May 10, 1938. J. M. JONES 2,117,174

TOOTH BRUSH

Filed Nov. 13, 1936

Fig. 1.

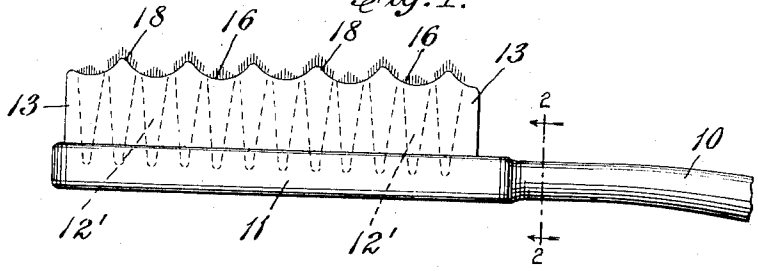


Fig. 2.

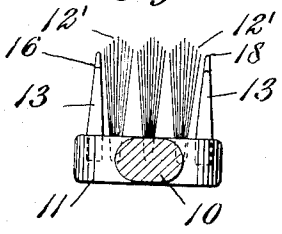


Fig. 3.

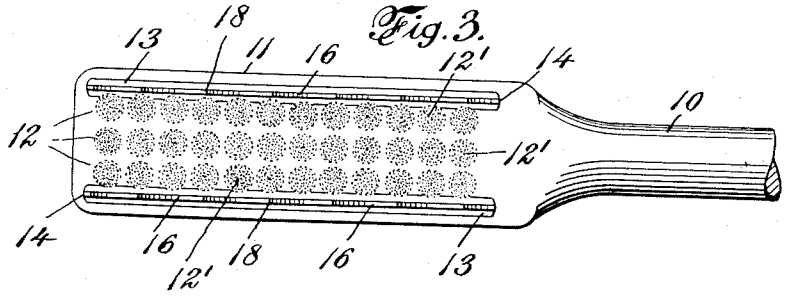


Fig. 5.

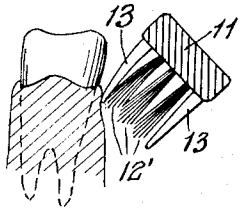
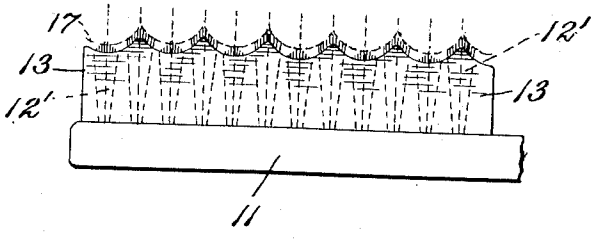


Fig. 4.



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UNITED STATES PATENT OFFICE

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TOOTH BRUSH

James M. Jones, Great Neck, N. Y.

Application November 13, 1936, Serial No. 110,560

3 Claims. (Cl. 15—110)

My invention relates to improvements in means for brushing the teeth, and the same has for its object to provide a simple, reliable and efficient device which is capable of use both for cleaning the teeth and for massaging the gums.

Further, said invention has for its object to provide a device of the character specified in which the teeth cleaning means thereof and gum massaging means thereof are associated so as not to detrimentally interfere with each other in their respective operations.

Further, said invention has for its object to provide a device of the character specified in which the massaging means thereof serve as shields for protecting the gums against the abrasive action of the bristles and for protecting the bristles of the brushing element against damage when in use.

Further, said invention has for its object to provide a device of the character specified in which the massaging members thereof are composed of relatively soft, yieldable material, such as a suitable rubber composition, capable of freely flexing transversely uniformly throughout the lengths thereof for exerting a beneficial action on the gums.

Further, said invention has for its object to provide a device of the character specified in which the massaging members thereof are capable of operating upon the peridental tissue or membrane in the interdental spaces.

Further, said invention has for its object to provide a device of the character specified in which both the brushing element thereof and the massaging element thereof are coordinated in contour to operate in said interdental spaces without detrimental action on the teeth or gums.

Other objects will in part be obvious and in part be pointed out hereinafter.

To the attainment of the aforesaid objects and ends my invention consists in the novel features of construction, and in the combination, connection and arrangement of parts hereinafter more fully described and then pointed out in the claims.

