L. STERN.

NON-REFILLABLE BOTTLE.

APPLICATION FILED NOV. 25, 1912.

**1,067,947.**

Patented July 22, 1913.

Fig. 1.

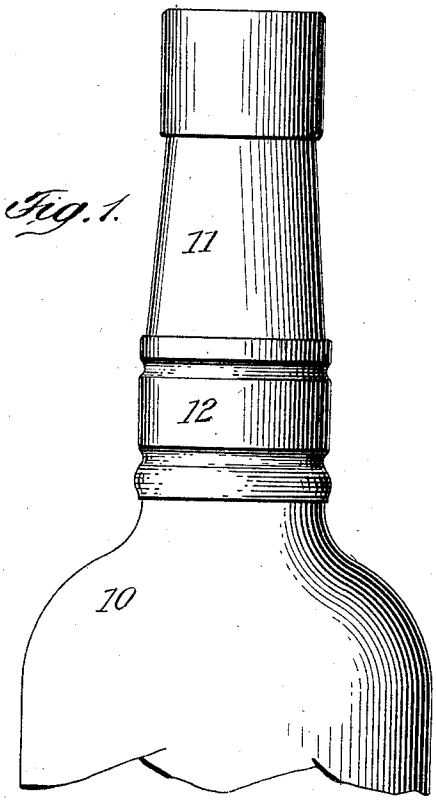



Fig. 2.

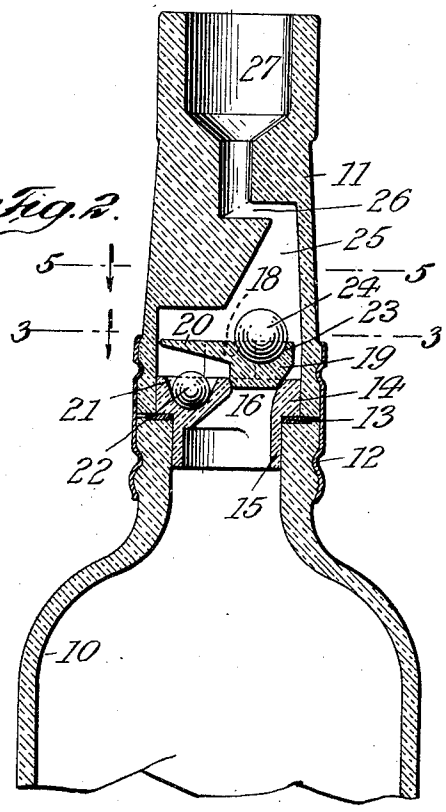



Fig. 3.

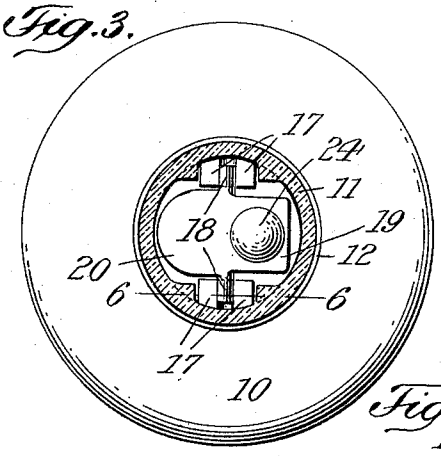



Fig. 4.

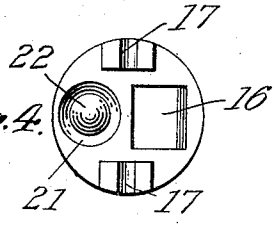



Fig. 5.

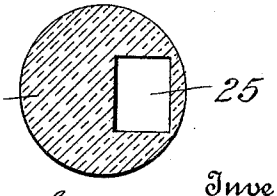
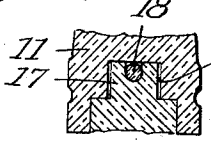



Fig. 6.




Witnesses:

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Inventor

Louie Stern

By his Attorneys

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# UNITED STATES PATENT OFFICE.

LOUIE STERN, OF NEW YORK, N. Y.

