Jan. 24, 1961 L. LAWSINE ET AL 2,968,827

TOOTH CLEANING AND GUM MASSAGING DEVICE

Filed Jan. 23, 1958 3 Sheets-Sheet 1

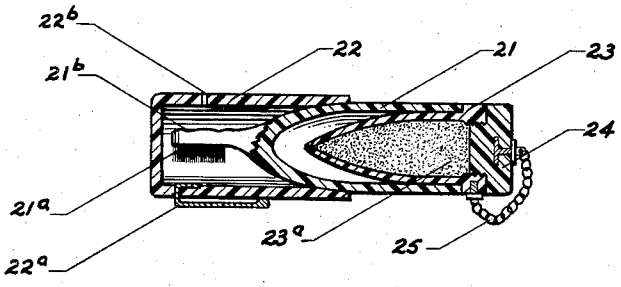


Fig. 1

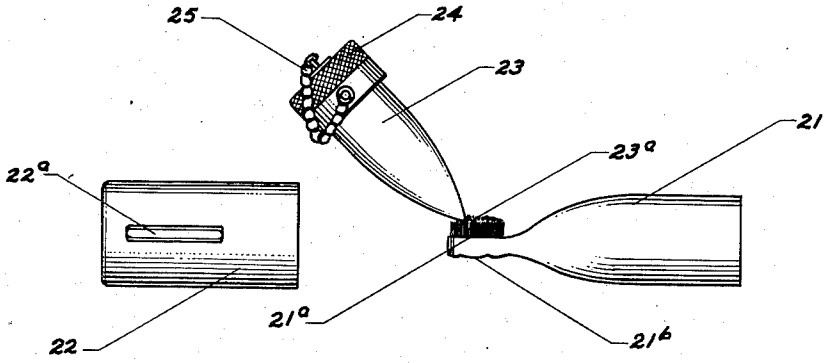


Fig. 2

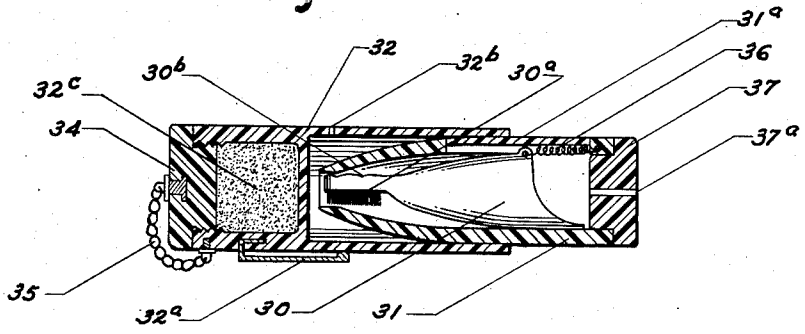


Fig. 3

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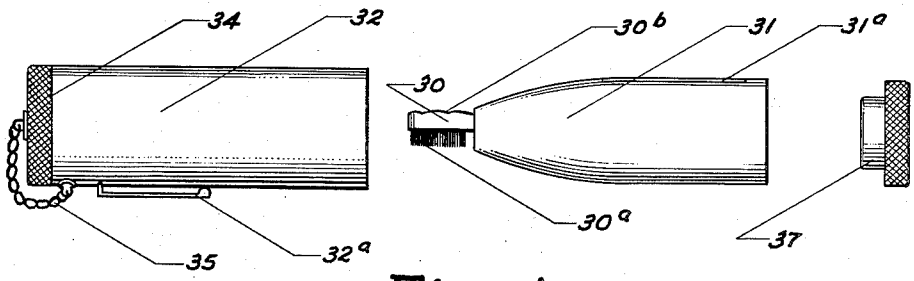


