Jan. 23, 1940. W. E. BEHRING 2,188,217

TOOTH BRUSH

Filed April 21, 1938

Fig. 1.

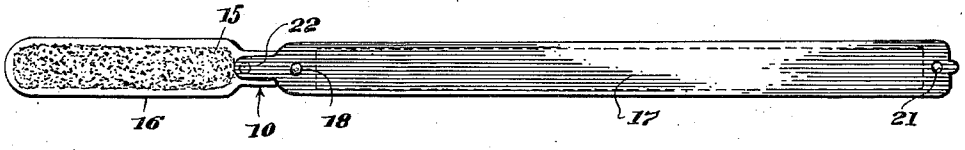


Fig. 2.

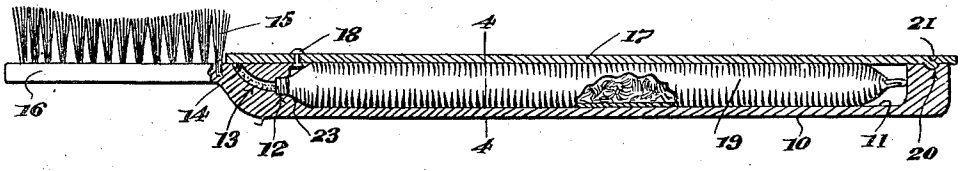


Fig. 3.

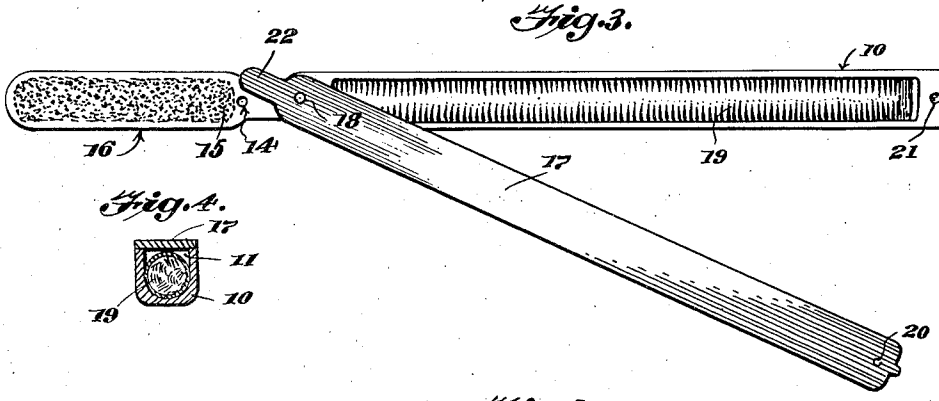


Fig. 4.

Fig. 5.

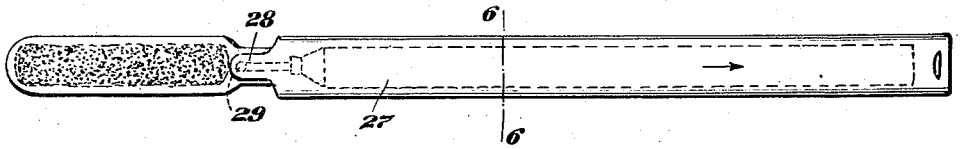
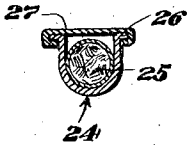


Fig. 6.



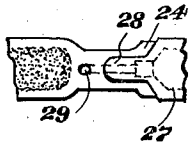


Fig. 7.

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2,188,217

TOOTH BRUSH

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Application April 21, 1938, Serial No. 203,387

4 Claims. (Cl. 15—138)

This invention relates to tooth brushes, and has for one of its objects the production of a simple and efficient means for facilitating the feeding of tooth paste to the bristle portion of the brush, and also for efficiently closing the tooth paste ejecting opening so that the ejecting opening may be properly closed to prevent the entrance of air which would cause hardening of the tooth paste within the tooth paste tube which is adapted to be carried by the handle.

A further object of this invention is the production of a simple and efficient combination valve and handle cover which is so mounted upon the handle of a brush, such as a tooth brush and the like, as to retain the tooth paste tube within the handle of the brush and also constitute a closure valve for the paste ejecting opening or port which is located adjacent the bristles of the brush.

Other objects and advantages of the present invention will appear throughout the following specification and claims.

In the drawing:

Figure 1 is a bottom plan view of the tooth brush;

Figure 2 is a longitudinal sectional view through the tooth brush, a portion thereof being shown in elevation;

Figure 3 is a bottom plan view of the tooth brush, the handle cover being shown in an open position;

Figure 4 is a transverse sectional view taken on line 4—4 of Figure 2;

Figure 5 is a bottom plan view of a modified form of the tooth brush;

Figure 6 is a transverse sectional view taken on line 6—6 of Figure 5;

Figure 7 is a fragmentary bottom plan view of the modified form of brush shown in Figure 5, with the valve extension of the handle cover in an open position.

