

No. 871,276.

PATENTED NOV. 19, 1907.

A. JAMESON.
NON-REFILLABLE BOTTLE.
APPLICATION FILED JAN. 14, 1907.

Fig. 1.

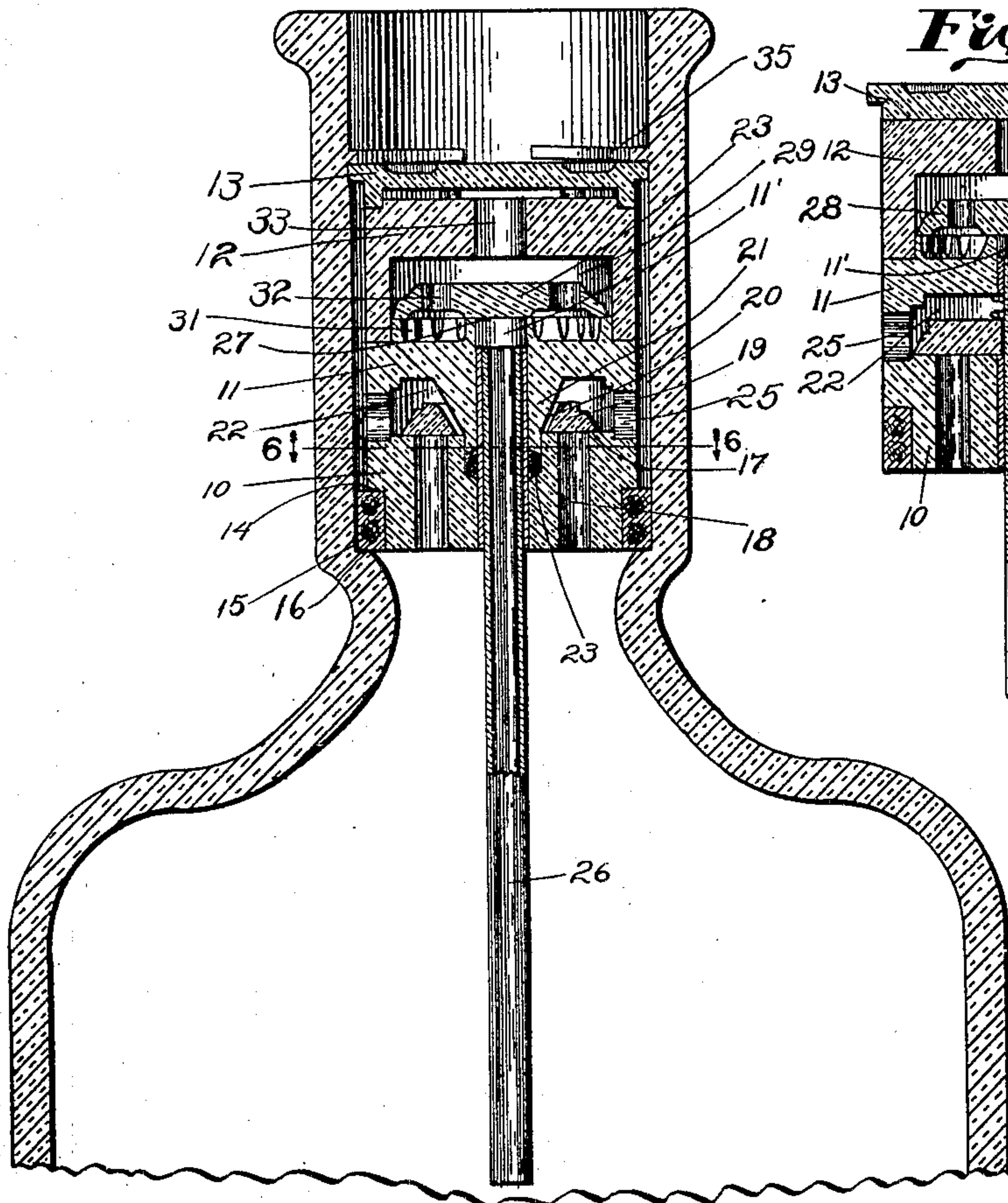


Fig. 2.

