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(54) **ORAL CARE IMPLEMENT**

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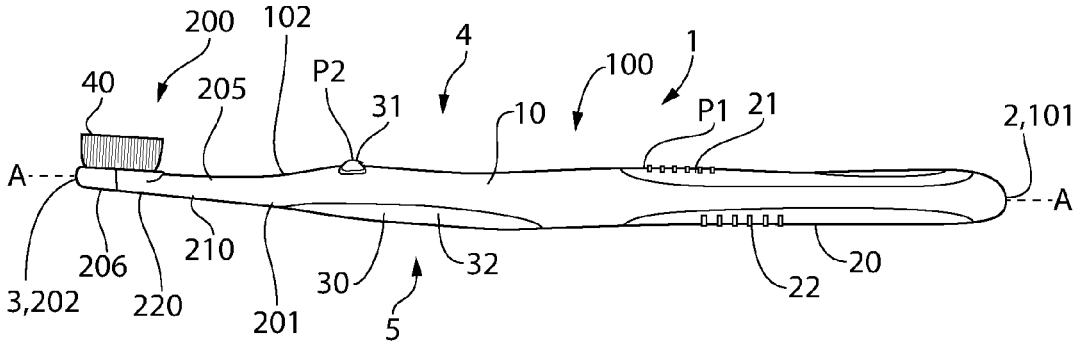
(57) **ABSTRACT**

Disclosed is an oral care implement, comprising: an elongate handle having a proximal end, a distal end and a longitudinal axis; and a head at the distal end of the handle, the head comprising one or more oral care elements on a first side of the oral care implement; wherein the handle comprises first and second visibly demarcated grip regions on the first side of the oral care implement, wherein the first grip region is between the second grip region and the proximal end of the handle, wherein the first grip region is between 60 and 100 millimeters from the proximal end of the handle, and wherein the first and second grip regions are spaced apart by between 50 and 100 millimeters in a direction parallel to the longitudinal axis.



