

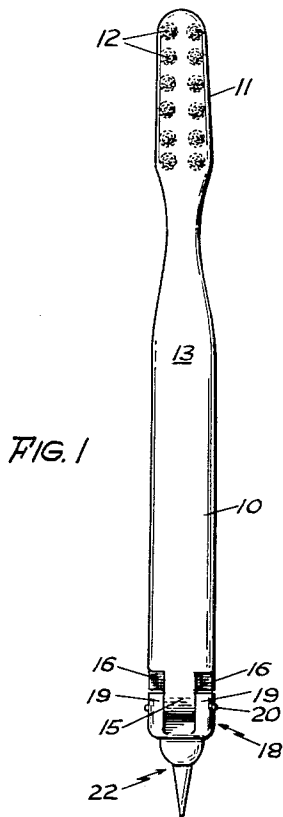
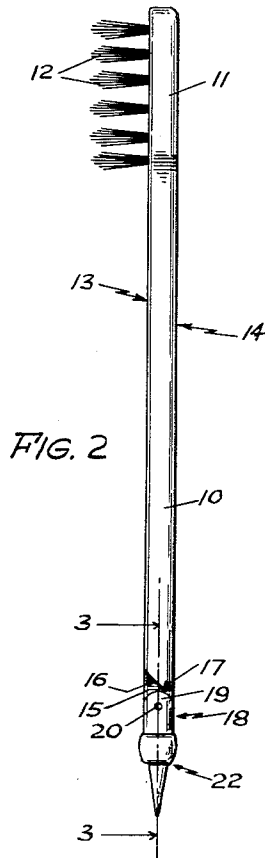
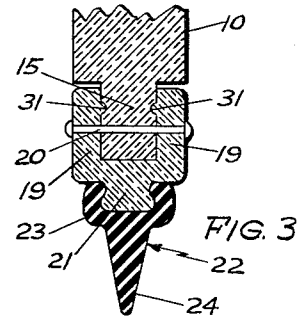
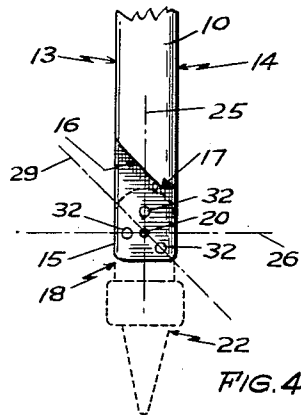
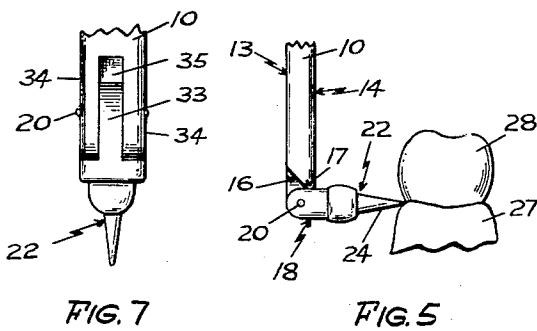
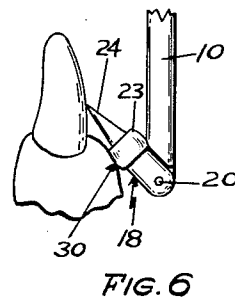
July 30, 1957

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2,800,899

GUM MASSAGE DEVICES

Filed May 11, 1953



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GUM MESSAGE DEVICES

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Application May 11, 1953, Serial No. 353,930

4 Claims. (Cl. 128—62)

This invention relates to a gum massage device and more particularly to such a device which may be formed as part of a toothbrush whereby the toothbrush handle also serves as the handle for the massage device.

