between the cover and the cross-bar passing through the opening of the plug for holding the said cover to the plug.

5. In combination with a receptacle having a neck, a suitable valve within the neck, a plug having an opening therethrough arranged within the neck above the valve, a perforated cover for one end of the plug, a cross-bar at the opposite end of the plug, a stem secured at one end to the cover and at the opposite end to the cross-bar for holding the said cover to the plug.

6. In combination with a receptacle having a neck, a suitable valve within the neck, a plug having an opening therethrough flared at both ends arranged within the neck above the valve, a perforated cover for the plug, said cover having its free surface convex, and means for holding the cover to the plug.

7. In combination with a receptacle having a neck, a suitable valve within the neck, a plug having an opening therethrough arranged within the neck above the valve, a perforated cover for the plug and means passing through the opening of the plug and arranged beneath the plug for binding said cover to the plug.

8. In combination with a receptacle having a neck, a suitable valve within the neck, a plug having an opening therethrough flared at both ends arranged within the neck above the valve, a perforated cover for the plug, and means for holding the cover to the plug.

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

JOHN J. McDONALD.

Witnesses:

THOMAS J. McDONALD,  
WILLIAM TIBS.