Dec. 27, 1938. G. W. BENZ 2,141,969

MASSAGE DEVICE FOR TOOTH BRUSHES

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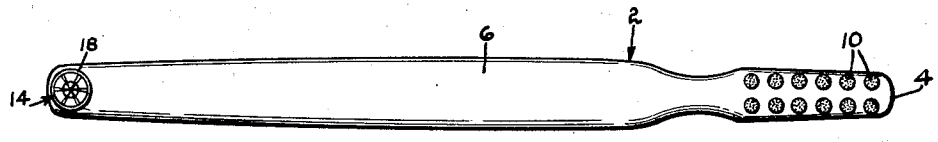

Fig.1

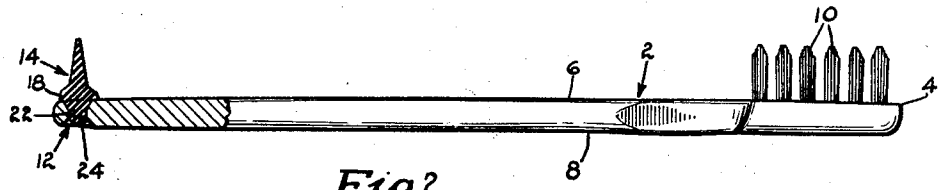

Fig.2

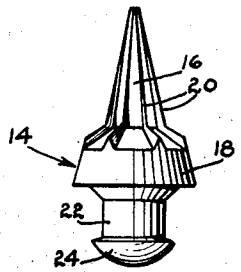

Fig.3

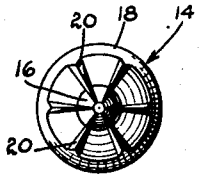

Fig.4

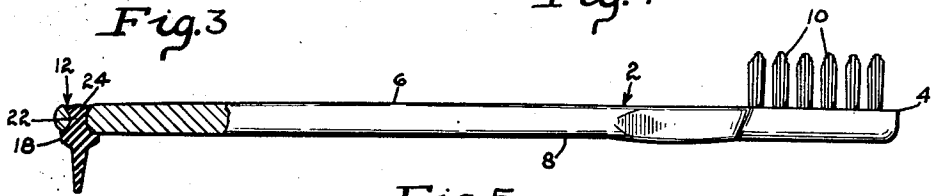

Fig.5

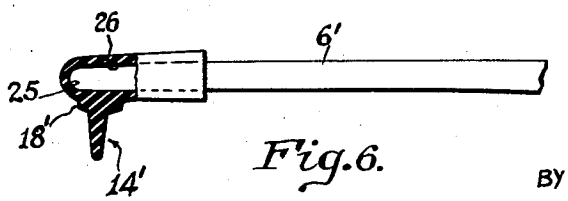

Fig.6.

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MASSAGE DEVICE FOR TOOTH BRUSHES

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3 Claims. (Cl. 128—62)

This invention relates to a massage unit for massaging the gums and especially to such a unit which can be readily attached to an ordinary tooth brush so that the tooth brush handle may serve as a handle for the massage device, as well as for its usual bristles.

It has been heretofore proposed to provide a detachable massage element for a tooth brush handle but the constructions heretofore advanced have involved complicated tooth brush handle constructions and massage element constructions. Also, the massage elements have been so mounted on the tooth bush handle with respect to the bristles that some users have regarded the presence of the massage element as interfering with the free use of the tooth brush, and vice versa.

One of the broad objects of the present invention is the provision of an improved and simplified massage unit which can be readily attached to the ordinary, simple, unmodified tooth brush handle, and which can moreover be selectively mounted in alternative relationships with respect to the handle so as to meet with the particular preferences of the individual users as regards arrangement of the handle, bristles and massage element.

It has been heretofore proposed to detachably mount a massage element on the end of the tooth brush handle remote from the bristles and on the same face as that from which the bristles project, that is to say with the bristles and massage element projecting outwardly in the same direction from the same face at opposite ends of the handle. This arrangement has the advantage that it permits of the handle being rested on its other face with the bristles and massage element projecting straight into the air while drying. However, it has the disadvantage that when using the bristles or massage element, one or the other may engage the user's palm.

Accordingly, the invention has for a further object the provision of a massage unit which may be selectively attached to either face of the tooth brush handle at the end remote from the bristles, whereby the user may determine his individual preference as to the face of the handle upon which to mount the massage element, and then use the same accordingly.

As is well known, practically all tooth brushes sold are provided with a hole at the end of the handle remote from the bristles, by means of which they may be hung upon a hook. With modern toilet facilities, there is virtually no use for these holes and the present invention contemplates providing the detachable massage element with an extension for insertion into this hole from either face of the handle thereby to effect attachment of the massage element to the handle in a simple, inexpensive manner which permits of the mounting of the element on either face of the handle. If by any chance it should be desired to provide means for hanging the tooth brush upon a hook, a second hole may very easily be provided.

Again, the invention contemplates the provision of a simplified, unitary form of massage element and extension for insertion into the hole of the tooth brush handle, in which the element and extension are integral and preferably molded rubber, or other suitable substance.

These and various other objects of the invention will be more readily apparent upon a detailed study of the accompanying drawing and specification, together with the appended claims.

In the drawing:

Figure 1 is a plan view of a tooth brush having a massage element detachably secured to the same face of the handle as that from which the bristles extend, i. e. an arrangement in which massage element and bristles project outwardly in the same direction;

Figure 2 is a side elevation of Figure 1, partly in cross-section;

Figure 3 is an enlarged side elevation of the massage unit;

Figure 4 is a plan view of Figure 3;

Figure 5 is a view similar to Figure 2 but with the massage element detachably secured to the handle face opposite to that from which the bristles project; and

Figure 6 is a side view of a massage element illustrating another arrangement for detachably securing the same to a tooth brush handle.

