

G. C. & H. W. BENTINCK.
 NON-REFILLABLE BOTTLE.
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1,059,816.

Patented Apr. 22, 1913.

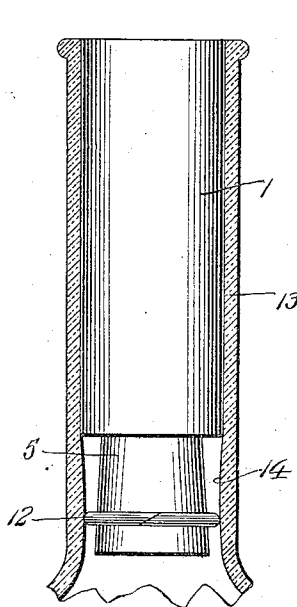


Fig. 1.

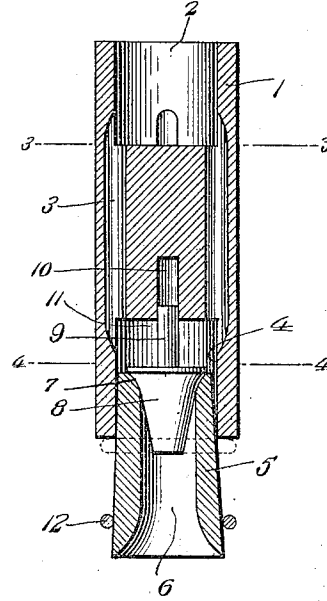


Fig. 2.

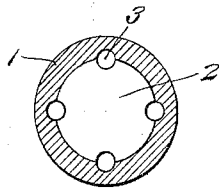


Fig. 3.

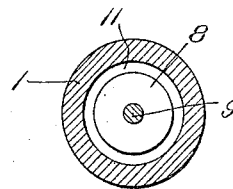


Fig. 4.

Witnesses

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NON-REFILLABLE BOTTLE.

1,059,816.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, GROVER C. BENTINCK and HENRY W. BENTINCK, citizens of the United States, residing at Galveston, in the county of Galveston and State of Texas, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to non-refillable bottles and the object of the invention is to provide a simple and efficient device of this character which may be cheaply constructed and which will effectually prevent the refilling of the bottle after the original contents have been dispensed.

A further object of the invention is to provide a novel form of locking mechanism to hold the stopper within the neck of the bottle without forming shoulders or channels in the bottle neck.

Further objects of this invention will appear as the following specific description is read in connection with the accompanying drawings, which form a part of this application, and in which:—

Figure 1 is a section through a bottle neck showing the stopper mounted therein. Fig. 2 is a longitudinal sectional view through the stopper showing the alternative position of the ring in dotted lines. Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 2. Fig. 4 is a similar view on the line 4—4 of Fig. 2.

Referring more particularly to the drawing, 1 represents a stopper body preferably of porcelain or other similar material which is provided with a central bore 2 in its upper end and with a plurality of channels 3 extending through the body and communicating with the bore 2 at the upper end and with a similar bore or recess 4 at the lower end. These channels are so arranged in the body with half of their diameter less than the bores 2 and 4 and the other half lies within the area of said bores. Secured in the lower bore 4 is a conical valve seat member 5 which is provided with a central bore 6 and a valve seat 7 at its upper end upon which the valve 8 is adapted to rest. This valve is provided with a stem 9 extending through the same and adapted to enter a central socket 10 formed in the body of the stopper and extending upwardly

from the bore 4. The valve member 5 projects only a short distance in the body of the stopper so as to produce a valve chamber 11 in which the valve moves. Surrounding the valve seat member is a split metallic ring 12, whose diameter is substantially the same as the interior of the valve neck and which is loose upon the valve seat member when seated against the stopper body, as shown in dotted lines in Fig. 2. When the stopper is forced into the neck, the ring will be raised into engagement with the stopper. After the stopper has been placed in the neck, the ring will drop down on the large end of the conical valve seat member and any attempt to remove the stopper from the bottle neck will result in said valve member expanding the ring in the bottle neck which thus locks the stopper against outward movement. In practice, this type of stopper is preferably used in connection with bottles having their necks provided with straight inner walls or the bottle neck may have a slight inward bulge over which the ring will ride by slight contraction. Such a type of neck has been illustrated in the drawings at 13 and the inward bulge indicated at 14.

What is claimed is:—

1. In combination, a bottle neck having an interior bulge, a stopper having a reduced and tapered lower end smaller than the diameter of the neck at said bulge, and a split ring mounted upon the tapered portion and adapted to engage the side of the bulge and lock the stopper against removal.

2. In combination, a bottle neck having an interior annular bulge, a stopper body, a reduced valve member secured to the stopper body and having an outward taper, and a central passage, a split ring mounted upon said valve member and having a diameter less than the diameter of the bottle neck at the bulge, said ring adapted to seat against the under side of the bulge and lock the stopper against removal from the neck, and a valve for closing the central passage through the stopper member.

3. In a non-refillable bottle, the combination with a bottle neck, of a stopper body mounted therein, said body having bores or sockets extending inwardly from opposite ends, longitudinal channels in the body,

said channels having half of their diameter
extending into the bores, a valve supporting
member secured in one of the bores and
having a central liquid channel, a valve
5 seated on said member adapted to close the
channel, and means for locking the stopper
body in the neck.

In testimony whereof we affix our signatures in presence of two witnesses.

GROVER C. BENTINCK.

HENRY W. BENTINCK.

Witnesses:

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