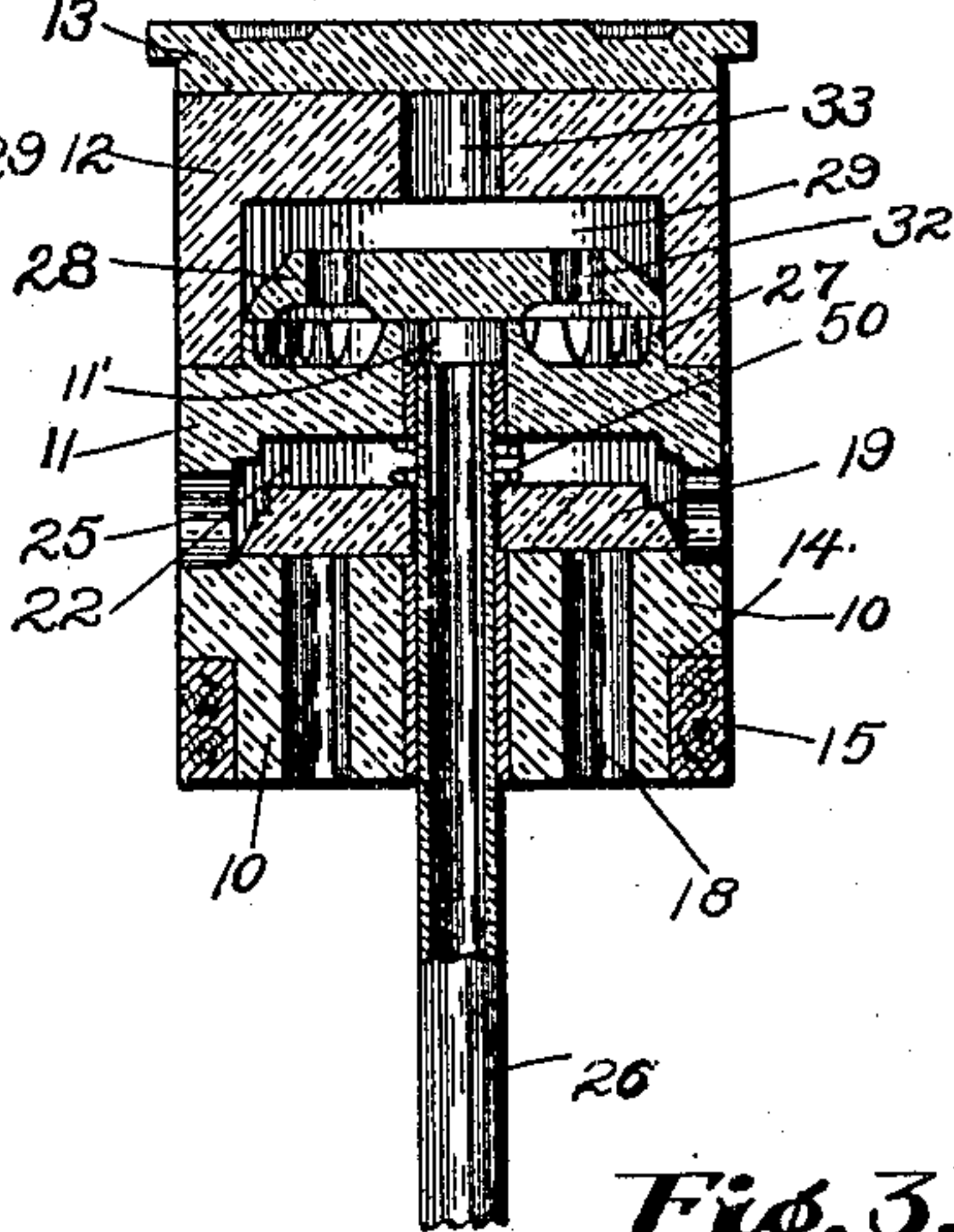


Fig. 3.

