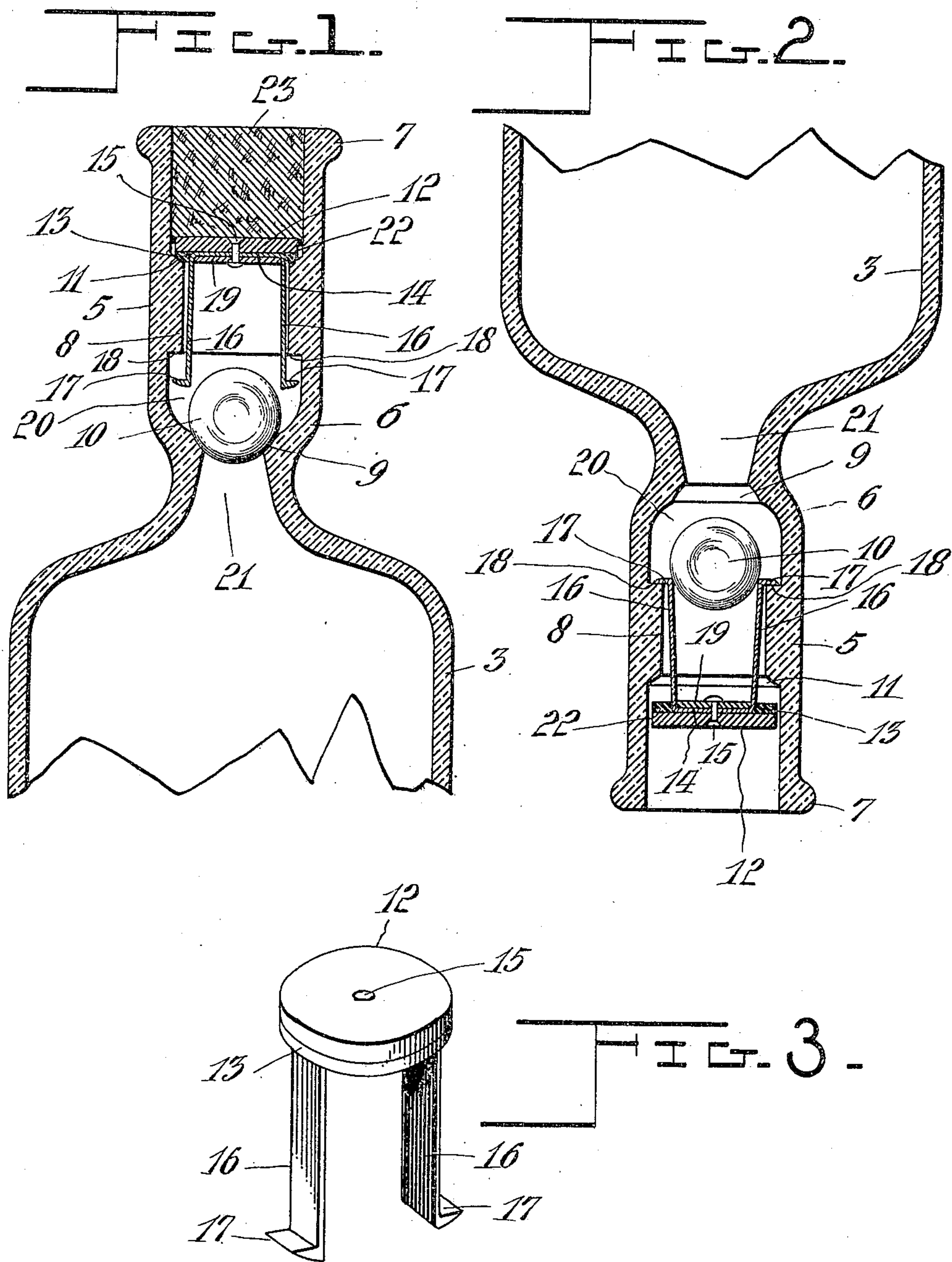


No. 807,856.

PATENTED DEC. 19, 1905.

P. J. O'BRIEN.
NON-REFILLABLE BOTTLE.
APPLICATION FILED MAY 3, 1905.



Witnesses:

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UNITED STATES PATENT OFFICE.

PATRICK JOSEPH O'BRIEN, OF MOBILE, NEWFOUNDLAND.

NON-REFILLABLE BOTTLE.

No. 807,856.

Specification of Letters Patent.

