

W. R. FEARN.
NON-REFILLABLE BOTTLE.
APPLICATION FILED MAR. 25, 1914.

1,143,695.

Patented June 22, 1915.
2 SHEETS—SHEET 1.

Fig. 1.

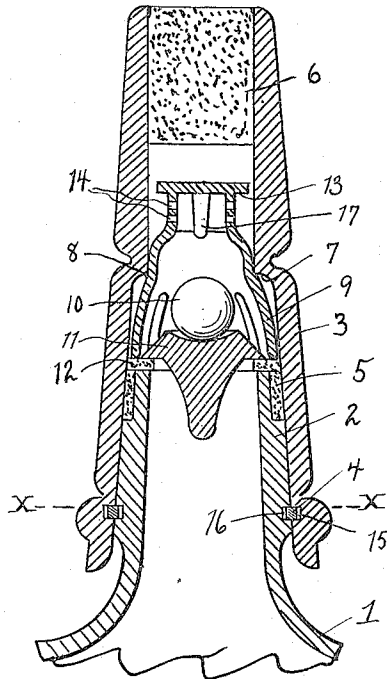


Fig. 2.

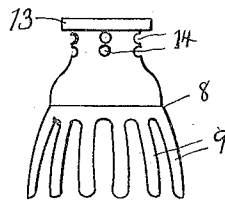
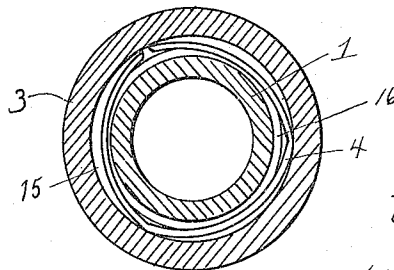


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

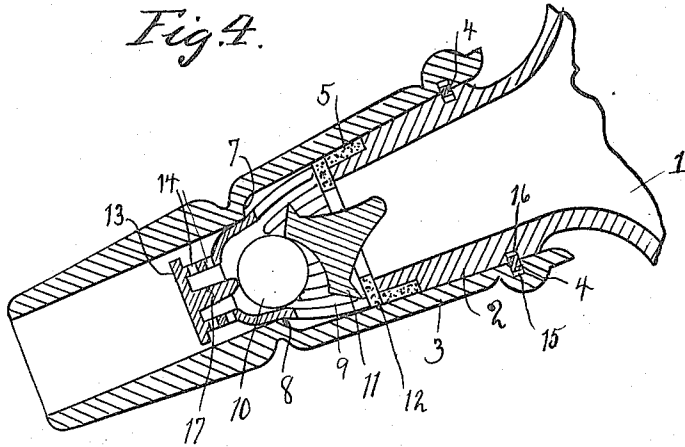
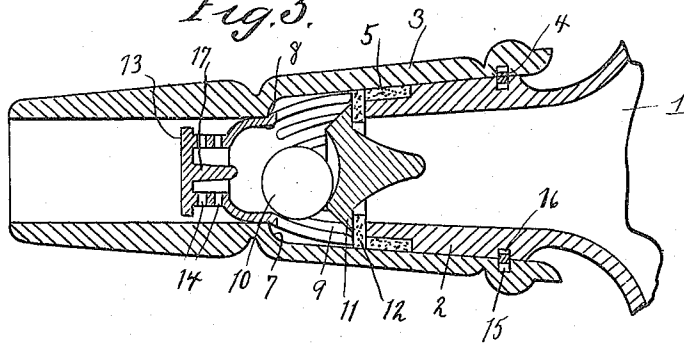


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM R. FEARN, OF CAMDEN, NEW JERSEY.

NON-REFILLABLE BOTTLE.

1,143,695.

Specification of Letters Patent. Patented June 22, 1915.

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To all whom it may concern:

Be it known that I, WILLIAM R. FEARN, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to new and useful improvements in non-refillable bottles, and has for its object to provide an exceedingly simple and effective device of this description, which when once filled and sealed its contents may be readily poured therefrom, but which cannot be refilled.

A still further object of the invention is to so construct the secondary neck that it may contain all of the non-refilling mechanism, whereby in practice the bottle may be as readily filled as an ordinary bottle and the secondary neck including the non-refillable mechanism applied to the primary neck of the bottle, in a simple and effective manner.

