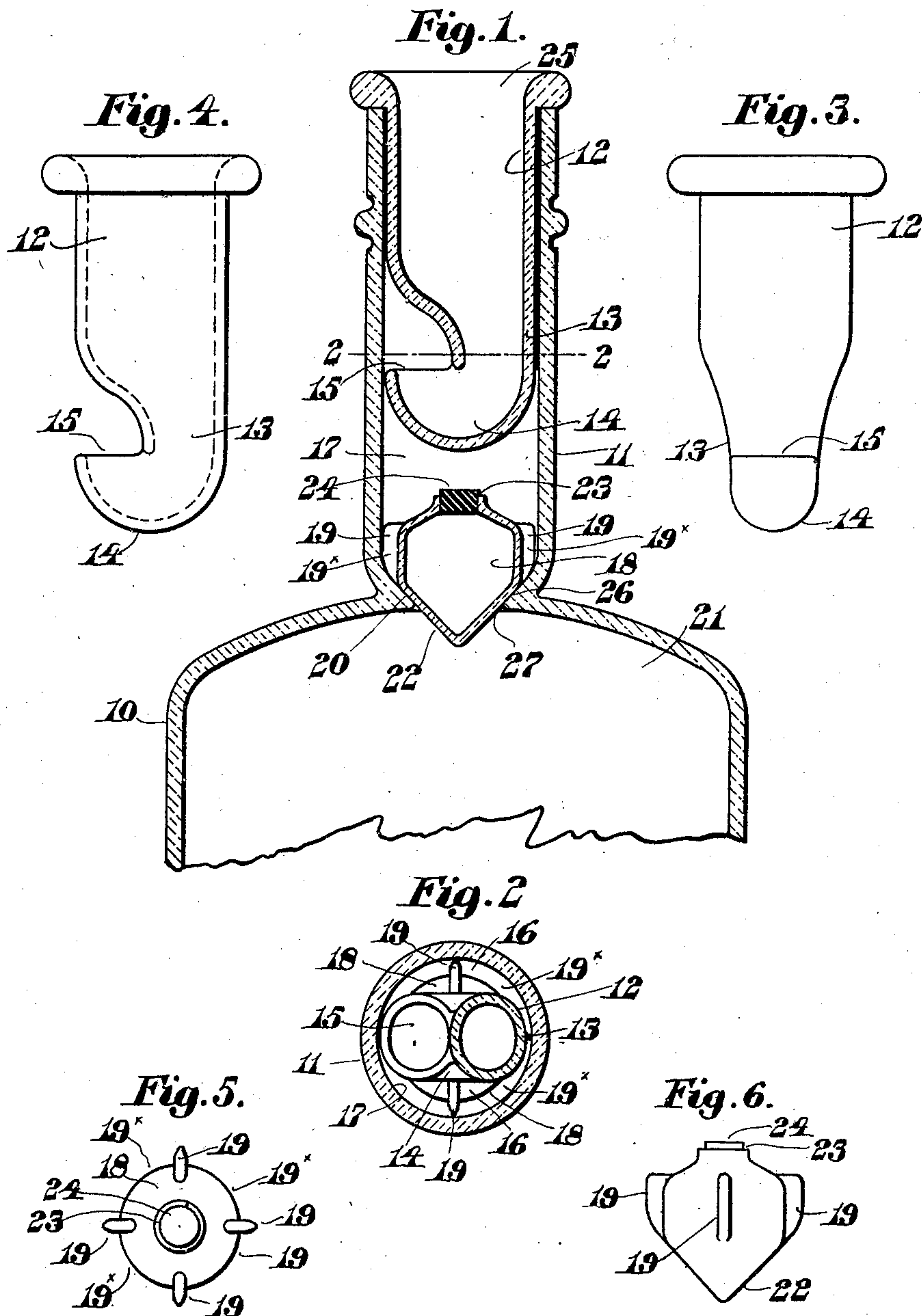


No. 862,359.

PATENTED AUG. 6, 1907.

J. SPINELLI.
NON-REFILLABLE BOTTLE.
APPLICATION FILED AUG. 15, 1906.



Witnesses:
Nathan C. Lombard
George H. Beadle

Inventor:
John Spinelli,
by Walter C. Lombard,
Atty.

UNITED STATES PATENT OFFICE.

JOHN SPINELLI, OF BOSTON, MASSACHUSETTS.

NON-REFILLABLE BOTTLE.

No. 862,359.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed August 15, 1906. Serial No. 330,634.

To all whom it may concern:

Be it known that I, JOHN SPINELLI, a citizen of the United States of America, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have
5 invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to non-refillable bottles and has for its object the production of a device whereby a
10 bottle once filled with a beverage cannot be used again for the purpose of dispensing another beverage without the fact being disclosed to the purchaser.

The invention consists in certain novel features of construction and arrangement of parts which will be
15 readily understood by reference to the description of the drawings and to the claims to be hereinafter given.

Of the drawings: Figure 1 represents a section of the neck of a bottle in which this improved invention is incorporated. Fig. 2 represents a horizontal section on
20 line 2—2 on Fig. 1. Figs. 3 and 4 represent, respectively, a front and side elevation of the inner neck closure, and Figs. 5 and 6 represent, respectively, a plan and an elevation of the valve.

