(No Model.)

H. M. WIRZ.

SCREW CAP FOR COLLAPSIBLE TUBES.

No. 359,305. Patented Mar. 15, 1887.

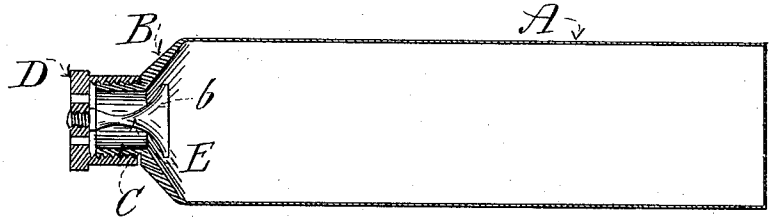


Fig. 1

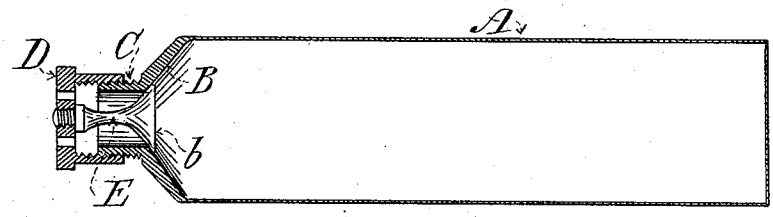


Fig. 2.

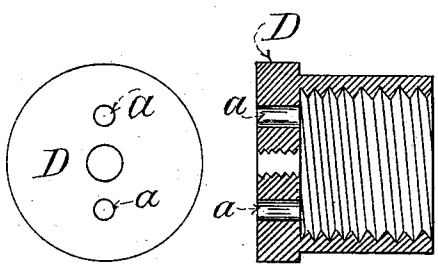


Fig. 3

Fig. 4

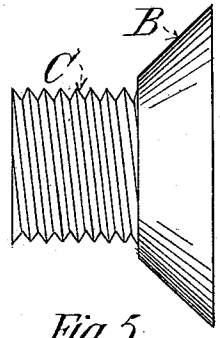


Fig. 5

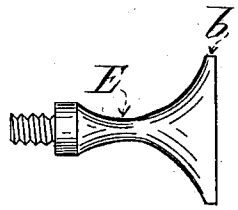


Fig. 6

WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY M. WIRZ, OF WALLINGFORD, PENNSYLVANIA.

SCREW-CAP FOR COLLAPSIBLE TUBES.

SPECIFICATION forming part of Letters Patent No. 359,305, dated March 15, 1887.

Application filed December 3, 1886. Serial No. 220,631. (No model.)

To all whom it may concern:

Be it known that I, HENRY M. WIRZ, a citizen of the United States, residing at Wallingford, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Screw-Caps for Collapsible Tubes and 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 to screw-caps for collapsible tubes, bottle-stoppers, and similar articles; and the improvement consists in the construction and combination of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 shows a section of a collapsible tube with my improvement thereon, and having the valve open. Fig. 2 is a section of the tube, showing the valve closed. Figs. 3, 4, 5, and 6 are details of the screw-cap and neck of the tube.

A is the body of the collapsible tube, which is constructed of metal in the ordinary manner.

B is the heavy metal shoulder or top of the tube.

Shoulder B and body A are preferably formed of a single piece of metal, the body being drawn up from the shoulder.

C is the screw-threaded neck.

D is the screw-cap, fitting over the neck C.

a a are two discharge-orifices in the cap D.

E is a valve secured to the cap D, and having an extending flange, *b*, made to conform to the under side of the shoulder or top B. The upper end of the valve E has a shoulder and a screw-threaded extension which fits into a screw-threaded central opening in the cap D. The projecting end of the screw is then spun over, thus securely fastening the valve and cap together and practically making them in one piece.

Instead of screwing the valve E to the cap, it may be fastened in place by soldering or any other convenient or desirable means.

The cap D is screwed upon neck C, and the valve E is inserted from the bottom of the tube and screwed or otherwise secured in cap D. The tube is then filled and the bottom closed in the usual manner.

The tube being constructed and arranged in the manner shown in Fig. 1, the valve E is closed by simply turning the cap D, as if about to remove it from the neck C. This movement will bring the flange *b* of the valve E up against the under side of the shoulder B, in the position shown in Fig. 2, thus effectually closing the tube and preventing any of its contents from coming out or being removed. The reverse movement of the cap D will of course again open the valve.

If desired, the neck C may be internally screw-threaded and the cap D provided with an external screw-thread.

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

1. A non-detachable cap for collapsible tubes and other articles, consisting of the screw-cap D, fitting on a screw-threaded neck, a valve, E, secured to the top of the cap, and having a flaring base, which closes against the bottom of the neck, and discharge opening or openings in the top of the cap, beside the valve-stem, as set forth.

2. In a collapsible tube, the combination of the body A, the shoulder or top B, having the screw-threaded neck C, the screw-cap D, having discharge opening or openings *a*, and the valve E, secured to the screw-cap D, and provided with the enlarged base or flange *b*, all arranged substantially as and for the purpose described.

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

HENRY M. WIRZ.

Witnesses:
CHARLES E. LEX, Jr.,
THOS. D. MOWLDS.