June 5, 1934. B. GOTTESMAN 1,961,759

HOLDER AND DISPENSER FOR PLASTIC MATERIALS

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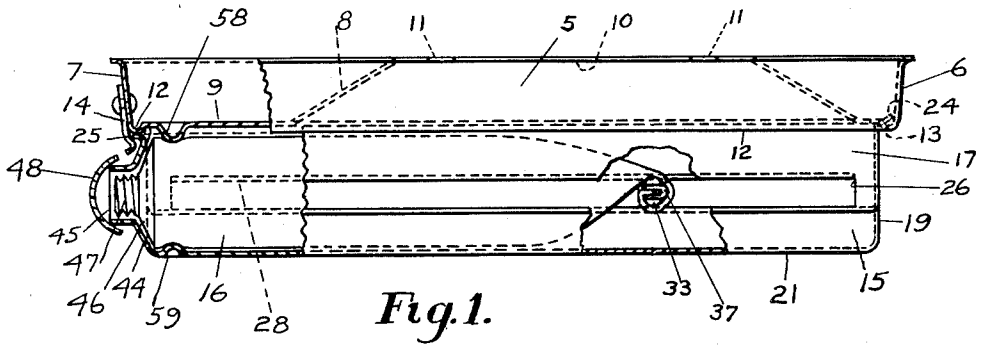


Fig. 1.

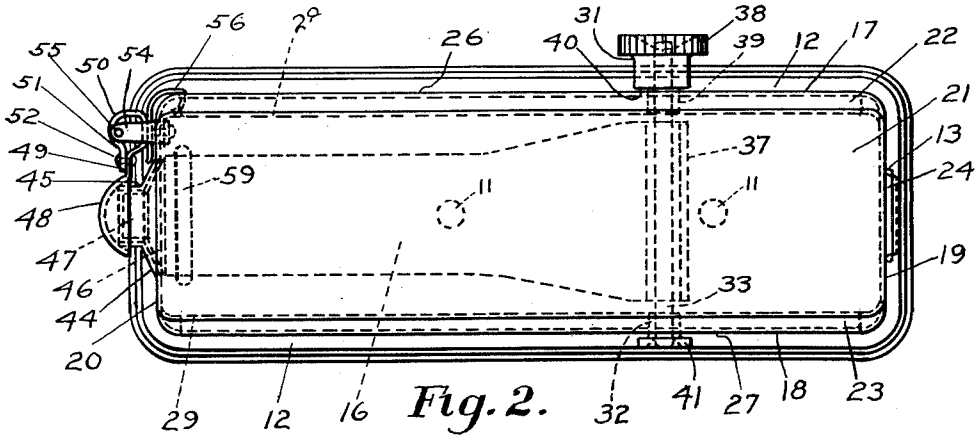


Fig. 2.

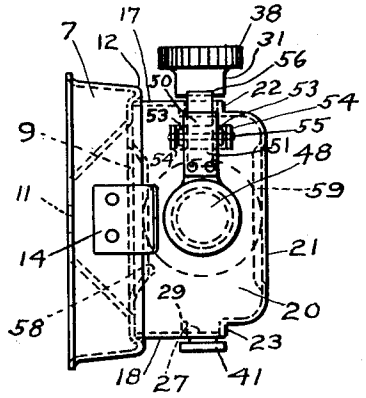


Fig. 3.

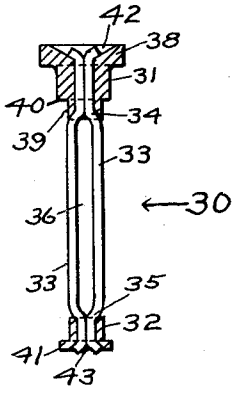


Fig. 4.

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HOLDER AND DISPENSER FOR PLASTIC MATERIALS

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7 Claims. (Cl. 221—60)

The present invention relates to dispensers, and more particularly to dispensers for extruding the contents of collapsible tubes.

It has been proposed heretofore to provide dispensers for this purpose. These dispensers usually comprise a bracket or casing fastened to a vertical wall for holding a tube, a key for wrapping the tube upon itself to extrude its contents, and means for holding the discharge nozzle of the tube from displacement at the point of extrusion. The provision in these devices of means for holding the discharge nozzle of the tube is a detrimental feature since the nozzles of most collapsible tubes are short and are made of relatively soft material, and the threading is sufficient only to secure the cap by which the nozzle is closed. Such nozzles are not adapted nor intended to support the tube itself rigidly in a dispenser or holder, and this is especially true where the nozzle is utilized to support the tube while its closed end is being wrapped upon itself or coiled to extrude the contents of the tube.

Accordingly, it is the principal object of the present invention to provide a dispenser in which the collapsible tube is held from displacement at the point of extrusion by means operating independently of the discharge nozzle of the tube.

To the accomplishment of this object, and such others as may appear hereinafter, the various features of the present invention relate to certain devices, combinations, and arrangements of parts hereinafter described and then set forth broadly and in detail in the appended claims possessing advantages which will be readily apparent to those skilled in the art.

