A TOOTH CARE IMPLEMENT

The present invention relates to a tooth care implement and in particular to a combination tooth care implement that contains more than one tooth care attachment, such as, but not limited thereto a toothbrush head and a dental floss head.

Numerous dental care implements are known in the art, the most common being a toothbrush. Toothbrushes are provided in many different designs and configurations. The other common daily dental care implement includes dental floss which is usually available wound on a reel. Disposable dental floss brackets are also available which comprises a Y-shaped bracket having a length of dental floss taught between the free ends of the bracket. In recent years, many other dental care implements have been designed and made available on the market. Using and keeping various tooth care implements separately is awkward and inconvenient for many users. Combination toothbrushes are known that include a tooth brush head and a handle having an internal compartment for storing a reel of dental floss. However, not all users prefer the reeled version of dental floss. Therefore, there is still a need in the art for an improved combination tooth care implement.

It is acknowledged that the term 'comprise' may, under varying jurisdictions be provided with either an exclusive or inclusive meaning. For the purpose of this specification, and unless otherwise noted explicitly, the term comprise shall have an inclusive meaning that it may be taken to mean an inclusion of not only the listed components it directly references, but also other non-specified components. Accordingly, the term 'comprise' is to be attributed with as broad an interpretation as possible within any given jurisdiction and this rationale should also be used when the terms 'comprised' and/or 'comprising' are used.

Accordingly, it is the object of the present invention to provide a combination tooth care implement that alleviates the drawbacks of the prior art.

Accordingly, the invention provides a tooth care implement comprising

a handle unit comprising a grippable base portion and shaft portion extending therefrom, the shaft portion having a free end remote from the grippable base portion; and

an arm having first and second ends, and a tooth care attachment mounted at each end; the arm being pivotally coupled with the handle unit adjacent the free end of the shaft portion such that the arm can be moved between first and second positions with respect to the shaft portion of the handle unit, such that

in the first position a portion of the arm containing the first tooth care attachment extends away from the shaft portion of the handle unit such that the first tooth care attachment can be used, and the remaining portion containing the second tooth care attachment is positioned adjacent the shaft portion of the handle unit; and

in the second position a portion of the arm containing the second tooth care attachment extends away from the shaft portion of the handle unit such that the second tooth care attachment can be used, and the remaining portion containing the first tooth care attachment is positioned adjacent the shaft portion of the handle unit.

In a preferred modification the arm is pivotally coupled with the handle unit at a location intermediate the first and second ends of the arm, such that the arm can pivot easily between the first and second positions.

Preferably, the arm is releasably coupled with the handle unit.

In one arrangement, the arm is coupled with the handle unit via interengageable fastening means provided on the arm and on the handle unit, such as for example, but not limited thereto, a pin or a screw arrangement or a resiliently deformable snap fit and release coupling.

In one embodiment, the handle unit defines a cavity for accommodating the portion of the arm positioned adjacent the handle unit together with the tooth care attachment attached thereto, such that said portion of the arm is recessed with regard to outer surfaces of the handle unit thereby concealing the unemployed tooth care attachment when the other tooth care attachment is in a ready to use position. Since the tooth care attachment concealed in such a manner does not interfere with the function of the other tooth attachment at the other end of the arm, such an arrangement dispenses with the need to remove the unemployed tooth care attachment when the other attachment is in use. Thus, the two tooth care attachments can remain attached to the arm at all times during regular use and the user does not have to detach and re-attach the attachment for each use save for replacing worn attachments as necessary.

In one embodiment, the shaft portion of the handle unit comprises a pair of prongs each prong having a free end, the cavity being defined as the space between a pair of opposing inner faces of the pair of prongs. The arm is preferably pivotally mounted between free ends of the prongs, such that in the first and second positions one portion of the arm containing the unemployed tooth care attachment is accommodated in the space between the prongs and the other portion of the arm with the other tooth care attachment extends away from the free ends of the prongs in the ready to use position.

