

No. 827,051.

PATENTED JULY 24, 1906.

F. L. ANDERSON.
NON-REFILLABLE BOTTLE.
APPLICATION FILED SEPT. 21, 1905.

Fig. 1.

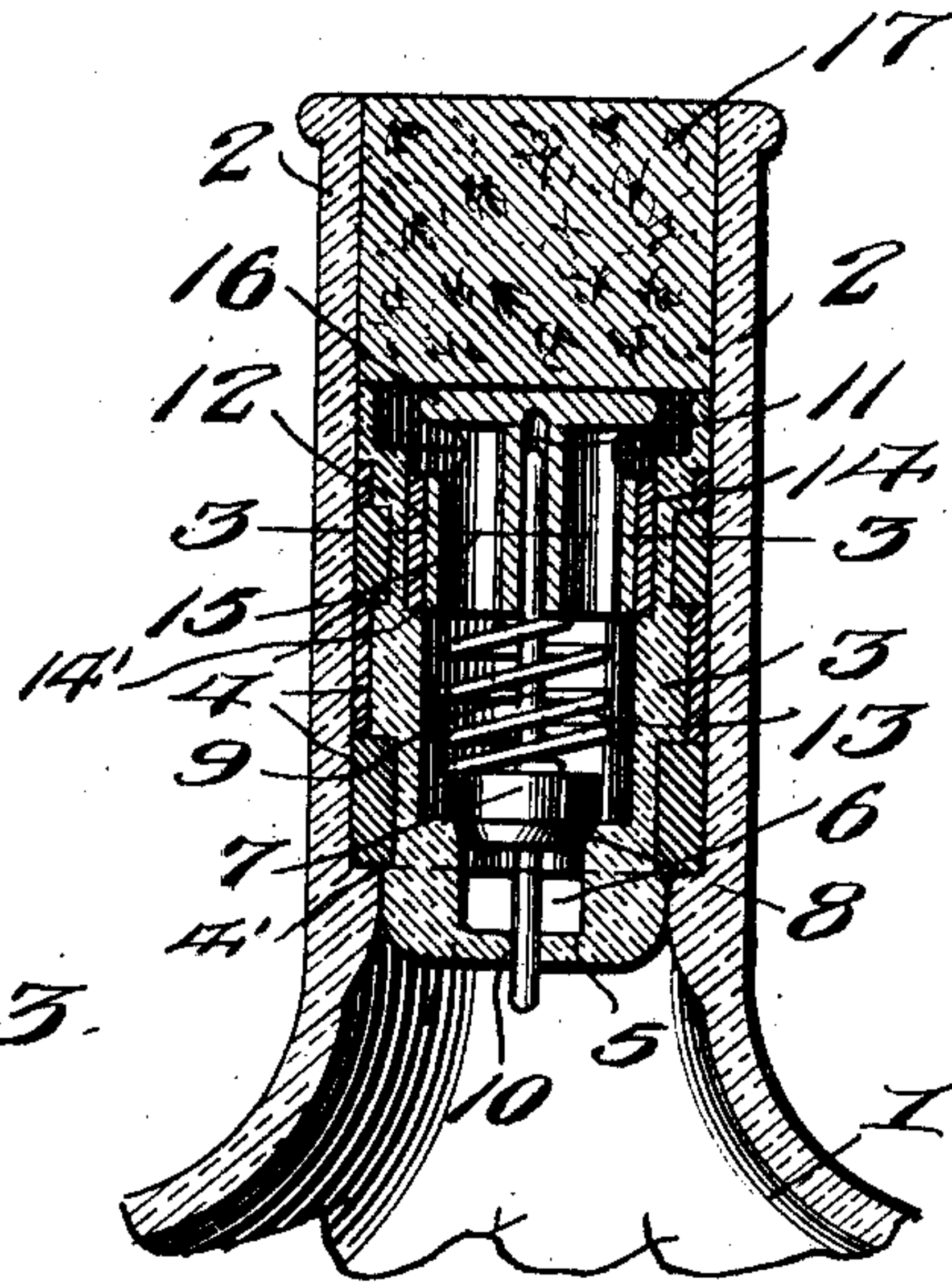


Fig. 3.

