Oct. 14, 1952 W. P. HALVORSEN 2,613,853

DISPENSER WITH SLIDABLE PRESSURE PLATES FOR COLLAPSIBLE TUBES

Filed Dec. 18, 1950 2 SHEETS—SHEET 1

Fig. 1

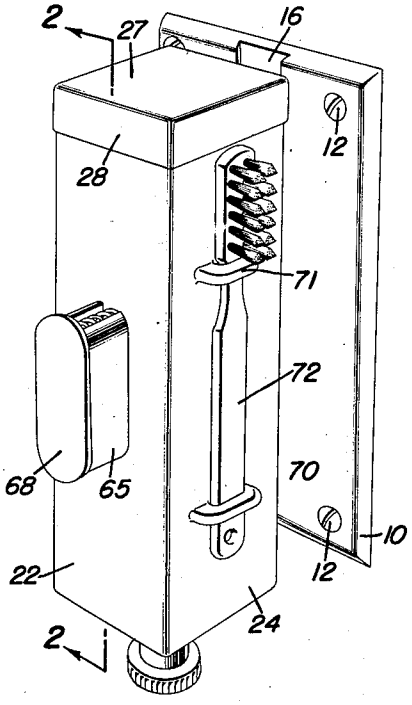


Fig. 2

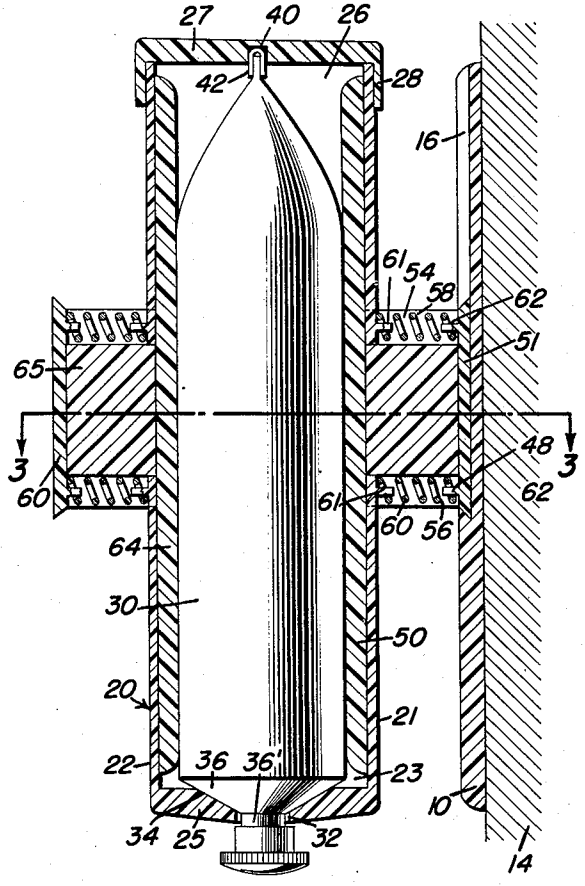
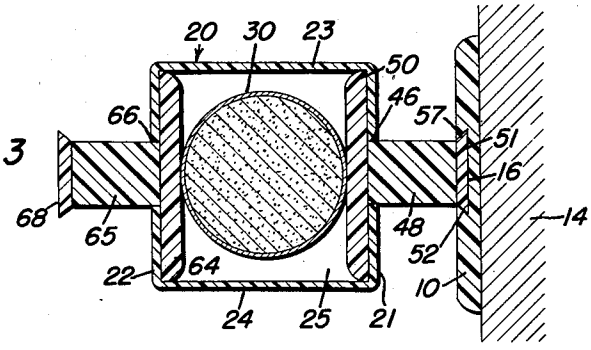


Fig. 3



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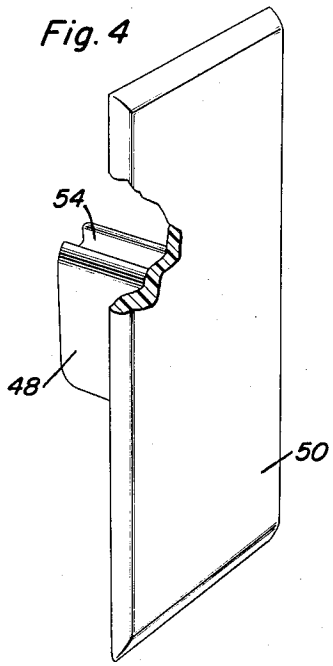
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Filed Dec. 18, 1950 2 SHEETS—SHEET 2

