No. 671,597. Patented Apr. 9, 1901.

F. B. HOOPER.

NON-REFILLABLE BOTTLE.

(Application filed June 28, 1900.)

(No Model.)

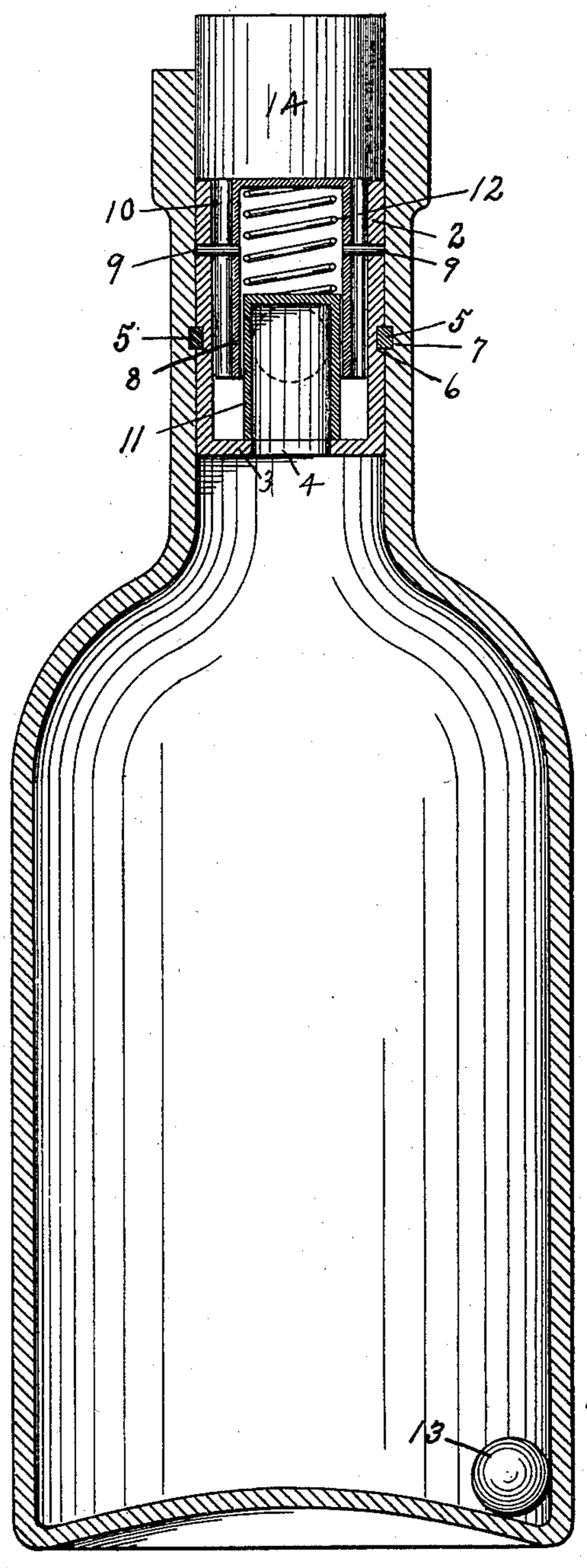

Fig. 1.

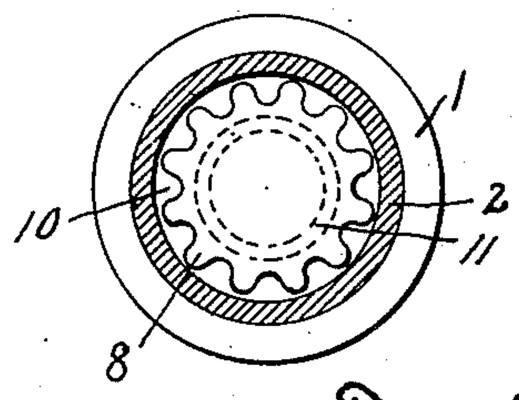

Fig. 2.

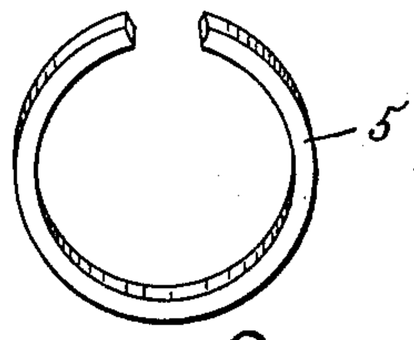

Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANK B. HOOPER, OF SUDBROOK PARK, MARYLAND.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 671,597, dated April 9, 1901.

Application filed June 28, 1900. Serial No. 21,873. (No model.)

To all whom it may concern:

Be it known that I, FRANK B. HOOPER, a citizen of the United States, residing at Sudbrook Park, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to an improved non-refillable bottle.

