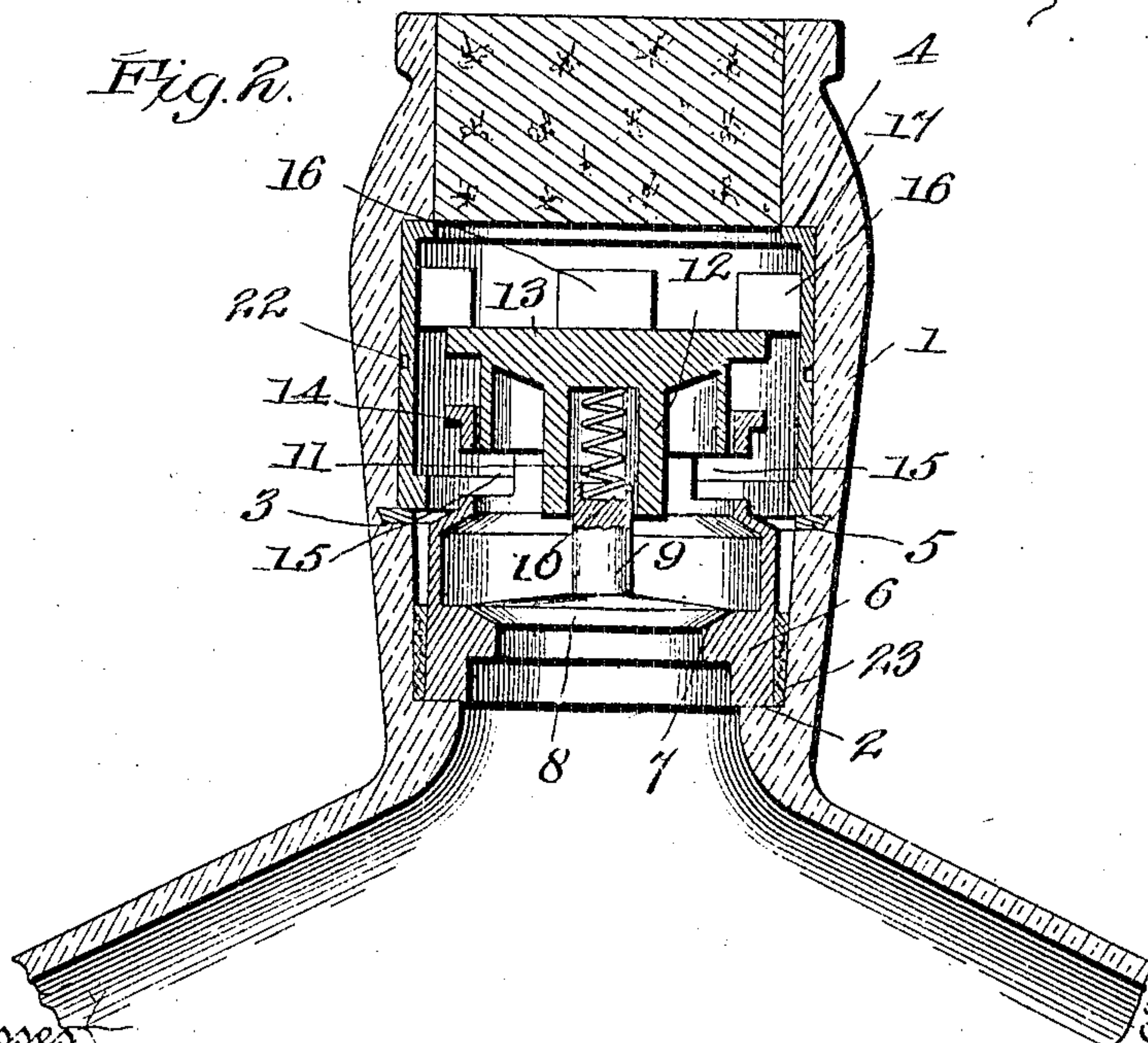
