Nov. 27, 1945. J. H. PAGE 2,389,683

TOOTH POWDER AND PASTE DISPENSER

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Fig. 4

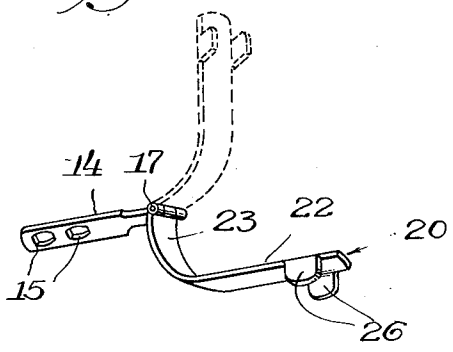
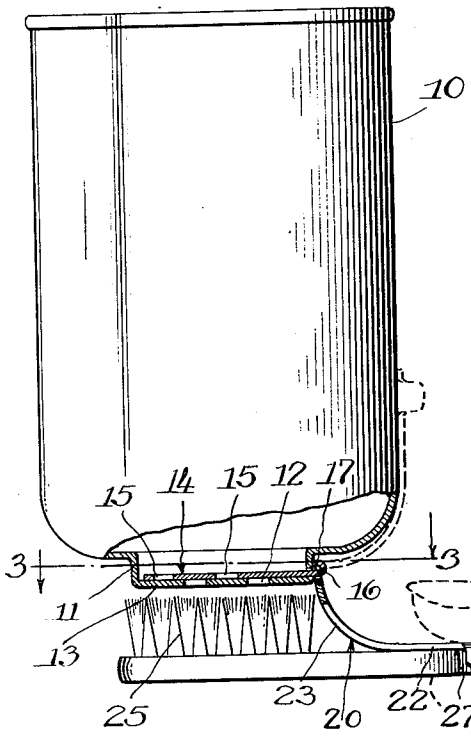


Fig. 1



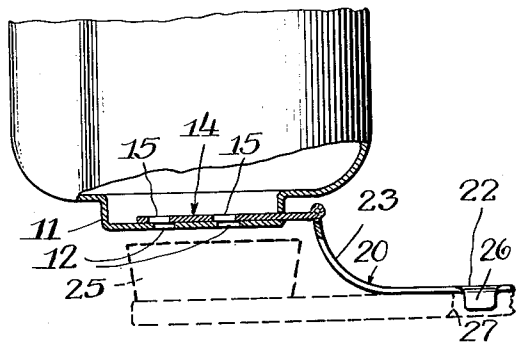


Fig. 2

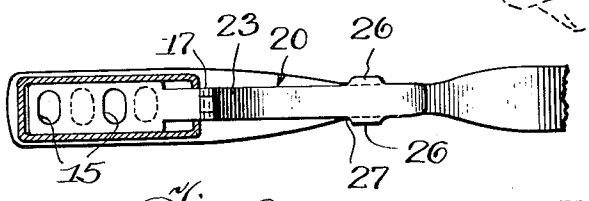


Fig. 3

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TOOTH POWDER AND PASTE DISPENSER

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Fig. 5

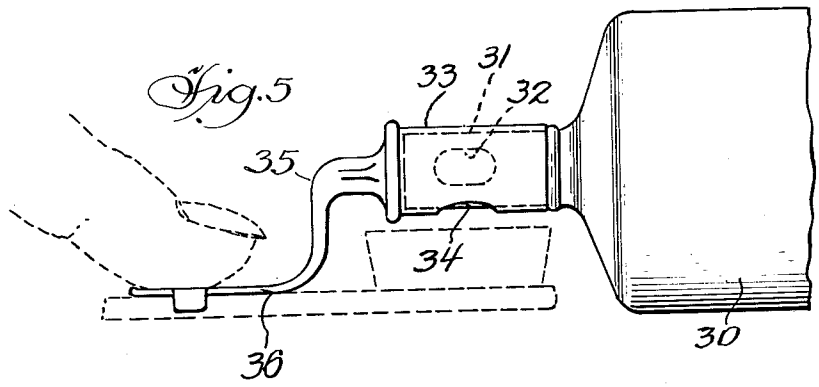
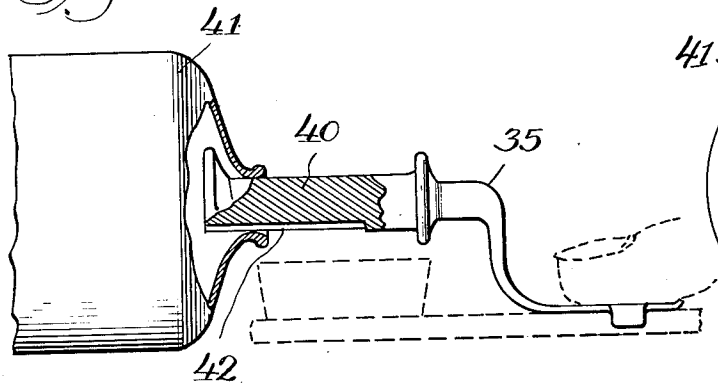


