Dec. 29, 1936. G. TRATTNER ET AL 2,066,241

TOOTH BRUSH

Filed June 17, 1935

Fig. 1

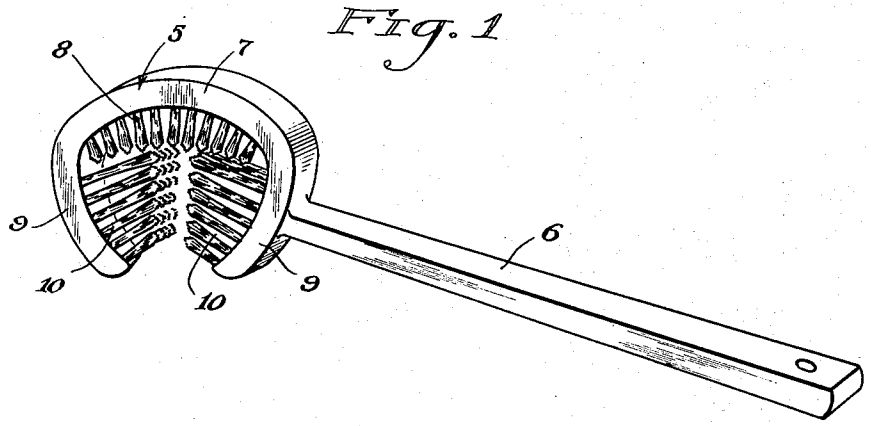


Fig. 2

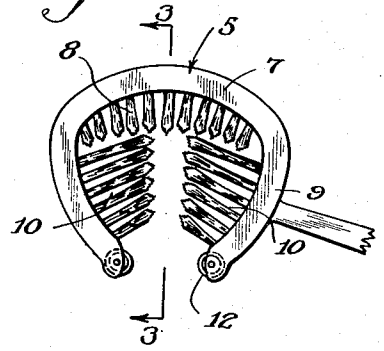


Fig. 3

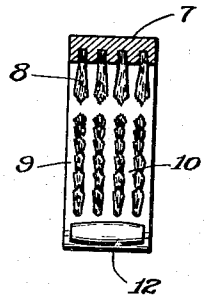
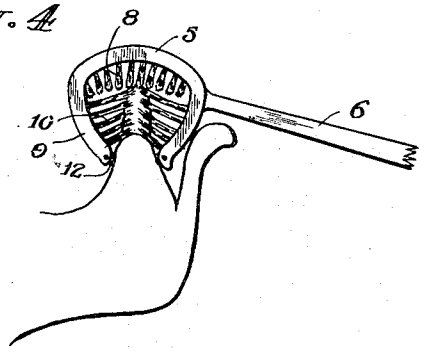


Fig. 4



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Patented Dec. 29, 1936

2,066,241

UNITED STATES PATENT OFFICE

2,066,241

TOOTH BRUSH

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Application June 17, 1935, Serial No. 27,076

1 Claim. (Cl. 15—167)

This invention relates to a toothbrush which, by its novel form and construction, will assure scientifically correct cleansing of all surfaces of all teeth as well as beneficial massaging of the interdental papillae and surrounding gum tissues.

The existing type of toothbrush, as misused in the average persons hands, does considerable harm to the delicate peridental gum tissue, and moreover fails in its most important prophylactic measure by its inability to properly clean the so-called inaccessible areas between the teeth and on their inner surfaces.

It is a generally accepted fact that the method of brushing teeth involving the use of the common type of toothbrush is inadequate to assure a complete cleaning of the teeth regardless of how the brush may be manipulated, in that the bristles thereof are not arranged so that they will normally project into the spaces or crevices between the teeth and thus dislodge the foreign matter accumulating therein. This general practice of incomplete cleaning has been the cause of most tooth decays, particularly those occurring between the teeth.

Recognizing this combination of danger and inadequacy, we have constructed a new toothbrush which by its ordinary use will not only reach and clean all so-called inaccessible portions of the teeth but will do so in such a manner as to coactively massage the surrounding gum tissue. This combined efficacy of this new brush is accomplished by placing the bristles on an arcuate plane instead of a flat one as heretofore practiced and by so arranging these bristles that they may force themselves between the teeth from the inner and outer surfaces concurrently at an angle away from the surrounding gum tissue.