Heretofore, in devices of this general nature, the massager itself, which ordinarily is made of a soft rubber body, has been mounted on its handle in a single predetermined fixed position. This has limited the degree to which various portions of the gums could be reached for proper application of the massage surfaces and also usually interfered with the insertion of the end of the toothbrush into a toothbrush holder. The present invention eliminates these limitations and difficulties. Briefly, this is attained by providing the toothbrush handle with a section carrying the massager, which section is pivoted to the handle so that it may be rotated into a plurality of predetermined angular positions, in each of which positions it is preferably retained by suitable detent means.

The foregoing and other advantages of the present invention will be best understood from the following description of exemplifications thereof, reference being had to the accompanying drawing in which:

Fig. 1 is a plan view of a toothbrush constructed in accordance with the present invention;

Fig. 2 is a side elevation of the device shown in Fig. 1;

Fig. 3 is an enlarged cross-section taken along line 3—3 of Fig. 2;

Fig. 4 is an enlarged fragmentary view of the lower end of Fig. 2, with the pivoted section and the massage tip drawn in dotted lines to show the arrangement of the detent recesses;

Fig. 5 is a diagram showing one manner of using the massager in one position of the pivoted section;

Fig. 6 is a similar diagram showing one manner of using the massager in another position of the pivoted section; and

Fig. 7 is an enlarged end view, similar to that of Fig. 1, of another embodiment of the present invention.

In the arrangement of Figs. 1 through 6, a toothbrush handle 10 is provided at one end with the usual type of head 11 carrying tufts of bristles 12. The front face of the handle 10 is designated at 13 and the rear face is designated at 14. The lower end of the handle 10 is provided with a central tongue 15 projecting beyond the handle proper. At each side of the tongue 15 the lower end of the handle 10 is shaped to provide a beveled face 16 lying at an angle of approximately 45 degrees with respect to the longitudinal axis of the handle 10. Each beveled face 16 slopes downwardly from the front face 13 to a horizontal stop surface 17 adjacent the rear face 14.

Pivoted to the tongue 15 is a tab 18 provided with a pair of side arms 19 lying on opposite sides of the tongue 15. A pivoted pin 20 passes through the side arms 19 and the tongue 15 to support the tab 18 with the desired degree of pivotal motion. The end of the tab 18 is also provided with a button 21 onto which is fitted the massager element 22 made of a suitable soft

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rubber or plastic material. The massager element is formed with a head portion 23 and a pointed extension 24. The head portion is provided with a recess into which the button 21 fits to retain the massager element 22. This arrangement permits a ready replacement of the massager 22. If desired, the massager element may be carried by the tab 18 as an integral part thereof, in which case the tab and its massager element could be made of rubber or plastic of the proper degree of flexibility.

When the toothbrush is to be inserted in the usual holder, the tab 18 is rotated into the 180-degree position designated by the dot-dash line 25 in Fig. 4. This position of the tab 18 is shown in Fig. 2, from which it will be seen that the massager 22 lies in such a position that it may pass readily through the usual hole in the holder. This is in contrast to previous arrangements in which an angular disposition of a massager interferes with ready insertion of the handle into its holder.

When the handle 10 is removed from its holder, the tab 18 may be rotated into an angular position with respect to the handle in which it lies in an ideal relationship with respect to the gums to be massaged. One such position is the 90-degree position designated by the dot-dash line 26 in Fig. 4. This position of the tab 18 is shown in Fig. 5, wherein the back surface of the tab 18 abuts the horizontal stop surface 17 and thus the pointed extension 24 projects at 90 degrees with respect to the longitudinal axis of the handle 10. As shown in Fig. 5, in this position, the extension 24 may be applied readily to massage the gum 27 along the base of a tooth 28 or at other locations such as the interproximal spaces between the teeth.

When the 90-degree position is such as to prevent the massaging of desired areas of the gums without danger of irritation due to improper positioning of the massager, the tab 18 may be rotated into the 45-degree position designated by the dot-dash line 29 in Fig. 4. This position of the tab 18 is shown in Fig. 6, wherein the front surface of the tab 18 abuts the beveled face 16 and thus the pointed extension 24 projects at 45 degrees with respect to the longitudinal axis of the handle 10. As shown in Fig. 6, in this position, the head portion 23 of the massager may readily stimulate lateral gum surfaces 30 while the extension 24 is accessible to gum areas which cannot be reached properly in the 90-degree position.