Fig. 6



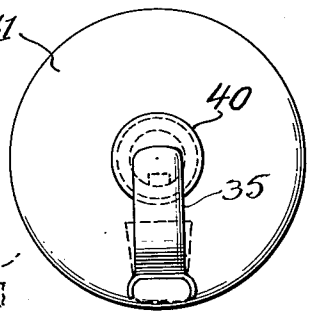


Fig. 7

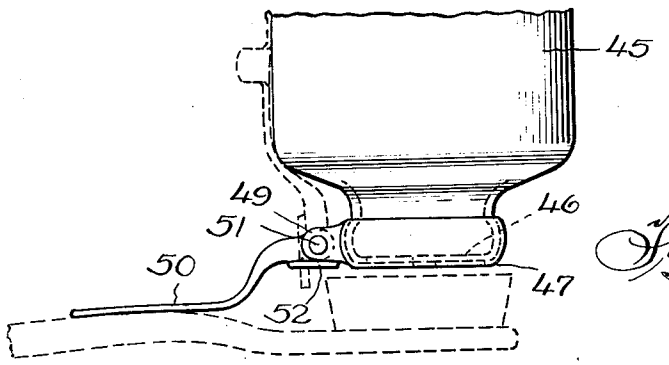
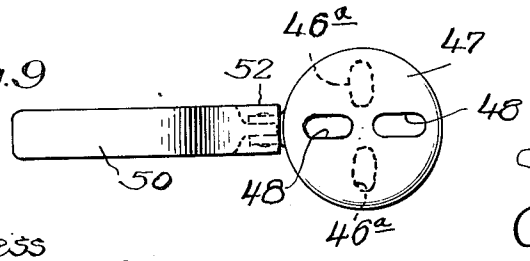


Fig. 8

Fig. 9



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UNITED STATES PATENT OFFICE

2,389,683

TOOTH POWDER AND PASTE DISPENSER

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Application January 22, 1944, Serial No. 519,250

2 Claims. (Cl. 222—126)

This invention relates to improvements in containers particularly adapted for dispensing tooth powder on tooth brushes, although not necessarily limited to such use.

One of the commonly recognized difficulties in the use of tooth powder is that of applying it to the brush without spilling. The powder is usually of such character that it does not flow freely through a dispenser opening, but the container usually has to be rapped, or the powder agitated in some other manner, and even then when the flow is started, the powder tends to rush out suddenly so that much of it is spilled and wasted.

A method often employed to avoid excessive spillage is to place the brush immediately below the container opening, but this requires a rather difficult manual operation, involving both hands, especially when the container must be rapped or shaken at the same time. Moreover, it is undesirable to permit the wet brush to come into direct contact with the dispenser openings, since this may result in an insanitary condition and cause wet powder to clog the opening.

The principal object of my invention is to overcome the difficulties above suggested, by providing means for positioning the tooth brush in the desired powder receiving relation, immediately below the dispensing orifice, which means is also operatively connected with the orifice gate or cover, so that the gate can be readily opened and closed and the powder agitated or shaken in the container without disturbing the predetermined relation of the brush to the dispensing orifice.

Other objects and advantages of my invention will appear as the following description proceeds.

