

No. 705,309.

Patented July 22, 1902.

C. P. SEARLES & D. J. MINTON,
NON-REFILLABLE BOTTLE.

(Application filed Oct. 10, 1901.)

(No Model.)

Fig. 1

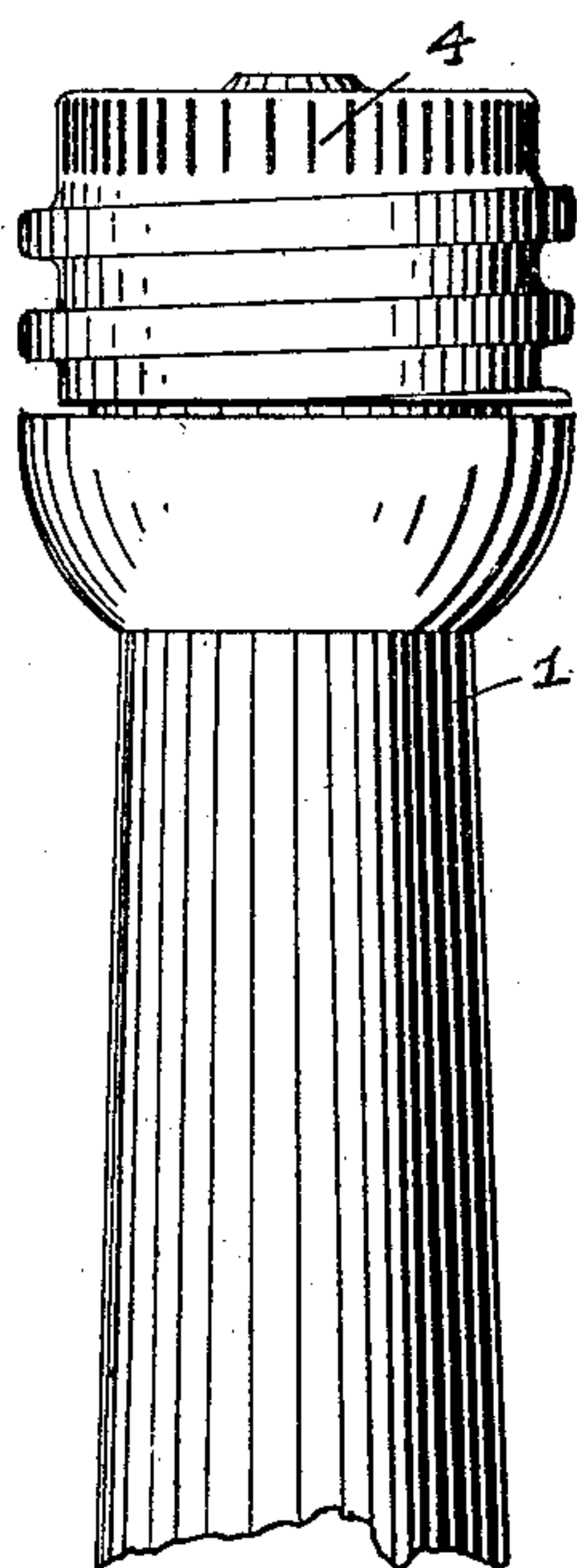


Fig. 2

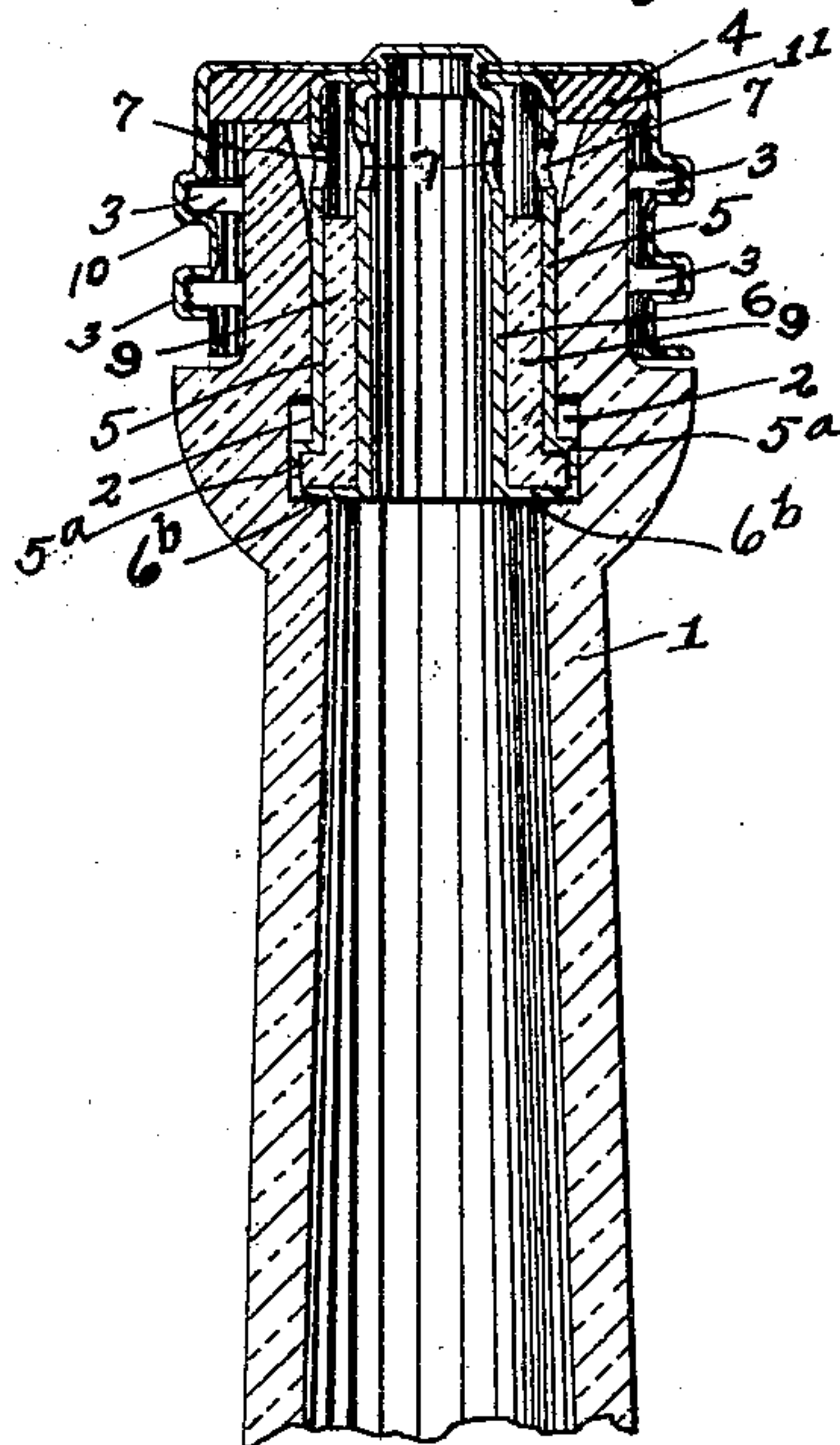


