

(No Model.)

A. H. WIRZ.
BOTTLE STOPPER.

No. 295,708.

Patented Mar. 25, 1884.

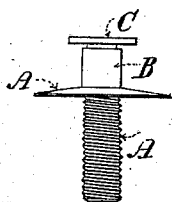


Fig. 1

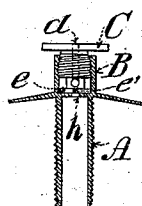


Fig. 2

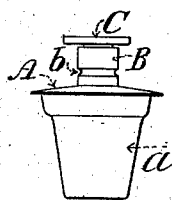


Fig. 3

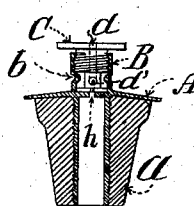


Fig. 4

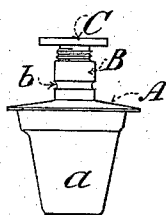


Fig. 5

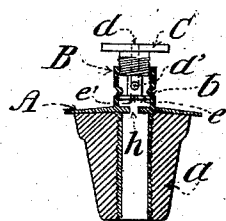
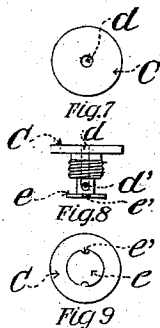


Fig. 6

WITNESSES:

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UNITED STATES PATENT OFFICE.

AUGUST H. WIRZ, OF PHILADELPHIA, PENNSYLVANIA.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 295,708, dated March 25, 1884.

Application filed October 15, 1883. (No model.)

To all whom it may concern:

Be it known that I, AUGUST H. WIRZ, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to stoppers for bottles that are used to contain perfumery and similar fluids; and the improvement consists in the manner of constructing the stopper and the means of preventing the separation of the two parts of the valve, as will be hereinafter described, and more particularly pointed out in the claims.

In the accompanying drawings, Figures 1 and 2 are respectively an elevation and a section of a stopper before the circular depression is made in the outer casing of the neck. Figs. 3 and 4 are respectively an elevation and a section of a finished stopper provided with a cork and ready to be fitted into the neck of the bottle, and having the circular depression in the neck to prevent the separation of the two parts of the valve. These figures show the valve closed. Figs. 5 and 6 are respectively an elevation and a section of the finished stopper, showing the valve open. Fig. 7 is a plan of the valve; Fig. 8, an elevation of the valve, showing it removed from the stopper. Fig. 9 is an inverted plan of the valve.

A represents the body of the stopper, made of any soft metal, and provided with a screw-thread at the lower end, by means of which the cork *a* is secured thereto, thus enabling the stopper to be fitted to the neck of a bottle.

B is the upper part or neck of the stopper, containing the valve.

b is a circular depression or crease made in the neck B. The crease *b* is made in the body of the neck portion B, which extends both above and below said crease in a plane cylindrical form, allowing the valve and screw-threaded portion thereof room for action.

C is a valve fitting into the neck B, the top or outlet of which valve may be of any desired or required shape.

d is a central opening or outlet in the valve C. *d'* is a passage or opening in the lower part

of the valve at right angles to the outlet *d*, and connected therewith at its lower end.

e is a flange on the bottom of the valve. Between the flange *e* and the screw-thread the valve-stem is turned down, to allow the circular depression *b* on the neck B to project over the flange and prevent the separation of the two parts of the valve, the space below this cut-away portion being made sufficiently wide to allow the valve to be opened and closed.

e' e' are two cuts or openings made in the flange *e* immediately opposite the ends of the passage *d*. These are made for the purpose of facilitating the flow of the liquid contained in the bottle.

h is a central outlet in the stopper. The stopper being fitted to the neck of a bottle and the valve opened, as shown in Figs. 5 and 6, when the bottle is inverted or turned over, the liquid will pass through the central outlet, *h*, into the neck B, from thence around the edge of the flange *e* and through the cuts *e' e'* into the opening *d'*, and is discharged through the outlet *d* in the center of the valve. The stoppers are first made with the valve fitted into the neck thereof, as shown in Figs. 1 and 2, after which the circular depression or crease is formed in the neck B. As this depression or crease projects into the opening on the valve-stem, between the lower end of the screw and the flange, it will be readily seen that it effectually prevents the removal of this valve from the neck of the stopper, and at the same time allows the free use of the valve. The neck B of the stopper extends up close under the bonnet or cap of the valve, thus completely hiding the screw-thread thereon and giving to the stopper a neat and finished appearance.

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

1. A bottle-stopper provided with a valve having a flange, a valve-seat, and a cylindrical neck encompassing the valve, said neck being provided with an inwardly-projecting annular crease above the flange on the valve, and having sufficient space between the crease and the valve-seat to allow the movement of the valve, as set forth.

2. A bottle-stopper having a valve with a flange and screw-thread near its upper end, a

valve-seat and cylindrical neck, formed of a single piece, the neck being provided on its inside, near the top, with screw-threads for engaging with those on the valve and a crease 5 above the flange on the valve-seat, as and for the purpose set forth.

3. In a bottle-stopper, the neck B, extending up so as to cover the screw-threads on the valve-stem, and having the circular depression

or crease *b*, in combination with the valve C, 10 having central outlet, *d*, passage *d'*, and cuts *e' e'*, substantially as shown.

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

AUGUST H. WIRZ.

Witnesses:

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