Fig. 4



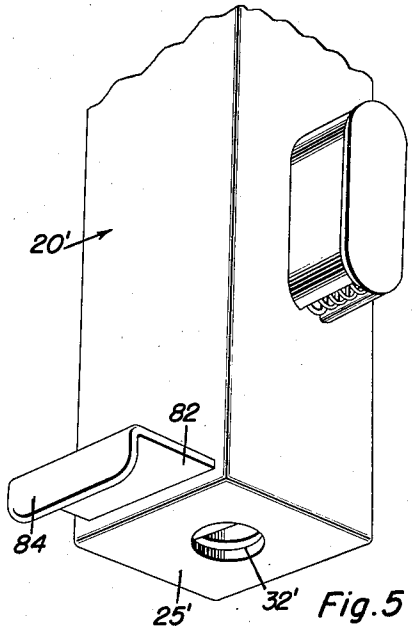


Fig. 5

Fig. 6

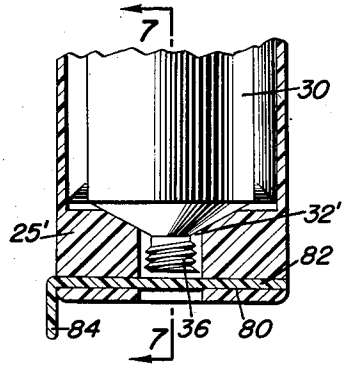
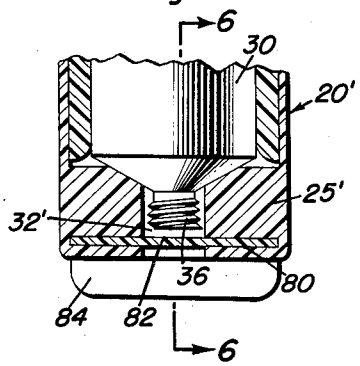


Fig. 7



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UNITED STATES PATENT OFFICE

2,613,853

DISPENSER WITH SLIDABLE PRESSURE PLATES FOR COLLAPSIBLE TUBES

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Application December 18, 1950, Serial No. 201,291

2 Claims. (Cl. 222—103)

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This invention relates to improvements in devices for discharging and dispensing the contents of a flexible tube.

An object of this invention is to provide an improved dispenser and holder combination which retains a standard flexible tube, for example shaving cream, tooth paste and others, so that the neck thereof fits in an aperture of a casing and by application of pressure manually on the tube, a quantity of the contents of the tube is discharged through the neck for application on a brush or the hands or fingers of an individual, depending largely upon the type of material which is contained in the flexible tube.

Other objects and features of importance will become apparent in following the description of the illustrated forms of the invention.

In the drawings:

Figure 1 is a perspective view of the device showing it attached to a mounting plate;

Figure 2 is a longitudinal sectional view taken substantially on the line 2—2 of Figure 1 and in the direction of the arrows;

Figure 3 is a transverse view taken on the line 3—3 of Figure 2 and in the direction of the arrows;

Figure 4 is a perspective view, portions being broken away in section, of one of the pressure applicator plates and its means of manual operation;

Figure 5 is a fragmentary bottom perspective view of a second form of the invention;

Figure 6 is a sectional fragmentary view taken on the line 6—6 of Figure 7 and showing the bottom assembly of the valve employed in the embodiment of Figure 5; and,

Figure 7 is a section view taken substantially on the line 7—7 of Figure 6 and in the direction of the arrows.

As I have illustrated in the drawings, there is a mounting plate 10 adapted to be fixed by standard means, as the screws 12 to a wall 14 or any other fixed element. The mounting plate has a vertical dovetail slot 16 formed therein so that the casing 20 may be supported by the mounting plate by using the dovetail slot 16. It will be noted from inspection of Figure 2 that the dovetail slot extends only partially through the plate and about half the length of the plate.