Fig. 3

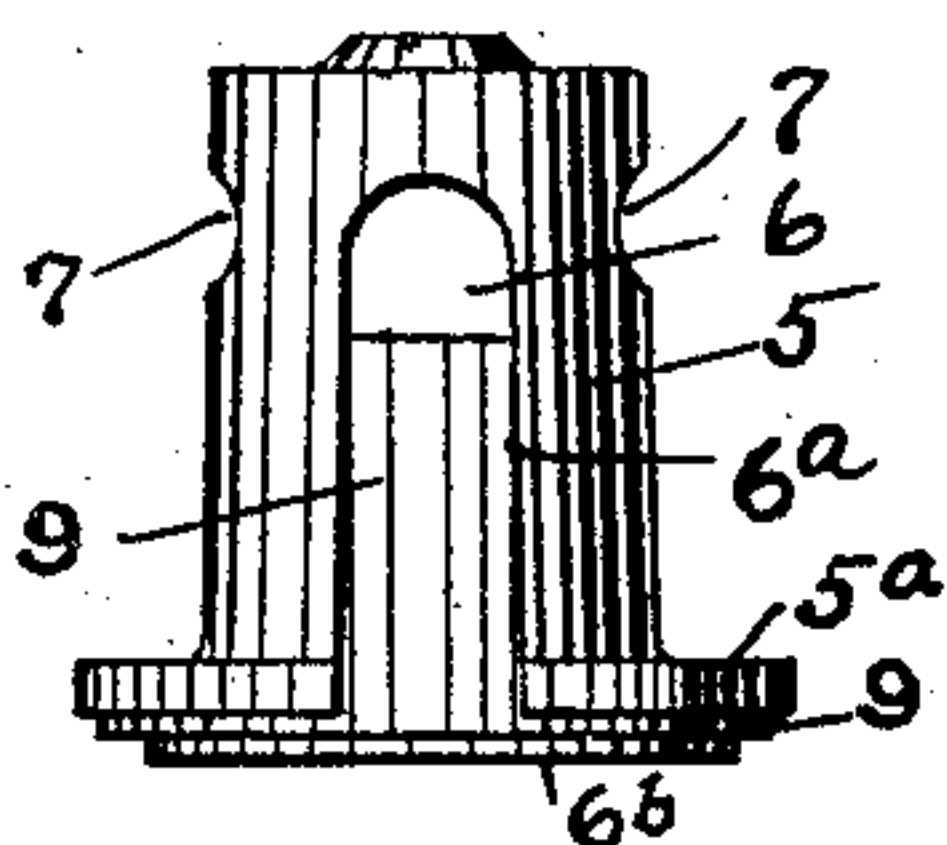


Fig. 4

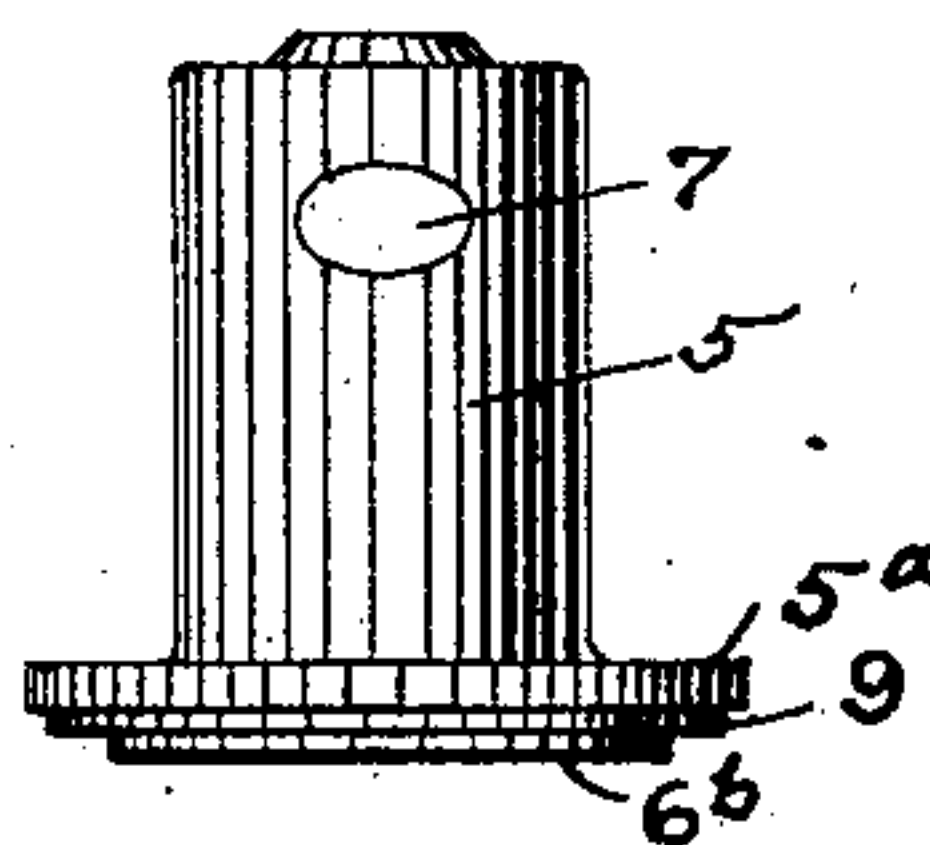
