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(71) Applicant: **COLGATE-PALMOLIVE COMPANY** [US/US]; 300 Park Avenue, New York, New York 10022 (US).

(72) Inventor: **BECKERMAN, Scott**; 30 Regent Street, #404, Jersey City, New Jersey 07302 (US).

(74) Agents: **CHUNG, Judy W.** et al.; Colgate-Palmolive Company, 909 River Road, Piscataway, New Jersey 08855 (US).

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(54) Title: ORAL CARE IMPLEMENT SUPPORT AND ORAL CARE SYSTEM COMPRISING THE SAME

(57) Abstract: Disclosed is an oral care implement support, comprising: a body having formed therein an opening for receiving a portion of an oral care implement; an affixion device connected to the body for affixing the oral care implement support to a surface; and a restrictor for restricting movement of the portion of the oral care implement in the opening, wherein the restrictor is fastened to, or is located within, the body. Also disclosed is an oral care system, comprising: the oral care implement support; and an oral care implement, a portion of which oral care implement is receivable in the opening.

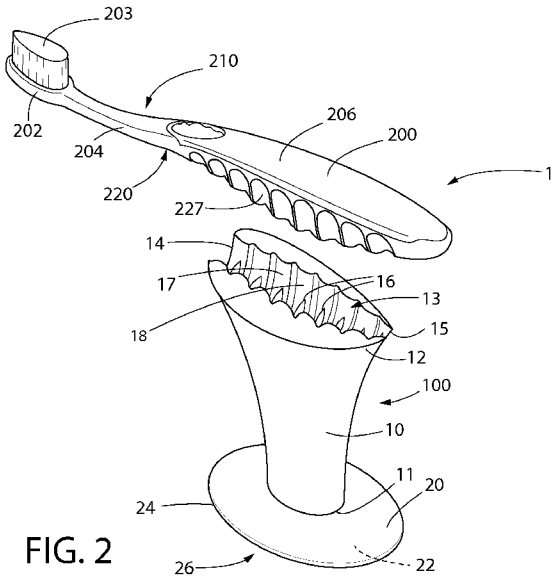


FIG. 2

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ORAL CARE IMPLEMENT SUPPORT AND ORAL CARE SYSTEM COMPRISING THE SAME

BACKGROUND

[0001] The present invention relates to an oral care implement support and to an oral care system comprising the oral care implement support and an oral care implement.

[0002] It is known to provide dentifrice, such as toothpaste, in a tube having an opening through which the dentifrice is dispensable. In order to dispense the dentifrice from the tube onto the head of an oral care implement, such as a toothbrush, a user has to align the head of the oral care implement with the opening of the tube and squeeze the tube while at the same time holding the oral care implement steady. Carrying out these processes simultaneously can be difficult or impossible for some users, such as children, individuals with disabilities, and others who are challenged by low strength, coordination or motor control in the fingers, hands or arms.

[0003] There is a need for a device for helping a user dispense dentifrice onto a head of an oral care implement. There also is a need for an oral care system that helps a user dispense dentifrice onto the head of an oral care implement of the oral care system.

BRIEF SUMMARY

[0004] An embodiment of the present invention provides an oral care implement support, comprising: a body having formed therein an opening for receiving a portion of an oral care implement; an affixion device connected to the body for affixing the oral care implement support to a surface; and a restrictor for restricting movement of the portion of the oral care implement in the opening, wherein the restrictor is fastened to, or is located within, the body.

[0005] Preferably, the affixion device comprises a suction cup. Alternatively or additionally, the affixion device comprises an adhesive pad.

[0006] Optionally, the restrictor is located within the body. For example, the restrictor may be partially or fully embedded in the body. Alternatively, the restrictor is fastened to the body. For example, the restrictor may be fastened to the body by a fastener, such as an adhesive, a screw or a bolt, or may be fastened to the body by being partially embedded in the body.

[0007] Preferably, the restrictor comprises a magnet generating a magnetic field that extends into the opening. Alternatively or additionally, the restrictor comprises a component of a hook-and-loop fastener fastened to the body, or an adhesive fastened to the body.

[0008] Optionally, the affixion device is at a first end of the body and the opening is at a second end of the body. Further optionally, the second end is opposite from the first end.

[0009] Optionally, the affixion device is for affixing the oral care implement support to a planar surface with the opening being elongate in a direction that is at an angle of less than 30 degrees to the surface, such as 0 to 15 degrees to the surface.

[0010] Optionally, the opening is a channel. Further optionally, the channel has two open axial ends. The channel may be substantially concave. Optionally, the body comprises one or more projections extending into the channel.

[0011] Optionally, the magnet is a permanent magnet. Optionally, the permanent magnet comprises ferromagnetic material. Further optionally, the ferromagnetic material comprises one or more of iron, nickel, cobalt, lodestone, a compound of rare earth elements, an alloy of rare earth elements, an alloy of iron, an alloy of nickel, and an alloy of cobalt.

[0012] Optionally, the body is rigid, or substantially rigid. Optionally, the body is formed from a plastic. The plastic may be a thermoplastic polymer, such as polypropylene or polyethylene terephthalate. Optionally, the support is free of resilient arms.

