

B. B. MOSS.
NON-REFILLABLE BOTTLE.
APPLICATION FILED DEC. 11, 1905.

Fig. 1.

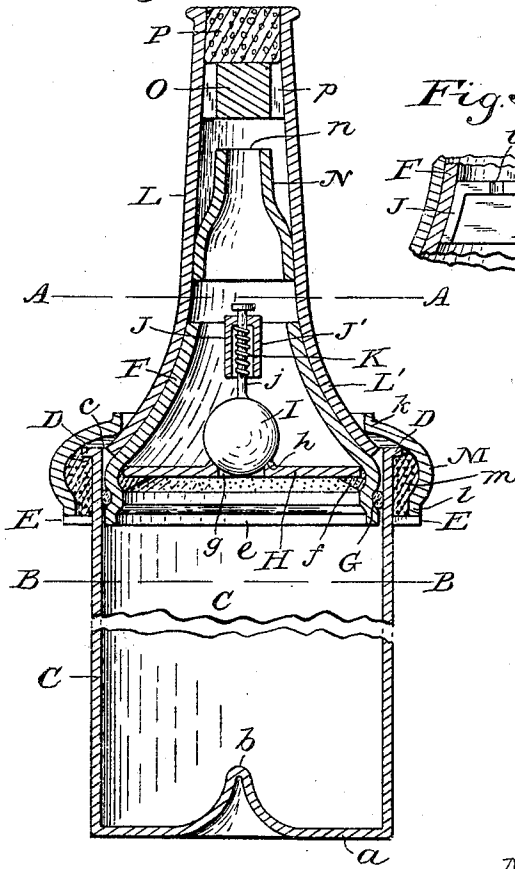


Fig. 2.

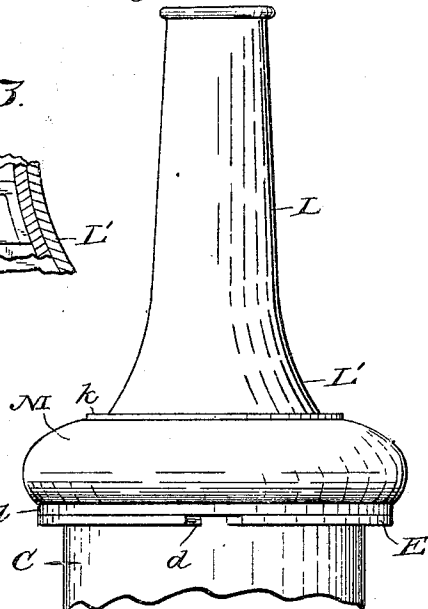


Fig. 3.

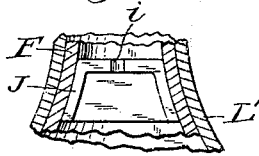


Fig. 4.

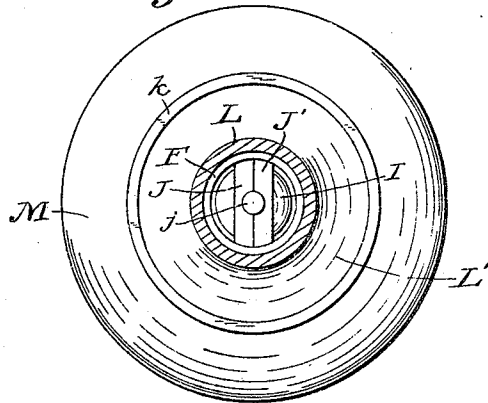


Fig. 5.

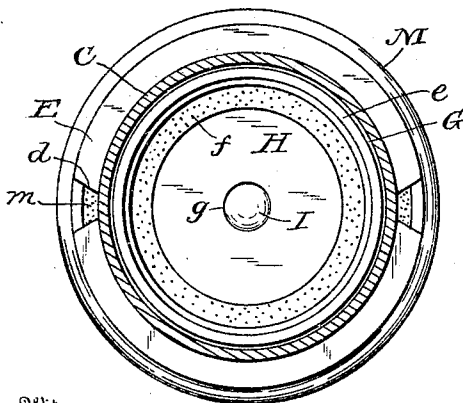
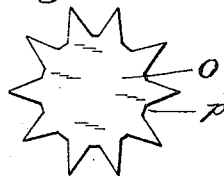


Fig. 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

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NON-REFILLABLE BOTTLE.

No. 828,675.

Specification of Letters Patent.

Patented Aug. 14, 1906.

Application filed December 11, 1905. Serial No. 291,247.

To all whom it may concern:

Be it known that I, BERTIE B. MOSS, a citizen of the United States, residing at Salem, in the county of Washington and State of Indiana, have invented 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, 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 bottles of the class that are designed to be proof against refilling and marketing with liquids that may be spurious or inferior to the original contents of the bottles, the invention having particular reference to bottles of this character that cannot be used as bottles after having been emptied of their contents.

Objects of the invention are to provide bottles that cannot be refilled by any means after the original contents thereof have been removed therefrom, to provide non-refillable bottles that may be emptied readily without requiring the fracturing or breaking of the bottles, and to provide bottles from which liquids may be taken in small quantities without admitting considerable quantities of air into the bottles, which might affect the quality of the liquid remaining in the bottles.

With the above-mentioned and minor objects in view the invention consists in a bottle having a top that is movable to the bottom of the body of the bottle and a neck that is also movable in the body for moving the top, the neck being returnable without returning the top; and the invention consists, further, in the novel construction, in the novel parts, and in the combinations and arrangements of parts, as hereinafter particularly described, and pointed out in the appended claims.