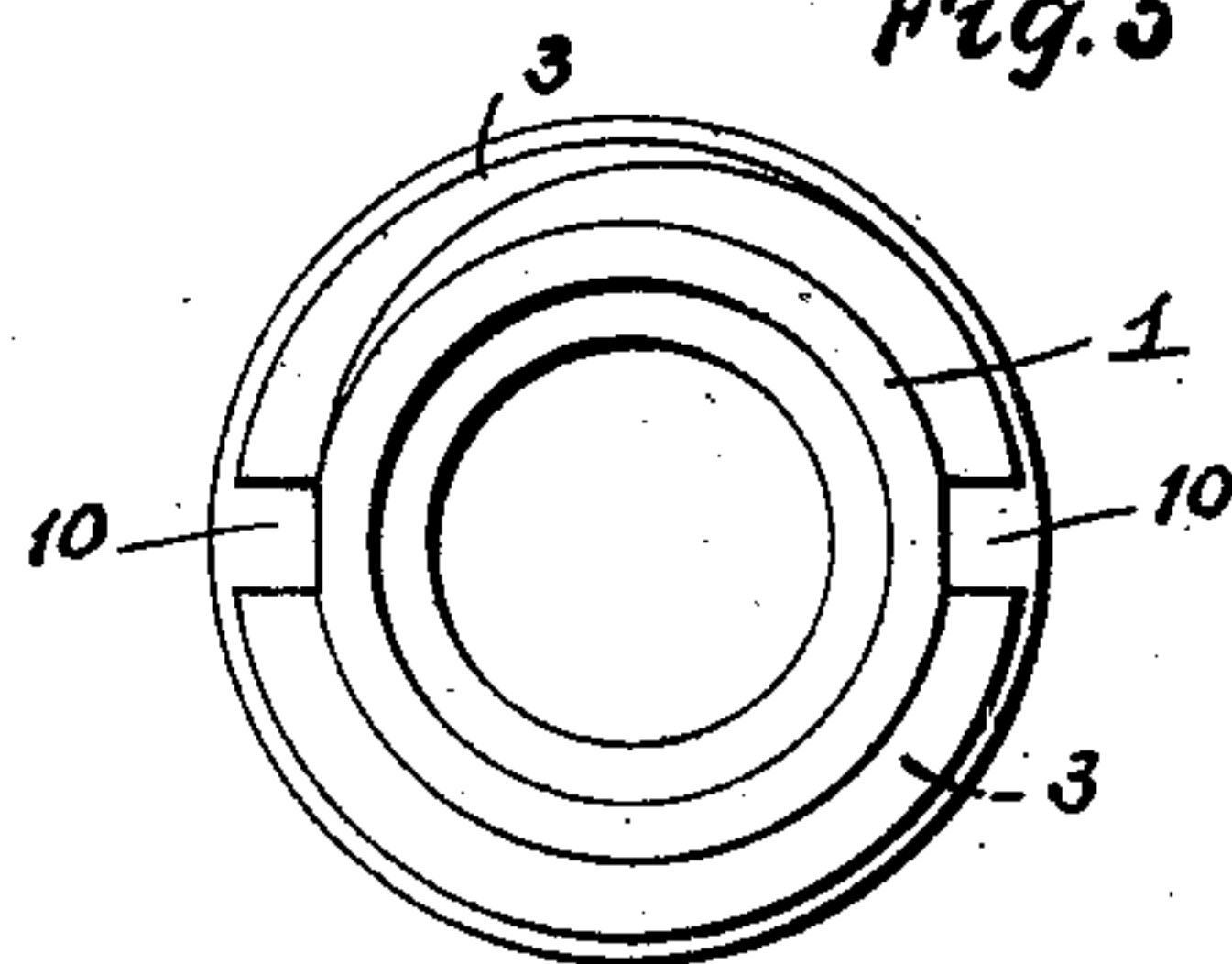


Fig. 5



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(Application filed Dec. 4, 1900.)

