

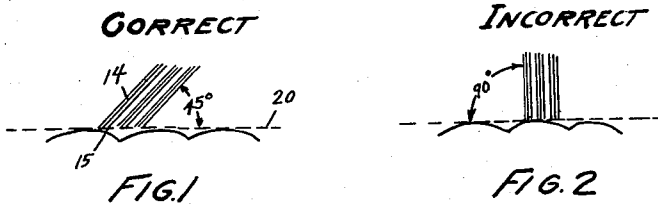
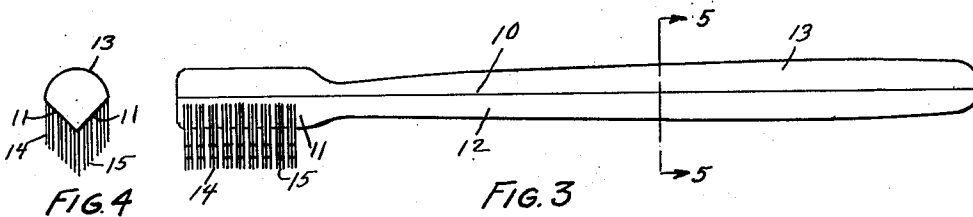
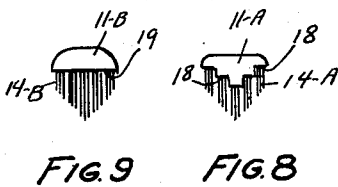
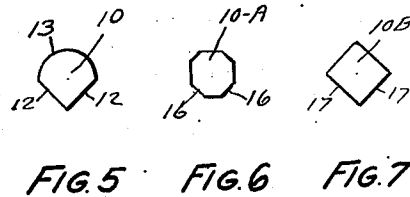
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TOOTHBRUSH

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TOOTHBRUSH

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3 Claims. (Cl. 15-167)

This invention relates generally to the art of dentistry and particularly to a method of and a brush for cleaning teeth.

The main object of this invention is to develop a method whereby teeth may be properly cleaned without injury to the teeth and gums, and whereby the muscles of the face and tongue are used to furnish the motive power for the brushing operation in order that the muscles of these members may be properly exercised, and accordingly strengthened.

A further object is to provide a method of brushing whereby the facial appearance of the brusher will be improved by the correction of flabby muscles commonly present in people of advancing years.

A third object is the production of a brush especially designed for insuring the proper inclination of the bristles during the brushing operation, as well as to so shape the contour of the work-engaging side of the ends of the bristles that they will follow closely into the depressions and crevices between the teeth with a gentle and non-injurious action.

I accomplish these and other objects in the manner set forth in the following specification as illustrated in the accompanying drawing, in which:

Fig. 1 is a diagrammatic view showing the correct relationship between the teeth and bristles.

Fig. 2 is a view similar to Fig. 1 but showing the incorrect relationship between the teeth and bristles, and one which commonly exists.

Fig. 3 is a side elevation of a preferred form of brush.

Fig. 4 is an end elevation of Fig. 3.

Fig. 5 is a section taken along the line 5-5 in Fig. 3.

Fig. 6 is a cross section of a modified form of handle.

Fig. 7 is a cross section of another modified form of handle.

Fig. 8 is an end elevation of a modified form of brush.

Fig. 9 is an end elevation of a further modified form of brush.

Before entering into an explanation of this invention, it is to be understood that brushing the teeth is perhaps one of the most important portions of the daily toilet and is often a most neglected and improperly performed. Relatively few people have any definite method or orderly procedure. Most people feel that they have done a thorough job if they scrub the teeth vigorously, often doing more harm than good.

In devising my method for cleansing or brushing of the teeth, I have focused my attention on the principal element, namely the brush. The conventional brush, if not properly used, can easily become an instrument of tooth destruction. A fast scrubbing stroke, for example, can eventually cut a tooth down to a nerve, especially at the gum margin. This is particularly true with soft teeth.

A tooth brush functions by having the individual bristle contact the particle of matter on the surface of the tooth or gum and then dislodging it and pushing it ahead of the bristle until it loses contact and can be washed away.

