

(No Model.)

H. C. SMALL.  
NON-REFILLABLE BOTTLE.

No. 560,942.

Patented May 26, 1896.

Fig. 1

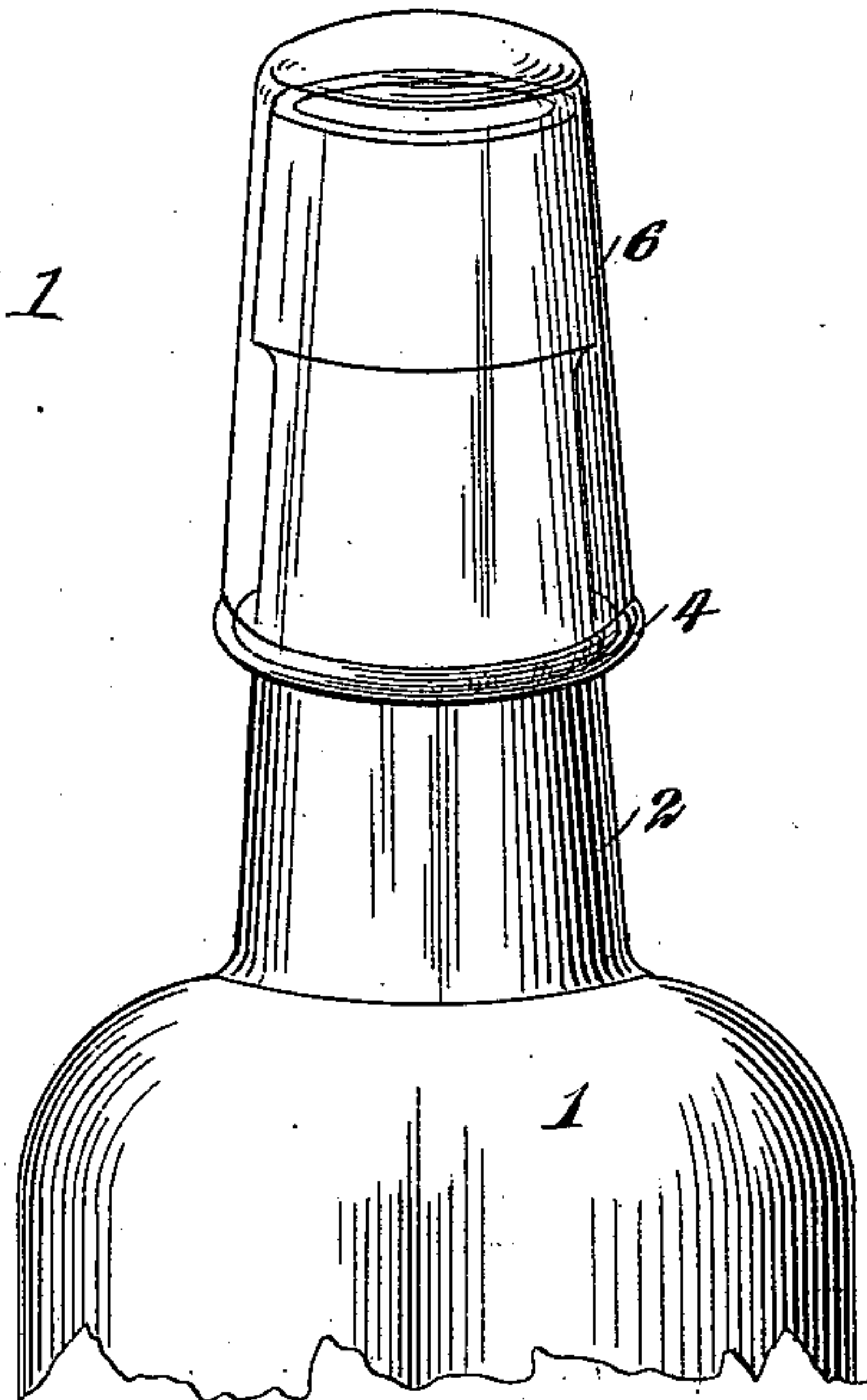


Fig. 4.