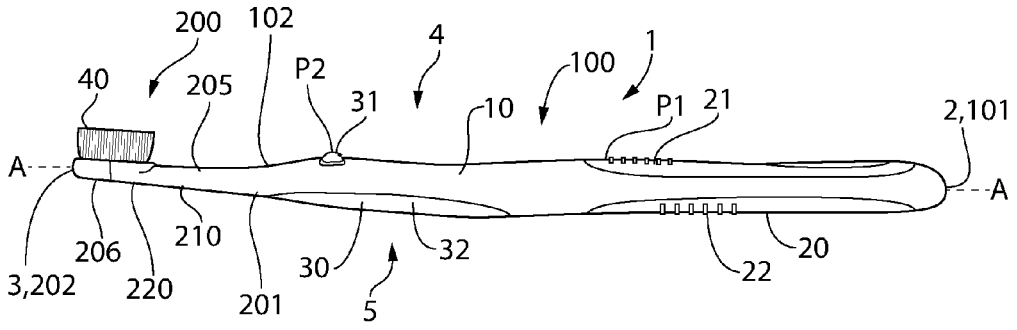


FIG. 1

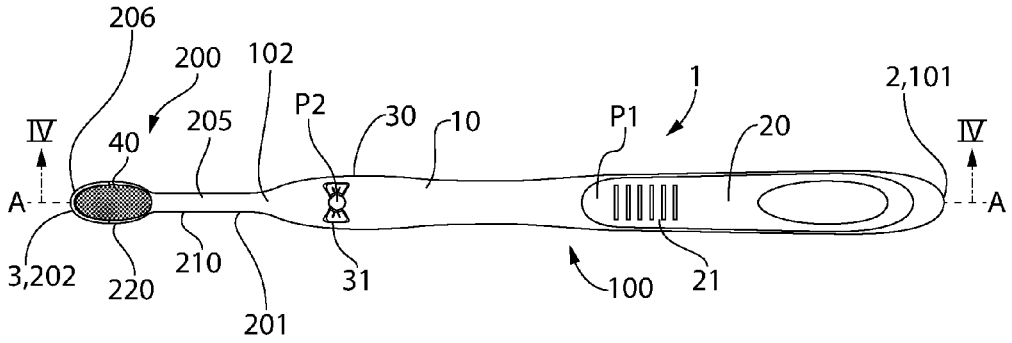


FIG. 2

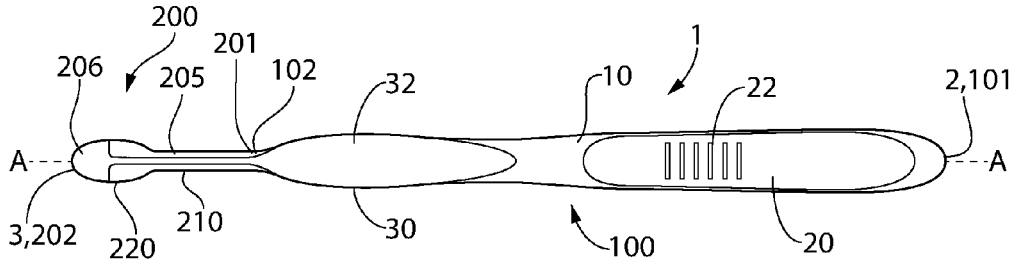


FIG. 3

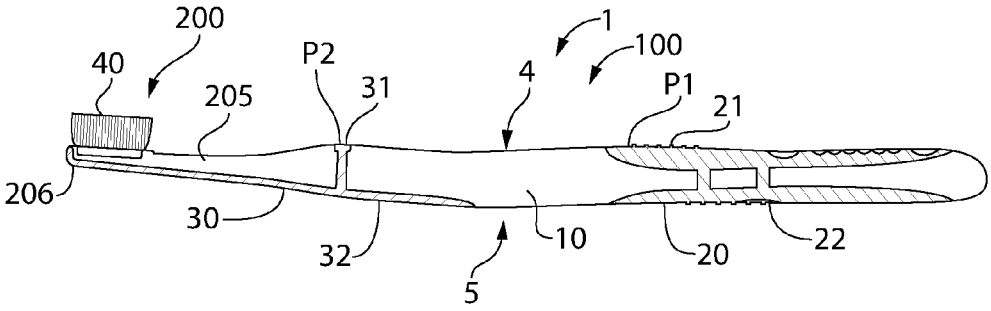


FIG. 4

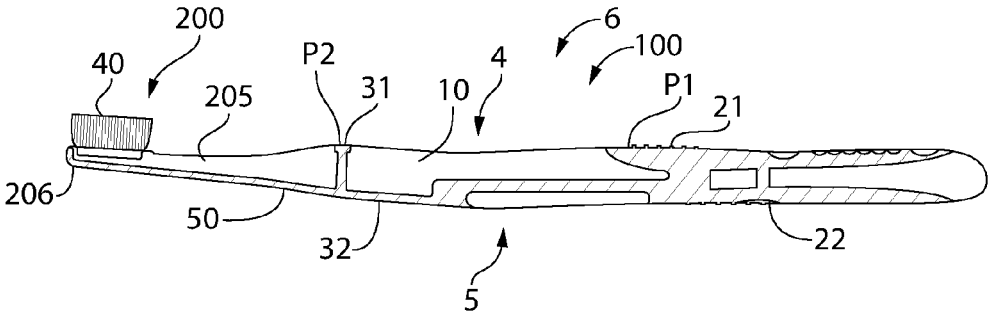


FIG. 5

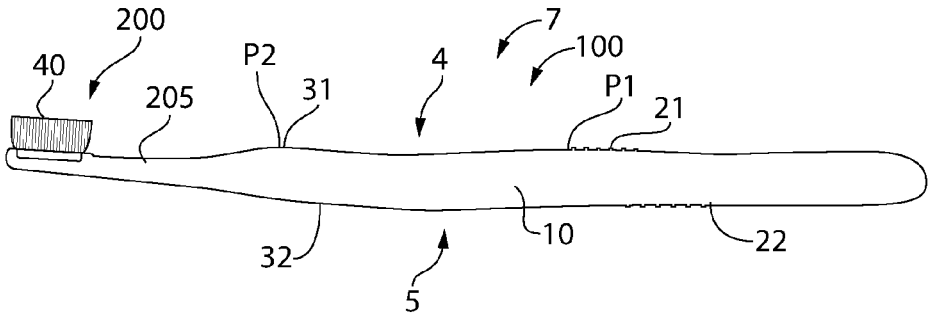


FIG. 6

ORAL CARE IMPLEMENT

BACKGROUND

[0001] The present invention relates to oral care implements, such as toothbrushes, and more particularly to oral care implements suitable for use by a child.

[0002] It is known to provide oral care implements, such as toothbrushes, for use by children. When teaching a child or student how to carry out effective and safe oral care, it is necessary for the adult or teacher to give instruction to the child or student verbally. That is, the adult or teacher has to explain how to use the oral care implement by speaking to the child or student. Such verbal communication can be ineffective, if the adult or teacher is unable to sufficiently express themselves and/or if the child or student is unable to comprehend the communication. This can lead to frustration or disappointment for either or both of the adult/teacher and child/student, and could cause the child or student to lose interest in effective and safe oral care, with the possible result that the child or student fails ever to learn how to adequately take care of their oral cavity.

[0003] There is a need for an oral care implement that better enables an adult or teacher to teach a child or student how to carry out effective and safe oral care using the oral care implement.

BRIEF SUMMARY

[0004] An embodiment of the present invention provides a first oral care implement, comprising: an elongate handle having a proximal end, a distal end and a longitudinal axis; and a head at the distal end of the handle, the head comprising one or more oral care elements on a first side of the oral care implement; wherein the handle comprises first and second visibly demarcated grip regions on the first side of the oral care implement, wherein the first grip region is between the second grip region and the proximal end of the handle, wherein the first grip region is between 60 and 100 millimeters from the proximal end of the handle, and wherein the first and second grip regions are spaced apart by between 50 and 100 millimeters in a direction parallel to the longitudinal axis.

[0005] Optionally, the first grip region is between 70 and 90 millimeters from the proximal end of the handle. Further optionally, the first grip region is about 79 millimeters from the proximal end of the handle.

[0006] Optionally, the first and second grip regions are spaced apart by between 65 and 85 millimeters in a direction parallel to the longitudinal axis. Further optionally, the first and second grip regions are spaced apart by about 74 millimeters in a direction parallel to the longitudinal axis.

[0007] Optionally, the first grip region has a higher coefficient of friction than a portion of the handle surrounding the first grip region, and/or the second grip region has a higher coefficient of friction than a portion of the handle surrounding the second grip region.

[0008] Optionally, the handle comprises a body, a first member fixed to the body and comprising the first grip region, and a second member fixed to the body and comprising the second grip region.

[0009] Optionally, the first member is out of contact with the second member at an exterior surface of the handle.

[0010] Optionally, the first member is softer than the body and/or the second member is softer than the body.

[0011] Optionally, an exterior surface of the first member has a higher coefficient of friction than an exterior surface of the body and/or an exterior surface of the second member has a higher coefficient of friction than an exterior surface of the body.

[0012] Optionally, the first member and/or the second member are made of an elastomeric material, such as an elastomer.

[0013] Optionally, the first member is of a different color to the body and/or the second member is of a different color to the body, and/or the second member is of a different color to the first member.

[0014] Optionally, the handle comprises a body and a member fixed to the body, the member comprising the first and second grip regions. Further optionally, the member is softer than the body.

[0015] Optionally, an exterior surface of the member has a higher coefficient of friction than an exterior surface of the body.

[0016] Optionally, the member is made of an elastomeric material, such as an elastomer.

[0017] Optionally, the member is of a different color to the body.

[0018] Optionally, at least a portion of the head is formed by the body.

[0019] Optionally, one or both of the first and second grip regions comprises one or more depressions, ridges, nubs, bumps or grooves.

[0020] Optionally, the first grip region is of a different color and/or texture to a portion of the handle surrounding the first grip region, and/or the second grip region is of a different color and/or texture to a portion of the handle surrounding the second grip region, and/or the second grip region is of a different color and/or texture to the first grip region.

[0021] Optionally, the second grip region comprises an image.

[0022] Optionally, a first section of the handle comprising the first grip region is detachable from a second section of the handle comprising the second grip region.

[0023] Another embodiment of the present invention provides a second oral care implement, comprising: an elongate handle having a proximal end, a distal end and a longitudinal axis; and a head at the distal end of the handle, the head comprising one or more oral care elements on a first side of the oral care implement; wherein the handle has an exterior surface profile that defines first and second peaks on the first side of the oral care implement, wherein the first peak is between the second peak and the proximal end of the handle, wherein the first peak is between 75 and 125 millimeters from the proximal end of the handle, and wherein the first and second peaks are spaced apart by between 60 and 100 millimeters in a direction parallel to the longitudinal axis.

[0024] Optionally, the first peak is between 90 and 110 millimeters from the proximal end of the handle. Further optionally, the first peak is about 98 millimeters from the proximal end of the handle.