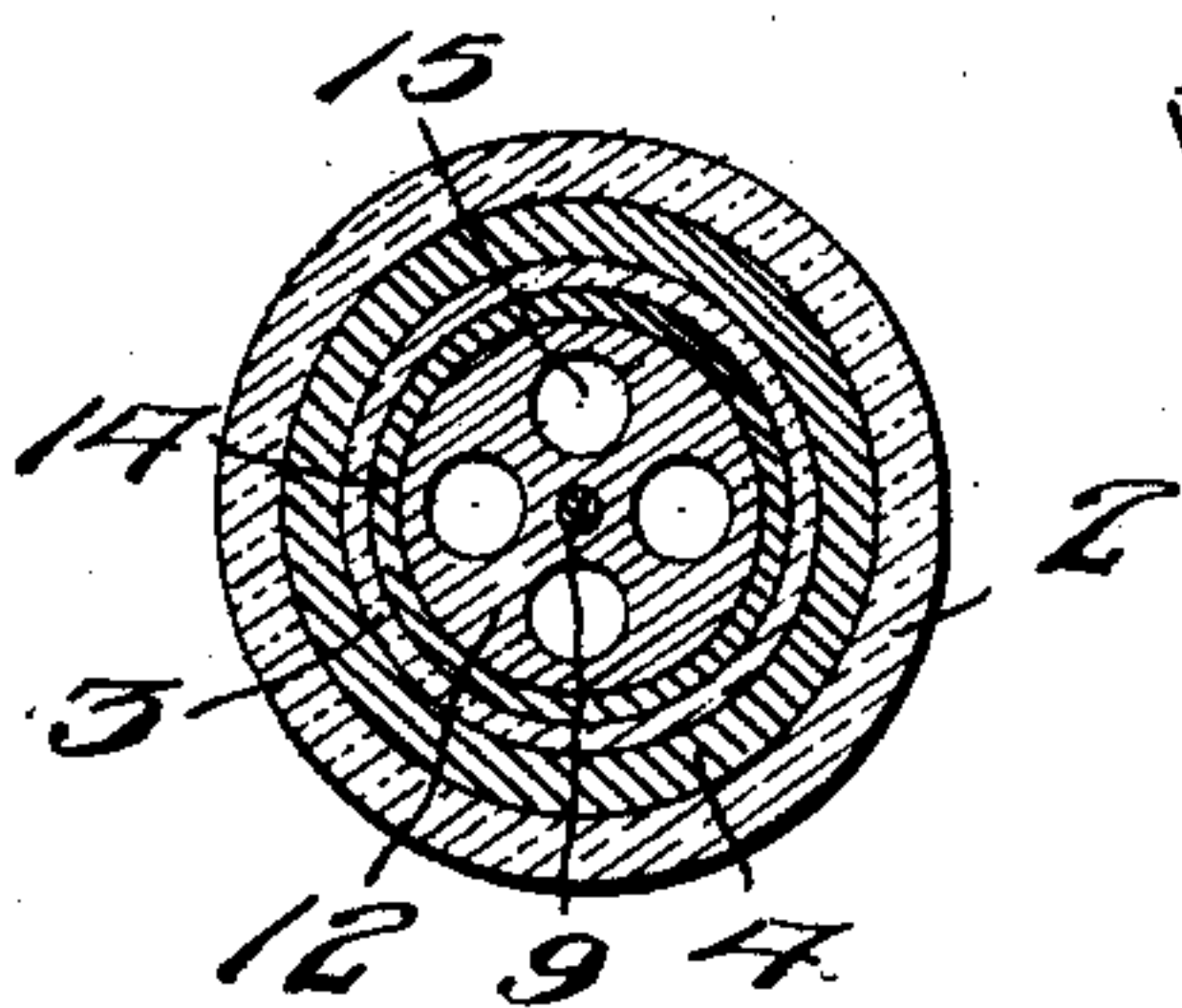


Fig. 2.

