

(No Model.)

D. MYERS.  
NON-REFILLABLE BOTTLE.

No. 599,972.

Patented Mar. 1, 1898.

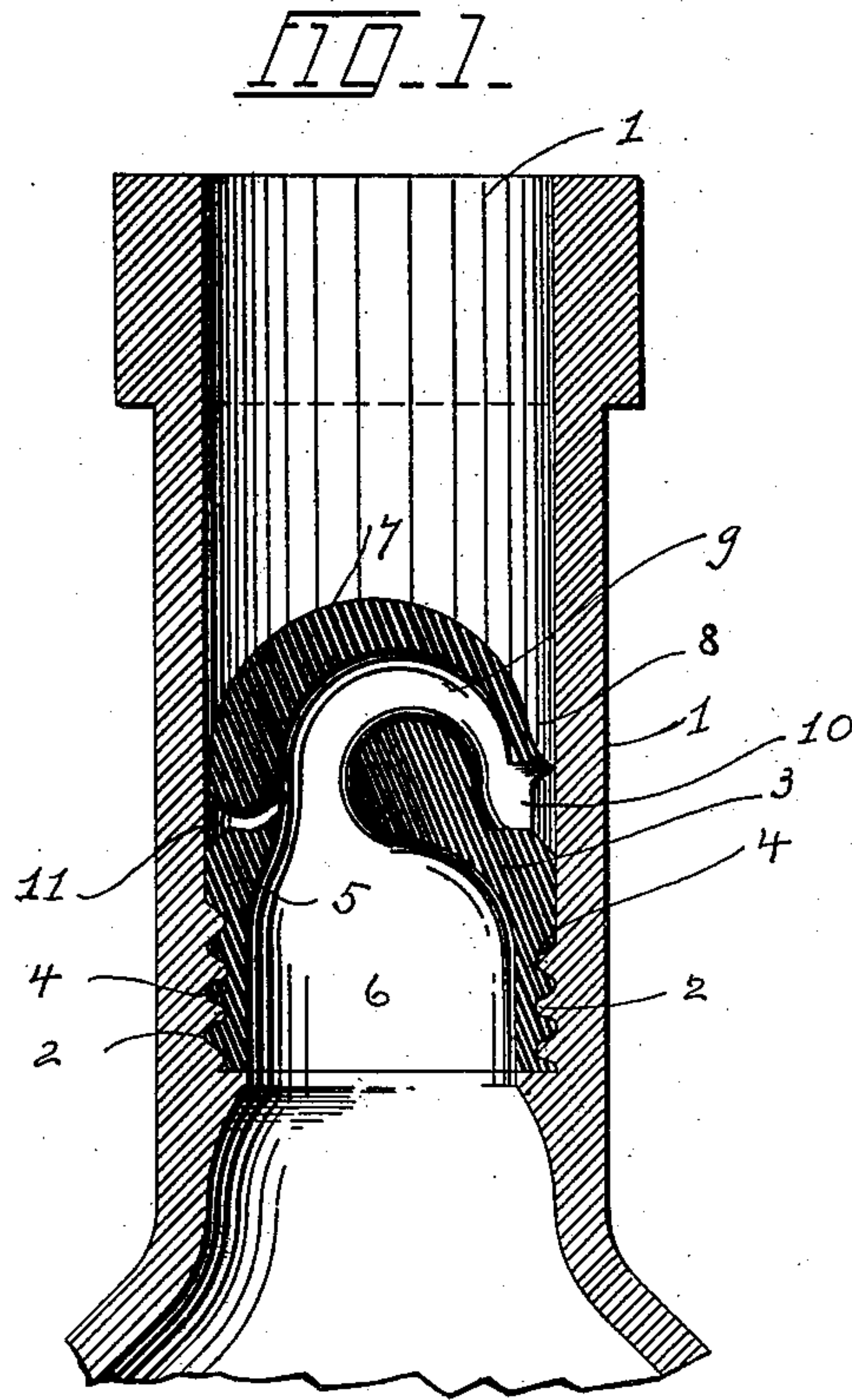


FIG. 2.