[0013] Another embodiment of the present invention provides an oral care system, comprising: any one of the oral care implement supports described above; and an oral care implement, a portion of which oral care implement is receivable in the opening.

[0014] Optionally, the restrictor comprises a magnet generating a magnetic field that extends into the opening, and the oral care implement comprises a second magnet or a metal portion that is magnetically attracted to the magnet of the oral care implement support when the portion of the oral care implement is received in the opening.

[0015] Optionally, the oral care implement comprises a handle and a head, and the portion of the oral care implement comprises, or is comprised in, one of the handle and the head. Further optionally, the second magnet or the metal portion is comprised in one of the handle and the head.

[0016] Optionally, the affixion device is oriented relative to the opening, and the oral care implement is configured, so that a centre of mass of the oral care implement is within or above the opening, when the oral care implement support is affixed to an upwardly-facing horizontal surface by the affixion device and the portion of the oral care implement is received in the opening.

[0017] Optionally, the oral care implement has cleaning elements extending therefrom. Optionally, the portion of the oral care implement is receivable in the opening with the cleaning elements extending from the oral care implement in a direction extending away from the surface.

[0018] Optionally, a surface profile of a portion of the body that defines the opening is a negative of a surface profile of the portion of the oral care implement.

[0019] Optionally, the oral care implement has a first side and a second side opposite from the first side; wherein cleaning elements are located on the first side of the oral care implement; and wherein the surface profile of the portion of the oral care implement is on the second side of the oral care implement.

[0020] Optionally, the oral care implement comprises a handle and a head, the head having cleaning elements extending therefrom. Optionally, the cleaning elements extend from the head in a direction extending away from the surface, when the portion of the oral care implement is received in the opening with the surface profile of the portion of the oral care implement in contact with the surface profile of the portion of the body that defines the opening.

[0021] Optionally, the oral care implement is a toothbrush.

[0022] Further areas of applicability of the present invention will become apparent from the detailed description provided hereinafter. It should be understood that the detailed description and specific examples, while indicating the preferred embodiment of the invention, are intended for purposes of illustration only and are not intended to limit the scope of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0023] The present invention will become more fully understood from the detailed description and the accompanying drawings, wherein:

[0024] Figure 1 shows a perspective view of an oral care implement support according to an exemplary embodiment of the present invention;

[0025] Figure 2 shows a perspective view of an oral care system according to an exemplary embodiment of the present invention, the oral care system comprising the oral care implement support of Figure 1 and an oral care implement, wherein the oral care system is in a first state with the oral care implement separate from the oral care implement support;

[0026] Figure 3 shows a perspective view of the oral care system of Figure 2 in a second state with a portion of the oral care implement received in an opening of the oral care implement support; and

[0027] Figure 4 shows a cross sectional view through the oral care system of Figure 3.

DETAILED DESCRIPTION

[0028] The following description of the preferred embodiment(s) is merely exemplary in nature and is in no way intended to limit the invention, its application, or uses.

[0029] As used throughout, ranges are used as shorthand for describing each and every value that is within the range. Any value within the range can be selected as the terminus of the range. In addition, all references cited herein are hereby incorporated by referenced in their entireties. In the event of a conflict in a definition in the present disclosure and that of a cited reference, the present disclosure controls.

[0030] Figure 1 shows an oral care implement support 100, hereinafter referred to as the support 100, according to an exemplary embodiment of the present invention. The support 100 comprises a body 10 having formed therein an opening 13 for receiving a portion of an oral care implement, an affixion device 20, comprising a suction cup, connected to the body 10 for affixing the support 100 to a surface, and a restrictor, comprising a magnet 30 (not visible) generating a magnetic field that extends into the opening 13 of the body 10, for restricting movement of the portion of the oral care implement in the opening 13.

[0031] The body 10 of the illustrated embodiment is formed from a plastic, more specifically a thermoplastic polymer, such as polypropylene (PP) or polyethylene terephthalate (PET). The body 10 has a first end 11, which is a lower end when the support 100 is oriented in use as shown in the Figures, and a second end 12, which is an upper end when the support 100 is oriented in use as shown in the Figures, the second end 12 being an opposite end of the body 10 from the first end 11. The suction cup 20 is at the first end 11 of the body 10 and the opening 13 is at the second end 12 of the body 10. In the illustrated embodiment, the first end 11 is of a smaller cross-sectional area than the second end 12, and the body 10 smoothly tapers down in cross-sectional area from the second end 12 to the first end 11. In variations to this embodiment, the first end 11 may be of the same or a larger cross-sectional area than the second end 12. Moreover, in the illustrated embodiment, the first end 11 has a circular cross-sectional shape. In variations to this embodiment, the first end 11 may have a different cross-sectional shape, such as elliptical, polygonal, triangular, rectangular, or square.

