

**No. 626,741.**

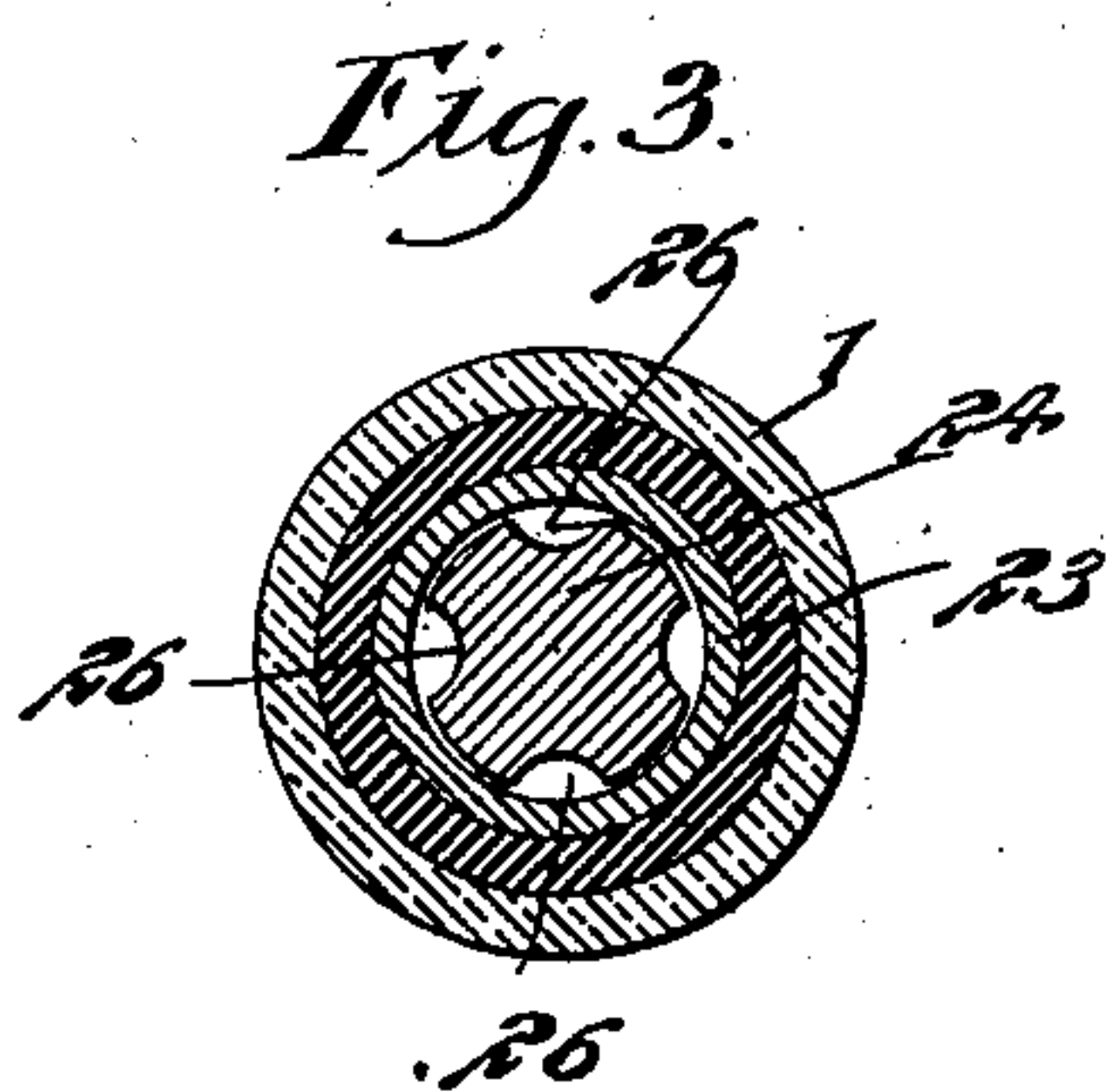