Fig. 4

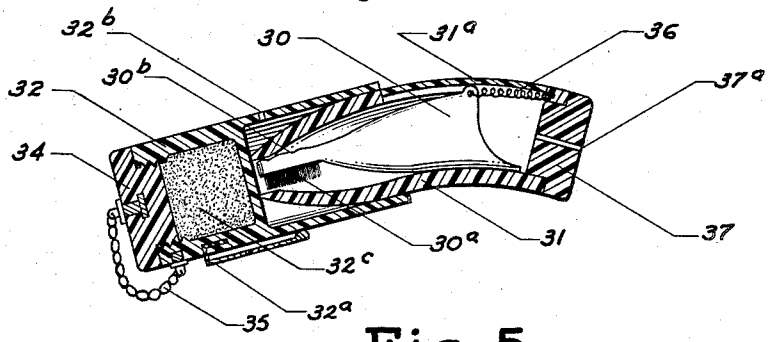


Fig. 5

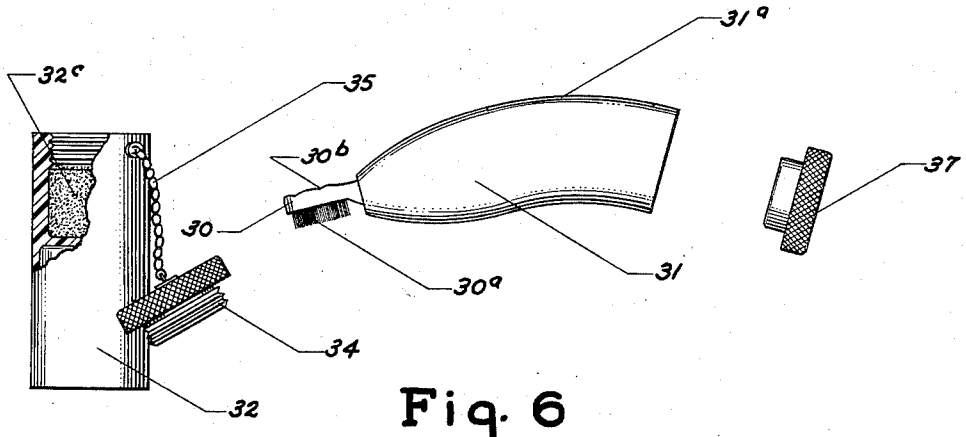


Fig. 6

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TOOTH CLEANING AND GUM MASSAGING DEVICE

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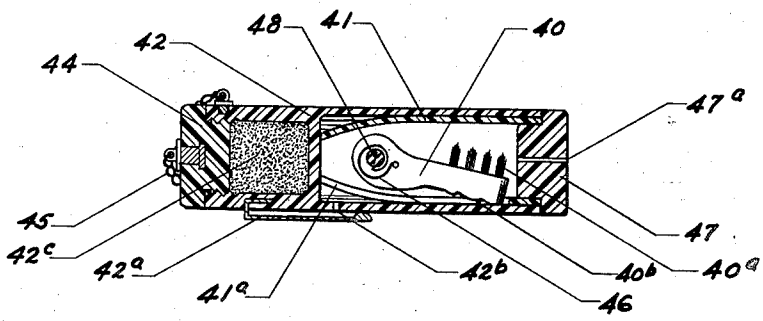


