

No. 710,319.

Patented Sept. 30, 1902.

J. W. EDWARDS.  
NON-REFILLABLE BOTTLE.

(Application filed Mar. 19, 1902.)

(No Model.)

Fig. 2.

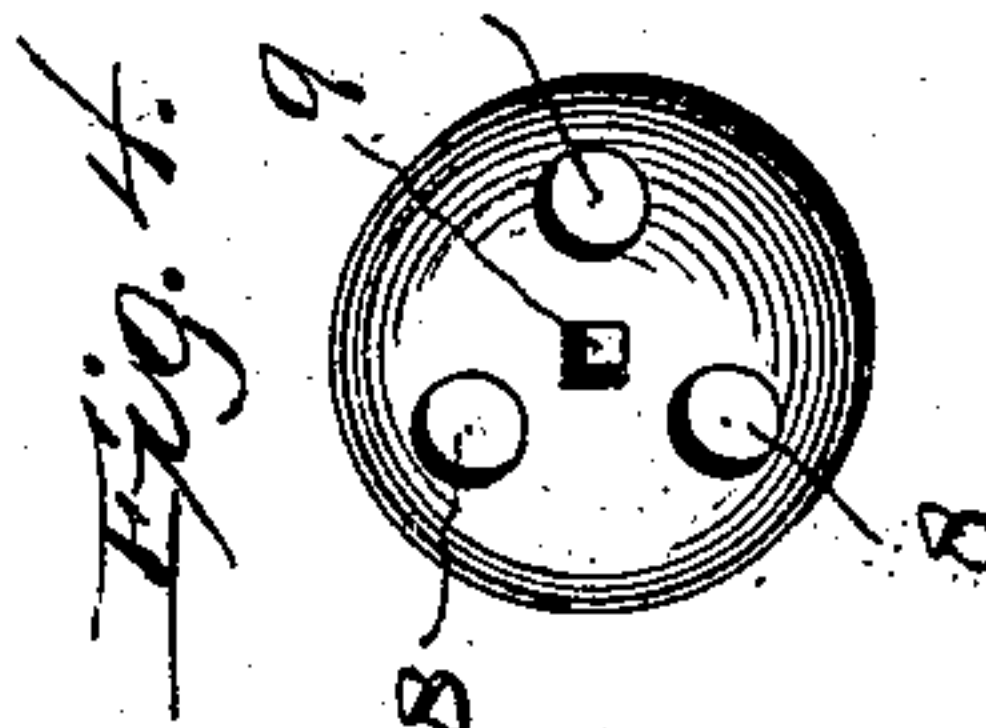
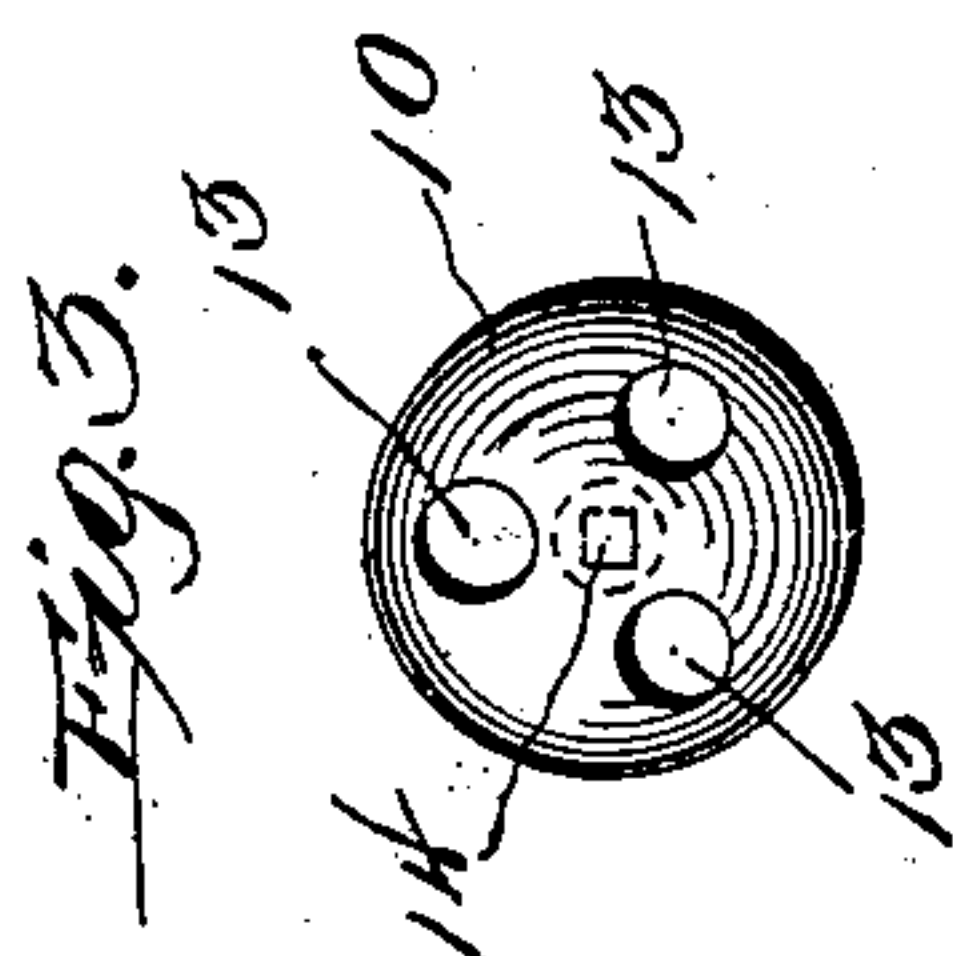