The casing 20 is provided with sides 21, 22, 23 and 24 together with a bottom wall 25 and an open top 26. A closure 27 which includes a depending flange 28 is disposed on the top part of the casing, the flanges contacting the outer surfaces of the side walls, 21, 22, 23 and 24 in order

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to frictionally hold the closure in place so that it may be readily removed for insertion and removal of tubes, for example the tube 30, from the casing 20.

There is an aperture 32 provided in the bottom wall 25 of the casing 20 and this aperture has a wall constituting a beveled surface 34 on the inner surface thereof so as to accommodate the tapered portion 36 of the tube 30 near the neck 36' thereof, whereby the tube is maintained centered and the neck easily guided in the aperture 32.

There is a downwardly opening groove or slot 40 formed in the closure 27 to accommodate the flattened end portion 42 of the tube 30. The slot helps to maintain the tube 30 centered within the casing.

The wall 21 is provided with an aperture 46 intermediate the upper and lower ends thereof through which the operator arm 48 passes. This arm is fixed to the outside surface of the pressure plate 50, which together with the operator 48 constitutes a part of a means for compressing the tube 30 for the purpose of squeezing the contents through the neck 36' thereof.

The outer end of the operator 48 is provided with a plate 51 having beveled edges to fit in the dovetail slot 16. Accordingly, when the plate 51 is slipped into the open upper end of the slot 16, the casing 20 is held in place properly.

There is an upwardly opening trough 54 provided in the arm 48 and a downwardly opening trough 56 provided in the same arm 48. The spring 58 is located in the trough 54 and the spring 60 is located in the trough 56. Centering pins 61 are provided on the wall 21 and centering pins 62 are provided on the plate 50 in order to hold the springs in the troughs and to yieldingly oppose the inward movement of the arm 48 and hence the plate 50.

There is a second pressure plate 64 with an operator 65 passed through an opening 66 in the wall 22. The arm has an identical spring and plate assembly operatively connected therewith and is used in the same capacity as the means of operating the pressure plate 50 which has been previously described.

In operation, the cap is removed from the tube and pressure applied to the plate 58 which is connected to the operator arm 65. This causes the squeezing plate 64 to compress the tube and at the same time causes the entire casing to shift slightly toward the mounting plate 10. By this action the pressure plate 50 exerts a pressure on the side of the tube opposite from the application of pressure by the plate 64. The

charge of material is thus issued from the neck 36' of the tube. When the pressure is relieved, the pressure plates are sprung outwardly of the case by the action of the springs connected therewith.

The casing 20 may be provided with various appurtenances, for example the brackets 70 and 71 to accommodate a tooth brush 72 for convenience. The materials of construction are selected in accordance of the prerogative of the manufacturer, the preferred material being commercial plastic.

Reference to Figure 5–7 shows that the differentiating structure is the provision of a slot 80 in the bottom wall 25' of the casing 20' and a slider valve 82 which is operated by the finger grip 84 to control the aperture 32'. In this instance, the closure of the tube is simply discarded when placing the flexible tube in the casing.

Having described the invention, what is claimed as new is:

1. In a dispenser and holder for a flexible tube, a casing with side walls, a bottom wall with an aperture to accommodate the neck of the tube, and an opening in the top of the casing for insertion and withdrawal of the tube, a pressure member disposed in said casing to squeeze a charge of material from the tube, one of said side walls having an aperture, and means disposed in said aperture and connected with said pressure member for actuating said pressure member, another of said side walls having

an aperture, a second pressure application member for the tube, and an operator for said second member disposed in said last mentioned aperture, a mounting element, and means operatively connected with said mounting element and said operator for removably supporting said casing.

2. A dispenser comprising a casing for the reception of a collapsible container, a pair of opposed ejector plates slidable in the casing for compressing the container therebetween, means for manually actuating one of the ejector plates, and means for stationarily mounting the other of said ejector plates on a support, the last named means including a wall plate, and an arm on said wall plate fixed to said other ejector plate and slidably supporting the casing.

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