[0025] Optionally, the first and second peaks are spaced apart by between 70 and 90 millimeters in a direction parallel to the longitudinal axis. Further optionally, the first and second peaks are spaced apart by about 77 millimeters in a direction parallel to the longitudinal axis.

[0026] Optionally, the handle comprises a body, a first member fixed to the body and comprising the first peak, and a second member fixed to the body and comprising the second peak.

[0027] Optionally, the first member is out of contact with the second member at an exterior surface of the handle.

[0028] Optionally, the first member is softer than the body and/or the second member is softer than the body.

[0029] Optionally, an exterior surface of the first member has a higher coefficient of friction than an exterior surface of the body and/or an exterior surface of the second member has a higher coefficient of friction than an exterior surface of the body.

[0030] Optionally, the first member and/or the second member are made of an elastomeric material, such as an elastomer.

[0031] Optionally, the first member is of a different color to the body and/or the second member is of a different color to the body, and/or the second member is of a different color to the first member.

[0032] Optionally, the handle comprises a body and a member fixed to the body, the member comprising the first and second peaks. Further optionally, the member is softer than the body.

[0033] Optionally, an exterior surface of the member has a higher coefficient of friction than an exterior surface of the body.

[0034] Optionally, the member is made of an elastomeric material, such as an elastomer.

[0035] Optionally, the member is of a different color to the body.

[0036] Optionally, at least a portion of the head is formed by the body.

[0037] Optionally, the first peak is of a different color to a portion of the handle surrounding the first peak, and/or the second peak is of a different color to a portion of the handle surrounding the second peak, and/or the second peak is of a different color to the first peak.

[0038] Optionally, in either one of the first and second oral care implements, the head comprises a base portion, to which the one or more oral care elements are attached, and a neck portion, wherein the neck portion of the head has a smaller cross sectional area perpendicular to the longitudinal axis than each of the handle and the base portion of the head, and wherein a length of the handle between the proximal end of the handle and the distal end of the handle is at least 170 millimeters, optionally at least 185 millimeters, further optionally at least 200 millimeters.

[0039] Optionally, a first section of the handle comprising the first peak is detachable from a second section of the handle comprising the second peak.

[0040] Another embodiment of the present invention provides a third oral care implement, comprising: an elongate handle having a proximal end, a distal end and a longitudinal axis; and a head at the distal end of the handle, the head comprising a base portion, one or more oral care elements attached to the base portion, and a neck portion; wherein the neck portion of the head has a smaller cross sectional area perpendicular to the longitudinal axis than each of the handle and the base portion of the head; and wherein a length of the handle between the proximal end of the handle and the distal end of the handle is at least 170 millimeters.

[0041] Optionally, the length of the handle is at least 185 millimeters. Further optionally, the length of the handle is at least 200 millimeters.

[0042] Optionally, the handle comprises first and second visibly demarcated grip regions. Further optionally, the one or more oral care elements are attached to the base portion on a first side of the oral care implement, and the first and second grip regions are on the first side of the oral care implement.

[0043] Optionally, the first grip region is between the second grip region and the proximal end of the handle, and wherein the first grip region is between 60 and 100 millimeters from the proximal end of the handle. Further optionally, the first grip region is between 70 and 90 millimeters from the proximal end of the handle.

[0044] Optionally, the first and second grip regions are spaced apart by between 50 and 100 millimeters in a direction parallel to the longitudinal axis. Further optionally, the first and second grip regions are spaced apart by between 65 and 85 millimeters in a direction parallel to the longitudinal axis.

[0045] Optionally, a first section of the handle comprising the first grip region is detachable from a second section of the handle comprising the second grip region.

[0046] Optionally, in any one of the first to third oral care implements, a length of the oral care implement between the proximal end of the handle and a distal end of the head furthest from the handle is at least 200 millimeters. Further optionally, the length of the oral care implement is at least 225 millimeters. Still further optionally, the length of the oral care implement is at least 250 millimeters.

[0047] Optionally, in any one of the first to third oral care implements, the oral care implement is a toothbrush and the one or more oral care elements comprise one or more tooth cleaning elements.

[0048] 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

[0049] The present invention will become more fully understood from the detailed description and the accompanying drawings, wherein:

[0050] FIG. **1** shows a side view of an oral care implement according to one embodiment of the present invention,

[0051] FIG. **2** shows a front view of the oral care implement of FIG. **1**,

[0052] FIG. **3** shows a rear view of the oral care implement of FIG. **1**,

[0053] FIG. **4** shows a cross-sectional view of the oral care implement of FIG. **1**,

[0054] FIG. **5** shows a cross-sectional view of an oral care implement according to another embodiment of the present invention, and

[0055] FIG. **6** shows a cross-sectional view of an oral care implement according to a further embodiment of the present invention.

DETAILED DESCRIPTION

[0056] 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.

[0057] 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.

[0058] In the following description, each of the exemplary embodiments of the oral care implement of the invention 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 oral care implement, such as a powered toothbrush, wherein one or more oral care 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. It is to be understood that other embodiments may be utilised, and that structural and functional modifications may be made without departing from the scope of the present invention.

[0059] FIGS. **1** to **4** illustrate an oral care implement, in this case a toothbrush, according to an exemplary embodiment of the present invention, generally designated with the reference numeral **1**.

[0060] The toothbrush **1** comprises an elongate handle **100**, which handle **100** has a proximal end **101** and a distal end **102** and is elongate between the proximal and distal ends **101**, **102**. The handle **100** has a longitudinal axis A-A. In some embodiments, such as the embodiment of FIGS. **1** to **4**, the longitudinal axis A-A extends approximately through each of the proximal and distal ends **101**, **102** of the handle **100**. The handle **100** is formed in part by a body **10**, in part by a first member **20** fixed to the body **10**, and in part by a second member **30** fixed to the body **10**, as will be described in more detail below. That is, the handle **100** comprises the body **10**, the first member **20** and the second member **30**.

[0061] Preferably, a length of the handle **100** between the proximal end **101** of the handle **100** and the distal end **102** of the handle **100** is at least 170 millimeters, such as between 170 and 250 millimeters. More preferably, the length of the handle **100** between the proximal end **101** of the handle **100** and the distal end **102** of the handle **100** is at least 185 millimeters, such as between 185 and 225 millimeters, and still more preferably is at least 200 millimeters. In the illustrated embodiment, the length of the handle **100** between the proximal end **101** of the handle **100** and the distal end **102** of the handle **100** is about 200 millimeters.

