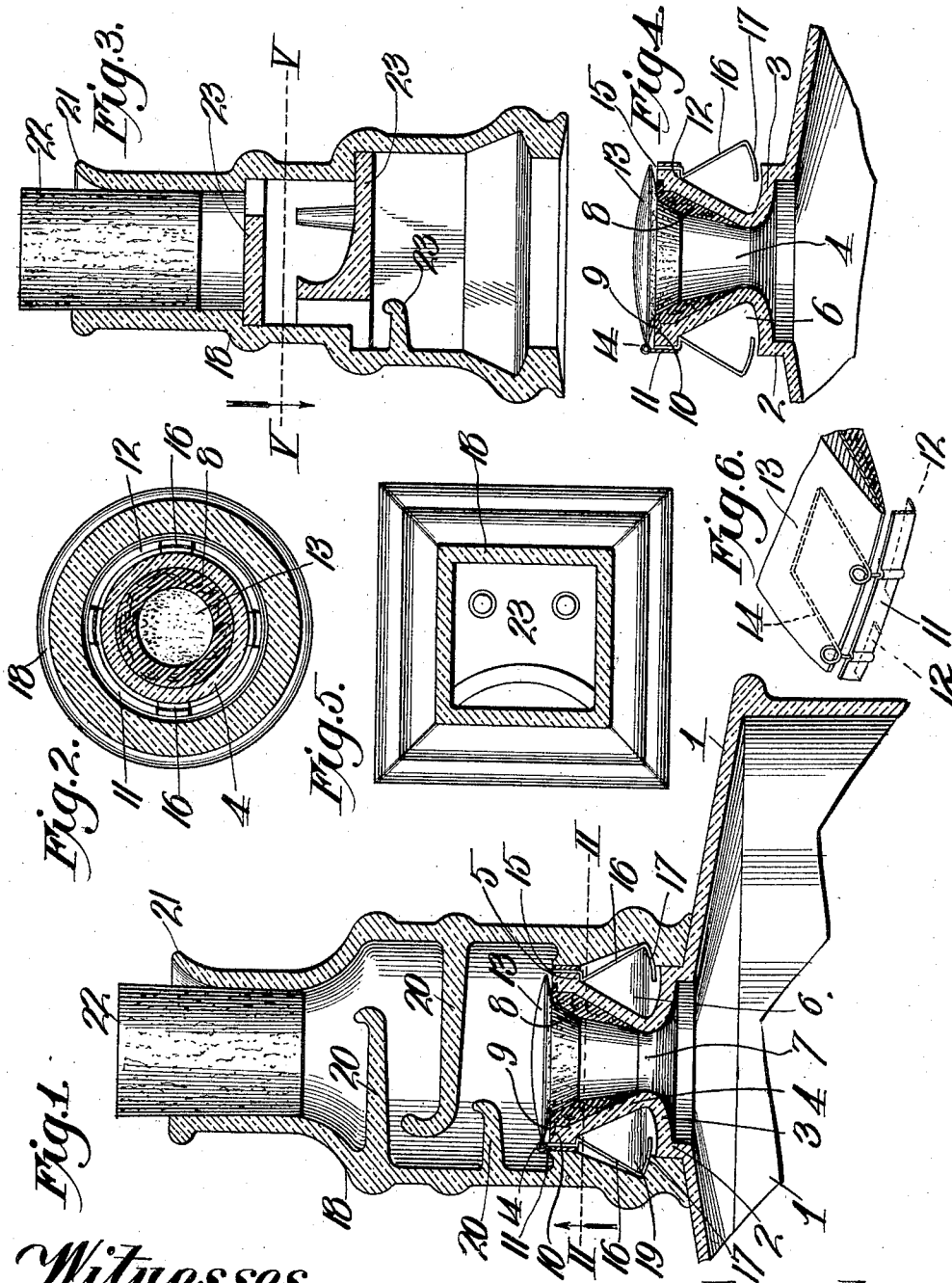


J. T. DEMPSEY.
NON-REFILLABLE BOTTLE.
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1,038,497.

Patented Sept. 10, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

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NON-REFILLABLE BOTTLE.

1,038,497.

Specification of Letters Patent.

Patented Sept. 10, 1912.

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To all whom it may concern:

Be it known that I, JAMES T. DEMPSEY, a citizen of the United States, residing at Kansas City, in the county of Wyandotte and State of Kansas, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to nonrefillable bottles of that class embodying a body and a short valve-controlled neck and a relatively long neck secured to the short neck and provided with a tortuous passage and a cork at its upper end, and my object is to produce inaccessible means for permanently locking the two necks together, a further object being to produce a bottle of the type outlined of simple and cheap construction.