In the accompanying drawing—

Figure 1 is a side elevation of one form of device constructed according to and embodying my said invention;

Fig. 2 is an enlarged sectional view thereof on the line 2—2 of Fig. 1;

Fig. 3 is a plan thereof;

Fig. 4 is a diagrammatic detail side elevation, and

Fig. 5 is a detail view, partly in section, showing a tooth and a portion of the gum and the manner of utilizing the device in connection therewith.

Referring to the drawing the device or tooth brush includes the usual handle portion 10 terminating in the head 11 upon which are secured the usual rows of bristles 12 disposed longitudinally along the head 11. The brush may contain any number of rows of bristles, and preferably two, or more, as illustrated. The bristles are anchored in the head 11 and preferably consist of tufts of hog's hair having properties particularly adapting the same for use in tooth brushes.

In the present invention I provide supplemental means for massaging the gums and for protecting the gums against contact with the bristles when the device is in use. The massaging means preferably comprises a pair of flexible members or strips 13 extending longitudinally of the head 11 along said rows of bristles 12 at opposite sides thereof. The members 13 are anchored or secured at the lower edges thereof to said head 11 and project outwardly therefrom to form protective shields extending continuously along said head at opposite sides of the bristles 12' and being substantially coextensive in length with the length of the rows 12. The members 13 are preferably composed of a soft, yieldable material, such as rubber, and taper in cross-section substantially from the bases thereof to the longitudinal free edges 14 thereof. The members 13 are entirely separate one from the other, spaces being provided between the same at opposite ends to allow flexure of the bristles 12' longitudinally. The tapering cross-section of the members 13 together with the separated relationship thereof provide structures which are transversely flexible uniformly throughout the lengths thereof.

The longitudinal edges of the members 13 have a series of scallops or notches 16 therein rendering said edges of undulate or undulatory configuration. The bristles 12' are slightly longer than the depth of the members 13 so that normally when the device is not in use the bristles extend slightly beyond said undulate longitudinal edges of the flexible members. Preferably, the several ends of the bristles 12' describe an undulating line or plane corresponding to or substantially in phase with the undulations of the edges of the members 13 but located at a higher elevation, the undulating line described by the ends of the bristles 12' being indicated in broken lines at 17. The undulate configuration of the edges 14 of the members 13 provide crest portions 18 capable of operating upon or massaging the peridental tissue or membrane in the interdental spaces.

By imparting a corresponding undulate configuration to the ends of the bristles, the gums may be effectively massaged throughout by the flexible members 13 without danger of the relatively stiff bristles coming into contact with the gums at any point to cause injury thereto. At the same time the brush is always available for cleaning the teeth.

In operation the device is preferably held horizontally and given a vertical wiping movement, i. e. a downward movement relative to the upper set of teeth, and an upward movement relative to the lower set of teeth; one member 13 being effective in one direction and the other member in the opposite direction. In the course of these movements the outer side of each rubber strip 13 and the undulating edge thereof will engage with the gums, and as the device is actuated said members 13 will act upon and massage the gums with a wiping movement. In this operation the high portions or crests 18 of the undulate edges will engage and follow the gum to points between the teeth and thereby serve to massage the interdental portions of the membrane as the brush is manipulated. Thereafter the brush may be used in the usual manner to brush the teeth.

By my invention I am enabled to provide a device capable of use as an ordinary tooth brush with which is associated means for massaging the gums which means is also capable of shielding the gums from the abrasive action of the bristles when the device is used in cleaning the teeth, and of wiping over the gums for massaging the same at all points thereof in order to strengthen and harden the same. Said massaging members or shields 13 also serve to protect the bristles against injury or breakage.

Having thus described my said invention what I claim and desire to secure by Letters Patent is:

1. A tooth brush comprising a head, longitudinal rows of bristles on said head, and flexible members separate from each other composed of rubber extending longitudinally of said head along said bristles at opposite sides thereof, and having scalloped longitudinal edges, the ends of said bristles and the scalloped edges of said members describing corresponding undulatory lines extending longitudinally of the brush.

2. A tooth brush comprising head, bristles extending from said head and disposed longitudinally therealong, and flexible members extending from said head at opposite sides of said bristles, the ends of said bristles extending beyond the edges of said members, and said edges and said ends describing corresponding undulatory lines longitudinally of the brush.

3. A tooth brush comprising a head, bristles extending from said head, and members extending from said head and along said bristles at opposite sides thereof, and in separated relation to each other, said members being composed of yieldable material and tapering towards the free longitudinal edges thereof, the ends of said bristles extending beyond the edges of said members, and said edges and said ends describing corresponding undulatory lines longitudinally of the brush.

JAMES M. JONES.