

No. 817,034.

PATENTED APR. 3, 1906.

O. E. S. AZZONI.
NON-REFILLABLE BOTTLE.
APPLICATION FILED APR. 19, 1905.

Fig. 1.

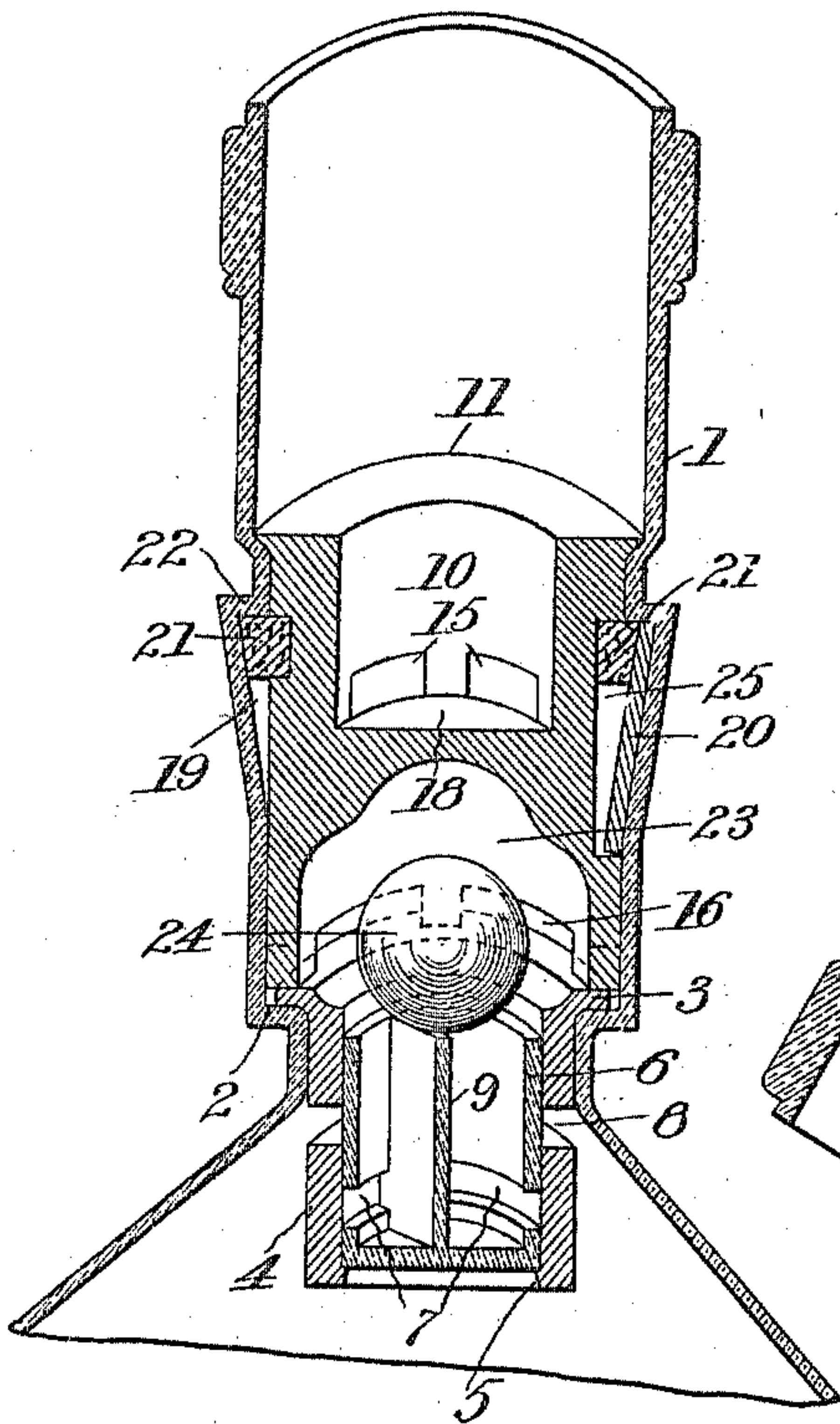


Fig. 2.