The invention may best be understood by reference to the accompanying drawings, in which

Figure 1 is a view in side elevation of a powder container constructed in accordance with my invention, with the dispensing closure or gate shown in part section, and in closed position;

Figure 2 is a fragmentary detail view of the bottom portion of the container illustrated in Figure 1, but showing the closure or gate in open position to deposit powder on a tooth brush held in registering, but slightly spaced position thereunder;

Figure 3 is a detail section taken on line 3—3 of Figure 1;

Figure 4 is a detail view in perspective of the closure and hinged positioning extension employed in the device shown in the preceding figures;

Figure 5 is a fragmentary side view showing a modified form of my invention as applied to a common form of powder dispensing container, wherein the latter has an extended neck with an apertured side wall, covered by an apertured cap rotatably mounted thereon;

Figure 6 is a fragmentary view in part section showing another modification of my invention as applied to another form of dispensing container, wherein a plunger is slidably mounted in the top of the container and opened by withdrawing said plunger endwise from the container;

Figure 7 is an end view of the dispensing device shown in Figure 6;

Figure 8 is a view in side elevation of another modified form of my invention, wherein the closure is opened by rotation rather than sliding movement of the parts; and

Figure 9 is a detail bottom view of the closure means illustrated in Figure 8.

Referring now to details of the embodiment of my invention shown in Figures 1 to 4 inclusive, a container indicated generally at 10 has a dispensing device at one end, consisting of a projecting housing 11 generally rectangular in transverse section and having a plurality of spaced discharge orifices 12, 12 (two in number) in its end wall 13. A closure plate 14 is slidably mounted in juxtaposition with the end wall 13 to close the discharge orifices 12, 12, excepting when openings 15, 15 in said plate are brought into register with said openings 12, 12. In the form shown, the closure plate 14 is on the inner side of the end wall 13 and has an end portion 16 projecting through a slot 17 at one side of the housing 11.

A positioning member 20 is connected at one end to the projecting end 16 of the closure plate, in the form of container shown in Figures 1 to 4, this connection preferably being formed by a hinge 21, to permit the positioning member 20 to be folded up against the adjacent side of the container when the device is not in use, as indicated in dotted lines in Figure 1. The positioning member 20 consists of a strip of metal or similar relatively rigid material provided with a flat outer end portion 22, adapted to be engaged in registering relation with the under side of a tooth brush handle 24, as indicated in full lines in Figure 1. The flat outer end portion 22 is offset from the plane of the closure plate 14 of the dispenser housing 11, as by a curved intermediate portion 23, so that when said end portion 22 is held flatwise against the tooth brush handle, as shown, the proximate side of the dispenser housing 11 will be held in spaced relation from the tooth brush head 25.

As a further aid in positioning the tooth brush head in proper registering relation beneath the dispenser housing 11, the outer end portion 22 of the positioning member 20 may be provided with a pair of downwardly bent wings 26, 26, adapted to fit along the outer sides of the tooth brush handle so as to hold the tooth brush in longitudinal alignment with the dispenser housing when the device is in use. Moreover, the wings 26, 26 may also be arranged so as to engage a reduced shoulder portion 27 on the brush handle, as shown in Figure 6, so as to insure proper endwise positioning of the brush head relative to the dispenser openings.

The use and operation of the device hereinabove described may now be described as follows:

While the dispensing device is not in use, the positioning member 20 is normally folded up against the side of the container, as shown in dotted lines in Figure 1, and the closure member 14 is in closed position, as shown in the same figure. To prepare for dispensing the powder, the container is inverted, and the positioning member is swung downwardly into registering engagement with the tooth brush handle 24, with the wings 26, 26 fitting against the shoulder 27 of the latter. By exerting slight manual pressure upon the flattened portion 22 as by the thumb or fingers, the latter portion will be brought into flatwise engagement with the brush handle, so as to bring and maintain the brush head 25 in proper position for receiving the powder from the container, as shown in Figure 1. The closure plate 14 is then opened by means of the positioning member 20, as indicated in Figure 2. During the opening movement, the brush handle and positioning member are preferably grasped manually so as to move laterally together relative to the container, thus placing the brush head immediately below the discharge orifices 12, 12, when the latter are opened, but at the same time maintaining sufficient vertical spacing between the brush bristles and the dispenser openings to avoid wetting of the latter.

It will be further understood that the movement of closure plate 14 while opening the discharge orifices will tend to agitate the powder so as to promote flow thereof from the container.