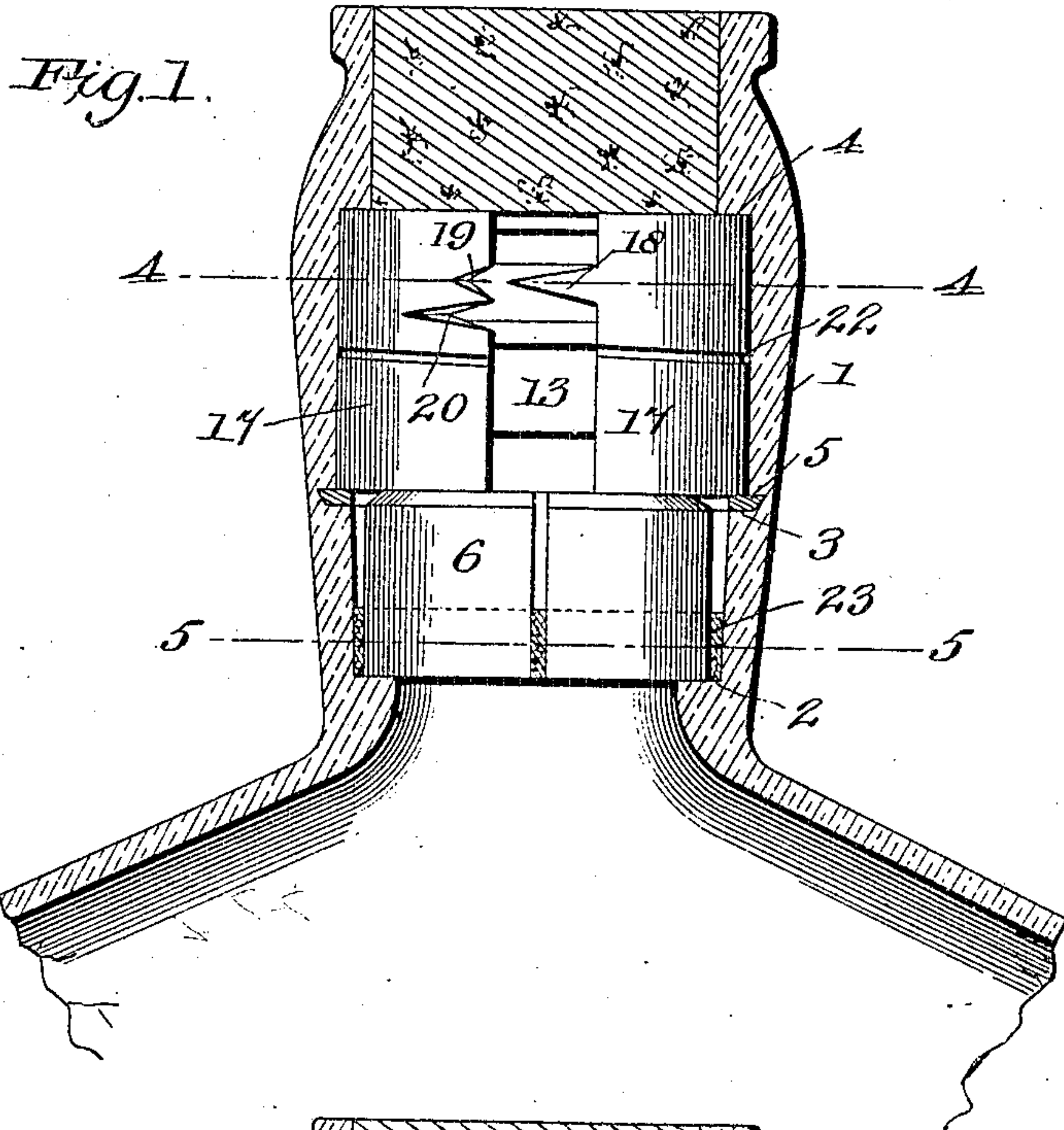


