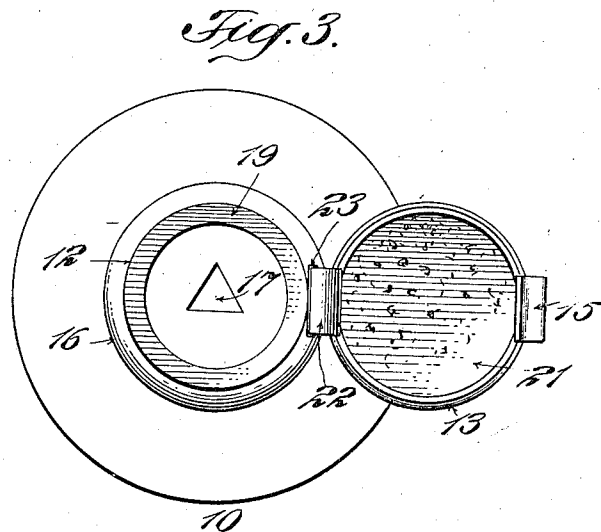
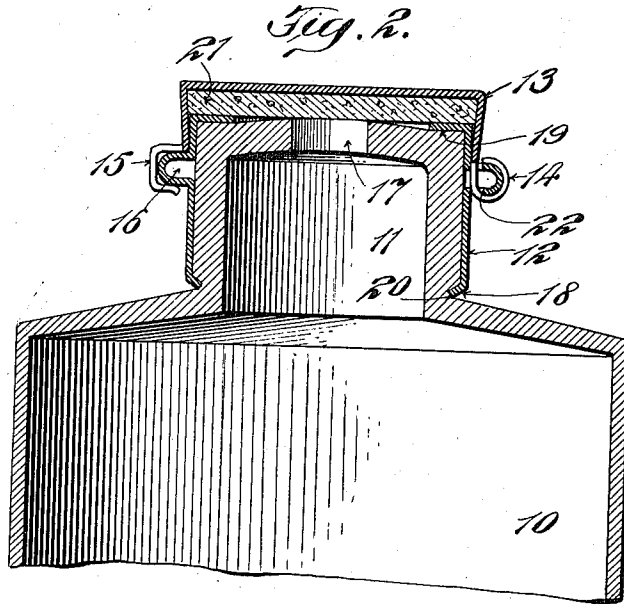
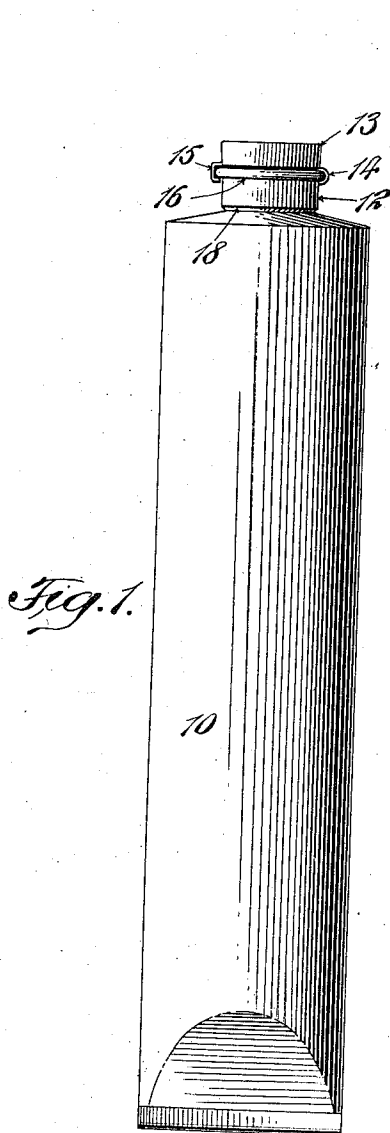


A. ALBRIGHT, JR.
 COLLAPSIBLE FOIL TUBE.
 APPLICATION FILED JULY 1, 1909.

984,636.