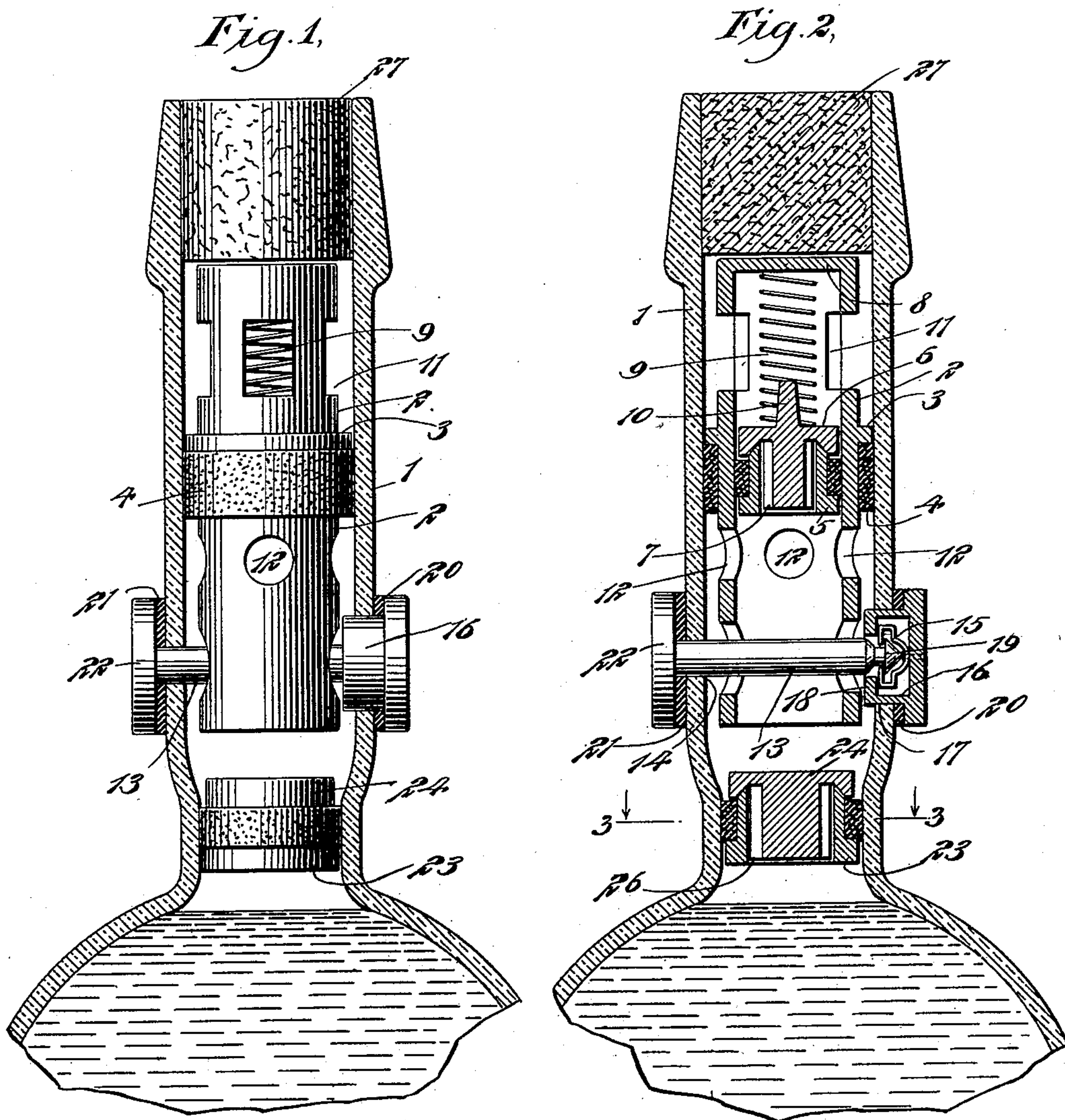
**Patented June 13, 1899.**