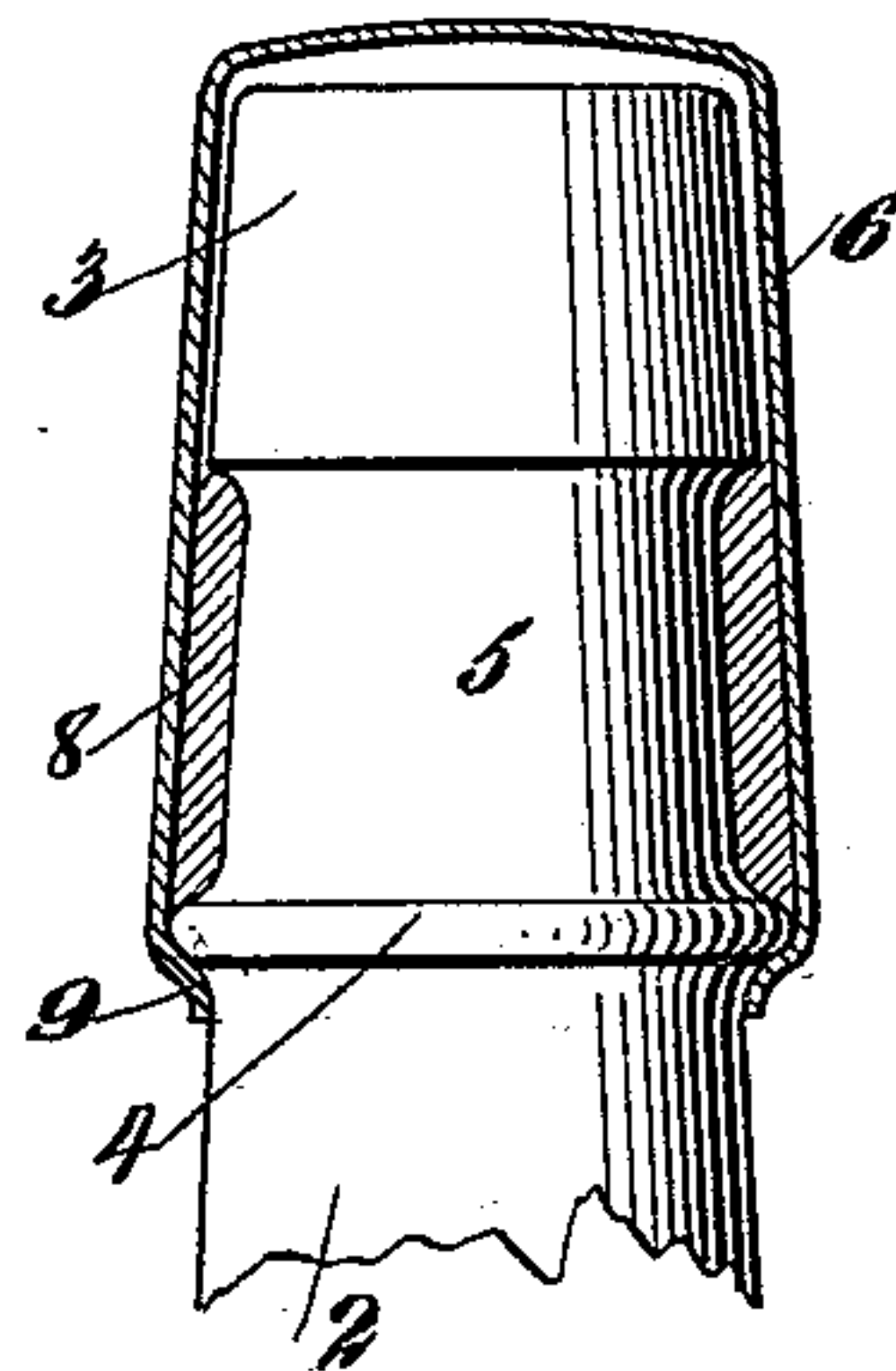


Fig. 2.