Fig. 7

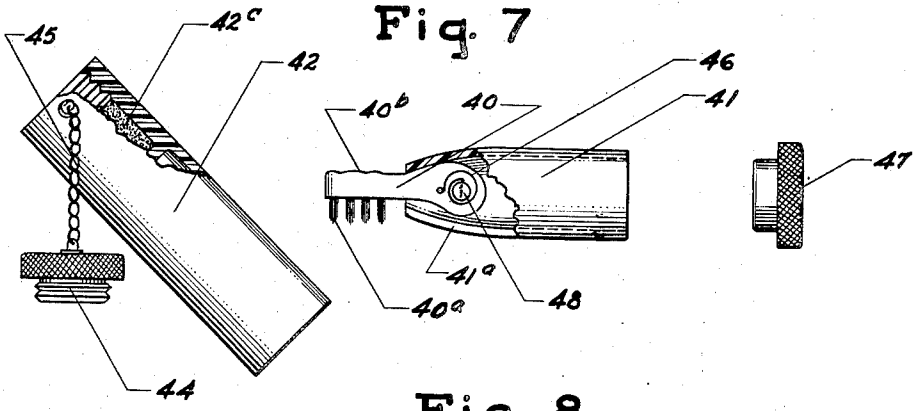


Fig. 8

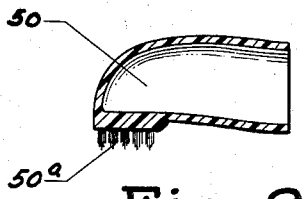


Fig. 9

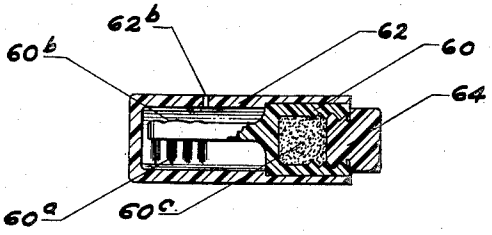


Fig. 10

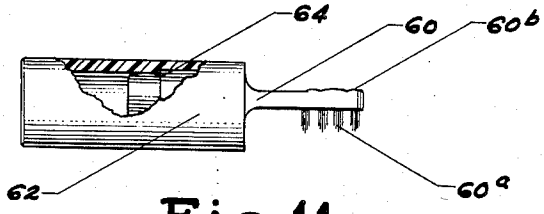


Fig. 11

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TOOTH CLEANING AND GUM MASSAGING DEVICE

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1 Claim. (Cl. 15—184)

This invention relates to a device for cleaning teeth or massaging the gums or both, and more particularly to a tooth cleaning device especially suitable for emergency use where ordinary toothbrushes are not readily available, or where it would be physically inconvenient, or socially awkward to use an ordinary brush.

One of the principal objects of our invention is the provision of an improved tooth cleaning and gum massaging device which is sanitary and compact and can be carried at all times on the person of the user, as for example in a pocket, and is readily available for use at any time, particularly at times during the day when it is impractical or inconvenient to use an ordinary toothbrush.

More particularly it is an object of the invention to provide an improved tooth cleaning or gum massaging device which can be carried in the pocket or purse of the user and which carries with it a readily available supply of dentifrice so that the user can easily clean his teeth or gums at odd times during the day, as for example, after lunch when it would be otherwise impossible or impractical to use an ordinary toothbrush.

A more specific object of the invention is to provide a toothbrush or gum massager which is provided with means protecting the brush against contamination and contains either in the handle portion of the brush or in the cap a dentifrice compartment from which dentifrice can be conveniently applied to the brush.

Still another object of the invention is to provide a toothbrush or gum massager having in place of the usual handle a sheath-like finger stall or cot which closely encompasses the finger of the user so that the brush may be carried by the finger and inserted into the mouth for application to the teeth or gums, the finger serving in place of the ordinary toothbrush handle to impart a brushing or massaging motion to the brush against the teeth or gums.

A still further object of the invention is to provide a readily portable finger-carried tooth cleaner or gum massager which, due to the absence of a handle in the ordinary sense, permits unobtrusive use of the brush of the invention in public washrooms or other places where it might be embarrassing to the user to be observed brushing his teeth.

Other objects and their attendant advantages will become apparent when the following detailed description is read in conjunction with the accompanying drawings wherein:

Fig. 1 is a longitudinal cross-sectional view, partly in elevation, of one embodiment of our invention showing the parts of the invention in assembled condition.

Fig. 2 is a view showing the parts of the invention illustrated in Fig. 1 in disassembled condition for use;

Fig. 3 is a longitudinal cross-sectional view partly in elevation of a second embodiment of our invention;

Fig. 4 is a view of the embodiment illustrated in Fig. 3 showing its various parts detached;

Fig. 5 is a longitudinal cross-sectional view, partly in elevation, of a third embodiment of our invention;

Fig. 6 is a view, partly in cross-section, of the embodiment illustrated in Fig. 5 showing the parts detached;

Fig. 7 is a longitudinal cross-sectional view, partly in elevation, of a fourth embodiment of our invention;

Fig. 8 is a view, partly in cross-section, of the embodiment illustrated in Fig. 7 showing the parts detached;

Fig. 9 is a cross-sectional view of a form of finger-carried toothbrush;

Fig. 10 is a longitudinal cross-sectional view, partly in elevation, of a fifth embodiment of our invention; and

Fig. 11 is a view of the embodiment illustrated in Fig. 10 showing the parts thereof assembled in their position of use.