In one modification, the fastening means between the arm and the prongs comprises an axle about which the arm can pivot. Conveniently the axle is inserted through suitably sized and shaped bores formed through each prong and the arm. An example of a suitable axle, but not limited thereto, is any one of a screw, pin or rod.

In a further modification, the fastening means comprises a pair of pins provided on a pair of opposing outer faces of the arm, the pins being engageable with corresponding through bores formed in the prongs. Optionally the pins could be integrally formed with the arm, thus forming projecting members on opposing outer faces of the arm. Preferably, a slot is formed between the interior of the through bore and outer surface of a prong transversely in relation to the bore, thereby defining a pair of resiliently deformable flaps, such that the pin or projecting members of the arm can access the through bore laterally through the slot. A suitable cap is preferably provided for placing over a free end of each pin for securing the pin in engagement with the corresponding prong.

In a still further modification, the fastening means comprises a pair of projecting members provided on a pair of opposing outer faces of the arm. Optionally the projecting members are integrally formed with the arm. Preferably a U-shaped channel is formed at the free end of each prong, wherein the projecting members pass through the opening of the U-shaped channel to seat into the base of the U-shaped channel. A tapered member is preferably formed on each of the opposing inner faces of each prong extending from the free end of each prong towards the grippable base portion such that the distance between the opposing inner faces of the prongs diminishes from the free end of each prong to the grippable base portion. Conveniently in this arrangement, the arm and tapered member are complimentary shaped such that the projecting members are unable to seat correctly within the U-shaped channel unless the arm and prongs are in correct alignment. In this arrangement, when the arm and prongs are in correct alignment the tapered member resiliently engages with a portion of the arm thereby locking the arm in position with respect to the handle unit.

In yet another modification, the fastening means comprises a key member provided at each of the opposing outer faces of the arm. Each key member is preferably engageable with a corresponding slot formed in a rotating receiver rotatably mounted in a seat defined at the free end of each prong. Another slot is formed extending between the seat of the receiver and outer surface of the prong such that when the slot of the receiver is aligned with the slot in the prong, the key can be engaged with the slot of the receiver by passing it through the second slot. Ideally, the keys are located on the arm in such orientation

that when the keys engage with the aligned slots in the prongs and in the receiver, the arm is positioned with respect to the handle unit in a third position, intermediate the first and second positions of the arm. On rotation of the arm from this intermediate position towards the first or the second position, the slots of the receiver misalign with the slots of the prongs and thereby secure the arm in the engagement with the prongs in any position of the arm with respect to the prongs, other than the intermediate position of the arm.

In a most preferred embodiment, the handle unit comprises a lock means configured for releasably locking the arm in the first or the second position with respect to the handle unit.

In one arrangement, the locking means comprises a catch arrangement configured for releasably fastening the portion of the arm positioned adjacent the handle unit.

In one variation, the catch arrangement comprises a snap fit and release mechanism comprising a resiliently deformable member formed on each of the inner opposing faces of the prongs such that when the arm enters the cavity the two resiliently deformable members deform and resiliently engage the arm thereby locking the arm with respect to the handle unit.

In another variation the catch arrangement is formed at the point of attachment of the arm to the handle unit. It will be appreciated by those skilled in the art that many other releasable lock arrangements are possible within the scope of the present invention for releasably locking the arm in the first or second positions with respect to the handle unit.

Ideally, each of the first and second ends of the arm comprises a means for releasably engaging with a tooth care attachment thereby enabling a user to replace the tooth care attachment when desired.

In a preferred embodiment, the handle unit defines an internal chamber adapted for storage of one or more tooth care attachments.

More preferably, a holder means is provided in the internal chamber, the holder means being configured for holding the one or more of tooth care attachments.

Preferably, the holder means comprises a rack shaft extending along the internal chamber, the rack shaft comprising a plurality of positions for holding tooth care attachments.

In one modification, the grippable base portion of the handle unit comprises a tubular wall and the internal chamber is defined by the tubular wall.

