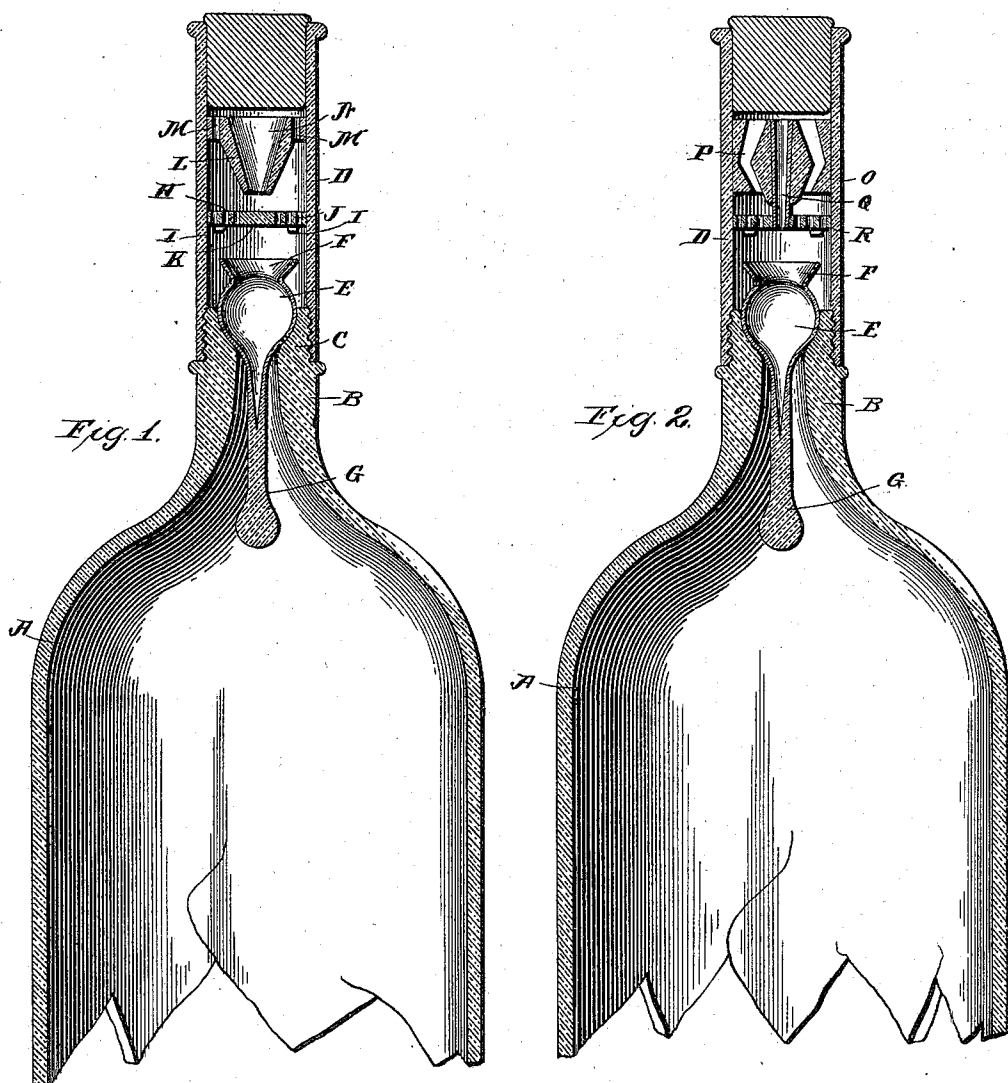


(No Model)

J. H. DOERR.
NON-REFILLING BOTTLE.

No. 585,464.

Patented June 29, 1897.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN H. DOERR, OF CAMDEN, NEW JERSEY.

NON-REFILLING BOTTLE.

SPECIFICATION forming part of Letters Patent No. 585,464, dated June 29, 1897.

Application filed July 1, 1896. Serial No. 597,747. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. DOERR, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Non-Refilling Bottles, of which the following is a specification.

This invention relates to a new and useful improvement in non-refilling bottles, and has for its object to provide a device of this description which will preclude the possibility of refilling the bottle after the contents have once been withdrawn therefrom, thereby preventing the fraudulent sale of the goods of one manufacturer under the name of another.

