

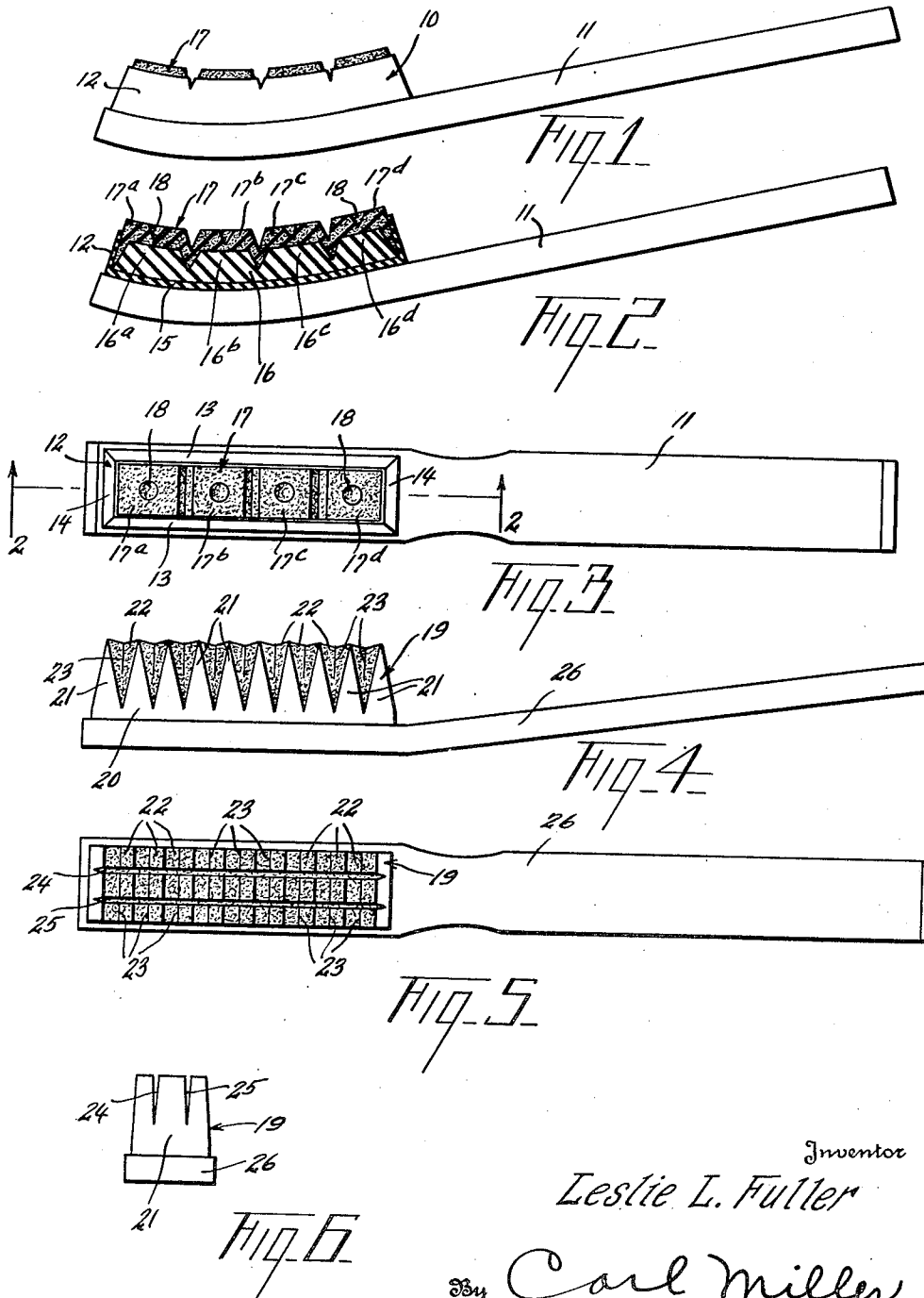
Oct. 8, 1940.

L. L. FULLER

2,217,439

ORAL MASSAGING DEVICE

Filed March 17, 1938



Inventor

Lestie L. Fuller

By Carl Miller

Attorney

UNITED STATES PATENT OFFICE

2,217,439

ORAL MASSAGING DEVICE

Leslie L. Fuller, Goldfields, Saskatchewan, Canada

Application March 17, 1938, Serial No. 196,442

8 Claims. (Cl. 15-188)

This invention relates to massaging appliances and more particularly to gum massage brushes, tooth brushes and combination gum and tooth brushes.