(No Model.)

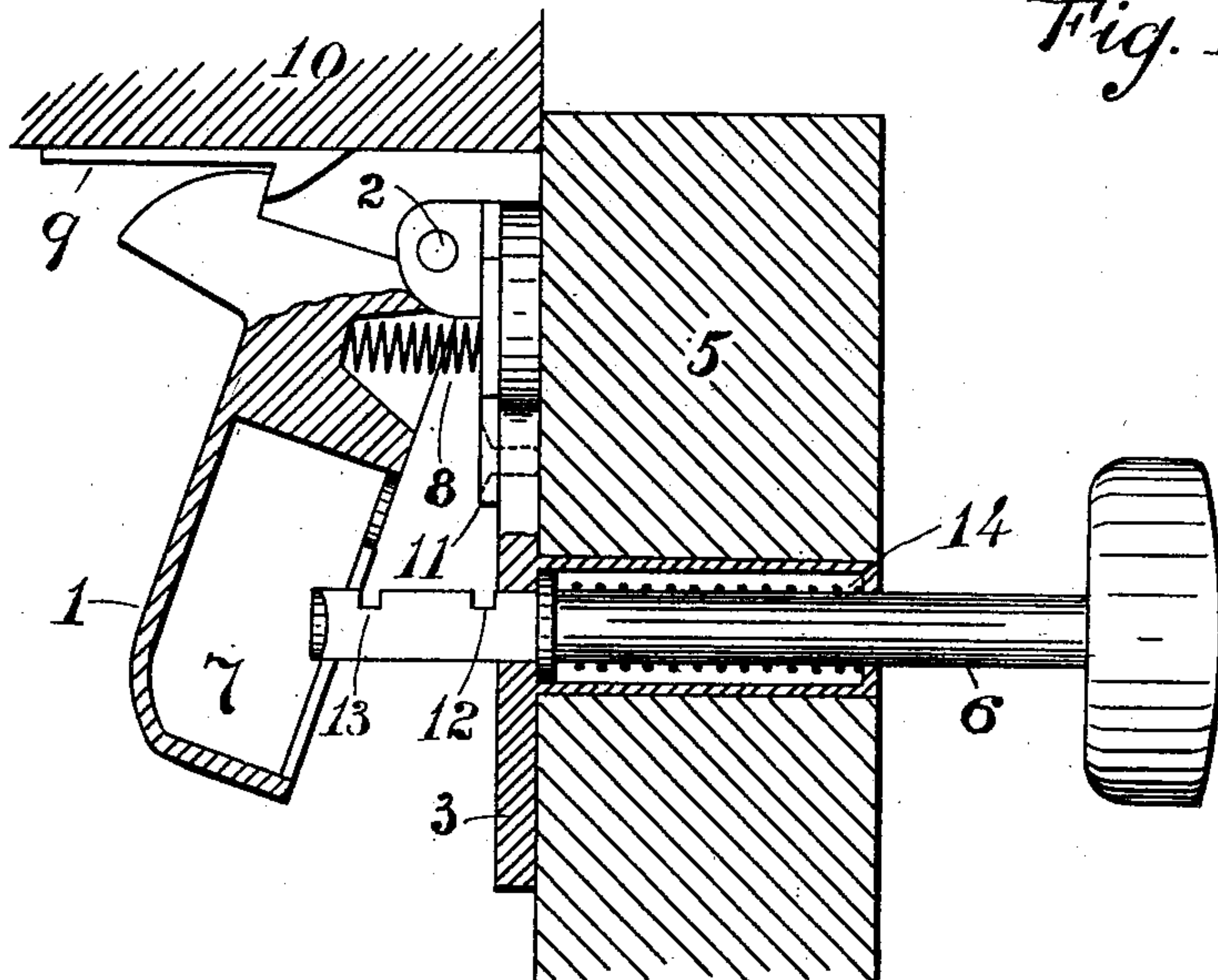


Fig. 1.

