

W. A. SCHNELLER.
NON-REFILLABLE BOTTLE.
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1,066,056.

Patented July 1, 1913.

FIG. 1.

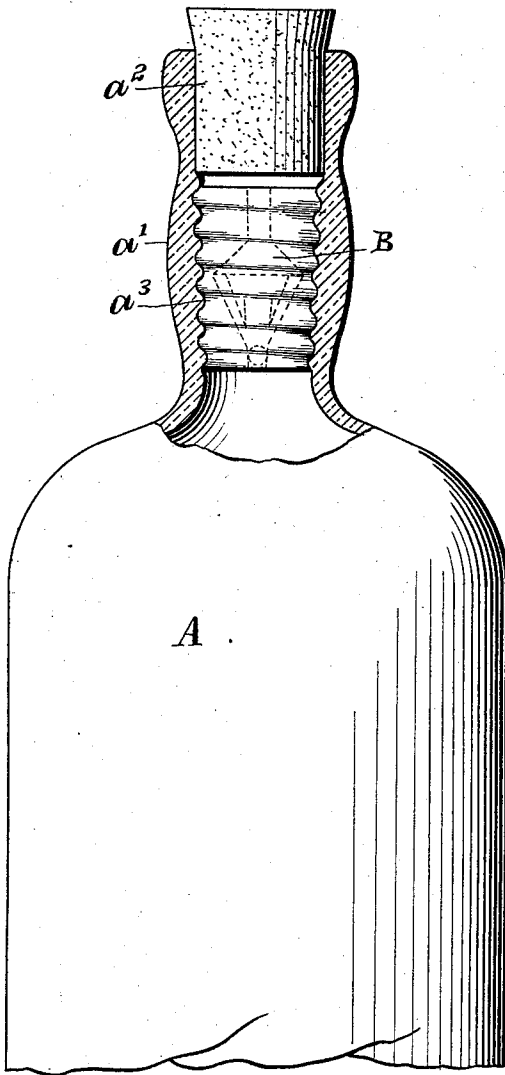
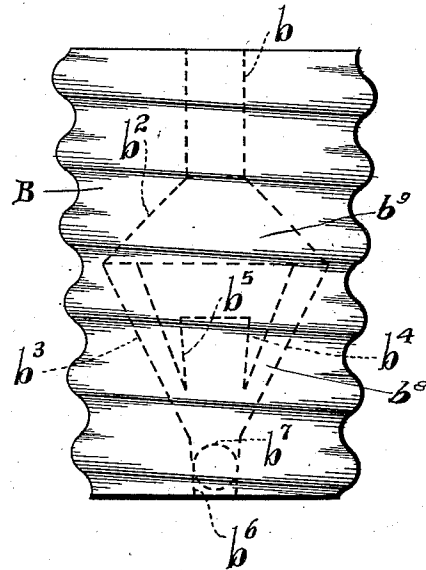


FIG. 2.



Witnesses

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WILLIAM ARTHUR SCHNELLER, OF BETHLEHEM, PENNSYLVANIA.

NON-REFILLABLE BOTTLE.

1,066,056.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM A. SCHNELLER, a citizen of the United States, residing at Bethlehem, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention has relation to an efficient or reliable and cleanly type of bottle known as "non-refillable," which cannot be filled by unauthorized persons or the bottle being once filled and the threaded plug structurally arranged interiorly, embodying my invention, being secured in the neck of the bottle, it cannot then be re-filled without destroying the neck.

The nature and scope of my present invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof, in which—

Figure 1, is a view in broken sectional elevation of a bottle and a vertical central section of the neck, in which is mounted a threaded plug having a certain interior formation and valve-arrangement, embodying main features of my present invention; and Fig. 2, is an enlarged elevational view of the threaded plug for securing in the bottle neck, showing in dotted outline the internal formation of the plug and the ball-valve therein, in a vertical position of the bottle.

