

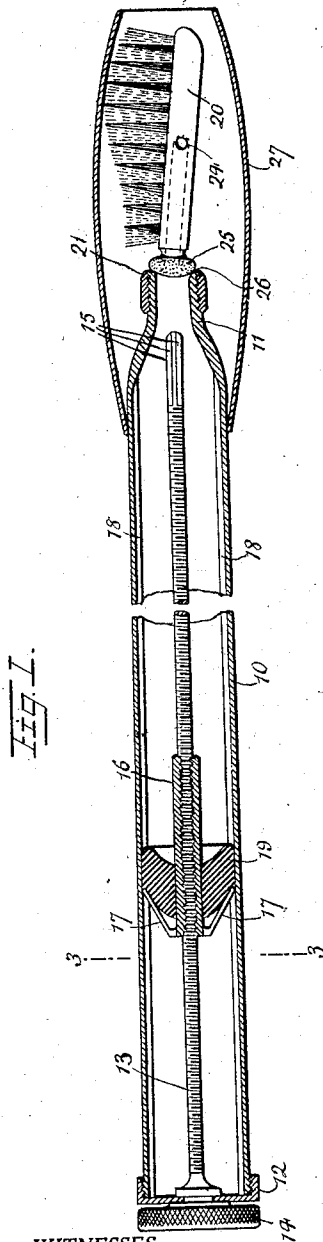
Sept. 29, 1925.

1,555,064

G. A. LA MOTHE

FOUNTAIN TOOTHBRUSH

Filed March 21, 1924



WITNESSES

H. T. Walker
C. L. Mueller

Fig. 3.

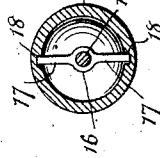


Fig. 6.



Fig. 2.

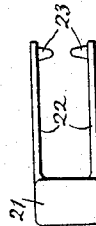


Fig. 5.

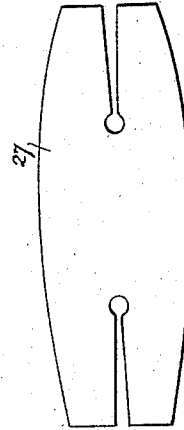
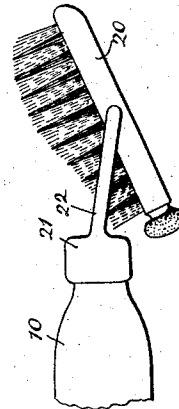


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE A. LA MOTHE, OF NEW YORK, N. Y.

FOUNTAIN TOOTHBRUSH.

Application filed March 21, 1924. Serial No. 700,839.

To all whom it may concern:

Be it known that I, GEORGE A. LA MOTHE, a subject of the King of Great Britain, and a resident of the city of New York, Borough of Manhattan, in the county and State of New York, have invented a new and Improved Fountain Toothbrush, of which the following is a full, clear, and exact description.

This invention relates to improvements in brushes, and has particular reference to a fountain tooth brush.

An object of the invention is to provide a fountain tooth brush of simple, practical and economical construction wherein the brush head is connected to the handle, which contains the cleansing material, in such manner as to facilitate the application of the material to the brush preparatory to cleaning the teeth, and wherein a portion of the brush head is utilized to form a closure for the outlet end of the handle so as to effectively prevent the escape of material from said handle.

Another object is to provide the handle with an ejecting means which will effectively remove all of the material from the handle and which will indicate to the user when the supply of material should be replenished.

The above and other objects will appear more clearly from the following detailed description, when taken in connection with the accompanying drawing, which illustrates a preferred embodiment of the inventive idea.

In the drawing—

Figure 1 is a vertical longitudinal section through the brush constructed in accordance with the invention;

Figure 2 is a plan view of the brush head support;

Figure 3 is a section on the line 3—3 of Figure 1;

Figure 4 is an elevational view showing the position of the brush head when the material is being deposited thereon from the handle;

Figure 5 is a side elevation of a shield employed to protect the brush head when not in use; and

Figure 6 is a fragmentary view of the screw member forming a part of the ejecting means shown with its end provided with a plurality of agitating fingers which

are utilized to prevent clogging of powder material at the outlet end of the handle.

The invention is shown in its preferred form as comprising a handle 10 in the form of a tubular casing slightly tapered toward its reduced outlet end 11 which is provided with external screw threads. The opposite end of the handle 10 is provided with a removable end closure 12 in which is rotatably mounted a screw member 13 extending longitudinally and axially of the casing to a point adjacent the reduced end 11 thereof. The end of the screw member 13 adjacent the closure 12 is provided with a knurled nut 14 to facilitate the rotation of the screw member in either direction. With this construction it will be apparent that the end closure 12 may be removed and the screw member and other ejecting mechanism presently to be described may be removed from the casing to permit of the same being filled with the desired cleansing material. If a powder material is being used only the screw member 13 is employed and the inner end of said member in this instance is split to provide a plurality of diverging agitating fingers 15 which may be rotated occasionally to prevent clogging of the powder material in the reduced end of the casing.

