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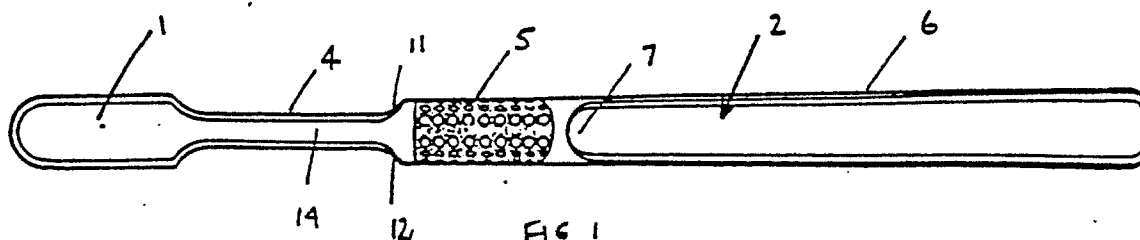
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54 **A toothbrush.**

57 A toothbrush for massaging gums as well as cleaning teeth wherein the handle (2) extending from the bristle head portion (1) includes a barrel-shaped grip portion (5) to facilitate rolling the toothbrush, and a spatula-shaped portion (6) extending from the barrel-shaped portion (5) to aid in controlling the rolling action.



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A TOOTHBRUSH

The present invention relates to toothbrushes for massaging gums as well as cleaning teeth.

Conventionally, toothbrushes comprise a handle portion and a head portion. The head portion generally contains a pattern of holes on one side into which are inserted bristles. Tufts of bristles are conventionally secured in the holes by means of short anchor wires. The handle portion is attached to the head portion of the toothbrush, a thinner neck portion sometimes being provided. The handle generally lies in the same general orientation as the head although it may be angled from the head as desired.

It would be desirable for a toothbrush to be of a design which can be effectively manipulated in use to achieve efficient and effective cleaning of the teeth and massaging of the gums. Toothbrushes have been designed with a great many varying grips in an effort to facilitate holding the toothbrush in a suitable manner for brushing the teeth. In general, however, such attempts to provide improved grip have resulted in toothbrushes which can be held firmly in one position but not manipulated easily into other positions. It is generally accepted that a desirable cleaning action is up and down rather than across the tooth surface.

According to the present invention there is provided a toothbrush for massaging gums as well as cleaning teeth, comprising a head portion having bristles for massaging gums and cleaning teeth, and an elongated handle extending from the head portion, the handle having a barrel-shaped grip portion shaped to facilitate rolling of the toothbrush between the thumb and forefinger during use of the toothbrush, and an extension portion extending from the grip portion adapted to fit across the palm of the hand in use and including a stabilizing portion for engaging the hand and assisting in the control of the rolling action during use of the toothbrush.

Embodiments of the invention can provide, with advantage, the facility of rolling the toothbrush to achieve the desired preferred action of up and down cleaning. In a preferred embodiment of the toothbrush, the bristles will extend substantially away from the head generally in a first direction and the handle will extend substantially at right angles to the first direction.

Furthermore, with advantage the extension portion extending from the grip portion may be generally spatula-shaped and in particular may increase in width towards the free end of the toothbrush.

A preferred feature of the toothbrush is the inclusion of a cut-away portion on the back of the handle (i.e. the side opposite that containing the bristles) at the junction of the barrel-shaped grip portion and the extension portion in order to provide a suitable position for the second finger, whilst the barrel is gripped between the thumb and forefinger.

Preferably the toothbrush will be provided with a second cut-away portion on the front of the handle (i.e. the side containing the bristles), adapted to allow in the alternative, a conventional grip to be exercised by placing the forefinger on the first cut-away portion and the thumb on the second cut-away portion. Additionally, there may be provided another pair of cut-away portions (third and fourth) formed in the sides of the handle at the junction of the barrel-shaped portion with a narrow neck portion. These cut-away portions provide an alternate gripping facility for fine control of the toothbrush, particularly suited for reaching the back teeth, with the advantage that the toothbrush is thereby held in a plane which is generally at right angles to the place in which the handle is conventionally gripped.