Patented Feb. 21, 1911.



WITNESSES:
Julius F. [Signature]
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 BY
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UNITED STATES PATENT OFFICE.

ANDREW ALBRIGHT, JR., OF EATONTOWN, NEW JERSEY, ASSIGNOR TO RUBBER & CELLULOID HARNESS TRIMMING CO., OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

COLLAPSIBLE FOIL TUBE.

984,636.

Specification of Letters Patent.

Patented Feb. 21, 1911.

Application filed July 1, 1909. Serial No. 505,309.

To all whom it may concern:

Be it known that I, ANDREW ALBRIGHT, Jr., a citizen of the United States, and a resident of Eatontown, in the county of Monmouth and State of New Jersey, have invented certain new and useful Improvements in Collapsible Foil Tubes, of which the following is a specification.

The invention relates to improvements in collapsible tubes, such as are commonly made of foil and employed for containing paste of various kinds, glue and other substances, and said invention consists in the novel features and structure hereinafter described, and particularly pointed out in the claims.

Collapsible tubes, as commonly made, have on one end an externally threaded discharge neck containing an outlet orifice and are provided with detachable internally threaded caps adapted to said neck for closing said orifice. These tubes are customarily used many times before their contents become exhausted, and hence the cap or closure is necessarily frequently removed and replaced or intended so to be.

One difficulty connected with the use of collapsible tubes is that the detachable caps become lost or misplaced, with the result that the tube when not in use is not properly closed and the material therein hardens within the discharge orifice by exposure. Another objection is that the lead being soft the screw thread on the discharge neck is frequently destroyed by an improper application of the cap, with the result that the utility of the cap becomes impaired.

The purpose of my invention is to improve and increase the utility of collapsible tubes by providing a novel closure or cap and attaching means which become a permanent part of the tube and hence cannot be detached therefrom and lost or misplaced.

My invention comprises a new construction of the discharge end of the tube, whereby the features of a detachable cap and the threading of the neck and cap are wholly avoided.

In carrying out my invention I leave the discharge neck of the tube smooth and apply over said neck a metal sleeve whose lower edge is flanged into an annular recess or groove at the base of the neck and whose upper edge is flanged over the upper annular edges of the neck and forms an upwardly projecting annular shoulder, which aids in

fastening the sleeve to the neck and also in the sealing of the tube. The sleeve below its upper edge is formed with an annular beading which stiffens the sleeve and serves the double purpose of enabling a closure-cap to be hinged thereto at one side of the sleeve and of affording a lip at the other side of the sleeve to be engaged by a catch on the cap when the latter is closed. The hinged cap will contain a cork or other disk, and the outer end of the tube-neck will be convexed at its central portion so that said neck around its orifice and the upper flanged edge of the encompassing sleeve may both be engaged by said disk and thus afford a double seal for the tube when the cap is closed.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which:

Figure 1 is a side elevation of a collapsible tube embodying my invention; Fig. 2 is an enlarged central vertical section through the upper portion of the same, and Fig. 3 is an enlarged top view of the same, with the lid or cap shown in its open position.

In the drawings, 10 designates the body of the tube, 11 the neck thereof, 12 a sheet metal sleeve closely fitted upon the exterior of said neck, and 13 a cap or lid hinged, at 14, to said sleeve and provided with a catch 15 to engage a projection formed by an annular beading 16 on said sleeve for locking the cap in its closed position.

The neck 11 has a smooth exterior surface and in its upper end is formed an orifice 17 for the discharge of the contents of the tube.

