

C. R. STITT.
NON-REFILLABLE BOTTLE.
APPLICATION FILED APR. 10, 1912.

1,048,225.

Patented Dec. 24, 1912.

Fig. 1

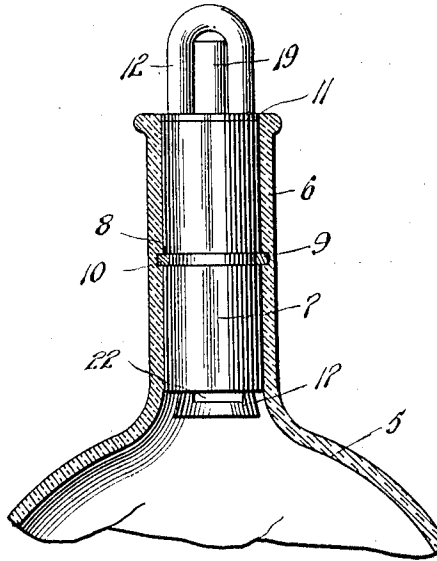


Fig. 2

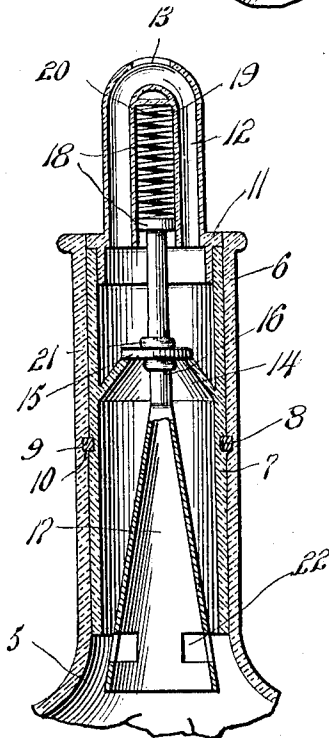


Fig. 3

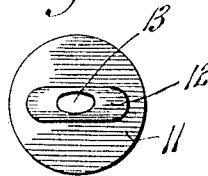
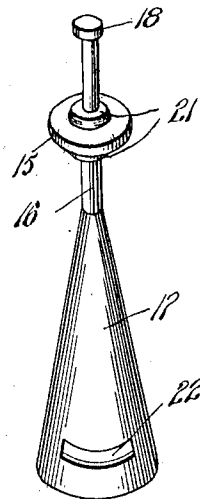


Fig. 4



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NON-REFILLABLE BOTTLE.

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To all whom it may concern:

Be it known that I, CURTIS R. STITT, a citizen of the United States, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

The invention relates to bottles, and more particularly to the class of non-refillable bottles.

The primary object of the invention is the provision of a bottle, in which the contents thereof will cause the opening of a valve on inverting the bottle, so that said contents can be discharged therefrom, but it will be impossible to replenish the bottle when once emptied.

Another object of the invention is the provision of a bottle of this character, wherein there is arranged in the neck thereof a valve which is held to its seat by means of a spring, so that fluid cannot be introduced into the bottle, but the original contents therein will effect the unseating of the valve against the resistance of the spring to permit the egress of the contents from the bottle.

A further object of the invention is the provision of a bottle of this character in which the valve cannot be tampered with, for the unseating thereof when closed, thus preventing the refilling of the bottle.

A still further object of the invention is the provision of a bottle which is simple in construction, thoroughly reliable and efficient in operation, and inexpensive in manufacture.

With these and other objects in view, the invention consists in the construction, combination and arrangement of parts, as will be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claim hereunto appended.

In the drawings: Figure 1 is a side elevation of a bottle constructed in accordance with the invention. Fig. 2 is a fragmentary vertical sectional view thereof. Fig. 3 is a top plan view. Fig. 4 is a perspective view of the displaceable element carrying the valve.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

Referring to the drawings by numerals, the bottle comprises a body 5 having the

usual neck 6, and is preferably constructed from glass in the ordinary well-known manner. To render the bottle non-refillable, there is arranged in the neck 6 thereof an attachment or device which comprises a tubular casing or shell 7, the inner end of which is open to communicate with the body, and the casing or shell is inserted within the neck of the bottle and suitably fastened therein, although in this instance, the casing or shell is provided with an annular groove 8 in its exterior surface, in which is received a split ring 9, the same being also adapted for engagement in an annular groove 10 formed in the inner wall of the neck 6, so that the said casing or shell will be locked fast in the bottle neck.

Closing the outer open end of the shell or casing is a cap 11, the same being cemented or otherwise secured thereto, and is preferably formed from glass, and likewise is the casing or shell. Integral with and rising from the cap 11 is an arcuate-shaped discharge tube 12, the ends of which open into the shell or casing 7, and at a medial point thereof is formed an opening 13 which permits the contents of the bottle to be poured therefrom on inverting the same. Formed in the shell or casing 7, intermediate the ends thereof, is a valve seat 14, with which is adapted to engage a resilient disk-like valve 15, the latter carried upon a displaceable element, presently described.

The displaceable element comprises a stem 16 formed at one end with a hollow cone 17, while at its opposite end is formed a head 18, the latter working within a barrel 19 formed on and projecting outwardly from the cap 11 within the arcuate-shaped tube 12 between the ends thereof, the outer end of the barrel being closed, and in the same is disposed a coiled expansion spring 20 which works against the head 18 of the stem 16, so as to normally sustain the valve 15 closed and engaged with the seat 14, the valve 15 being held upon the stem by means of retaining ring 21 extending around the stem in spaced relation to each other. The cone 17 forms a cup to receive a quantity of the liquid contained in the body 5, when inverted, so as to overcome the resistance of the spring 20 for the unseating of the valve 15 from the seat 14 in the casing or shell, the cone 17, at diametrically opposite points, being formed with elongated slots 22 which

permit the liquid in the bottle body to freely flow from the same through the shell or casing 7, tube 12 and be discharged through the opening 13 from the latter.

5 The stem 16, cone 17, and head 18 are preferably constructed from glass, and likewise the barrel 19. When the bottle is brought to normal upright position, the contents will gravitate into the body 5 of the
10 bottle, and the portion of the liquid contained in the cone 17 will discharge therefrom into said body. Thus, the spring will become active, so as to move the valve 15 to closed position for engagement with the seat
15 14 within the casing or shell 7, thereby preventing the introduction of fluid into the bottle, as will be clearly obvious.

From the foregoing, taken in connection with the accompanying drawings, it is
20 thought that the construction and operation of the invention will be readily understood,

without requiring a more extended explanation.

What is claimed is:

In a non-refillable bottle, a shell held fast 25 in its neck and having a valve seat, a displaceable valve element normally engaging said seat and having a hollow cone-shaped inner end adapted to receive liquid to move said element in one direction for the opening 30 of the valve, means for sustaining the valve normally seated, means closing the outer end of the shell to prevent access to the valve, and an arcuate-shaped tube rising from said means and communicating with the shell 35 and having a medial discharge perforation.

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

CURTIS R. STITT.

Witnesses:

WILBUR J. TAYLOR,
WM. LIETZ.

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