No. 852,260.

PATENTED APR. 30, 1907.

A. B. COURT.  
NON-REFILLABLE BOTTLE.  
APPLICATION FILED JULY 12, 1906.

2 SHEETS-SHEET 1.



Witnesses  
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2 SHEETS—SHEET 2.

Fig. 3.

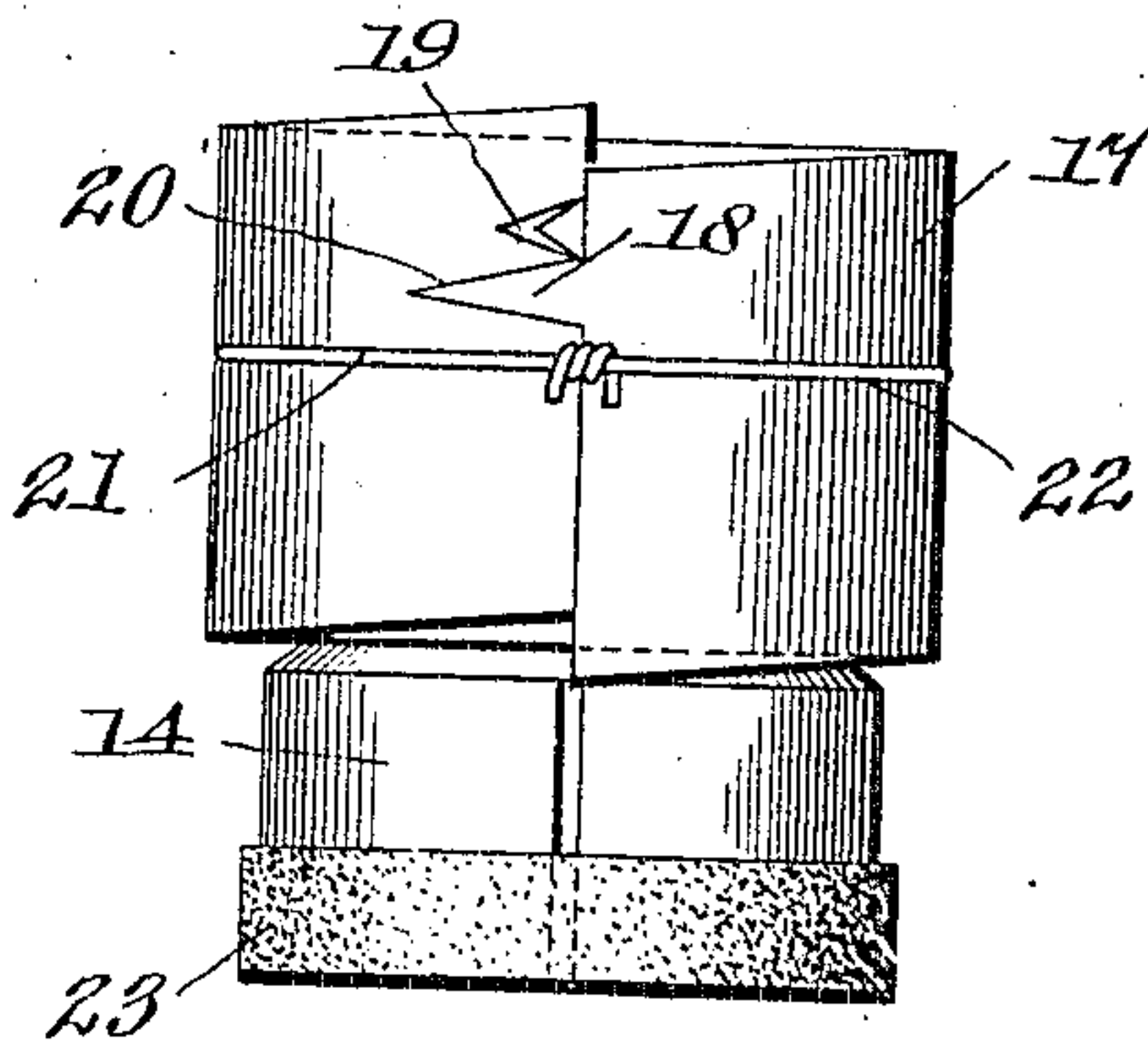


Fig. 4.

