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H. C. TAYLOR

1,974,632

PASTE TUBE

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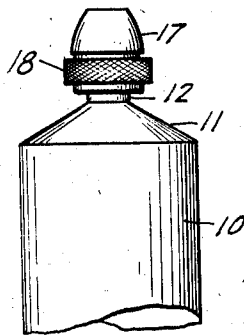


Fig. 1.

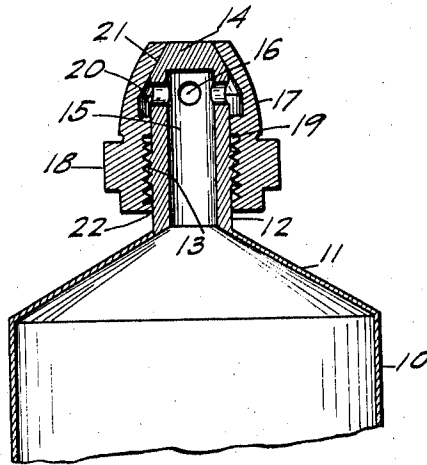


Fig. 2.

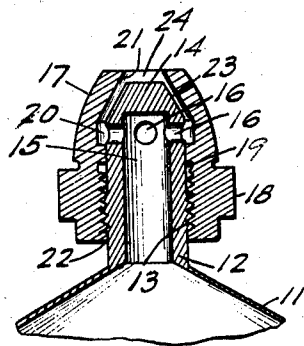


Fig. 3.

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PASTE TUBE

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1 Claim. (Cl. 221-60)

This invention is a paste tube and has special reference to collapsible containers for tooth paste, shaving creams, ointments, oil paints and other commodities of a pasty nature which are customarily dispensed in small amounts.

The main object of the invention is to provide a valve type cap for a paste tube which will effectively seal the tube, and permit dispensing of the paste without removal of the cap.

Another object of the invention is to provide a paste tube with a non-removable cap, which by partial rotation will effectively seal or open the tube.

A further object of the invention is to provide a paste tube which is sanitary due to a sanitary seal which does not permit communication between the point of cut-off of the paste and the contents of the tube.

Other objects and advantages of the invention will become apparent as the following description is read on the drawing forming a part of this specification and in which similar reference characters are used to designate similar parts throughout the several views and in which:

Fig. 1 is a fragmentary elevation of a paste tube with my invention applied thereto.

Fig. 2 is an enlarged sectional view through my invention showing the neck closed.

Fig. 3 is a view similar to Fig. 2 except the neck is shown in open position for extrusion of paste.

The paste tube consists of a cylindrical body portion 10 and conical shoulder 11 which are of the usual construction formed of soft metal by the extrusion process and does not form a part of the invention except in combination with my sealing means, which consists of a neck portion 12 which is externally threaded as shown at 13 and terminates in a frusto-conical end 14 which is closed as indicated. A central bore 15 communicates with the interior of the tube and a plurality of radial apertures 16 communicate with the central bore adjacent to the conical portion 14.

A cap 17 is provided with a knurled portion 18 to permit convenient rotation by the fingers and has a central bore 19 which is threaded throughout a portion of its length, the bore being recessed at 20 and terminating at its upper end in a frusto-conical bore 21 which cooperates with the frusto-conical portion 14 of the neck. The lower end of the cap is spun under after assembling as indicated at 22 so as to prevent removal of the cap. The bottom of recess 20 is formed of an annular flange 20a which serves to prevent paste from working down into the threads 13.

The tubes are filled in the usual way after first closing the cap as shown in Fig. 2.

When paste is to be dispensed from the tube, the cap 17 is partly rotated in a direction to move the cap to the position shown in Fig. 3. The tube is partly collapsed in the usual manner and the

paste is forced through apertures 16 into recess 20 and out between the conical seat 21 and plug 14 through the conical passage 23 thence through the opening 24 at the top of the cap.

For sealing, the cap is turned in the reverse direction to that used for opening, to the position shown in Fig. 2 which extrudes all paste from the passage 23, effectively sealing the contents of the tube against contamination with the expelled paste. It will be observed that as paste is extruded through the openings 16, it will fill the chamber 20 before passing through the tapered portion 14 and out of the opening 24. Upon reversely rotating the cap to again seal the tube, the complementary tapered portions of the plug 14 and cap 17 will squeeze out any excess paste lying between them as the cap moves to closed position. At this time, however, the chamber 20 will remain filled with paste, so that when additional paste is extruded from the tube after unscrewing the cap, the paste leaving the tube will first push the paste out of the reservoir 20 and promptly deliver it to the opening.

Having described an operable method of constructing and using the invention it will be noted that variations in construction and arrangement of parts which are consistent with the appended claim may be resorted to without detracting from the spirit or scope of the invention or sacrificing any of the advantages thereof.

I claim:

A paste tube comprising a collapsible tube provided with an externally threaded discharge neck terminating in a frusto-conical end, said neck having radially disposed outlet openings adjacent said end, and a cap rotatively engaging the neck and having internal threads complementary to and engaging the threads of said neck, said cap having a frusto-conical bore complementary to the end of said neck, and also having an annular flange spaced from said frusto-conical bore in such manner as to provide an annular chamber so located as to register with and surround said outlet openings, the bottom of said chamber being interposed between said outlet openings and the threaded portions of the neck and cap to prevent paste from working into said threaded portions, and means for limiting the opening movement of said cap.

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