

Description

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.

US-A 1 369 966 describes a toothbrush to facilitate cleaning of the teeth with up and down rotary motion of the brush. Adjacent the brush head, the handle is enlarged to form an elongate ball-shaped portion adapted to be gripped by the fingers. The remainder of the handle may be of any desired shape but a round section is illustrated and preferred. In use, the ball-shaped portion is rolled between the fingers to achieve the desired rotary motion.

A further toothbrush whose handle is circular in section and includes a convex gripping portion is disclosed in US-A 2 414 775. The handle is relatively short such that it can be pivotally supported against the little finger of the user while the gripping portion is held between the thumb and forefinger. This construction enables the brush handle to be conveniently rotated.

A third toothbrush designed to permit easy cleaning of the teeth is described in US-A 4 274 174. The toothbrush has a round handle which tapers conically away from the bristle carrier. The handle extends from the bristle carrier at an angle of 30°. In the bend region the handle tapers also in the direction of the bristle carrier, so that a depression is formed on the back of the toothbrush in the transition region to the bristle carrier. On the front of the bend region a depression extends from the handle over the entire bend region into the bristle carrier. The carrier itself is flat and the bristles cover only the front portion of the carrier. In use, the opposed depressions on either side of the bend region are held between thumb and forefinger.

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 elongate 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, characterised in that there are 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;

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;

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 alternative 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 alternative gripping capabilities; and

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, co-operating with the back of the neck portion to provide alternative gripping capability for fine control, whereby the brush is held in substantially the same plane as that in which the handle is conventionally gripped.

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 (1) having bristles (3) for massaging gums and cleaning teeth, and an elongate handle (2) extending from the head portion (1), the handle (2) having a barrel-shaped grip portion (5) shaped to facilitate rolling of the toothbrush between the thumb and forefinger during use of the toothbrush, and an extension portion (6) extending from the grip portion (5) 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, characterised in that there are provided

a first cut-away portion (7) on the back of the handle (2) for engagement of the second finger when the barrel (5) is gripped between the thumb and forefinger;

a second cut-away portion (10) on the front of the handle (2) whereby the cut-away portions (7, 10) co-operate to provide, in the alternative, a conventional gripping capability;

a further pair (11, 12) of cut-away portions on each side of the handle (2) at the junction of the barrel-shaped grip portion (5) with a narrow neck portion (4), each of the further cut-away portions (11, 12) providing alternative gripping capability for fine control, whereby the brush is held in a plane substantially at right angles to the plane in which the handle (2) is conventionally gripped, the further pair of cut-away portions (11, 12) co-operating with

the first (7) and second (10) cut-away portions and the barrel-shaped grip portion (5) to provide a combination of alternative gripping capabilities; and a further cut-away portion (13) formed in the front of the handle (2) at the junction of the barrel-shaped grip portion (5) with the narrow neck portion (4), co-operating with the back of the neck portion (4) to provide alternative gripping capability for fine control, whereby the brush is held in substantially the same plane as that in which the handle (2) is conventionally gripped.

2. A toothbrush according to claim 1, in which the bristles extend away from the head generally in a first direction and the elongate 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 the barrel-shaped grip portion (5) is tapered.

6. A toothbrush according to any of the preceding claims, in which the barrel-shaped grip portion (5) is provided with a texture to facilitate gripping thereof.

Revendications

1. Brosse à dents destinée à masser les gencives aussi bien qu'à nettoyer les dents, comprenant une partie de tête (1) munie de soies (3) destinées à masser les gencives et à nettoyer les dents, et un manche (2) de grande longueur qui s'étend à partir de la partie de tête (1), le manche (2) comprenant une partie de prise (5) en forme de barillet conformée pour faciliter le roulement de la brosse à dents entre le pouce et l'index pendant l'utilisation de la brosse à dents, et une partie prolongatrice (6) qui s'étend à partir de la partie de prise (5) et est adaptée pour se placer en travers de la paume de la main en utilisation, cette partie prolongatrice comprenant une partie stabilisatrice destinée à prendre appui dans la main et à aider à maîtriser l'action de roulement pendant l'utilisation de la brosse à dents, caractérisée en ce qu'elle comprend:

un premier évidement (7) prévu sur le dos du manche (2) pour donner appui au majeur lorsqu'on serre le barillet entre le pouce et l'index;

une deuxième évidement (10) prévu sur l'avant du manche (2), de sorte que les évidements (7, 10) coopèrent pour offrir, en variante, une possibilité de préhension normale;

une paire additionnelle (11, 12) d'évidements prévus des deux côtés du manche (2) à la jonction entre la partie de prise (5) en forme de barillet et une partie col étroite (4), chacun des évidements additionnels (11, 12) offrant une autre possibilité de préhension pour la maîtrise précise, dans laquelle la brosse est tenue dans un plan sensiblement perpendiculaire au plan dans lequel le manche (2) est saisi dans le mode classique, la paire additionnelle d'évidements (11, 12) coopérant avec le premier (7) et le deuxième (10) évi-