[0062] The toothbrush **1** also comprises a head **200** at the distal end **102** of the handle **100**. The head **200** has a proximal end **201** connected directly to the distal end **102** of the handle **100** and a distal end **202** remote from the handle **100**. The head **200** is formed in part by a first portion **205** that is unitary with the body **10**, in part by a second portion **206** that is unitary with the second member **30**, and in part by a plurality of oral care elements **40**. That is, the head **200** comprises the first portion **205**, the second portion **206**, and the oral care elements **40**. The head **200** comprises a base portion **220**, to which the oral care elements **40** are attached, and a neck portion **210** that has a smaller cross sectional area perpendicular to the longitudinal axis A-A than each of the handle **100** and the base portion **220** of the head **200**. A majority of the neck portion **210** and a majority of the base portion **220** of the head **200** are formed by the first portion **205**. The remainder of the neck portion **210** and base portion **220** are formed by the second portion **206**, and includes a gum guard at the distal end **202** of the head **200**. The neck portion **210** includes the proximal end **201** of the head **200**, which is that portion of the head **200** fixed to and closest to the distal end **102** of the handle **100**. In the illustrated embodiment, the head **200** is non-detachable from the handle **100**. However, in variations to the illustrated embodiment, the head **200** may be detachable from the handle **100**, such as for replacement of the head **200** when the oral care elements **40** become worn.

[0063] The proximal end **101** of the handle **100** forms a proximal end **2** of the toothbrush **1**, and the distal end **202** of the head **200** forms a distal end **3** of the toothbrush **1**. Preferably, a length of the toothbrush **1** between the proximal end **101** of the handle **100** and the distal end **202** of the head **200** is at least 200 millimeters, such as between 200 and 300 millimeters. More preferably, the length of the toothbrush **1** between the proximal end **101** of the handle **100** and the distal end **202** of the head **200** is at least 225 millimeters, such as between 225 and 275 millimeters, and still more preferably is at least 250 millimeters. In the illustrated embodiment, the length of the toothbrush **1** between the proximal end **101** of the handle **100** and the distal end **202** of the head **200** is about 251 millimeters.

[0064] In the illustrated embodiment, the oral care elements **40** are on a first, front side **4** of the toothbrush **1**. More specifically, the oral care elements **40** are on a first, front side of the head **200**, and are for cleaning or polishing surfaces in a user's mouth, such as surfaces of their teeth. As used herein, the term "oral care element" is used in a generic sense to refer to any structure that can be used to clean, massage or polish an oral surface, such as teeth or soft tissue, through relative surface contact. In this embodiment, the oral care elements comprise a plurality of tooth cleaning elements, preferably a plurality of flexible bristles arranged in tufts. However, in variations to this embodiment, the oral care elements may additionally or alternatively comprise one or more tooth polishing elements, preferably in the form of elastomeric tooth polishing elements, such as elastomeric protrusions, elements, fingers, or prophylactic (prophy) cups. In some embodiments, the oral care elements **40** may comprise at least one of any one or more of the following, without limitation: bristles, rigid bristles, flexible bristles, filament bristles, fibre bristles, nylon bristles, polybutylene terephthalate (PBT) bristles, tapered bristles, spiral bristles, rubber bristles, elastomeric protrusions, elastomeric elements, flexible polymer protrusions, co-extruded filaments, flag bristles, crimped bristles, anti-bacterial bristles and combinations thereof and/or structures containing such materials or combinations.

[0065] In a variation to the illustrated embodiment, a soft tissue cleaner may be provided on a second side of the toothbrush **1**, such as a second, rear side **5** of the toothbrush **1** opposite to the front side **4** of the toothbrush **1**. Such a soft tissue cleaner may be provided on a second, rear side of the

head **200** opposite to the front side of the head **200**. Such a soft tissue cleaner may be formed by the second portion **206** of the head **200**.

[0066] The handle **100** provides a user with a mechanism by which he/she can readily grip and manipulate the toothbrush **1**, includes ergonomic features which provide a high degree of control for the user while maintaining comfort, and may be formed of many different shapes and with a variety of constructions. On the other hand, the head **200** is that portion of the toothbrush **1** intended to be inserted into a user's oral cavity for carrying out oral care.

[0067] The handle **100** comprises first and second visibly demarcated grip regions **21**, **31** on the first side **4** of the toothbrush **1**. Herein, by "visibly demarcated" it is meant that a finite extent of each of the first and second grip regions **21**, **31** within the surrounding environment is visible to a human. In the illustrated embodiment, the second grip region **31** comprises an image of a bowtie, and each of the first and second grip regions **21**, **31** has a groove or bump forming a visible perimeter or outline of the grip region **21**, **31**. Moreover, in the illustrated embodiment, the first grip region **21** comprises a plurality of parallel alternating grooves and bumps, and respective portions of the handle surrounding the first and second grip regions **21**, **31** are substantially free of images, grooves and bumps. That is, the first and second grip regions **21**, **31** have different textures to an exterior surface of the respective portions of the handle **100** surrounding the first and second grip regions **21**, **31**. Herein, by "exterior surface" it is meant a surface forming at least part of an exterior of the toothbrush **1**, so that the surface is visible to, and touchable by, a user. Furthermore, in the illustrated embodiment, the second grip region **31** is of a different color to a portion of the handle **100** surrounding the second grip region **31**.

[0068] The first grip region **21** is between the second grip region **31** and the proximal end **101** of the handle **100**. It is intended that the first grip region **21** be gripped by an adult or teacher while the second grip region **31** is gripped by a child or student, when the child or student is learning how to carry out effective and safe oral care using the toothbrush **1**. Alternatively, the first grip region **21** could be gripped by a caregiver while the second grip region **31** is gripped by a different sort of dependent person who needs assistance in carrying out effective and safe oral care using the toothbrush **1**, such as an elderly person or a person who is mentally and/or physically disabled. In any case, the spacing of the first and second grip regions **21**, **31** relative to each other and relative to the rest of the toothbrush **1** needs to be considered.

[0069] Preferably, the first grip region **21** is between 60 and 100 millimeters from the proximal end **101** of the handle **100**. More preferably, the first grip region **21** is between 70 and 90 millimeters from the proximal end **101** of the handle **100**. In the illustrated embodiment, the first grip region **21** is about 79 millimeters from the proximal end **101** of the handle **100**. Accordingly, when the thumb of an adult, teacher or caregiver is gripping the first grip region **21**, a portion, or all, of a first part of the handle **100** between the first grip region **21** and the proximal end **101** of the handle **100** lies in the palm of the adult, teacher or caregiver, and one or more fingers of the adult, teacher or caregiver wrap around the first part of the handle **100**, thereby enabling the adult, teacher or caregiver to hold the toothbrush **1** stably and comfortably.

