No. 788,644. PATENTED MAY 2, 1905.

J. G. HAYES.

NON-REFILLABLE BOTTLE.

APPLICATION FILED JULY 9, 1904.

Fig. 1.

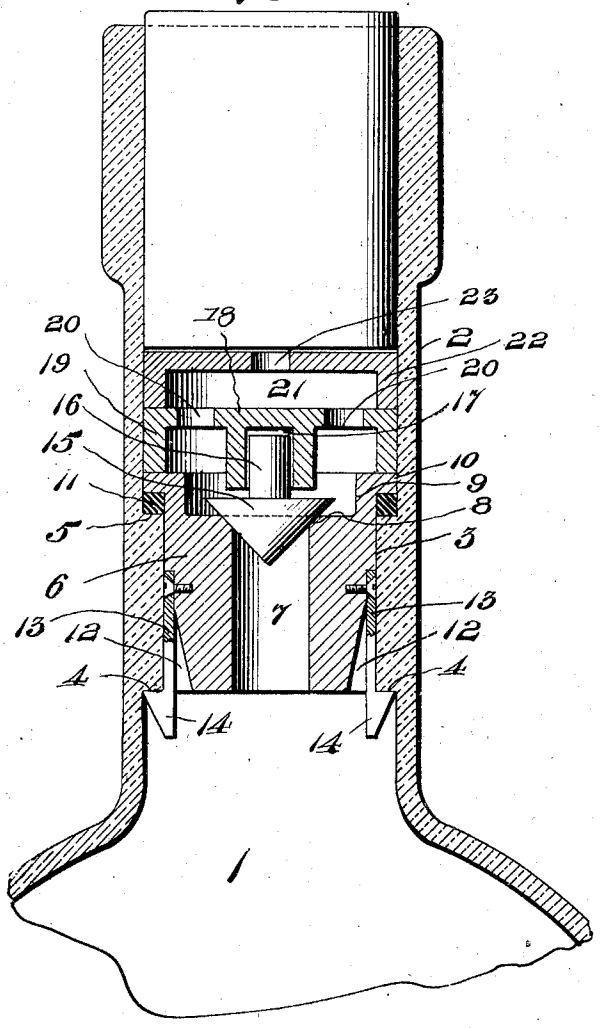
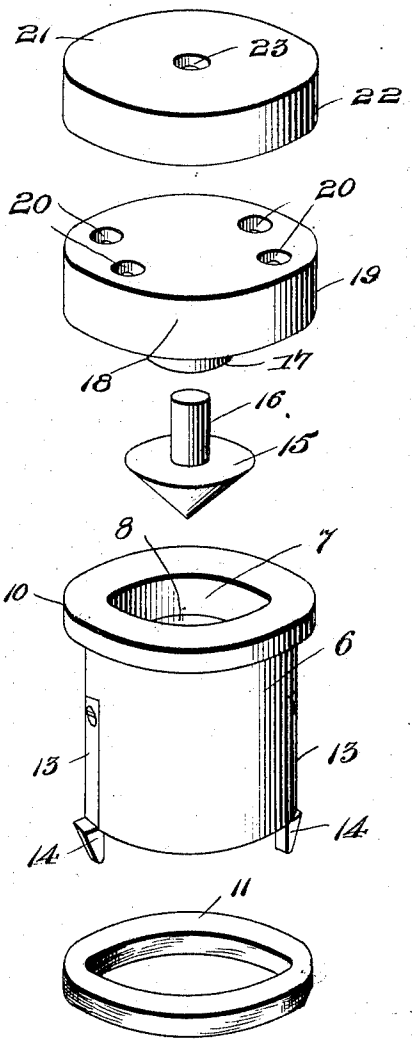


Fig. 2.



Witnesses

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No. 788,644. Patented May 2, 1905.

UNITED STATES PATENT OFFICE.

JOHN GRAVES HAYES, OF ARGENTA, ARKANSAS.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 788,644, dated May 2, 1905.

Application filed July 9, 1904. Serial No. 215,962.

To all whom it may concern:

Be it known that I, JOHN GRAVES HAYES, a citizen of the United States, residing at Argenta, in the county of Pulaski and State of Arkansas, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

This invention relates to non-refillable bottles, and has for its object to produce a comparatively simple inexpensive device of this character which after being once filled and sealed will permit the discharge of the liquid from, but prevent introduction of liquid to, the bottle, thereby effectually obviating the fraudulent substitution of an inferior grade of goods for that originally contained by the bottle.

