

No. 842,050.

PATENTED JAN. 22, 1907.

J. W. WOODARD.  
NON-REFILLABLE BOTTLE.  
APPLICATION FILED APR. 23, 1906.

APPLICATION FILED APR. 23, 1906.

FIG. 1

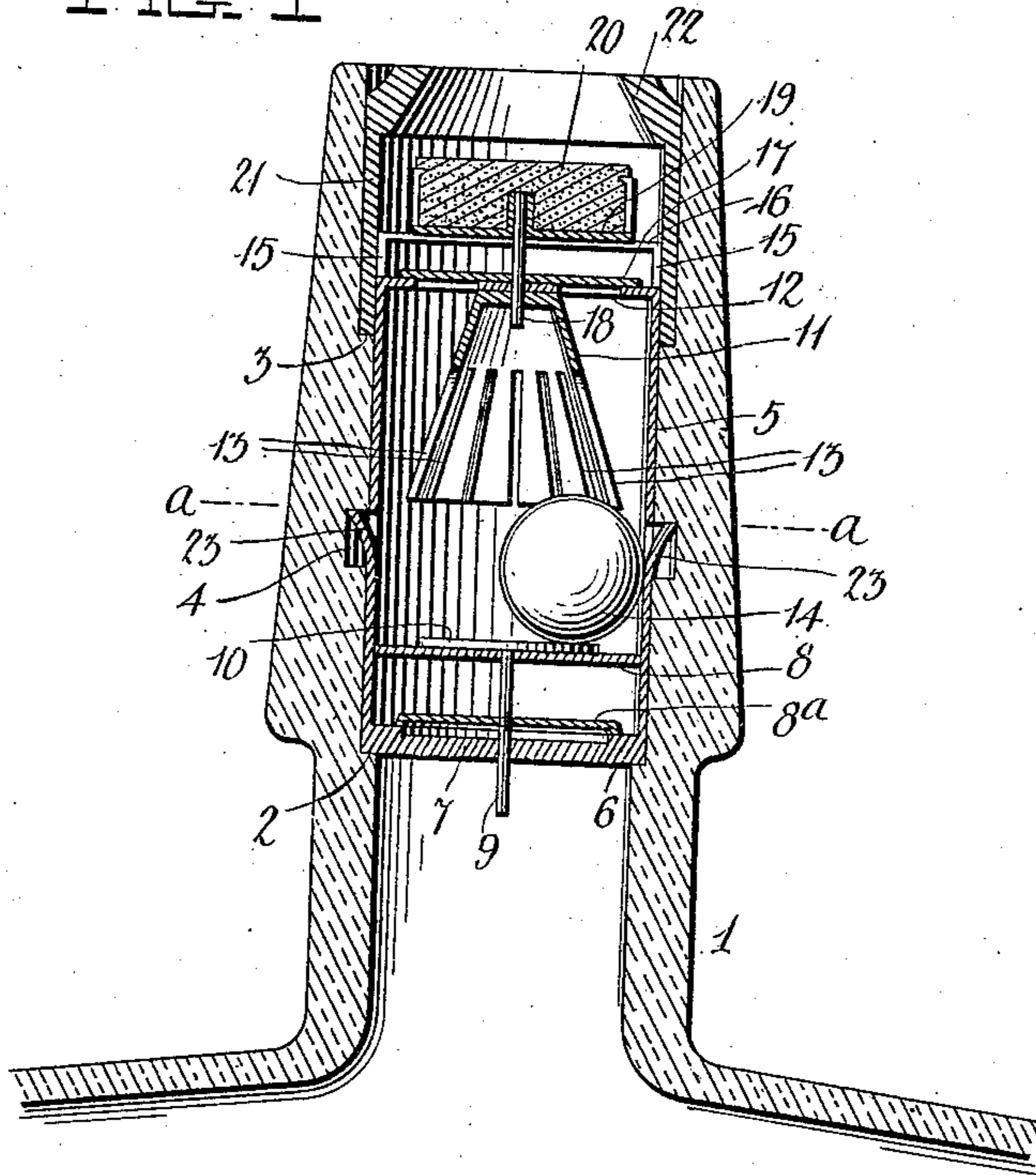
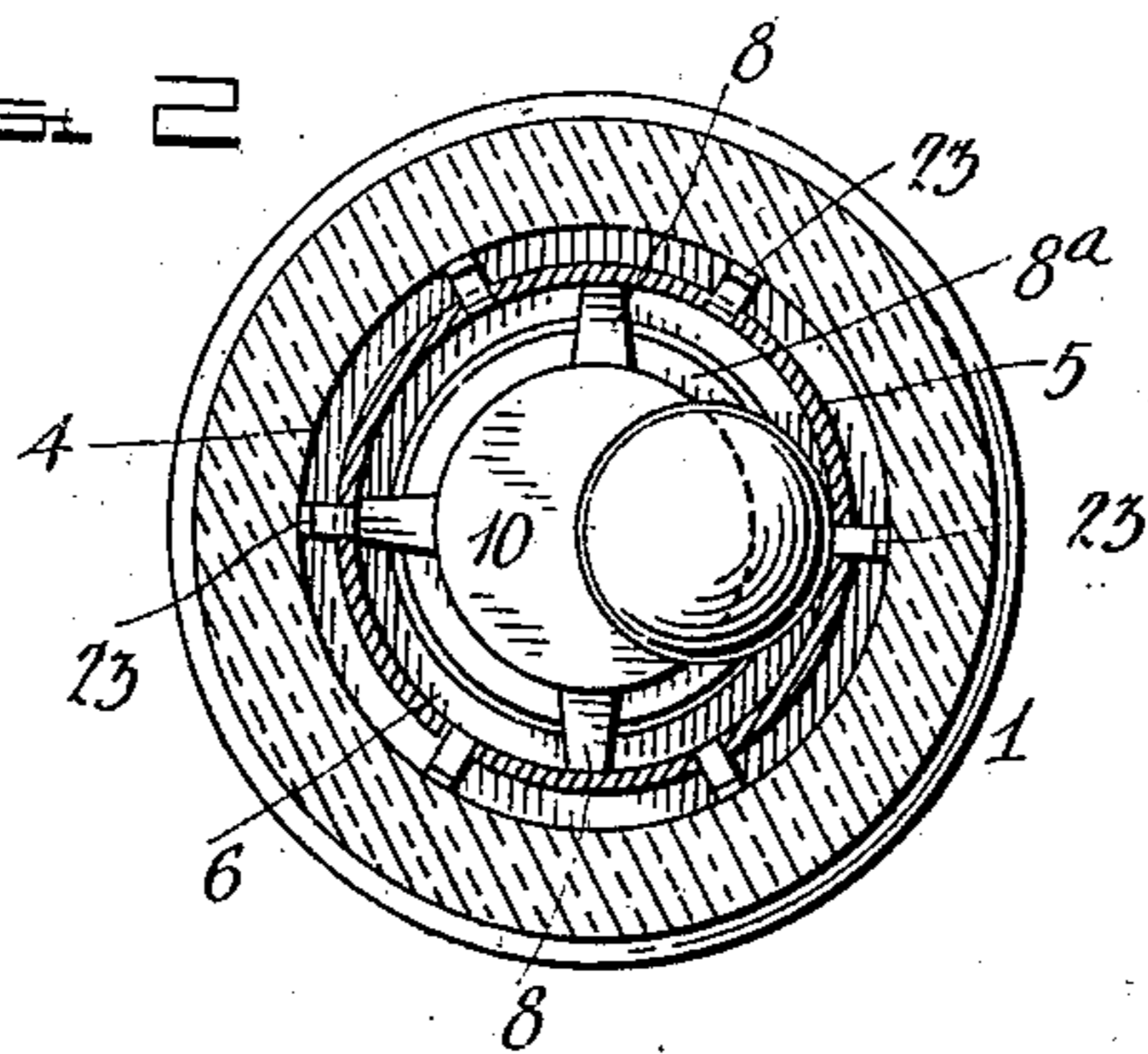


