

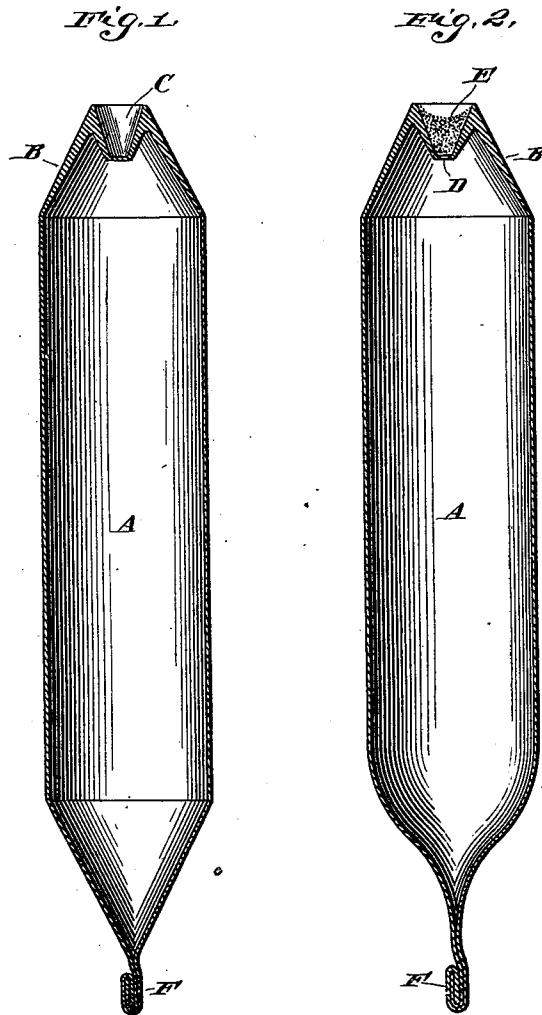
No. 675,372.

Patented June 4, 1901.

R. BROOKS.
COLLAPSIBLE TUBE.

(Application filed Sept. 13, 1900.)

(No Model.)



Witnesses:

Daniel C. Tamwood
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Inventor:

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UNITED STATES PATENT OFFICE.

REUBEN BROOKS, OF GLOUCESTER, MASSACHUSETTS, ASSIGNOR TO THE
RUSSIA CEMENT COMPANY, OF SAME PLACE.

COLLAPSIBLE TUBE.

SPECIFICATION forming part of Letters Patent No. 675,372, dated June 4, 1901.

Application filed September 13, 1900. Serial No. 29,976. (No model.)

To all whom it may concern:

Be it known that I, REUBEN BROOKS, a citizen of the United States, residing at Gloucester, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Collapsible Tubes for Holding Adhesive or Gummy Liquids, by means of which the cost of the package is reduced and the package itself rendered more serviceable for the purpose intended, of which the following is a specification.

My improvement is particularly intended for packages of liquid glue of a very strongly adhesive character, though it may be used for packages containing other substances.

It consists in a peculiar construction of the top or cone of the package, by means of which the disadvantages of the screw-threaded neck and cap are entirely avoided and provision is made for retaining a drop of the adhesive substance in such position that it will effectually seal up the package after it has been opened for use.

In the accompanying drawings, Figure 1 shows a longitudinal section of my improved tube as it appears when filled and ready for sale, an illustration of the contents, however, being omitted. Fig. 2 shows a similar section of the tube after it has been opened for use and closed again by allowing a small portion of its adhesive contents to seal the opening.

The great objection to the screw-threaded cap for adhesive substances is that after once opening the package it is generally impossible to again unscrew the cap, and in the effort to do so the entire top of the tube is liable to be twisted off and the package spoiled. It is the purpose of my invention to obviate this difficulty and provide means by which the package may be easily opened without danger of twisting or crushing the top, and also provide for the self-sealing of the orifice after a portion of the contents of the tube has been ejected therefrom. To attain this end I construct the entire tube of one piece of metal, the top of the cone being truncated so as to form a small flattened surface having a comparatively strong edge with a cup-shaped depression or hollow in its center, so formed that the metal at the bottom of the cup is thin

enough to be easily pierced by a pin or other pointed instrument, but so protected by the stronger raised edges of the cup that it is not likely to be broken by the ordinary handling to which the package is subjected in transportation or sale.

In the drawings, the reference-letter A designates the barrel of the tube; B, the discharge end of the tube, preferably tapered, and C, a cup-shaped depression at the top of the discharge end. The walls of the tube are preferably thickened toward the extremity of the latter and in the sides of the reëntrant portion C, while the bottom of the latter is comparatively thin, so that it can be readily punctured. The reference-letter D, Fig. 2, designates a puncture which is made in the bottom of the cup C by the consumer when he desires to eject a portion of the contents of the tube, and E designates a small quantity of the adhesive liquid from the tube which has been allowed to dry in the cup C, making the tube "self-sealing." This seal can be easily broken with a pin or removed by the point of a knife when it is desired to reopen the package. The cup-shaped depression or reëntrant portion is preferably of flaring form to facilitate the puncturing and seal-breaking operations and insure a complete sealing by the collection of liquid in the cup. The letter F designates the folded end of the tube, through which filling of the tube is effected in the first place, the discharge end of the tube, including the cup-shaped depression, being preferably formed integral with the body of the tube from one piece of metal or other suitable substance, no hole being made therein until the tube is opened for the ejection of its contents.

Having thus described my invention, what I claim as new is as follows:

1. A collapsible tube having at its discharge end a reëntrant portion providing a cup, the bottom of which is puncturable for egress of the contents of the tube, the cup itself being adapted to contain a sealing charge, substantially as described.

2. A collapsible tube having at its discharge end a reëntrant flaring portion providing a cup, the bottom of which is puncturable for

egress of the contents of the tube, the cup itself being adapted to contain a sealing charge, substantially as described.

3. A collapsible tube having at its discharge
5 end a reëtrant portion providing a cup, the bottom of which is puncturable for egress of the contents of the tube, the cup itself being adapted to contain a sealing charge and the
10 walls of the tube and the cup thickening toward the rim of the cup, substantially as described.

4. A collapsible tube having a tapered discharge end portion with a reëtrant formation at the extremity providing a cup, the bottom of which is puncturable for egress of
15 the contents of the tube, the cup itself being adapted to contain a sealing charge, substantially as described.

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Witnesses:

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