In a further arrangement, the grippable base portion and the shaft portion of the handle unit are releasably engageable to form the handle unit. The engagement and release of the grippable base portion and the shaft can be achieved in many ways apparent to those skilled in the art, such as for example a thread or a resiliently deformable snap fit and release coupling.

In another arrangement, the shaft portion comprises a rack shaft attached thereto, such that when the shaft portion and the grippable base portion are engaged, the rack shaft enters the internal chamber through an open end of the grippable base portion and the open end is blocked by the body of the shaft portion.

In a further arrangement the grippable base portion comprises an open end remote from the shaft portion. In this arrangement the rack shaft comprises a removable insert that enters the internal chamber through the open end of the grippable base portion thereby closing the grippable base portion.

In a preferred embodiment, the tooth care attachment at the first end of the arm comprises a tooth brush head and the tooth care attachment at the second end of the arm comprises a disposable dental floss head. The dental floss head is preferably a single use head which comprises a bracket member having a length of dental floss taught thereon. It will be appreciated by those skilled in the art, that the invention is not limited to the combination of the tooth brush head and the dental floss head. Indeed, a combination of any tooth care attachments, of different or the same type is contemplated within the scope of the present invention.

The above described arrangement provides a combination tooth care implement that has more than one tooth care attachment, preferably, but not limited thereto, of a different type, and which provides the user with the convenience of having the two attachments readily available at all times without the need to detach and re-attach the different attachments.

The invention will hereinafter be described with reference to the accompanying drawings which show by way of example only, embodiments of a tooth care implement according to the invention.

Figure 1 is a front elevation of a combination tooth care implement according to the invention, comprising a tooth brush attachment and a dental floss head attachment;

Figure 2 is a side elevation of the tooth care implement of Figure 1;

Figure 3 is a rear elevation of the tooth care implement of Figures 1 and 2;

Figure 4 is a perspective view of a handle unit of the tooth care implement of the invention;

Figures 5 and 6 are respectively rear and side elevations of a shaft portion of the handle unit of Figure 4;

Figure 7 is a side elevation of a modification of the shaft portion of Figures 5 and 6;

Figure 8 is a perspective view of a section of a shaft portion of Figures 5 to 7 showing a rack shaft holding a plurality of tooth care attachments;

Figure 9 is a perspective view of a grippable base portion of a handle unit of Figure 4;

Figures 10 and 11 are perspective views of modifications of the rack shaft of Figure 8;

Figure 12 is a perspective view of a modification of the grippable base portion of Figure 9;

Figures 13 to 15 are perspective views of variations of fastening means for coupling a rotating arm of the tooth care implement of the invention to the handle unit thereof;

Figure 16 is a rear elevation of a further embodiment of a combination tooth care implement according to the invention;

Figure 16a is an exploded perspective view of a handle unit and removable insert of the tooth care implement of Figure 16;

Figure 17 is a side elevation of the tooth care implement of Figure 16 wherein the arm portion is out of alignment with the shaft portion;

Figure 18 is a side elevation of the tooth care implement of Figure 16 wherein the arm portion is in alignment with the shaft portion;

Figure 19 is a perspective view of a handle unit of the tooth care implement of Figure 16;

Figure 20 is a perspective view of the arm and handle unit of the tooth care implement of Figure 16;

Figure 21 is a perspective view of the arm and handle unit of the tooth care implement of Figure 16 when out of alignment; and

Figure 22 is a perspective view of the arm and handle unit of the tooth care implement of Figure 16 when in alignment.

Referring to initially to Figures 1 to 3, a tooth care implement of the invention is indicated generally by reference numeral 1. The tooth care implement 1 comprises a handle unit 2 (see also Figure 4) which comprises a grippable base portion 3 and a shaft portion 4 extending from the grippable base portion 3. The grippable base portion 3 and the shaft portion 4 are releasably engageable. The shaft portion 4 comprises a pair of prongs 5, each prong 5 having a free end 5a. A cavity 6 is defined between inner opposing faces 5b of the prongs 5.

