

C. HECKER.
NON-REFILLABLE BOTTLE.
APPLICATION FILED MAY 2, 1910.

987,298.

Patented Mar. 21, 1911.

Fig. 1.

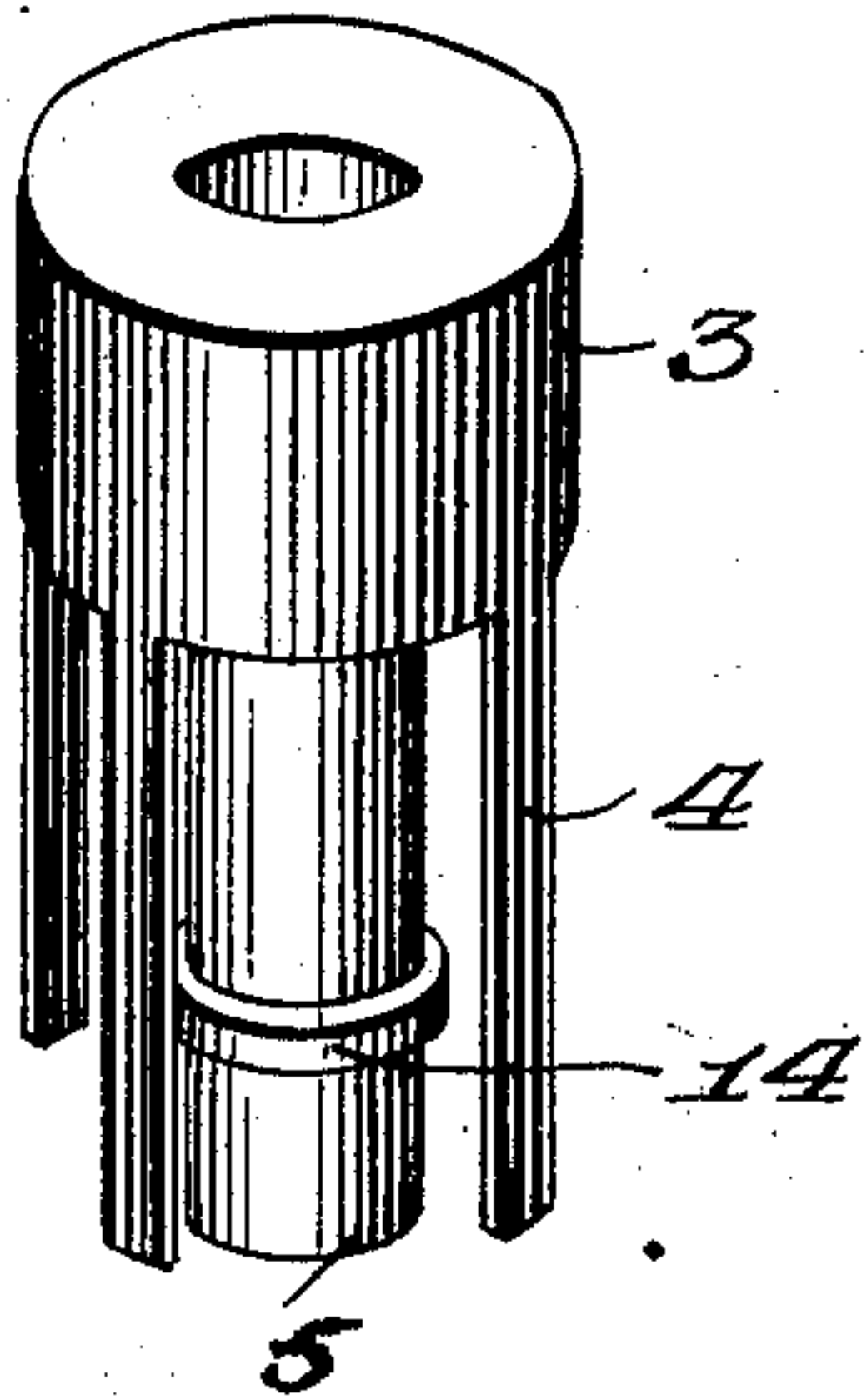


Fig. 2.