## NON-REFILLABLE BOTTLE.

1,067,947. Specification of Letters Patent. **Patented July 22, 1913.**

Application filed November 25, 1912. Serial No. 733,271.

*To all whom it may concern:*

Be it known that I, LOUIE STERN, a subject of the Czar of Russia, residing at New York city, county and State of New York, have invented a new and Improved Non-Refillable Bottle, of which the following is a specification.

This invention relates to a bottle of novel construction which is protected against spurious refilling in any position it may be made to assume.

In the accompanying drawing: Figure 1 is a side view of the upper part of a bottle embodying my invention; Fig. 2 a longitudinal section thereof; Fig. 3 a cross section on line 3—3, Fig. 2; Fig. 4 a plan of the disk; Fig. 5 a cross section on line 5—5, Fig. 2, and Fig. 6 a cross section on line 6—6, Fig. 3.

To the body 10 of a bottle or similar container is permanently secured a neck 11 by means of a band 12, while a gasket 13 is interposed between said neck and body. Within the bottle constructed as described, there is fitted a disk 14 that rests upon gasket 13 and is provided with a depending flange 15. Disk 14 has a liquid egress port 16 and a pair of upper bearings 17, in which turns the pivot 18 of a flap valve 19 that controls said port. Valve 19 is beyond the pivot with a tail piece 20, extending above a flaring seat 21 formed in disk 14 sidewise of port 16 and within which movably rests a spherical weight 22. At its upper side, valve 19 is socketed as at 23 for the accommodation of a second movable spherical weight 24, which should be somewhat heavier than weight 22 and tends to maintain the valve in its closed position when the bottle is righted. Above weight 24, there is formed in neck 11, a tapering egress passage 25 that receives such weight when the bottle is tilted and which is of a width greater than the diameter of the weight, so that it can never become closed thereby. Passage 25 communicates by a sinuous duct 26 with the mouth 27 of the bottle. Within neck 11, there is further provided a pair of recesses 28 that accommodate bearings 17, while the upper perimeters of said recesses prevent the disengagement of pivot 18 from such bearings when the bottle is tilted.

As has been stated, the valve is normally held in its closed position by weight 24. When the bottle is tilted to pour out its contents, this weight will become unseated to relieve the valve, while at the same time, weight 22 will become unseated and bear with a certain pressure against the lower side of tail piece 20. The pressure thus exerted against the tail piece will tend to tilt valve 19 with a slight pressure toward its seat, and this pressure must be overcome by the force of the outflowing liquid, which during its discharge, counteracts such pressure and temporarily opens the valve sufficiently to permit the free egress of the liquid through port 16 and thence through passage 25, duct 26 and mouth 27.

If it is attempted to refill the bottle by shaking valve 19 off its seat while the bottle is righted, such attempt will be frustrated by both the weights 22, 24, as the weights by such agitation will be caused to respectively strike tail piece 20 and valve 19 on their respective lower and upper faces and on opposite sides of pivot 18, thus forcing the valve toward its seat. Should the spurious refilling be attempted by tilting the bottle or placing it in a horizontal position, weight 22 by rolling off its seat 21 will bear against the lower side of tail piece 20, thus again holding the valve closed. It will thus be seen that the refilling of the bottle is practically excluded in all positions it may be made to assume.

In assembling the parts, disk 14, valve 19 and weights 22, 24 are of course fitted in position before the neck 11 is permanently secured to the bottle by means of the neck band.

I claim:

A non-refillable bottle provided with a disk having an egress port, a coniform socket, and a pair of upwardly extending grooved bearings, a valve controlling said port and having a tail piece and pivots that are hung in the bearings, a neck having a tapering tortuous egress passage and provided with a pair of recesses that accommodate

the bearings, the upper recess walls confining the valve pivots within the bearing-grooves, a first movable weight normally seated within the socket and adapted to engage the tail piece, a second movable weight normally supported upon the body of the valve and adapted to be received within the tapering egress passage of the neck, the diameter of said second weight being less than the width of said passage, and means for securing the neck to the bottle.

LOUIE STERN.

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