[0032] The opening 13 in the body 10 is in the form of an elongate channel, i.e. a depression or a groove. With the elongate direction of the channel 13 considered an axial direction of the

channel 13, even though the channel 13 is not strictly linear, the channel 13 has two axial open ends 14, 15. The channel 13 is substantially concave. That is, when looking from one axial end 14 to the opposite axial end 15, the channel 13 has a substantially concave cross-sectional shape. The body 10 may be considered to comprise a wall 18 that defines the channel 13, and a plurality of projections 16 that extend from the wall 18 into the channel 13. Together, the wall 18 and the projections 16 define a surface profile 17 of a portion of the body 10 that defines the channel 13. As will be described in more detail below, the surface profile 17 of the portion of the body 10 that defines the channel 13 preferably is a negative of a surface profile 227 of a portion of an oral care implement 200 to be used with the support 100 in an oral care system 1.

[0033] In variations to the illustrated embodiment, the opening 13 may be a hole extending fully or partially through the body 10 with material of the body 10 circumferentially surrounding the hole.

[0034] The suction cup 20 is oriented relative to the channel 13 and the body 10 for affixing the support 100 to an upwardly-facing horizontal surface 5 with the channel 13 above the suction cup 20 and above the surface 5. More specifically, in the illustrated embodiment, the suction cup 20 is for affixing the support 100 to a planar surface 5 with the channel 13 being elongate in a direction that is at an angle of approximately 10 degrees to the planar surface 5. In variations to the illustrated embodiment, this angle may be a different angle, such as any angle in the range of 0 to 30 degrees. That is, in some embodiments, the suction cup 20 is for affixing the support 100 to a planar surface 5 with the channel 13 being elongate in a direction that is parallel to the planar surface 5. Preferably, the angle is less than 30 degrees, so as to more stably retain an oral care implement in the channel 13 against the effects of gravity.

[0035] The suction cup 20 defines a chamber 22 and comprises a rim 24 defining an opening 26 of the chamber 22. When the rim 24 of the suction cup 20 lies fully on a horizontal surface 5, as shown in Figure 4, the rim 24 is horizontal and lies in a horizontal plane. This is the case, for example, when the rim 24 is affixed to the horizontal surface 5 through the provision of a lower pressure inside the chamber 22 than outside the chamber 22. The suction cup 20 preferably is made of a flexible material, and more preferably is made of a resilient material, such as an elastomeric material, an elastomer, a thermoplastic elastomer (TPE), or styrene-ethylene/butylene-styrene (SEBS). As will be understood by the person skilled in the art, the suction cup 20 allows the support 100 to be affixed to the horizontal surface 5, at least

temporarily. The support 100 is affixed to the horizontal surface 5 by applying a force to the support 100 in a direction toward the horizontal surface 5 sufficient to deform the suction cup 20. The deformation forces air out from the chamber 22 through a gap between the suction cup 20 and the surface 5. When the force is removed, there will be a natural tendency for the suction cup 20 to return to its non-deformed state, which results in slight movement of the suction cup 20 relative to the horizontal surface 5, which in turn seals the gap and slightly increases the volume of the chamber 22 to create a partial vacuum therein. This partial vacuum creates a holding force that affixes the suction cup 20, and the rest of the support 100, to the horizontal surface 5. When a user wishes to detach the support 100 from the horizontal surface 5, they need only apply a force to the support 100 in a direction away from the horizontal surface 5 sufficient to overcome the holding force. This would result in at least a portion of the rim 24 being lifted from the horizontal surface 5, which removes the partial vacuum in the chamber 22 and thus removes the holding force, so that the support 100 can be moved away from the horizontal surface 5 without further hindrance.

[0036] As shown in Figure 4, fully embedded within the body 10 is a permanent magnet 30 comprising ferromagnetic material. In the illustrated embodiment, the ferromagnetic material comprises iron. In variations to the illustrated embodiment, the ferromagnetic material comprises one or more of iron, nickel, cobalt, lodestone, a compound of rare earth elements, an alloy of rare earth elements, an alloy of iron, an alloy of nickel, and an alloy of cobalt. In respective variations to each of the embodiments described herein, the magnet 30 may be a different type of magnet, such as an electromagnet. In the latter case, the support 100 may comprise an electrical power supply for powering the electromagnet, such as a battery or one or more cells, or an electrical connector suitable for electrically connecting the electromagnet to an electrical power supply external to the support 100, such as the mains electrical power supply.

[0037] As mentioned above, in the illustrated embodiment, the magnet 30 is fully embedded within the body 10. Accordingly, the magnet 30 is located within the body 10, is protected from damage, and is prevented from being dislodged relative to the channel 13. However, in variations to the illustrated embodiment, the magnet 30 instead may be only partially embedded in the body. In embodiments in which the magnet is partially embedded in the body 10, the magnet 30 may be considered located within the body 10 or fastened to the body 10, depending on the degree to which the magnet 30 is embedded in the body 10. In some embodiments, the

magnet 30 may be fastened to the body 10, e.g. to the wall 18, by a fastener, such as an adhesive, a screw or a bolt.

[0038] The permanent magnet 30 is located relative to the channel 13, and has a magnetic field strength selected, so that the magnetic field generated by the magnet 30 extends into the channel 13. The significance of this feature will be understood from the following explanation.

[0039] The support 100 of Figure 1 is usable with an oral care implement, such as a toothbrush, comprising a second magnet or a metal portion that is magnetically attracted to the magnet 30 when a portion of the oral care implement is received in the opening 13. An oral care system 1 according to an exemplary embodiment of the present invention comprises the support 100 of Figure 1 and such an oral care implement, in the form of a toothbrush 200, as shown in Figures 2 to 4.