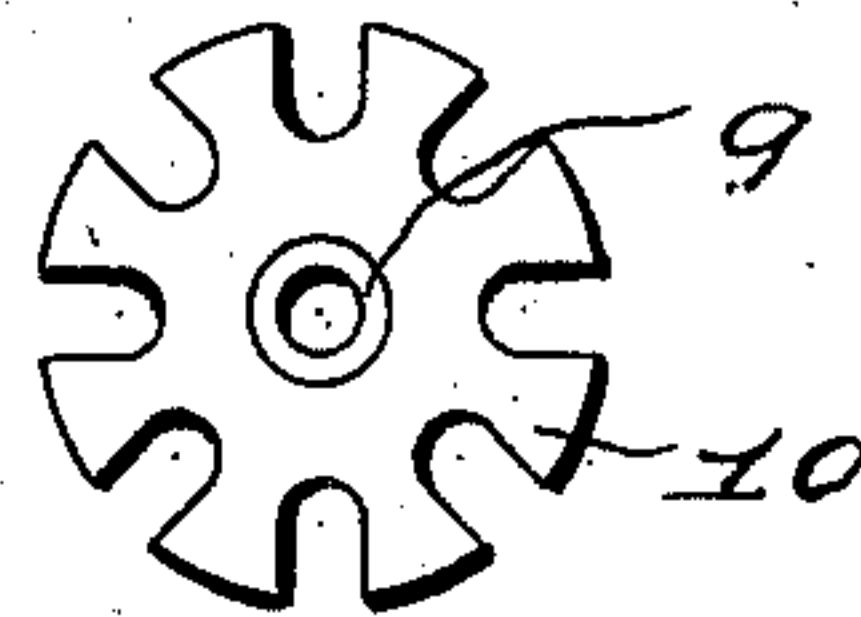
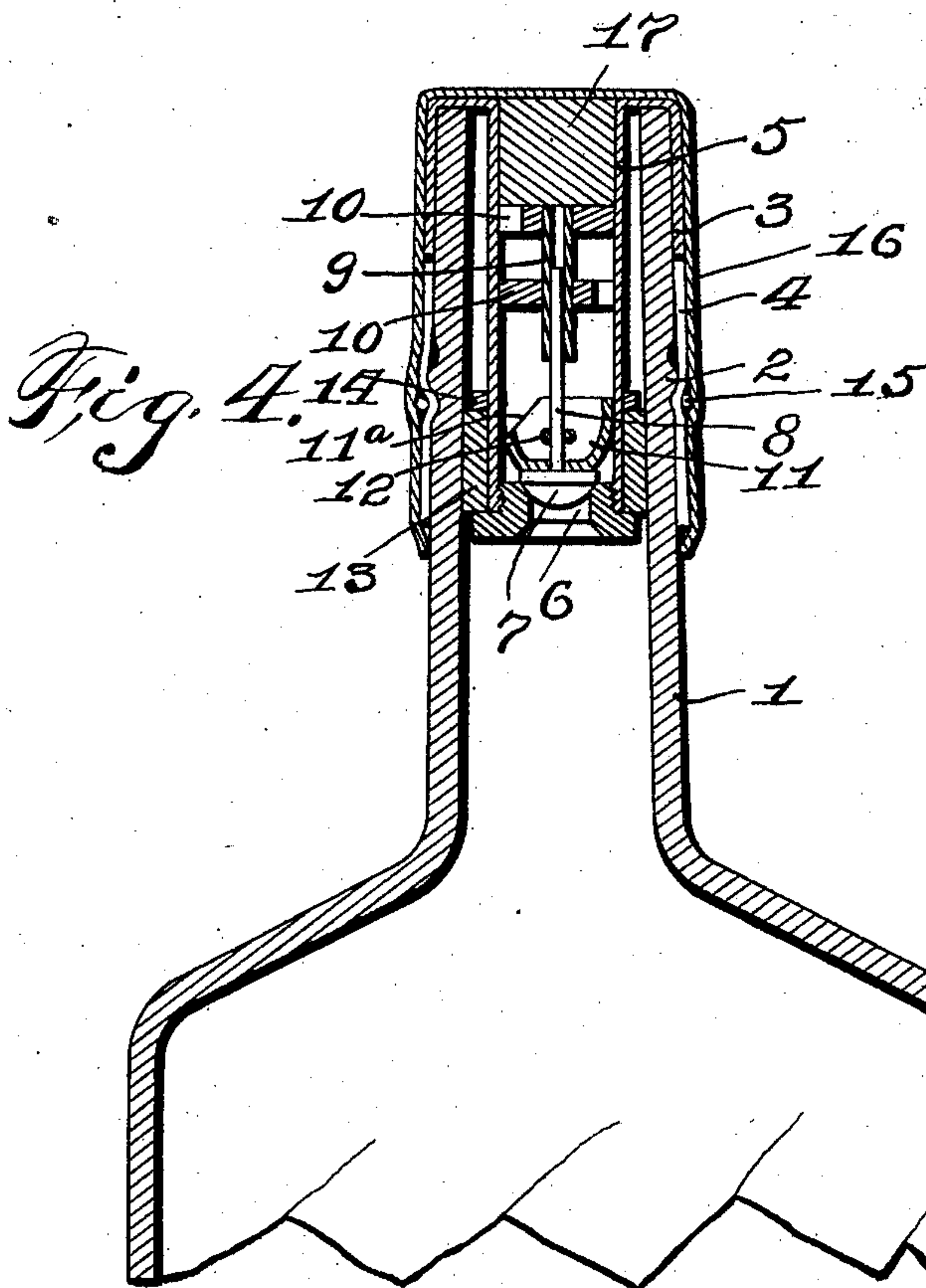
