

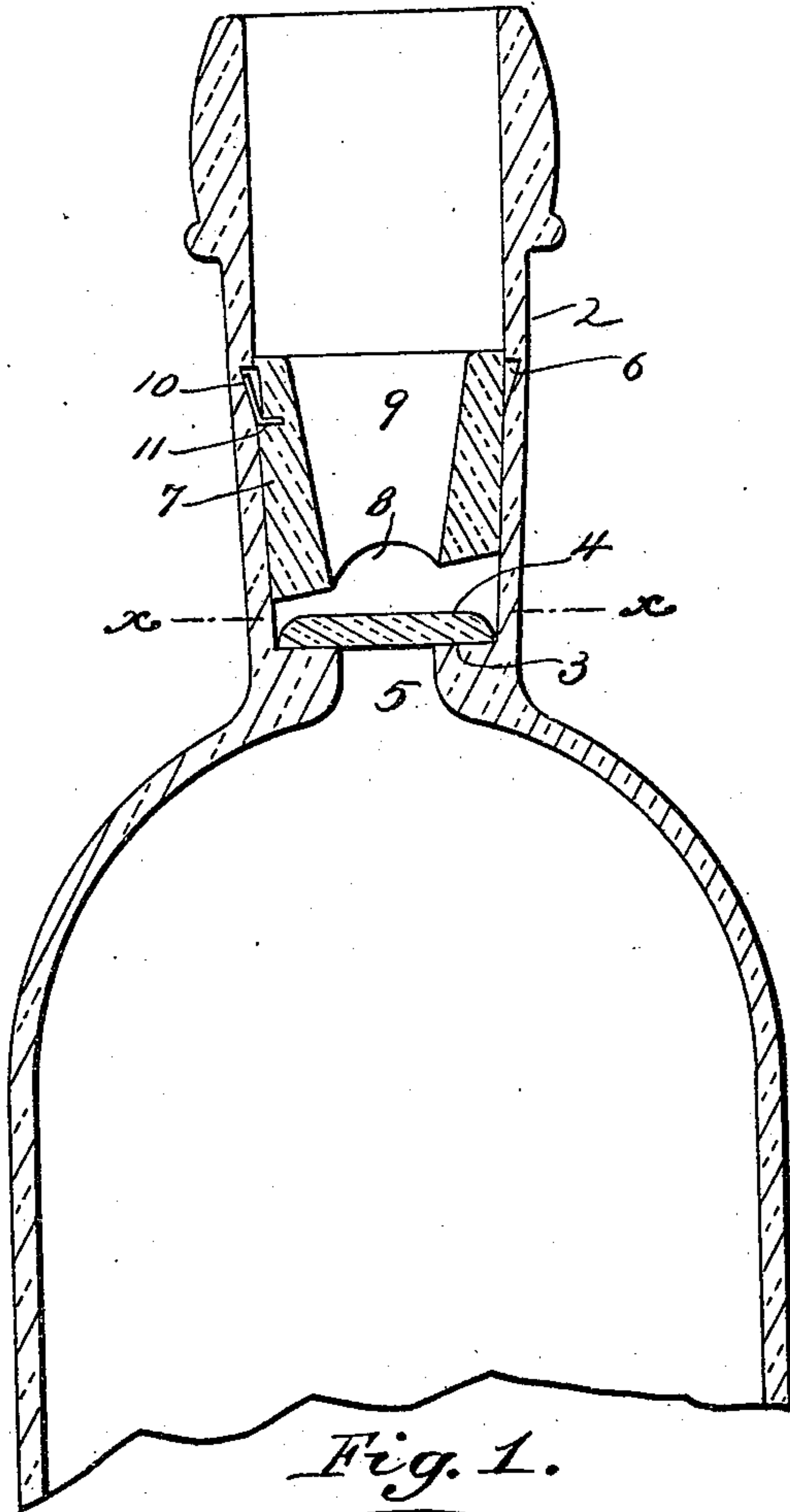
(No Model.)