By referring to the drawing, it will be seen that 10 designates the handle of the tooth brush which is provided with an elongated longitudinally extending socket 11 having a threaded opening 12 at one end which communicates with an outwardly extending channel or port 13. This channel or port 13 is provided with a discharge opening 14 adjacent the base of the inner group of bristles 15 carried by the brush head 16, as shown in Figures 2 and 3.

A cover plate 17 is pivotally mounted, as at 18, upon the handle 10 adjacent the head 16, and this handle 15 is adapted to normally cover the socket 11 within which a tooth paste tube 19 is adapted to lie. The handle 17 may be provided with a detent 20 near its outer end for fitting in a socket 21 formed in the handle 10, as shown in Figures 2 and 3, to hold the handle 17 in a closed position against accidental opening. This handle 17 is provided with a reduced valve extension 22 at the end opposite the detent 20, which reduced valve extension 22 is adapted to overhang the discharge opening 14 when the handle 17 is in a closed position such as is shown in Figure 1, thereby completely sealing the opening 14 preventing the discharge of tooth paste therefrom, and also preventing the entrance of air which would tend to harden the tooth paste within the channel 13. The threaded neck 23 of the tube 19 is adapted to thread into the threaded socket 12 and the tube 19 lies within the channel 11, as described. When it is desired to discharge tooth paste from the discharge opening 14, the handle 17 is swung to the position shown in Figure 3, uncovering the discharge opening 14 and the tooth brush is held in a position to elevate the handle and lower the head 16. When pressure is brought to bear upon the tube 19 with the thumb or fingers of the operator, the paste will pass out through the tube and passage 13, out through the discharge opening 14, and over and upon the bristles 15 carried by the head 16. When a sufficient amount of paste has been discharged, the cover 17 may be swung to the position shown in Figure 1, the detent 20 locking in the socket 21 and the tooth brush will then be ready for use.

In Figures 5 and 6, I have shown a modified form of the invention, wherein the handle of the brush is indicated by the numeral 24, the handle containing a tooth paste tube 25 in a manner similar to that shown in Figure 2. The handle 24 is preferably provided with side flanges 26, over which flanges 26 is slidably mounted a sliding cover 27 movable longitudinally of the handle 24. The cover 27 is provided with a valve extension or neck 28 which is adapted to cover the tooth paste discharge port or opening 29 when the cover 27 is in the position shown in Figure 5. The cover 27 may be moved in the direction of the arrow shown in Figure 5 for uncovering the port 29 in a manner as shown in Figure 7.

It should be understood that the present type of brush may be used for holding paste of any character without departing from the spirit of the invention, since it is not desired to limit the present invention to a type of brush merely for holding tooth paste.

Having described the invention, what is claimed is:

1. A fountain brush of the class described com-

prising a handle portion having a tube receiving socket, a tube therein, a movable cover for closing the socket and retaining the tube therein, the handle having means for receiving the open end of the paste tube, the handle having a passage communicating with said last mentioned means, the handle carrying a brush head, said passage having a discharge port adjacent the brush head, and means controllable by the cover when moved for opening and closing said discharge port.

2. A fountain brush of the class described comprising a handle portion having a tube receiving socket, a tube therein, a cover for closing the socket and retaining the tube therein, the handle having means for receiving the open end of the paste tube, the handle having a passage communicating with said last mentioned means, the handle carrying a brush head, said passage having a discharge port adjacent the brush head, said cover being pivotally mounted upon said handle adjacent the brush head, and having a valve extension neck adapted to close the discharge port of said passage when the cover is in a closed position over the socket formed in the handle, and to uncover the discharge port when the cover is in an open position.

3. A fountain brush of the class described comprising a handle portion having a tube receiving socket, a tube therein, a cover for closing the socket and retaining the tube therein, the handle having means for receiving the open end of the paste tube, the handle having a passage communicating with said last mentioned means, the handle carrying a brush head, said passage having a discharge port adjacent the brush head, said cover being pivotally mounted upon said handle adjacent the brush head, and having a valve extension neck adapted to close the discharge port of said passage when the cover is in a closed position over the socket formed in the handle and uncover the discharge port when the cover is in an open position, and means for detachably holding the cover in a closed position upon the handle.

4. A fountain brush of the class described comprising a handle having a paste tube containing socket formed therein, said handle having a channel adapted to communicate with the open end of a paste tube placed within said socket, said handle having a brush head, the handle having a discharge port communicating with the channel adjacent the brush head, a cover slidably mounted upon said handle to permit access to the paste tube carried within the socket, and said cover having an extension at one end for normally closing the discharge port of said channel when said cover is in a closed position upon said handle.

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