One object of the invention is to provide a device which can be permanently secured within the neck of a bottle after the latter has been filled and which will allow the contents of the bottle to flow freely therefrom when desired, but will prevent the bottle from being refilled after having once been emptied of its contents.

A further object of the invention is to so construct and arrange the several parts as to prevent tampering with the operative parts in the attempt to refill the bottle after having been emptied of its original contents.

Other features of the invention will be fully set forth in the description of the accompanying drawings, in which—

Figure 1 is a vertical sectional view of my invention applied to a bottle. Fig. 2 is a top plan view of same, the cork of the bottle being removed. Fig. 3 is a view of the locking-ring.

Similar numerals refer to like and corresponding parts throughout the several views.

In the accompanying drawings, 1 designates a bottle, which may be of any preferred construction, and 2 the hollow plug which fits within the neck of the bottle. The said plug 2 may be made of glass, porcelain, or any other suitable material. The plug 2 is formed with a seat 3 at its lower end and is provided with an aperture 4 therein. This plug 2 is held within the neck of the bottle by means of the locking-spring 5, which fits within the annular grooves 6 and 7 in the said plug and neck of the bottle, respectively. Within the said plug 2 is a corrugated tube 8, having one end thereof closed. This tube 8 is held within the plug 2 in this instance by means of pins 9, which extend through the plug 2 and the tube 8. The tube 8 fits snugly within the plug 2, thus forming a number of small passages 10 between the corrugations for the liquid to pass through when making its exit from the bottle. By making these corrugations small enough it will be impossible to insert a bent-end wire between them for the purpose of tampering with the operative parts of the bottle for the purpose of refilling it. Within the tube 8 is a vertically-movable hollow valve 11, the inner circumference of which is the same as the aperture 4 in the seat 3 of the plug 2. This valve 11 is retained to its seat by the spring 12 and is unseated by the weight 13 when it is desired to pour the contents from the bottle, the weight occupying the position shown by dotted lines in Fig. 1.

While I have shown the valve 11 of a cup shape, the same may be made any preferred shape.

When it is desired to pour the contents from the bottle, the cork 14 is first removed and the bottle then held in an inverted position, whereby the weight 13 will roll up into the valve 11, overcoming the resistance of the spring 12, and thus unseat the said valve and allow the contents to flow out through the aperture 4 and then through the passages 10 to the vessel intended to receive the same.

Having thus described my invention, what I claim is—

1. In a non-refillable bottle, the combination of a hollow plug fitted within and impinging against the neck of the bottle throughout the entire length of the plug, said plug having an inwardly-projecting flange at its lower end provided with a central aperture; a tube secured within and extending nearly the entire length of the said plug, and a passage between the sides of the said tube and plug; a valve within the said tube, said valve being normally seated upon the inwardly-projecting flange of the plug; and a weight to unseat the said valve.

2. In a non-refillable bottle, the combination of a hollow plug fitted within and impinging against the neck of the bottle throughout the entire length of the plug, said plug having an inwardly-projecting flange at its lower end provided with a central aperture; a corrugated tube secured within and extending nearly the entire length of the said plug, and a plurality of passages between the sides of the said tube and plug; and a valve vertically movable within the said tube, the said valve being

normally seated upon the inwardly-projecting flange of the hollow plug.

3. In a non-refillable bottle, the combination of a hollow plug fitted within and impinging against the neck of the bottle throughout the entire length of the plug, said plug having an inwardly-projecting flange at its lower end provided with a central aperture; a corrugated tube secured within the said plug and having its upper end closed and its lower end terminating a short distance above the inwardly-projecting flange of the hollow plug and leaving a passage between the plug and tube; a valve vertically movable within the corrugated tube; a spring to hold the said valve to its seat; and a weight to unseat the said valve.

4. In a non-refillable bottle, the combination of a hollow plug, 2, fitted within and impinging against the neck of the bottle throughout the entire length of the plug, said plug having an inwardly-projecting flange at its lower end provided with a central aperture; a corrugated tube, 8, secured within the plug, 2, and having its upper end closed and its lower end terminating a short distance above the inwardly-projecting flange of the hollow plug, and a plurality of passages between the sides of the tube and plug; a cup-shaped valve vertically movable within the said tube, 2, said valve being normally seated upon the inwardly-projecting flange of the hollow plug; a spring to keep the valve to its seat; and a weight of a diameter sufficiently small to permit it to pass through the aperture in the inwardly-projecting flange of the hollow plug and unseat the said valve.

In testimony whereof I affix my signature in the presence of two witnesses.

FRANK B. HOOPER.

Witnesses:
JOHN L. HEBB,
CHAPIN A. FERGUSON.