The dental area being very irregular and full of crevices makes it difficult to reach the bottoms of the crevices, due to the fact that the bristles are elastic or springy and can go into the irregularities or depressions only if the speed of the brush movement will permit the bristles to spring back or recover after being bent. In other words, if the brush is stroked too fast, the bristles will bounce over the depressions much as a tire bounces over depressions in a roadway. If, on the other hand, a slow stroke is used the bristles can spring into the depressions and crevices. In addition to the slow stroke it is necessary that the proper angle should be maintained. This is substantially 45 degrees between the bristle and the line of travel so as to allow the bristles to spring down and also so that the bristle will not cut the tissues, either hard or soft. The proper stroke might be likened to a correct paint brush stroke and there should be sufficient pressure exerted on the brush to force the bristles sideways into the deep crevices, and also to compress the gum tissue sufficiently to get a milking action of the blood in the direction of brush travel, which should always be toward the incisal or occlusal edge.

In order to provide a way of stimulating the oral circulation so as to get the blood to these areas, I have provided a novel form of tooth brush. Referring in detail to the drawing, the same will be seen to consist of a handle 10, whose bristle-bearing faces 11 are substantially normal to each other and parallel with the front sides 12 of the handle 10, the purpose being to enable the user to better direct the movements of the brush.

The back 13 is preferably rounded or straight. It will be noted that the bristles 14 are of substantially uniform length, making the tooth-engaging tips 15 parallel with the faces 11.

It will be noted in Fig. 6 that the shape of

the handle 10A is octagonal. Here again the sides 16 would be parallel with the sides 11, and in Fig. 7 the cross section of the handle 10B is square and the sides 17 are normal to each other, and of course normal to the sides 11.

In Fig. 8 is shown a modified form of cross section of the brush holding element 11A, in which the rows of bristles 14A are seated in steps 18.

In the form of the device shown in Fig. 9, the face 19 of the bristle holding element 11B is straight, but the bristles 14B are of varying length and the ones in the center are the longest, and those along the edge the shortest, the contour being the same as in the first described forms 15 of the device.

It will be observed from the foregoing that when the brush is used it naturally falls into the correct position for a proper tooth brushing, owing to the flattened handle sides 12, 16 and 17, which are parallel with the brushing lines 20 of the brush.

In the application of the brush it is of course held and guided by the hand but it is actually used by causing the muscles of the face and tongue to provide the impetus for the stroke. That is, the muscles of the face move the brush during the exterior brushing and the tongue moves the brush during the interior brushing. The movement is accomplished by merely inserting the brush by hand to the proper position and at the right angle and well up on the mucous membrane on the uppers or low on the lowers, and then causing the facial muscles to supply all the impulsion to move the brush down or up to the occlusal or incisal edges, as the case may be. When brushing the inner sides of the teeth, the tongue is used to provide the necessary movement.

By the practice of my method and use of my brush, certain distinct advantages are gained. First, it stimulates circulation of the cheeks and face, bringing added blood to the gum tissues, permitting the brush to move the blood toward the terminal fissures in the gums.

Secondly, it improves the muscle tone in the face and on the jaws, giving the individual a firm muscle development of these members, thereby improving and maintaining the facial contour and keeping wrinkle development at a minimum.

Third, the design of the brush also allows a slow side stroke which will allow the edge to go up under the gums and clean these also.

I claim:

1. A brush of the class described comprising a handle and a brush head having bristles disposed thereon characterized by having the tips of the bristles formed into two normally intersecting planes, said handle having longitudinal flattened faces along the hand-engaging portion thereof characterized by having two of said faces parallel with the planes of the bristle tips.

2. An elongated brush of the class described, having bristles trimmed to form a ridge of two normally intersecting planes extending longitudinally with said brush and having the bristle side of the handle provided with two normally intersecting faces parallel to the bristle faces.

3. A tooth brush comprising a handle and a brush head having the hand-engaging portion and the bristle bearing portion formed in two normally intersecting planes and having bristles of uniform length extending from the bristle bearing portion, the outermost tips of the bristles occupying two normally intersecting planes.

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