No. 850,807. PATENTED APR. 16, 1907.

J. C. UHLEIN.

NON-REFILLABLE BOTTLE.

APPLICATION FILED SEPT. 7, 1906.

Fig. 1.

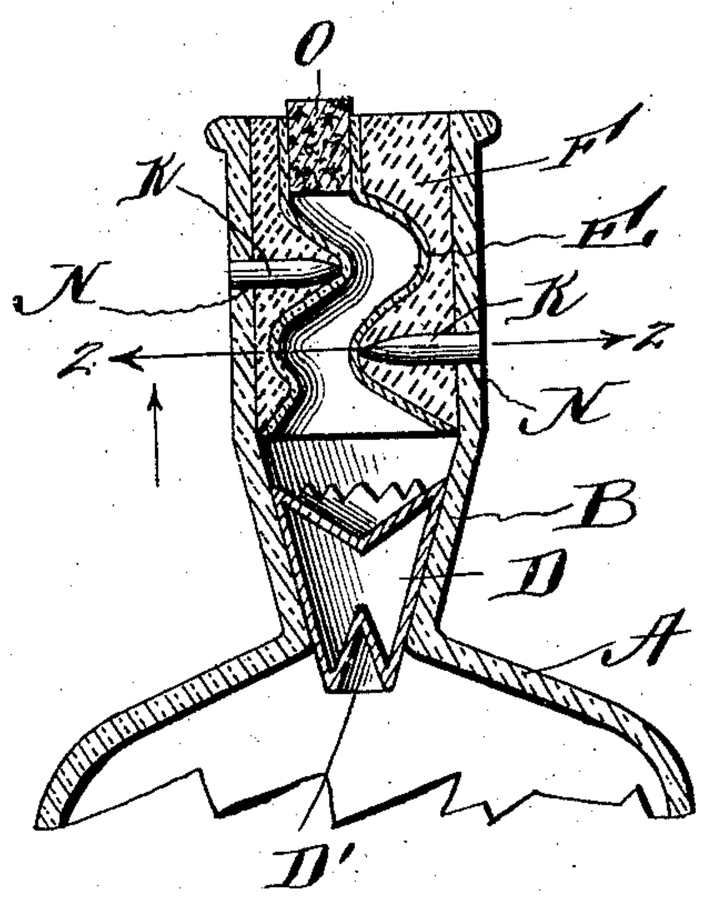


Fig. 2.

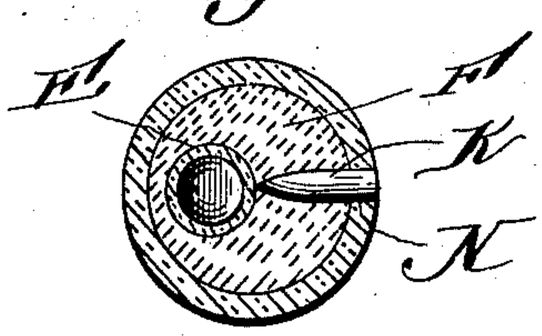
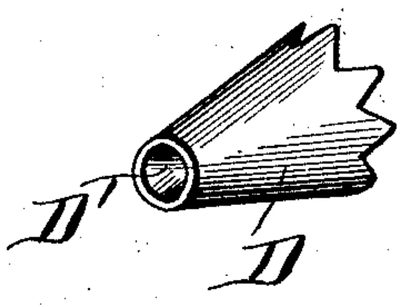


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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NON-REFILLABLE BOTTLE.

No. 850,807. Specification of Letters Patent. Patented April 16, 1907.

Application filed September 7, 1906. Serial No. 333,702.

To all whom it may concern:

Be it known that I, JOHN COPLEY UHLEIN, a citizen of the United States, residing at Watertown, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in non-refillable bottles; and the object in view is to produce a simple and efficient device of this nature comprising, essentially, a bottle having a neck with a contracted portion forming a valve-seat adapted to receive a conical-shaped valve, the lower end of which has a recess which is V-shaped in longitudinal section and provided to offer a considerable surface against which the liquid contained in the bottle may bear to cause the valve to unseat when the bottle is inverted.

The invention consists, further, in the provision of a non-refillable bottle having a tapering gravity-closing stopper and an irregular-outlined tube as a passage-way, whereby liquid may be poured from the bottle, but so constructed that access to the valve for the purpose of tampering therewith is prevented, and in the provision of a cement or composition filling in which the tube is embedded and which is held in place within the neck of the bottle by pins, which are inserted through apertures in the neck of the bottle and seated in the cement, in which they are securely held as the cement sets.

My invention comprises other details of construction and arrangements of parts, which will be hereinafter fully described, and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which—

Figure 1 is a vertical sectional view through the neck of a bottle and my improved stopper. Fig. 2 is a sectional view on line 2 2 of Fig. 1, and Fig. 3 is a perspective view of the valve.