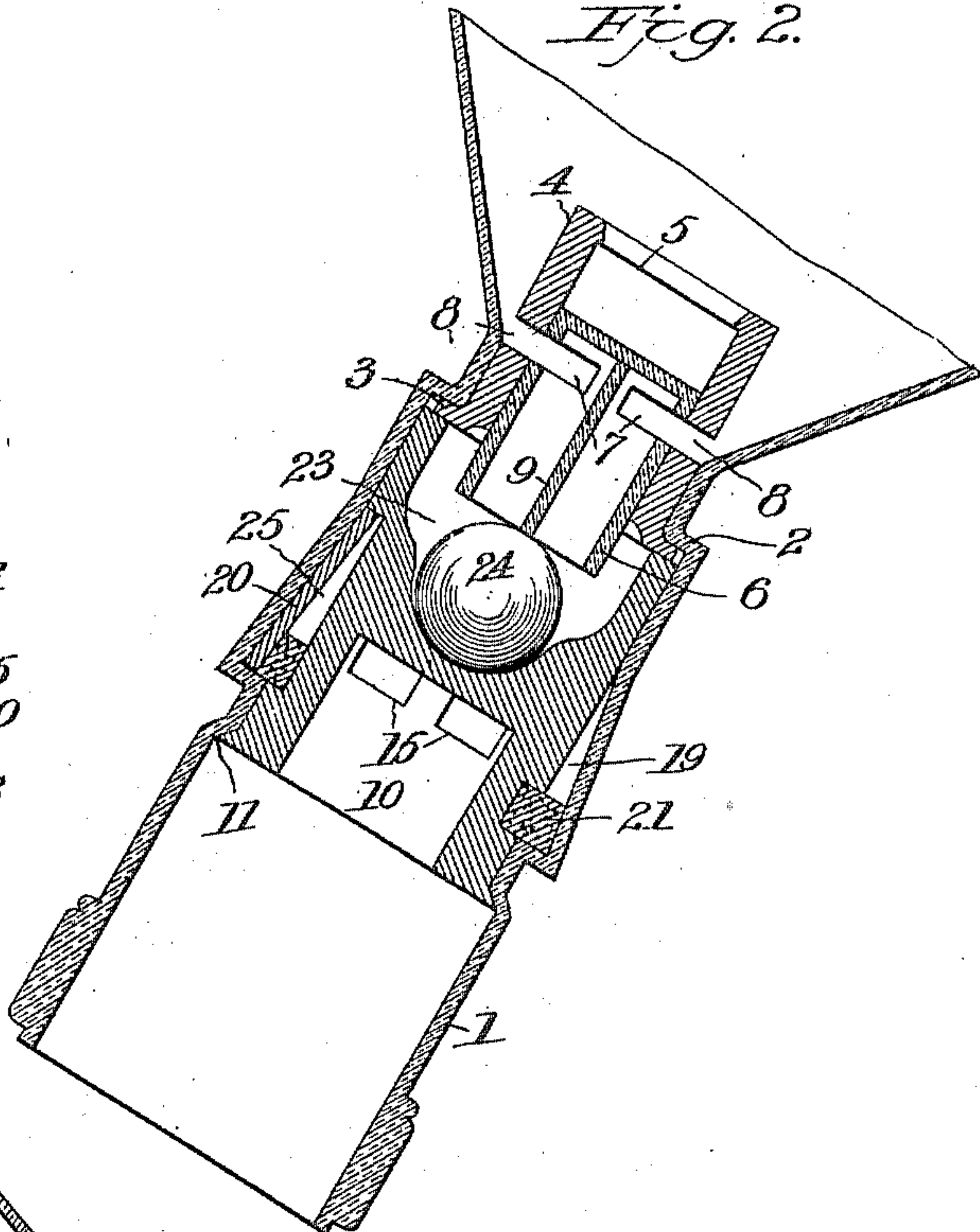


Fig. 3.