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 (1) having bristles (3) for massaging gums and cleaning teeth, and an elongate handle (2) extending from the head portion (1), the handle (2) having a barrel-shaped grip portion (5) shaped to facilitate rolling of the toothbrush between the thumb and forefinger during use of the toothbrush, and an extension portion (6) extending from the grip portion (5) 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, characterised in that there are provided

a first cut-away portion (7) on the back of the handle (2) for engagement of the second finger when the barrel (5) is gripped between the thumb and forefinger;

a second cut-away portion (10) on the front of the handle (2) whereby the cut-away portions (7, 10) co-operate to provide, in the alternative, a conventional gripping capability;

a further pair (11, 12) of cut-away portions on each side of the handle (2) at the junction of the barrel-shaped grip portion (5) with a narrow neck portion (4), each of the further cut-away portions (11, 12) providing alternative gripping capability for fine control, whereby the brush is held in a plane substantially at right angles to the plane in which the handle (2) is conventionally gripped, the further pair of cut-away portions (11, 12) co-operating with

the first (7) and second (10) cut-away portions and the barrel-shaped grip portion (5) to provide a combination of alternative gripping capabilities; and a further cut-away portion (13) formed in the front of the handle (2) at the junction of the barrel-shaped grip portion (5) with the narrow neck portion (4), co-operating with the back of the neck portion (4) to provide alternative gripping capability for fine control, whereby the brush is held in substantially the same plane as that in which the handle (2) is conventionally gripped.

2. A toothbrush according to claim 1, in which the bristles extend away from the head generally in a first direction and the elongate 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 the barrel-shaped grip portion (5) is tapered.

6. A toothbrush according to any of the preceding claims, in which the barrel-shaped grip portion (5) is provided with a texture to facilitate gripping thereof.

Revendications

1. Brosse à dents destinée à masser les gencives aussi bien qu'à nettoyer les dents, comprenant une partie de tête (1) munie de soies (3) destinées à masser les gencives et à nettoyer les dents, et un manche (2) de grande longueur qui s'étend à partir de la partie de tête (1), le manche (2) comprenant une partie de prise (5) en forme de barillet conformée pour faciliter le roulement de la brosse à dents entre le pouce et l'index pendant l'utilisation de la brosse à dents, et une partie prolongatrice (6) qui s'étend à partir de la partie de prise (5) et est adaptée pour se placer en travers de la paume de la main en utilisation, cette partie prolongatrice comprenant une partie stabilisatrice destinée à prendre appui dans la main et à aider à maîtriser l'action de roulement pendant l'utilisation de la brosse à dents, caractérisée en ce qu'elle comprend:

un premier évidement (7) prévu sur le dos du manche (2) pour donner appui au majeur lorsqu'on serre le barillet entre le pouce et l'index;

une deuxième évidement (10) prévu sur l'avant du manche (2), de sorte que les évidements (7, 10) coopèrent pour offrir, en variante, une possibilité de préhension normale;

une paire additionnelle (11, 12) d'évidements prévus des deux côtés du manche (2) à la jonction entre la partie de prise (5) en forme de barillet et une partie col étroite (4), chacun des évidements additionnels (11, 12) offrant une autre possibilité de préhension pour la maîtrise précise, dans laquelle la brosse est tenue dans un plan sensiblement perpendiculaire au plan dans lequel le manche (2) est saisi dans le mode classique, la paire additionnelle d'évidements (11, 12) coopérant avec le premier (7) et le deuxième (10) évi-



dements et avec la partie de prise (5) en forme de barillet pour offrir une combinaison de possibilités de préhension; et

un évidement additionnel (13) formé dans l'avant du manche (2) à la jonction entre la partie de prise (5) en forme de barillet et la partie col étroite (4), et qui coopère avec le dos de la partie col (4) pour offrir une autre possibilité de préhension pour la maîtrise précise, dans laquelle la brosse est tenue sensiblement dans le même plan que celui dans lequel le manche (2) est saisi dans le mode classique.