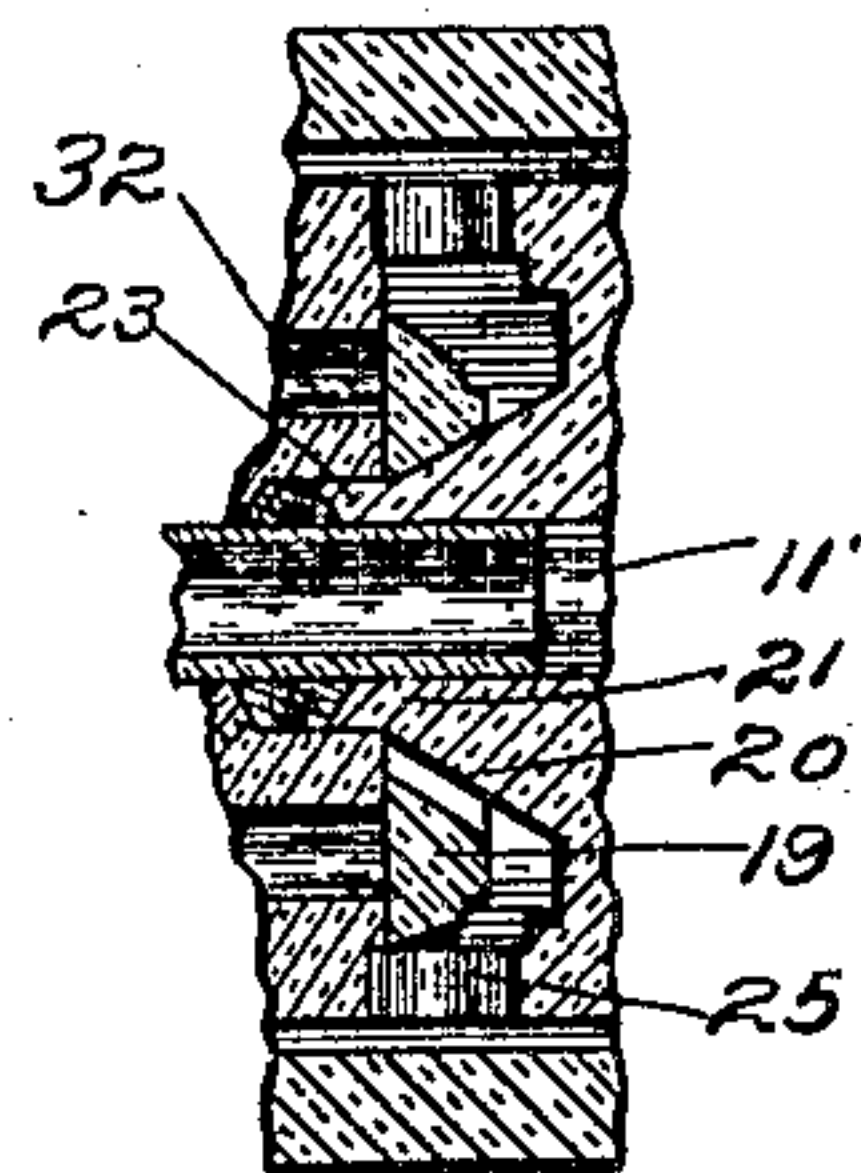


Fig. 4.

