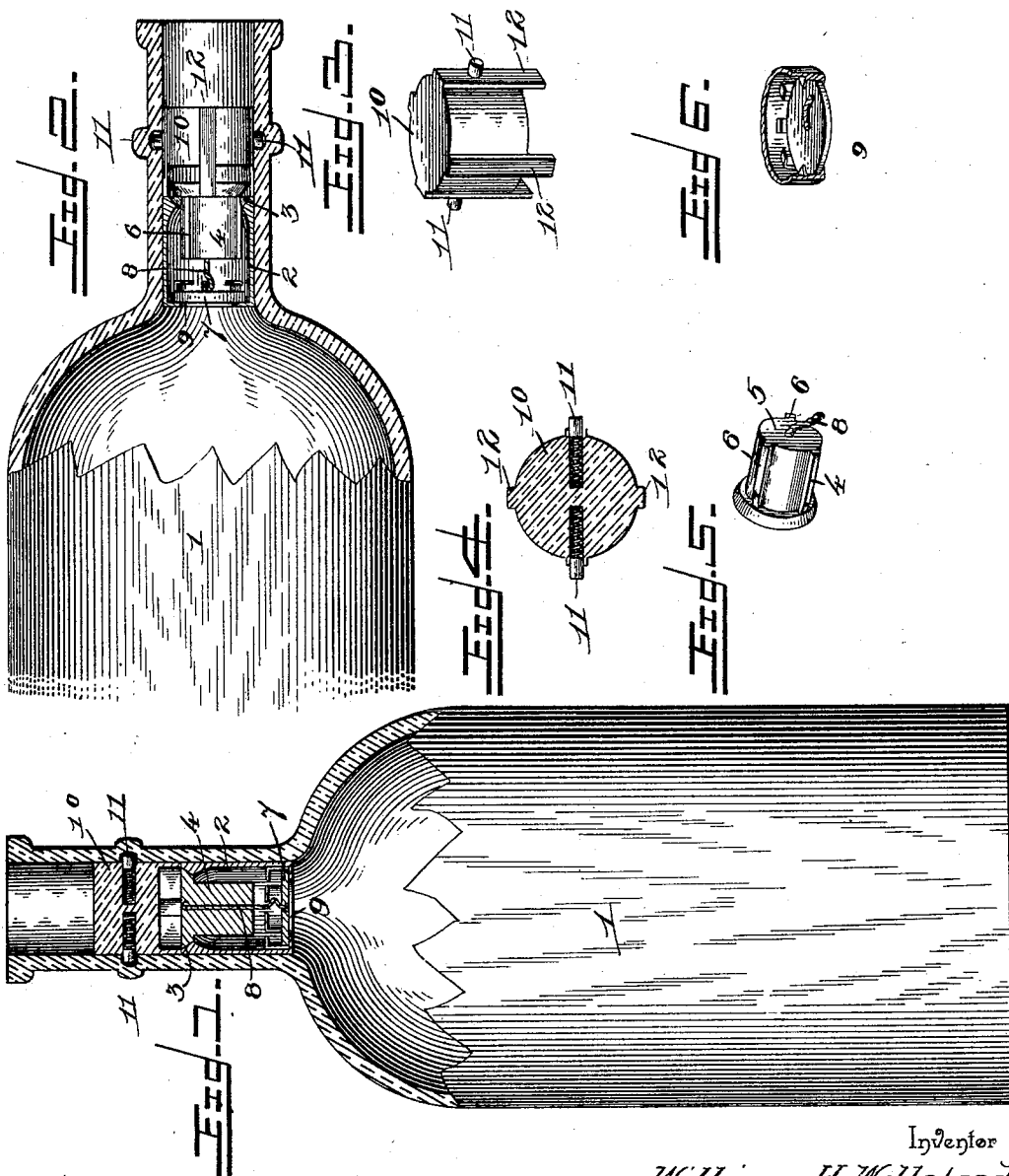


W. H. WELLSTEED.
NON-REFILLABLE BOTTLE.

Patented June 22, 1897.



Inventor

William H. Wellsted.

By *his* Attorneys,

Witnesses
W. J. Ladd
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UNITED STATES PATENT OFFICE.

WILLIAM H. WELLSTEED, OF BRAMPTON, MICHIGAN.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 585,143, dated June 22, 1897.

Application filed August 31, 1896. Serial No. 604,495. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WELLSTEED, a citizen of the United States, residing at Brampton, in the county of Delta and State of Michigan, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

The invention relates to improvements in non-refillable bottles.