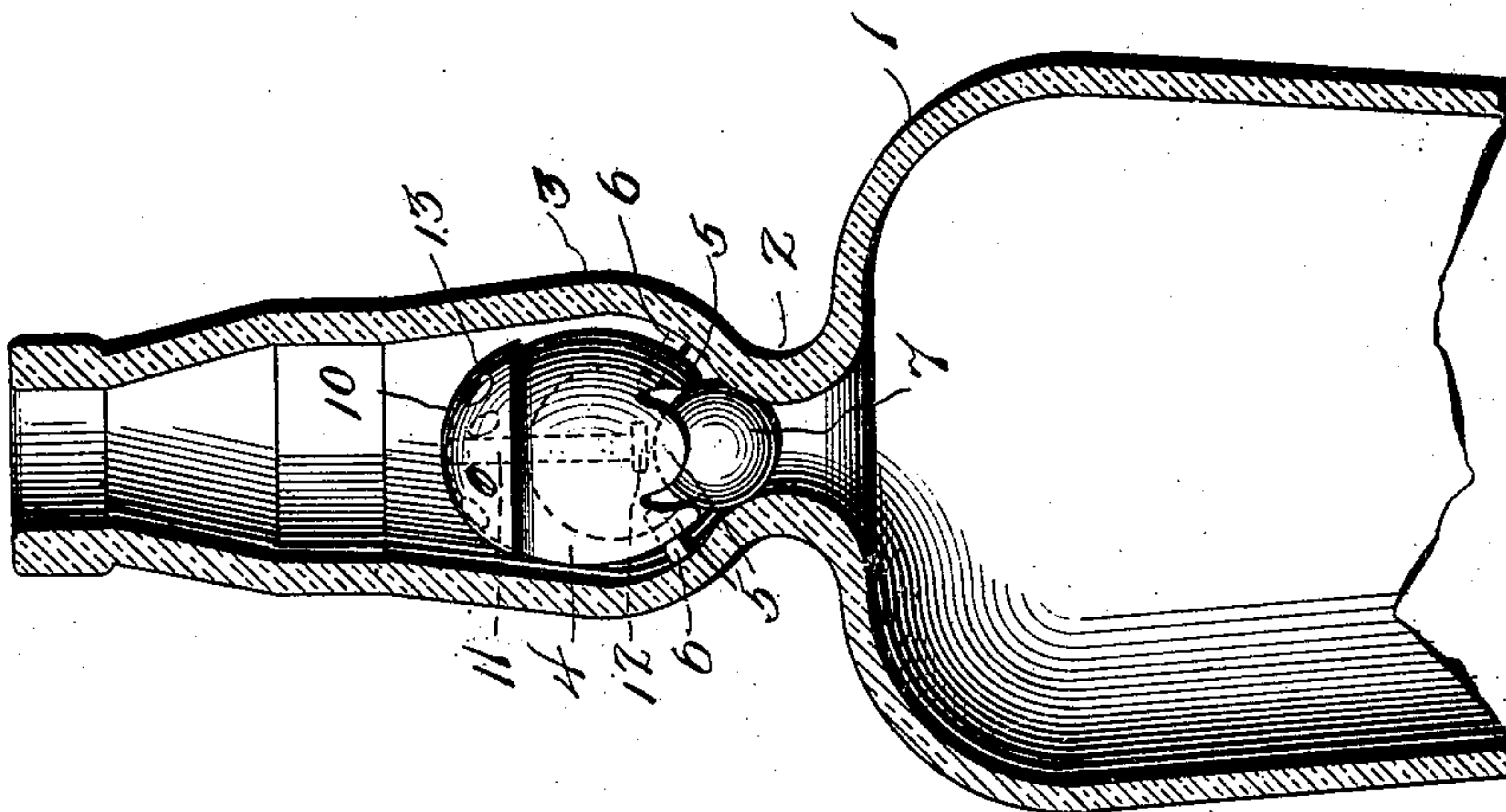
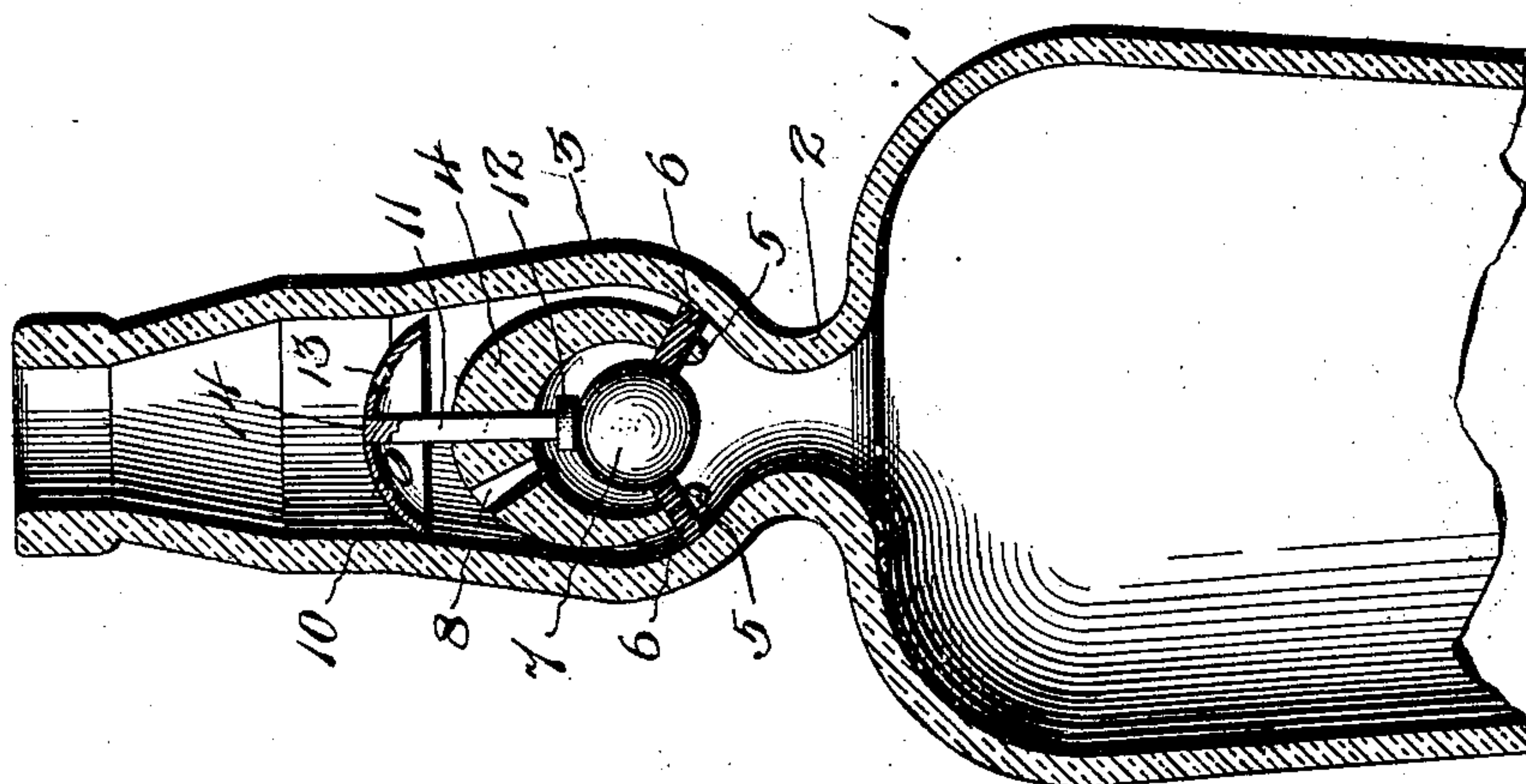