[0070] Preferably, the first and second grip regions **21**, **31** are spaced apart by between 50 and 100 millimeters in a direction parallel to the longitudinal axis A-A of the handle **100**. More preferably, the first and second grip regions **21**, **31** are spaced apart by between 65 and 85 millimeters in a direction parallel to the longitudinal axis A-A of the handle **100**. In the illustrated embodiment, the first and second grip regions **21**, **31** are spaced apart by about 74 millimeters in a direction parallel to the longitudinal axis A-A of the handle **100**. Accordingly, when the thumb of the adult, teacher or caregiver is gripping the first grip region **21**, a child, student or dependent person is able to place their own thumb on the second grip region **31** to hold the toothbrush **1** in common with the adult, teacher or caregiver. Preferably, a portion, or all, of a second part of the handle **100** between the second grip region **31** and the first grip region **21** lies in the palm of the child, student or dependent person, and one or more fingers of the child, student or dependent person wrap around the second part of the handle **100**, thereby enabling the child, student or dependent person to hold the toothbrush **1** stably and comfortably.

[0071] As will be appreciated from FIGS. **1** to **4**, the first member **20** comprises the first grip region **21**, and the second member **30** comprises the second grip region **31**. By comprising the first and second grip regions **21**, **31** in the first and second members **20**, **30**, as opposed to in the body **10**, it is possible to provide the first and second grip regions **21**, **31** with properties different to those that would be possible were the first and second grip regions **21**, **31** instead formed by the body **10**. In some embodiments of the present invention, one or each of the first and second members **20**, **30** is softer than the body **10**. In the illustrated embodiment, each of the first and second members **20**, **30** is softer than the body **10**. In some embodiments of the present invention, one or each of the first and second members **20**, **30** has an exterior surface with a higher coefficient of friction than an exterior surface of the body **10**. In the illustrated embodiment, each of the first and second members **20**, **30** has an exterior surface with a higher coefficient of friction than an exterior surface of the body **10**. In some embodiments of the present invention, one or each of the first and second members **20**, **30** is made from an elastomeric and/or resilient material, such as an elastomer (e.g. a thermoplastic elastomer). In the illustrated embodiment, each of the first and second members **20**, **30** is made from an elastomeric resilient material. In the illustrated embodiment, the body **10** is formed of a thermoplastic polymer, e.g. polyethylene terephthalate (PET) or polypropylene (PP). Accordingly, the relatively rigid material of the body **10** provides the handle **100** with strength and rigidity, whereas the relative soft and resilient materials of the first and second members **20**, **30** enhance the ability of a user to grip the first and second grip regions **21**, **31**.

[0072] By comprising the first and second grip regions **21**, **31** in the first and second members **20**, **30**, as opposed to in the body **10**, it is also possible easily to indicate to users the positions and intended uses of the first and second grip regions **21**, **31**. In some embodiments of the present invention, one or each of the first and second members **20**, **30** is of a different color to the body **10**. In the illustrated embodiment, each of the first and second members **20**, **30** is of a different color to the body **10**. Accordingly, a user is able readily to determine the location on the handle **100** of the first and second members **20**, **30** comprising the first and second grip regions **21**, **31**. In some embodiments of the

present invention, as is the case in the illustrated embodiment, the first member **20** also is of a different color to the second member **30**. More specifically, the body **10** is blue, the first member **20** is yellow, and the second member **30** is green. Herein, "color" is intended to encompass all of color, hue, shade, saturation, and brightness. Moreover, the first member **20** is out of contact with the second member **30** at an exterior surface of the handle **100**. Accordingly, the first and second grip regions **21**, **31** clearly are distinguished from each other to indicate that one is for gripping by an adult, teacher or caregiver and the other is for gripping by a child, student or dependent person.

[0073] In some embodiments of the present invention, one or each of the first and second grip regions **21**, **31** has a higher coefficient of friction than a portion of the handle **100** surrounding that grip region **21**, **31**. In the illustrated embodiment, each of the first and second grip regions **21**, **31** has a higher coefficient of friction than a portion of the handle **100** surrounding that grip region **21**, **31**. That is, the first grip region **21** has a higher coefficient of friction than the portion of the first member **20** surrounding the first grip region **21** due to the provision of the plurality of parallel alternating grooves and bumps of the first grip region **21**, and the second grip region **31** has a higher coefficient of friction than the portion of the body **10** surrounding the second grip region **31** due to the difference in materials of the second member **30** and the body **10**.

[0074] In the embodiment illustrated in FIGS. **1** to **4**, the handle **100** comprises first and second palm grip regions **22**, **32** on the second side **5** of the toothbrush **1**. As will be appreciated from FIGS. **1** to **4**, the first member **20** comprises the first palm grip region **22**, and the second member **30** comprises the second palm grip region **32**. As shown in FIG. **4**, the first palm grip region **22** is connected to the first grip region **21** via a passage through the body **10**, and the second palm grip region **32** is connected to the second grip region **31** via a passage through the body **10**. The first palm grip region **22** is unitary with the first grip region **21**, and the second palm grip region **32** is unitary with the second grip region **31**. However, the first palm grip region **22** and the first grip region **21** are not in contact with, or unitary with, the second palm grip region **32** and the second grip region **31**. Moreover, the first palm grip region **22** is out of contact with the second palm grip region **32** at the exterior surface of the handle **100**.

[0075] The handle **100** has an exterior surface profile that that defines first and second peaks P**1**, P**2** on the first side **4** of the toothbrush. That is, the exterior surface of the handle **100** is contoured so as to define the first and second peaks P**1**, P**2**. The first and second peaks P**1**, P**2** are portions of the handle **100** that are further from the longitudinal axis A-A of the handle **100** than portions of the handle **100** surrounding the first and second peaks P**1**, P**2**. The first and second peaks P**1**, P**2** may be distanced from the longitudinal axis A-A by equal distances. Alternatively, the first and second peaks P**1**, P**2** may be distanced from the longitudinal axis A-A by different distances, such as in the illustrated embodiment where the first peak P**1** is further from the longitudinal axis A-A than the second peak P**2**.