To these ends the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a vertical longitudinal section through the upper portion of a bottle embodying my invention. Fig. 2 is a detail perspective view of the valve and its attendant parts disassembled.

Referring to the drawings, 1 designates a bottle, and 2 its neck, these parts being of the usual or any appropriate construction and material, except that the neck has formed or otherwise provided therein an internal marginal projection or rib 3, presenting at its lower edge a stop shoulder or abutment 4 and at its upper edge a bearing ledge or seat 5.

Disposed in the neck 2 and within the central opening through the enlargement 3 is a tubular shell or casing 6, provided with a central discharge-opening 7, terminating at its upper end in a valve-seat 8, there being formed upon the upper end of the shell an extension 9, terminating at its upper end in an outturned marginal flange 10, designed to bear upon a rubber or other packing gasket 11, which in turn rests upon the ledge or seat 5, while upon the outer face of the shell 6 there is formed at diametrically opposite points a pair of recesses 12, designed for the reception of spring engaging members 13, detachably secured in place by means of screws or other appropriate fastening devices and having at their lower ends engaging heads 14, adapted in practice to swing into engagement with the stop-shoulder 4 for maintaining the shell in position within the neck, attention being directed to the fact that the rear walls of the recesses 12 are suitably inclined to permit play of the springs.

Arranged for normally closing the discharge-opening 7 and resting upon the seat 8 is a conical valve 15, having a central upwardly-projecting stem or guide 16, adapted to enter and have longitudinal movement within a tubular socket or guideway 17, depending centrally from a primary cap or shield 18, which in practice is seated within the neck over the casing 6 and has a marginal depending flange 19, bearing at its lower edge upon the flanged extension of the casing, there being formed through the shield a series of openings 20, constituting discharge-passages for the liquid from the bottle.

Seated upon the cap 18 is an auxiliary cap or shield 21, having a depending marginal flange 22, the lower edge of which rests upon the upper face of the cap 18 and a central opening or passage 23 for the liquid, attention being here directed to the fact that the shields 18 and 21 are in practice permanently secured in position by means of cement or its equivalent applied to the lower edges of their marginal flanges 19 and 22 and, further, that the openings 20 and 23 are in staggered or non-registering relation, thereby obviating the introduction of a wire or other instrument for tampering with the valve.

In practice, the bottle having been filled with liquid, the gasket 11 is placed in position and the shell or casing 6 inserted and forced downward until the heads of the springs 13 snap into engagement with the shoulder 4 and the valve and shields are placed in position, as will be readily understood, the latter being permanently secured in the manner above explained. The bottle is now ready for use, and its contents may be discharged as desired, the valve moving for the purpose, it being apparent, however, that the valve will effectually prevent the introduction of liquid to the bottle.

From the foregoing it will be seen that I produce a comparatively simple inexpensive

device which in practice will efficiently perform its functions, it being understood, however, that in attaining these ends minor changes in the details herein set forth may be resorted to without departing from the spirit of the invention.

Having thus described the invention, what is claimed is—

1. A bottle having an internal marginal ledge provided in its neck, a tubular casing disposed in the neck and having an outturned flange resting upon the ledge, a valve-seat formed in the upper end of the casing, a valve resting upon the seat and provided with an upwardly-projecting stem, a cap disposed above the valve and provided with a depending socket adapted to receive the valve-stem, and a shield arranged within the neck of the bottle and provided with a marginal depending flange designed to rest at its lower edge upon said cap.

2. A bottle having an internal marginal rib provided in its neck to present an upper ledge and a lower shoulder, a tubular casing having an outturned flange to seat above the ledge and a pair of longitudinally-disposed recesses provided with downwardly and inwardly inclined rear walls, engaging springs arranged in the recesses and having heads for engagement with the lower shoulder, a valve provided with an upwardly-projecting stem seated at the upper end of the tubular casing, a cap provided with a centrally-disposed depending socket for the reception of the valve-stem, and a shield arranged above the cap and having a depending marginal flange designed to rest at its lower edge upon said cap.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN GRAVES HAYES.

Witnesses:
L. W. BOWLS,
M. WOODS.