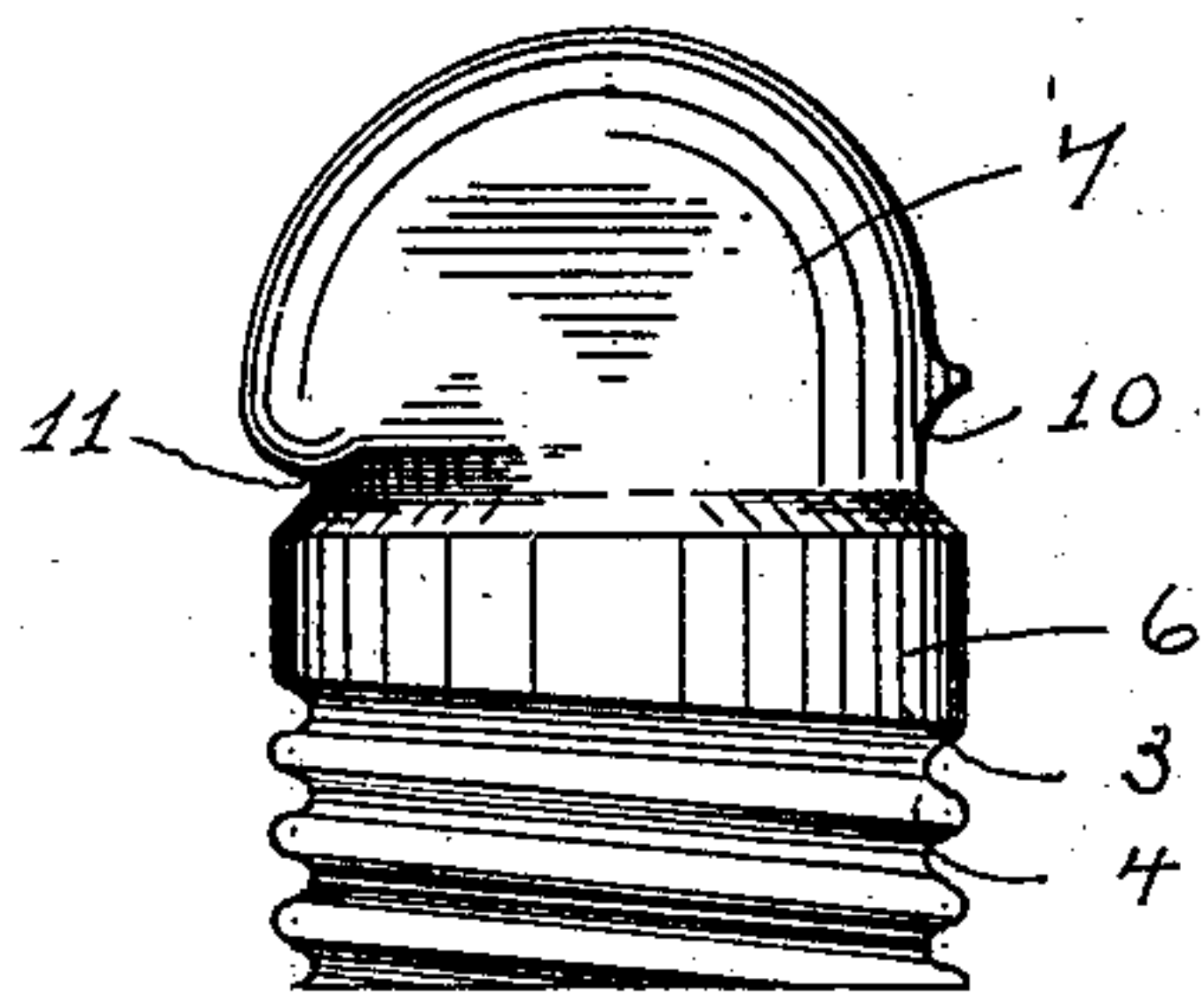