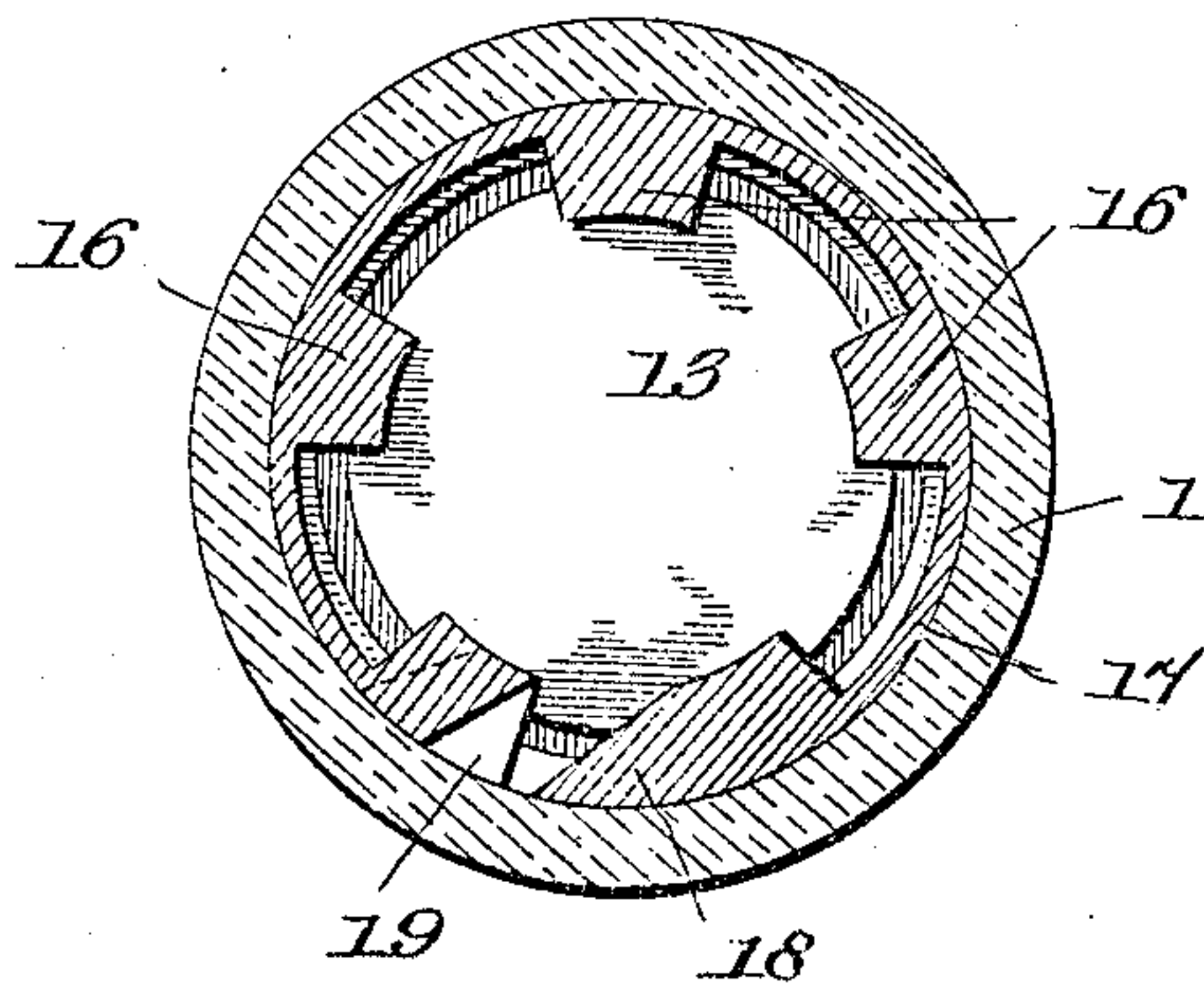
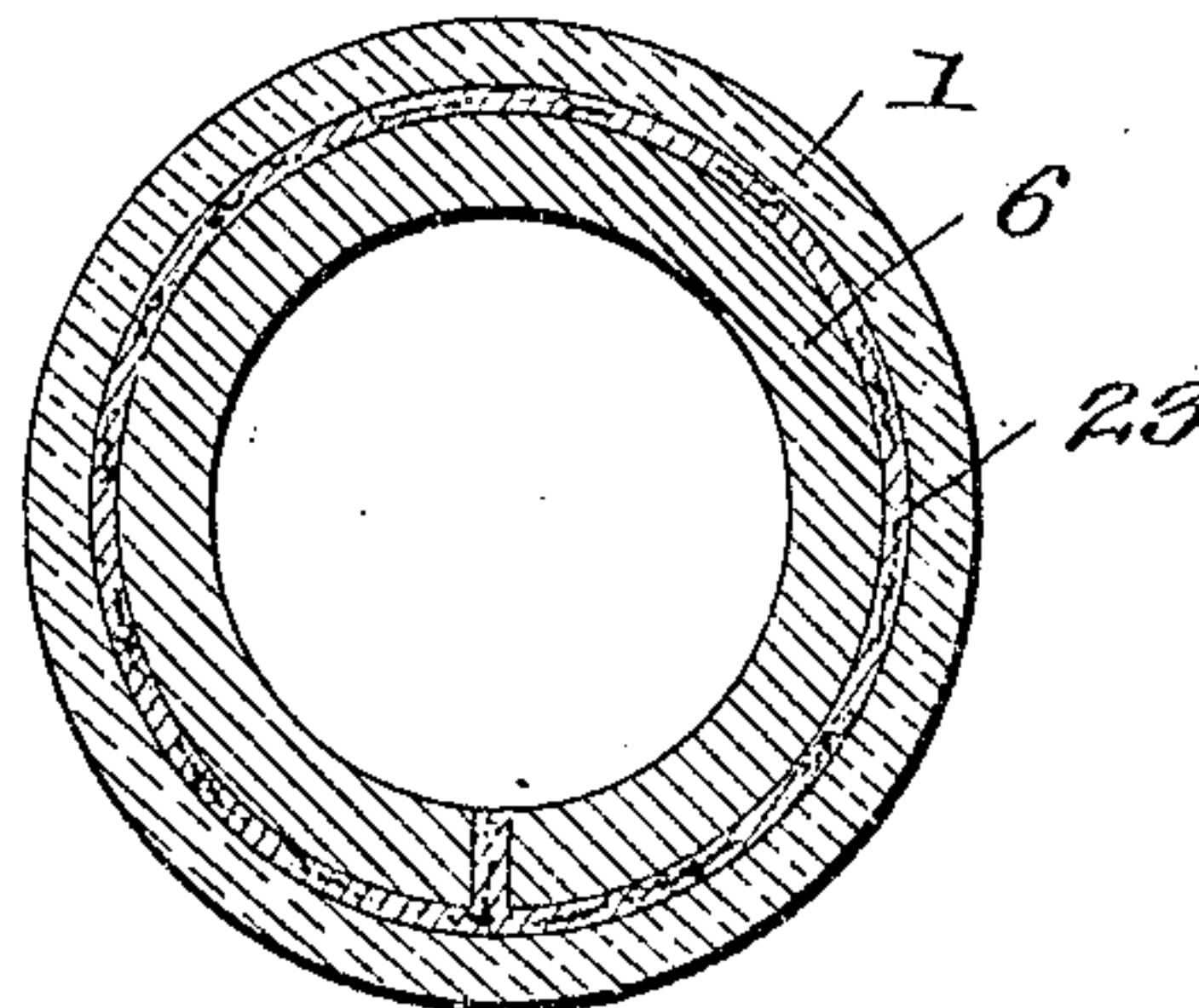