To this end the invention consists in certain novel and peculiar features of construction and organization as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawing in which—

Figure 1, is a central vertical section of the upper part of a bottle embodying my invention. Fig. 2, is a section on the line II—II of Fig. 1. Fig. 3, is a central vertical section of a modified form of the long neck detached from the bottle. Fig. 4, is a similar view of the upper part of the body of the bottle, including the short neck the valve and the locking means. Fig. 5, is a section on line V—V of Fig. 3. Fig. 6, is a fragmentary perspective view of the collar and valve hinged thereto.

In the said drawing, the body 1 of the bottle is provided with a short neck consisting of a vertical portion 2, an upwardly projecting portion 3 and a funnel-shaped portion 4 enlarged or beaded at its upper end to form a downwardly-disposed shoulder 5 overhanging an annular external groove 6 formed by the converging relation of flange 3 and funnel portion 4.

Secured in the passage 7 of the funnel portion is an inverted frustum shaped valve-seat ring 8, of cork or equivalent compressible material, and said ring is provided at its upper end with an outwardly-projecting flange 9, fitting in a recess 10, in the upper end of the said funnel-shaped portion 4.

Fitting around and cemented to the en-

larged or beaded end of the funnel-shaped portion of the neck is a collar 11 provided with an inturned flange 12 underlying shoulder 5 to guard against upward movement of the collar should the cement fail to hold, and hinged to said collar is a valve 13, a spring 14 of the type shown or any other suitable type, tending to hold the valve yieldingly upon the seat ring and adapted to close the valve after each opening thereof produced by the pressure of the outflowing contents of the bottle when the latter is caused to assume an angular position.

Secured to and depending from the collar is a plurality of spring detents consisting of angular upper portions 15 interposed between the beaded end of the funnel portion and said collar and also underlying shoulder 5, between adjacent flanges 12, and arms 16 projecting downwardly and outwardly and equipped at their lower ends with inwardly projecting foot-portions 17, the parts being so proportioned and arranged that said arms and foot portions may be pressed or sprung wholly within the annular groove 6.

The long neck 18 fits down upon the body and snugly around the vertical portion 2 of the short neck being permanently secured in position by cement or otherwise. The said neck 18 also fits snugly around and is preferably cemented to the collar 11, and opposite groove 6 is formed with an internal groove 19, into which said detents project, the bottom of said groove 19 being substantially horizontal so that an upward pull on the long neck could not possibly cause the detents to move inwardly and thus in the event the cement bond was broken, unlock the necks and leave the long one free for detachment from the other, it being obvious that when the long neck is slipped down over the short one, that the detents will be forced inward and then spring outward into groove 9, when free to do so. The neck 18 is formed with a plurality of baffle plates 20, above the valve, three being shown, in staggered relation to render it impossible for a person to insert a wire and open the valve and while maintaining it in such position refill the bottle. The upper end of the neck 18 is provided with a spout 21 at the opposite side from the hinge point of the valve so that in pouring from the bottle the liquid will impose the greatest pressure on the

valve farthest from its hinge and therefore effect its escape more readily. An ordinary removable cork 22 is employed for normally sealing the neck 18.

5 In Figs. 3, 4, and 5 a modified construction of bottle is disclosed, the chief differences existing in the employment of baffle plates 23 secured within instead of being integrally molded with the long neck and in
10 the fact that the said neck and baffle plates are rectangular instead of round so that if the latter become loose they cannot be turned to facilitate the insertion of a wire whereby the valve may be opened and so held while
15 the bottle is being refilled.

From the above description it will be apparent that I have produced a non-refillable bottle possessing the features of advantage enumerated as desirable and I wish it to be
20 understood that I reserve the right to make all changes properly falling within the spirit and scope of the appended claim.

I claim:—

25 A nonrefillable bottle comprising a body having a short neck, of reduced diameter between its ends to provide an annular external groove and a downwardly facing shoulder at the upper side of said groove, a long

neck fitting upon and forming a rigid extension for the short neck and provided internally with an annular groove in the horizontal plane of the groove of the short neck and provided above the latter with baffle-plates and above the baffle-plates with a removable cork, an inverted frustum-shaped
35 valve seat ring fitting in the short neck, a collar fitting around and cemented to the upper end of the short neck and engaging the inner side of the long neck with a liquid tight joint, spring detents secured to the collar and extending downwardly and outwardly therefrom into the groove of the long neck to prevent disconnection thereof
40 with the short neck, a valve overlying the short neck and provided with a portion depending into and engaging the seat ring, and a spring hinge secured to the collar and the valve and normally holding the latter in liquid tight engagement with the seat ring
45 of the short neck.

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

JAMES T. DEMPSEY.

Witnesses:

HELEN C. RODGERS,
G. Y. THORPE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."