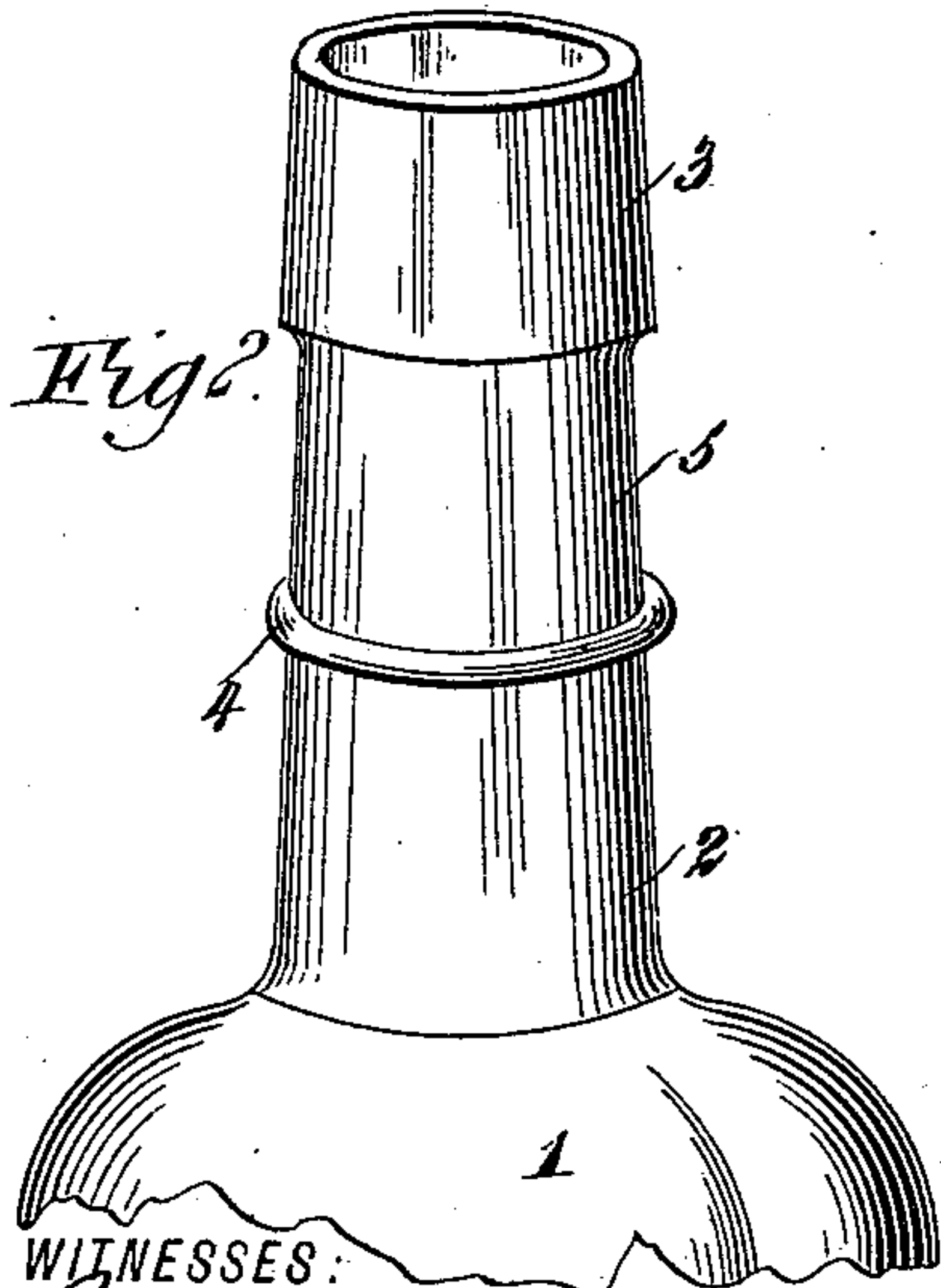
