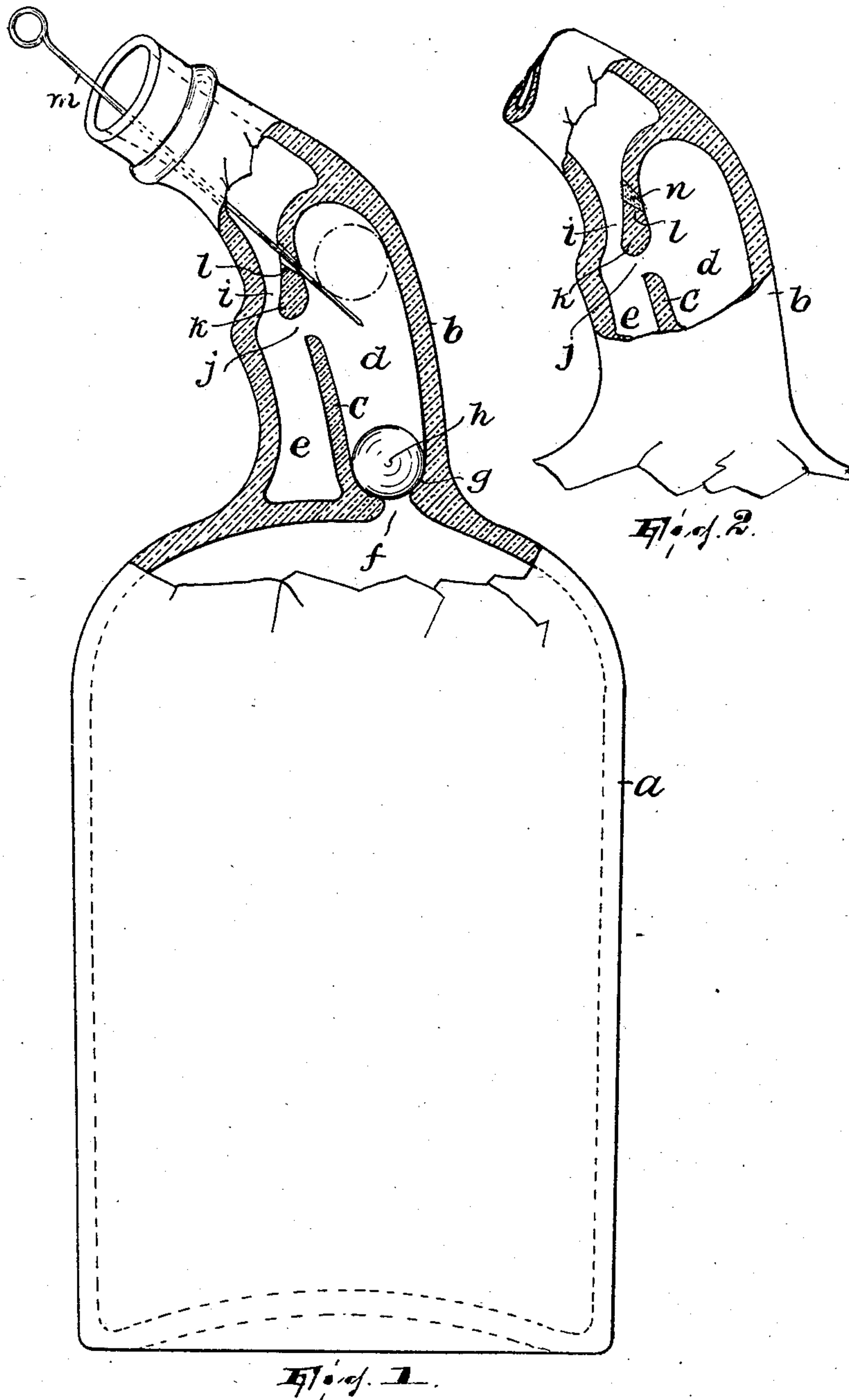


R. SIENA.  
NON-REFILLABLE BOTTLE.  
APPLICATION FILED MAR. 15, 1910.

968,993.

Patented Aug. 30, 1910.



WITNESSES:

*Wm. D. Zell.*  
*Elice Kaufmann.*

INVENTOR,

*Rocco Siena,*

BY

*J. H. Steward.*  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

ROCCO SIENA, OF PATERSON, NEW JERSEY.