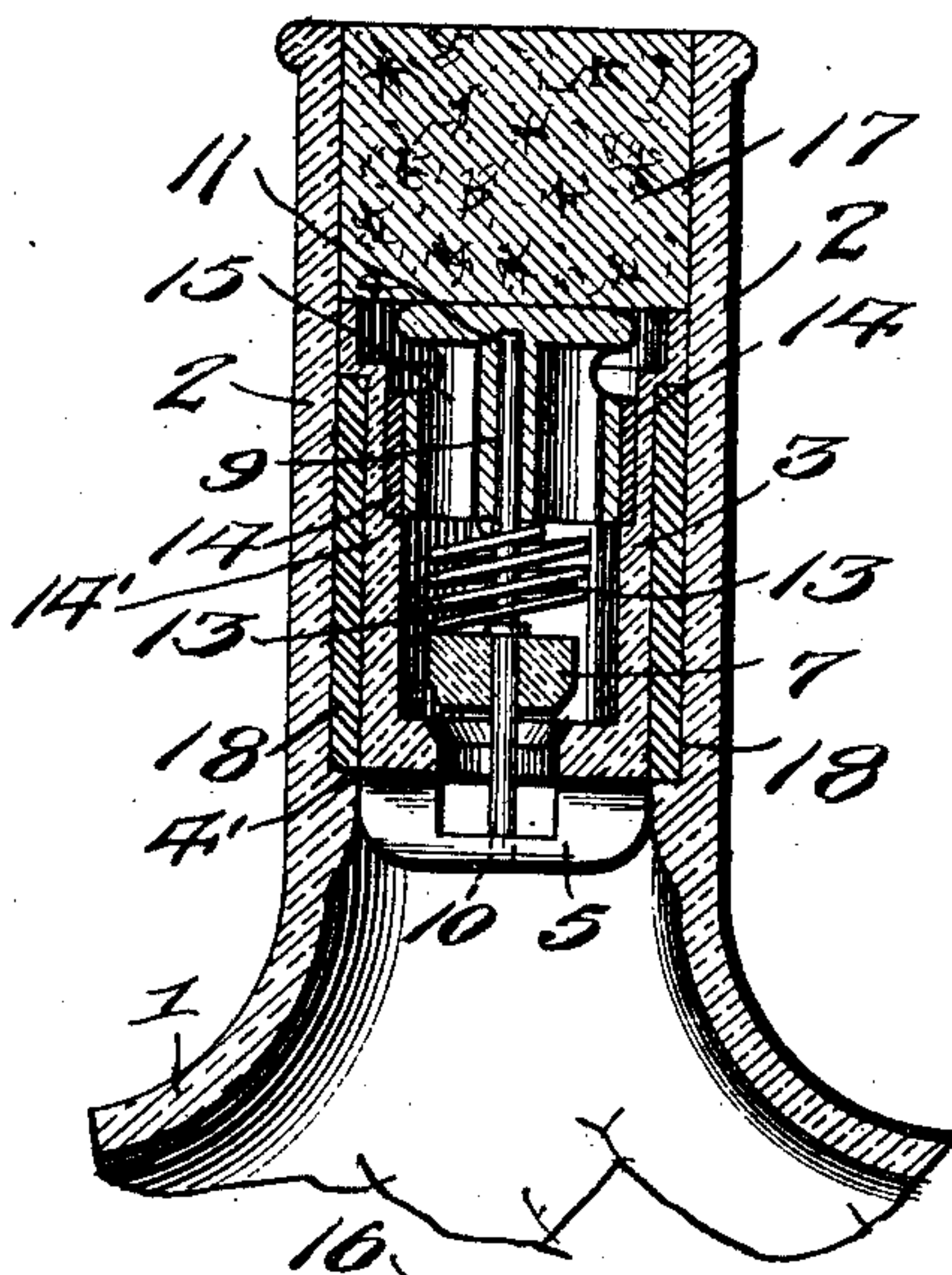


Fig. 4.