Referring now more particularly to the drawing, 2 is a tooth brush handle formed with a head 4 of reduced width. As shown in Figure 1, the handle is gradually reduced in width in the direction of its end remote from head 4. The upper face of the handle is designated at 6 and the lower face at 8. Tufts of bristles 10 are mounted in the head 4 and project upwardly from upper face 6, substantially at right angles thereto, as shown in Figures 2 and 5. The handle of the tooth brush is provided with the usual hole 12 at its end remote from head 4 and bristles 10. The edges of hole 12 are preferably dished as shown in Figures 2 and 5.

The detachable massage unit 14 may be of any desired type or shape and is in this case shown

formed as an interproxymal massage element consisting of a slender cone shaped portion 16 formed with an enlarged base 18 of appreciable thickness. As shown in Figure 3, the upper portion of the enlarged base adjacent the slender cone is tapered downwardly. The slender cone portion 16 and tapered portion of the base 18 are provided with suitable ribs 20 to assist in the massaging action. From the bottom of enlarged base 18 there depends an extension 22 of reduced diameter having a head 24 at its extremity.

The massage unit 14 may be made of any desired material which will hold its shape. It is preferably made of soft rubber which is yieldable but sufficiently firm to permit the massage element to carry out its intended purpose, and by the term "soft rubber" as used herein and in the claims is meant rubber of such consistency. The entire unit is of course integrally formed.

The extension 22 of massage unit 14 may be inserted into hole 12 of the tooth brush handle from either face 6 or face 8. When inserted from either side, the top and bottom edges of the hole 12 are wedged between the base 18 and head 24, and the element 14 is thus secured to handle 2 in snap fastener relationship.

If unit 14 is mounted as shown in Figure 2, it is possible to rest the assembly on face 8 of the handle whereby massage element 16 and bristles 10 extend straight upwardly into the air while drying. However, the massage element may engage the user's palm while he is brushing his teeth, depending of course upon the manner in which the user ordinarily holds the brush. The handle shown in the drawing is to scale and somewhat longer than the usual tooth brush handle but engagement of the palm with the massage element while the brush is being used or vice versa may nevertheless result. But if unit 14 is mounted as shown in Figure 5, the palm will not engage the massage element while the brush is being used or vice versa, although it is impossible to rest the device on face 8 as in the case of Figure 2. In either case the massage element is held substantially against rotation while in use.

Because of the fact that massage unit 14 may be selectively mounted either as shown in Figure 2 or in Figure 5 with ease, a user may readily determine his own preference as to which mounting is most convenient to him.

It will be readily appreciated that the reduced width of handle 2 at the hole 12 facilitates insertion of this end of the handle into the mouth when the interproxymal massage element 16 is applied between the teeth in known manner.

While the modification of the invention illustrated in the drawing has been described in detail, it will be understood that it is merely illustrative and that the scope of the invention is only to be limited by the appended claims. For example, various shapes and types of massage elements may be used, and, if desired, the extension on the element may be of a different material than the element itself, as for instance spring metal. Again, instead of having a male connecting element, the massage device may be provided with a pocket or socket of any suitable material, integral or otherwise, which slips snugly over the end of the tooth brush handle remote from the bristles, thereby obviating the necessity for a hole in the handle. Such an arrangement is shown in Figure 6. Therein the base 18' of the massage unit 14' has formed integral therewith a socket member 25 having a recess 26 snugly receiving the end portion of the tooth brush handle 6'. It will be evident that the socket member may be applied to the handle to support the massage unit at either the upper or lower face of the handle.

I claim as my invention:

1. An interdental element adapted to be detachably secured to a handle having a transverse opening adjacent one end thereof and comprising a body of yieldable material having a base underface engageable with a side face of the handle, and having a thin outwardly tapering interdental massage and cleaning portion terminating in a point at its outer end, a shank of smaller diameter than the base underface adapted to be inserted through the handle opening, a frustro-conical portion of smaller diameter than the underface connecting the shank to the base underface, and an enlarged clamping head at the rear end of the shank having an inner face adapted to clamp against the handle at one end of the handle opening.

2. An interdental element adapted to be detachably secured to a handle having a transverse opening adjacent one end thereof and comprising a body of yieldable material having a base underface engageable with a side face of the handle, and having a thin outwardly tapering interdental massage and cleaning portion terminating in a point at its outer end, a shank of smaller diameter than the base underface adapted to be inserted through the handle opening, a frustro-conical portion of smaller diameter than the underface connecting the shank to the base underface, and an enlarged clamping head at the rear end of the shank having a frustro-conical inner face adapted to clamp against the handle at one end of the handle opening.

3. In a device of the class described, a handle, a transverse opening through the handle at one end thereof, said opening having dished portions adjacent the front and back side faces of the handle, an interdental element comprising a body covering the opening having a base underface seating on one side face of the handle at one end of the opening, and having a thin outwardly tapering interdental massage and cleaning portion terminating in a point at its outer end, a shank of smaller diameter than the base underface extending through the opening, a frustro-conical portion on the shank adjacent the base underface seating in one dished portion of the opening, and an enlarged clamping head at the rear end of the shank having a frustro-conical inner face engaging the handle in clamping relation in the other dished portion of the opening.

GEORGE W. BENZ.