[0076] The first peak P**1** is between the second peak P**2** and the proximal end **101** of the handle **100**. The first grip region **21** extends in the direction of the longitudinal axis A-A from the first peak P**1** towards the proximal end **101** of the handle **100** along a portion of the handle **100** that is inclined relative to the longitudinal axis A-A. The second grip region **31** is coincident with the second peak P**2** and also surrounds the second peak P**2**, so that at least part of the second grip region **31** also extends along a portion of the handle **100** that is inclined relative to the longitudinal axis A-A. It is intended that the first peak P**1** aids application of longitudinal forces to the handle **100** by an adult, teacher or caregiver while the second peak P**2** is gripped by a child, student or dependent person, when the child, student or dependent person requires assistance when carrying out effective and safe oral care using the toothbrush **1**, and that the second peak P**2** emphasizes the presence of the second grip region **31** to the child, student or dependent person and may aid handling and control of the toothbrush **1** by the child, student or dependent person. For this reason, the spacing of the first and second peaks P**1**, P**2** relative to each other and relative to the rest of the toothbrush **1** needs to be considered.

[0077] Preferably, the first peak P**1** is between 75 and 125 millimeters from the proximal end **101** of the handle **100**. More preferably, the first peak P**1** is between 90 and 110 millimeters from the proximal end **101** of the handle **100**. In the illustrated embodiment, the first peak P**1** is about 98 millimeters from the proximal end **101** of the handle **100**. Accordingly, when the thumb of an adult, teacher or caregiver is gripping the first grip region **21** with a portion, or all, of a part of the handle **100** between the first grip region **21** and the proximal end **101** of the handle **100** lying in the palm of the adult, teacher or caregiver and one or more fingers of the adult, teacher or caregiver wrapping around that part of the handle **100**, the adult, teacher or caregiver is able to apply a longitudinal force to the side of the first peak P**1** to control movement of the toothbrush **1**.

[0078] Preferably, the first and second peaks P**1**, P**2** are spaced apart by between 60 and 100 millimeters in a direction parallel to the longitudinal axis A-A of the handle **100**. More preferably, the first and second peaks P**1**, P**2** are spaced apart by between 70 and 90 millimeters in a direction parallel to the longitudinal axis A-A of the handle **100**. In the illustrated embodiment, the first and second peaks P**1**, P**2** are spaced apart by about 77 millimeters in a direction parallel to the longitudinal axis A-A of the handle **100**. Accordingly, when the thumb of the adult, teacher or caregiver is gripping the first grip region **21** adjacent the first peak P**1**, a child, student or dependent person is able to place their own thumb on the second grip region **31** at the second peak P**2** to hold the toothbrush **1** in common with the adult, teacher or caregiver. Preferably, a portion, or all, of a part of the handle **100** between the second peak P**2** and the first peak P**1** lies in the palm of the child, student or dependent person, and one or more fingers of the child, student or dependent person wrap around that part of the handle **100**, thereby enabling the child, student or dependent person to move and control the toothbrush **1** safely.

[0079] As will be appreciated from FIGS. **1** to **4**, the first member **20** comprises the first peak P**1**, and the second member **30** comprises the second peak P**2**. By comprising the first and second peaks P**1**, P**2** in the first and second members **20**, **30**, as opposed to in the body **10**, it is possible to provide the first and second peaks P**1**, P**2** with properties different to those that would be possible were the first and second peaks P**1**, P**2** instead formed by the body **10**. Indeed, in the illustrated embodiment, each of the first and second peaks P**1**, P**2** is softer than the body **10**, which makes contact

with the peaks by a user comfortable, and each of the first and second peaks P1, P2 has a higher coefficient of friction than the exterior surface of the body **10**, thus aiding transmission of longitudinal forces applied to the first and second peaks P1, P2 to the rest of the toothbrush **1**.

[0080] Moreover, by comprising the first and second peaks P1, P2 in the first and second members **20**, **30**, as opposed to in the body **10**, it is also possible easily to indicate to users the positions of the first and second peaks P1, P2. In the illustrated embodiment, the second peak P2 is of a different color to a portion of the handle **100** surrounding the second peak P2. In variations to the illustrated embodiment, the first peak P1 additionally or alternatively is of a different color to a portion of the handle **100** surrounding the first peak P1.

[0081] In a variation to the embodiment illustrated in FIGS. **1** to **4**, and as shown in FIG. **5**, in another embodiment, the handle **100** comprises a body **10** and a member **50** fixed to the body **10**, the member **50** comprising both the first and second visibly demarcated grip regions **21**, **31** and both the first and second peaks P1, P2. That is, the handle **100** is formed in part by the body **10** and in part by the member **50**. The member **50** may have any of the above-described properties of the first member **20** discussed above. That is, the member **50** may be softer than the body **10**. In the embodiment illustrated in FIG. **5**, the member **50** is softer than the body **10**. In some embodiments, including the embodiment illustrated in FIG. **5**, the member **50** has an exterior surface with a higher coefficient of friction than an exterior surface of the body **10**. In some embodiments, including the embodiment illustrated in FIG. **5**, the member **50** is made from an elastomeric and/or resilient material, such as an elastomer (e.g. a thermoplastic elastomer). In the embodiment illustrated in FIG. **5**, the body **10** is formed of a thermoplastic polymer, e.g. polyethylene terephthalate (PET) or polypropylene (PP). Accordingly, the relatively rigid material of the body **10** provides the handle **100** with strength and rigidity, whereas the relative soft and resilient material of the member **50** makes the first and second grip regions **21**, **31** suitable for gripping by a user.

[0082] By comprising the first and second grip regions **21**, **31** in the member **50**, as opposed to in the body **10**, it is also possible easily to indicate to users the positions and intended uses of the first and second grip regions **21**, **31**. In some embodiments, including the embodiment illustrated in FIG. **5**, the member **50** is of a different color to the body **10**. Accordingly, a user is able readily to determine the location on the handle **100** of the member **50** comprising the first and second grip regions **21**, **31**. In the embodiment illustrated in FIG. **5**, the first and second grip regions **21**, **31** are the same colour as each other. More specifically, the body **10** is blue, and the member **50** is green. However, by blending materials or colorants when injection molding the member **50** onto the body **10**, in some embodiments the first grip region **21** may be of a different color to the second grip region **31**. By comprising the first and second grip regions **21**, **31** in a common member **50**, manufacture of the toothbrush **6** is simplified, as fewer components need to be assembled or molded.

[0083] In some embodiments, one or each of the first and second grip regions **21**, **31** has a higher coefficient of friction than a portion of the handle **100** surrounding that grip region **21**, **31**. In the embodiment illustrated in FIG. **5**, each of the first and second grip regions **21**, **31** has a higher coefficient of friction than a portion of the handle **100** surrounding that grip region **21**, **31**. That is, the first grip region **21** has a higher coefficient of friction than the portion of the member **50** surrounding the first grip region **21** due to the provision of the plurality of parallel alternating grooves and bumps of the first grip region **21**, and the second grip region **31** has a higher coefficient of friction than the portion of the body **10** surrounding the second grip region **31** due to the difference in materials of the member **50** and the body **10**.