Referring to the drawings A, is the bottle, a^1 , the neck, and a^2 , an ordinary cork stopper, for closing the mouth of the same. The interior surface of the neck is preferably arranged with a threaded surface a^3 , for a purpose to be presently explained.

B, is a threaded tapering plug of preferably glass, and molded in two sections and then united so as to snugly fit a complementary threaded surface of the neck a^1 , of the bottle. Interiorly the plug at the top is formed into a vertical outlet passage b , and at the bottom into a valve-chamber b^6 , for a ball-valve b^7 , in which to normally seat. Between the outlet passage b , and valve-chamber b^6 , and merging into both are reversely arranged truncated configurations b^2 and b^3 , differing in dimension with respect to each other in connected relationship, as clearly illustrated in Fig. 2. Within the configuration b^3 , as shown, is formed an inverted conical-shaped obstruction device b^4 ,

having a tapering chamber b^5 , provided in the body thereof and into which by tilting the bottle A, the ball b^7 , of the chamber b^6 , will be shifted thereinto and held by the lower tapering portion of the wall of said chamber during pourings of the bottle, and until again the bottle has been caused to assume a vertical position, when by gravity the said ball will drop and seat in the base portion of the said chamber b^6 , to thereby seal by such seating of the ball, the internal contents of the said bottle.

Between the wall of the lower truncated configuration b^3 , and inner obstruction device b^4 , is provided a tapering passage-way b^8 , to permit of a free deflected flow of fluid or liquid in discharge of the contents of the bottle, without being interfered with by the ball-valve b^7 , because by the tilting of the bottle is caused the ball to roll into the pocket b^5 , of the device b^4 . In the said shifted position of the bottle the liquid or fluid liberated will unretarded flow into the enlarged space b^9 , located above the obstruction device b^4 , and then discharge through the vertical outlet b , from the bottle A, after the cork or stopper a^2 , of the bottle has been removed to permit of such discharge, as will be clearly understood from Fig. 1, of the drawings.

The threaded surface of the plug B, is first coated with an adhesive cement or other suitable substance, and then screwed to place in the complementally threaded neck of the bottle A. The plug B, being thus secured in the neck, a cork or other type of stopper a^2 , is then fitted into the mouth of the neck, as illustrated in Fig. 1.

When it is desired to draw the liquid from the bottle, the cork is first removed and the bottle A, tilted at an angle to its vertical position, thereby shifting the ball-valve b^7 , so as to enable the liquid of the bottle to flow in the manner hereinabove explained.

It will be observed that any unauthorized attempt to re-fill the bottle A, by inclining it will cause at once, owing to the tapering shape of the valve chamber b^6 , the ball to again seat itself, and hence frustrate any attempt at re-filling of the bottle. Moreover, by the manner of securing the plug in the bottle neck any attempt at removing the plug will only result in either cracking or destroying the neck of the bottle.

Having thus described the nature and ob-

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jects of my invention, what I claim as new and desire to secure by Letters Patent is:—

In a non-refillable bottle, a plug secured in the neck of the bottle, said plug interiorly provided with an upper tubular chamber merging into a centrally located irregular-shaped triangular formation, the latter terminating in a contracted valve-seating chamber, having a ball therein and interiorly of said formation is arranged an inverted truncated cone-shaped configuration having a surrounding outlet passageway and from the apex of said configuration and extending into the body of the same is arranged a tapering chamber permitting when the bot-

tle is tilted the ball of said valve-seating chamber to be shifted thereinto and held by the tapering wall of said chamber during pourings from said bottle and until the bottle has been caused to assume a vertical position, when by gravity the ball will drop into its said seating chamber. 20

In witness whereof, I have hereunto set my signature in the presence of the two subscribing witnesses hereto.

WILLIAM ARTHUR SCHNELLER.

Witnesses:

C. M. RIEGEL,
T. E. NORDRING.

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