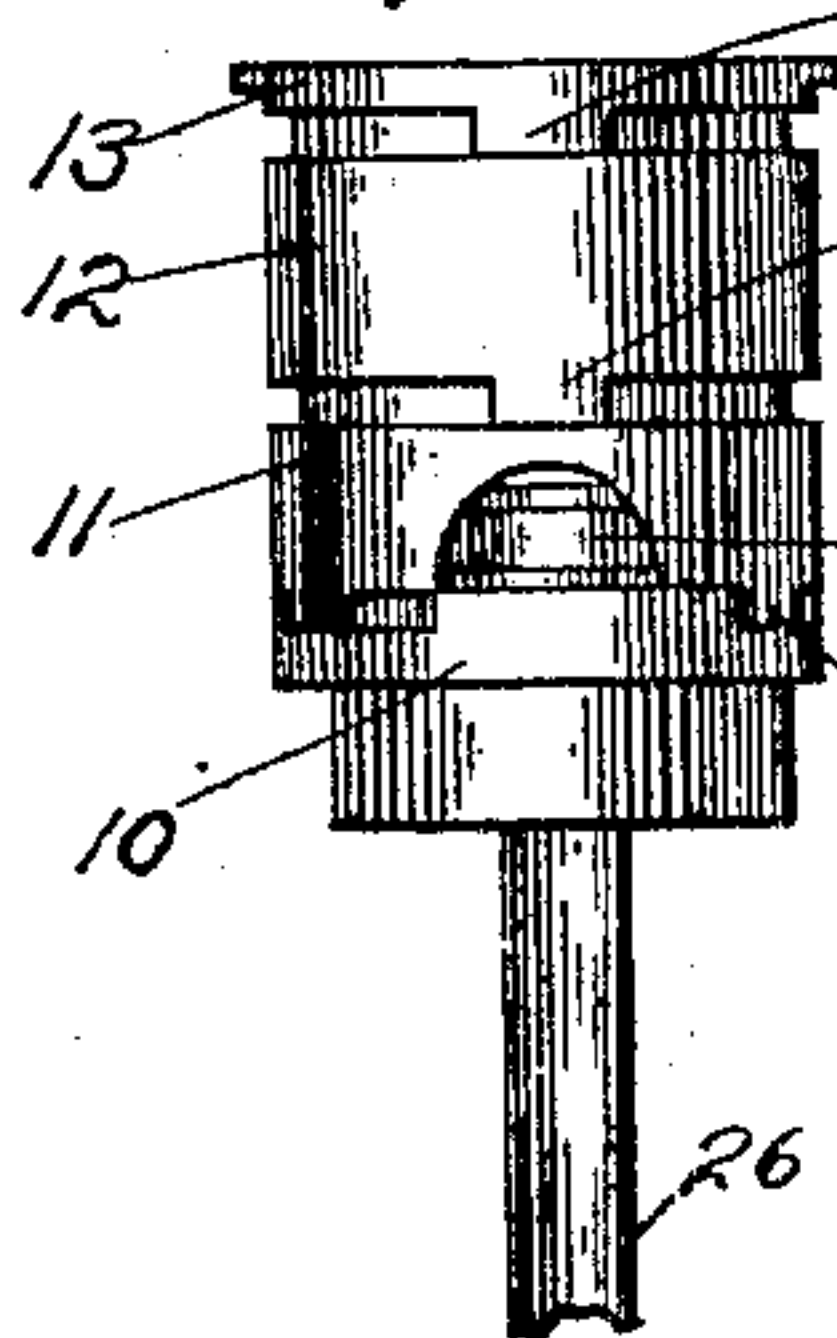


Fig. 5.

