

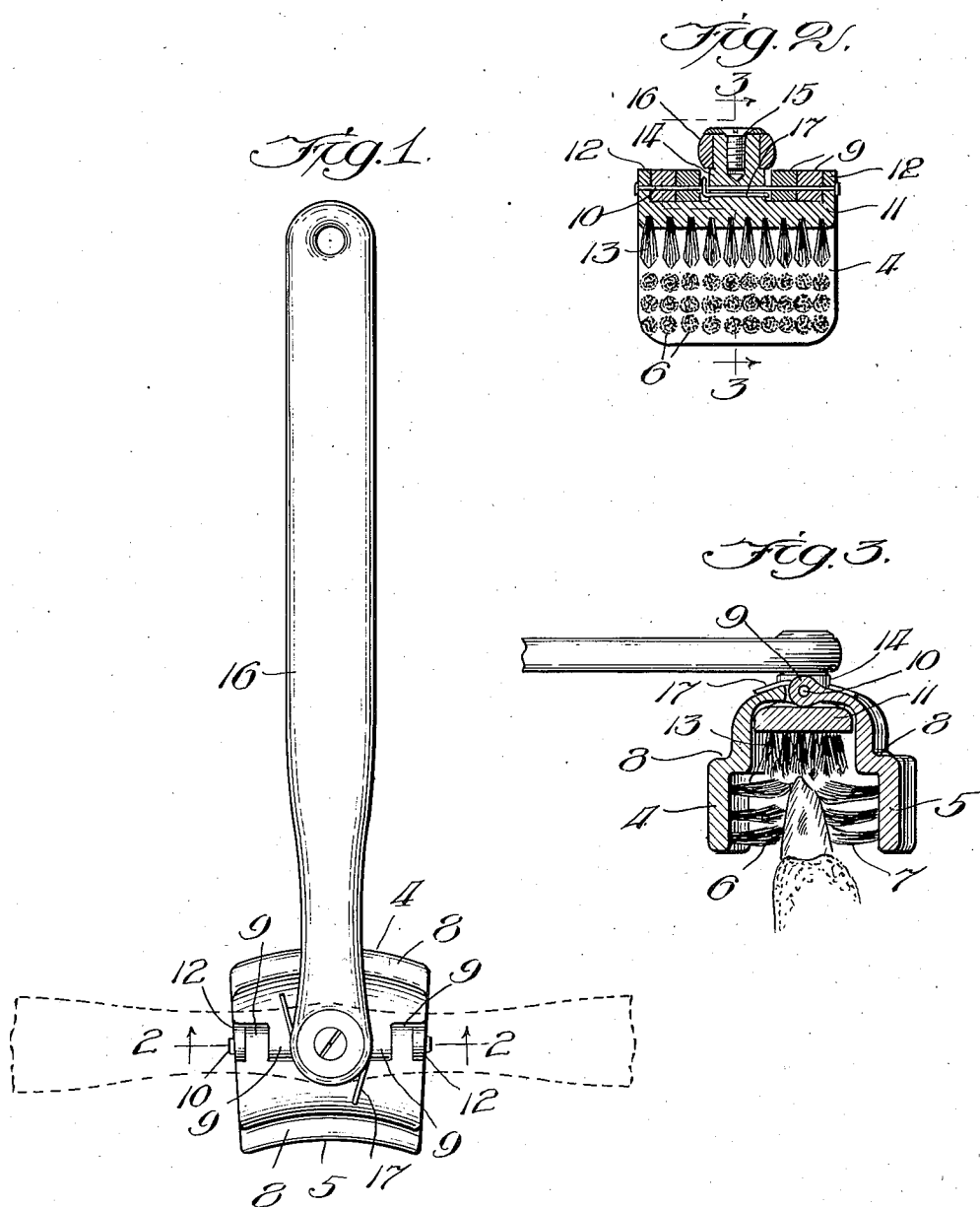
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TOOTHBRUSH

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TOOTHBRUSH.

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This invention relates to a brush designed primarily for the brushing of teeth, although it may possibly be applied advantageously to other uses as well.

