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E. F. DELLENBACH

2,685,703

TOOTHBRUSH

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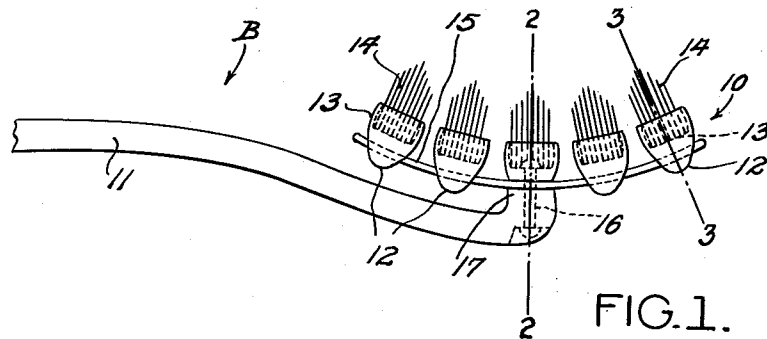


FIG. 1.

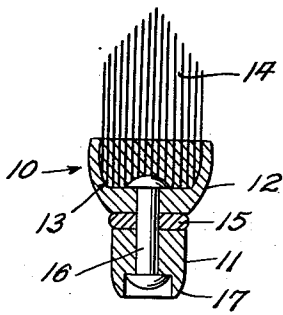


FIG. 2.

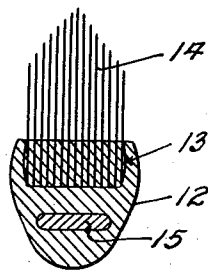


FIG. 3.

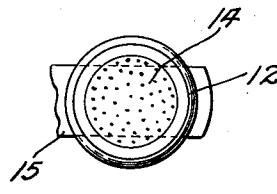


FIG. 4.

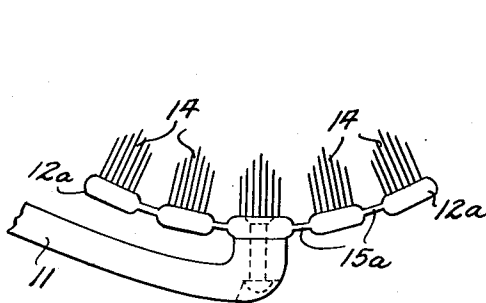


FIG. 5.

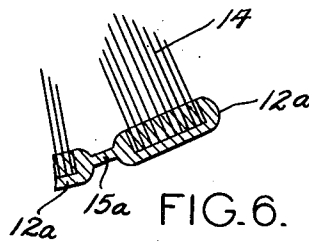


FIG. 6.

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TOOTHBRUSH

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1 Claim. (Cl. 15—167)

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This invention relates to improvements in brushes employed specifically for cleaning teeth of the human mouth, and its object generally is to provide an improved flexible mounting for the bristles of the brush and also a pivotal union of a brush handle with the associated bristle-holding head, the parts of the brush cooperating to enable the bristles to engage the teeth to be cleaned more completely and effectively than the bristles of brushes heretofore employed in similar capacities, whereby to facilitate and improve the operations incident to the brushing of teeth.

It is another object of the invention to provide a tooth brush formed with an arcuate bristle-carrying head in which the head includes a plurality of normally spaced relatively movable bristle mounts, the mounts being joined for yieldable movement with respect to each other by means of resiliently flexible interconnecting webs.

A further object of the invention is to provide a tooth brush having a bristle-carrying head capable of readily conforming to the labial and lingual surface curvature of the teeth against which the bristles of the head are placed.

With these and other objects in view, the present invention consists in the novel details of construction, combinations of elements and arrangements of parts hereinafter more fully described and pointed out in the appended claim.

In the accompanying drawings, forming a part of the specification, and in which similar characters of reference denote like and corresponding parts throughout the several views thereof:

Fig. 1 is a top plan view of a tooth brush formed in accordance with the present invention;

Fig. 2 is a vertical transverse sectional view taken through the brush on the plane indicated by the line 2—2 of Fig. 1, and disclosing more particularly the pivotal union between the handle and the bristle-carrying head of the brush;

Fig. 3 is a similar view on the line 3—3 of Fig. 1, disclosing in detail one of the bristle mounts and the arcuate spring web used in uniting the mount with adjoining mounts;

Fig. 4 is a detail front elevational view of one of the mounts and the bristles carried thereby;

Fig. 5 is a detail plan view of a slightly modified form of the invention in which the bristle-carrying mounts are joined by thin flexible webs of the same material as that of which the mounts are composed;

Fig. 6 is a detail sectional view taken through a pair of mounts of the character illustrated in

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Fig. 5 and disclosing the flexible connecting webs therebetween.

Referring more particularly to the drawings, my improved tooth brush is designated in its entirety by the letter B. The brush comprises primarily two parts: a bristle carrying head 10 and a handle 11.

In the form of the invention illustrated in Figs. 1 to 4, inclusive, the head is constructed to embody a plurality of bristle-carrying mounts 12, preferably formed from any suitable material selected from the group of moldable plastics. Each of the mounts possesses a conoidal tooth-like configuration and are shaped to include sockets 13 which, as shown more particularly in Figs. 2 and 3, receive and retain the inner ends of tooth-engaging and cleaning bristles 14.

The mounts are arranged in relative arcuate order and are supported upon an arcuate strip or web 15 of a resilient material, such as a corrosion resisting spring steel. The bristle mounts are arranged in relatively spaced order on the strip or web so that the same are capable of limited flexible movement relative to each other, enabling the bristle head to conform quite readily to the normal curvature of the teeth of the head to the inner and outer surfaces of the teeth.

To further assist in the manipulation of the head and to enable the bristles thereon to reach conveniently the relatively accessible and inaccessible surfaces of the teeth, the handle 11 is pivotally joined with the head 10. To accomplish this conveniently and effectively, the central mount 12, see Fig. 1, is formed with an axial opening through which extends the shank of a pivoting pin or rivet 16, the shank being extended through a transverse opening provided midway in the strip 15 and also through an aligning opening formed in the laterally offset end 17 of the handle 11, the ends of the pin or rivet 16 being headed, as indicated, to hold the joined parts of the brush in assembled relationship. The elongated handle of the brush is also provided with a compound curvature, as shown in Fig. 1, so that it may be grasped conveniently by the hand of the user for the proper and effective manipulation of the bristle head.

In Figs. 5 and 6, a slightly modified form of the invention is set forth in which the mounts 12a are flexibly joined by thin resilient webs 15a of the same material as that of which the mount bodies are formed, providing a composite head which may be molded to form an integral one-piece structure.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size and materials may be resorted to without departing from the spirit and scope of the invention as hereinafter claimed.

I claim:

A tooth brush comprising a normally arcuately curved, resiliently flexible strip of integral one-piece construction; a plurality of substantially rigid bristle-carrying devices provided at spaced longitudinal intervals along said strip and having flexible bristles normally projecting outwardly from one side of said strip in radially convergent relation, said strip being resiliently flexible in response to forces applied radially and inwardly thereof through said bristles, whereby to vary the curvature of the strip and the relative angularity of said bristles and thereby to conform said bristles to the curvature of a surface to be cleaned by said brush; and a handle having an end portion pivotally connected with

and supporting said strip in its central region to permit of resilient flexure of said strip, the said end portion of said handle being curved in conformity with the normal curvature of said strip.

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