No. 848,165. PATENTED MAR. 26, 1907.

W. F. FRYCKBERG.

NON-REFILLABLE BOTTLE.

APPLICATION FILED MAY 23, 1906.

Fig. 1.

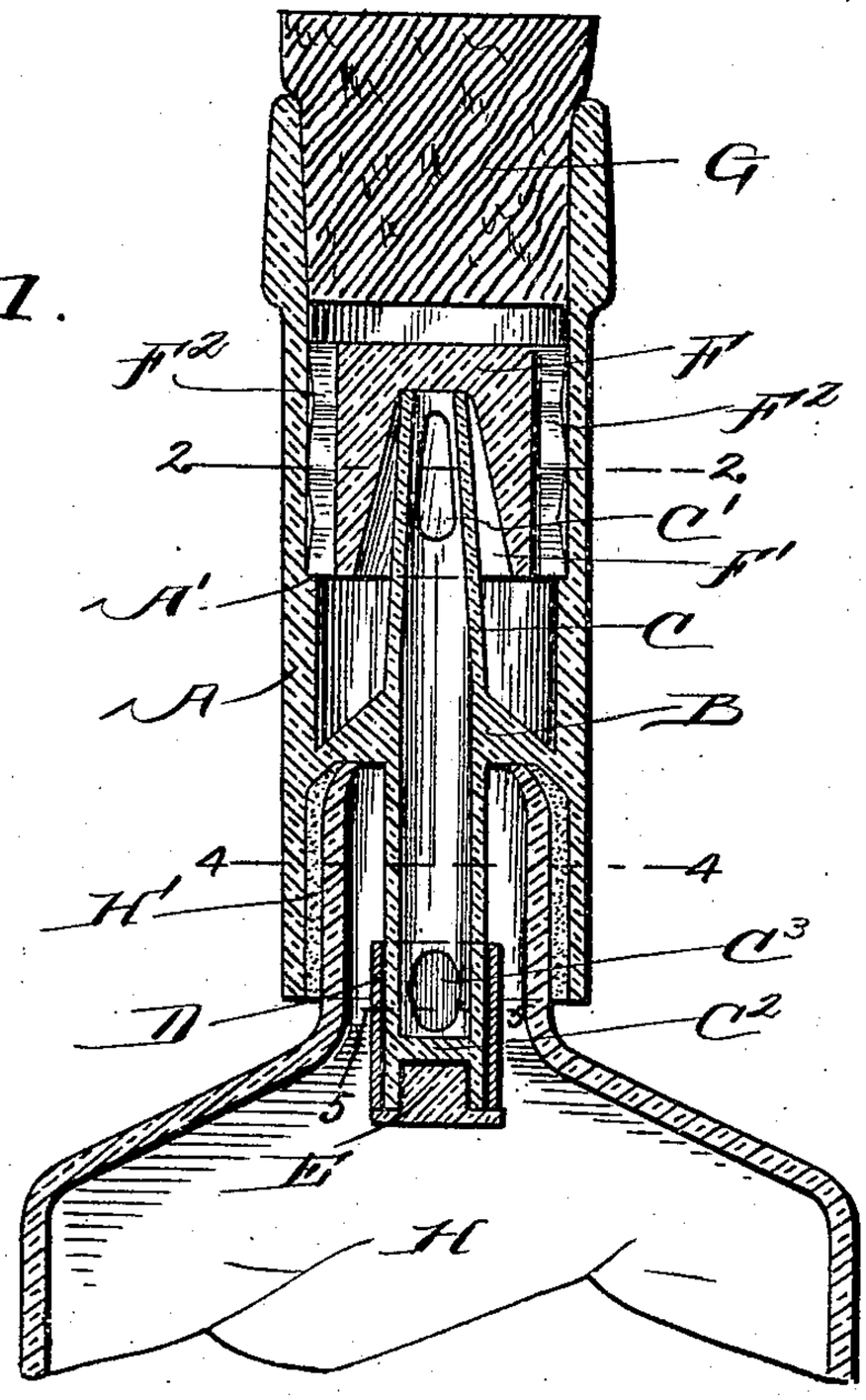


Fig. 2

Fig. 3

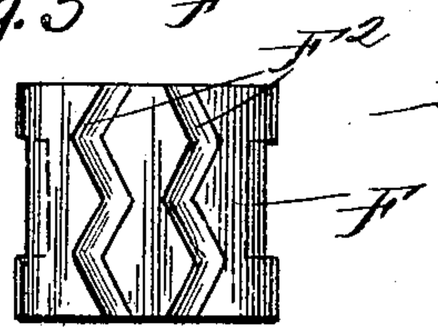


Fig. 4.