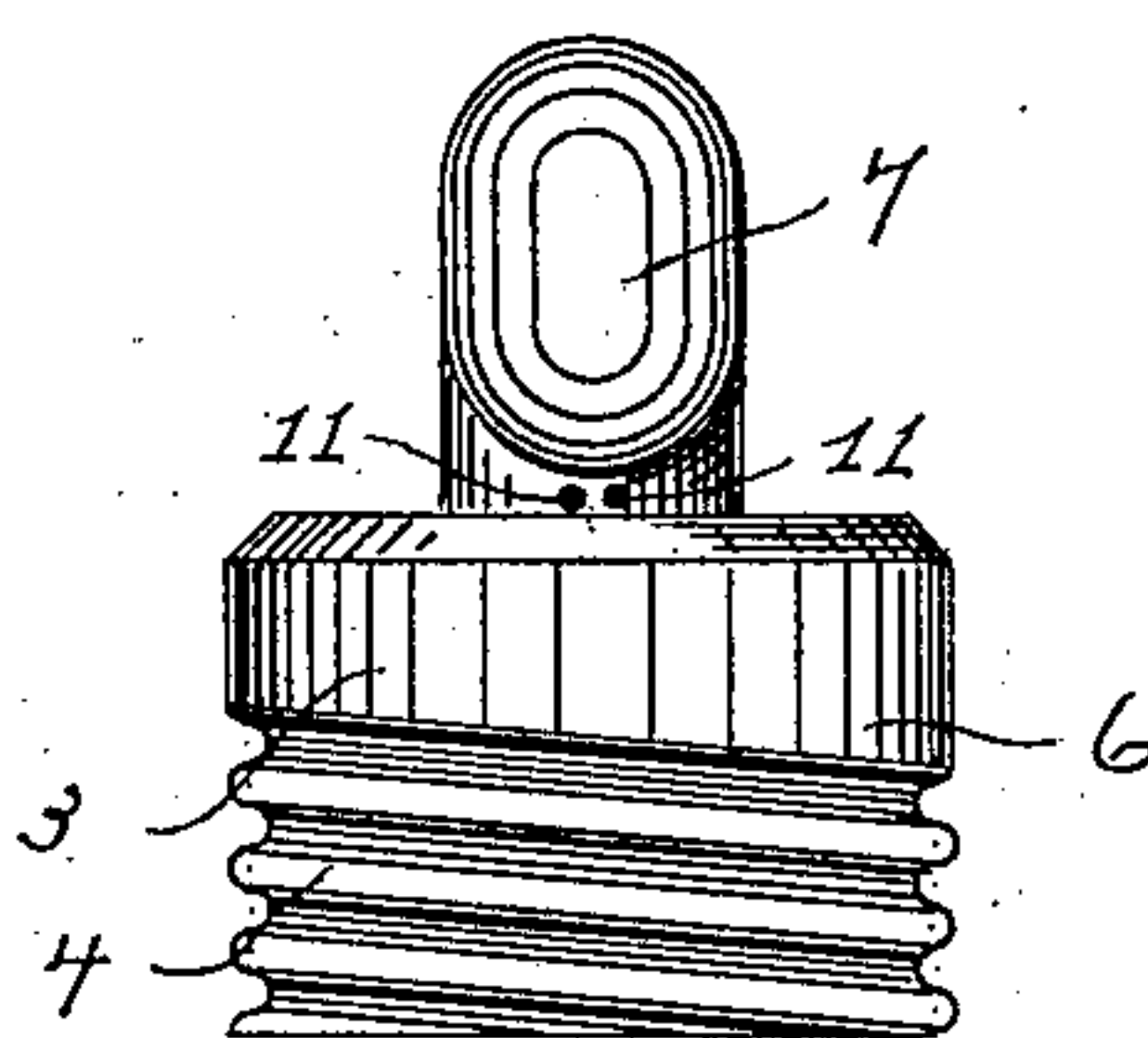