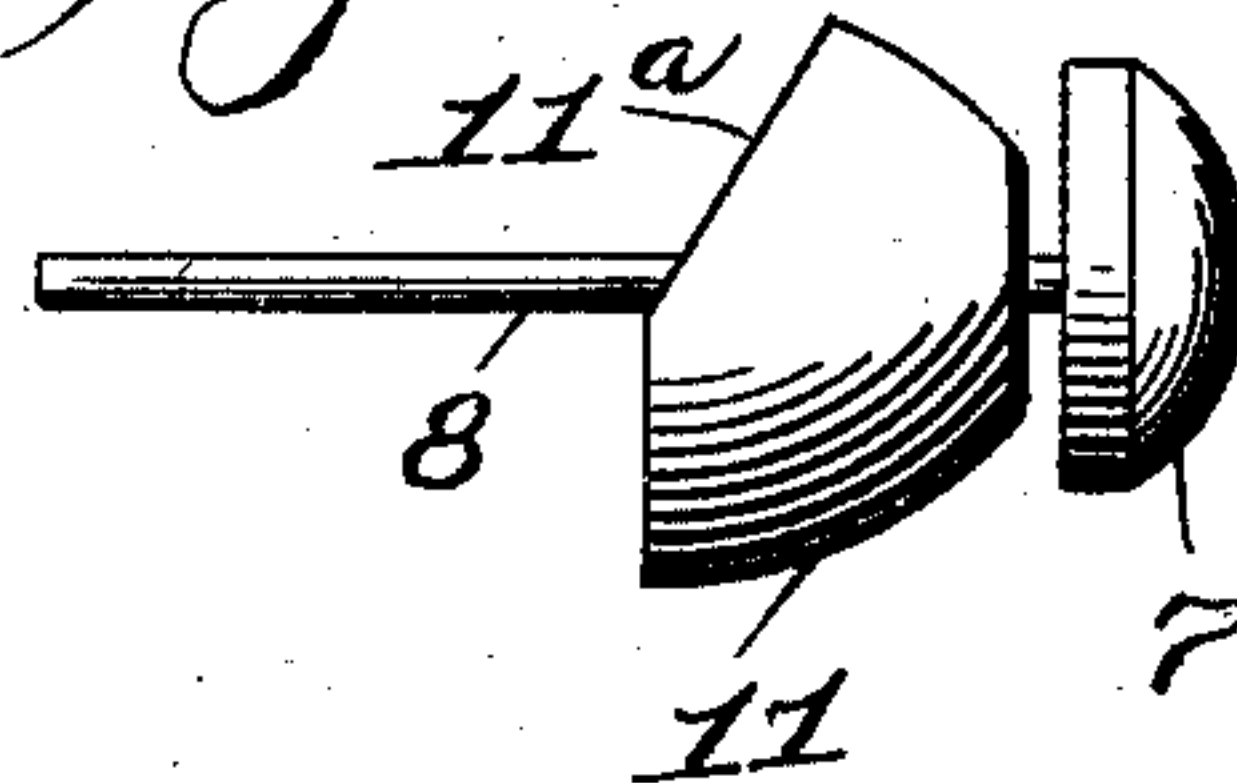