The various features of the present invention will be readily understood from an inspection of the accompanying drawing illustrating the best form of the invention at present devised, in which,

Figure 1 is a view in plan, cut away to show underlying parts;

Fig. 2 is a view in side elevation;

Fig. 3 is a view in end elevation, and

Fig. 4 is a view in sectional elevation of the key for collapsing the tube.

Referring to the drawing, the illustrated embodiment of the present invention comprises a hollow, rectangular, inverted tray or support provided with longitudinal sides 5, vertical ends 6 and 7, and a dished bottom 8 constructed with two level surfaces 9 and 10, the deepest, 10, of which is provided with apertures 11 to facilitate the securing of the tray to a vertical wall. The bottom 8 is formed with a peripheral bead 12, and the top of the tray is provided with a flange. The inside face of the bead 12 adjacent the end 6 is provided with a slot 13, while secured to the end 7 is one element 14 of a fastener.

Adapted to rest against the bottom 8 inside the bead 12 is a hollow, rectangular casing 15 for containing a collapsible tube 16 of extrudable material, such as tooth paste and shaving cream. The casing 15 is provided with longitudinal sides 17 and 18, vertical ends 19 and 20, and a forwardly projecting bottom 21. The bottom 21 is narrower than the ends 19 and 20 and is joined to the sides 17 and 18 by means of integral shoulders 22 and 23. For detachably securing the casing 15 to the bottom 8, the end 19 is provided with a lug 24 adapted to enter the slot 13, while the end 20 is provided with an element 25 (Fig. 1) which cooperates with the element 14 to form a fastening device.

The longitudinal sides 17 and 18 of the casing are provided with slots 26 and 27, respectively, adjacent the respective shoulders 22 and 23. The edge of the slot 26 farthest from the shoulder 22 is provided with a lip 28 bent inwardly and parallel to the shoulder 22, while the edge of the slot 27 farthest from the shoulder 23 is provided with a similar lip 29. With this construction the slots 26 and 27 comprise walled channels.

Adapted to move bodily in the slots 26 and 27 and to be rotated therein is a key 30 comprising collars 31 and 32 which secure together the upper and lower ends, respectively, of two bars 33 (Fig. 4). The bars 33 are provided adjacent their upper ends with shoulders 34 and adjacent their lower ends with shoulders 35 so that when the bars are held together, an opening 36 is formed for the insertion of the closed end 37 of the tube 16, as shown in Fig. 2. The collar 31 is provided with a knurled flange 38 to assist in turning the key, and with a reduced end portion 39 adapted to contact the walls of the slot 26 formed by the shoulder 22 and the lip 28. The shoulder 40 formed by the reduced portion is wider than the slot 26, and rides on the side 17 of the casing 15 as shown in Fig. 2. The collar 32 rides in the slot 27 formed by the shoulder 23 and the lip 29, and is provided with a flange 41 wider than the slot 27 so that the key is secured loosely to the casing. As shown in Fig. 4 the upper ends of the bars 33 are spread apart in a depression 42 formed in the knurled flange 38, while the lower ends of the bars 33 are spread apart in a depression 43 formed in the flange 41.

The end 20 of the casing 15 is provided with a projecting frusto-conical portion 44 and a de-

livery nozzle 45 adapted to receive the shoulder 46 and the discharge nozzle 47, respectively, of the tube 16, as shown in Fig. 2. For covering the end of the delivery nozzle 45 the embodiment of the present invention is provided with a cap 48 formed on one end of an arm 49. The arm 49 is curved to form a loop 50 (Fig. 2) the free end 51 of which is bent into engagement with the base of the arm where it may be secured as shown at 52. Adjacent the cap 48 the arm 49 is provided with two apertured ears 53, while the casing 15 is provided with two ears 54 having apertures which register with those of the ears 53. A pin 55 provides a pivotal connection for the cap 48 and the loop 50 on the ears 54. Bearing against the loop 50 is the flat end of a spring 56 which is preferably bent around a corner of the casing 15, as shown in Fig. 2, and passes through the slot 26 adjacent one end thereof where it is secured to the inner wall of the casing. With this construction, the loop 50 is pivoted as an eccentric upon the pin 55, so that when the cap 48 abuts the delivery nozzle 45, the spring 56 is depressed by the loop (Fig. 2) and the cap is held in place. When the cap 48 and the arm 49 are swung upwardly pressure on the spring 56 is removed, and it extends outwardly to contact the loop 50 adjacent the pin 55 to hold the cap 48 in an elevated position.

By having the delivery nozzle 45 project from the end 20 of the casing 15, there is no opportunity for the paste to smear the casing as the paste issues from the nozzle. Any smearing that may occur, as when a brush is carelessly held near the nozzle, is confined to the mouth of the nozzle. With this construction the end of the casing is always kept clean.

For holding the tube 16 securely in position, the present invention contemplates means carried by both the casing 15 and the bottom surface 9 for engaging the side walls of the tube. To this end the surface 9 is provided with a boss 58 (Figs. 1 and 3) and the bottom 21 of the casing is provided on its inner surface with a boss 59 (Figs. 2 and 3) aligned with the boss 58. The function of these two bosses is to depress and malform the side walls of the tube 16 as shown in Fig. 1, so that the abutment of the shoulder 46 of the tube against the bosses will serve to resist the tendency of the discharge nozzle 47 of the tube to be withdrawn from the delivery nozzle 45 as the key 30 is turned to collapse the tube.

