

Oct. 2, 1934.

V. G. SCHNEIBLE

1,975,481

PERMANENTLY ATTACHED CLOSURE CAP FOR COLLAPSIBLE TUBES

Filed Nov. 15, 1932

FIG. 1.

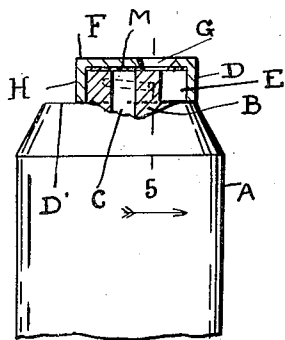


FIG. 2.

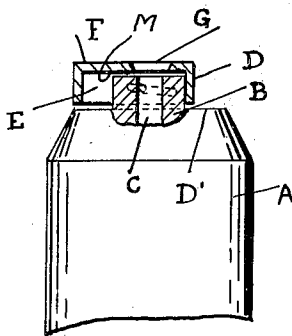


FIG. 3.

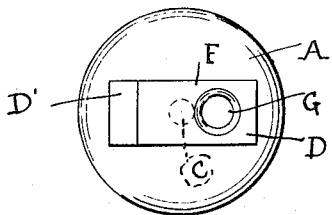


FIG. 4.

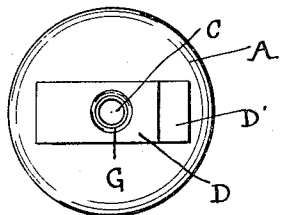


FIG. 6.

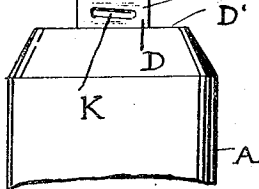
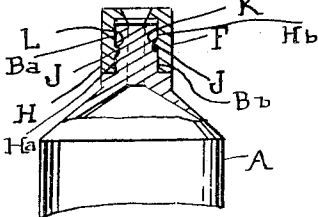


FIG. 5.



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1,975,481

PERMANENTLY ATTACHED CLOSURE CAP
FOR COLLAPSIBLE TUBES

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Application November 15, 1932, Serial No. 642,692

1 Claim. (Cl. 221—60)

This invention relates to improvements in closures for collapsible tubes, and its leading object is to provide a closure cap which will not be detached when in open position, and which may be clamped tightly over the neck of the collapsible tube, to seal the same.

Another object of the invention is the provision of a one piece cap and a coupling connection between the cap and the discharge neck of the collapsible tube, which will permit of the opening of the closure cap by a sliding movement of the same on the discharge neck.

With the above and other objects in view the invention relates to certain new and useful objects, and comprises certain combinations, constructions and arrangements of parts, clearly described in the following specification, and fully illustrated in the accompanying drawing, in which:—

Fig. 1 is a view of the upper part of a collapsible tube, showing the closure cap in closed position.

Fig. 2 is a similar view, showing the closure cap in open position.

Fig. 3 is a plan view of the cap in closed position.

Fig. 4 is a similar view showing the cap in open position.

Fig. 5 is a transverse sectional view, taken on line 5—5 of Fig. 1, looking in the direction of the arrow.

Fig. 6 is a detailed side elevation of the collapsible tube, showing the cap removed.

Referring to the accompanying drawing illustrating the practical construction of the invention, A designates a collapsible container tube, having a discharge neck B, formed with the opening C, which may be disposed near the center of the neck.

The discharge opening C is closed by means of the cap D, which is formed with an elongated opening E, and with a top sealing wall F, having a discharge opening G therein. The pendant flange H of this cap encircles the neck, and the sides of this flange are formed with parallel surfaces Ha and Hb, which engage the parallel sides Ba and Bb of the discharge neck.

In this way the cap has a sliding movement on the discharge neck and is coupled thereto against detachment, by means of the trunnion lugs J, located on opposite sides of the cap and carried by the flange H, which have sliding engagement with the slightly inclined grooves K and L, located on the opposite sides of the discharge neck.

The opening G of the closure cap is normally out of alignment with the opening of the discharge neck, so that the top or sealing wall F of the closure cap will have sealing fit with the upper end of the discharge neck of the collapsible container tube. The sealing wall F is held

in this position by means of the inclined grooves K and L and the cooperating trunnion lugs, carried by the pendant flange of the closure cap.

In opening the collapsible container tube the cap is manually shifted upon the discharge neck, so that the opening G will be placed in register with the discharge opening of the neck B. In this position the contents of the tube may be pressed out. By shifting the cap toward the neck B the sealing wall F will be moved into snug sealing engagement with the upper end of the discharge neck B. The flange H forms a stop to limit the movement of the cap on the discharge neck B. In order to insure a good sealing fit with the discharge neck the sealing cap is provided with a small sealing disc M, which engages the upper end of the discharge neck B.

The cap at all times remains attached to the collapsible tube, and cannot be accidentally removed therefrom. In assembling the cap on the container tube the side walls of the cap may be sprung upon the discharge neck.

Having described my invention I claim as new:—

A collapsible tube having its outlet end formed with a flat rectangular seat and a rectangular lug smaller than the seat and formed with a central discharge orifice, the opposite sides of the lug being parallel to each other and two opposite sides of said lug being formed with grooves inclined in a common direction, a cap mounted astride the lug, said cap having side walls slidably engaging the parallel grooved sides of the lug and end walls which are adapted to permit the sliding movement of the cap on the lug by contact with said lug, the cap having a flat top closure wall formed with a discharge orifice located near one end thereof and conforming to the flat top of the lug, the side walls of the cap having indented portions which slidably engage the inclined grooves of the lug, so that increased pressure contact is established between the closure wall of the cap and the end face of the lug when the cap is shifted to closing position, the discharge orifice of the closure wall being adapted to register with the discharge orifice of the lug when the cap is in open position, the lug being enclosed by the cap and the end walls of the cap being confined in either extreme position of the cap within the margin of the flat top.

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