[0040] The toothbrush 200 comprises a head 202, a handle 206, and a neck 204 connecting the head 202 to the handle 206. The toothbrush 200 has a first, front side 210 and a second, rear side 220 opposite from the first side 210. The head 202 has tooth cleaning elements 203, in the form of bristles, extending therefrom on the first side 210 of the toothbrush 200. In variations to this embodiment, the cleaning elements 203 may take different forms. The neck 204 is of smaller cross sectional area than the head 202 and the handle 206. In variations to the illustrated embodiment, the head 202 may be connected directly to the handle 206 without a narrowed neck therebetween. A magnet 230 is comprised in the handle 206 of the toothbrush 200. In the illustrated embodiment, the magnet 230 is fully embedded in the handle 206 but, in variations to the illustrated embodiment, the magnet 230 may be only partially embedded in the handle 206 so that a portion of the magnet 230 is exposed, or may be fastened to the handle 206. In this embodiment, the magnet 230 is a permanent magnet.

[0041] The handle 206 of the toothbrush 200 comprises a portion of the toothbrush 200 that is receivable in the channel 13 of the support 100. Moreover, the magnet 230 is comprised in the portion of the toothbrush 200 that is receivable in the channel 13. Specifically, the magnet 230 is suitably positioned in the toothbrush 200 so that the magnet 230 is magnetically attracted to the magnet 30 of the support 100 when the portion of the toothbrush 200 is received in the channel 13. The magnetic field strength of the magnet 30 of the support 100, and preferably also the magnetic field strength of the magnet 230 of the toothbrush 200, are selected so that, when the portion of the toothbrush 200 is received in the channel 13, magnetic attraction of the magnet

230 of the toothbrush 200 by the magnet 30 of the support 100 stably supports the toothbrush 200 in the channel 13. The magnet 30 has sufficient magnetic field strength to attract the magnet 230 of the toothbrush 200, even though the magnets 30, 230 are spaced apart and material of the body 10 and the handle 206 is between the magnets 30, 230.

[0042] To more stably support the toothbrush 200 in the channel 13, the suction cup 20 is oriented relative to the channel 13, and the toothbrush 200 is configured, so that a centre of mass 250 of the toothbrush 200 is within or above the channel 13, when the support 100 is affixed to an upwardly-facing horizontal surface 5 by the suction cup 20 and the portion of the toothbrush 200 is received in the channel 13, as best shown in Figure 4. When the system 1 is configured in use as shown in Figures 3 and 4, the portion of the toothbrush 200 is receivable in the channel 13 with the cleaning elements 203 extending from the toothbrush 200 in a direction extending away from the surface 5. In the illustrated embodiment, the cleaning elements 203 extend from the toothbrush 200 in a direction orthogonal to the surface 5, when the system 1 is configured in use as shown in the Figures.

[0043] On the second side 220 of the toothbrush 200 the handle 206 has a particular surface profile 227, of which the surface profile 17 of the portion of the body 10 that defines the channel 13 is a negative, i.e. a co-operable or reverse profile. The portion of the handle 206 is stably receivable in the channel 13 with the surface profile 227 of the handle 206 in contact with the surface profile 17 of the portion of the body 10 that defines the channel 13, so that the handle 206 stably is nested with the channel 13 and the toothbrush 200 stably is nested with the support 100. Still further, when the system 1 is configured in use as shown in Figures 3 and 4, since the cleaning elements 203 and the surface profile 227 of the handle 206 are on opposite sides of the toothbrush 200, and since the surface profile 17 of the portion of the body 10 defining the channel 13 faces away from the suction cup 20 and the surface 5, the cleaning elements 203 extend in a direction away from the surface 5, when the portion of the handle 206 is stably received in the channel 13 with the surface profiles 17, 227 in contact with each other. As a result of the irregular nature of the cooperating surface profiles 17, 227 of the handle 206 and the portion of the body 10 that defines the channel 13, and as a result of the magnetic attraction of the magnet 230 of the toothbrush 200 by the magnet 30 of the support 100, movement of the toothbrush 200 relative to the support 100 in a direction parallel to the elongate direction of the channel 13 is restricted. Also, as a result of the magnetic attraction of the magnet 230 of the

toothbrush 200 by the magnet 30 of the support 100, movement of the toothbrush 200 relative to the support 100 about a longitudinal axis of the toothbrush 200 is restricted.

[0044] In variations to the illustrated and/or described embodiments, the toothbrush 200 may comprise a metal portion instead of the magnet 230, which metal portion is magnetically attracted to the magnet 30 of the support 100 when the portion of the handle 206 of the toothbrush 200 is received in the opening 13.

[0045] Furthermore, in variations to the illustrated and/or described embodiments, the magnet 230 or metal portion of the toothbrush 200 may be comprised in one of the neck 204 and the head 202 of the toothbrush 200, rather than in the handle 206. Preferably, in such variations, the opening 13 and the neck 204 or head 202, respectively, are configured so that the neck 204 or head 202, respectively, comprises a portion of the toothbrush 200 that is receivable in the opening 13 with the magnet 230 or metal portion of the toothbrush 200 magnetically attracted to the magnet 30 of the support 100.