A fifth cut-away portion may also be provided on the front of the handle at the junction of the barrel-shaped portion with the narrow neck portion. An alternate gripping facility for fine control, where the toothbrush is held in the place in which it is conventionally gripped, is thereby provided when the thumb rests on this fifth cut-away portion and the forefinger rests on the back of the neck opposite the cut-away portion.

Preferably, the barrel-shaped portion will be tapered and may be provided with suitable texture to facilitate control whilst rolling the brush between the thumb and forefinger.

For illustrative purposes only, an embodiment of the invention will now be described with reference to the accompanying drawings of which:

Figure 1 is a plan view of a toothbrush embodying the invention;

Figure 2 is a side view of the toothbrush;

Figure 3 is a bottom view of the toothbrush;

Figure 4 is a perspective view of the toothbrush from above;

Figure 5 is a perspective view of the toothbrush from below; and

Figure 6 is an enlarged side view showing the grip portion of the toothbrush.

The toothbrush shown in the drawings comprises a set of bristles 3 attached to the head portion 1 of a moulded plastic handle 2. The handle 2 includes a narrow neck portion 4 attached to the head portion 1 and leading to a barrel-shaped

portion 5, from which a spatula-shaped portion 6 extends. The barrel-shaped portion 5 is oval in cross-section having its major axis substantially at right angles to the direction in which the bristles 3 extend from the head portion 1. The spatula-shaped portion 6 widens from its junction with the barrel-shaped portion 5 towards its free end.

Referring specifically to figure 6, there can be seen a first cut-away portion 7 on the back of the handle adapted to support the second or middle finger when the barrel-shaped portion 5 is gripped between the thumb and forefinger. A second cut-away portion 10 is also formed on the opposite side of the handle at the junction of the barrel-shaped portion 5 with the spatula-shaped portion 6. The toothbrush may be gripped conventionally by placing the forefinger on the first cut-away portion 7 and the thumb on the second cut-away portion 10.

In addition a texture is provided on the surface of the barrel-shaped grip portion 5 by means of raised dimples 8 and a suitably roughened surface portion 9.

Also shown in the figures generally is a further pair of cut-away portions 11 and 12 on either side of the handle at the junction of the narrow neck portion 4 and the barrel-shaped grip portion 5. These cut-away portions 11 and 12 co-operate to provide alternate gripping for fine control of the toothbrush in a plane substantially at right angles to the plane in which the handle is conventionally gripped.

A fifth cut-away portion 13 is provided on the front of the handle the junction of the narrow neck portion 4 and the barrel-shaped grip portion 5. This cut-away portion 13 and the back of the neck 14 co-operate to provide alternate gripping for fine control of the toothbrush in the same plane in which the handle is gripped conventionally.

Claims

1. A toothbrush for massaging gums as well as cleaning teeth, comprising a head portion having bristles for massaging gums and cleaning teeth, and an elongated handle extending from the head portion, the handle having a barrel-shaped grip portion shaped to facilitate rolling of the toothbrush between the thumb and forefinger during use of the toothbrush, and an extension portion extending from the grip portion adapted to fit across the palm of the hand in use and including a stabilising portion for engaging the hand and assisting in the control of the rolling action during use of the toothbrush.

2. A toothbrush according to Claim 1, in which the bristles extend away from the head generally in a first direction and the elongated handle extends substantially at right angles to said first direction.

3. A toothbrush according to Claim 1 or 2 in which the extension portion is generally spatula-shaped.

4. A toothbrush according to Claim 3 in which the width of the spatula-shaped portion increases along the length of the handle away from the grip portion.

5. A toothbrush according to any of the preceding Claims in which there is provided a first cut-away portion on the back of the handle for engagement of the second finger when the barrel is gripped between the thumb and forefinger.

