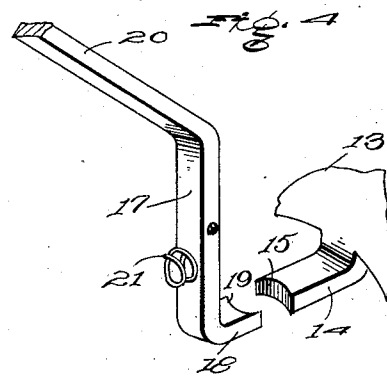
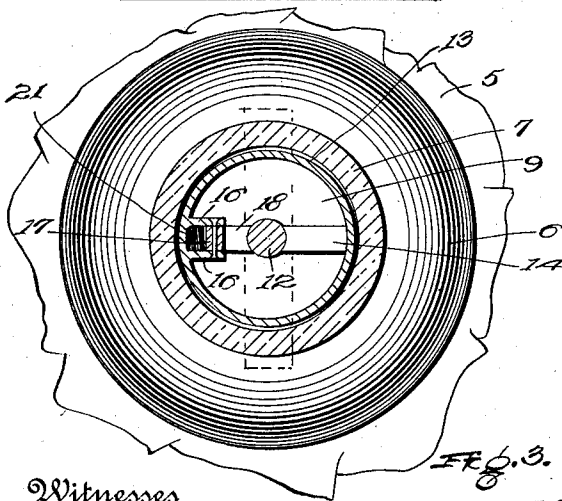
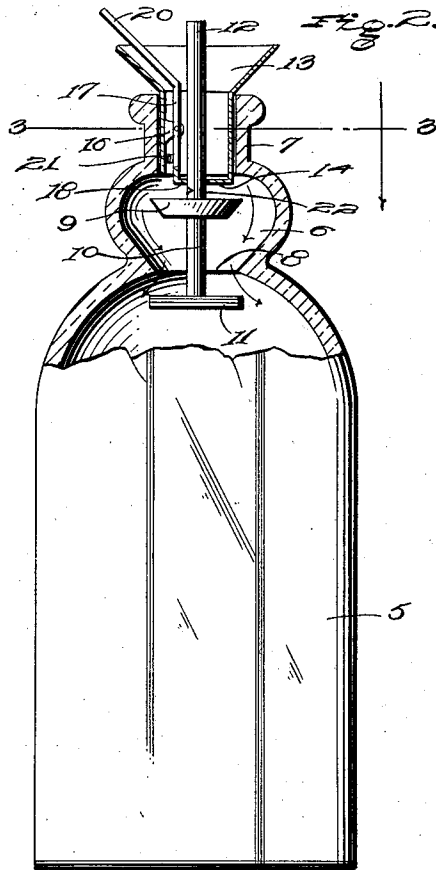
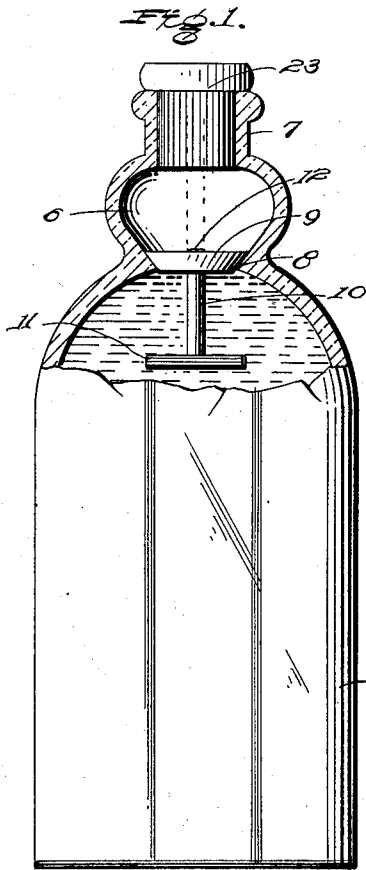


E. C. DAVIDSON.
NON-REFILLABLE BOTTLE.
APPLICATION FILED FEB. 14, 1911.

1,010,868.

Patented Dec. 5, 1911.



Witnesses
J. M. Lee
H. J. McDonald

Inventor
Edgar Charles Davidson
By *E. C. Vrooman*
his Attorney.

UNITED STATES PATENT OFFICE.

EDGAR CHARLES DAVIDSON, OF VIEQUES, PORTO RICO.

NON-REFILLABLE BOTTLE.

1,010,868.

Specification of Letters Patent.

Patented Dec. 5, 1911.

Application filed February 14, 1911. Serial No. 608,508.

To all whom it may concern:

Be it known that I, EDGAR CHARLES DAVIDSON, a citizen of the United States, residing at Vieques, in the county of Humacao and Territory of Porto Rico, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to the subject of non-refillable bottles and the principal object of the same is to provide a non-refillable bottle of the type wherein a valve is provided for preventing the bottle being refilled, and means whereby the valve can be held in an inoperative position before the bottle is entirely finished to permit the initial filling of the bottle.