[0046] While in each of the above-described embodiments the restrictor comprises a magnet 30 generating a magnetic field that extends into the opening 13, in respective variations to each of the embodiments, the restrictor may comprise an additional or an alternative device for restricting movement of the portion of the oral care implement in the opening 13, preferably repeatedly. For example, the restrictor may comprise a component of a hook-and-loop fastener fastened to the body 10 or an adhesive fastened to the body 10. The component of the hook-and-loop fastener may be either a component comprising the hooks of the hook-and-loop fastener arranged on a carrier, or a component comprising the loops of the hook-and-loop fastener arranged on a carrier. The adhesive may be provided on a carrier, such as a pad or strip, fastened to the wall 18 of the body 10. A removable layer or film of material may cover the adhesive on the carrier to protect the adhesive prior to use.

[0047] While in each of the above-described embodiments the affixion device 20 comprises a suction cup, in respective variations to each of the embodiments the affixion device 20 may comprise an alternative device for affixing the body 10 to a surface, preferably repeatedly, such as an adhesive pad, e.g. a pad with adhesive applied thereon. A removable layer or film of material may cover the adhesive on the pad to protect the adhesive prior to use.

[0048] In each of the above-described embodiments, the body 10 is substantially rigid. In variations to the illustrated and/or described embodiments, the body may comprise one or more,

such as a pair of, resilient arms for clamping the portion of the oral care implement in the opening. For example, the opening could be between a pair of resilient arms so that, when the portion of the oral care implement is in the opening, the portion of the oral care implement is held between, and by, the resilient arms. However, optionally, oral care implement support is free of resilient arms.

[0049] Still further, in variations to the illustrated and/or described embodiments, the surface profiles 227, 17 of the portion of the toothbrush 200 and the portion of the body 10 defining the channel 13 may take a different form to that shown. For example, the respective surface profiles 17, 227 may be smooth, regular, or have a different irregular nature to that shown. Moreover, while in the illustrated embodiment the surface profile 227 of the toothbrush 200 is on the second side 220 of the toothbrush 200, in variations to this arrangement the surface profile 227 of the toothbrush 200 that cooperates with the surface profile 17 of the portion of the body 10 defining the channel 13 may be on a different side of the toothbrush 200, such as on a lateral side of the toothbrush 200 that connects the first and second sides 210, 220. Preferably, the portion of the body 10 defining the channel 13 would be suitably modified so as to still cooperate with the surface profile 227 of the toothbrush 200 in the manner discussed above.

[0050] The support 100, and the system 1 as a whole, is usable to help a user dispense dentifrice onto a head 202 of the toothbrush 200. It is intended that the user first affixes the support 100 to a surface, preferably an upwardly-facing horizontal surface 5 as shown in Figure 4, such as a counter, by affixing the rim 24 of the suction cup 20 to the surface 5 in the manner discussed above. The suction cup 20 can be positioned on the surface 5 at a position relative to a sink so that, when the portion of the toothbrush 200 is received in the channel 13, the head 202 of the toothbrush 200 is over the sink and the toothbrush 200 is held off the surface 5 in a substantially stable position. The user can then focus on aligning the opening of a dentifrice tube with the head 202 and subsequently dispensing the dentifrice from the tube onto the head 202, without simultaneously having to hold the toothbrush 200 steady. Any excess dentifrice can be allowed to fall into the sink, from where it can easily be cleaned up. Once a desired volume of the dentifrice has been dispensed, the toothbrush 200 easily can be pulled away easily from the support 100, against the attractive force of the magnet 30, for use in an oral care session. The support 100 may be retained affixed to the surface 5 during and after the oral care session.

[0051] In each of the above described exemplary embodiments of the oral care system, the oral care system comprises a manually-operated oral care implement, more specifically a manually-operated toothbrush. However, in variations to these embodiments, the oral care implement could instead comprise a powered toothbrush wherein one or more cleaning elements provided to the head of the implement are drivable so as to be moved relative to the handle of the implement. In still further embodiments, the oral care implement could instead comprise other forms of oral care implement, such as a soft-tissue cleaner, a tooth polisher, an interdental brush, a tongue scraper, or another implement designed for oral care.

CLAIMS

WHAT IS CLAIMED IS:

1. An oral care implement support, comprising:

a body having formed therein an opening for receiving a portion of an oral care implement;

an affixion device connected to the body for affixing the oral care implement support to a surface; and

a restrictor for restricting movement of the portion of the oral care implement in the opening, wherein the restrictor is fastened to, or is located within, the body.

2. The oral care implement support of claim 1, wherein the affixion device comprises a suction cup.

3. The oral care implement support of claim 1 or claim 2, wherein the restrictor is located within the body.

4. The oral care implement support of any preceding claim, wherein the restrictor comprises a magnet generating a magnetic field that extends into the opening.

5. The oral care implement support of any preceding claim, wherein the affixion device is at a first end of the body and the opening is at a second end of the body, the second end being opposite from the first end.