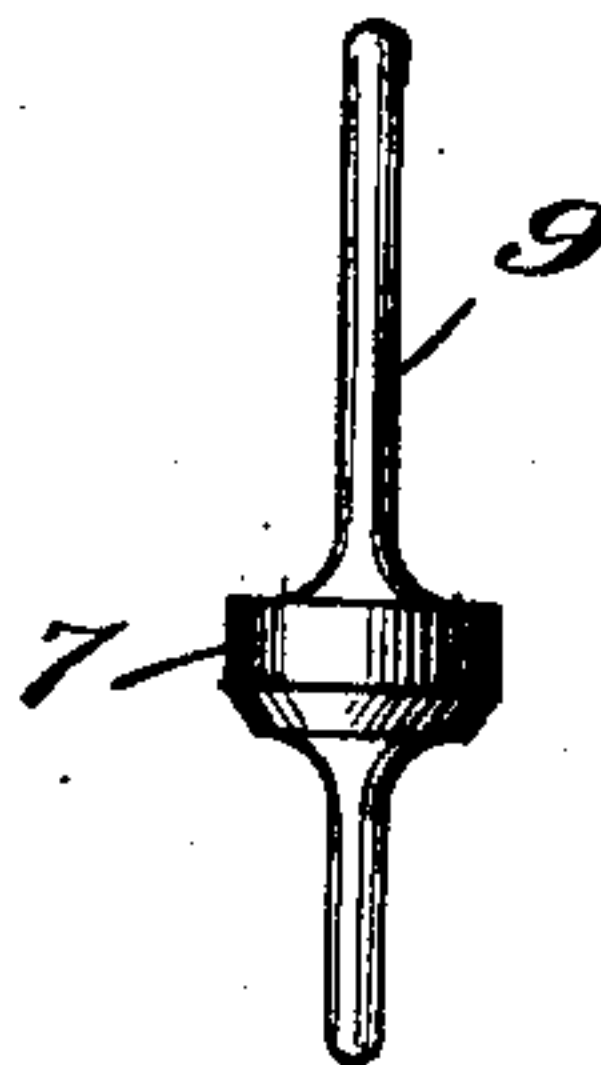
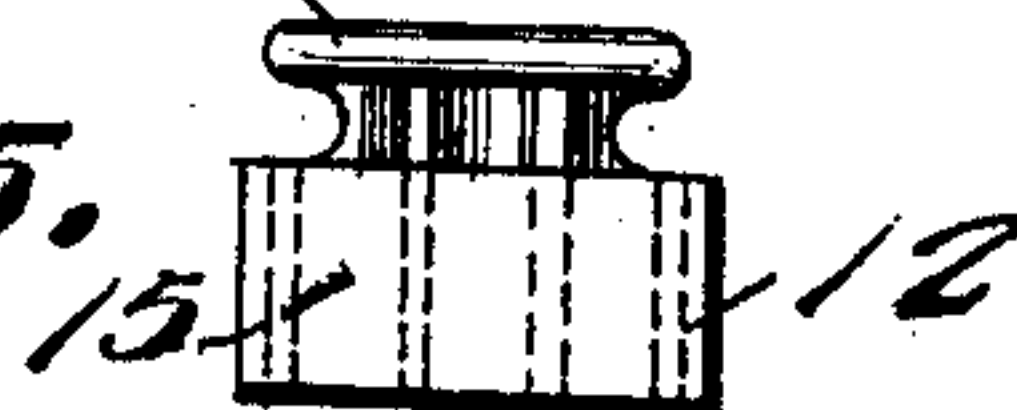


Fig. 5.



Witnesses

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NON-REFILLABLE BOTTLE.

No. 827,051.

Specification of Letters Patent.

Patented July 24, 1906.

Application filed September 21, 1905. Serial No. 279,483.

To all whom it may concern:

Be it known that I, FREDERICK L. ANDERSON, a citizen of the United States, residing at Haverhill, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to non-refillable bottles or analogous receptacles, and has for its object to produce a comparatively simple inexpensive device of this character embodying a valve mechanism which when the receptacle is filled and sealed will effectually obviate refilling, thus to prevent the fraudulent substitution of an inferior grade of goods for that initially contained in the receptacle.

With these and other objects in view the invention comprises the novel features of construction and combination of parts more fully hereinafter described.

In the accompanying drawings, Figure 1 is a vertical longitudinal section through a portion of a bottle equipped with a valve mechanism embodying the invention. Fig. 2 is a similar view showing a slightly-modified form of the device. Fig. 3 is a cross-section taken on the line 3 3 of Fig. 1. Fig. 4 is an elevation of a slightly-different form of valve. Fig. 5 is an elevation of the plug or shield.