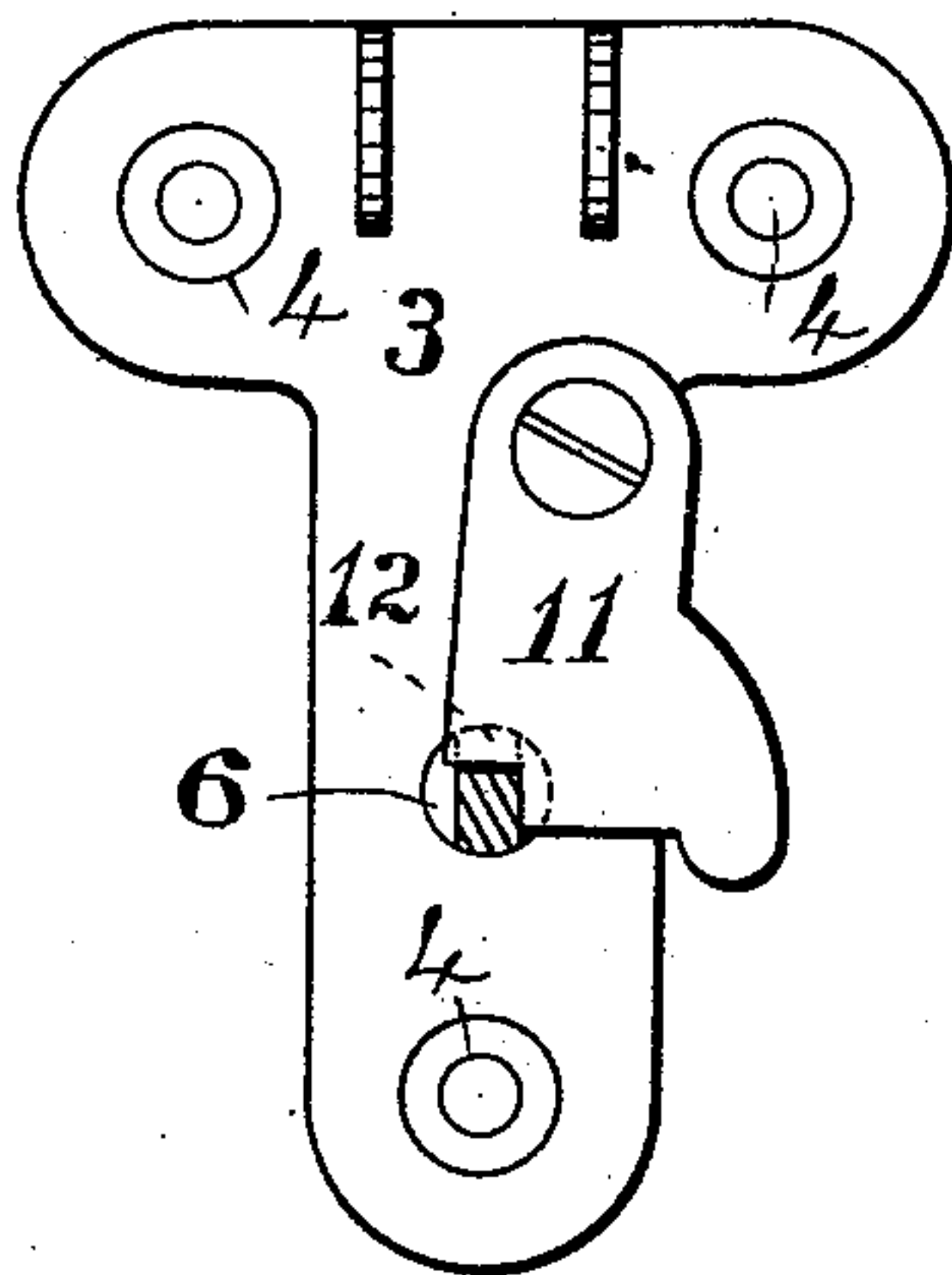


Fig. 2.

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UNITED STATES PATENT OFFICE.

CHARLES P. SEARLES AND DANIEL J. MINTON, OF COLUMBUS, OHIO.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 705,309, dated July 22, 1902.

Application filed October 10, 1901. Serial No. 78,164. (No model.)