[0084] In the embodiment illustrated in FIG. **5**, the member **50** comprises the first palm grip region **22** and the second palm grip region **32**, and the first and second palm grip regions **22**, **32** are unitary with the first and second grip regions **21**, **31** via passages through the body **10**. However, the first palm grip region **22**, the first grip region **21**, the second palm grip region **32** and the second grip region **31** are out of contact with each other at the exterior surface of the handle **100**.

[0085] The handle **100** of the embodiment of FIG. **5** has an exterior surface profile that that defines the first and second peaks P1, P2 on the first side **4** of the toothbrush **6**. Other than both being defined by the member **50**, the first and second peaks P1, P2 of the embodiment of FIG. **5** are the same as the first and second peaks P1, P2 of the embodiment of FIGS. **1** to **4**. By comprising the first and second peaks P1, P2 in the member **50**, as opposed to in the body **10**, it is possible to provide the first and second peaks P1, P2 with properties different to those that would be possible were the first and second peaks P1, P2 instead formed by the body **10**. Indeed, in the illustrated embodiment, each of the first and second peaks P1, P2 is softer than the body **10**, which makes contact with the peaks by a user comfortable, and each of the first and second peaks P1, P2 has a higher coefficient of friction than the exterior surface of the body **10**, thus aiding transmission of longitudinal forces applied to the first and second peaks P1, P2 to the rest of the toothbrush **1**. Moreover, by comprising the first and second peaks P1, P2 in the member **50**, as opposed to in the body **10**, it is also possible easily to indicate to users the positions of the first and second peaks P1, P2. In the embodiment illustrated in FIG. **5**, the second peak P2 is of a different color to a portion of the handle **100** surrounding the second peak P2. In variations to the illustrated embodiment, the first peak P1 additionally or alternatively is of a different color to a portion of the handle **100** surrounding the first peak P1.

[0086] In a variation to the embodiments illustrated in FIGS. **1** to **5**, and as shown in FIG. **6**, in another embodiment, the handle **100** comprises a body **10**, the body **10** comprising both the first and second visibly demarcated grip regions **21**, **31** and both the first and second peaks P1, P2. That is, the handle **100** may be formed entirely, or substantially entirely, by the body **10**. In the embodiment illustrated in FIG. **6**, the body **10** is formed of a thermoplastic polymer, e.g. polyethylene terephthalate (PET) or polypropylene (PP).

[0087] In some embodiments, including the embodiment illustrated in FIG. **6**, the positions and intended uses of the first and second grip regions **21**, **31** may be indicated to users by including paint(s) on the body **10** at the location of the first and second grip regions **21**, **31**, which paint is of a different color to the body **10**. In some embodiments, including the embodiment illustrated in FIG. **6**, the body **10** has a first paint of a first color at the location of the first grip region **21** and a second paint of a second color at the location of the second grip region **31**, which second color is different

to the first color and the color of the body **10**. In some embodiments, including the embodiment illustrated in FIG. **6**, the positions and intended uses of the first and second grip regions **21**, **31** also are indicated by providing that the first and second grip regions **21**, **31** have different textures to an exterior surface of the respective portions of the handle **100** surrounding the first and second grip regions **21**, **31**.

[0088] In some embodiments, one or each of the first and second grip regions **21**, **31** has a higher coefficient of friction than a portion of the handle **100** surrounding that grip region **21**, **31**. In the embodiment illustrated in FIG. **6**, each of the first and second grip regions **21**, **31** has a higher coefficient of friction than a portion of the handle **100** surrounding that grip region **21**, **31**. That is, the first grip region **21** has a higher coefficient of friction than the portion of the body **10** surrounding the first grip region **21**, and the second grip region **31** has a higher coefficient of friction than the portion of the body **10** surrounding the second grip region **31**.

[0089] In the embodiment illustrated in FIG. **6**, the body **10** also comprises the first palm grip region **22** and the second palm grip region **32**. The first and second palm grip regions **22**, **32** may be of different colors and/or textures to respective portions of the body **10** surrounding the first and second palm grip regions **22**, **32**.

[0090] The handle **100** of the embodiment of FIG. **6** has an exterior surface profile that that defines the first and second peaks P**1**, P**2** on the first side **4** of the toothbrush **7**. Other than both being defined by the body **10**, the first and second peaks P**1**, P**2** of the embodiment of FIG. **6** are the same as the first and second peaks P**1**, P**2** of the embodiment of FIGS. **1** to **4**.

[0091] Whereas in the illustrated embodiments the second grip region **31** comprises an image of a bowtie, in variations to these embodiments the second grip region **31** may comprise an image of something other than a bowtie, such as an image of one or more of a cartoon character or famous person, an object, or a geometrical shape. In other variations to the illustrated embodiment, the second grip region **31** does not comprise an image.

[0092] In variations to the illustrated embodiments, the first grip region **21** additionally or alternatively is of a different color to a portion of the handle **100** surrounding the first grip region **21**. In variations to the illustrated embodiments, the first grip region **21** additionally or alternatively comprises an image. In variations to the illustrated embodiments, the second grip region **31** additionally or alternatively comprises a plurality of parallel alternating grooves and bumps.

[0093] Whereas in the illustrated embodiments the first grip region **21** comprises a plurality of parallel alternating grooves and bumps, in variations to the illustrated embodiments, one or each of the first and second grip regions **21**, **31** comprises one or more depressions, ridges, nubs, bumps or grooves. Herein, a "nub" is generally meant to include a column-like protrusion (without limitation to the cross-sectional shape of the protrusion) which is upstanding from a base surface. In a general sense, the nub, in the preferred construction, has a height that is greater than the width at the base of the nub (as measured in the longest direction). Nevertheless, nubs could include projections wherein the widths and heights are roughly the same or wherein the heights are somewhat smaller than the base widths. Moreover, in some circumstances (e.g., where the nub tapers to a tip or includes a base portion that narrows to a smaller projection), the base width can be substantially larger than the height.

[0094] In respective variations to the illustrated embodiments, the handle **100** may comprise first and second sections, wherein the first section is detachable from the second section. The first section may comprise the first grip region **21** and/or the first peak P**1**. The second section may comprise the second grip region **31** and/or the second peak P**2**. The first section may be detachably attached to the second section by a mechanical connection, which may comprise one of a friction fit connection, a snap fit connection, a bayonet connection, and a threaded connection. Accordingly, if and when the adult, teacher or caregiver considers that the child, student or dependent person is capable of carrying out oral care effectively and safely without requiring assistance, they are able to detach the first section of the handle **100** from the second section of the handle **100** in order to permit the child, student or dependent person to perform oral care on their own.