Reference now being had to the details of the drawings by letter, A designates a bottle having a neck which has a tapering portion B, a portion of its length forming a seat for a conical-shaped valve D, a portion of said neck being of cylindrical outline from the tapering part to its upper end. Said valve D has a cone-shaped recess D′ formed in its lower end, the end of which stopper projects into the body portion of the bottle. Said recess is provided for the purpose of offering a larger surface to the liquid when the bottle is inverted in the act of dispensing a liquid from the bottle, the increased surface which has contact with the liquid serving to effectually unseat the valve as the bottle is turned in the act of pouring the liquid.

E designates a tube, preferably of glass, which is of irregular shape, as shown clearly in the sectional view of the drawings, and so constructed that when held within the neck it will be impossible for a person to see the valve by looking into the outer end of the tube or to insert a straight object down through the passage-way of the tube if it should be desired for any purpose to hold the valve unseated for the purpose of refilling the bottle. The inner end of said tube flares and is adapted to rest against the outer tapering portion of the neck, and when thus adjusted within the neck a cement filling F is inserted within the neck and about the tube, filling the space from the outer tapering portion of the neck to the end of the latter, thereby securely holding the tube in place after the cement has set.

Perforations N are formed in the neck of the bottle opposite the portions forming the bends in the tube, one above the other, and pins K are inserted one through each of said apertures and embedded in the cement before it sets, one of each pins being inserted in the cement, which fills the space intermediate the curved portions of the tube, so that when the pins are embedded within the cement their inner ends will come substantially in the longitudinal center of the neck and adjacent to the wall of the tube. A stopper O of any material is provided for closing the outer end of the tube, which when fastened within the neck is located at one side of the center of the neck.

In order to allow the liquid to run through the neck of the bottle and by the conical-shaped stopper, it will be noted that I have

made the enlarged end of the valve fluted, so that when the outer end of said valve comes in contact with the end of the flaring tube it will not cut off the exit of the liquid being dispensed.

From the foregoing it will be noted that by the provision of a non-refillable bottle made in accordance with my invention, means is provided whereby the liquid may readily flow from the bottle as the latter is turned toward a horizontal position or inverted, the weight of the liquid coming in contact with the increased surface of the valve occasioned by recessing the inner end thereof, causing the latter to slide upon the inclined surface of the neck as the bottle approaches a horizontal position, allowing the liquid to flow by the same and out through the tube, it being impossible to unseat the valve for the purpose of causing the bottle to be refilled, owing to the irregular-outlined tube, which will not permit of an instrument being inserted through the same to unseat the valve. As the valve is made of a comparatively light material, should an attempt be made to force liquid into the bottle while the same is inverted the valve will readily be forced to its seat, thus effectually preventing the refilling of the bottle in this manner. By the provision of the metallic pins, which are inserted through the holes in the neck in opposite directions and embedded in the cement filling, it will be observed that the tube will be securely held with its cement filling within the neck, thereby making it impossible to refill the bottle unless the neck of the bottle is severed, thereby destroying the value of the latter.

What I claim is—

1. A non-refillable bottle having a neck with a tapering valve-seat, a valve, and an irregular-outlined tube held within the neck and its inner end bearing against the outer tapering portion of the valve-seat, as set forth.

2. A non-refillable bottle having a neck with a tapering valve-seat, a valve, an irregular-outlined tube, the inner end of which is flaring and adapted to bear against the outer bearing portion of the valve-seat, and means for holding said tube within the neck of the bottle, as set forth.

3. A non-refillable bottle having a neck with a tapering valve-seat, a valve, an irregular-outlined tube, an inner end of which is flaring and adapted to bear against the outer bearing portion of the valve-seat, and a cement filling within the neck of the bottle and about said irregular-outlined tube, as set forth.

4. A non-refillable bottle having an apertured neck with a tapering valve-seat, a valve, an irregular-outlined tube, the inner end of which is flaring and adapted to bear against the outer bearing portion of the valve-seat, a cement filling within the neck of the bottle and about said irregular-outlined tube, and fastening means extending through the apertures in the neck and embedded in said cement filling, as set forth.

5. A non-refillable bottle having an apertured neck with a tapering portion forming a valve-seat, a conical-shaped valve, an undulating tube, the inner end of which is flaring and adapted to bear against the outer tapering portion of the valve-seat, a cement filling intermediate the tube and the neck of the bottle, pins extending through apertures in the neck of the bottle and seated in the cement filling within the latter, as set forth.

6. A non-refillable bottle having an apertured neck with a tapering portion forming a valve-seat, a valve, and the outer part of the neck of cylindrical outline and provided with apertures, a tube having a compound curve therein, the inner end of the tube flaring and bearing against the outer tapering part of the neck, a cement filling intermediate the tube and cylindrical portion of the neck, and pins inserted through said apertures in opposite directions and each embedded in the cement intermediate the curves of the tube, as set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

JOHN COPLEY UHLEIN.

Witnesses:

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