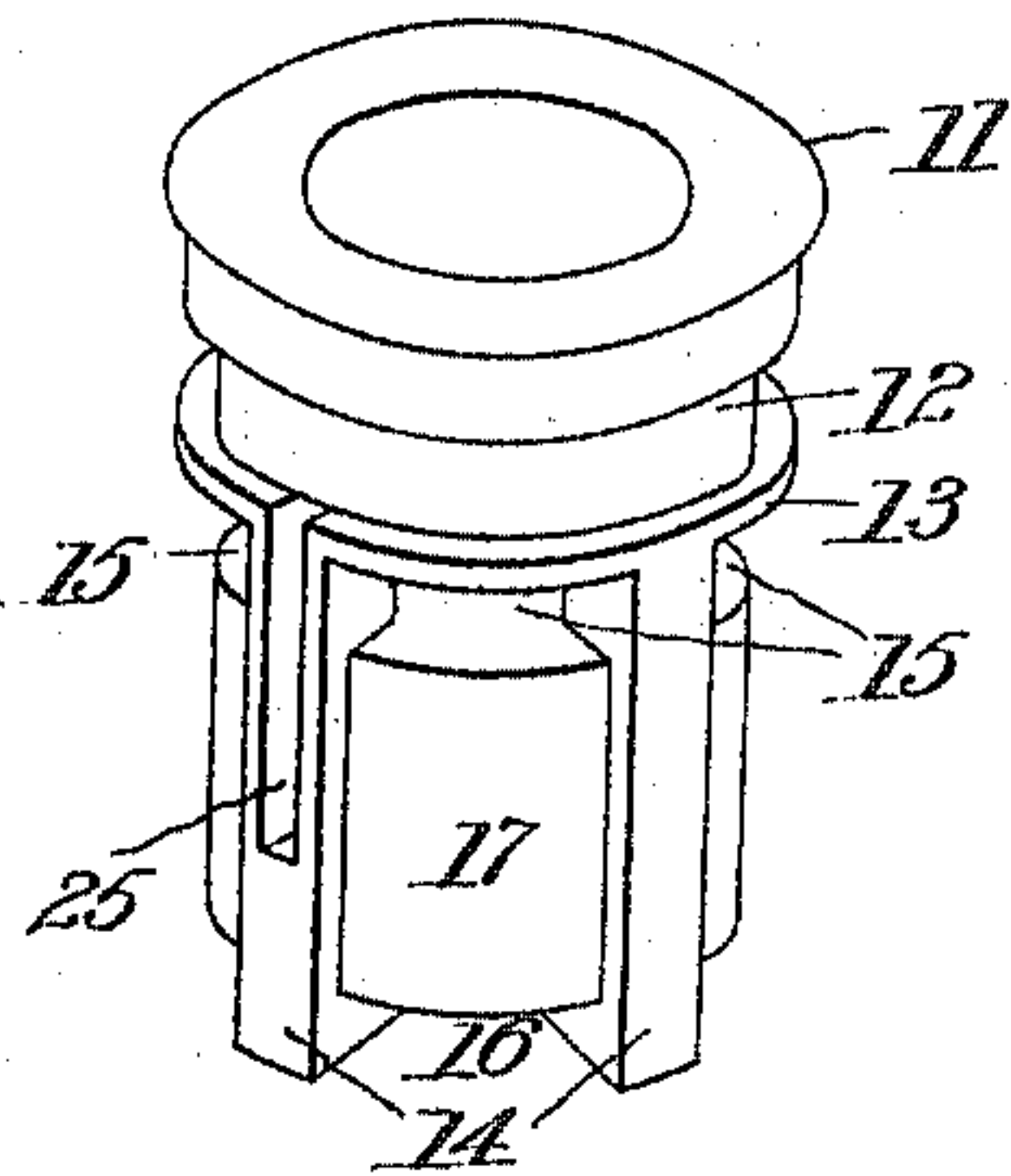


Fig. 4.