[0095] Whereas in the illustrated embodiments the handle **100** of each of the oral care implements **1**, **6**, **7** comprises first and second visibly demarcated grip regions **21**, **31**, in variations to the illustrated embodiments the first visibly demarcated grip region **21** is omitted, or the second visibly demarcated grip region **31** is omitted, or both the first and second visibly demarcated grip regions **21**, **31** are omitted. Whereas in the illustrated embodiments the handle **100** of each of the oral care implements **1**, **6**, **7** comprises first and second peaks P**1**, P**2**, in variations to the illustrated embodiments the first peak P**1** is omitted, or the second peak P**2** is omitted, or both the first and second peaks P**1**, P**2** are omitted.

[0096] In embodiments in which some or all the first and second visibly demarcated grip regions **21**, **31** and some or all of the first and second peaks P**1**, P**2** are omitted, preferably a length of the handle **100** between the proximal end **101** of the handle **100** and the distal end **102** of the handle **100** is at least 170 millimeters, more preferably the length of the handle **100** is at least 185 millimeters, and more preferably the length of the handle **100** is at least 200 millimeters. Accordingly, the handle still is simultaneously grippable by an adult, teacher or caregiver and a child, student or dependent person, when the child, student or dependent person requires assistance when carrying out effective and safe oral care using the toothbrush.

[0097] In embodiments in which some or all the first and second visibly demarcated grip regions **21**, **31** and some or all of the first and second peaks P**1**, P**2** are omitted, preferably a length of the toothbrush between the proximal end **101** of the handle **100** and the distal end **202** of the head **200** is at least 200 millimeters, more preferably the length of the toothbrush is at least 225 millimeters, and more preferably the length of the toothbrush is at least 250 millimeters.

[0098] Other modifications and embodiments of the present invention will be apparent to those skilled in the art in light of the present disclosure.

We claim:

1. An oral care implement, comprising:

an elongate handle having a proximal end, a distal end and a longitudinal axis; and

a head at the distal end of the handle, the head comprising one or more oral care elements on a first side of the oral care implement;

wherein the handle comprises first and second visibly demarcated grip regions on the first side of the oral care implement, wherein the first grip region is between the second grip region and the proximal end of the handle, wherein the first grip region is between 60 and 100 millimeters from the proximal end of the handle, and wherein the first and second grip regions are spaced apart by between 50 and 100 millimeters in a direction parallel to the longitudinal axis.

2. The oral care implement of claim **1**, wherein the first grip region is between 70 and 90 millimeters from the proximal end of the handle.

3. The oral care implement of claim **1**, wherein the first and second grip regions are spaced apart by between 65 and 85 millimeters in a direction parallel to the longitudinal axis.

4. The oral care implement of claim **1**, wherein the first grip region has a higher coefficient of friction than a portion of the handle surrounding the first grip region, and/or wherein the second grip region has a higher coefficient of friction than a portion of the handle surrounding the second grip region.

5. The oral care implement of claim **1**, wherein the handle comprises a body, a first member fixed to the body and comprising the first grip region, and a second member fixed to the body and comprising the second grip region.

6. The oral care implement of claim **5**, wherein the first member is out of contact with the second member at an exterior surface of the handle.

7. The oral care implement of claim **5**, wherein the first member is softer than the body and/or wherein the second member is softer than the body.

8. The oral care implement of claim **5**, wherein an exterior surface of the first member has a higher coefficient of friction than an exterior surface of the body and/or wherein an exterior surface of the second member has a higher coefficient of friction than an exterior surface of the body.

9. The oral care implement of claim **5**, wherein the first member and/or the second member are made of an elastomeric material, such as an elastomer.

10. The oral care implement of claim **5**, wherein the first member is of a different color to the body and/or wherein the second member is of a different color to the body, and/or wherein the second member is of a different color to the first member.

11. The oral care implement of claim **1**, wherein the handle comprises a body and a member fixed to the body, the member comprising the first and second grip regions.

12. The oral care implement of claim **11**, wherein the member is softer than the body.

13. The oral care implement of claim **11**, wherein an exterior surface of the member has a higher coefficient of friction than an exterior surface of the body.

14. The oral care implement of claim **11**, wherein the member is made of an elastomeric material, such as an elastomer.

15. The oral care implement of claim **11**, wherein the member is of a different color to the body.

16. The oral care implement of claim **5**, wherein at least a portion of the head is formed by the body.

17. The oral care implement of claim **1**, wherein one or both of the first and second grip regions comprises one or more depressions, ridges, nubs, bumps or grooves.

18. The oral care implement of claim **1**, wherein the first grip region is of a different color and/or texture to a portion of the handle surrounding the first grip region, and/or wherein the second grip region is of a different color and/or texture to a portion of the handle surrounding the second grip region, and/or wherein the second grip region is of a different color and/or texture to the first grip region.

19. The oral care implement of claim **1**, wherein the second grip region comprises an image.

20. The oral care implement of claim **1**, wherein a first section of the handle comprising the first grip region is detachable from a second section of the handle comprising the second grip region.

21. An oral care implement, comprising:

an elongate handle having a proximal end, a distal end and a longitudinal axis; and

a head at the distal end of the handle, the head comprising one or more oral care elements on a first side of the oral care implement;

wherein the handle has an exterior surface profile that defines first and second peaks on the first side of the oral care implement, wherein the first peak is between the second peak and the proximal end of the handle, wherein the first peak is between 75 and 125 millimeters from the proximal end of the handle, and wherein the first and second peaks are spaced apart by between 60 and 100 millimeters in a direction parallel to the longitudinal axis.

22. (canceled)
23. (canceled)
24. (canceled)
25. (canceled)
26. (canceled)
27. (canceled)
28. (canceled)
29. (canceled)
30. (canceled)
31. (canceled)
32. (canceled)
33. (canceled)
34. (canceled)
35. (canceled)
36. (canceled)
37. (canceled)
38. (canceled)

39. An oral care implement, comprising:

an elongate handle having a proximal end, a distal end and a longitudinal axis; and

a head at the distal end of the handle, the head comprising a base portion, one or more oral care elements attached to the base portion; and a neck portion;

wherein the neck portion of the head has a smaller cross sectional area perpendicular to the longitudinal axis than each of the handle and the base portion of the head; and

wherein a length of the handle between the proximal end of the handle and the distal end of the handle is at least 170 millimeters.

40. (canceled)
41. (canceled)
42. (canceled)
43. (canceled)
44. (canceled)
45. (canceled)
46. (canceled)
47. (canceled)

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