Referring now to the drawings, Fig. 1 shows a miniature cartridge type tooth cleaning and gum massaging device comprising essentially a brush mounting finger cot or sheath 21, a barrel cap closure 22, and a dentifrice tube 23. The finger cot 21 may be molded as a unitary structure having a hollow core or cavity at one end and a projection consisting of a brush 21^a and a gum massager 21^b at the other end. The hollow core 21 is preferably tapered to provide a means for inserting a finger. The brush or scrubber 21^a may be an integral part of the finger sheath 21 or an external attachment and may be of any suitable shape, size and construction. Thus, the brush portion may comprise extruded stud-like embossments, pads, clumps of bristles, evenly spaced bristles and the like. The brush material may be the same as the finger cot 21 and may be made of a suitable material such as nylon. If desired, a cellular, fibrous or porous material such as flexible foam plastic, natural sponge, sponge rubber or the like, may be substituted for the brush. The gum massager 21^b is an optional feature and may also be an integral part of the finger cot 21.

The dentifrice tube 23 is of the refillable type and is inserted with a friction or threaded fit into the finger cot 21. The tube 23 is made preferably of flexible plastic or other suitable material to form a hollow body adapted to contain a dentifrice 23^a which may be in the form of toothpaste, tooth powder or dentifrice tablets. The container 23 may be filled from standard cans or tubes to which the former may be temporarily threaded for filling purposes with the member 23 being thereafter squeezeable to eject the dentifrice onto the brush through a small hole at the tip. The dentifrice 23^a may be retained in member 23 by means of a knurled threaded cap 24 which may be molded of any suitable material to provide a readily removable closure for container 23 as well as providing means for extracting the latter from the cot or sheath 21. If desired, a retaining swivel and chain 25 may be provided to prevent loss of the cap 24 while filling the container 23. The barrel 22 provides a sanitary closure encompassing the brush and may be removably joined to the cot by screw threads or by friction fit as shown. This enclosure 22 may be constructed of any suitable material, preferably of molded plastic, and is provided with an air vent 22^b which serves to remove any excess moisture from the interior after use. An optional pocket clip 22^a may be supplied for carrying purposes.

Fig. 2 illustrates the manner in which the dentifrice is applied to the brush for use. By means of slight pressure on the tube 23 its contents 23^a will be expelled onto the brush after a finger of the user has been inserted into the sheath 21. Thereafter, the brush is applied to the teeth and given a scrubbing motion by manipulation of the finger in the user's mouth.

Fig. 3 illustrates a second form of our invention in which a retracting type brush is utilized. The brush

carrying member shown comprises a body 30 which is shaped to the finger tip at one end and carries a brush 30a and gum massager 30b at the other end with the material and construction of the elements 30a and 30b being identical with the brush 21a and gum massager 21b of Fig. 1. The brush body 30 is attached within a finger cot 31 by means of a tension spring 36 of preferably corrosion-resistant material which, during manufacture, is introduced through a normally sealed slot 31a in the upper side of the finger cot 31. The brush is extended to its position of use when the user's finger is inserted into the cot, with spring 36 retracting the brush body 30 into the cot 31 when the user's finger is removed therefrom after use. A cap 37 closes off the rear end of finger cot 31 with a threaded or friction fit when the latter is not in use, an air vent 37a being provided in the cap for the removal of any excess moisture from the cot's interior. A barrel 32, vented at 32b and optionally provided with a pocket clip 32a, provides a sanitary enclosure for the forward end of the finger cot 31 and may be retained in the position shown in Fig. 3 by means of a friction or threaded fit. The cap 32 may be provided with a cavity for dentifrice 32c with the cavity being closed by a screw cap 34 which may be molded or machined from any suitable material and is preferably knurled to facilitate disassembly of barrel 32 from finger cot 31. A retaining swivel and chain attachment 35 may be provided to prevent loss of cap 34 while filling the dentifrice cavity or using the dentifrice.

Fig. 4 shows a disassembled view of Fig. 3 with the brush in its extended position of use.

Fig. 5 is substantially identical to Fig. 3 except that the finger cot 31 is shown curved rather than straight as in Fig. 3. This arrangement may be desirable for a more comfortable fit for the finger and for greater ease of manipulation of the brush in the mouth than might be afforded by the straight cot described above.

Fig. 6 is identical to Fig. 4 but illustrates the curved cot construction of Fig. 5 in a disassembled condition in readiness for use.

