

No. 684,870.

Patented Oct. 22, 1901.

M. ROSENSTOCK.
NON-REFILLABLE BOTTLE.

(Application filed Dec. 24, 1900.)

(No Model.)

Fig. 1.

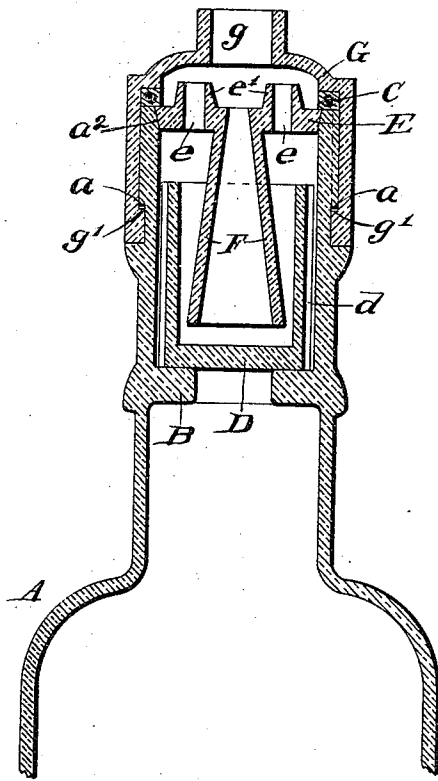


Fig. 2.

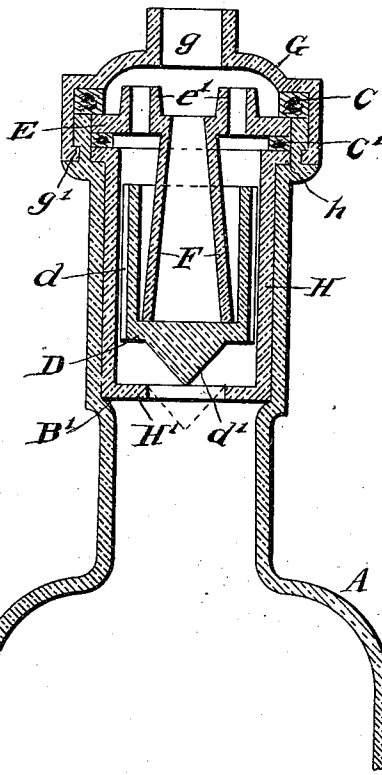
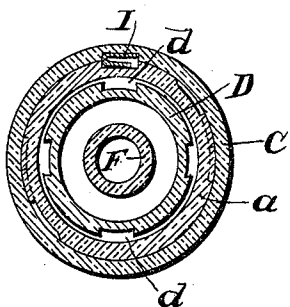


Fig. 3.



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MORITZ ROSENSTOCK, OF NEW YORK, N. Y., ASSIGNOR TO THE THOMPSON MANUFACTURING CO., OF DOVER, DELAWARE, A CORPORATION OF DELAWARE.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 684,870, dated October 22, 1901.

Application filed December 24, 1900. Serial No. 40,870. (No model.)

To all whom it may concern:

Be it known that I, MORITZ ROSENSTOCK, a citizen of the United States, and a resident of New York city, (Flushing,) borough of Queens, in the county of Queens and State of New York, have invented a new and Improved Non-Refillable Bottle, of which the following is a full, clear, and exact description.

My invention relates to an improvement in non-refillable bottles, and comprises certain novel features which will be hereinafter described, and particularly pointed out 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 figures.

Figure 1 is a sectional elevation of a bottle having my invention embodied therein. Fig. 2 is a similar view showing a modified construction, and Fig. 3 is a section taken through the neck of the bottle.

The above-referred-to drawings show the form of my invention which is now preferred by me, although I am aware that the details of construction of the parts may be considerably changed without changing the character of the invention, and I do not therefore wish to be limited to the exact construction herein shown. The following description applies to the construction herein shown.