Patented Dec. 19, 1905.

Application filed May 3, 1905. Serial No. 258,627.

To all whom it may concern:

Be it known that I, PATRICK JOSEPH O'BRIEN, a subject of the King of Great Britain, residing at Mobile, Ferryland district, Newfoundland, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do hereby declare that the following is 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.

This invention relates to new and useful improvements in non-refillable bottles of the type having a reduced neck portion with a closure held in such position that any attempt to force fluid into the bottle will seat the closure in such manner as to prevent ingress of fluid.

The object of the invention is to simplify the construction of this class of devices and provide a plurality of valves or closures which are adapted to cooperate to prevent unlawful filling of the bottle.

Referring to the annexed drawings, in which similar numerals of reference indicate corresponding parts, Figure 1 is a vertical sectional view taken approximately centrally through the bottle, showing the neck portion having a reduced diameter intermediate the ends. Fig. 2 is a similar view of the bottle inverted, and Fig. 3 is a detached detail view of the cap-closure hereinafter referred to.

Referring to the parts, 3 is a bottle having the neck 5, which is of substantially uniform external diameter from the lower end portion 6 to the bead 7, which is commonly formed near the terminus of the neck portion upon the exterior thereof. The neck portion has the thickened intermediate portion 8, which materially reduces the internal diameter of the neck of the bottle within that portion thereof, and has the valve-seat 9 between the neck and the body portion of the bottle. When the bottle is in a vertical position, the ball-valve 10 rests upon the valve-seat 9 and prevents the ingress of fluid, and resting upon the shoulder 11 of the thickened portion 8 is a cap or closure 12, between which and the shoulder 11 is a packing 13, which is preferably of rubber or similar flexible material. The cap 12 is perforated, as shown, and secured to said cap is the spring member 14, provided with the transversely-extending portion, which is secured, by means of the rivet 15, to the cap 12, and having the depending limbs 16, which are provided with angular laterally-projecting offset

portions 17, which offset portions cooperate with the annular angular shoulder 18, formed by the said thickened portion 8 of the neck.

A plate 19 is provided, which lies normally below the spring member 14, and said plate, as well as the spring member and the cap-plate 12, are perforated, and said members are connected by means of the rivet 15, passing through said perforations.

The ball 10 rests in the chamber 20, which is of such diameter that when the bottle is held on its side, with the ball resting between the lower ends of the spring member 16, there is a passage from the chamber 20 to the reduced neck portion 21 adjacent to the receptacle, and in pouring fluid from the bottle the bottle should be held in such position that the ball 10 will rest in the widest portion of said chamber 20, and the closure comprising the cap-plate 12, plate 19, and packing referred to will fall away from the shoulder 11 by gravity sufficiently far to permit egress of fluid through the annular passage 22—that is, between the cap-plate and the wide upper portion of the bottle-neck.

When the bottle is filled and the movable parts referred to are placed in their proper position, the cork or other stopper 23 may be inserted in position, as shown in Fig. 1, to form a temporary closure for the receptacle, and this temporary closure should be removed before attempting to remove the contents of the bottle.

In the event of an attempt at refilling the bottle it is evident that the cap-plate 12 will force the packing against the shoulder 11, and if by any possible chance fluid should pass this point the ball 10 will seat itself on the seat 9, thereby serving as a closure from the chamber 20 to the reduced neck portion 21.

While I have shown in the accompanying drawings the preferred form of my invention, it will be understood that I do not limit myself to the precise form shown, for many of the details may be changed in form or position without affecting the operativeness or utility of my invention, and I therefore reserve the right to make all such modifications as are included within the scope of the following claim or of mechanical equivalents to the structures set forth.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

In a non-refillable bottle, a neck portion of substantially uniform external diameter for

the major portion of its length, with a thickened intermediate portion and a valve-seat between said thicker portion and the bottle, in combination with a gravity ball-valve and a
5 closure, said closure comprising a perforated cap-plate in combination with spring-locking arms provided with angular offset portions adapted to engage said thickened intermediate portion of the neck when the bottle is in-
10 verted and a packing on the side of said cap

adjacent to said thickened intermediate portion of the neck, and a rivet passing through the perforation in said cap-plate to secure said cap and spring-arms.

In witness whereof I have hereunto set my 15 hand in the presence of two witnesses.

PATRICK JOSEPH O'BRIEN.

Witnesses:

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A. J. ANGEL.