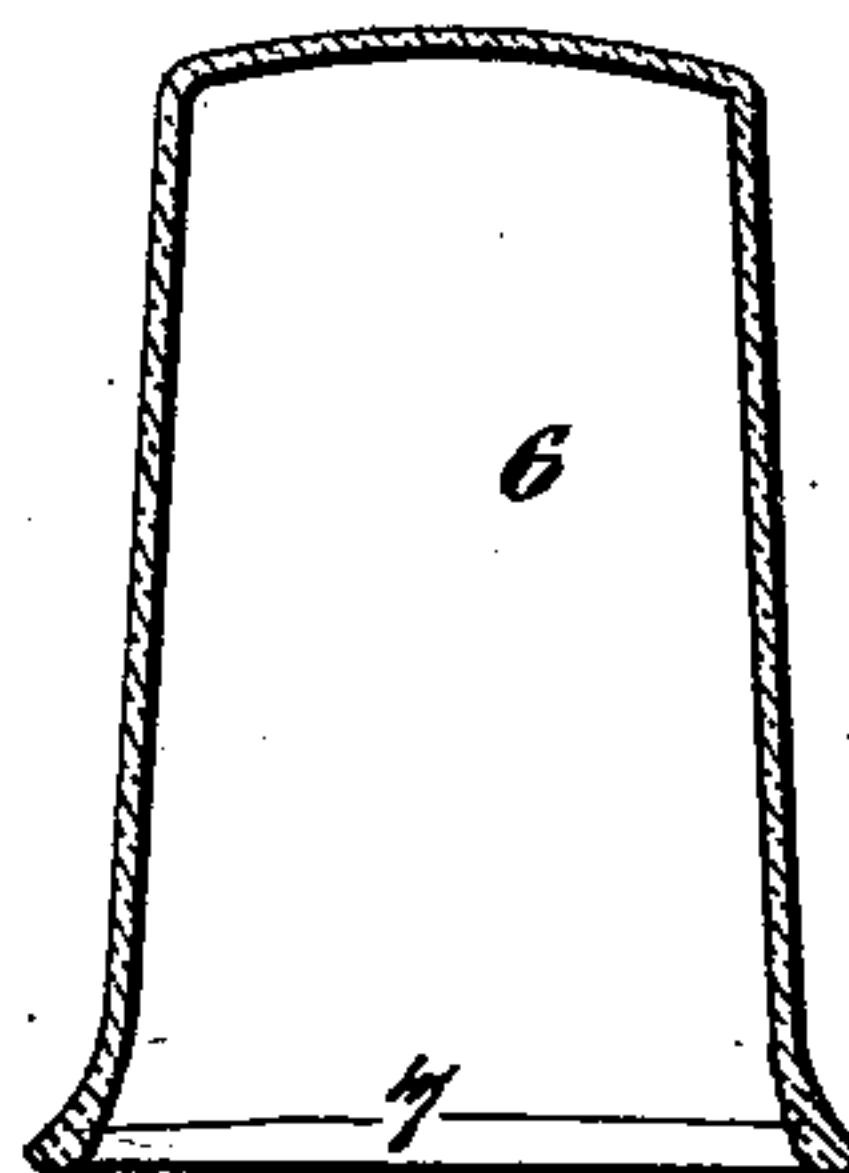