J. L. WOLF.  
NON-FILLABLE BOTTLE.

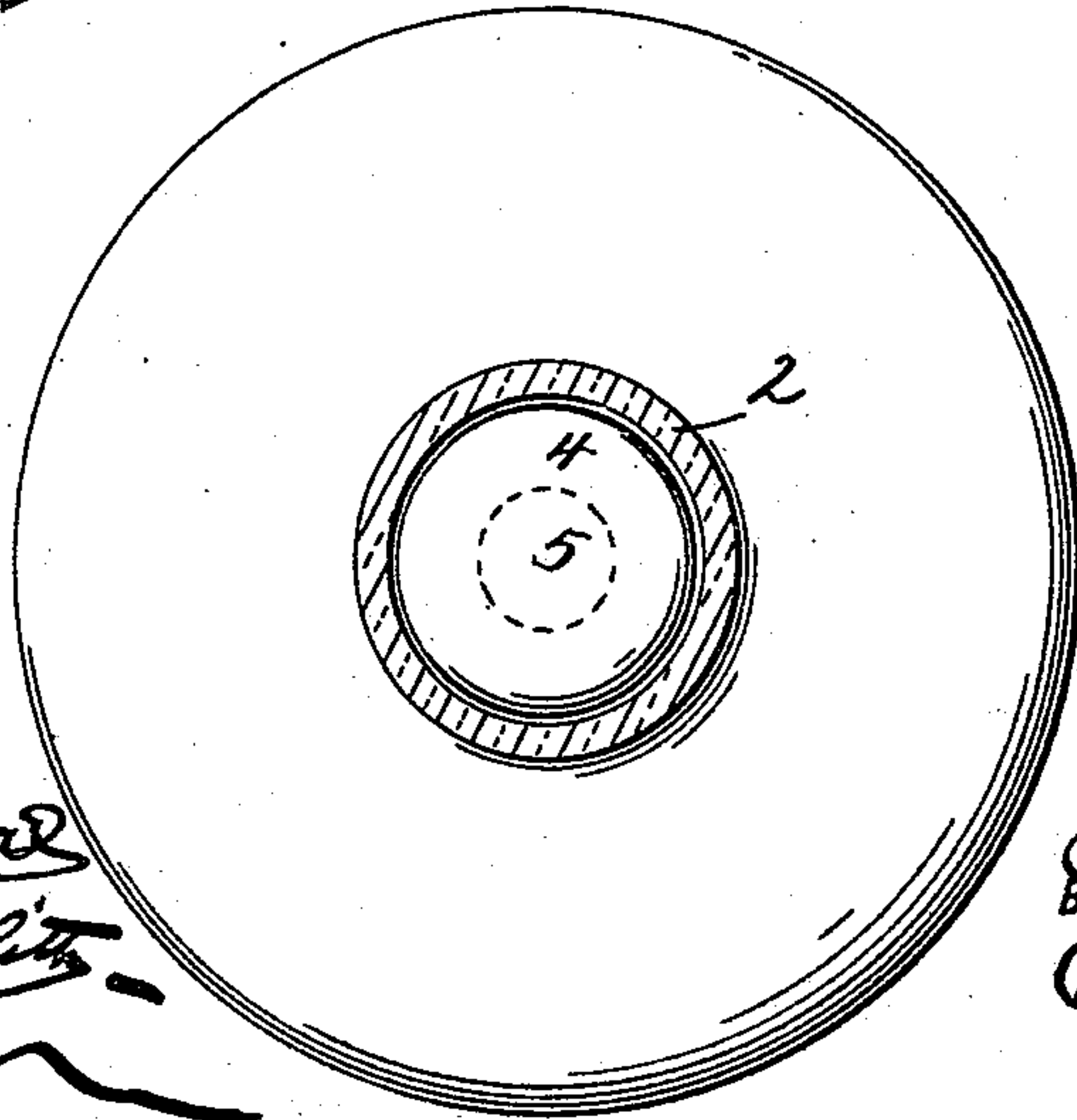
No. 551,069.

Patented Dec. 10, 1895.

*Fig. 1.*



*Fig. 1.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN L. WOLF, OF NEW YORK, N. Y.

## NON-FILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 551,069, dated December 10, 1895.

Application filed March 16, 1895. Serial No. 541,979. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN L. WOLF, a citizen of the United States, and a resident of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Non-Fillable Bottles, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar numerals of reference indicate corresponding parts in both views.

This invention relates to bottles, and the object thereof is to provide a non-removable stopper and automatic valve therefor, the construction and arrangement thereof being such that when the bottle has once been filled and the non-removable stopper and valve secured therein the bottle may be emptied of its contents, but cannot be refilled.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 represents a central vertical section of the neck of a bottle provided with my improvement, and Fig. 2 a section thereof on the line *x x*.