NON-REFILLABLE BOTTLE.

968,993.

Specification of Letters Patent.

Patented Aug. 30, 1910.

Application filed March 15, 1910. Serial No. 549,462.

*To all whom it may concern:*

Be it known that I, ROCCO SIENA, a citizen of the United States, residing in Paterson, Passaic county, New Jersey, have invented  
5 a certain new and useful Improvement in Non-Refillable Bottles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as  
10 it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specifica-

15 This invention relates to means for rendering bottles non-refillable and it consists in certain improvements in such means whereby a bottle may be constructed which, while being adapted to be readily filled and  
20 readily emptied and yet incapable of refilling, will not require a number of parts or other conditions going to make it unduly expensive. In short, in accordance with my invention, a practical bottle of the non-  
25 refillable class may be made, blown or otherwise formed intact or unitary in character, except for a single valve, which is the only part thereof that is movable and separately made.

30 The accompanying drawing shows in Figure 1 the improved bottle in side elevation, partly in section, in the condition in which it is when filled; and, Fig. 2 is a fragmentary view of the neck portion of the bottle,  
35 partly in section, showing the structure after the bottle is once filled.

40 *a* is the bottle and *b* its neck; the neck in the present instance is of somewhat larger diameter in its base portion than in its upper or mouth portion, and it has its mouth portion bent off at a slight angle, the portion of which latter will subsequently appear. An angular wall *c* is formed in the neck, dividing the interior of the neck into two  
45 compartments or chambers, *d* and *e*, the latter occupying the side of the neck from which its mouth portion is deflected and the former occupying the opposite side of the neck. The chamber *d* converges slightly  
50 downwardly toward the opening *f* affording communication between said chamber and the interior of the bottle and at this point (the lower end of chamber *d*) a valve-seat *g* is formed. In the chamber *d* is arranged  
55 a valve *h*, preferably in the form of a ball.

The chamber *e*, which extends to the mouth of the bottle, is restricted at *i* by the wall *c* being so disposed as to stand close to the outer wall of chamber *e*. Penetrating the wall *c* is a passage *j* affording communication between chambers *d* and *e*, access to said  
60 passage by any implement being prevented by the fact that the passage *j* is tortuous, as shown and is guarded by the overhanging laterally projecting lip *k* of wall *c*.  
65 The passage *j* is so disposed that when the valve occupies the position indicated in dot-and-dash outline in Fig. 1, the valve will stand above the passage.

70 *l* is a small orifice in the portion of the wall *c* above the passage *j*. This orifice is so disposed and formed that a fine straight implement *m*, such as a needle or the like, may be introduced through the mouth of the  
75 bottle and through said orifice, projecting into the chamber *d*. After the bottle has once been filled, this orifice is closed by cement or the like *n*.

In filling the bottle the needle *m* or the like is inserted in the manner above described and made to hold the valve *h* elevated. The bottle is then filled, the liquid  
80 entering freely through the opening *f* because the valve is kept away from its seat *g*. Having filled the bottle the orifice *l* is closed  
85 with the cement *n*.

In emptying the bottle the valve will take the position indicated by dot-and-dash outline in Fig. 1 upon inverting the bottle,  
90 allowing the liquid to pass successively through chambers *d* and *e* and out through the mouth of the bottle. Any attempt to refill the bottle will be frustrated by the valve returning to its seat at *g*, effectively  
95 closing the admission of the liquid from chamber *d* to the interior of the bottle.

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

100 The combination, with a bottle having in its neck a wall extending substantially longitudinally of the neck and dividing the neck into two chambers disposed side by side, one opening into the interior of the bottle and forming a valve seat where it adjoins the  
105 latter and the other opening to the atmosphere in substantially the opposite direction, said wall having a passage connecting the chambers below the upper end of the first-named chamber and also having a lip at the  
110

relatively upper side of said passage project-  
ing laterally into the second-named chamber,  
and a valve arranged in the first chamber,  
adapted to seat on said valve-seat, and mov-  
5 able in said first chamber past said passage,  
substantially as described.

In testimony, that I claim the foregoing,

I have hereunto set my hand this 5th day of  
March, 1910.

ROCCO SIENA.

Witnesses:

WM. D. BELL,

JOHN W. STEWARD.