5 The principal object of this invention is to provide an appliance of this character wherein the massaging contact surface is composed in whole or in part of a soft, flexible, cellular mass of material such as sponge rubber, and having a reinforcing core or cores of a denser but flexible material such as vellum rubber enclosed in whole or in part within the soft, flexible, cellular mass of material. Such an appliance provides a means of gum massage and tooth brushing that is neither 15 harsh, irritating or injurious to the most tender, inflamed or congested tissue; it will not cause injury, damage to or recession of the gum tissue, but because of its soft and flexible nature it will furnish a means of beneficial massage.

20 Another object of the invention relates to the cellular mass serving as a means of applying medicaments as its spongy structure provides a superior vehicle for carrying medicaments by the absorption thereof and to thus allow the massaging of the same into the gum tissue; that in the form of a tooth brush it provides a superior vehicle for carrying and applying dentrifices and that teeth and gums may be brushed with it without irritating and injurious effect often 25 caused by brushing with an appliance the contact surface of which is of a hard and sharp nature.

These, and other objects will become more apparent from the specification following as illustrated in the accompanying drawing, in which:

35 Figure 1 shows in side elevation one form of brush or gum massaging appliance.

Figure 2 is a longitudinal sectional view of the same taken on line 2-2, Figure 3.

40 Figure 3 is a plan view of the same.

Figure 4 shows in side elevation a modified form of brush or gum massaging appliance.

Figure 5 is a plan view of the same.

45 Figure 6 is a front elevational end view of the same.

Referring in detail to the drawing, 10 denotes generally the massaging unit or appliance mounted on one end of a manipulating handle 11, the device as a whole resembling a conventional form of tooth brush as well known. The massaging appliance 10 comprises a base and core portion 15 and 16 preferably formed of an integral mass of a flexible substantially hard material such as what is commonly known as "vellum rubber" and a massaging portion 17 formed of a

soft, flexible, cellular material, preferably sponge rubber.

The base and core portion 15 and 16 is firmly attached to the handle 11 and the massaging portion 17 is firmly attached to the core 16. The whole thus forming an integral unit handled structure.

The oblong core 16 is preferably shaped on its upper surface to provide a plurality of separated portions 16a, 16b, 16c, and 16d of a truncated 10 pyramid shape.

Superimposed upon and over the core 16 is a mass of soft flexible cellular material 17 preferably sponge rubber. The sponge rubber mass 17 is formed to provide a plurality of separated portions 17a, 17b, 17c and 17d complementary to the respective core portions 16a, 16b, 16c and 16d to provide the contacting massaging portion of the appliance. Each such contacting massaging portion 17a, 17b, 17c and 17d is provided with a 20 central depression or recess 18 for a purpose to be hereinafter described. The sponge rubber mass 17 preferably has its side and end walls 13 and 14 sealed 12, but the cellular structure of the sponge rubber contacting massaging surface and the peripheries of the walls of each portion 17a, 17b, 17c and 17d is exposed for a purpose hereinafter 25 described.

The sponge rubber massaging portion 17 is vulcanized to or secured by cementation to the base-core portion 15 and 16 and the whole massaging appliance 10 is secured in any desired manner to the manipulating handle 11. This may be accomplished either by mechanical means such for 35 example as set forth in my co-pending U. S. application Serial No. 184,383, filed January 11, 1938, on invention for "Appliance for dental massage and medicinal applicator," or by vulcanization or cementation thereto. In any event it is intended that the massaging appliance 10 be 40 rigidly secured to said handle 11 so as to form therewith a unit handled structure.

In use the contacting massaging portions 17a, 17b, 17c, 17d constituted by the sponge rubber act on the gums or teeth or both. Inasmuch as 45 the sponge rubber has absorbing properties, in the manner of a sponge, medicaments applied to the cellular contact surfaces are held within the cellular pockets and in the recesses 18 the same exuding therefrom only by the flexing action of the appliance in massaging. Thus the medicament may be supplied to the gums and massaged therein by the use of the appliance. In a like manner a dentrifice may be carried by the sponge 55

rubber both by the recesses 18 and the cellular pockets in the exposed contact massaging portions. The sealed walls 12 will act to retain either medicaments or dentifrice within the sponge rubber mass the same exuding therefrom only through the exposed contact massaging portions by the flexing action of the appliance in massaging or brushing.

It is to be understood that the appliance 10 as above described and shown illustrates only a preferred form and that the same may be of any suitable form, shape or design and that the contact massaging portion of the sponge rubber may also be of any suitable form, shape, design or thickness.