Referring to Fig. 1 of the drawings, the numeral 2 designates the neck of the bottle, the inner walls of which in my improvement are preferably slightly inclined from the top down to a point approximately near the lower end of the neck, at which place is formed an annular inwardly-directed shoulder or ledge 3, designed to receive and support an automatic plate-valve 4, preferably convex on its upper surface, and designed to close the central bore or passage 5 into the bottle. In the inner walls of the neck of the bottle, at a predetermined distance above said annular ledge or shoulder, is formed an annular recess or cavity 6, the upper wall of which is straight, forming an annular shoulder or projection, and the lower wall of which is inclined inwardly and downwardly, as shown. Within the neck, above said valve and at a short distance therefrom, is located an annular or tubular attachment or plug 7, the outer walls of which are adapted to fit the neck of the bottle at this point and the inner or central bore of which is preferably conical in form, the larger end or base thereof being directed upward. The lower end of this plug or attachment is

preferably inclined or cut away at an angle to the vertical or axial line thereof to facilitate the operation of the automatic valve, and at opposite sides the walls of said lower end are cut away, forming semicircular passages 8, which communicate with the central conical bore 9 of said plug or attachment when the valve 4 is seated thereon in the operation of emptying the bottle. Secured in the outer wall of said plug or attachment, at a short distance below the top thereof, is a spring 10, formed preferably of a short piece of metal, one end thereof being bent at an angle to the main body portion and said end being inserted into the body of the plug, as shown, by means of a perforation or hole 11, formed therein for this purpose, said spring being secured to said plug or attachment in such manner that the outer or free end thereof extends outwardly and upwardly therefrom, as shown in said Fig. 1.

The valve 4 and the annular plug or attachment 7 may be formed of any preferred material, glass being probably the best substance for this purpose, though hard rubber, aluminum, or other similar non-corrosive substances may be employed.

The parts are assembled in the following manner: The bottle having been filled, the valve 4 is first inserted and seated with its flat surface down, as shown in the drawings, after which the plug 7, with its spring attached, is forced downwardly into the neck of the bottle until the outer end of the spring 10 passes the annular shoulder formed by the annular recess or groove 6, when it immediately springs out beneath said shoulder and effectually prevents the removal of the stopper or attachment from the neck of the bottle. A number of these springs 10 may be employed, if desired, and the plug or attachment may also be coated with cement or other similar substance in a plastic condition before being inserted in the neck of the bottle if deemed necessary, and after said attachment or plug has been inserted the nozzle of the bottle may be closed by a cork in the usual manner.

If, now, at any time it be desired to empty the bottle or discharge a portion of the contents thereof, it is only necessary to remove the cork and hold the bottle tilted or in an inverted position in the usual manner, when



the valve 4 will leave its seat and be supported on the inner end of the plug or attachment 7, in which position the fluid contents of the bottle will flow out around said valve through the semicircular passages 8 into and through the central conical bore of the plug or attachment and out at the nozzle of the bottle, and this operation may be repeated or continued until the contents of the bottle are fully exhausted.

If, now, an attempt be made to refill the bottle and the same be held in any position which will admit of pouring liquids thereinto, the valve 4 will at once be reseated on the annular shoulder or ledge 3, and the central bore 5 effectually closed thereby, thus closing the passage into the bottle and preventing the refilling thereof. This operation of the valve 4 will be the same in any position in which the bottle can be held to admit of pouring liquids into the same, and I thus accomplish the object of my invention by means of a device simple in construction and operation, which is also comparatively inexpensive and does not add materially to the cost of the bottle, and which is adapted to effectually accomplish the result for which it is intended.

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

1. In a bottle stopper, the combination of a bottle-neck having an inwardly directed shoulder 3, a plate valve loosely arranged thereon, an annular recess 6 in the wall of the bottle-neck above the shoulder and having a straight upper wall forming an annular projection and an inclined lower wall, a tubular attachment 7 adapted to be arranged within the bottle-neck above the valve and having

its lower end cut away at an angle to the axial line of the attachment to facilitate the operation of the valve, and one or more springs 10 consisting of a short piece of metal, one end thereof being bent at an angle to the main body portion and inserted into holes 11 in the attachment and the free end thereof extending outwardly and upwardly and adapted to enter the recess 6 when the attachment is inserted in the bottle-neck, substantially as and for the purpose described.

2. The combination with the neck of a bottle, having an annular ledge or projection formed at or near the bottom thereof, of an automatic valve adapted to be seated thereon and to close the passage therethrough into the bottle, a non-removable plug or attachment secured within said neck at a short distance above said valve on which the valve is also adapted to be seated when the bottle is inverted, said plug being provided with a central bore or passage and the lower end thereof being cut off at an angle or inclination to the central line or axis of the plug or attachment, and the walls of said lower end being also cut away to form passages communicating with said central bore when the valve is seated on the lower end of the plug, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 15th day of March, 1895.

JOHN L. WOLF.

Witnesses:

PERCY T. GRIFFITH,  
A. M. CUSACK.