No. 615,601. Patented Dec. 6, 1898.

E. WILBUR.

NON-REFILLABLE BOTTLE.

(Application filed Nov. 17, 1897.)

(No Model.)

Fig. 1.

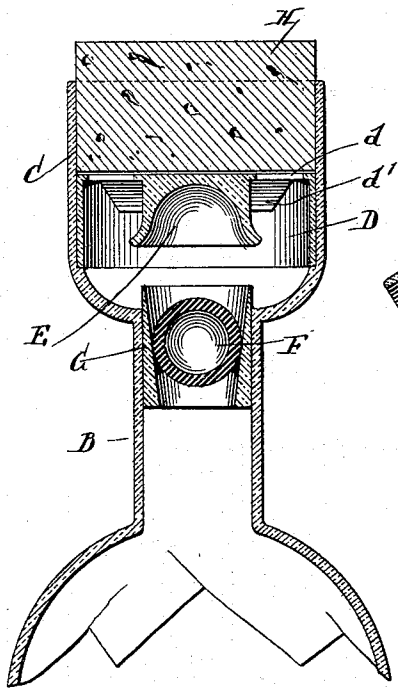


Fig. 2.

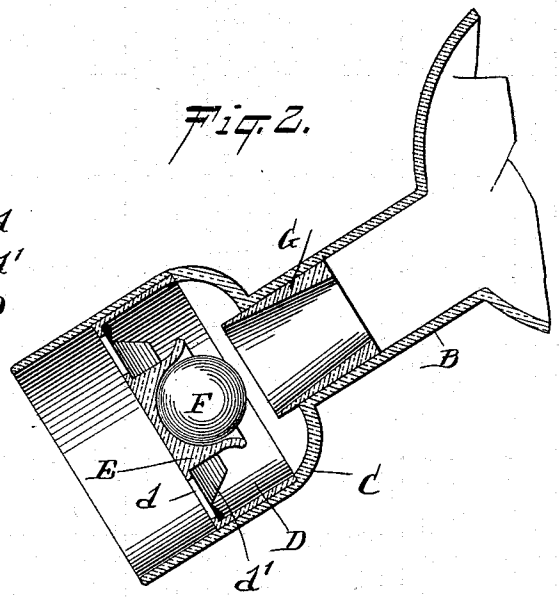


Fig. 3.

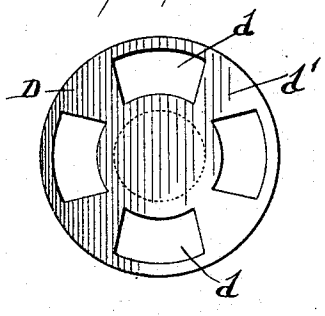
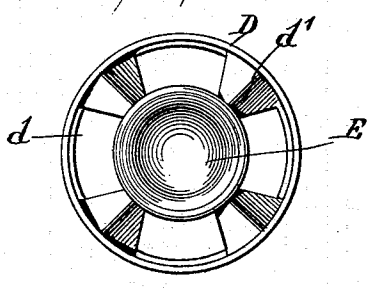


Fig. 4.



WITNESSES:

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EDWIN WILBUR, OF NEWPORT, RHODE ISLAND.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 615,601, dated December 6, 1898.

Application filed November 17, 1897. Serial No. 658,794. (No model.)

To all whom it may concern:

Be it known that I, EDWIN WILBUR, of Newport, in the county of Newport and State of Rhode Island, have invented a new and Improved Non-Refillable Bottle, of which the following is a full, clear, and exact description.

My invention relates to an improvement in non-refillable bottles; and it consists of certain novel constructions, which will be hereinafter described, and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal section through the upper part of the bottle. Fig. 2 is a similar section showing the bottle tipped for pouring out its contents. Fig. 3 is a top plan view of the collar which is inserted within the bell-shaped mouth. Fig. 4 is an inverted plan of the same.

In constructing bottles after my improved design the neck B is similar to that of any ordinary bottle except that at its upper end it is provided with an enlarged bell-shaped mouth C. The neck of the bottle is also provided with an inserted sleeve G, which is enlarged slightly at its outer end, the same being flaring and serving as a ball-seat. The extreme outer end of the sleeve G may be used as the ball-seat; but it is preferred that the seat be formed within the cylinder by a decrease in the inner diameter thereof, the same being such as to produce a conical inner surface, as shown in the drawings.

The bell-shaped mouth is provided with an inserted collar D, which fits closely within the bell and so that it cannot be readily extracted. These parts may, if desired, be fused in place. The collar D has a central cup E, facing inwardly, the inner surface thereof being shaped to form a ball-seat, which is located opposite the ball-seat in the sleeve G and with its inner edges separated from the outer edges of the sleeve by a slight space, which is sufficient to permit pouring the liquid therethrough, but not enough to permit the ball to pass out thereat or become wedged between the two. This central cup E is connected with the outer body of the collar D by a series of arms d', which are preferably made of a triangular cross-section, as is indicated in the drawings. This forms a series of holes d, through which the liquid may pass. A ball F is inserted between the sleeve G and the cup E and is of such a size as to effectually close the opening in the sleeve and prevent the insertion of any liquid. This ball is preferably made hollow and of rubber, so that it will seat tightly and float if immersed. The collar D and the mouth C are of such size that the collar occupies the lower portion only of the mouth, leaving the outer portion thereof for the insertion of the cork H, which forms a closure for the mouth C.

When in use, the ball F will drop into the cup E whenever the bottle is turned upward for pouring, and the liquid may then flow out through the orifices d. Whenever the bottle is turned right side up, the ball F will drop into the seat in the sleeve G and effectually close the same, so that the liquid cannot enter.

This construction of bottle is simple and cheap of manufacture, and, moreover, gives ample area for the passage of the liquids.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A bottle, having a neck enlarged or bell-shaped at its outer end, a ring or hollow cylinder fitting within the outer end of the smaller section of the neck and projecting slightly into the bell-shaped or enlarged section of the neck, said ring having a conical or tapering perforation through it lengthwise and forming a valve-seat, a ring fitting the bell or enlarged section of the neck and having a partition extending across the outer end thereof and perforated near its edge, a cup depending from the center of partition and opening inwardly and opposite the end of the other ring which forms the valve-seat, and a ball adapted to enter the seat-ring, the cup and seat-ring being a distance apart less than the diameter of the valve-ball, whereby its escape is prevented, substantially as described.

2. In a non-refilling bottle, the combination with a bottle having a valve-seat in its neck, of a ring fitting in the bottle-neck above the valve-seat and provided with a central cup

projecting downwardly within the ring, said cup being connected to the upper portion of the ring by arms, and a ball adapted to be seated in the valve-seat, substantially as described.

3. In a non-refilling bottle, the combination with a bottle, the neck of which has an enlarged bell-shaped mouth, of a tapering sleeve within the smaller portion of the bottle-neck and having its upper end projecting into the bell-shaped mouth, a ring fitting in the bell-shaped mouth of the neck and provided with a central cup projecting downwardly within the ring, the cup being connected to the upper portion of the ring by arms, and a ball adapted to enter the tapering sleeve, substantially as described.

EDWIN WILBUR.

Witnesses:
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