A still further object of the invention is to so design the secondary neck that it may be used upon bottles of ordinary design without changing their shape.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by numeral to the accompanying drawing forming a part of this specification, in which—

Figure 1, is a vertical section of the upper portion of a bottle including the neck thereof and showing my improved secondary neck and non-refilling mechanism applied thereto. Fig. 2, is a detail elevation of the keeper; and Fig. 3, is a section at the line $x-x$ of Fig. 1. Fig. 4, is a view similar to Fig. 1, showing the bottle tilted to the position for pouring the contents therefrom and illustrating the position assumed by the non-refilling mechanism; and Fig. 5, is a similar view showing the bottle in a horizontal position, at which point the valve will close.

In carrying out my invention as here embodied, 1 represents the upper portion of an

ordinary bottle and 2 the neck thereof, over which is fitted the secondary neck 3, being locked in position by the spring 4 as hereinafter explained.

In order that no leakage may take place between the primary neck and the secondary neck of the bottle a compressible ring 5 is interposed. These two necks as clearly shown in Fig. 1, and this ring may be either of cork or other suitable material. The upper portion of the secondary neck has a central opening of sufficient size to receive the ordinary cork 6, while the interior of the lower portion thereof is of larger diameter and preferably tapered, so as to form a shoulder 7 against which the shoulder 8 of the keeper bears, thus when the keeper is inserted into the lower end of the secondary neck, it will be positioned therein. The keeper is hollow, the lower portion thereof terminating in the prongs 9 to form a cage for the ball 10 and the valve 11 and also to hold the valve seat disk 12 in place upon the top of the primary neck. The upper portion of the keeper has a flanged head 13, the neck thereof having the holes 14 here shown as round, but which may be oblong or other desired shape. The valve seat disk 12 is preferably made of cork, the upper surface forming the valve seat upon which the valve seats, and this valve is preferably concaved upon its upper surface and has an extension upon its lower surface as clearly shown, so as to give it a tendency to overbalance when the bottle is turned to certain positions. The locking wire 4 is preferably made square in cross section and triangular in shape so as to fit within the groove 15 formed in the secondary neck and spring into the groove 16 formed in the primary neck, which construction provides a simple method of locking the two necks together after the bottle has been filled, and which will prevent the removal of the secondary neck, except by leakage, but of course this wire may be of any cross section or shape desired.

From the foregoing description the operation of my improvement will be as follows:—The bottle has been filled, the secondary neck is slipped over the primary neck and locked in place as before described, and as all of the mechanism is located in the secondary neck and the cork 6 has been previously applied thereto, no further adjust-

ment or sealing is necessary, thus saving the bottler considerable time and expense. When the liquid is to be poured from the bottle it is only necessary to remove the
 5 cork 6 and tilt the bottle in the usual manner, when the ball 10 will roll into the upper portion of the keeper, and the valve tilt
 10 sidewise from off its seat, permitting the liquid to flow outward through the keeper and the holes 14 and finally out of the
 15 mouth. A prong 17 is formed in the keeper to limit the movement of the ball as shown in Fig. 4. Should an attempt be made to
 20 refill the bottle, the ball will hold the valve upon its seat and prevent the inflow of liquid, and should the bottle be laid
 upon its side to permit the liquid to be floated into it, the shape of the interior of the
 25 keeper and the valve assisted by the ball will hold said valve upon its seat while the bottle is in this horizontal position, thus
 preventing the filling of the bottle by the usual method.

While I have shown my improvement applied to a bottle having an ordinary shaped
 25 neck, it is obvious that it may be applied to any form of bottle, the secondary neck being designed to fit the same, and it is equally
 30 obvious that any shape of keeper may be used so long as it serves the purpose here intended.

Of course I do not wish to be limited to the exact details of construction as here shown as these may be varied within the

limits of the appended claim without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful, is—

A non-refillable bottle comprising a primary bottle neck, a secondary neck, having
 40 two different sized bores, the lower or larger bore being tapered toward the smaller bore to form a shoulder, said secondary neck adapted to fit over the primary
 45 neck and be locked thereon, a valve seat mounted on the end of the primary neck, a valve adapted to coact with the valve seat,
 50 a ball arranged to coact with said valve, a hollow keeper provided with prongs and having an exterior shoulder intermediate
 its ends, the shoulder on the secondary neck adapted to coact with the shoulder on the
 55 keeper to retain the latter in its position, said keeper being provided with holes and having a flanged head, said head being
 spaced from the side walls of the secondary neck to permit the passage of liquid and a
 60 prong formed with the head of the keeper and projecting inwardly to limit the movement of the ball.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

WILLIAM R. FEARN.

Witnesses:

M. E. HAMER,
 M. P. WILLIAMSON.

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