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 and operation in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a central vertical section of a portion of a bottle made in accordance with my improvement, and Fig. 2 a similar view showing a slightly-modified form thereof.

A represents the bottle, the neck B of which is provided with a threaded shank C, so that the extension D may be secured thereto by the engagement of the internal threads at the lower edge thereof with this threaded shank.

Within the upper end of the neck is formed a valve-seat adapted to receive the valve E, which latter is globe-shaped, being hollow and having a flared upper end F, for the purpose hereinafter set forth.

Depending from the valve is a stem G, which serves to guide said valve within the neck of the bottle and also on account of the enlargement upon the lower end thereof acts as a weight to assist in opening the valve when the contents of the bottle are poured out. A disk H is located within the extension D at a sufficient distance above the valve to permit the latter to move from off its seat, but will so limit this movement of the valve as to prevent the latter from being displaced, and upon the under side of the disk are formed lugs I, against which the flared mouth

of the valve strikes, so as to prevent said valve from coming in contact with the under side of the disk, which will shut off the flow of liquid through the extension. The disk is provided with a series of perforations J, but has a solid center portion K. A keeper L is secured within the extension D above the disk and is provided with a number of holes M around its outer edge and a central funnel-shaped opening N, and this arrangement is for the purpose of permitting the free outward flow of the liquid and the inward flow of the air, while at the same time preventing the valve from being tampered with by the insertion of a wire through the mouth of the bottle.

From this description the operation of my present improvement will be as follows: After the bottle has been filled and the valve placed in position upon its seat the extension is run upon the threaded shank C and there sealed by the use of any suitable compound which will prevent the removal of the extension without breaking the same, after which it will be seen that the contents of the bottle may be readily withdrawn therefrom in the usual manner, since when the bottle is tipped or inverted the pressure of the liquid upon the inner side of the valve will force said valve from off its seat, the liquid thereafter passing around the same through the perforations J and certain of the holes M, the air flowing inward through the opening N and certain of the perforations J and from thence within the bottle to take the place of the outflowing liquid. Should an attempt be made to refill the bottle when in its upright position, the inflowing liquid will be prevented from passing to the interior of the bottle by the valve remaining upon its seat, as will be readily understood, and should an attempt be made to refill the bottle by placing it upon its side and submerging it within a quantity of liquid the inflowing liquid will confine the air within the hollow portion of the valve, causing the same to act as a float, whereby the valve will be driven against its seat and there held until this pressure has been released, which can only take place by the raising of the bottle from out of the liquid, and, further, should an attempt be made to force liquid within the bottle by inverting the same and submerging

within a quantity of liquid the rising of said liquid within the extension D would also confine the air within the interior of the valve, whereby the latter would be caused to act as
5 a float and elevate it against its seat, thus excluding the ingress of the liquid. Therefore it will be seen that the bottle cannot be refilled after the contents have been withdrawn therefrom without first breaking some
10 portion thereof sufficiently to gain access to the valve in order that the latter may be held open while the liquid is being poured therein, and should the bottle be thus broken it is obvious that this would be determined by the
15 most casual observer, thus preventing the fraudulent sale of the goods of one manufacturer under the name of another.

The modification shown in Fig. 2 contemplates a different design of keeper, as indicated at O, and has formed therethrough the
20 deflected holes P, so arranged as to prevent the insertion of a wire or other implement for tampering with the valve, and also a tapering tube Q, passing through the center thereof
25 and through the disk R. This arrangement will permit the outflowing of the liquid

through the perforations in the disk R and the deflected holes, while the air will flow inward through the tapered tube.

Having thus fully described this invention, 30 what is claimed as new and useful is—

A bottle, a valve formed in the neck thereof, a hollow valve having the shape of a globe, a flared flange formed on the upper side of said valve, a solid stem formed with said valve 35 and extending through the neck of the bottle, an enlargement formed on said stem, a disk perforated around its sides secured in the neck above the valve, lugs formed on the lower face of said disk, and a keeper secured 40 above the disk, said keeper having a large funnel-shaped opening with a number of smaller openings surrounding it, substantially as described.

In testimony whereof I have hereunto af- 45 fixed my signature in the presence of two subscribing witnesses.

JOHN H. DOERR.

Witnesses:

S. S. WILLIAMSON,
MARK BUFORD.