To all whom it may concern:

Be it known that we, CHARLES P. SEARLES and DANIEL J. MINTON, citizens of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Non-Refillable Bottles, of which the following is a specification.

Our invention relates to the improvement of non-refillable bottles; and the objects of our invention are to provide an improved bottle of this class of superior construction and arrangement of parts, to so construct the same as to prevent the refilling thereof and at the same time to provide means for closing the neck of the bottle against the outlet of liquid therefrom, and to produce other improvements in details of construction and arrangement of parts, which will be more fully pointed out hereinafter. These objects we accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a view in elevation of a bottle-neck having our improvement thereon. Fig. 2 is a central vertical section of the same, showing the cap in its closed position. Fig. 3 is a view in elevation of a cap neck or extension which we employ in the manner hereinafter described. Fig. 4 is a view in elevation of the same, taken at right angles with that shown in Fig. 3; and Fig. 5 is a plan view of the bottle-neck with the cap and its connected parts removed.

Similar numerals refer to similar parts throughout the several views.

1 represents the neck portion of a bottle. In the construction of the outer end portion of the neck 1 we form therein at a point below the mouth an internal continuous recess 2, and on the outside of said mouth or outer end portion of said neck are formed a desirable number of threads 3.

4 represents a screw-cap or cap having its sides internally threaded, said threads adapted to engage with the threads 3 of the bottle-neck. In constructing the cap 4 we connect therewith two separated centrally-depending tubes 5 and 6, these tubes being arranged one within the other, as shown, and extending within the bottle-neck. The outer tube 5 is slightly shorter than the inner tube 6 and has

its lower end portion flanged outward and thence downward, as indicated at 5^a. This outer tube, as well as the inner tube, as indicated more clearly in Figs. 3 and 4, is provided at opposite points with vertical recesses 6^a, which lead through the lower end of said tube, thus permitting the latter to have its lower portion sprung inward. The outer tube 5 is also provided at opposite points in its upper portion with liquid-outlet openings 7. The lower end of the inner tube 6 is also flanged outward a short distance, as indicated at 6^b. Between the walls of the tubes 5 and 6 and between their flanges and below the openings 7 we preferably provide a filling of rubber 9.

In inserting the tube portions 5 and 6 within the neck of the bottle it will be understood that the walls of the lower portion of the outer tube will be compressed sufficiently to permit the flanges 5^a thereof to pass downward until opposite the internal bottle recess 2, at which point said flanged portions will be permitted to spring into said recess, thereby locking the tube against withdrawal. In order, however, to provide for a partial withdrawal of this tube and a partial unscrewing of the cap 4 from the bottle-neck, the recess 2 is of a depth preferably equal to twice the height of the flanged portions 5^a and 6^b. As shown more clearly in Figs. 2 and 5 of the drawings, we form vertically through the threads 3 on opposite sides of the bottle-neck oppositely-arranged recesses 10. In the outer end of the cap 4 and about the upper or outer end of the outer tube 5 we provide a washer 11, of cork or similar material, which when the cap is screwed downward bears against and closes the mouth of the bottle. In Fig. 2 of the drawings we have shown the cap as screwed down and closing said bottle-mouth, and in order to pour liquid from said bottle-neck said cap is unscrewed a sufficient distance to permit the liquid to pass through the openings 7 of the tubes 5 and 6, thence downward through the thread-recesses 10, and out beneath the cap 4.

By this construction and operation it will be seen that the bottle-neck is provided with a non-detachable cap, which is only permitted such outward movement as is sufficient to provide for the exit of the liquid.

Having now fully described our invention, what we claim, and desire to secure by Letters Patent, is—

5 In a non-refillable bottle, the combination with a bottle-neck having external threads and recesses formed vertically therethrough and having an internal recess 2, of a threaded cap adapted to be screwed onto the threaded
10 mouth of the latter and a central tubular cap

projection having a lower end flange, said tubular projection being provided with an outlet-opening and adapted to be contracted to permit its insertion within the bottle-neck, substantially as specified.

CHARLES P. SEARLES.

DANIEL J. MINTON.

In presence of—

C. C. SHEPHERD,

A. L. PHELPS.