FIG. 3.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

DORA MYERS, OF WAUSEON, OHIO.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 599,972, dated March 1, 1898.

Application filed July 21, 1897. Serial No. 645,350. (No model.)

*To all whom it may concern:*

Be it known that I, DORA MYERS, of Wauseon, county of Fulton, and State of Ohio, 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, which 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 part of this specification.

My invention relates to a non-refillable bottle, and has for its object to provide an integral supplemental attachment to be inserted within the neck of the bottle, with provision for an outward flow of the liquid without interruption and with provision for an absolute prevention of refilling the bottle.

With this object in view the invention consists, broadly, in an attachment, either homogeneous with the construction of the bottle or as an attachment thereto by an interior filling-piece constructed with a tortuous channel formed within the filling-piece for the exit of the liquid through the mouth of the bottle, with an air-port formed within the filling-piece in horizontal relation thereto to prevent vacuum in the flow of the liquid, the conditions being such that the effect shall be reversed in an attempt to refill the bottle—to wit, that in the introduction of a liquid at the neck of the bottle the air-port and delivery-port shall be closed, they being in horizontal relation, thereby effectually sealing within the neck of the bottle the possibility of the introduction of a liquid.

I have further conceived the invention in the manufacture of bottles by the formation of a screw-thread progressive toward the body of the bottle, with a non-refillable insertible body portion having a coincident screw-thread to be run into the thread of the bottle and when seated be air-tight as to the flow of liquid and contain the conduit for the egress of the liquid in any volume desired, due to the air-conduit formed within the insertible body portion in horizontal relation thereto, and at the same time be seated with

relation to the neck of the bottle to allow of the insertion of the usual character of closure.

In the drawings, Figure 1 is a longitudinal vertical section of the neck of a bottle, showing my non-refillable device inserted therein by means of a screw-thread, and also the space above the same to admit of the usual character of closure in sealing the end of the bottle. Fig. 2 is an elevation of the supplemental attachment for insertion within the neck of the bottle; and Fig. 3 is an elevation of the same, showing the air-conduit.

In carrying out my invention I prefer to have the neck of the bottle constructed with a screw-thread, which enables me to provide the non-refillable attachment as an article of manufacture, and in this connection I will describe my invention, although I wish it understood that the non-refillable attachment may have a ground peripheral surface for attachment to bottles in present use or in coincidence with bottles manufactured with a ground surface, an essential feature being the inexpensive construction of the non-refillable portion insertible within the neck of the bottle and the absolute prevention of refilling.

1 designates the neck of the bottle having a screw-thread 2, and 3 the insertible non-refilling medium, which in this particular construction is provided with a screw-thread 4, coincident with the screw-thread 2 of the neck of the bottle.

I will now more particularly describe the non-refillable medium 3, which consists of an annulus 5 of a diameter to permanently seat within the neck of the bottle and in its body portion 6, with a dome-shaped integral portion 7 of less diameter than the neck of the bottle 1, whereby there is formed an annular recess 8 between the circumference of the dome and the interior of the neck 1 at the upper portion of the non-refillable medium 3. Within the dome-shaped portion of the non-refillable medium 3 there is formed a duct 9, describing the arc of a circle, with an opening 10 considerably below the highest curvature of the duct to allow of discharge of liquid through the neck of the bottle, and a free discharge of the liquid is inserted by reason of an air-port 11, practically diametric to the



opening or the discharge-port 10 and formed within the non-refillable attachment, whereby a vacuum is avoided.

It will be observed that the features relied upon insure a continuous flow of the liquid without the usual gurgling or intermittent flow, which conditions are positively inverted in an attempt to refill the bottle, as it will be readily understood that liquid introduced through the neck 1 would immediately seal the opening 10 and the air-port 11, they being diametrically opposite, thereby positively precluding the possibility of introducing a liquid into the bottle.

I wish it distinctly understood that while I prefer a specific form of bottle with a screw-thread and a specific form of non-refillable plug I may adapt the non-refillable plug or filling to any character of bottle by grinding the periphery of one or both.

I wish it further understood that in the consideration of my invention I attempt and have

successfully avoided the use of any material that would be effected by and incorporated with a liquid contained in the bottle.

What I claim is—

In connection with the neck of a bottle, a screw-thread formed upon the interior of the neck of the bottle, a plug having an outer diameter screw-threaded to seat within the screw-thread of the neck of the bottle, and an integral top portion of less area than the screw-threaded top portion, with a semicircular conduit terminating in a discharge within the top portion, of less area, and an air-conduit in opposition thereto and in horizontal relation.

In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

DORA MYERS.

Witnesses:

WILLIAM WEBSTER,  
MAUD SCHUMACHER.