An object of our invention is to provide a toothbrush which may be conveniently moved about the teeth, during which movement the bristles of the brush will come into contact and therefore thoroughly clean all of the surfaces thereof.

A further object of our invention is to provide a device of this character comprising means by which the gum margins of the teeth may be suitably massaged simultaneously with the cleaning action of the brush.

The invention will be fully and comprehensively understood from a consideration of the following detailed description when read in connection with the accompanying drawing which forms part of the application, with the understanding, however, that the improvement is capable of extended application and is not confined to the exact showing of the drawing nor to the precise construction described and, therefore, such changes and modifications may be made therein as do not affect the spirit of the invention nor exceed the scope thereof as expressed in the appended claim.

In the drawing:

Fig. 1 is a perspective view of the preferred form of our toothbrush.

Fig. 2 is a side elevational view of a modified form thereof.

Fig. 3 is a transverse sectional view of the modified form taken on line 3—3 of Fig. 2; and

Fig. 4 is an elevational view illustrating the use of our brush in cleaning the lower front teeth.

Referring now to the drawing for a more detailed description thereof and particularly to Fig. 1, our improved toothbrush comprises a brush body 5 and a handle 6 projecting from same at a suitable angle. The body 5 is shaped as an open loop resembling a substantially U-shaped member in outline converging arms having convex sides, the opening being arranged at a corner thereof.

From the intermediate portion 7 of the body 5 and projecting inwardly from same are arranged a group 8 of bristles provided for the brushing of the biting surfaces of the teeth and also to afford a guiding support for the entire brush during its manipulation, as hereinafter described. The bristles of group 8 are arranged in tufts which preferably are disposed to converge toward each other, the ends of the tufts forming an arcuate or cylindrical surface. From the remaining portions 9 of the body 5 project inwardly opposed groups 10 of bristles, which are also preferably arranged in tufts converging slightly toward each other. The tufts of the groups 10 are also desirably slanted or inclined away from the opening of the body so that as the brush is placed over the teeth the ends of the bristles 10 will be caused to engage with the entire front and rear surfaces of the teeth and at the same time insert themselves into the spaces between the teeth, during which the lowermost bristles will tend to lie against the marginal gum surfaces, particularly the interdental papillae. In this fashion the disposition of the lowermost bristles of the groups 10 will effect a beneficial massaging of the surrounding gum tissues coactively with the cleaning action of the other bristles of the brush.

To effect the cleaning of the teeth in the most

efficient manner the brush, after being placed over the teeth, as aforementioned, see Fig. 4, is moved in a vertical rocking motion such as by oscillating the handle 6 thereof. By so doing the bristles of the groups 10 will be caused to be moved slightly up and down the surfaces of the teeth, and at the same time the bristles of the group 8 will tend to bear onto and thoroughly brush the biting surfaces thereof, the latter being particularly desirable for the molar teeth.

Attention is now directed to Figs. 2 and 3 in which a modified form of our brush is illustrated. The object of this form is to provide means by which the massaging effect of the lower bristles in the groups 10 is supplemented. The mentioned means comprises the rollers 12 which are rotatably supported on suitable trunnions journaled at the terminal ends of the loop 5, which ends are extended an amount ample to afford this support. The rollers 12 are disposed in parallelism with each other and have their peripheries slightly convex so as to obviate any danger of injury to the gums. The rollers 12 may be of rigid construction or preferably be formed of a resilient material such as rubber.

In the practical application of this form of our toothbrush the latter is placed over the teeth and manipulated in a manner similar to that previously described for the first form. The rollers 12 thus become engaged with the marginal surfaces of the gum tissues where, during the motion of the brush as described, the rollers 12 are caused to roll up and down on the gum structure to effect a massaging action to the gums. In the second form of our toothbrush the groups of bristles comprising the same are arranged substantially as described for the first form.

What is claimed as new is:

A toothbrush comprising an inverted substantially U-shaped body having substantially converging arms, bristles extending at an upward angle from the confronting faces of the arms, bristles extending from the intermediate portion of the body toward the first mentioned bristles, and a handle extending from one of the arms and on the outer face thereof opposed to its bristles, and said handle adapted to be rocked in a vertical plane to cause like movement of the bristles with respect to the teeth.

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