

E. SUSOL.
NON-REFILLABLE BOTTLE,
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1,004,495.

Patented Sept. 26, 1911.

Fig. 1.

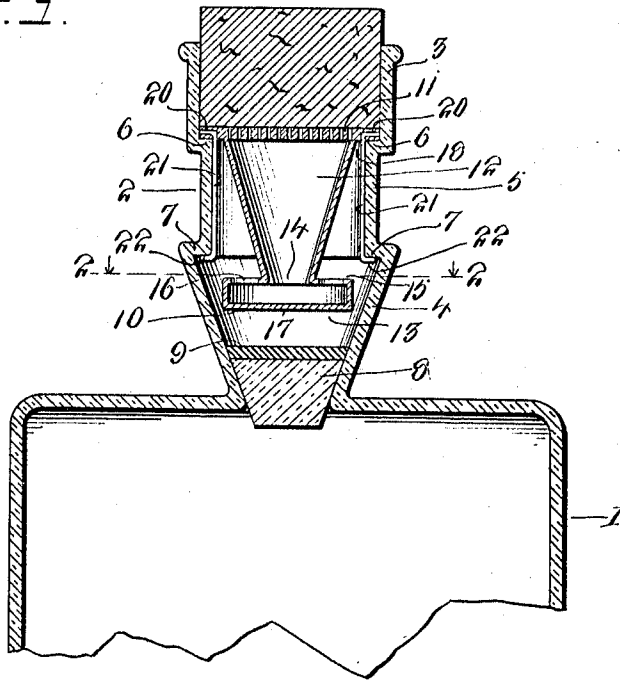
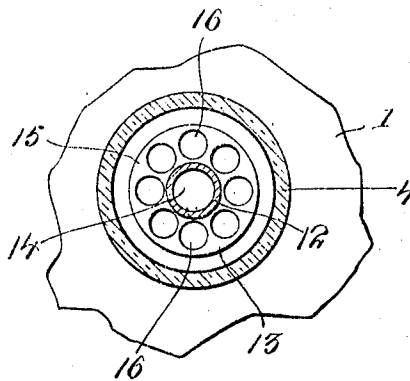


Fig. 2.



Witnesses
E. R. Ruppert.
James A. Ruppert

Inventor
Emeric Susol
By Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

EMERIC SUSOL, OF ARNOLD, PENNSYLVANIA, ASSIGNOR OF ONE-FIFTH TO MARTIN WELESKI, OF ARNOLD, PENNSYLVANIA.

NON-REFILLABLE BOTTLE.

1,004,495.

Specification of Letters Patent. Patented Sept. 26, 1911.

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To all whom it may concern.

Be it known that I, Emeric Susol, a citizen of the United States of America, residing at Arnold, in the county of Westmoreland and State of Pennsylvania, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to non-refillable bottles, and it has for an object to provide an improved construction of valve and guard therefor arranged within the neck of the bottle and positioned with respect to each other so as to readily permit the contents of the bottle to be discharged when the bottle is canted, but prevent in the most effective manner the fraudulent refilling of the bottle on the displacement of its original contents.

In the drawing, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a vertical section through my improved bottle. Fig. 2 is a section on line 2—2 of Fig. 1.

The body 1 of the bottle may be of any suitable configuration or design, and as shown, it is provided with a peculiarly formed neck 2 embodying an upper cylindrical section 3 a lower substantially inverted conical portion 4 and an intermediate cylindrical portion 5, the transverse diameter of the latter being considerably less than the transverse diameter of the cylindrical portion 3 or the large end of the conical portion 4 so that a shoulder 6 is formed immediately at the bottom of the cylindrical portion 3 and a similar shoulder 7 is formed at the large end of the conical portion 4.

The small end of the conical portion 4 opens directly into the body of the bottle and the said small end forms a valve seat against which is engaged a gravity closing valve 8 of a configuration conforming substantially with the small end of the said conical portion 4 of the neck. The large end of the valve 8 is protected by a cap 9 of rubber or suitable analogous elastic cushioning material, the purpose of the same being to prevent destruction of the valve, incident to its contact with the guard 10 when the bottle is canted.

The guard 10 may be formed of aluminum, glass or any other suitable material which may be found best adapted for the

purpose. This guard embodies a cap 11 which is preferably perforated and which has integrally formed thereon a depending substantially inverted hollow conical portion 12, the lower end of which being formed with a hollow disk 13 which opens directly into the hollow conical portion 12 of the guard by way of the passage 14. The outer head 15 of the disk is formed with discharge passages 16 and the inner head 17 of the disk is wholly imperforate and disposed in spaced relation with respect to the valve 8 when the bottle is in its vertical position, as shown in Fig. 1 of the drawing.

The cap 11 is extended beyond the wall of the conical portion 12 of the guard to form a flange 18 which is seated directly against the shoulder 6 of the bottle neck. This flange has formed therein a plurality of passages 20 which open directly onto the peripheral edge of the disk. These passages have seated therein the upper ends of spring arms or retainers 21, each being provided at its lower end with a keeper portion 22 to engage beneath the shoulder 7 under spring tension of the arm so as to hold the guard 10 against removal from the neck after its application thereto on the proper original filling of the bottle. The cap 11 has its peripheral portion bearing directly against the walls of the cylindrical portion 3 of the neck adjacent to the shoulder 6 so as to conceal the passages 20 when the guard is operatively placed in the bottle and thereby prevent fraudulent tampering with the spring retainers with the purpose in view of removing the guard from the bottle.

When the bottle is canted the valve 8 falls from its seat in the neck and the cushioning surface 9 of the valve wholly contacts with the head 17 at the small end of the guard 10. Free communication is then established between the bottle neck and the body portion of the bottle so that the liquid can be discharged into the neck and have free escape therefrom by way of the perforations 16 and the perforations in the disk 11. By constructing the guard 10 of substantially inverted cone form a relatively large space is provided between the walls of the conical portion of the guard and the walls of the cylindrical portion 5 of the neck so as to provide for the required relative movements of the spring retainers 21 during the operation of inserting the guard into the neck.

The small end of the conical portion 12 of the guard extends into the large end of the conical portion 4 of the bottle neck so that a very large space surrounds the small end of the conical portion 12 to permit the free passage of the contents of the bottle through the passages 16 when the bottle is canted.

I claim:—

10 A bottle having a neck portion provided with an inner substantially inverted conical portion, an outer cylindrical portion and an intermediate cylindrical portion, a guard including a substantially inverted conical
15 member extending through the intermediate cylindrical portion of the neck and having its small end extended into the large end of the said substantially inverted conical portion of the neck, and a valve movably
20 large intervening space between the large end of the conical portion of the neck and

the small end of the conical portion of the guard, the said conical portion of the guard being hollow and being provided at its outer end with a perforated head and being provided at its inner end with a hollow disk including spaced heads, the outer head having passages therein which open into the intervening space between the small end of the guard and the large end of the conical portion of the neck, and a valve movably mounted in the conical portion of the neck and adapted to engage against the inner head of the hollow disk of the guard to limit the opening movement of the valve when the bottle is canted.

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

EMERIC SUSOL.

Witnesses:

STANLEY BROSBY,
PAUL SUSOL.