The object of the present invention is to improve the construction of non-refillable bottles, and to provide a simple and comparatively inexpensive one, adapted to permit its contents to be readily decanted, capable of effectually preventing the introduction of a liquid when the bottle is in an upright position, and adapted also to prevent the introduction of a liquid into the bottle when the latter is in a horizontal position, so that the bottle cannot be floated in such a position in a receptacle and partially or completely refilled.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a side elevation, partly in section, of a non-refillable bottle constructed in accordance with this invention. Fig. 2 is a similar view illustrating the position of the parts when the bottle is in a horizontal position. Fig. 3 is a detail perspective view of the shield. Fig. 4 is a horizontal sectional view of the shield, illustrating the manner of locking the same in the neck of the bottle. Fig. 5 is a detail perspective view of the upper or main valve. Fig. 6 is a similar view of the lower or auxiliary valve.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a bottle adapted to receive an ordinary cork in the upper portion of its neck and having a cylindrical casing 2, arranged in the lower portion of its neck. The cylindrical casing 2 is provided at its upper end with a beveled edge, forming a valve-seat 3, adapted to receive a valve 4, which is provided at its top with an annular flange or head beveled at its under side to form a work-

ing surface to rest on the valve-seat. The casing is enlarged or slightly thickened at its upper end adjacent to its valve-seat to form an interior annular rib, and the valve 4 has a round stem or shank 5, which is provided with longitudinal ribs 6, cut away at their upper ends to form recesses.

The stem or shank 5 of the valve forms a counter balancing-weight, and when the bottle is arranged in substantially a horizontal position the notches or recesses formed by connecting the upper edges of the ribs 6 engage the annular rib of the casing and prevent the valve from moving outward, so that the upper valve will not withdraw a lower auxiliary valve 7 from its seat until the bottle is inverted to such an inclined position as will absolutely prevent any liquid from being introduced into the bottle.

The upper valve, which is constructed of glass or any other suitable material, is connected by a cord 8 or wire or other suitable connection with the auxiliary valve 7, which is constructed of cork and which is arranged within a frame or cage 9 at the bottom of the casing. The cord 8, which connects the upper and lower valves, is adapted to draw the lower valve off its seat when the bottle is in an inverted position, but the said cord has sufficient length or slack to permit the lower valve to remain on its seat, as illustrated in Fig. 2 of the accompanying drawings, when the bottle is in a horizontal position and when the upper valve moves outward only slightly. The frame or cage 9 consists of a series of L-shaped arms secured to the interior of the casing and extending horizontally over the lower valve to limit its upward or outward movement, and when the valve 7 is raised or moved outward sufficient space is provided at its outer edge to permit the contents of the bottle to flow freely past it. When the bottle is in a horizontal position, as illustrated in Fig. 2 of the accompanying drawings, the auxiliary valve is not withdrawn from its seat, and should it be withdrawn in attempting to introduce a liquid into the bottle it would float the valve against its seat and effectually close the neck.

The valve mechanism is protected by a shield 10, secured within the neck of the bottle above the valve mechanism by a pair of

spring-actuated bolts 11 and provided at its sides with ribs 12, which space the body portion of the shield from the inner face of the neck of the bottle sufficiently to form intervening spaces for the outward passage of the contents of the bottle. The ribs are extended inward beyond the shield and fit against the upper edges of the annular casing, providing an intervening space between the same and the bottom of the shield for the plate of the upper valve. The spring-actuated bolts are adapted to engage the sockets or grooves of the neck of the bottle when the shield is forced inward.

It will be seen that the non-refillable bottle is exceedingly simple and inexpensive in construction, that it is positive and reliable in operation, and that it effectually prevents a liquid from being introduced into it when it is in a horizontal position or in substantially a horizontal one, so that the bottle cannot be floated in a vessel and partially refilled.

What I claim is—

1. In a non-refillable bottle, the combination with a bottle or analogous receptacle, a casing arranged within the neck of the bottle or receptacle, and provided at its top with a valve-seat, an upper valve arranged on the valve-seat and provided with a counterbalancing stem or shank extending downward into the casing and adapted to engage the same to hold the valve against outward movement when the bottle is in a horizontal or substantially a horizontal position, and a lower auxiliary valve arranged on the bottom of the casing and connected with the upper valve, substantially as described.

2. In a non-refillable bottle, the combination with a bottle or analogous receptacle having a neck, of a casing arranged within the same, provided at its top with an interior annular rib and having upper and lower valve

seats, an upper valve arranged on the upper valve seat and provided with a depending shank or stem having longitudinal ribs forming notches at their upper ends, said notches being adapted to engage the rib of the casing when the bottle or receptacle is held in a horizontal position to hold the upper valve against outward movement, and a lower valve arranged within the casing and connected with the upper valve, substantially as described.

3. In a non-refillable bottle, the combination with a bottle or analogous receptacle provided with a neck, a casing arranged within the neck, upper and lower valves arranged within the casing and connected with each other, the lower valve being adapted to float, a cage arranged within the casing at the lower end thereof and receiving and limiting the outward movement of the lower valve, means for holding the upper valve against complete outward movement when the bottle is arranged in a horizontal position, and a shield interlocked with the neck of the bottle and located above the casing, substantially as described.

4. In a non-refillable bottle, the combination with a bottle, of a casing arranged within the neck thereof, upper and lower valves mounted in the casing and connected with each other, and a shield interlocked with the neck of the bottle and provided with exterior ribs spacing the body portion of the shield from the neck and extending downward and resting upon the casing, substantially as and for the purpose described.

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

WILLIAM H. WELLSTEED.

Witnesses:

G. RAYMUND EMPSON,
ROBERT J. REID.