Fig. 7 illustrates a fourth form of our invention similar to Fig. 3. The former differs from the latter in that it uses a self-opening swivel type brush body instead of the direct acting spring loaded type indicated in Fig. 3. The brush body 40 includes brush 40a and gum massager 40b, and is pivotally assembled to finger cot 41 by means of brush body pin 48. The self-opening feature is accomplished by the use of volute spring 46 preferably corrosion-resistant with one end attached to brush body 40 and the other end to pin 48.

As in the previous embodiments of the invention, the rear end of the cot 41 is closed by a knurled cap 47 having a vent 47a, and the barrel cap 42 closing the forward end of cot 41 is provided with a cavity for dentifrice 42c and a threaded closure 44 which may be provided with a keeper chain 45. The cap 42 may be vented at 42b and if desirable, a pocket clip 42a may be attached to the exterior of cap 42 as shown.

It will be apparent from an inspection of Figs. 7 and 8, that when the cap 42 is removed the body 40 is swung forwardly through the slot 41a into its position of use by the spring 46. The back edge of the brush member 40 is curved so as to be complementary with the inner side of the cot so that this portion serves as an abutment for the extended brush body 30 as can be clearly seen in Fig. 8.

Fig. 9 is a very simple form of our invention embodying a finger cot 50 and integral brush 50a. The material and construction of element 50a may be identical with brush 21a of Fig. 1. Finger cot 50 may be formed from a mold in the shape of a hollow core or cavity preferably tapered. A carrying container for this unit may be a tube and cap assembly of clear or colored plastic or other suitable material. The construction of the device of Fig. 9 may be modified by substituting a suitably curved cot for the substantially straight cot illustrated.

Fig. 10 shows another form of our invention using a barrel 62 both as a sanitary enclosure and as a handle for the brush body 60 which includes brush 60a or gum massager 60b or both and a dentifrice cavity 60c. The material and construction of elements 60a and 60b may be identical with the brush 21a and gum massager 21b of Fig. 1. There may be a friction or threaded fit between the mating surfaces of barrel 62 and brush body 60 in both operating and carrying positions and a step in barrel 62 serves as a stop for the brush body in closed carrying position. Screw cap 64 closes off dentifrice cavity and serves as a knob for removing brush body 60 from barrel 62. An air vent 62b serves to remove any excess moisture from the interior.

Fig. 11 shows the operating position of the embodiment of Fig. 10 with brush body 60 inserted into barrel 62 with a friction or threaded fit. Insertion for operating position is directly opposite to that for the carrying position. A step in barrel 62 serves as a stop for the brush in both the operating and carrying positions.

While we have herein described the preferred embodiment of our invention, yet we desire to have it understood that we do not limit ourselves to the precise details of construction herein illustrated, since it is apparent that various modifications may be made, by those skilled in the art, without departing from the spirit of the invention or exceeding the scope of the appended claim.

What is claimed is:

A tooth brushing or gum massaging device comprising a finger cot adapted to be carried on a user's finger and whose interior tapers from an open rear end toward the forward end of said cot, said cot having an aperture at the forward end thereof, a tooth brush element normally occupying a retracted position of storage within said cot and extendable through said aperture to a position of use, a body member integrally connected to the rear of said brush member and slideably received in said cot, means on the rear of said body member adapted to be engaged by a finger end when a user's finger is inserted into the open rear end of said cot to slide said body member forwardly and extend said brush to a position of use, and spring means within said cot acting on said body member to urge it at all times towards a position wherein said brush element occupies its normal retracted position of storage within said cot.

References Cited in the file of this patent

UNITED STATES PATENTS

380,080	Bouton et al.	Mar. 27, 1888
711,075	Rench	Oct. 14, 1902
1,192,182	Gerstenzang	July 25, 1916
1,563,031	Jones	Nov. 24, 1925
1,645,965	Neumerkel	Oct. 18, 1927
2,168,689	Smith et al.	Aug. 8, 1939
2,240,876	Waterud	May 6, 1941
2,399,660	Boulicault	May 7, 1946
2,491,207	Preble et al.	Dec. 13, 1949
2,552,415	Weber	Sept. 12, 1950
2,552,714	Gardiner	May 15, 1951
2,596,217	Dendy	May 13, 1952
2,601,244	Boulicault	June 24, 1952
2,607,942	Gordon	Aug. 26, 1952
2,630,812	Dendy	Mar. 10, 1953
2,733,722	Rodd	Feb. 7, 1956