In carrying out the objects of the invention generally stated above it will be understood, of course, that the essential features thereof are necessarily susceptible of changes in details and structural arrangements, one preferred and practical embodiment of which is shown in the accompanying drawings, wherein:—

Figure 1 is a view in elevation of a non-refillable bottle, partly in section, as it appears after being initially filled. Fig. 2 is a similar view of the bottle as it appears when being initially filled. Fig. 3 is an enlarged transverse sectional view taken on the line 3—3, Fig. 2. Fig. 4 is a detail fragmentary perspective view of a clamp for holding the controlling valve stem when the bottle is receiving its initial filling.

Referring to the accompanying drawings by numerals, 5 designates the body of the bottle, and 6 designates an enlarged outwardly bulged neck thereof that terminates in a straight pouring tube 7. At the junction of the neck 6 with the shoulder of body 5, a valve seat 8 is formed.

The described bottle may be blown, molded or otherwise made, and in the process of manufacturing the same a valve 9 is placed in the neck 6 that is of a greater diameter than the tube 7. Said valve is movable in neck 6 and is forced to seat 8 when an attempt is made to refill the bottle so that liquid cannot pass from the neck to the body. The valve 9 has a pendent stem 10 that projects into the body 1 and carries a transversely arranged weight 11, in the form of a bar, which abuts the shoulder of the

body 1 when liquid is being poured from the bottle and thereby prevents said valve sealing the tube 7.

The valve 9, when placed in the bottle neck during the process of manufacturing the bottle, is provided with an elongated holding rod 12 that projects well beyond the outlet end of the tube 7. Said rod 12 is used to hold the valve 9 away from the seat 8 when the bottle is being filled.

The initial filling of the bottle is performed by means of a funnel 13 that is fitted within the tube 7 and surrounds rod 12. A bar 14, preferably integral with the outlet end of the funnel 13, is arranged transversely of and extends partly across said funnel outlet and its free end is provided with a seat 15 that partly embraces rod 12. The discharge tube of the funnel carries a pair of laterally projecting ears 16 that are disposed opposite, but higher than seat 15 and in which a clamping lever 17 is pivotally mounted. The lever 17 has an angular lower end 18 that terminates in an embracing seat 19 for the rod 12 so that when said lever 17 is rocked in one direction, the rod 12 will be rigidly clamped to the seat of bar 14. The angular handle extension 20 projects beyond the upper end of funnel 13 so that it can be readily grasped to operate said lever. A spring 21 is carried by the lower portion of lever 17 and bears against the discharge tube of the funnel 13 and exerts a tension tending to rock said lever into clamping engagement with bar 12.

It will be understood from the foregoing, that when the bottle is finished, the rod 12 projects well beyond the pouring tube thereof and that the funnel 13 is placed in said tube and the lever 17 clamped to said rod to hold valve 9 away from the seat 8 while liquid is being poured through said funnel to fill the bottle. After the bottle has been filled, the funnel is removed and the rod 12 cut off close to valve 9 by means of a suitable cutting tool that is passed into neck 6. To facilitate such cutting, the rod 12 may be notched or otherwise weakened, as indicated at 22. When rod 12 is cut-off, the weight bar 11 draws valve 9 to seat 8, as shown in Fig. 1 of the drawings, and a closure 23 is placed in tube 7 to seal the same.

What I claim as my invention is:—

1. In a bottle, the combination with the body and neck thereof and a weighted valve for normally preventing liquid passing

through the neck to the body, of a funnel adapted to be seated in said neck, and means carried by said funnel for holding said valve in an inoperative position.

5 2. A bottle comprising a body and a neck, a weighted valve in said neck for normally preventing liquid passing through said neck to said body, breakable holding means carried by said body, a funnel adapted to be
10 seated in said neck, and a clamp carried by said funnel for engaging said holding means to retain the valve in an inoperative position.

3. A bottle comprising a body and a neck, a valve therein for normally preventing re-
15 filling of said bottle, a breakable holding rod carried by said valve, a funnel adapted to be seated in said neck and provided with a base bar for engaging said rod, and a lever pivotally mounted in said funnel for clamp-
20 ing said rod to said bar to retain said valve in an inoperative position.

4. A non-refillable bottle comprising a body provided with an enlarged neck, a valve seat at the junction of said neck and

body, a valve in said neck, means for nor- 25
mally holding said valve to said seat, a breakable holding rod carried by said valve, and filling means adapted to be seated in said neck and engaged with said rod to un-
30 seat the valve to permit the initial filling of said bottle.

5. In combination with a bottle provided with internal sealing means, a filling tube adapted to be removably fitted in the neck of said bottle and provided with a clamping
35 member at its base, and a lever pivotally mounted in said tube and provided with a clamping member at its base that coöper-
ates with the clamping member of said tube for holding said sealing means in an inop-
40 erative position.

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

EDGAR CHARLES DAVIDSON.

Witnesses:

ADRIAN BREVES,
EUSTAGIUS MORALES.

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