

J. KRETZER.
NON-REFILLABLE BOTTLE.
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1,003,918.

Patented Sept. 19, 1911.

Fig. 1.

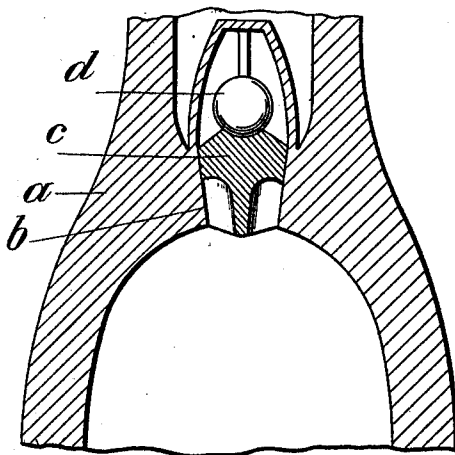
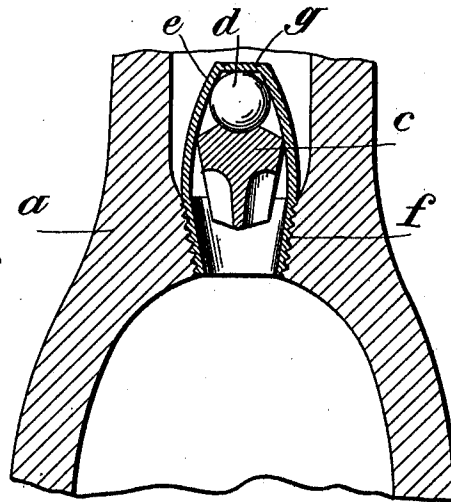


Fig. 2.



Witnesses:

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JOHANN KRETZER, OF WIESBADEN, GERMANY.

NON-REFILLABLE BOTTLE.

1,003,918.

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To all whom it may concern:

Be it known that I, JOHANN KRETZER, a subject of the Emperor of Germany, and a resident of Wiesbaden, Germany, have invented a certain Improved Non-Refillable Bottle, of which the following is a specification.

The present invention relates to a bottle of the kind having means for preventing a fraudulent refilling of the same.

The arrangement according to the present invention is illustrated in the annexed drawings, Figure I representing a section through the closing device in closed position, and Fig. II, a similar view of the same in open position.

The lower part of the passage of the bottle-neck *a* is contracted to form a downwardly tapering seat *b* for the reception of a closing plug *c*. Cavities in the lower part of the plug are made to reduce its weight, and a depression on its top surface serves to receive a ball *d* for holding the plug in its seating. Both these elements are inclosed in a cage *e* which is fused to the plug-seat after the bottle has been filled and plug and ball have been introduced in the bottle-neck.

When the bottle is tilted, plug and ball are pressed forward by the liquid into the upper part of the cage, as shown in Fig. II, thereby clearing the passage for the liquid so that the bottle can be emptied. A refilling of the bottle, however, is prevented by the parts *c* and *d* which, at an attempt at refilling, reassumes their closing position, as shown in Fig. I.

The arrangement may be modified, as illustrated in Fig. II, where the seating for the plug is made separately and integrally connected to the cage *e*. These elements, together with their inclosures *c* and *d*, are then screwed into the bottle-neck which for that purpose is provided with a screw-thread *f*. Recesses *g* in the upper part of

the cage serve to receive a key for screwing the closing device into the bottle-neck. In this case the bottle can be refilled by the one who possesses the key.

The closing device may be made of glass or any other suitable material.

I claim:—

1. In combination, a bottle provided with a neck, the lower portion of which is tapered and threaded, a cage provided with a tapered lower end which is externally threaded to engage the threaded tapered portion of the neck of the bottle, the upper part of the cage being flat and formed on its upper surface with recesses for the reception of a tool to turn the cage, a tapered valve formed at its lower portion with notches and on its upper surface with a curved recess, said tapered valve fitting snugly the interior of the lower tapered portion of the cage to close the neck of the bottle, and a ball fitting in the curved recess in the upper surface of the valve and confined in its movement by the upper end of the cage, the interior of the cage below the flat top being substantially the width of the ball to confine the latter whereby to prevent lateral movement of the ball when the valve is open.

2. In combination, a bottle provided with a neck, the lower portion of which is opened, a cage over the tapered opening, a tapered valve snugly fitting in the tapered opening and formed at its lower end with recesses and on its upper surface with a curved recess and a ball fitting in the curved recess, said cage tapering from its lower to its upper end, the width of the interior of the cage at the top being substantially the width of the ball to prevent the latter moving laterally when the valve is open.

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Witnesses:

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