In assembling the present invention for use, the tube 16 is inserted in the casing 15 so that the discharge nozzle 47 and the shoulder 46 of the tube are received by the delivery nozzle 45 and the frusto-conical portion 44 of the casing, respectively. The tube is then pressed against the boss 59 so that the boss will malform and depress the body of the tube adjacent the shoulder 46. The key 30 is then placed over the closed end 37 of the tube, and the casing is secured to the tray by inserting the lug 24 into the slot 13 and then snapping together the fastener elements 14 and 25. This operation serves to press the tube against the boss 58 carried by the surface 9, thereby causing the boss 58 to malform and depress the body of the tube adjacent the shoulder 46 exactly as is done by the boss 59. With this construction, rotation of the key 30 serves to extrude paste from the tube through the delivery nozzle 45, but since the bosses 58 and 59 depress the body of the tube to form an abutment for the shoulder 46, the bosses resist the tendency of the discharge nozzle 47 to be withdrawn from the delivery nozzle 45 as the key 30 is turned to collapse the tube and extrude its contents.

It will be apparent that I have devised a convenient and compact dispenser for collapsible tubes containing extrudable contents, and that by securing the tube independently of its discharge nozzle I have avoided the disadvantages of constructions utilizing the discharge nozzle for holding the tube in place.

It will also be clear to those skilled in this art, with the general objects of the present invention in view, that changes may be made in the details of structure, the described and illustrated embodiment thereof being intended as an exploitation of its underlying essentials, the features whereof are definitely stated in their true scope in the claims herewith.

What is claimed as new, is:

1. In a dispenser, the combination with a member for retaining a collapsible tube provided with a discharge nozzle, a delivery nozzle carried by said retaining member for loosely receiving the discharge nozzle, a base member for supporting said retaining member, and means engageable with the closed end of the tube for collapsing it, of means carried by at least one of said members for engaging the body of the tube to resist any tendency of the discharge nozzle to be withdrawn from the delivery nozzle during the collapsing of the tube.

2. In a dispenser, the combination with a member for retaining a collapsible tube provided with a shoulder and a discharge nozzle, a delivery nozzle carried by the retaining member for loosely receiving the discharge nozzle, a base member for supporting said retaining member, and means engageable with the closed end of the tube for collapsing it, of means carried by at least one of said members for engaging the body of the tube adjacent the shoulder thereof to resist any tendency of the discharge nozzle to be withdrawn from the delivery nozzle during the collapsing of the tube.

3. In a dispenser, the combination with a member for retaining a collapsible tube provided with a discharge nozzle, a delivery nozzle carried by said retaining member and adapted to receive loosely the discharge nozzle, a base member for supporting said retaining member, and means engageable with the closed end of the tube for collapsing it, of means independent of the delivery nozzle and carried by at least one of said members for engaging the body of the tube to resist the tendency of the discharge nozzle to be withdrawn from the delivery nozzle during the collapsing of the tube.

4. In a dispenser, the combination with a member for retaining a collapsible tube provided with a shoulder and a discharge nozzle, a delivery nozzle carried by said retaining member and adapted to receive the discharge nozzle, a base member for detachably supporting said retaining member, and means engageable with the closed end of the tube for collapsing it, of means carried by at least one of said members for engaging the body of the tube adjacent the shoulder thereof to resist the tendency of the discharge nozzle to be withdrawn from the delivery nozzle during the collapsing of the tube.

5. In a dispenser, the combination with a member for retaining a collapsible tube provided with a discharge nozzle, a delivery nozzle projecting from said retaining member and adapted to receive the discharge nozzle, a base member for detachably supporting said retain-

ing member, and means engageable with the closed end of the tube for collapsing it, of means carried by at least one of said members for engaging the body of the tube to resist the tendency of the discharge nozzle to be withdrawn from the delivery nozzle during the collapsing of the tube.

6. In a dispenser, the combination with a member for retaining a collapsible tube provided with a discharge nozzle, a delivery nozzle carried by said retaining member and adapted to receive the discharge nozzle, a base member to which the retaining member is detachably secured, and means engageable with the closed end of the tube for collapsing it, of means carried by the retaining member cooperating with means carried by the base member for engaging the body of the tube to resist the tendency of the discharge nozzle to be withdrawn from the delivery nozzle during the collapsing of the tube.

7. In a dispenser, the combination with a member for retaining a collapsible tube provided with a discharge nozzle, a delivery nozzle for receiving the discharge nozzle, said delivery nozzle projecting from the retaining member and being provided with a closure, a base member to which the retaining member is detachably secured, and means engageable with the closed end of the tube for collapsing it, of means carried by the retaining member cooperating with means carried by the base member for engaging with the body of the tube to resist the tendency of the discharge nozzle to be withdrawn from the delivery nozzle during the collapsing of the tube.

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