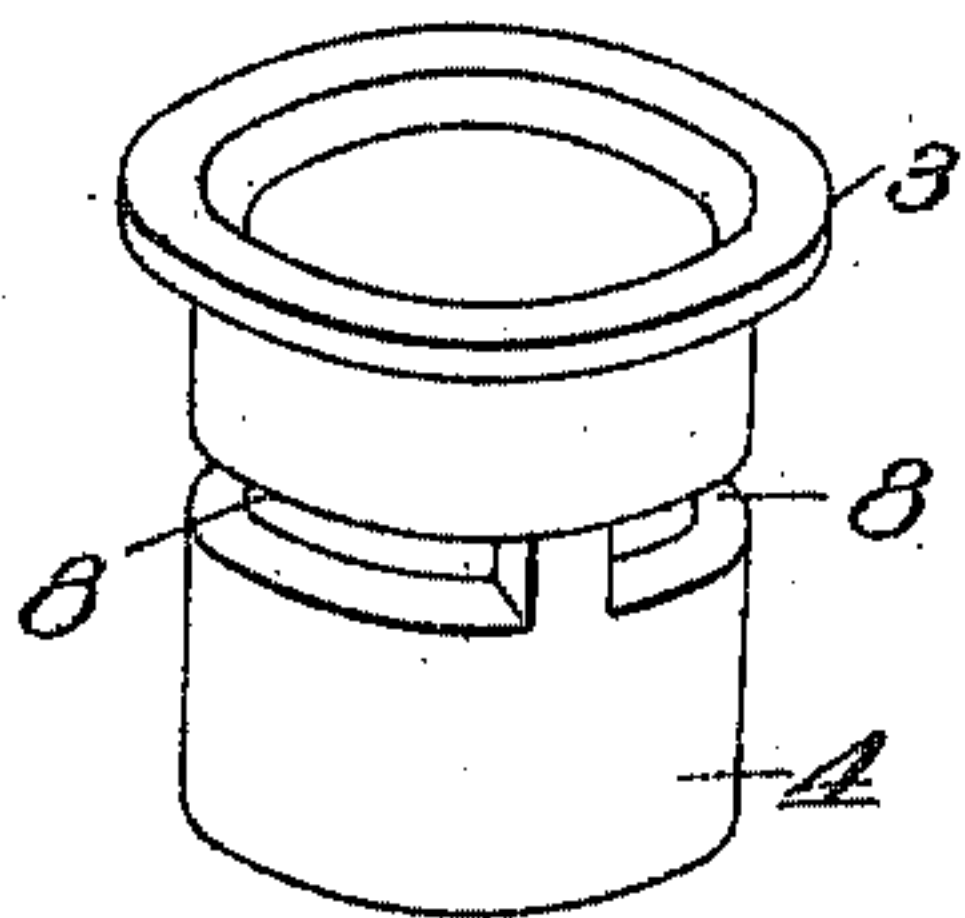
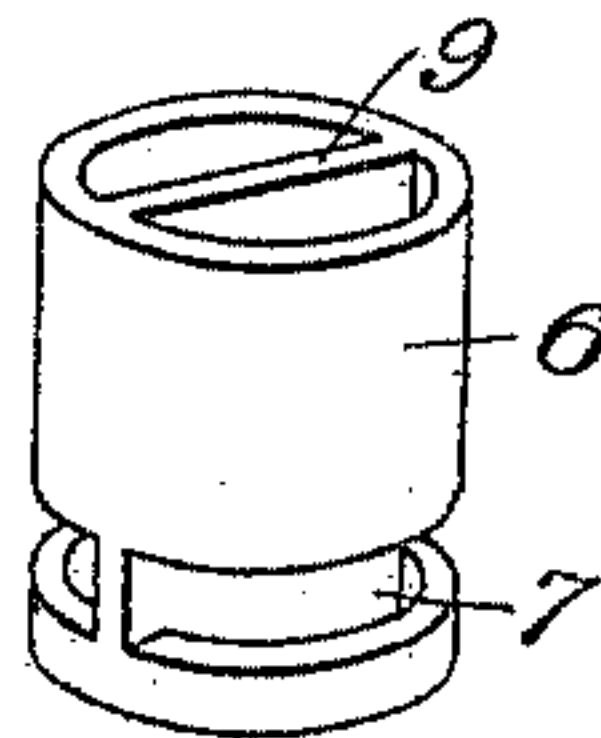


Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ORESTE E. S. AZZONI, OF PHILADELPHIA, PENNSYLVANIA.

NON-REFILLABLE BOTTLE.

No. 817,034.

Specification of Letters Patent.

Patented April 3, 1906.

Application filed April 19, 1905. Serial No. 256,441.

To all whom it may concern:

Be it known that I, ORESTE E. S. AZZONI, a subject of the King of Italy, and a resident of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

My invention relates to non-refillable bottles of the type shown in my application filed January 7, 1905, Serial No. 240,077.

My object is to provide a non-refillable bottle of the type shown in said application in which the parts are strengthened and so disposed as to render it easy of application to a bottle-neck, the latter of which can be easily made with the proper contour necessary to adapt the valve structure thereto in the simplest and most effective manner and to permanently retain the said valve structure in place therein.

