Oct. 18, 1927. 1,646,082

F. L. DAILEY

TOOTHBRUSH

Filed Jan. 28, 1927

Fig. 1.

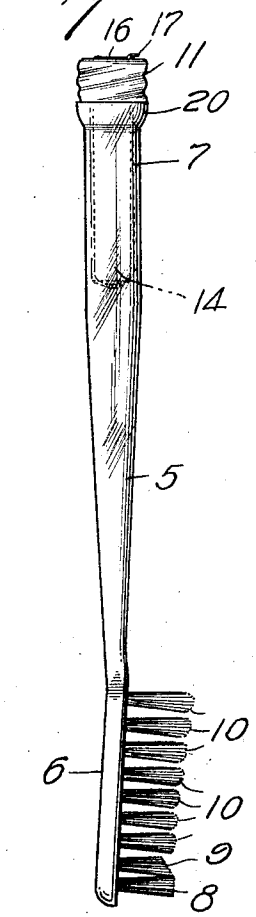


Fig. 5.

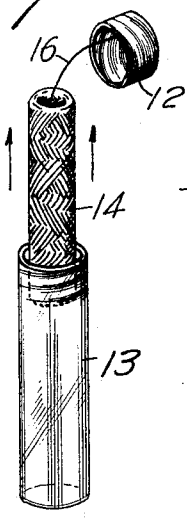
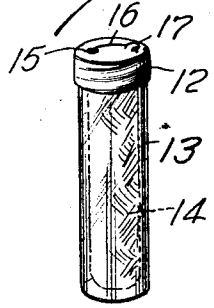


Fig. 4.



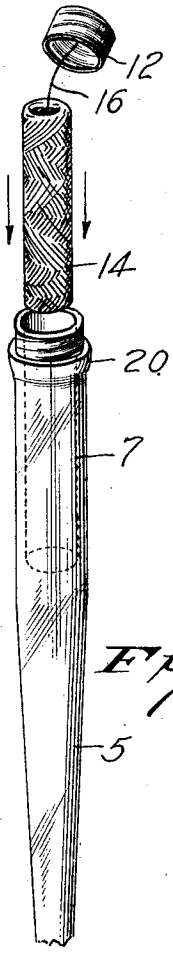


Fig. 3.

Fig. 6.

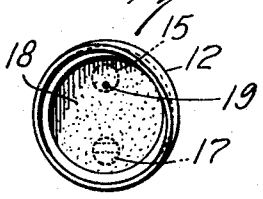
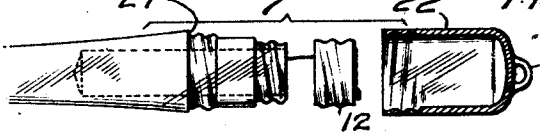


Fig. 2.



Fig. 7.



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UNITED STATES PATENT OFFICE.

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TOOTHBRUSH.

Application filed January 28, 1927. Serial No. 164,316.

My invention relates to tooth brushes and its objects are to improve upon the construction and to increase the efficiency of tooth brushes.

In one aspect the nature of the invention consists in so constructing and mounting the bristles as to provide for efficient functioning of the brush in regions difficultly accessible to the ordinary brush, namely, behind the third molar teeth and under bridges and especially between the teeth and cheeks in the molar regions where the buccal space is narrow.

In another aspect, the nature of the invention consists in providing a brush head calculated to cooperate with a brush of the character stated and having a tapered handle of circular cross-section and whereof the end is chambered to constitute a flossfont.

In another aspect the invention consists in providing a refill of dental floss, the floss being threaded through a novel form of cut-off and closure member which is interchangeably fitted to the original package or container for the floss and to the flossfont of the handle, thus providing for replenishment of the flossfont without the necessity of re-threading or otherwise touching the floss.

The invention in its preferred form is illustrated in the annexed drawings, wherein

Figure 1 is a perspective view of my improved tooth brush.

Fig. 2 is an enlarged sectional view of the receptacle end of the handle.

Fig. 3 is a perspective view of the handle with the floss and cap in detached relation.

Fig. 4 is a perspective view of a capped or sealed original floss container.

Fig. 5 is a similar view with the cap in detached relation.

Fig. 6 is an inside view of the interchangeable cap; and

Fig. 7 is a view of a modification.

According to my invention, I provide a solid or one-piece handle 5 of generally tool handle form that is to say of tapered or cone form, round in cross-section, whereof one end is flat to constitute a brush head 6 and whereof the other end is hollow to constitute a receptacle or flossfont 7. The brush head is equipped with tufts of bristles whereof the pilot bristles 8 have squared or flat ends and whereof the immediately adjacent bristles 9 have their ends sharply inclined rearwardly, the remaining bristles 10 being trimmed to provide the usual forward inclination. The purpose and merit of this construction and arrangement is that it enables the user to get behind the third molar teeth and under bridges, etc. While the pilot tuft is thus afforded desirable rolling action, it is not so long with relation to the bristles 9 that it will flatten down when operating between the teeth and the cheek in the molar region where the buccal space is narrow.

The receptacle end of the handle is provided with a threaded neck 11 to accommodate a cap 12 and it is a merit of the invention that the cap is interchangeably fitted to an original floss container such as a glass vial or bottle 13, Figs. 4 and 5. The motive of the interchangeable feature of the cap is to avoid casual contact of the person with the floss and to insure a dry environment for the floss. In the advancement of this thought, the cap is constructed and arranged as a suspension element for a floss quill 14, the cap being provided with an eye 15 through which the free end 16 of the floss is threaded. At a point diametrically opposite the eye 16, the cup has a struck-up portion 17, which constitutes a stay for the floss and also as a means of severing the same. Within the cup and bearing against the head thereof is a rubber washer 18, which functions alternatively to prevent the ingress of water to the original floss container or to the receptacle of the brush. The washer is apertured as at 19 for the passage of the floss and its binding action serves to put tension on the floss.

The neck portion of the handle is stopped by an annular projection or enlargement 20 whereof one side is sloped and vanishes in the body of the handle and whereof the other side provides a flat shoulder to seat the end of the cap.

The capped end of the handle may be further safeguarded against the ingress of moisture to the floss chamber by, for example, the provision of sealing means, as in Fig. 7. In that embodiment, the handle is formed or provided with an additional shoulder 21, to seat an external cap 22. The latter may have a friction fit or be screw threaded, as shown, and its merit is that it covers the joint of the regular cap closure of the floss chamber, and when equipped

with a bail 23, affords a convenient means of suspending the toothbrush.

Having described my invention, I claim:

1. A tooth brush assembly, comprising a tooth brush having a coniferous handle formed with an integral flossfont having an externally threaded neck portion stopped by a flange whereof one side provides a flat shoulder for a closure and whereof the other side slopes into the body of the handle, and a refill for the flossfont having a cap constituting a floss-suspension element and adapted to fit said neck portion.

2. A tooth brush assembly, comprising a tooth brush having a coniferous handle formed with an integral flossfont having an externally threaded neck portion stopped by a flange whereof one side provides a flat shoulder for a closure and whereof the other side slopes into the body of the handle, a refill for the flossfont having a cap constituting a floss-suspension element and adapted to fit said neck portion, and a washer operating to seal the floss receptacle and also to put tension on the floss.

3. A tooth brush of the flossfont type, having a floss-carrying inner seal, and having an outer seal telescoping the inner seal and equipped with a bail.

In testimony whereof I affix my signature.

FRANK L. DAILEY.