

G. W. WOOD.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JUNE 8, 1910.

985,487.

Patented Feb. 28, 1911.

Fig. 1.

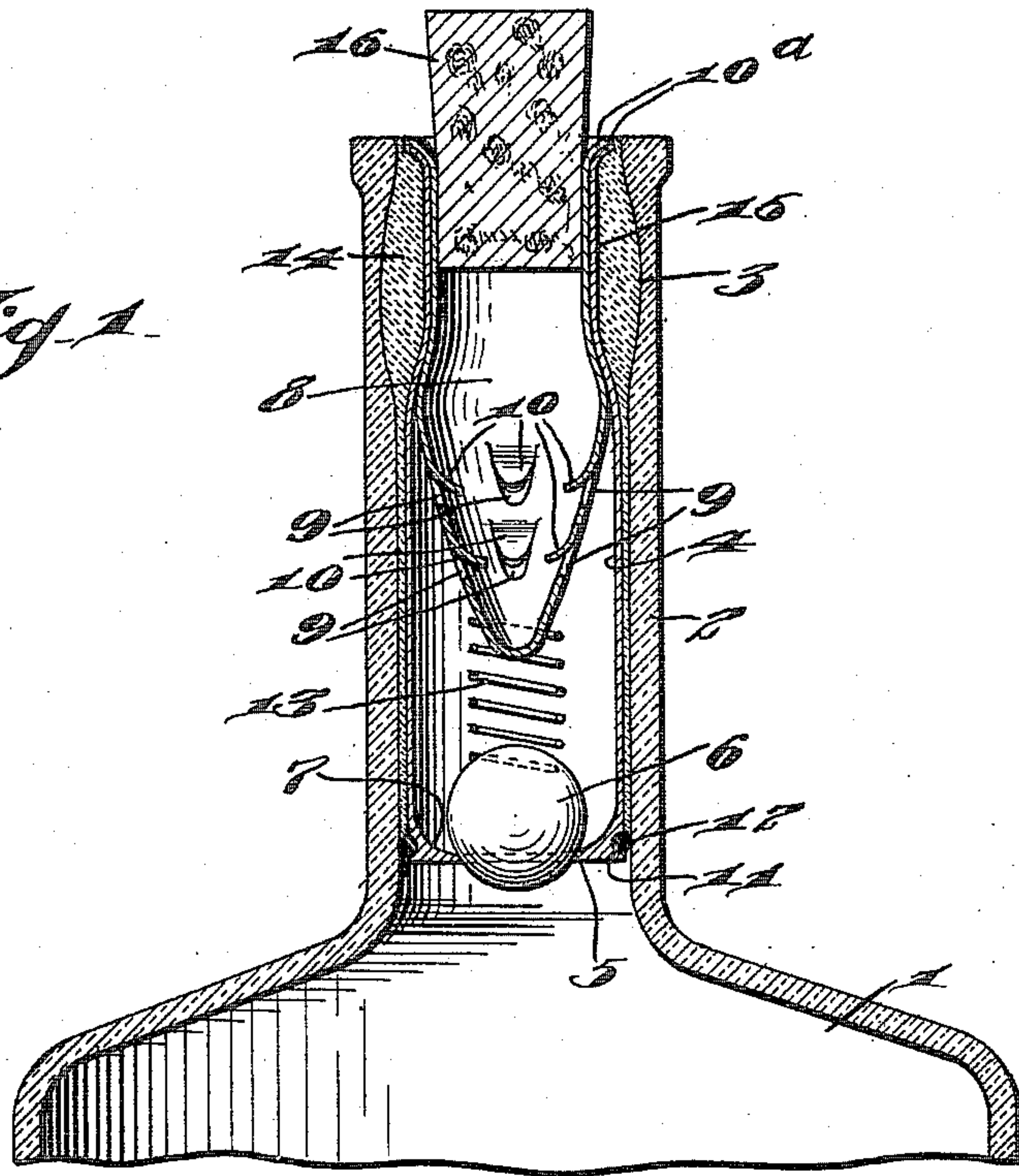
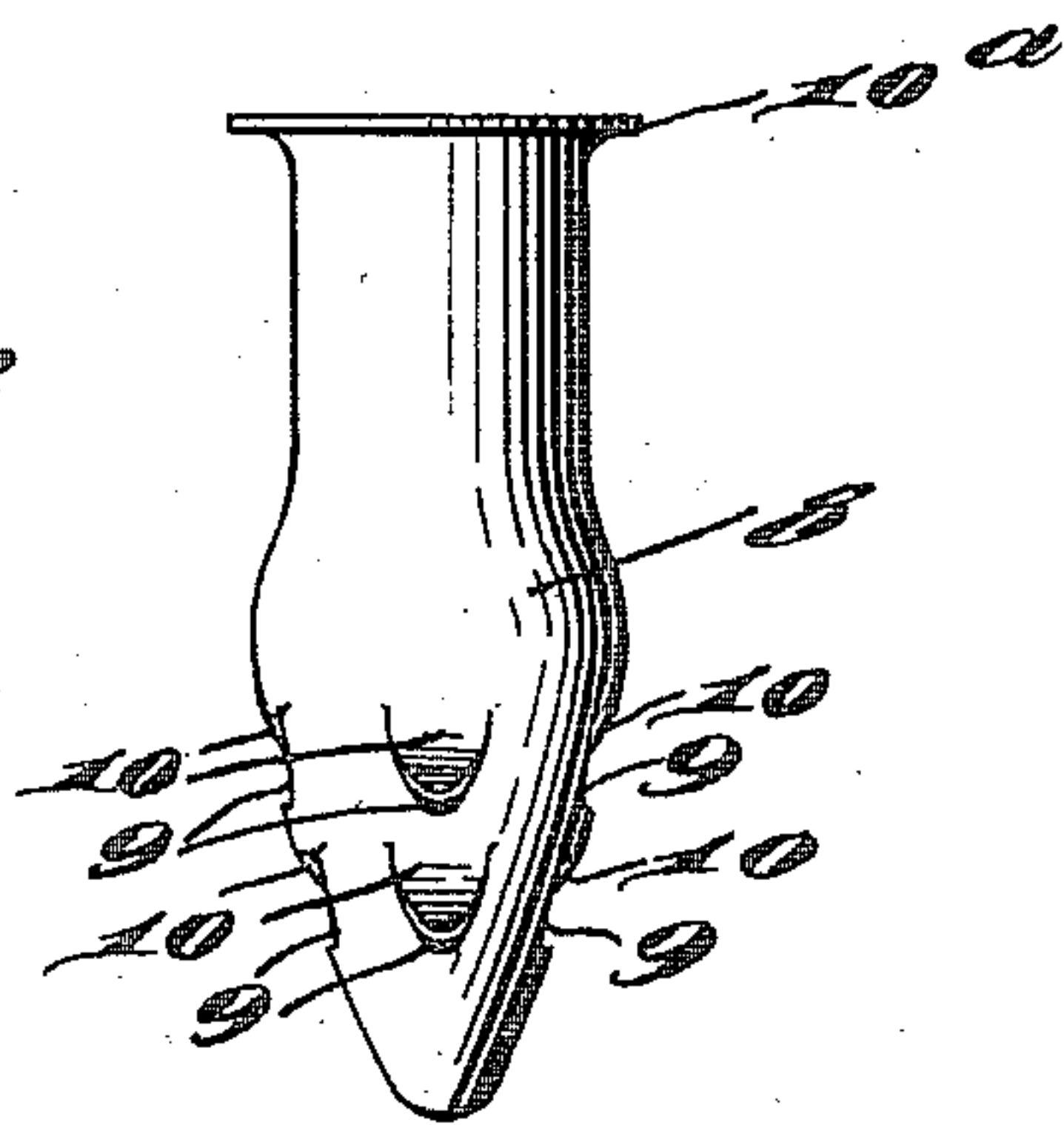