Referring to the modified form of my invention illustrated in Figure 5, the container 30 is of a familiar type of dispenser including an elongated hollow neck portion 31 with a discharge orifice 32 at one side thereof, said neck portion being enclosed in a cap 33 having a discharge orifice 34 adapted to be moved into registering position with the orifice 32 of said neck by rotation of said cap. With this form of dispensing device, the cap 33 is provided with a positioning member 35, herein formed as an integral extension of said cap. Said positioning member has a flat end portion 36, which is disposed in a plane offset from the axis of rotation of the cap 33, and adapted to be held flatwise against the handle of a brush so as to position the head of said brush immediately adjacent, but slightly spaced from the discharge orifice 34 of said cap. The arrangement is such that by positioning the brush as aforesaid, with the discharge orifice 34 facing downwardly as shown in Figure 5, the container 30 can be rotated so that the powder will be deposited without fail directly upon the brush head.

In the modified form of my invention illustrated in Figures 6 and 7, the powder dispenser consists of a hollow plunger 40 which forms a stopper for the container 41 when it is telescoped in the latter, but when pulled out as shown in Figure 6, the powder is discharged from an orifice 42 at one side of said plunger. With this type of dispenser, a positioning member 35 is provided, similar to that described in connection with the form of dispenser shown in Figure 5. With the form of device shown in Figures 6 and 7, however, the plunger 40 is pulled out of the container with its discharge orifice 42 facing upwardly. The tooth brush and its handle are applied to the positioning member 35 while the latter is also in an upright position, in alignment with the discharge orifice 42. Then by inverting the brush and positioning member bodily to the discharge position shown in Figures 6 and 7, the powder will be deposited as before, directly upon the brush head. It will be noted that inversion of the brush and positioning member may be accomplished either by rotating the plunger 40 in its container, or by inverting the entire assembly as a unit.

In the modified form of my invention shown in Figures 8 and 9, the dispensing container 45 is provided with a circular end plate 46, having a discharge orifice 46a therein. The end plate is covered by a rotatable cap 47 with an opening 48 adapted to register with the orifice 46a. The cap 47 has a lug 49 at one side thereof, to which a positioning member 50 is connected, as by a hinge 51. In this form of device the positioning member has a stop 52 adapted to engage the lug 49 so as to limit the downward swinging movement of said positioning member and thus hold the lower surface of the cap 47 in substantially parallel relation with the top of the brush head when the device is in use, as indicated in Figure 8. Obviously, this stop means for the hinged positioning member can also be employed in the form of device shown in Figures 1 to 4, if desired.

It will also be noted that the outer end of the positioning member 50 consists simply of an elongated piece of substantially the same width as the brush handle and the depending side wings used with the previously described forms of positioning members which have been omitted. Nevertheless, each of the several forms of positioning members has an extended bearing surface at its outer end adapted to be held in registering non-tilting relation with the tooth brush handle when said handle and positioning member are grasped together and held either by the thumb or fingers of the hand. In this manner the tooth brush head can be supported in the desired material-receiving relation to the dispensing orifice while the closure member is actuated.

Although I have shown and described certain embodiments of my invention, it will be understood that I do not wish to be limited to the exact constructions shown and described, but that various changes and modifications may be made without departing from the spirit and scope of the invention as defined in the appended claims.

I claim:

1. In combination with a container for dentifrice or the like, having a dispensing orifice and a closure member therefor, a positioning member having hinged connection with said closure member, including an extended bearing portion adapted in one position to be folded against the side of said container, and in a second position to be disposed at a predetermined angular relation remote from said dispensing orifice, and adapted to be positioned in registering flatwise engagement with the handle of a tooth brush so that said bearing

portion and the tooth brush handle may be clasped together by the hand to support the head of said brush in material-receiving relation to said dispensing orifice while actuating said closure member, by the hand which is also holding the brush handle.

2. In combination with a container for dentifrice or the like, having a dispensing orifice and a slidable closure member therefor, a positioning member having hinged connection with said closure member and provided with an offset bearing portion adapted in one position to be folded against the side of said container, and in a second position to be extended in a plane generally parallel to said slidable closure member but remote therefrom so that said bearing portion may be grasped by the hand in registering flatwise engagement with a handle of a tooth brush to support the head of said brush in a predetermined material-receiving relation with said dispensing orifice, while actuating the latter by the hand which is also grasping the brush handle.

JOHN H. PAGE.