For its objects the invention aims to provide in an article of this kind three brushing units two of which are associated yieldingly with each other, so that the three sets of brushes may operate simultaneously to clean the teeth upon their grinding surfaces and upon their contiguous inner and outer surfaces as well. It aims also to mount these several brushing units in a compact structure with which is swivelly connected a handle by which the device in its entirety may be manipulated with ease. Objects such as these, as well as others which will hereinafter appear, are realized from my invention, a suggestive embodiment whereof is illustrated in the accompanying drawing in the manner following:

Figure 1 is a plan view of the brush structure in its entirety;

Fig. 2 is a longitudinal section taken on line 2—2 of Fig. 1; and

Fig. 3 is a transverse section taken on line 3—3 of Fig. 2.

In the present brush may be comprised a pair of backs 4 and 5 in which are mounted bristles 6 and 7, respectively, and constituting two of the brushing units. The two brush backs may each be inwardly offset as at 8 and then upwardly extended and brought together in the form of interlapping joints 9 through which is extended a hinge pin 10. I utilize also a third brush unit having a back 11 provided with joints 12 which interlap the other joints 9. The hinge pin 10 is extended also through the joints of this last unit in which are carried bristles 13. It will be noted that the ends of the bristles in this third unit terminate adjacent the other sets of bristles 6 and 7 which are extended toward each other, as best shown in Fig. 3.

Formed on the back 11 is a base 14 having a threaded socket to receive a screw 15 which affords a swivel connection for a handle 16. By the means described the handle is free to swing around upon its mounting so as to occupy a position which is transverse to the brush, or longitudinally thereof in either direction, as indicated by the full and dotted lines in Figure 1. The two brush backs 4 and 5 are further urged toward each other and toward the third back 11 as by means of

a wire spring 17, which may be coiled about the base 14 and hinge pin 10 in such a manner as to present its opposite ends with pressure against the two brush backs 4 and 5. The back 11 thus forms a stop for the two backs 4 and 5.

The brush of this invention is well adapted for operation upon the teeth, as appears plainly in Fig. 3. When put to use, the bristles 6 and 7 will engage with the inner and outer surfaces of the teeth while the other bristles 13 will perform work upon the grinding surfaces thereof. The brush in its entirety may be moved back and forth with the aid of the handle 16. Due to the swiveled connection 15 the device will turn in conformity with the curvature of the teeth as the brush is moved along the row of teeth in the mouth. As irregularities or variations occur in the thickness of the teeth the two brush units 4 and 5 may yield, as required, the ends of their bristles being held always in close contact with the teeth due to the pressure exerted by the spring 17.

The present brush may be made of any suitable material such as celluloid, bone, bakelite, metal, etc. The backs of its two units 4 and 5 may also be rounded in a longitudinal direction, as shown in Fig. 1, so as to better conform to the curvature of the teeth within the mouth. The bristles are readily accessible for cleaning, and because of the sturdy construction employed, the brush may be depended upon to perform satisfactorily over an extended period of time.

I claim:

1. A tooth brush having a pair of hingedly connected units with spring means tending to move them toward each other, a third interposed unit hingedly connected with the others, and brush elements extending inwardly from each of the three units and terminating adjacent each other to provide brushing surfaces adapted to operate simultaneously upon the inner, outer, and grinding surfaces of the teeth, substantially as described.

2. A tooth brush having a pair of hingedly connected units with spring means tending to move them toward each other, a third interposed unit hingedly connected with the others, brush elements extending inwardly from each of the three units and terminating adjacent each other to provide brushing surfaces adapted to operate simultane-

ously upon the inner, outer, and grinding surfaces of the teeth, and a handle having a swivel connection with one unit whereby the entire brush may be rotatively manipulated, substantially as described.

3. A tooth brush having a pair of hingedly connected units with spring means tending to move them toward each other, a third interposed unit hingedly connected with the others and stopping their inward movement, and brushing elements extending inwardly from each of the three units and terminating adjacent each other to provide brushing surfaces adapted to operate simultaneously upon the inner, outer, and grinding surfaces of the teeth, substantially as described.

4. A tooth brush in which is combined a handle, a brush unit swivelly connected thereto, and a pair of other brush units hingedly connected to each other and to the

first brush unit, each brush unit including cleaning elements terminating in three planes such as to adapt the device for operation upon inner, outer, and grinding surfaces of the teeth, and tension means urging the two opposite brush units toward each other, substantially as described.

5. A tooth brush in which is combined a pair of hingedly connected brush units having bristles extended toward but stopping short of each other, a third brush unit hinged to the other two and having bristles extended toward but stopping short of the bristles of the others, spring means for urging the first two brush units towards each other and against the intermediate brush unit, and a handle connected with one of the brush units for manipulating the device, substantially as described.

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