The bottle A in the form shown in Fig. 1 is provided with a ledge B, which, as shown, consists of a diaphragm having a central discharge-opening, the upper surface of said diaphragm acting as a valve-seat. Within the portion of the neck above this diaphragm or valve-seat is placed a valve D, which has an upward hollow extension, serving to guide the valve in its movements up and down in the neck, and provided with grooves *d* in its exterior adapted to permit the passage of the liquid. At the upper end of the bottle-neck a seat *a*² is provided, which is engaged by the edges of a perforated diaphragm E, said diaphragm having a tubular downward extension or pendant F, which terminates a short distance above the bottom of the tubular extension of the valve, so that the valve may move a short distance, which is limited by

contact with the lower end of the pendant. The pendant is herein shown as being of a conical shape, the opening in the same extending through the diaphragm. The lower end of the cone, which is the larger end, forms a free-sliding fit within the upward extension of the valve. The diaphragm is provided with holes *e* outside of said pendant, and these are extended above the upper surface of the diaphragm by means of short tubes *e'*, which increase the difficulty of inserting a wire or other instrument within the bottle, so as to interfere with the proper operation of the valve.

In the form shown in Fig. 2 a cup H is inserted within the neck, said cup being provided with a flange *h*, located at its upper end and engaging a seat provided therefor in the bottle-neck. In this construction the diaphragm which forms the valve-seat is formed as the lower portion of the cup H, as is shown at H'. The bottle-neck might be provided with a seat at the point B', as indicated in Fig. 2, instead of the seat at the upper end. In either of the constructions shown the parts which are inserted within the bottle are held in place by means of a locking-cap G, said cap being constructed and secured to the bottle after the manner illustrated in the Patent No. 573,484, issued to me December 22, 1896. In said patent the cap and neck are shown as provided with threads, which are engaged to hold the cap in place, and also with a spring catch or pawl, which engages recesses in the cap and bottle-neck to prevent the cap from being screwed backward. In the device as herein shown a bayonet-joint is used as a substitute for the screw-threads. This bayonet-joint consists of the projections *g'* upon the cap and the projections *a* upon the bottle-neck. The spring-pawl is shown at I in Fig. 3, being a small piece of metal which is bent back upon itself and which will spring together while the cap is being inserted, but will spring outward, so as to lock the cap in place, as soon as it reaches the recess in the bottle-neck. The cap is also provided with a discharge-opening *g*, which when the bottle is not in use will be filled by an ordinary cork. In Fig. 1 the valve is shown as down upon its seat, while in Fig. 2 the valve is shown as raised. The valve in Fig. 2 is also pro-

vided with a teat adapted to enter a hole in the diaphragm H', so as to both guide the valve to its place and to form a better seating-surface. The lower position of the valve is 5 shown by the dotted outline of this teat.

It is preferred that washers, as C C', be inserted between the parts of the device, so as to permit a slight yielding of the parts while being located in position and also to insure 10 a tight joint which will prevent leakage.

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

1. A bottle having a valve and valve-seat 15 within its neck, the valve having an upward hollow extension, a diaphragm extending transversely within the neck and above the valve, said diaphragm having a central stop depending within the hollow extension of the 20 valve and adapted to engage the bottom thereof before the upper end of the extension contacts with the diaphragm, said diaphragm also

having holes outside of the depending stop, a seat for the diaphragm within the neck, and a cap having a discharge-opening and a locking engagement with the upper end of the neck and holding the diaphragm in place. 25

2. A bottle having a removable cup fitting within the neck and seating thereon, the bottom of said cup having a discharge-opening, 30 a valve within said cup having an upward hollow extension and adapted to close the discharge-opening in the cup, a perforated diaphragm seated above the valve and having a stop engaging the valve before its upper end 35 touches the diaphragm, and a cap having a discharge-opening and provided with means for locking it upon the neck, said cap holding the diaphragm and cup in place.

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Witnesses:

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