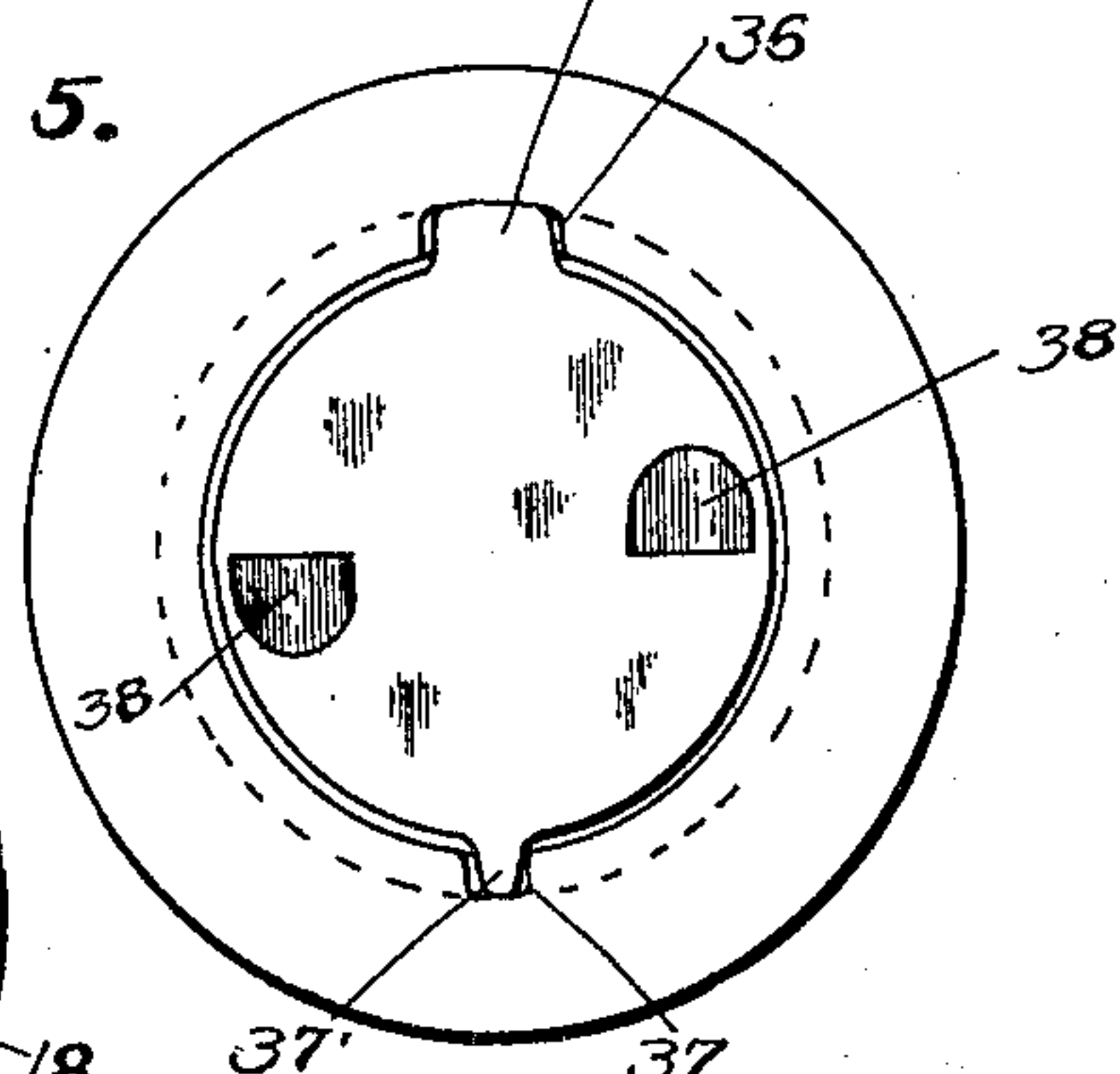