6. The oral care implement support of any preceding claim, wherein the affixion device is for affixing the oral care implement support to a planar surface with the opening being elongate in a direction that is at an angle of 0 to 15 degrees to the surface.

7. The oral care implement support of any preceding claim, wherein the opening is a channel.

8. The oral care implement support of claim 7, wherein the channel has two open axial ends.

9. The oral care implement support of claim 7 or claim 8, wherein the channel is substantially concave.

10. The oral care implement support of any one of claims 7 to 9, wherein the body comprises one or more projections extending into the channel.

11. The oral care implement support of any one of claims 4 to 10, wherein the magnet is a permanent magnet, optionally wherein the permanent magnet comprises ferromagnetic material, further optionally wherein the ferromagnetic material comprises one or more of iron, nickel, cobalt, lodestone, a compound of rare earth elements, an alloy of rare earth elements, an alloy of iron, an alloy of nickel, and an alloy of cobalt.

12. The oral care implement support of any preceding claim, wherein the body is substantially rigid.

13. The oral care implement support of any preceding claim, wherein the body is formed from a plastic, such as a thermoplastic polymer, such as polypropylene or polyethylene terephthalate.

14. An oral care system, comprising:

an oral care implement support according to any preceding claim; and

an oral care implement, a portion of which oral care implement is receivable in the opening.

15. The oral care system of claim 14, wherein the restrictor comprises a magnet generating a magnetic field that extends into the opening, and wherein the oral care implement comprises a second magnet or a metal portion that is magnetically attracted to the magnet of the oral care implement support when the portion of the oral care implement is received in the opening.

16. The oral care system of claim 14 or claim 15, wherein the oral care implement comprises a handle and a head, and wherein the portion of the oral care implement comprises, or is comprised in, one of the handle and the head.

17. The oral care system of claim 16, when dependent on claim 15, wherein the second magnet or the metal portion is comprised in one of the handle and the head.

18. The oral care system of any one of claims 14 to 17, wherein the affixion device is oriented relative to the opening, and the oral care implement is configured, so that a centre of mass of the oral care implement is within or above the opening, when the oral care implement support is affixed to an upwardly-facing horizontal surface by the affixion device and the portion of the oral care implement is received in the opening.

19. The oral care system of any one of claims 14 to 18, wherein the oral care implement has cleaning elements extending therefrom; and wherein the portion of the oral care implement is receivable in the opening with the cleaning elements extending from the oral care implement in a direction extending away from the surface.

20. The oral care system of any one of claims 14 to 19, wherein a surface profile of a portion of the body that defines the opening is a negative of a surface profile of the portion of the oral care implement.

21. The oral care system of claim 20, wherein the oral care implement has a first side and a second side opposite from the first side;

wherein cleaning elements are located on the first side of the oral care implement; and

wherein the surface profile of the portion of the oral care implement is on the second side of the oral care implement.

22. The oral care system of claim 20 or claim 21, wherein the oral care implement comprises a handle and a head, the head having cleaning elements extending therefrom; and

wherein the cleaning elements extend from the head in a direction extending away from the surface, when the portion of the oral care implement is received in the opening with the surface profile of the portion of the oral care implement in contact with the surface profile of the portion of the body that defines the opening.

23. The oral care system of any one of claims 14 to 22, wherein the oral care implement is a toothbrush.

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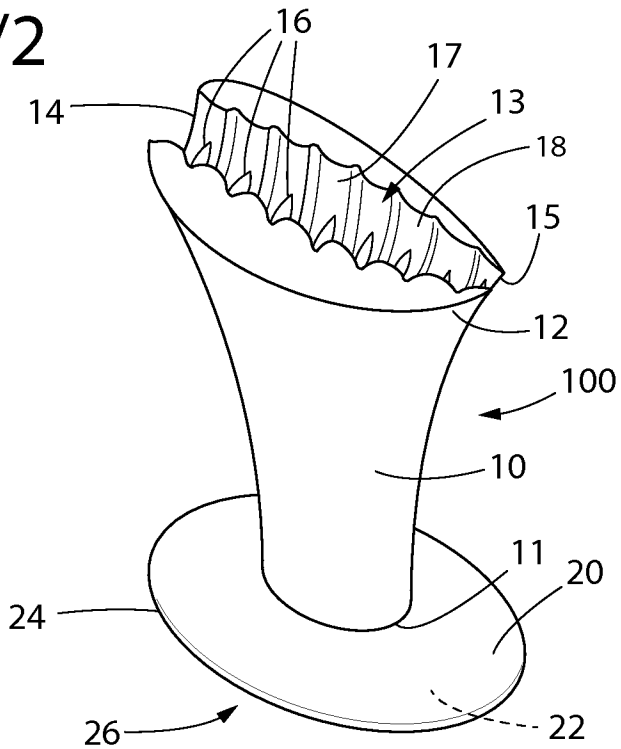