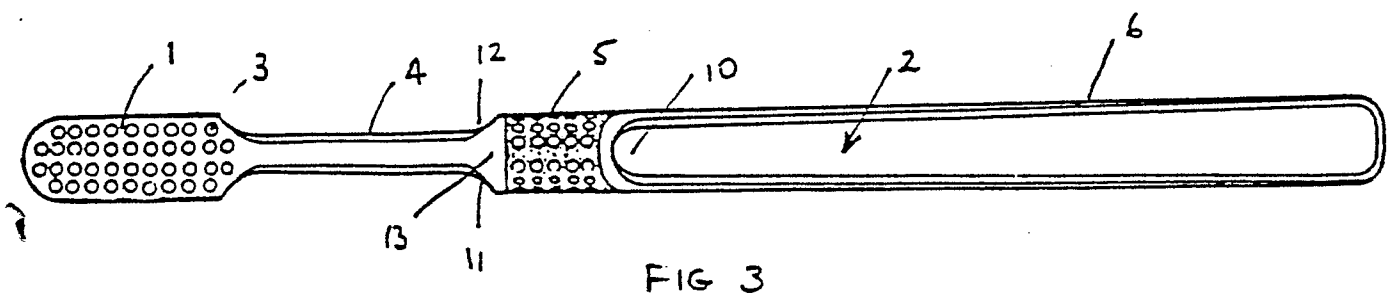
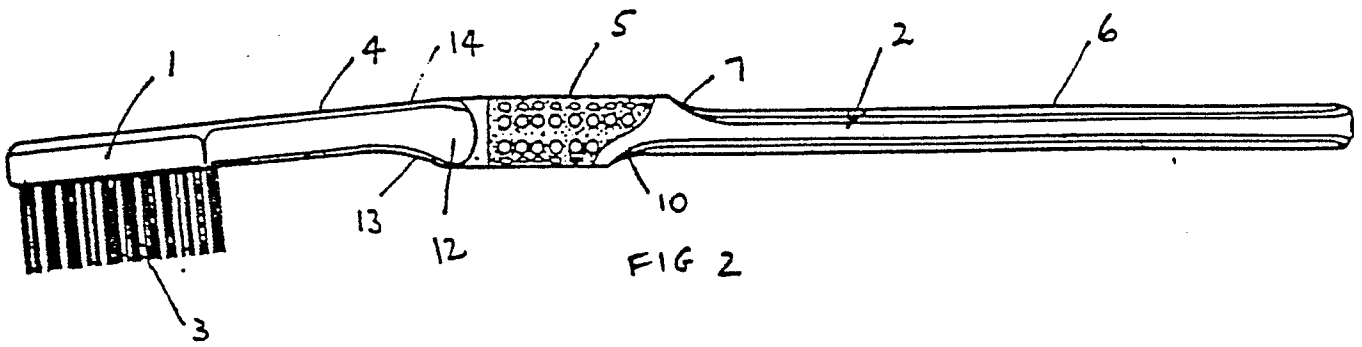
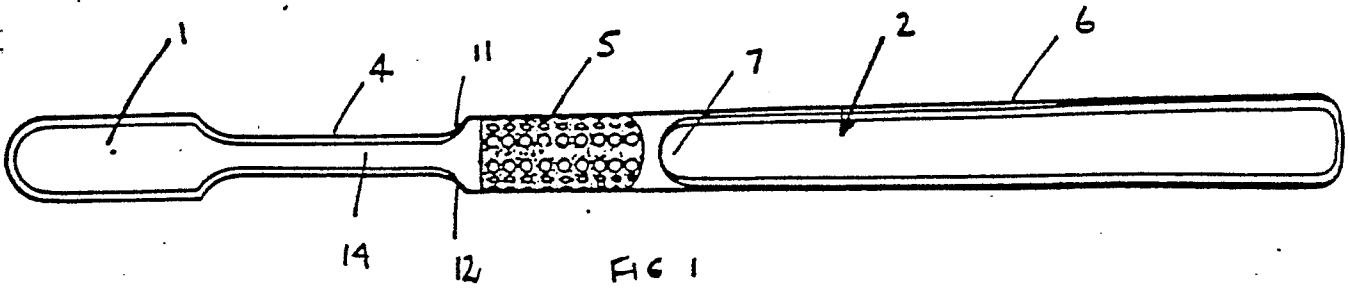
6. A toothbrush according to Claim 5 in which there is provided a second cut-away portion on the front of the handle whereby the cut-away portions co-operate to provide in the alternative, a conventional gripping capability.