Similar characters designate like parts throughout
25 the several figures of the drawings.

In the drawings, 10 represents a bottle of any well known construction provided with a neck 11. The inside of this neck 11 is fitted with a closure 12 which is held in position therein by a layer of cement or other
30 similar material. The mouth of the closure 12 is adapted to receive an ordinary stopper. The inner end of the closure 12 terminates in an extension 13 of smaller area and this extension 13 is provided with a reverse bend 14 so that the inner end 15 of said closure points in the
35 same direction as the mouth of the bottle.

Between the outer walls of the bend 14 of the extension 13 and the inner walls of the neck 11 of the bottle 10 are formed passages 16 which communicate with the inner chamber 17 of the neck 11, in which chamber is
40 mounted a hollow cylindrical valve 18 provided with outwardly extending radial ribs 19 which provide a suitable guide for said valve as it moves longitudinally of said neck 11. These ribs 19 form suitable passages 19* outside the walls of said valve 18 through which the
45 liquid is adapted to flow when the valve 18 is removed from its seat 20 in the neck 11. This seat 20 is formed by contracting the mouth of said neck 11 at the point it connects with the main chamber 21 of the bottle 10. The valve 18 is provided with a pointed end 22 which
50 is adapted normally to engage with said seat 20 to prevent access to the interior chamber 21 and to prevent refilling the bottle in an upright position when empty.

The valve 18 is made hollow and of light material, preferably glass, so that when an attempt is made to fill the bottle while reversed the valve will float and be
55 forced quickly to its seat to prevent access to the chamber 21, all in an obvious manner.

The upper part of the valve 18 is made open as at 23 and the opening 23 is provided with a buffer 24 of cork or similar material which is adapted to contact with the
60 reverse bend 14 in the movement of said valve 18 away from its seat 20, thus preventing the valve 18 from becoming injured by contact with the closure 12. The area of the two passages 16 equal the area of the contracted interior of the terminating end 15 of said closure 12
65 so that a free delivery of the contents of said bottle is always assured.

When it is desired to dispense beverages from the bottle, the cork (not shown) is removed from the outer end of the mouth 25 and the bottle 10 inclined in such
70 position as to permit the valve 18 to move toward said inner closure 12 on the ribs 19 which fit the inner walls of the neck 11. The buffer 24 will limit the movement of the valve toward the inner closure 12 by coming in contact with the bend 14, the buffer 24 serving to pre-
75 vent the two glass members coming in contact with each other and thereby insuring that neither should be injured. When the valve 18 is in withdrawn position, the liquid will pass through the passages 19* formed by the ribs 19. The outer wall of the valve 18 and the in-
80 ner walls of the neck 11, then passing through the inner chamber 17, the passages 16 to the open end 15 of the reverse bend 14 of the closure 12 through which the liquid is finally delivered from the mouth 25 into the glass or other receptacle provided to receive it. When re-
85 turned to its normal position the valve will move to close the contracted portion 20 of the mouth thereof, the inclined end 22 bearing against the inclined wall 26 of the seat 20 to close the inlet and prevent the bottle from being filled with another liquid. If the bot-
90 tle is inverted and an attempt is made to force a liquid into the bottle while in such inverted position said liquid will act upon said valve 18 to force it to its seat thereby closing the opening 27. The valve 18 is made hollow, of thin material, and is hermetically sealed by
95 the buffer 24 (which may be adjusted therein to limit the movement of said valve) so as to be buoyant and float whenever immersed in liquid so that if an attempt is made to fill the bottle when inverted in a receptacle full of liquid, the valve 18 will float and rise in the in-
100 verted neck 11 to cause the orifice 27 to be closed and prevent the liquid passing therethrough into the main chamber 21 of the bottle.

All the parts except the cork buffer 24 are made of

glass so that the liquid contained within the bottle cannot be contaminated by the devices used to prevent refilling.

It is believed that the invention will be thoroughly understood without any further description.

Claims.

1. The combination with a bottle having a cylindrical neck with a contracted portion adjacent the main portion of the bottle; of a valve of substantially the same diameter as the opening in said neck and adapted to fit said contracted portion when moved in one direction; and a separate closure inserted in said neck and secured therein having its inner end turned outwardly and adapted to limit the movement of said valve in the other direction.
2. The combination with a bottle having a contracted mouth; of a separate closure inserted in said mouth and secured therein having its inner end turned outwardly; and a valve normally adapted to close said contracted

mouth and limited in its movement therefrom by said closure.

3. The combination with a bottle; of a separate closure for the mouth thereof consisting of an inner cylindrical member fitting said mouth and terminating in a reverse turn of smaller size; and a valve interposed between said closure and the main chamber of said bottle.

4. The combination with a bottle; of a separate closure for the mouth thereof consisting of an inner cylindrical member fitting said mouth and terminating in a reverse turn of smaller size and forming passages between said closure and the wall of the neck of the bottle communicating with the main chamber; and a valve interposed between said closure and the main chamber of said bottle.

Signed by me at Boston, Mass., this 13 day of August—1906.

JOHN SPINELLI.

Witnesses:

WALTER E. LOMBARD,
NATHAN C. LOMBARD.