The sleeve 12 is of durable, though thin, sheet metal and fastened on the neck 11 by means of an inwardly turned flange 18 formed on its lower edge and an inwardly turned flange 19 formed on its upper edge, the flange 18 entering an annular groove 20 cut in the tube at the base of the neck 11 and the flange 19 engaging the upper annular outer edge of said neck. The flange 19 forms a smooth annular upwardly extending projection around the edges of the neck 11 and serves as an efficient seat for the outer edges of the cork or other disk 21 held within the dome of the cap 13. Within the inner outline formed by the flange 19, the top of the neck 11 is convexed upwardly so that its central portion around the edge of

the orifice 17, becomes disposed on a horizontal plane with the upper surface of the flange 19, whereby the disk 21 is enabled to engage both the flange 19 and the central portion of the top of the neck 11 around said orifice, the result being that the tube is furnished with two sealing lines, one around the orifice and the other along the flange 19.

The cap 13 is of durable, though thin, sheet metal and its sides converge slightly downwardly, so that the sealing disk 21 may be securely held within the cap. The cap 13 has a top and downwardly extending sides adapted to encompass the upper edges of the sleeve 12 and seat upon the annular shoulder formed by the beading 16, which is integral with and pressed outwardly from said sleeve. At one side the cap 13 is formed with a downwardly extending tongue 22 which is utilized in connection with the beading 16 in forming a hinge for the cap, said tongue being inserted downwardly through a vertical slot 23 in said beading and then curled or folded upwardly around the exterior of the beading, as illustrated in Figs. 2 and 3, whereby the beading adjacent to the slot 23 forms a pintle on which the tongue 22 operating as a hinge-member, may be turned. At its opposite side, the cap 13 is formed with the downwardly extending integral tongue which is bent to pass on and engage the beading 16 and constitutes the catch 15. The catch 15 operates as a spring latch in that when the cap is moved to its closed position, the lower end of the catch 15 will spring over the beading 16 and secure the cap. The lid 13 may be readily opened by applying the pressure of the thumb-nail to the lower edge of the catch 15 to move the latter outwardly and upwardly from the beading 16.

The orifice 17 will preferably be of polygonal outline so that a rod of paste squeezed through the same will have flat sides. I prefer to give the orifice 17 a triangular form, but do not limit the invention to the special contour of the orifice.

My invention provides the neck of the tube with an improved structure enhancing the appearance of the article and avoiding the objections incident to the employment of screw caps on collapsible foil tubes. In ac-

cordance with my invention the tube becomes very securely sealed in that the sealing disk 21 engages both the central portions of the top of the neck 11 and also the annular projection afforded by the metal flange 19. The sealing disk 21 will be of cork, paper or other suitable material.

What I claim as my invention and desire to secure by Letters Patent, is:

1. A collapsible foil tube having on its neck a tight fitting inclosing sheet metal sleeve formed between its upper and lower portions with an outwardly projecting annular beading and at the upper edge of its upper part with an inwardly extending flange engaging the upper edge of said neck, and a cap having at one side a downwardly extending tongue projected through a slot in said beading and folded over on the same to constitute a hinge and at the opposite side a tongue bent to constitute a spring-catch to engage said beading, said cap containing a sealing disk and having sides to pass downwardly over and inclose the upper portion of said sleeve above said beading when the cap is closed; substantially as set forth.

2. A collapsible foil tube having on its neck a tight-fitting inclosing sheet metal sleeve flanged inwardly over the upper edge of said neck, and a cap containing a sealing disk and hinged at one side to said band and at its opposite side provided with a catch to engage a projecting portion of said sleeve, said neck within the outline defined by the upper inwardly flanged portion of said sleeve having an upwardly convex end containing a discharge orifice and being at its apex substantially on a horizontal plane with said flange whereby said sealing disk is enabled to engage both the apex of said neck and said flange and form a double seal, and said cap having sides to pass downwardly over and inclose the upper portion of said sleeve; substantially as set forth.

Signed at Newark, in the county of Essex and State of New Jersey, this 28th day of June A. D. 1909.

ANDREW ALBRIGHT, JUNIOR.

Witnesses:

EDWARD G. ROBERTSON,
NORMAN ROCKWELL.