**H. WEIL.**

**NON-REFILLABLE BOTTLE.**

(Application filed Nov. 11, 1898.)

(No Model.)



**WITNESSES :**

Edward Thorpe.  
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# UNITED STATES PATENT OFFICE.

HENRY WEIL, OF NEW YORK, N. Y.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 626,741, dated June 13, 1899.

Application filed November 11, 1898. Serial No. 696,164. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY WEIL, of the city of New York, borough of Manhattan, in the county of New York and State of New York, have invented a new and Improved Non-Refillable Bottle, of which the following is a full, clear, and exact description.

This invention relates to bottles of the non-refillable class; and the object is to provide a bottle of this character with a valve mechanism of simple and comparatively inexpensive construction that may be placed and secured in a bottle-neck not materially differing in shape from the ordinary bottle-neck, thus permitting of the bottle being made in the ordinary molds, and, further, to so construct the valve that it will be practically impossible to refill the bottle, therefore protecting the purchaser from a spurious article.

I will describe a non-refillable bottle embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional elevation of a bottle-neck, showing in elevation a valve mechanism embodying my invention. Fig. 2 is a vertical section of the bottle-neck and valve mechanism, and Fig. 3 is a section on the line 3 3 of Fig. 2.

Referring to the drawings, 1 designates the neck of a bottle, and 2 indicates a tubular valve-casing secured therein. As shown, this valve-casing has between its ends an annular flange 3, which engages closely against the interior of the neck of the bottle, and surrounding the casing, below this flange, is a bushing 4, of cork or similar material. Secured within the valve-casing is a tubular valve-seat 5, in which a valve 6 operates. This valve 6 has a stem portion which extends down into the tubular valve-seat, and this stem portion is fluted longitudinally or provided with corrugations 7, through which liquid may flow when the valve is open. The upper portion of the valve is provided with a head adapted to bear upon the tubular valve-seat 5, and between the closed upper end 8 of the valve-casing and the top of said valve is a light coil-spring 9, serving nor-

mally to hold the valve upon its seat. To prevent the displacement of the spring relatively to the valve, I provide said valve with a projection 10, which extends into the spring.

Above the valve 6 the casing 2 is provided with lateral outlet-ports 11, and below said valve the casing is provided with lateral inlet-ports 12. After placing the valve-casing, with the valve mechanism, in the neck of the bottle it is to be securely locked to prevent its withdrawal. As a means for locking the casing in position I employ a locking-bar 13, which passes through an opening 14 in one side of the bottle-neck and at its opposite end engages with a locking-spring 15, arranged within a casing 16, seated in an opening 17, formed in the bottle-neck opposite the opening 14. The casing 16 has at its inner end an inwardly-extended annular flange 18, and a portion of the spring 15 bears against the inner side of this flange. The spring also has portions extended inward of the flange and adapted to engage with the inner side of an enlargement 19 on the rod 13. This enlargement 19, as shown in the drawings, is pointed, so that when inserting the rod the pointed or inclined end of the enlargement will force the inward projections of the spring to such position as to allow the enlargement to be forced within the spring.

To prevent a possible breaking of the bottle-neck while inserting the locking-bar, I place a rubber or similar washer 20 between the neck of the bottle and an annular flange on the outer end of the casing 16. A similar washer 21 is placed between the head 22 of the rod 13 and the neck of the bottle.

Secured within the lower portion of the neck of the bottle is a tube 23, the upper end of which forms a seat for an auxiliary valve 24, the stem of which projects into the tube 23 and has longitudinal corrugations 26, permitting of the escape of liquid when the bottle is inverted and the valve moved upward or toward the valve-casing 2. It will be noted that the distance between the upper end of the tube 23 and the lower end of the valve-casing 2 is somewhat less than the length of the stem of the valve 24. Thus the valve 24 will be prevented from entirely leaving the tube when the bottle is inverted to discharge liquid. The tube 23 and the valve 24 are of



course to be placed in the bottle-neck before the other parts are placed therein and also after the desired liquid is placed in the bottle.

In operation upon tilting or inverting the bottle the valve 24 will be forced to an open position, so that the liquid may run through the corrugations 26 and discharge into the valve-casing 2 through the ports 12 and also through the bottom of the casing, which as here shown is open. The force of the liquid will open the valve 6 against the resistance of the spring 9, so that the liquid may discharge through the channels or corrugations 7 and then out through the ports 11. Should an attempt be made to refill the bottle, the tension of the spring 9 aided by the pressure of the liquid will hold the valve 6 tightly closed, so that no liquid can pass it. I have shown above the valve-casing in the neck of the bottle a cork 27. This cork is merely intended as a sealing-cork during transportation, and forms no part of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a non-refillable bottle, a valve-casing secured in the neck thereof and closed at the top, a spring-pressed valve arranged in said casing between its ends, the said casing having ports above and also below the valve, and an auxiliary valve in the neck of the bottle below the valve-casing, said valve-casing serving to limit the opening movement of said auxiliary valve, substantially as specified.

2. In a non-refillable bottle, a tubular valve-casing secured in the neck thereof, a tube having a valve-seat in its top and secured in the casing between its ends, a valve for engaging with a seat on the end of said tube and having a fluted stem portion extended into the tube, and a spring arranged between the upper closed end of the valve-casing and the top of the valve, substantially as specified.

3. In a non-refillable bottle, a valve-casing in the neck thereof, a valve in said casing between its ends, the said casing having ports above and also below the valve, and a locking device for the valve-casing, passing through an opening in the bottle-neck and also through openings in the valve-casing, a casing arranged in an opening in the neck of the bottle opposite the first-named opening, and having an inwardly-extended annular flange at its inner end, a spring arranged within said casing and having portions extended toward each other and adapted to engage at the inner side of an enlargement formed on the locking-rod, and a yielding material between an annular flange on the outer end of the casing and the bottle-neck, and also between the bottle-neck and the head of the rod, substantially as specified.

HENRY WEIL.

Witnesses:

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WILLIAM WEYRAND.