With these objects in view my invention consists in the novel construction and combination of parts, as hereinafter described with reference to the accompanying drawings, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a central section in perspective of a bottle-neck, showing my invention applied thereto. Fig. 2 is a central section through the bottle-neck in pouring position. Fig. 3 is a perspective view of the guard structure; and Figs. 4 and 5 are similar views, respectively, of the valve-casing and valve.

Referring to the drawings, in which the same reference characters designate the same or corresponding parts in all the views, the bottle-neck 1 is provided with a shoulder 2 at its lower end adapted to support the flange 3 of the valve-casing 4. This valve-casing is provided with suitable ports 8 and an internal flange 5 at the bottom against which the tubular valve 6 rests when in closed position, the said valve being provided with ports 7, adapted to register with the ports 8 in the casing when the bottle is in pouring position, as shown in Fig. 2, and thereby afford a passage for the liquid from the interior of the bottle to the interior of the valve, the latter, it will be observed, having a closed bottom, so as to compel the liquid to pass through the ports 7 and 8 into the interior of the valve

structure. This valve is also provided with strengthening-webs 9, so that it may, if desired, be made of glass and possess sufficient rigidity to resist breakage.

Surmounting the valve-casing is a guard structure comprising a tubular body portion 10, having a flange 11 at its upper end adapted to fit snugly within the bottle-neck and to rest upon an internal shoulder therein, as shown in Fig. 1, and an intermediate perforate disk portion 18, above which are ports 15, communicating with spaces 17 between the ribs or posts 14, extending downwardly from the body portion, the lower ends of which ribs or posts rest upon the top of the flange 3 and form ports 16, communicating with the interior of the valve structure through the spaces 17. This construction, it will be observed, provides a tortuous channel for the passage of the liquid from the interior of the valve structure to the bottle-neck, as indicated in Fig. 2, by way of the ports 16, passages 17, and ports 15.

On the under side of the disk portion 18 of the guard structure a concavity 23 is provided for the reception of a ball 24, which when the bottle is in pouring position rests in said concavity and when turned to closed position falls against the valve 6, striking the web 9, and thus quickly and forcibly seating the same upon the flange 5.

In order to effectively and conveniently secure the guard structure permanently in place within the bottle-neck, I preferably enlarge the latter, so as to provide an internal tapering recess 19, terminating at its top in a shoulder 22, and around the body portion of the guard structure 10 I provide a groove 12, the upper edge of which is adapted to aline with the shoulder 22. In this groove I place a compressible ring 21, preferably of cork, which when the guard structure is forced into position is compressed until the said ring passes below the shoulder 22, whereupon it expands underneath said shoulder and presses against the locking-strip 20, preferably of glass, the lower end of which rests in the bottom of the recess 25 in one of the posts or ribs 14, the upper end bearing against the shoulder 22. The cork ring and the locking-bar 20 thus provide effective means for locking the guard structure in position, while they are easily applicable to the bottle-neck, which

because of the formation of the space entirely around the same presents no difficulty in molding or otherwise forming the bottle.

I claim as my invention—

- 5 1. In a non-refillable bottle, the combination with the bottle-neck having an internal recess extending around the same and terminating in a shoulder at the upper portion, a casing, a valve slidably mounted therein, a
10 guard structure above and covering the upper end of the casing provided with a groove around its outer surface, a compressible ring in said groove adapted to expand into the enlargement of the bottle-neck and engage with
15 the shoulder, said guard structure having a recess therein, and a locking-bar having its lower end seated in said recess with its upper end clamped between said ring and the bottle-neck, substantially as described.
- 20 2. In a non-refillable bottle, the combina-

tion with a bottle-neck having an internal recess therein, of a casing, a valve, a guard structure above said structure, having a groove around its upper portion and posts extending downwardly from the upper portion, 25 one of said posts having a recess therein, a locking-bar in the recess of the bottle-neck and having its lower end resting in the bottom of the recess in the post of the guard structure, and a compressible ring seated in said groove and clamping the upper end of the locking-bar in the bottle-neck, substantially as described. 30

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 35

ORESTE E. S. AZZONI.

Witnesses:

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