Fig. 5.



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# UNITED STATES PATENT OFFICE.

ALVA B. COURT, OF THE UNITED STATES NAVY.

## NON-REFILLABLE BOTTLE.

No. 852,260.

Specification of Letters Patent.

Patented April 30, 1907.

Application filed July 12, 1906. Serial No. 325,866.

*To all whom it may concern:*

Be it known that I, ALVA B. COURT, a citizen of the United States and midshipman in the United States Navy, stationed on board United States steamship *Pennsylvania*, navy-yard, New York city, have invented certain new and useful Improvements in Non-Refillable Bottles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in bottles and closures therefor, and especially to that type designated as non-refillable bottles, and the object of which is apparent.

While I do not limit myself to the specific details shown and described, to more fully understand the invention, reference is had to the accompanying drawings illustrating a practical embodiment of same, in which like letters designate the same parts in the several views, and in which:—

Figure 1 is a sectional elevation through the top of a portion of the bottle, the closing device being shown in elevation. Fig. 2 is a similar sectional view, the section being taken through the closing device also. Fig. 3 is an enlarged detail view showing the position of the closing device prior to its being sprung into the bottle neck. Fig. 4 is a sectional view on the line 4—4 of Fig. 1, and Fig. 5 is a section on the line 5—5 of Fig. 1.

1 designates the bottle neck provided with the annular shoulders 2, 3, and 4.

5 designates a metal plate which rests on the shoulder 3 and may be blown into the glass, the object of which plate, if employed, being that the neck may be severed if acid be used to remove the closing device, the metal plate being of such material as to be affected and disintegrated by an acid as soon as or before the rest of the device and the heat produced by the chemical action, locally applied, causing the ring to expand and crack the thin glass that surrounds the metal ring.

6 designates the annular valve casing which is adapted to seat on the shoulder 2 when sprung into the bottle neck, which valve casing is machined as at 7 to seat the valve 8, which valve is provided with a shank 9 recessed as at 10 to receive the end of a coil spring 11 interposed between the valve stem 9 and the hollow stem 12 of the valve protecting cap 13, the said cap being in the form of a cylindrical cup opening down-

wardly and mounted to be guided within an annular projection 14 forming an integral extension of the valve casing 6, which extension is slotted as at 15.