Although the stop surfaces 16 and 17 enable pressure to be exerted on the massager element 22 without moving it out of position, it is usually desirable to provide detent means to hold the tab 18 in its various positions. This may be done by providing a projection 31 on the inner face of each side arm 19 and a series of recesses 32 on each side face of the tongue 15. In each position of adjustment of the tab 18 each projection 31 snaps into a properly placed recess 32 so that the tab 18 is quickly, accurately and firmly fixed in the desired position.

Of course, it is to be understood that this invention is not limited to the particular details described above, since many equivalents will suggest themselves to those skilled in the art. For example, as shown in Fig. 7, the tab 18 may be provided with a central tongue 33 while the handle 10 is provided with projecting side arms 34, thus reversing the relationship represented by the tongue 15 and side arms 19 of the previously described embodiment. In Fig. 7 a beveled surface 35, corresponding to the beveled surface 16, is shown formed on the handle 10 between the side arms 34. Also, although the invention is shown as being incorporated in a toothbrush structure, the massager may be made as a unit in itself and provided with its own handle. The massager element may be made with the sides of the head 23 as a continu-

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ation of the sides of the extension 24 rather than as a bulbous appendage thereto. Various other changes will suggest themselves to those skilled in the art. It is accordingly desired that the appended claims be interpreted broadly in accordance with the scope of the invention.

What is claimed is:

1. A gum massager comprising an elongated handle, a tab pivoted to one end of said handle, and a massager element carried by said tab, said handle being provided with a plurality of stop surfaces adjacent said tab and lying in different angular positions with respect to the longitudinal axis of said handle, said tab being rotatable into a plurality of predetermined angular positions with respect to the longitudinal axis of said handle in each of which a lateral surface of said tab engages one of said stop surfaces.

2. A gum massager comprising an elongated handle, a tab pivoted to one end of said handle, a massager element carried by said tab, said handle being provided with a plurality of stop surfaces adjacent said tab and lying in different angular positions with respect to the longitudinal axis of said handle, said tab being rotatable into a plurality of predetermined angular positions with respect to the longitudinal axis of said handle in each of which a lateral surface of said tab engages one of said stop surfaces, and detent means for holding said tab in each of said positions.

3. A gum massager comprising an elongated handle, a tab pivoted to one end of said handle, and a massager element carried by said tab, said tab being rotatable into a plurality of predetermined angular positions with respect to the longitudinal axis of said handle, in one of said positions the axis of said tab and said massager element lying along the longitudinal axis of said handle, in a second of said positions the axis of said tab and said massager element being substantially perpendicular to

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the longitudinal axis of said handle, in a third of said positions the axis of said tab and said massager element forming an acute angle with the longitudinal axis of said handle, said handle being provided with a pair of stop surfaces adjacent said tab and lying in different angular positions with respect to the longitudinal axis of said handle, in each of said second and third positions a lateral surface of said tab engaging one of said stop surfaces.

4. A gum massager comprising an elongated handle, a tab pivoted to one end of said handle, a massager element carried by said tab, said tab being rotatable into a plurality of predetermined angular positions with respect to the longitudinal axis of said handle, in one of said positions the axis of said tab and said massager element lying along the longitudinal axis of said handle, in a second of said positions the axis of said tab and said massager element being substantially perpendicular to the longitudinal axis of said handle, in a third of said positions the axis of said tab and said massager element forming an acute angle with the longitudinal axis of said handle, said handle being provided with a pair of stop surfaces adjacent said tab and lying in different angular positions with respect to the longitudinal axis of said handle, in each of said second and third positions a lateral surface of said tab engaging one of said stop surfaces, and detent means for holding said tab in each of said positions.

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