7. A toothbrush according to Claim 6 in which there is provided a further pair of cut-away portions on each side of the handle at the junction of the barrel-shaped grip portion with a narrow neck portion, each of the further cut-away portions providing alternate gripping capability for fine control, whereby the brush is held in a plane substantially at right angles to the plane in which the handle is conventionally gripped; the further pair of cut-away portions co-operating with the first and second cut-away portions and the barrel-shaped grip portion to provide a combination of alternate gripping capabilities.

8. A toothbrush according to Claim 7 in which there is provided a further cut-away portion formed in the front of the handle at the junction of the barrel-shaped grip portion with the narrow neck portion, cooperating with the back of the neck portion to provide alternate gripping capability for fine control, whereby the brush is held in substantially the same plane in which the handle is conventionally gripped.

9. A toothbrush according to any of the preceding Claims in which the barrel-shaped grip portion is tapered.

10. A toothbrush according to any of the preceding Claims, in which the barrel-shaped grip portion is provided with a texture to facilitate gripping thereof.



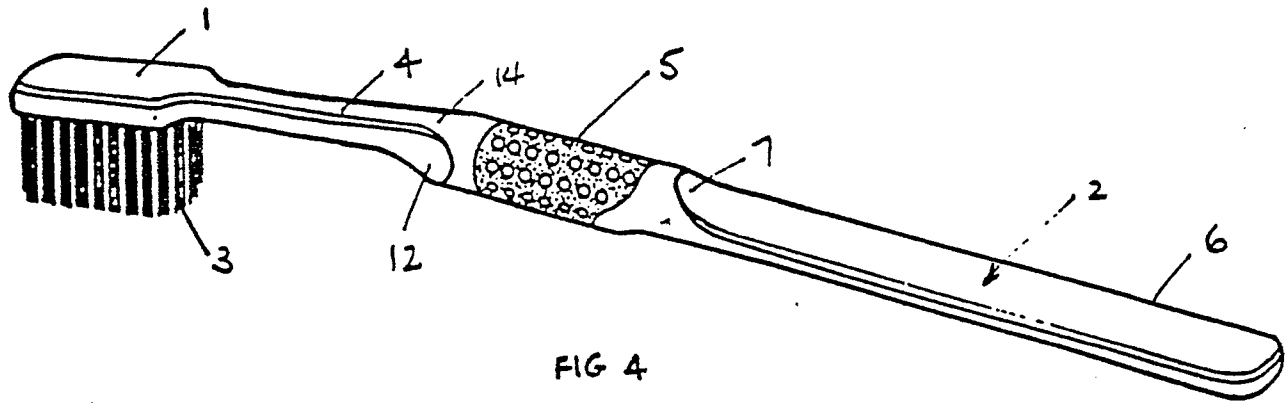


FIG 4

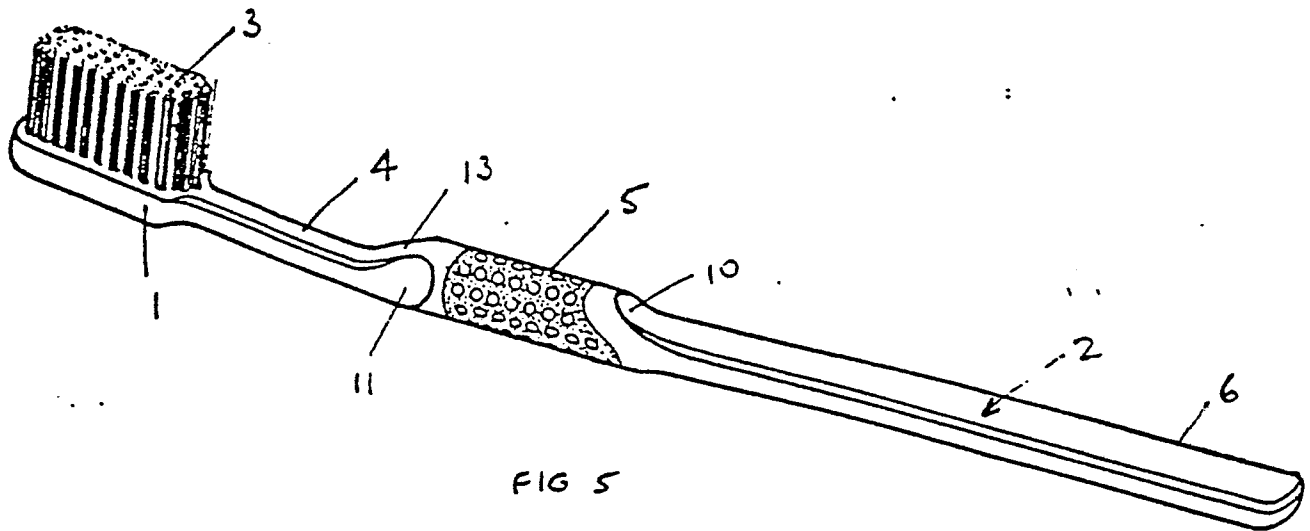


FIG 5

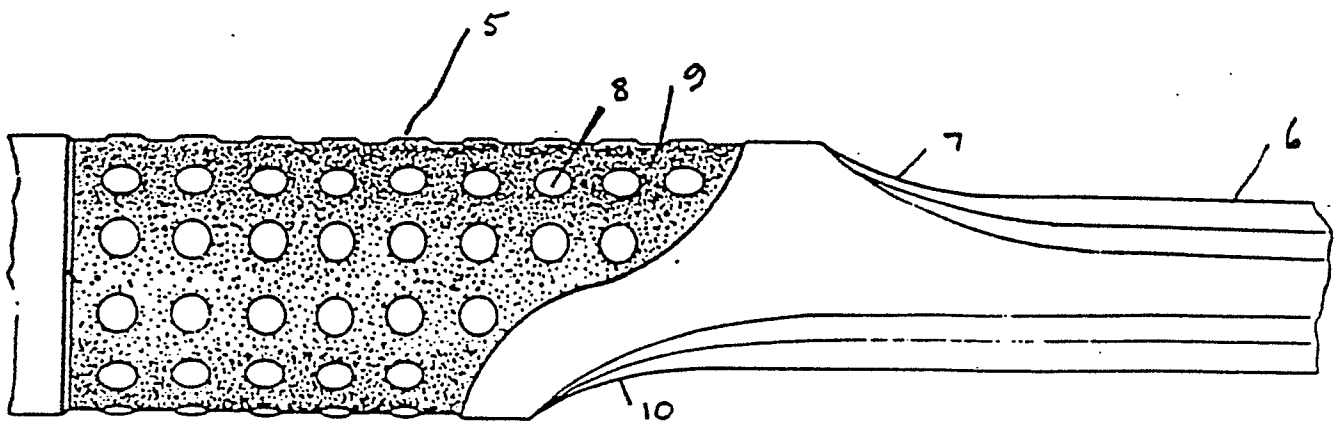


FIG 6



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
X	US-A-2 414 775 (STAVELY) * Columns 1,2; figures 1-5 *	1,2,7, 9,10	A 46 B 5/02 A 46 B 9/04
Y	---	3-6,8	
Y	US-A-2 267 670 (ROSENWASSER) * Pages 1,2; figures 1-5 *	3-6,8	
X	US-A-1 369 966 (COSENS) * Page 1; figures 1-4 *	1,2,9, 10	
X	US-A-4 274 174 (ERTEL) * Column 3, line 24 - column 4, line 10; figures 1,2 *	1,6,9	
A	FR-A-1 005 685 (LECLERC) * Page 1; figures 1-3 *	1-4,7, 9,10	A 46 B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 30-09-1987	Examiner WOHLRAPP R.G.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	