

No. 683,883.

Patented Oct. 1, 1901.

H. J. MYERS.

DEVICE FOR RENDERING BOTTLES NON-REFILLABLE.

(Application filed May 2, 1901.)

(No Model.)

Fig. 1.

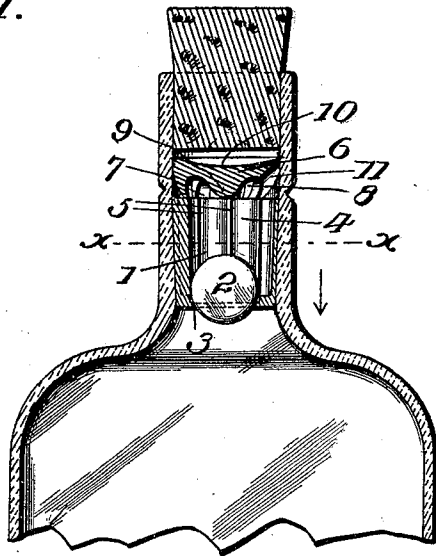


Fig. 2.

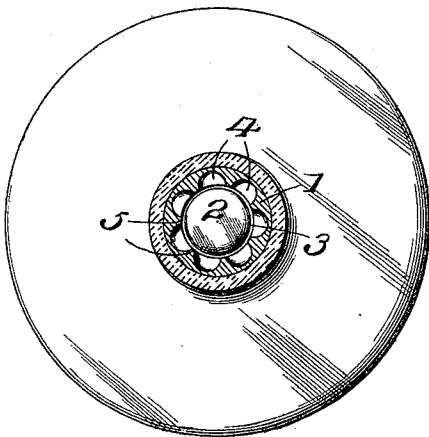


Fig. 3.

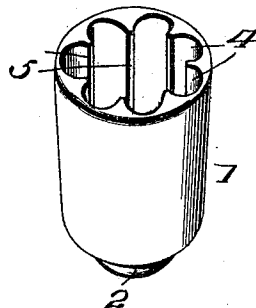
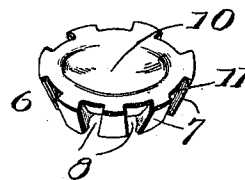


Fig. 4.



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UNITED STATES PATENT OFFICE.

HARRY J. MYERS, OF ROCHESTER, NEW YORK, ASSIGNOR TO EDWIN E. SERVIS AND FRANK W. ZOLLER, OF SAME PLACE.

DEVICE FOR RENDERING BOTTLES NON-REFILLABLE.

SPECIFICATION forming part of Letters Patent No. 683,883, dated October 1, 1901.

Application filed May 2, 1901. Serial No. 58,507. (No model.)

To all whom it may concern:

Be it known that I, HARRY J. MYERS, a resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Devices for Rendering Bottles Non-Refillable; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

The invention relates to means for preventing the refilling of bottles; and its object is to provide in the bottle-neck a device which will permit free exit of the bottle contents and adapted also to prevent inlet.

The invention consists in the construction herein described and pointed out.

In the accompanying drawings, Figure 1 is a longitudinal section of the device seated in a bottle-neck, the bottle being partly broken away. Fig. 2 is a section on line *xx* of Fig. 1. Fig. 3 is a perspective of the improved device. Fig. 4 is a similar view of a detail.

Numeral 1 denotes a cylindrical body forming part of a valve-casing for a ball-valve. 2 denotes the valve-seat, into which the ball drops by gravity when the device is in place in a bottle and the latter suitably held. 4 denotes grooves separated by ribs 5, both ribs and grooves extending from the upper side of the valve-seat to the upper end of the casing-body. Liquid escaping past the ball in pouring from the bottle has free passage in these grooves.

6 denotes a cover for the casing to prevent the escape of the ball. It is provided with lugs 7, that stand on the ribs 5 when the parts are properly assembled. These lugs and also the openings 8 incline inwardly to render it impossible for any one to tamper with or remove the cover. The openings 8, situated between the lugs shaped as set forth, allow free passage of liquid in either direction. The top of the cover is concave on its upper face and on its under side has the form of a low cone. The apex of the under cone 9 arrests the valve when the bottle is inverted, as in pouring, and holds it at a little distance from the cover-top, whereby more space is

provided for the rapid and easy escape of the contents of the bottle.

The device is placed in a bottle in such manner that the bottle-mouth may be closed with a cork. In practice the bottom of the cork when seated in the bottle-neck is situated about one-fourth or three-eighths of an inch from the top of the cover. The concave 10 in the cover affords a central seat for the driver used in forcing the valve-casing into the bottle-neck. These latter parts are made slightly frusto-conical to facilitate seating the valve-casing tightly in the neck. The parts 7 and the inner wall of the openings 8 are inclined, as shown, to prevent the use of a steel hook or tool to withdraw the cover.

It will be understood that the body of the casing 1 and its cover 6 are cemented or otherwise fixed in the bottle-neck. The latter may, if desired, be provided with a groove 11 to determine the line of fracture in case it is desirable to break off the neck. This groove, if employed, is situated, preferably, in the same plane with the bottom of the casing-body 1.

It is obvious that the ball-valve will roll from its seat upon any inclination of the bottle sufficient for pouring out and that when so inclined no liquids could be poured in. Immediately upon moving the bottle toward an upright normal situation the ball falls to its seat and closes the passage.

The device may be made of any suitable material—such as wood, compressed fiber, or metal. The material selected should be one not affected by the particular contents of the bottle in any case. Though the ball would be operative if made of the heaviest species of wood, it will usually be made of other material, a suitable metal being preferred.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A bottle having a casing-body open from end to end and provided with a valve-seat near its lower end and with grooves for escaping liquids separated by ribs extending from near the said seat to the other open end of the casing-body, the casing-cover having lugs to stand on the ribs, and a ball-valve,

said casing fitting the bottle-neck from end to end of the casing and the grooves at their upper ends communicating immediately and freely with exits between the cover-lugs.

5 2. A bottle having a casing-body open from end to end and provided with a valve-seat near its lower end and with grooves for escaping liquids separated by ribs extending from near the said seat to the other open end
10 of the casing-body, the casing-cover having lugs to stand on the ribs, and having exits for liquids between said lugs, and a ball-valve, said lugs being inclined inwardly from the perimeter of the casing-cover.

15 3. A bottle having a casing-body open from end to end and provided with a valve-seat near its lower end and with grooves for escaping liquids separated by ribs extending from near the said seat to the other open end
20 of the casing-body, the casing-cover having lugs to stand on the ribs, and a ball-valve, said cover having exits between its lugs and having on its under surface a centrally-situated cone to hold the ball above the cover-
25 exits when the bottle is inverted in pouring.

4. A bottle having a casing-body open from end to end and provided with a valve-seat

near its lower end and with grooves for escaping liquids separated by ribs extending from near the said seat to the other open end
30 of the casing-body, the casing-cover having lugs to stand on the ribs, and a ball-valve, said cover being concave on its upper surface to hold a tool centrally for forcing the cover and body into the bottle. 35

5. A bottle, a valve-casing open from end to end and provided with a valve-seat in its lower end, the casing-cover having the lugs 7 fitting the bottle at their upper part and inclined inwardly below and separated by
40 openings 8 having their inner walls inwardly inclined toward their bottom, said inward inclines of the lugs and walls being greater than that of the adjacent surface of the bottle to preclude the use of a tool for the re- 45
moval of the cover and to afford a freer escape for the contents of the bottle.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HARRY J. MYERS.

Witnesses:

HERBERT J. MENZIE,
JAMES G. GREENE.