(No Model.)

A. H. WIRZ.

BOTTLE STOPPER.

No. 306,307. Patented Oct. 7, 1884.

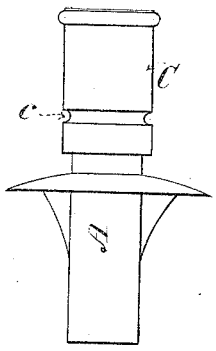

Fig. 1

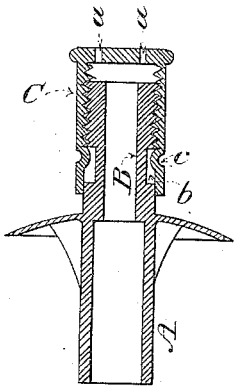

Fig. 2

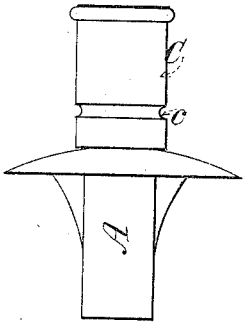

Fig. 3

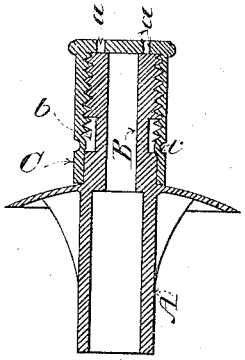

Fig. 4

WITNESSES:

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AUGUST H. WIRZ, OF PHILADELPHIA, PENNSYLVANIA.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 306,307, dated October 7, 1884.

Application filed June 23, 1884. (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; 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.

My invention relates, particularly, to that class of bottle-stoppers used on bottles containing perfumery, tooth-washes, and similar articles; and the object of my improvement is to more securely fasten the cap upon the discharge-tube, so that it cannot be separated therefrom when opening the valve to allow the liquid to flow out, and at the same time to make a cheap and sightly stopper that will not be liable to get out of order. To accomplish this object I extend the outer cap well down over the discharge-tube, and form therein an inwardly-projecting annular crease, said annular crease fitting into a corresponding cut or depression made around the outside of the discharge-tube.

Heretofore this class of stoppers has been made by simply forming an inwardly-turned flange on the bottom of the cap, so as to engage with a shoulder formed on the neck of the discharge-tube, thus preventing the removal of the cap. As this inwardly-turned flange is usually made by simply spinning the metal under after the cap has been screwed into place, and the metal being soft and yielding, a very slight pressure applied to the cap when opening the stopper will force back the spun-under flange and allow the cap to come off. With my improvement this becomes almost impossible, as it will be readily seen that it will require a much greater effort to force the cap off if it is provided with the inwardly-projecting annular crease and the metal of the cap extends some distance below said crease.

In the accompanying drawings, Figure 1 is an elevation of an open stopper containing my improvements. Fig. 2 is a section through Fig. 1. Fig. 3 is an elevation of the stopper closed. Fig. 4 is a section through Fig. 3.

A is the part of the stopper fitting into the bottle.

B is the neck or discharge-tube, having an external screw-thread thereon.

b is a circular cut or depression formed around the outside of the discharge-tube. This cut is made wide enough to allow the cap to be moved up and down sufficiently to open and close the stopper.

C is a cap covering the discharge-tube. This cap is provided with an internal screw-thread.

a a are ports or openings in the top of the cap C. These ports are placed in such a position that they will be closed by the top of the discharge-tube when the cap is screwed down. (See Fig. 4.)

c is an inwardly-projecting annular crease formed in the cap C. By extending the cap C downward below the crease so as to fit snugly around the neck of the stopper, an additional bearing is secured, and the cap will move up and down more smoothly and evenly, and the screw-thread on the cap and discharge-tube may be made considerably shorter.

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

In a bottle-stopper, the externally-screw-threaded discharge-tube B, having the cut or depression *b*, in combination with the internally-screw-threaded cap C, provided with port or ports *a*, and having the inwardly-projecting crease *c*, the said cap C extending below the cut or depression in the discharge-tube B, so as to form an additional bearing thereon for the cap C, substantially as shown and described.

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

AUGUST H. WIRZ.

Witnesses:
REV. E. NIDECKER,
THOMAS D. MOWLDS.