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FIG. 1

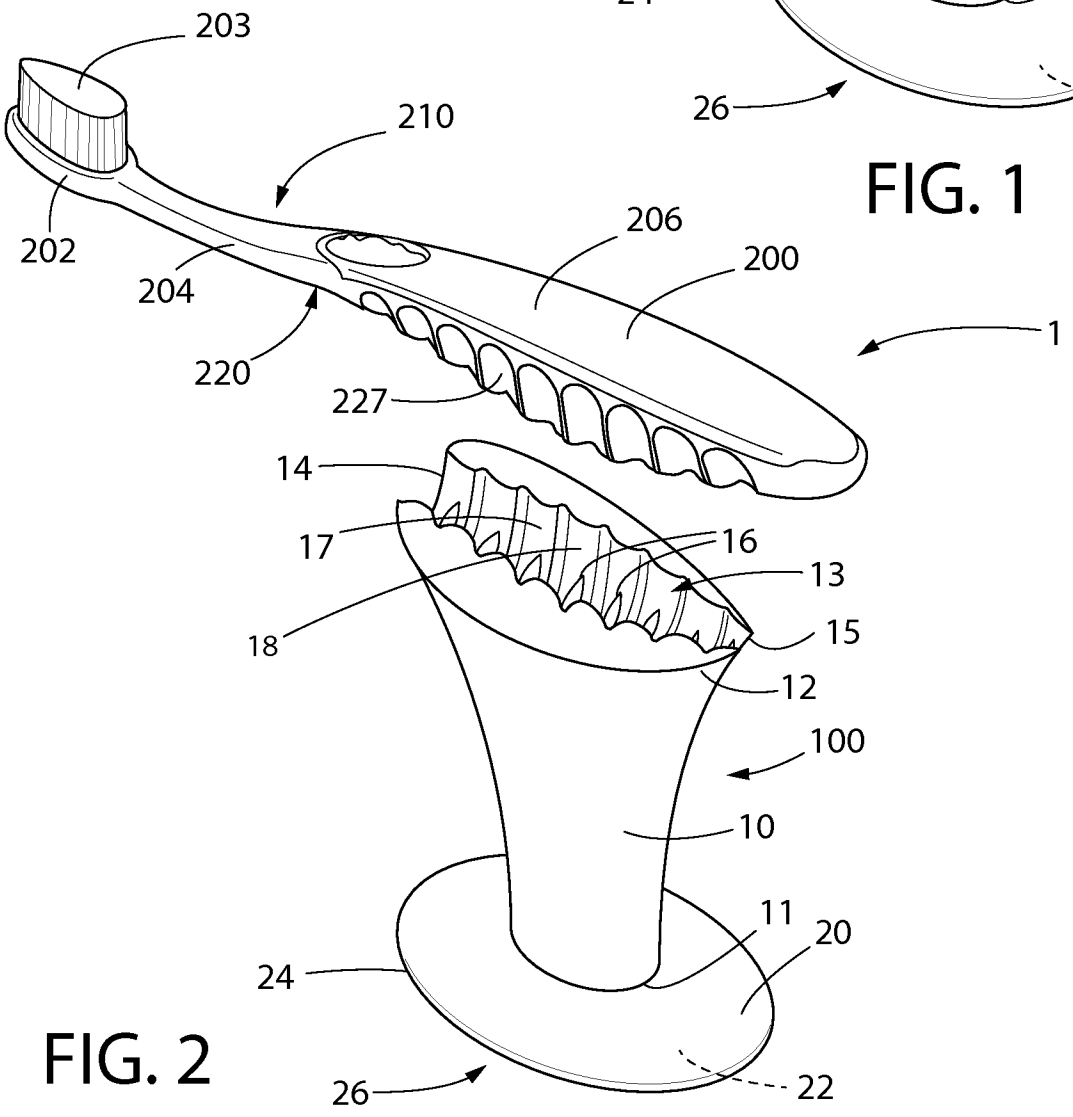

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FIG. 2

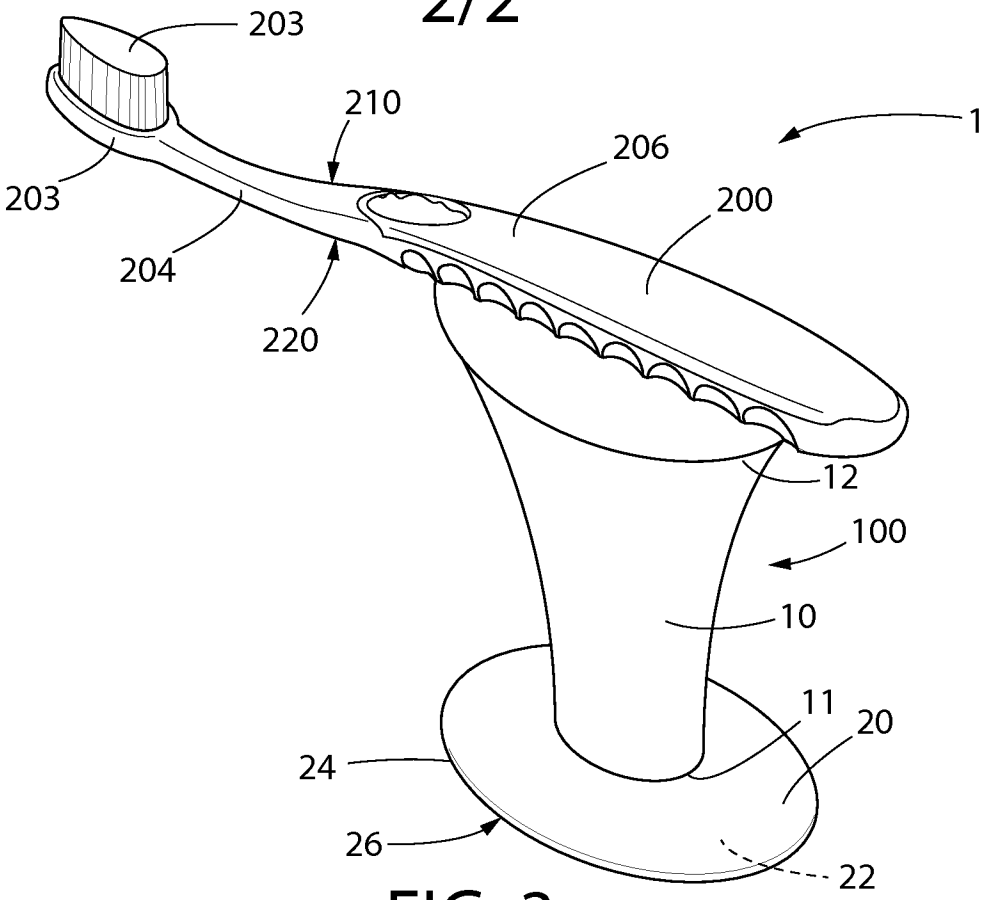

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FIG. 3

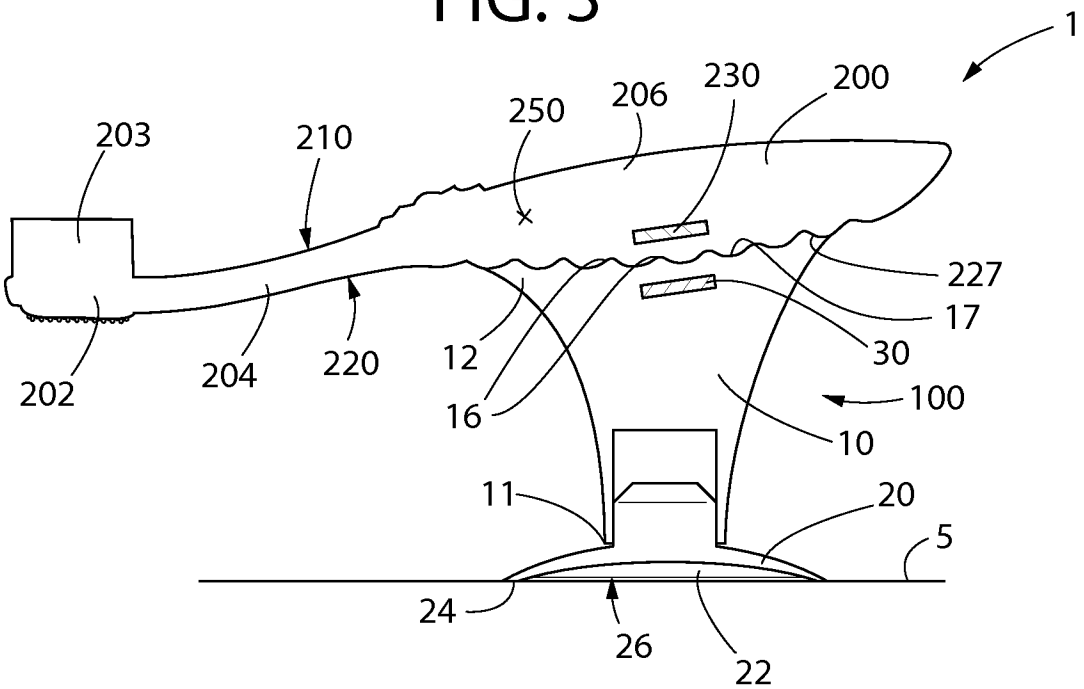

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FIG. 4

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/071222

A. CLASSIFICATION OF SUBJECT MATTER
INV. A46B5/00 A46B15/00 A47K1/09
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A46B A47K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 94/27479 A1 (SMITH COLIN J [US]; KURCZEK DAVID C [US]) 8 December 1994 (1994-12-08) page 3, lines 23-25 page 6, lines 5-32 page 12, lines 21-23; figures 3, 5-7, 14-20	1-23

X	US 2013/125327 A1 (SCHMID MICHAEL [CH] ET AL) 23 May 2013 (2013-05-23)	1-5, 11-18,23
A	paragraphs [0002], [0045]; figures 1, 3	6-10, 19-22

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
5 August 2014	13/08/2014

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Dal Bó, Paolo

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/071222

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 297 677 A (BURIAN ALFRED [US] ET AL) 29 March 1994 (1994-03-29)	1,3,6-9, 12-14, 16, 18-20, 22,23
A	figure 5	2,4,5, 10,11, 15,17,21

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2013/071222

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9427479 A1	08-12-1994	NONE	
US 2013125327 A1	23-05-2013	NONE	
US 5297677 A	29-03-1994	NONE	