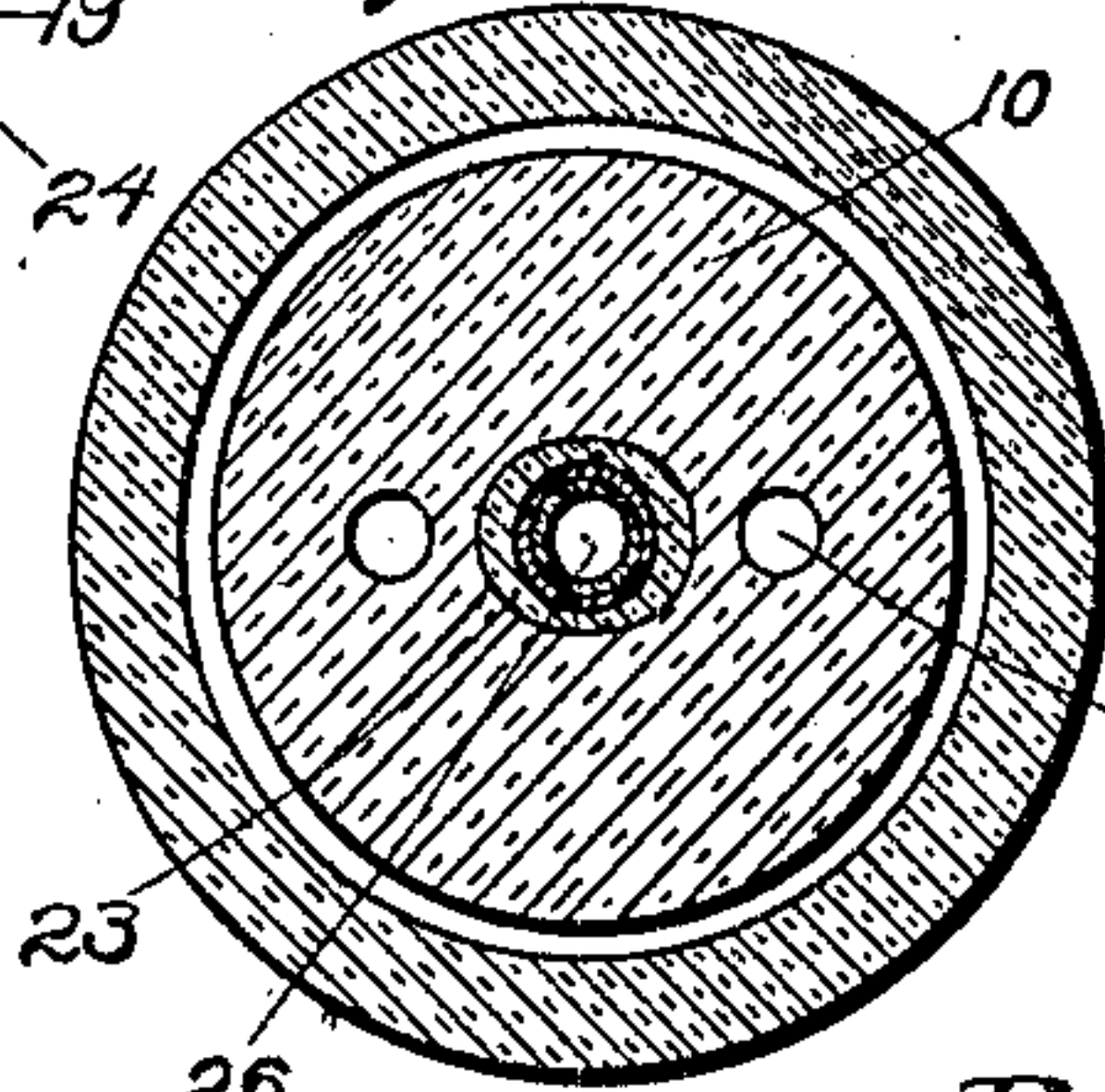