When using a paste or cream material an ejecting means is employed, which preferably comprises an elongated internally threaded sleeve 16 capable of receiving the screw member 13 and having at one end the oppositely disposed and diagonally extending guides 17, the free ends of which engage in diametrically disposed longitudinally extending slots 18 formed in the casing 10 so that rotation of the sleeve 16 with respect to the casing will be prevented when the screw member 13 is turned in either direction. This turning movement, however, will move the ejecting means longitudinally of the casing. Associated with the sleeve 16 is a follower 19 preferably made of a resilient material, such as rubber, and having an outer periphery shaped to conform to the interior contour of the casing 10. This follower 19 is mounted upon the sleeve and engaged by the guide arms 17 so that the same will be moved along the casing when the sleeve 16 is operated by the screw member 13. Due to the compressible nature of the follower 19 and the resiliency of the guides 17 it will be apparent that as the fol-

lower is forced toward the outlet end of the casing the same will be gradually compressed and the free ends of the guides 17 moved inwardly owing to the tapered formation of the casing 10 and as this compression increases it will be apparent that the follower becomes more effective in ejecting all of the material from the casing through the outlet end. By mounting the follower 19 on the sleeve 16 with a considerable portion of the latter projecting beyond said follower toward the outlet end of the casing, it will be apparent that the latter portion of said sleeve will be projected through said outlet end as the supply of material in the casing diminishes thus indicating this fact to the user so that said supply may be replenished before becoming completely exhausted. As has been previously pointed out the ejecting means including the sleeve and the follower may be entirely removed from the casing when it is desired to use powder material therein.

The invention further contemplates connecting the brush head 20 to the handle or casing in such manner that said brush head may be adjusted to a suitable position to permit of the spreading of the material on the bristles of the brush as said material is being ejected from the casing by a rotation of the nut 14. To this end a brush head support is provided which consists of an internally threaded collar 21 mounted upon the external threads of the reduced end 11 of the casing and having extending therefrom the oppositely disposed supporting arms 22 provided at their free ends with inwardly extending projections 23 engageable in an opening 24 extending transversely of the brush head 20 intermediate the ends thereof. At the inner end of the brush head the same is provided with a knob 25 having a suitable covering of rubber thereover and this knob is utilized as a stopper to engage the beveled extremity 26 of the reduced end 10 to form a closure for the casing 10 when the brush is not in use, or after the material has been ejected from the casing on to the bristles of the brush head. The brush head and its support are so proportioned that when the head is swung from the position shown in Figure 4 to that shown in Figure 1 the knob 25 will frictionally engage the adjacent extremity of the casing and snap into its closing position so as to form an effective closure for the outlet end 11.

In order to protect the bristles of the brush head when not in use a shield 27 is provided which is split at both ends so as to permit of the same being adjusted longitudinally of the casing and impart resiliency to the shield to retain the same in its operative and inoperative positions, it being understood that this shield may be entirely removed from the casing when it is desired

to use the brush, or may be moved to a position adjacent the closed end of the casing remote from the brush head.

What is claimed is:

1. In a fountain tooth brush, a handle forming a material containing casing having an outlet end, a brush head support removably mounted upon the outlet end of said casing and including supporting arms extending beyond said outlet end, and a brush head pivotally mounted between said supporting arms and having a knob upon one end forming a closure for the outlet end of said casing.

2. In a fountain tooth brush, a handle forming a material containing casing having an outlet end, a brush head swingingly connected to said casing and having a portion forming a closure for said outlet end when the brush head is in one position, and means movable longitudinally of said casing for ejecting material therefrom on to the bristles of said brush head when the latter is swung to an angular position with respect to the longitudinal axis of said casing.

3. In a fountain tooth brush, a casing having an outlet, a brush head pivotally connected to said casing adjacent said outlet and having a portion forming a closure for said outlet when the brush is in one position, and a rotatable member in said casing having a plurality of diverging agitating fingers at one end adjacent the outlet of said casing to prevent clogging of material near said outlet.

4. A fountain tooth brush comprising a hollow handle adapted to contain a cleaning substance having an outlet opening at one end, a brush head having a compressible closure element at one end and a connection between the brush head and the outlet end of the handle to permit of rocking movement of the brush head whereby the compressible closure element is disposed respectively in covering relation to the outlet end to close the same and in uncovered relation to open the same, the said brush being disposed in the latter position to receive the contents of the handle.

5. A fountain tooth brush comprising a hollow handle adapted to contain a dentifrice and having an outlet opening at one end, a brush head having a yieldable closure element at one end and a pivotal connection between the brush head and the outlet end of the handle constituting means to permit longitudinal rocking of the brush head whereby in one position the compressible closure element is retained in closed relation to the outlet end and whereby in another position the outlet end is opened with the brush head disposed in a relation to the outlet opening to receive the dentifrice.

GEORGE A. LA MOTHE.