The lower end of the hollow valve shank 12 is guided by the valve stem 9, which operates therein, and the spring 11 tends to force the cap and valve apart, the upward movement of the cap being limited by suitable lugs 16 mounted on the inside face of a split cylinder 17 of resilient material, such as spring metal, and this metal cylinder is provided at one edge with a circumferentially extending tongue 18 adapted to normally register with a shallow notch 19 cut in the opposite edge of said cylinder and adapted to also fit an elongated notch 20 so disposed that the spring cylinder may be forced inwardly until its edges touch, when the cylinder will be disposed spirally, as clearly shown in Fig. 3, in which position the spring cylinder may be clamped by means of a wire or cord 21 fitting within a circumferential groove 22. The lower casing 6 is also split, as shown clearly in Figs. 1, 3, and 5, and is preferably provided with a cork gasket 23 which may also extend within the space formed by the adjacent edges of the casing.

In operation, the parts are assembled in the position shown in Fig. 3 with the spring split ring or cylinder contracted, in which position the tongue 18 is seated in the slot 20 so that the spring cylinder is spirally disposed. When thus interlocked, the wire or cord may be secured therearound in the groove 22. After the bottle has been filled, the closure is forced down through the top, it being understood that in the contracted state, the diameter of the split ring or cylinder 17 is such as to enable its passage through the opening at the top of the bottle. After the parts have been fairly started on their way, the string or wire 21 may be cut, and upon further shifting the parts downwardly when the upper edge of the cylinder 17 passes beneath the shoulder 4, the spring member or cylinder will expand into the position shown in Fig. 1 and interlock the parts in the bottle neck with the tongue 18 disposed opposite the slot 19 so that upon an attempt to contract the cylinder to withdraw the same, the attempt will be frustrated by the tongue 18 interlocking in the notch 19, and thus prevent the further contraction of the cylinder. It will also be seen that the bore of the bottle neck between the



shoulders 2 and 3 is conical so as to insure the entrance of the cork gasket and the subsequent compression of the same to make the valve seat tight.

5 With the parts in their interlocked position, it will be obvious that the cork having been extracted, upon inverting the bottle the valve 8 will be forced outwardly against the compression of the spring 11, and the con-  
10 tents will flow through the lower valve casing out through the slots 15 into the upper cylinder and thence through the outlet of the bottle, but upon the bottle being again set up, the valve 8 will be again seated, the protect-  
15 ing cap 13 at all times preventing any tampering with the valve but allowing of the ready outflow of the liquid when desired.

Having thus described the invention, what I claim is:

20 1. The combination with a bottle provided with a recessed portion in the neck thereof, of valve mechanism therefor, and means for holding said valve mechanism within said bottle neck, comprising a split resilient ring  
25 adapted to be sprung in said recessed portion of said bottle neck above and in operative relation with said valve mechanism, said resilient ring being provided on its respective adjacent edges with a tongue and a non-  
30 aligned slot sufficiently deep to receive said tongue and allow the closing of said split ring, substantially as described.

2. The combination with a bottle provided with a recessed portion in the neck thereof,  
35 of a valve casing, a valve therefor, a protecting cap for said valve, and means for holding said protecting cap within said bottle neck

comprising a split resilient ring adapted to be sprung in the recessed portion of said bottle neck, said split ring being provided on its adjacent respective edges with a tongue and a deep and a shallow slot, substantially as described.

3. The combination with a bottle, of a valve casing communicating with the body 45 portion of the bottle and having an upward annular extension provided with outlet slots, a valve seated in said chamber, a split cylinder inclosing said annular extension, a protecting cap operating immediately above said valve 50 within said annular extension and provided with a hollow stem, and a spring interposed between said protecting cap and said valve, substantially as described.

4. The combination with the bottle pro- 55 vided with a recessed portion in the neck thereof, of a valve casing, a valve therefor, a protecting cap for said valve, and means for holding said protecting cap and valve within said bottle neck, comprising a split resilient 60 ring adapted to be sprung in said recessed portion of said bottle neck, said split ring being provided with inwardly disposed radial projections adapted to rest above said protecting cap and said split ring being also pro- 65 vided on its adjacent edges with a tongue and slot, substantially as described.

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

ALVA B. COURT.

Witnesses:

JOHN J. PAEW,  
PETER NELLIS.