Fig. 6.



Witnesses
Karl Glendening,
Thomas W. McMeans.

Inventor,
Alexander Jameson.

By
Bradford Hood,
Attorney.

UNITED STATES PATENT OFFICE.

ALEXANDER JAMESON, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO LAZ NOBLE, TRUSTEE,
OF INDIANAPOLIS, INDIANA.

NON-REFILLABLE BOTTLE.

No. 871,276.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed January 14, 1907. Serial No. 352,221.

To all whom it may concern:

Be it known that I, ALEXANDER JAMESON, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

The object of my invention is to produce a simple, yet efficient, structure by means of which refilling of bottles may be prevented.

The accompanying drawings illustrate my invention: Figure 1 is an axial section of my improvement; Fig. 2 a similar section of a modified form; Fig. 3 a detail showing the position assumed by the valve when the bottle is laid on the side; Fig. 4 a side elevation on a smaller scale; Fig. 5 a plan, and Fig. 6 a section on line 6—6 of Fig. 1.

The apparatus is composed primarily of four sections, 10, 11, 12, and 13, which may conveniently be formed of glass. The section 10 is provided at its lower end with an exterior shoulder 14 adapted to receive a cork ring 15 which is adapted to abut against a suitable annular flange 16 formed in the neck of the bottle. The upper end of section 10 is ground to a flat, true valve seat 17 and leading axially through the section are liquid passages 18 which open into the valve face 17. Resting upon the face 17 is a valve 19, which, in form shown in Fig. 1 is provided with a central conical opening 20 adapted to fit loosely upon a conical spud 21 formed axially on the member 11, said member 11 having formed therein a valve chamber 22 within which the valve 19 may play. The spud 21, at its lower end, is non-circular in cross section and enters a correspondingly shaped recess 23 formed in the upper end of the member 10. The additional connections between members 10 and 11 are short spuds 24 formed on the member 11 and projected into properly formed larger recesses in the upper end of member 10, the arrangement being such that, if turned backward, the member 11 may turn without moving member 10, but if so turned backward the part 23 will be broken by the twisting action within its socket. Passages 25 through the wall of member 11 form outlets from the valve chamber 22. Cemented into member 10 and projecting up into member 11, or at least communicating with the central air passage 11' thereof, is a vent pipe

26. The passage 11 is provided at its upper end with a valve seat 27 upon which rests the air valve 28. The air valve lies in a chamber 29 formed in the shield member 12, and members 12 and 11 are connected by short spuds 30 formed on the member 12 and projected into suitably formed recesses in the upper end of the member 11. The upper end of member 11 is also provided with a series of short upwardly extending fingers 31 adapted to form a support for the outer edge of the air valve 28, the upper ends of said fingers being of comparatively small area and separated so that there will be no tendency for the valve 28 to stick thereon. Valve 28 is provided with air passages 32 which are out of alinement with the passage 11' and an air passage 33 is formed through the shield member 12 out of alinement with the passages 32.

In order to prevent the possibility of the valve 28 being lifted by means of an instrument introduced through the air passage 33, said passage is covered by the cap member 13 and this cap member is connected with the member 12 by means of short spuds 34 which enter suitably formed recesses in the upper end of member 12. Cap 13, as well as members 12 and 11, are somewhat less in diameter than the internal diameter of the neck of the bottle and the bottle neck is provided, near its upper end with a pair of screw threads 35 which are separated at their ends, as at 36 and 37, the space at 36 being greater than the space at 37, a cap 13 being provided with a number of projecting tongues 36' and 37', which are adapted to enter the spaces 36 and 37 respectively, the tongue 36' being wider than the tongue 37' in order to pass beneath the threads 35, and thus permit the entire structure to be screwed down to the position shown in Fig. 1, the arrangement being such that a complete rotation of the cap member must be had before the structure can be removed from the bottle neck. The parts are so proportioned that such a complete revolution cannot be produced without breaking the parts, the pitch of the threads 35 being sufficient to permit the setting of ring 15 on shoulder 16 by less than half a turn of the cap 13.

Formed in the upper face of the cap 13 are opposed notches 38 which are inclined in one direction only so as to form shoulders at only one end of the notch, said shoulders being so

arranged that a properly shaped tool may serve to rotate in one direction but not in the other. The angle of the cone 21 is such that if the bottle be laid upon its side, the valve 20 will slide down the cone and seat itself upon seat 17, in the mannershown in Fig. 3. If desired, the cone 20 may be omitted and a light spring 50 inserted above the valve 19.