In Figures 4, 5 and 6 there is shown a massaging appliance 19 intended for use as a combined gum massage and tooth brush. Integrally formed on a base element 20 is a row of tapered vertical flexible members 21 arranged parallel to each other, said base element 20 and flexible members 21 being formed of a flexible substantially hard rubber such as "vellum rubber." Disposed between the flexible members 21, up to the tips thereof are masses of sponge rubber 22 which are rigidly secured to said members by vulcanization or cementation to form a unitary structure.

Each mass of sponge rubber 22 is partially severed in a transverse plane medially between opposed members 21 as at 23, and the entire appliance is partially severed as at 24, 25 in a plurality of longitudinal planes, parallel to each other and normal to the base 20. This partial severing of the flexible members 21 and sponge rubber masses 22 provides a greater flexibility of the appliance as a whole, simulating a tooth brush, and will permit a brushing action by the tips of the flexible members 21 and a massaging action by the sponge rubber masses 22. As described above with reference to the massaging appliance shown in Figure 4, the sponge rubber masses 22 may carry either a medicament or dentifrice, the appliance being used in exactly the same manner as a conventional tooth brush. The massaging unit or appliance 19 is rigidly secured in any desired manner to a manipulating handle 26.

Again it is to be understood that the appliance 19 as above described and shown illustrates only a preferred embodiment thereof and that the same may be of any suitable form, shape, or design. And it is to be further understood that the flexible members 21 may be entirely enclosed in sponge rubber except where the said members 21 are united to the base 20.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. An oral massaging device comprising a manipulating handle, an elastic core body having at least one upstanding core secured to an end portion of said handle and a soft cellular elastic body superimposed upon said core body and completely surrounding said core with the major portion of its mass above said core to define the massaging surfaces of said device, said handle, core body and cellular elastic body being integrally united, said body by virtue of its cellular nature serving as a medicament carrying medium, and an elastic sheath surrounding said cellular elastic body and of such a height as to leave exposed an upper portion of said cellular elastic body whereby to retain the medicament carried thereby.

2. An oral massaging device comprising an elongated body of cellular elastic material transversely separated at its upper portion to define a plurality of spaced massaging pads, a reinforcing elastic core projecting upwardly within each of said pads and completely enclosed thereby, and a flexible walled sheath surrounding said cellular body and leaving exposed only a small upper portion of each pad thereof to constitute the massaging surface portion of said device, said sheath, core and cellular body being integrally united to provide a unit element for attachment to a manipulating handle.

3. The massaging device as set forth in claim 2, said sheath serving as a pocket to retain a medicament to be absorbed and contained by said cellular body.

4. An oral massaging and medicament carrying appliance comprising a plurality of flexible substantially stiff rubber members attached at their lower ends to a base element, a mass of sponge-like material adapted to absorb and retain a medicament disposed between said flexible members and united with the same and said base element to form a unitary structure, said flexible members functioning to reinforce and confine said sponge-like mass.

5. The appliance as set forth in claim 4, wherein said sponge-like mass is formed of sponge rubber, the upper ends of said flexible members and the upper surface portion of said mass providing a massaging surface of irregular contour, and a manipulating handle for said appliance to which the base element thereof is rigidly fixed.

6. An oral massaging and medicament carrying appliance comprising a plurality of longitudinally spaced parallel members of tapering thickness, formed of flexible and substantially hard rubber and joined together at their bases to a common base element, a mass of sponge rubber adapted to absorb and retain a medicament filling the spaces between said flexible members and bonded thereto, the tips of said flexible members and the upper surface portion of said sponge rubber masses providing a massaging surface of irregular contour and a manipulating handle for said appliance to which the base element thereof is rigidly secured.

7. In the appliance as set forth in claim 6, wherein each sponge rubber mass between a pair of flexible members is severed along a transverse plane parallel to and midway of said members, and said flexible members and sponge rubber masses being severed in a plurality of parallel longitudinal planes normal to the plane of said base element whereby to increase the flexibility of the appliance.

8. A gum massaging and medicament carrying appliance comprising a flexible walled rubber casing including a base, a body of sponge rubber within said casing and projecting above the flexible walls thereof, a plurality of stiff rubber supporting cores united to said base and projecting upwardly into said body of sponge rubber and wholly embedded therein, said casing, sponge rubber body and cores being integrally united and said casing acting to retain a medicament to be absorbed by said sponge-rubber body, the exposed top surfaces of said sponge-rubber body providing a massaging surface.

LESLIE L. FULLER.