2. Brosse à dents selon la revendication 1, dans laquelle les soies font saillie sur la tête sensiblement dans une première direction et le manche de grande longueur s'étend sensiblement perpendiculairement à ladite première direction.

3. Brosse à dents selon la revendication 1 ou 2, dans laquelle la partie prolongatrice est sensiblement en forme de spatule.

4. Brosse à dents selon la revendication 3, dans laquelle la largeur de la partie en forme de spatule croît sur la longueur du manche dans le sens qui s'éloigne de la partie de prise.

5. Brosse à dents selon une quelconque des revendications précédentes, dans laquelle la partie de prise (5) en forme de barillet est effilée.

6. Brosse à dents selon une quelconque des revendications précédentes, dans laquelle la partie de prise (5) en forme de barillet est munie d'une texture destinée à faciliter la préhension.

Patentansprüche

1. Zahnbürste zum Massieren des Zahnfleisches und zum Reinigen der Zähne, bestehend aus einem Kopfteil (1) mit Borsten (3) zum Massieren des Zahnfleisches und zum Reinigen der Zähne, sowie einem langen, sich von dem Kopfteil (1) erstreckenden Griff, der einen zylindrischen Griffteil (5) zum erleichterten Rollen der Zahnbürste zwischen Daumen und Zeigefinger während des Gebrauchs der Zahnbürste sowie einen Verlängerungsteil (6) aufweist, der sich von dem Griffteil (5) erstreckt und beim Gebrauch am Handballen anliegt, und einem Stabilisierungsteil zur Anlage an der Hand und zur Unterstützung der Steuerung der Rollwirkung während des Gebrauchs der Zahnbürste, dadurch gekennzeichnet, daß an der Rückseite des Griffs (2) ein erster Ausschnitt (7) zur Anlage des zweiten Fingers vorgesehen ist, wenn der zylindrische Griffteil (5) zwischen Daumen und Zeigefinger erfaßt wird; ein zweiter Ausschnitt (10) an der Vorderseite des Griffs (2) vorgesehen ist, wodurch die Ausschnitte (7, 10) zusammenwirken, um als Alternative eine übliche Greifbarkeit zu ermöglichen; ein weiteres Paar Ausschnitte (11, 12) an jeder Seite des Griffs (2) an der Verbindungsstelle des zylindrischen Griffteils (5) mit einem schmalen Halsteil (4) vorgesehen ist, wobei jeder der weiteren Ausschnitte (11, 12) für eine alternative Greifbarkeit im Sinne einer Feinsteuerung vorgesehen ist, wodurch die Bürste in einer Ebene gehalten wird, die im wesentlichen in rechten Winkeln zu der Ebene ver-

läuft, in der der Griff (2) üblicherweise erfaßt wird, und wobei das weitere Paar Ausschnitte (11, 12) mit dem ersten (7) und dem zweiten (10) Ausschnitt sowie dem zylindrischen Griffteil (5) zusammenwirkt, um eine Kombination von alternativen Greifmöglichkeiten vorzusehen; und ein weiterer Ausschnitt (13), der an der Vorderseite des Griffs (2) an der Verbindungsstelle des zylindrischen Griffteils (5) mit dem schmalen Halsteil (4) gebildet ist, mit der Rückseite des Halsteils (4) zusammenwirkt, um eine alternative Greifmöglichkeit für die Feinsteuerung zu bieten, wodurch die Bürste im wesentlichen in derselben Ebene wie diejenige gehalten wird, in der der Griff (2) üblicherweise erfaßt wird.

2. Zahnbürste nach Anspruch 1, bei der die Borsten sich von dem Kopf im allgemeinen in einer ersten Richtung erstrecken und der lange Griff sich im wesentlichen im rechten Winkel zu der ersten Richtung erstreckt.

3. Zahnbürste nach Anspruch 1 oder 2, bei der der Verlängerungsteil im allgemeinen spatelförmig ist.

4. Zahnbürste nach Anspruch 3, bei der die Breite des spatulaförmigen Teils in Längsrichtung des Griffs nach der dem Griffteil abgekehrten Seite zunimmt.

5. Zahnbürste nach einem der vorhergehenden Ansprüche, bei der der zylindrische Griffteil (5) verjüngt ist.

6. Zahnbürste nach einem der vorhergehenden Ansprüche, bei der der zylindrische Griffteil (5) mit einer Textur zum leichteren Erfassen versehen ist.