Fig. 3.



Attest:
N. G. Butler
E. L. Wallace.

Inventor
Christian Hecker
By Higdon Bingham Attys.

UNITED STATES PATENT OFFICE

CHRISTIAN HECKER, OF ST. LOUIS, MISSOURI.

NON-REFILLABLE BOTTLE.

987,298.

Specification of Letters Patent.

Patented Mar. 21, 1911.

Application filed May 2, 1910. Serial No. 558,859.

To all whom it may concern:

Be it known that I, CHRISTIAN HECKER, a resident of St. Louis, Missouri, have invented certain new and useful Improve-
5 ments in Non-Refillable Bottles, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

10 My invention relates to improvements in non-refillable bottles, the primary object of my invention being to construct a simple means for prevention of the unlawful re-
15 filling of bottles with liquids without de- tection.

For the above purpose my invention con- sists in certain novel features of construc-
20 tion and arrangement of parts as will be hereinafter more fully described, pointed out in the claims and illustrated by the ac-
companying drawing, in which:

Figure 1 is a perspective of the cap proper with its integral straps and the tube carried by the cap; Fig. 2 is an enlarged
25 plan of one of the members for holding the valve stem guide; Fig. 3 is an enlarged ele- vation of the valve and stem and the cup- shaped member carried by the stem; and
30 Fig. 4 is a vertical, sectional elevation of a portion of a bottle with my invention ap-
plied thereto.

Referring by numerals to the accompany- ing drawing: 1 designates the neck of an
35 ordinary bottle provided with the usual bead 2.

3 designates the cap which fits over the mouth and down the sides a short distance of the bottle neck.

4 designates integral straps extending
40 downwardly over the sides of the neck of the bottle to a point below the bead 2.

5 designates a tube carried by the cap and preferably formed integral therewith, which is inserted in the neck of the bottle. The
45 lower end of the tube 5 is internally thread- ed to receive and hold the valve seat 6.

7 designates the valve proper and 8 the stem thereof.

9 designates a tubular valve stem guide
50 which is held in place by disks 10, each of which is provided with notches in its pe- riphery. The disks 10 embrace the tubular guide 9 and are spaced some slight distance apart and when fixed in position the notches
55 are arranged so that they will not register or be in vertical alinement relative to each

other, thus serving to prevent the insertion of a probe or the like for purposes of tam-
pering with the valve.

11 designates a cup-shaped member hav- 60 ing a cut away portion 11^a, which member embraces the stem 8 and is of less size dia-
metrically than the internal diameter of the tube 5 so that liquids may freely pass
65 through the tube around it.

12 designates a boss arranged on the stem 8 to limit the movement of the cup.

As shown in Fig. 4, the parts when all assembled are placed over and in the neck
70 of the bottle, leakage between the tube and the neck of the bottle being prevented by a gasket 13 which is prevented against move-
ment lengthwise of the tube by the ring 14 and valve seat 6. For securing the cap and
75 tube in place upon the bottle a bond wire 15 is employed, the bond wire being wrapped
about each of the straps and drawn up until the straps are crimped to conform with the
80 bead 2, thus it is obvious that the device can not be removed from the bottle without
loosening or taking off the bond wire.

All of the parts of the device outside of the neck of the bottle including the bond
85 wire are covered by an ordinary capsule such as 16, which must be broken or de-
teriorated to expose the bond wire if it be de- sired to remove the device from the bottle.
If the bottle contains a liquid which is
90 "bottled in bond" the bonding stamp (not shown) may also be wrapped about the cap-
sule over the bonding wire or the revenue stamp may be placed about the capsule over
95 the bonding wire, thereby making it neces- sary to destroy the stamp as well as the
whole capsule in order to remove the bond- ing wire previous to the withdrawal of the
device from the bottle.

The disks 10 occupy a position somewhat removed from the mouth of the tube 5 there-
100 by leaving a space for the reception of a cork 17, the cork 17 and gasket 13 completely
sealing the contents of the bottle.

By the provision of the weighted valve it is obvious that when the bottle is tilted for
105 pouring the contents of the bottle, the valve falls by gravity away from the seat thereby
permitting the contents to flow readily through the bottle. It is further obvious
that when the bottle is in a normal or verti- cal position that the valve will seat itself
110 to close the bottle.

By the provision of the cup-shaped mem-

ber it is obvious that when an attempt is made to force liquids into the bottle the liquids will first come in contact with the cup which will be moved by the action of the liquids to close and hold closed the valve. For the reason that the cup is heavier on one side and is free to move about the stem, it is obvious that the heavier side of the cup will always be at the bottom, hence if an attempt is made to fill the bottle with liquid not under pressure and in a quantity not sufficient to wholly fill the tube the cup will always be in a position to be acted upon by the liquid being introduced to the bottle.

I claim:

1. In combination with a bottle, an open topped tube inserted in the neck of the bottle, means for holding the tube within the neck of the bottle, a valve seat carried by said tube, a valve coacting with said seat, gravity held in a closed position, a stem on said valve, a cup-shaped member embracing the stem and operating within the tube for seating the valve by the action of a liquid

introduced into the tube and means to prevent the insertion of a probe within the tube.

2. In a non-refillable bottle, the combination with a bottle of an open topped tube inserted in the neck of said bottle, means for retaining the tube within the neck, a valve seat carried by the tube, a gravity actuated valve coacting with said valve seat, a stem on said valve, a cup-shaped member embracing said stem, the cup-shaped member being heavier on one side in order to be acted upon by a liquid introduced in the top of the tube in quantities of less size than the tube, a guide for the valve stem, and notched disks for supporting said guide, the notches of which are arranged to permit the flow of a liquid and prevent insertion of a probe.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

CHRISTIAN HECKER.

Witnesses:

E. L. WALLACE,
N. G. BUTLER.

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