Fig. 1.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN W. EDWARDS, OF CLEVELAND, OHIO.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 710,319, dated September 30, 1902.

Application filed March 19, 1902. Serial No. 98,898. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. EDWARDS, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to non-refillable bottles; and the objects of the same are to provide a simple and reliable device designed to be inserted within the neck of a bottle or similar vessel and which may occupy such position that the bottle may be readily filled through the neck while the bottle is in an upright position, after which the device within the neck can be made to assume a position which will make it practically impossible to refill the bottle or vessel.

I attain the objects referred to by means of the construction shown in the accompanying drawings, in which—

Figure 1 is a central vertical section of the upper portion of a bottle and showing the valve mechanism in the position which it occupies prior to the filling of the bottle. Fig. 2 is a similar view of the bottle after the valve mechanism has been made to assume a position to prevent the bottle from being refilled. Fig. 3 is a plan view of a cap which forms part of the valve mechanism. Fig. 4 is a plan view of a hollow shell forming another part of the valve.

Like numerals of reference designate like parts wherever they occur in the different views of the drawings.

Referring to the drawings for a more particular description, the numeral 1 may designate a bottle or similar vessel having a contracted neck portion 2 and an enlargement 3 above the neck. Within the enlarged portion 3 of the bottle-neck a hollow shell 4 is seated, said shell being open at the bottom and having four or more depending lugs or lobes 5. Through two of the lobes 5 small apertures are formed, and small pieces of india-rubber 6 are inserted and held therein by friction, the outer ends of the rubber pieces bearing against the inner wall of the bottle-neck, while the inner ends of said rubber pieces extend a slight distance within the hollow shell to support a ball 7 in position to permit the bottle to be filled, as shown in Fig. 1. Holes

8 extend through the shell 4, and a square central opening 9 also passes through the shell. A cap 10 of substantially concavo-convex form is attached to a square stem 11, said stem extending through the aperture 9 in the shell 4 and provided at its lower end with a head or enlargement 12, which normally rests upon the ball 7 before the bottle has been filled. Holes 13 extend through the cap, and the stem 11 is riveted or headed up on top of the cap, as at 14. The shell 4 may be conveniently made of glass or similar material, while the ball 7 may either be formed of glass, porcelain, or similar material. The cap 10 and its stem 11 may be formed of metal, if found desirable.

When the valve is in the position shown in Fig. 1, the bottle may be readily filled by pouring the liquid through the nozzle, said liquid passing through the holes 13 in the cap, through the holes 8 in the shell, or around the outside thereof down into the bottle. After the bottle has been filled the cap 10 is pushed down by any suitable instrument inserted within the neck of the bottle until the ball 7 passes the rubber pieces 6 and is seated upon the top of the contracted portion 2 of the bottle-neck, the various parts of the device then assuming the relative positions shown in Fig. 2 of the drawings. The nozzle of the bottle may be corked or sealed in any suitable manner for shipping. When it is desired to remove the contents of the bottle, it is canted to one side, and the ball 7 moves slightly toward the nozzle, permitting the liquid to flow out in the usual manner. The holes 13 in the cap and the holes 8 in the shell do not register with each other, and hence it would be difficult, if not impossible, to gain access to the ball 7 by means of a wire or similar device for the purpose of refilling the bottle.

After the bottle has been once filled and the valve 7 seated within the contracted portion of the neck the bottle cannot again be filled while in an upright position. Should the bottle be immersed in a liquid for refilling and laid upon its side within the liquid, the cap 10 will close the nozzle of the bottle by coming in contact with the inner wall of the neck, and since the openings 8 and 13 do not register the liquid will not pass through and gain access to the bottle, owing to the fact



that the cap 10 will seat itself upon the convex portion of the shell 4 and the stem 11 will force the valve 7 past the cushion 6.

From the foregoing it will be obvious that  
5 my device is of simple construction, can be manufactured at a small cost, and will be found very efficient and reliable for its purposes. The pieces 6 may be very small, and instead of india-rubber some other material  
10 may be used, such as cork or fibrous material. If metal is used for any part of the device, it may be coated with a non-corrodible material.

Having thus fully described my invention,  
15 what I claim is—

1. A non-refillable bottle having a contracted neck portion, an enlargement above the contracted portion, a valve in the enlarged portion, means for holding the valve in an un-  
20 seated position for the filling operation and for preventing the valve from returning to its original position, substantially as described.

2. A non-refillable bottle having within its  
25 enlarged neck portion a valve, means for yieldingly suspending the valve above its seat prior to filling the bottle, and means for forcing the valve to its seat and for preventing its return to its original position after the  
30 bottle has been filled, substantially as described.

3. A non-refillable bottle comprising a shell within the neck of the bottle, yielding supports connected to the shell, a ball suspended by the supports prior to filling the bottle, and  
35 means for pushing the ball beyond the yielding supports after the bottle has been filled, substantially as described.

4. A non-refillable bottle consisting of a bottle having a contracted neck portion, a hollow shell within the enlargement, yielding  
40 supports connected to the shell, a ball within the shell and resting upon the supports, a stem extending through the shell and bearing upon the ball, and a cap connected to the opposite  
45 end of the stem, substantially as described.

5. A non-refillable bottle having a contracted neck forming an interior seat for a ball-valve, an enlargement above the seat, a shell within the enlargement, said shell having an  
50 open lower end, holes in the top, and yielding supports attached thereto, a stem passing through the shell and resting upon the ball, and a perforated cap attached to the opposite  
55 end of the stem, substantially as described.

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

JOHN W. EDWARDS.

Witnesses:

ELIZABETH M. RASING,  
ISRAEL KOYGERBERGER.