Referring to the drawings, Figure 1 represents a vertical central sectional view of a bottle constructed in accordance with the invention, the middle portion of the body of the bottle being broken away; Fig. 2, a fragmentary side elevation showing the upper portions of the bottle; Fig. 3, a fragmentary vertical sectional view showing parts appearing in Fig. 1 at right angles to the plane of that figure; Fig. 4, a horizontal view on the line A A in Fig. 1; Fig. 5, a horizontal sectional view on the line B B in Fig. 1 looking up-

wardly, and Fig. 6 a top plan of the obstructing-plug that is used in the neck of the bottle.

Similar reference characters in the different figures of the drawings designate like elements or features.

In a practical embodiment of the invention the improved bottle comprises a body having a circular straight side C and a bottom *a*, that has a central inwardly-extending projection *b*. The body has an open top *c*, about which is an integral annular flange D. Below the flange D a flange E is attached integrally to the side C and has one or more notches *d* therein. A top F is provided that has a flaring bell shape, its larger lower end *e* fitting loosely in the body of the bottle, the upper end of the top being of less diameter than the bottom, and a rubber or other suitable packing-ring G is interposed between the side C and the bottom *e* of the top. A disk H is seated in the lower portion of the top G and is secured thereto tightly by means of cement *f*, the disk having a central opening *g* and an annular valve-seat *h*, on which a valve I is normally seated to close the opening. The top, as will be seen, may move in the body of the bottle as a piston in a cylinder. A bridge is seated in the upper part of the top F and comprises two parts J and J', each having a guideway *i*, and the valve I has a stem *j* extending between the two parts of the bridge and guided movably by the guideways, there being a spring K seated against the bridge and normally holding the valve I to its seat *h*.

After the top F is inserted in the body of the bottle a neck L, having a flaring bell-shape bottom L', is placed upon the top and prevented from being removed from the body of the bottle by means of a collar M, having a relatively small top *k* to engage the bottom L' of the neck, the collar extending over the flange D to the flange E, with the lower and larger end *l* of the collar resting on the flange. Cement *m* is introduced through the notch or notches *d* while the bottle is inverted, so as to cement the collar M to the top of the body of the bottle.

The neck L is tapering, being smallest at its top, and before being permanently connected by the flange M to the bottle-body an annular throat-piece N is secured in the neck L and has a relatively small opening *n* in its top. An obstructing-plug O is secured also in the neck L slightly above the throat-piece N,

and it has grooves p in its periphery. A stopper P, of cork or other material, is placed in the orifice of the neck upon the plug O after the bottle may have been filled.

5 In order to fill the bottle, the liquid that it is to contain may be placed in the body of the bottle before the top F is applied to the body, or if the top be first applied the valve I may be held open while the liquid can be poured
10 into the top at either side of the bridge therein. After the liquid is in the bottle-body the neck is to be placed upon the top F, and then the collar M should be applied and sealed, the stopper P being also applied. In order to
15 withdraw the liquid from the bottle, the stopper should be removed from the neck. Then the bottle may be inverted or held horizontally, and if the neck be forced toward the bottom of the bottle the top F will move with
20 the neck, and the compressed liquid will cause the valve I to open, so that the liquid may flow through the opening g , thence out of the top F at either side of the bridge into the neck L and through the opening n of the throat-piece, thence out of the neck through
25 the grooves p of the plug O. When the top F arrives close to bottom a , the valve I will be pushed and held open by contact with the projection b of the bottom a , so that the liquid may be entirely drained out of the bottle.
30 The neck of the bottle may be retracted to its original position; but the top F must remain at the bottom of the bottle, so that it will be impossible to refill the bottle and retain liquid therein, as will be apparent.

35 Having thus described the invention, what is claimed as new is—

1. A non-refillable bottle comprising a body, a top movable in the body and having
40 packing in contact with the side of the body, a valve seated in the top, a neck connected detachably to the top and movable therewith into the body, and means attached to the top of the body preventing the withdrawal of the
45 neck from the body.

2. A non-refillable bottle comprising a

body provided with a movable top having an opening therein and a bridge opposite to the opening, a valve spring-pressed between the bridge and the opening normally closing the
50 opening, a collar attached to the body, a neck having a flared bottom interposed between the movable top and the collar, the neck having a tortuous passage therethrough and being separable from the movable top.

55 3. A non-refillable bottle comprising a circular straight body having an external annular flange at the upper end thereof, a collar extending over the flange and partially over the adjacent end of the body, a top movable
60 in the body and packed thereto, cement securing the collar to the annular flange, a disk attached to the top and having an opening therein, a valve normally closing the opening, a bridge in the top, a spring engaging the
65 bridge and normally holding the valve on the disk, a neck having a flaring bottom movable between the top and the collar, an annular throat-piece in the neck, and an obstructing-plug in the neck opposite the throat-piece
70 and having grooves in its periphery adjacent to the wall of the neck.

4. A non-refillable bottle comprising a body having a collar attached to the exterior thereof, a top and a neck detachably connect-
75 ed together and movable in the body between the top of the collar and the bottom of the body, a packing between the top and the body, an apertured disk forming a part of the top and provided with a spring-pressed valve
80 at the aperture thereof, a throat-piece secured in the neck, and an obstructing-plug also secured in the neck opposite to the throat-piece and having grooves in the periphery thereof.

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

BERTIE B. MOSS.

Witnesses:

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FRANK P. CANBEE.