Referring to the drawings, 1 designates a bottle having a neck 2, in which is arranged a tubular body or sleeve 3, composed of glass or other suitable material and secured and sealed in the neck by means of annular packing members or gaskets 4, preferably composed of rubber, the body, which rests on a flange 4', formed in the neck, being provided at its lower end with a bearing portion or strip 5, spaced from the bottom of the sleeve to present an opening or passage 6.

Arranged for movement in the sleeve 3 is a valve 7, adapted to normally rest upon a seat 8, provided in the body, said valve being fixed on and between the ends of a stem 9, slidably disposed at its lower end in a bearing-opening 10, formed in the strip 5, and at its upper end in a central bearing-opening 11, formed in a plug or shield 12, between which and the valve there is arranged on the stem a normally-expanded spring 13, tending to press the valve to normally closed or seated

position. It may be mentioned in this connection that the tension of the spring and weight of the valve are so adjusted relatively that the spring will act for closing the valve when the bottle is disposed in a substantially horizontal position, while the weight of the valve will when the bottle is inverted be sufficient to compress the spring and permit the valve to open.

The plug 12, which is secured in the body 3 by means of a packing-gasket 14, rests at its lower end on a flange 14', formed in the body, and is provided with a plurality of discharge-openings 15, protected at their upper ends by means of a disk-like portion or enlargement 16, formed on the upper end of the plug and serving in practice to prevent the introduction of a wire or other instrument through one of the openings 15 for tampering with the valve.

Seated in the neck of the bottle over the plug 12 is a cork or stopple 17, by which the bottle is closed during transportation or storage.

In practice after the bottle has been initially filled the sleeve 3, containing the valve mechanism, is seated and properly secured in the neck 2, it being understood, of course, that the shield or plug 12 is applied after arrangement of the valve 7 and its controlling-spring within the sleeve and prior to introduction of the latter into the neck, and, further, that the spring 13 will maintain the valve normally in closed or seated position to prevent the introduction of liquid into the bottle. In the operation of decanting liquor the valve will when the bottle is turned to discharging position move under the influence of its own weight and against the action of the spring to open position, whereby the liquid will flow freely from the bottle through the opening 6, sleeve 3, and discharge-opening 15. As soon, however, as the bottle is turned sufficiently to relieve the spring of the full weight of the valve the latter will, through the action of the spring in expanding, be automatically returned to closed position. Thus it is apparent that the spring will close the valve before the bottle is in a position for the liquid to flow thereinto, and that any pressure which may be applied for forcing liquid into the receptacle while in inverted position will immediately close the

valve. It is to be noted that the flange 4' prevents forcing of the shell into the bottle, while the flange 14' in like manner obviates forcing of the shield down into the shell.

5 In Fig. 2, which shows the valve 7 in open position, the construction and operation of the parts are identical with that above described, except that the body or sleeve 3 is secured and sealed in the neck 2 by means of
10 a single packing-gasket 18, composed of cork.

In Fig. 4 the valve 7 and its stem 9 are shown as cast in a single piece as distinguished from the construction illustrated in Figs. 1 and 2, in which the valve 7 is formed
15 separate from and secured by cement or otherwise upon the stem.

From the foregoing it is apparent that I produce a simple inexpensive device which in practice will admirably perform its func-
20 tions to the attainment of the ends in view and one whereby the introduction of any liquid into the bottle after the valve mechanism has been secured in the neck thereby is wholly obviated, it being understood that in
25 attaining these ends minor changes in the de-

tails herein set forth may be resorted to without departing from the spirit of the invention.

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

A bottle having a neck, a tubular body fixed in the latter and provided at its inner end with an inlet-opening and a bearing portion, a valve arranged for movement in the
35 body and designed to normally close the inlet-opening, a spring for pressing the valve normally to closed position, a shield fixed in the body and provided with a discharge-opening and an enlarged portion to overlie
40 the outer end of said opening; and a stem for the valve having bearing at its opposite ends in said bearing portion and shield.

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

FRED. L. ANDERSON.

Witnesses:

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J. F. BATCHELDER.