FIG 2



Witnesses  
J. J. Antonio  
C. V. Guethane

Inventor  
J. W. Woodard

by *A. B. Wilson & Co*  
Attorneys

# UNITED STATES PATENT OFFICE.

JOSEPH W. WOODARD, OF WASHINGTON, DISTRICT OF COLUMBIA,  
ASSIGNOR OF ONE-HALF TO LOUIS COHEN, OF WASHINGTON,  
DISTRICT OF COLUMBIA.

## NON-REFILLABLE BOTTLE.

No. 842,050.

Specification of Letters Patent.

Patented Jan. 22, 1907.

Application filed April 23, 1906. Serial No. 313,292.

*To all whom it may concern:*

Be it known that I, JOSEPH W. WOODARD, a citizen of the United States, residing at Washington, in the District of Columbia, 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.

This invention relates to non-refillable bottles, one of the principal objects of which is to provide a non-refillable bottle which cannot be refilled by immersing the bottle in a horizontal position in a quantity of liquid or by forcing liquid upward into the bottle through a tube when the bottle is in an inverted position.

Another object is to provide a simple and reliable non-refillable bottle in which the valves and casing can be quickly placed within the bottle-neck and secured thereto by reliable means.

My invention consists in the construction, combination, and arrangement of devices hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a vertical section through the neck portion of a bottle provided with my improved devices; and Fig. 2 is a sectional view of the same, taken on the plane indicated by the line *a a* of Fig. 1.

The neck 1 of the bottle is provided near its inner end with an annular shoulder 2, and has a shoulder 3 near its outer end. At a point between said shoulders the neck is provided in its bore or inner wall with an annular groove 4.

The casing 5 is of tubular cylindrical form. At its inner end is an annular valve-seat 6. Said valve-seat has a cross-bar 7 on its lower side. A similar cross-bar 8 is disposed at a suitable distance above the cross-bar 7. Between the said cross-bars is a disk valve 8<sup>a</sup>, having a stem 9, which is guided in openings in said cross-bars. An operating-disk 10 is at the upper end of said stem. In the upper portion of the casing is a conical baffle 11, secured to an apertured disk 12, which disk is in the upper end of the casing. The said baffle is provided with vertical slits 13. A ball 14 of sufficient weight to force the valve to its seat when the bottle is in an

upright position is confined within the baffle, and when the ball drops to rest upon the disk 10 the baffle serves to hold the ball on said disk, so that the ball serves to keep the valve 8<sup>a</sup> closed on the valve-seat 6 until the bottle is tipped beyond a horizontal position with the mouth of the bottle inclined downwardly, when the ball will then leave the disk 10 and the pressure of the liquid in the bottle will cause the valve 8<sup>a</sup> to open.

At the upper or outer end of the casing are a pair of ears 15, connected together by a bar 16. A disk valve 17 operates between the apertured disk 12 and the bar 16 on a stem 18, which carries at its outer end a disk 19, to which is attached a cork disk 20. Said stem 18 operates in openings in the disk 12 and bar 16. On the outer end of the casing 5 is a cap 21, which is secured firmly thereto, and the outer portion of the bore of which is tapered, as at 22, so that the said cap forms a nozzle or spout which collects the liquid that passes the valves when the bottle is being emptied and causes the liquid to flow in a solid stream out of the neck of the bottle. The casing 5 is provided on its outer side with outstanding spring locking-ears 23, the lower ends of which are united to said casing. When the casing is placed in the neck of the bottle so that its lower end rests against the shoulder 2 and the lower end of the cap 21 rests against the shoulder 3, the said locking-ears spring outwardly in and engage the upper side of the groove 4, and hence serve to lock the casing in the neck of the bottle, so that it cannot be removed therefrom without first breaking the neck of the bottle.

It will be understood that upon any attempt made to refill the bottle by forcing liquid under pressure thereinto the disk 20 will operate the disk valve 17 and close the latter firmly against the apertured disk 12, and hence prevent any liquid from entering the bottle. Said disk 20 being of cork and very light will rise in any liquid which it may be attempted to get into the bottle, when the latter has been inverted, to cause the ball 14 to free the valve, and hence such cork disk, by rising, will operate to effectually close the said disk valve 17.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the inven-

tion will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined by the appended claims.

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

1. A bottle having the neck provided with an annular shoulder near its inner end, a similar shoulder near its outer end and an annular groove at a point between said shoulders, in combination with a valve-casing in the neck, with its inner end bearing against the inner shoulder, said casing having spring locking devices engaging the annular groove, and a cap on the outer end of the said casing, and bearing against the outer shoulder, substantially as described.

2. A bottle having the neck provided with an annular shoulder near its inner end, a similar shoulder near its outer end and an annular groove at a point between said shoulders, in combination with a valve-casing in the neck, with its inner end bearing against the inner shoulder, said casing having spring locking

devices engaging the annular groove, and a cap on the outer end of the casing, bearing against the outer shoulder and having an outwardly-contracting bore, substantially as described.

3. A non-refillable bottle having a valve-casing in the neck thereof, a disk valve, a guide for said disk valve, and a float-disk spaced from the outer side of said disk, and connected thereto to operate the same, substantially as described.

4. A non-refillable bottle having an inner valve, a weight element to close said inner valve when the bottle is in an upright, inclined, or horizontal position, an outer disk valve, a guide therefor, a float-disk spaced from the outer side of the disk valve and connected thereto to operate the same, and a cap in the neck of the bottle, inclosing the float-valve, and having an outwardly-contracted bore, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH W. WOODARD.

Witnesses:

J. W. GARNER,

THOMAS LLOYD JENKINS.