Fig. 2.



Inventor

Witnesses

Thos. Brennan
R. V. Krenkel

George W. Wood,

By *Joshua R. Potts.*

Attorney

UNITED STATES PATENT OFFICE.

GEORGE WM. WOOD, OF CAMDEN, NEW JERSEY.

NON-REFILLABLE BOTTLE.

985,487.

Specification of Letters Patent.

Patented Feb. 28, 1911.

Application filed June 8, 1910. Serial No. 565,736.

To all whom it may concern:

Be it known that I, GEORGE W. WOOD, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to improvements in non-refillable bottles, the object of the invention being to provide improvements which may be permanently fixed in the neck of the bottle after the bottle is filled, which will allow the liquid to be poured out through the neck of the bottle but which will prevent any refilling thereof.

A further object is to provide an improved bottle of this character of extremely simple inexpensive construction, which will prevent the valve or closure being tampered with, and which will prevent the refilling of the bottle when the latter is held in any position.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a fragmentary view in longitudinal section illustrating my improvements, and Fig. 2, is a view in elevation of the baffle.

1, represents a bottle, and 2 the neck thereon, the internal diameter of which is enlarged near the upper end of the neck as illustrated at 3, for a purpose which will hereinafter appear.

A tubular valve casing 4 of less diameter than the internal diameter of the neck, is located in the neck and is provided in its lowered end with an opening 5, normally closed by a ball valve 6, the end of said casing being rounded or beveled, as illustrated at 7, to guide the ball 6 into position in the opening 5, it being understood, of course, that the ball is of greater diameter than the opening, and serves to effectually close the same.

8, represents my improved baffle which is of general cylindrical form throughout the greater portion of its length and at its lower closed end gradually reduces in diameter, as illustrated. In this reduced diameter of the baffle, openings 9 are formed by pressing inwardly tongues 10, said

tongues serving to guard the openings from any instrument inserted through the bottle neck. The valve casing 7, and the cylindrical portion of the baffle 8 come tightly together. In other words, the external diameter of the baffle is approximately the same as the internal diameter of the upper end of the valve casing, the latter being reduced in diameter at this point, and the upper ends of both the valve casing and the baffle are flared outward as illustrated at 10^a.

The lower end of the valve casing is provided with an annular groove 11, in which a gasket 12 is seated, said gasket snugly fitting within the neck of the bottle. A coiled spring 13 is positioned between the lower end of baffle 8 and the ball valve 6, and holds the ball normally in position to close the opening 5. This spring 13 is a weak spring, and is only of sufficient strength to overcome the weight of the ball, so that when the bottle is inverted and empty, the spring will hold the ball in its closed position, preventing any liquid from being forced upward through the neck of the bottle. It is not, however, strong enough to hold back liquid in the bottle, so that the latter may be easily poured out.

When the bottle is filled, and the valve casing with the parts therein inserted in the neck of the bottle to the position illustrated, a liquid cement 14 is poured into the neck of the bottle around the outside of casing 4. The downward flow of cement is stopped by the gasket 12, and the entire space between the casing and the bottle neck is filled with this cement which soon hardens, and owing to the increased internal diameter of the neck, illustrated at 3, and the decreased external diameter of the casing, illustrated at 15, the cement forms a key which effectually locks the valve casing within the neck, the baffle being locked in the casing by reason of the reduced diameters above referred to. As the valve casing and the baffle are preferably of metal, this reduction of their diameters can be readily effected after the baffle is inserted within the casing. An ordinary stopper 16 fits within the upper end of the baffle, and serves as a closure, which is desirable in packing and shipping.

Various slight changes might be made in the general form and arrangement of parts described without departing from my in-

vention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit
5 and scope of the appended claims.

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

1. In a device of the character described,
10 the combination with a bottle and a neck thereon, of a valve casing located within the neck, sealing material between the casing and the neck, a baffle located within the casing, and curved concentrically within the
15 casing throughout a portion of its length, said casing having an opening in its lower end, a ball normally closing said opening, and a spring between the end of said baffle and said ball, substantially as described.

20 2. In a device of the character described, the combination with a bottle and a neck thereon, of a valve casing located within the neck, and having an opening in its lower end, said casing having an annular groove
25 around its lower end, a gasket in said groove snugly fitting within the neck of the bottle, a ball constructed to close the opening in the end of the casing, a baffle in said casing of cylindrical form and curved concentrically
30 within the casing throughout a portion of its length and having a closed end gradually reducing in diameter, said baffle at said reduced diameter having openings therein, tongues projecting inwardly over said open-
35 ings, a spring between the lower end of said

baffle and said ball, and a filling of cement between said casing and said neck, substantially as described.

3. In a device of the character described, the combination with a bottle and a neck
40 thereon, of a valve casing located within the neck, and having an opening in its lower end, said casing having an annular groove around its lower end, a gasket in said groove snugly fitting within the neck of the bottle,
45 a ball constructed to close the opening in the end of the casing, a baffle in said casing of cylindrical form and curved concentrically within the casing throughout a portion of its length and having a closed end
50 gradually reducing in diameter, said baffle at said reduced diameter having openings therein, tongues projecting inwardly over said openings, a spring between the lower
55 end of said baffle and said ball, said baffle and said casing reduced in diameter throughout a portion of their length and snugly fitting each other, said neck having its internal diameter increased at a point
60 opposite the decreased diameter of the casing and baffle, and a filling of cement between said casing and said neck, substantially as described.

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

GEORGE WM. WOOD.

Witnesses:

M. R. POTTS,
C. E. POTTS.

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