Fig. 3.



WITNESSES:

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INVENTOR

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BY

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# UNITED STATES PATENT OFFICE.

HENRY C. SMALL, OF PORTLAND, MAINE.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 560,942, dated May 26, 1896.

Application filed October 16, 1895. Serial No. 565,909. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY C. SMALL, of Portland, in the county of Cumberland and State of Maine, have invented a new and Improved Non-Refillable Bottle, of which the following is a full, clear, and exact description.

This invention relates to that class of bottles commonly known as "safety-bottles" designed to prevent the refilling of the same after the contents thereof have been removed; and the object of the invention is to provide a bottle of this character of a simple and inexpensive construction which shall effectually prevent such refilling, and shall at the same time prevent an ornamental and attractive appearance.

The invention consists in a bottle which may be of any form and adapted to receive a cork stopple in the ordinary way, the neck of the bottle being provided with an exterior projecting bead or flange and a cup-shaped cap formed of soft glass arranged to fit over the neck of the bottle above said bead or flange and having its lower edge resting on and adapted to be fused thereto.

The invention also contemplates certain novel features in the construction, combination, and arrangement of the various parts, whereby certain important advantages are attained and the bottle is made simpler, cheaper, and otherwise better adapted and more convenient for use than various similar bottles heretofore employed, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view showing the upper part of a bottle provided with my improved safety-stopper. Fig. 2 is a similar view showing the bottle before the cap is applied. Fig. 3 is a sectional view showing the cap detached, and Fig. 4 is a sectional view taken through the cap when in place on the bottle.

In the views, 1 represents the bottle, which may be of any form, and 2 represents the neck thereof, having at its upper end a deep fillet

3, between which and the body of the bottle said neck is slightly tapered in the usual way. About centrally between the body of the bottle and the fillet 3 the neck 2 is provided with a projecting annular bead or flange 4, extending around its outside, and forming between its upper edge and the lower part of the fillet 3 a recess or chamber 5, the function of which will be hereinafter explained. The flange 4 is, as seen in the drawings, of greater diameter than the lower end of the fillet 3 on the bottle-neck.

6 represents the cap, made of glass, of a slightly-tapered form, adapted to snugly fit over the upper part of the bottle-neck 2 and having its lower edge 7 slightly thickened, as seen in Fig. 3, and adapted to rest, when the cap is applied over the neck of the corked bottle, on the flange or bead 4 on the said neck. The cap 6 will be by preference formed of some soft variety of glass adapted to be fused readily, and in applying said cap to the corked bottle the space or recess 5 will be filled with calcined plaster or other suitable cement, as seen at 8 in Fig. 4, after which the said cap will be applied, its lower edge resting on the flange or bead 4. The flange 4 being of greater diameter than the largest part of the fillet 3 of the bottle-neck, it is evident that the cap 6 may be readily placed over the corked mouth of the bottle in position for sealing, and when placed in this position its lower edge will engage the said flange 4. The thickened lower edge 7 of the cap will then be strongly heated, so as to adhere to said bead or flange 4 and act in conjunction with the plaster or cement 8 to hold the cap in place, it being understood that the lower edge of said cap, being made thicker than its body, permits the cap to be more securely attached to the bead 4. As shown at 9 in Fig. 4, the lower edge of the cap is pressed around and under the bead 4 on the bottle-neck.

The contents of a bottle sealed as above set forth cannot be removed without breaking the cap 6, and when this is done it will be a very difficult and impracticable proceeding to apply a new cap. Furthermore, the cap applied to the bottle as above described forms a hermetic seal for the bottle and may also be used as a protecting-covering for labels held on the neck or stopper.



It will be obvious from the above description of my invention that the device is susceptible of considerable modification without material departure from the principles and spirit of my invention, and for this reason I do not wish to be understood as limiting myself to the precise form of the parts herein set forth.

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

1. In a non-refillable bottle, the combination of a bottle having a neck provided with an annular projecting flange, and a cap of soft glass arranged to fit over the neck of the bottle and having a thickened edge arranged to rest on the said flange, said thickened lower edge being, when the cap is to be sealed down, pressed over and behind the said projecting flange on the bottle-neck, to hold the cap in place, substantially as set forth.

2. In a non-refillable bottle, the combina-

tion of a bottle having its neck provided with a fillet, and below said fillet with an annular projecting bead, of greater diameter than the said fillet, said neck having an annular recess between the bead and the lower part of the fillet, cement in said recess, and a cap of soft glass having tapered sides, said cap being arranged to fit over the neck of a bottle with its lower part extending over the recess and held in place by the cement therein, and having its lower edge thickened and adapted to rest upon the projecting bead below said recess, said thickened edge of the cap being adapted when the bottle is to be sealed, to be pressed around and behind said bead to prevent the removal of the cap, substantially as set forth.

HENRY C. SMALL.

Witnesses:

HANNO W. GAGE,  
CHARLES A. STROUT.