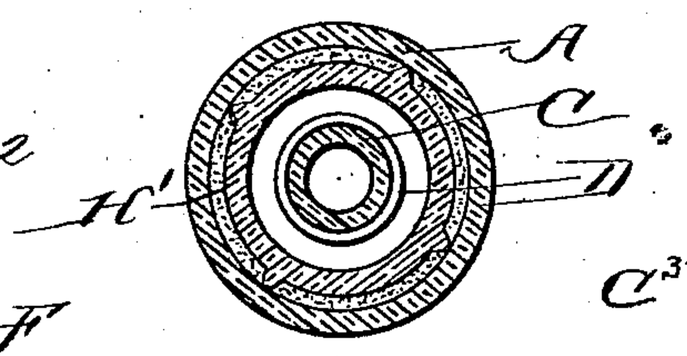
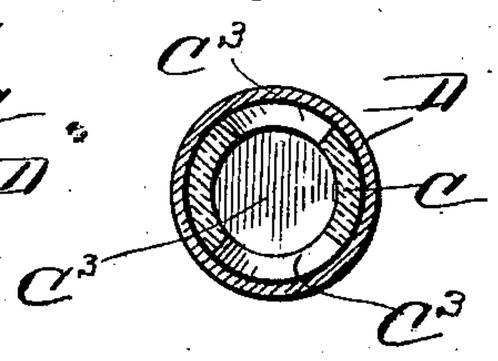


Fig. 5



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NON-REFILLABLE BOTTLE.

No. 848,165. Specification of Letters Patent. Patented March 26, 1907.

Application filed May 23, 1906. Serial No. 318,414.

To all whom it may concern:

Be it known that I, WILLIAM F. FRYCKBERG, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Non-Refillable Bottles, of which the following is a specification.

This invention relates to non-refillable bottles, and more particularly to necks for the same, the object being to provide a neck with a valve which can be readily attached to the neck of a bottle, so that the contents of the bottle can be readily emptied, but cannot be refilled.

Another object of my invention is to provide a neck so constructed that it is impossible for an instrument of any kind to reach the valve, so as to raise the same so that the bottle can be refilled.

With these objects in view the invention consists of the novel features of construction hereinafter fully described, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a vertical section of my improved bottle. Fig. 2 is a section taken on lines 2 2 of Fig. 1. Fig. 3 is a side view of the guard-plug. Fig. 4 is a section taken on the lines 4 4 of Fig. 1 Fig. 5 is a section taken on line 5 5 of Fig. 1.

In the drawings, A represents a neck having an inwardly-projecting flange B, provided with a tube C, having openings C′ formed in its sides adjacent its upper end. The tube C is closed adjacent its lower end by a partition C^2 and is also provided with openings C^3, over which a sleeve-valve D is adapted to work, which is secured on the tube by a flanged plug E, secured in the lower end of the tube C. The upper portion of the neck is enlarged on its inside, forming a shoulder A′, on which the guard-plug F is adapted to be secured by cement arranged in recesses formed in opposite sides of the plug, which will securely lock the plug in place.

A tapering recess F′ is formed in the plug in which the upper end of the tube is adapted to fit, which will securely close the upper end of the tube. Zigzag grooves F^2 are formed in opposite sides of the plug F, through which the liquid is adapted to pass, the upper end of the neck being closed by an ordinary stopper G. The lower portion of the neck is adapted to fit over the vertical ribbed neck H′ of the bottle H and be secured thereon by any suitable cement, the flange B resting on the upper edge of the neck H′ and completely closing the same. The lower end of the tube C projects down into the neck of the bottle, so that the liquid can pass out through the opening in the side of the tube when the bottle is turned upside down, so as to cause the sleeve-valve to drop down upon the flange B and open the openings in the tube.

From the foregoing description it will be readily seen that I have provided a neck for a bottle with a valve so constructed that by removing the stopper the liquid can pass out freely when turned upside down and one which will close itself when held in a vertical position.

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

1. In a device of the kind described, the combination with a bottle, of a neck secured thereon provided with a flange carrying a tube and sliding means for closing and opening said tube, for the purpose described.

2. In a device of the kind described, the combination with a bottle, of a neck secured thereon provided with a flange carrying a tube provided with openings, and a sliding sleeve working on said tube, for the purpose described.

3. In a device of the kind described, the combination with a bottle, of a neck arranged thereon having an inwardly-projecting flange carrying a tube provided with openings adjacent its ends, a partition formed in the lower end of the tube, and a sleeve working on the lower end of said tube, over said openings.

4. In a device of the kind described, the combination with a bottle, of a neck secured on said bottle provided with an inwardly-projecting tube having openings adjacent its ends, a partition formed in the lower end of said tube, a plug arranged in the neck over the upper end of said tube, a sleeve arranged on the lower end of said tube, and a flanged plug secured in the end of said tube, for the purpose described.

5. In a device of the kind described, the combination with a bottle having a ribbed neck, of a neck secured over said ribbed neck provided with an inwardly-projecting flange

carrying a tube provided with a valve adjacent its lower end, and a plug provided with zigzag grooves arranged in the upper portion of said neck over the end of said tube, for the purpose described.

6. In a device of the kind described, the combination with a bottle, of a neck secured on said bottle provided with an inwardly-projecting flange carrying a tube provided with openings adjacent each end, a plug provided with a tapering recess secured in the neck over the upper end of the tube and having zigzag grooves formed in its sides and a sleeve mounted on the lower end of the tube working over said openings, for the purpose described.

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