It will be noticed that the several parts are of such shape that they may be readily and commercially formed in glass, and that the several passages are so shaped as not to require complicated mechanism for producing the same.

I claim as my invention:

1. A device of the class described, comprising a plurality of separable members having intermediate connections permitting common rotation, a liquid valve arranged between two of said members, an air valve arranged between two of said members, and an outer member provided with means by which it may be turned in one direction only.

2. A device of the class described, comprising an inner member 10 having liquid passages therethrough, and a valve seat at its upper end, a member 11 arranged in the line of member 10 and having a valve chamber, a valve cone 21, a valve adapted to seat upon the upper end of the member 10 and having a central opening receiving the valve cone, whereby the valve will slide upon the cone toward its seat, the said several members having an air vent passage therethrough, an air valve closing the outer end of said air passage, and means for protecting said air valve against manipulation from the exterior.

3. A device of the class described, comprising an inner member 10 having liquid passages therethrough, and a valve seat at its upper end, a member 11 arranged in the line of member 10 and having a valve chamber, a valve cone 21 entering the member 10 with a non-circular portion, a valve adapted to seat upon the upper end of the member 10 and having a central opening receiving the valve cone, whereby the valve will slide upon the cone toward its seat, the said several members having an air vent passage therethrough, an air valve closing the outer end of said air passage, and means for protecting said air valve against manipulation from the exterior.

4. A device of the class described, comprising an inner member 10 having liquid passages therethrough, and a valve seat at its upper end, a member 11 arranged in the line of member 10 and having a valve chamber, a valve cone 21 entering the member 10 with a non-circular portion, a valve adapted to seat upon the upper end of the member 10 and having a central opening receiving the valve cone, whereby the valve will slide

upon the cone toward its seat, the said several members having an air vent passage therethrough, an air valve closing the outer end of said air passage, a member 12 arranged at the outer end of member 11 and having an air valve chamber within which the air valve plays, and means whereby said member 12 may be turned in one direction only.

5. A device of the class described, comprising an inner member 10 having liquid passages therethrough, and a valve seat at its upper end, a member 11 arranged in the line of member 10 and having a valve chamber, a valve cone 21 entering the member 10 with a non-circular portion, a valve adapted to seat upon the upper end of the member 10 and having a central opening receiving the valve cone, whereby the valve will slide upon the cone toward its seat, the said several members having an air vent passage therethrough, an air valve closing the outer end of said air passage, a member 12 arranged at the outer end of member 11 and having an air valve chamber within which the air valve plays, a cap member 13 provided with means by which it may be turned in one direction only, and a pair of oppositely extending fingers adapted to pass between adjacent ends of and beneath screw threads formed in the bottle neck.

6. A device of the class described, comprising an inner member 10 having liquid passages therethrough, and a valve seat at its upper end, a member 11 arranged in the line of member 10 and having a valve chamber, a valve cone 21 entering the member 10 with a non-circular portion, a valve adapted to seat upon the upper end of the member 10 and having a central opening receiving the valve cone, whereby the valve will slide upon the cone toward its seat, the said several members having an air vent passage therethrough, an air valve closing the outer end of said air passage, a member 12 arranged at the outer end of member 11 and having an air valve chamber within which the air valve plays, a cap member 13 provided with means by which it may be turned in one direction only, and a pair of oppositely extending fingers adapted to pass between adjacent ends of and beneath screw threads formed in the bottle neck, said fingers being of different widths.

In witness whereof, I, have hereunto set my hand and seal at Indianapolis, Indiana, this fourth day of January, A. D. one thousand nine hundred and seven.

ALEXANDER JAMESON. [L. S.]

Witnesses:

ARTHUR M. HOOD,
THOMAS W. McMEANS.