An arm 7 is pivotally releasably engaged with the free ends 5a of the prongs 5. The arm 7 has first and second ends 7a, 7b and is engaged with the prongs 5 at a point intermediate the ends 7a, 7b. A tooth care attachment is mounted at each end 7a, 7b.

In the presently described embodiment, the tooth care attachment mounted at the first end 7a comprises a toothbrush head 8, and the tooth care attachment mounted at the second end 7b of the arm 7 comprises a dental floss head 9. The dental floss head 9 is a single-use head and comprises a bracket member 9a having a length of dental floss 9b taught thereacross (see Figure 8).

The arm 7 is engaged with the prongs 5 such that the arm 7 can be rotated between first and second positions with respect to the handle unit 2. As shown in Figures 1 to 3 in a first position a portion of the arm 7 containing the tooth brush head 8 extends away from the free ends 5a of the prongs 5 and from the handle unit 2. At the same time, the portion of the arm 7 on the other side of the rotation axis of the arm 7 and containing the dental floss head 9 is accommodated in the cavity 6 between the prongs 5. In this position, the tooth brush head 8 is in a ready to use mode, and the dental floss head 9 is concealed within the cavity 6. Likewise, in a second position (not shown) a portion of the

arm 7 containing the dental floss head 9 extends away from the free ends 5a of the prongs 5 and from the handle unit 2 whilst the tooth brush head 8 and the relevant portion of the arm 7 are concealed within the cavity 6. The cavity 6 is sized and shaped for concealing the unemployed arm portion together with the tooth care attachment attached thereto in a manner that the concealed attachment does not interfere with the function of the other tooth attachment at the other end of the arm 7. This arrangement eliminates the need to remove the unemployed tooth care attachment in order to use the other tooth care attachment so that the two tooth care attachments remain attached to the arm 7 at all times during regular use.

As shown in Figures 5 to 7, the handle unit 2 comprises a snap fit and release lock 10 for releasably locking the arm 7 in the first or the second position with respect to the handle unit 2. The snap fit and release lock 10 comprises a resiliently deformable lip 11 formed on each the inner opposing inner faces 5b of the prongs 5 for engaging the arm 7. When the arm 7 enters the cavity 6, the lips 11 resiliently deform under the external force applied to the arm 7 so that the arm 7 is caught between the lips 11. The resilient force of the lips 11 acting on the arm 7 is sufficient to retain the arm 7 in place during the use of the other tooth care attachment. In order to move the arm 7 into the second position, continued application of an external force to the arm 7 deforms the lips 11 and releases the arm 7.

As shown in Figures 9 and 12, the grippable base portion 3 of the handle unit 2 comprises a tubular wall which defines an internal chamber 12 and an open end 12a. As shown in Figures 8, 10 and 11, the shaft portion 4 comprises a rack shaft 14 extending from a base portion 4a of the shaft portion 4. When the shaft portion 4 and the grippable base portion 3 are engaged, the rack shaft 14 enters the internal chamber 12 and the open end 12a of the internal chamber is blocked by the base portion 4a of the shaft portion 4. The rack shaft 14 comprises a plurality of positions in the form of recesses 14a for holding a plurality of dental floss heads 9. Figure 8 shows a modification of the rack 14 which has the recesses 14a formed along one side of the shaft 14 and the dental floss heads 9 are held in the recesses such that the bracket 9 and the floss 9a surround the rack shaft 14. Figure 10 shows another modification of the rack 14 which has the recesses 14a are formed in a staggered manner along two opposing sides of the shaft 14 and the dental floss heads 9 are held in the recesses 14a in the same manner as in Figure 8. In the modification of the rack shaft 14 shown in Figure 11, the rack shaft is attached to the base portion 4a at a location offset from the centre of the base portion 4a. The recesses 14a are formed along one side of the shaft 14 and the dental floss heads 9 are held in the recesses 14a such that the dental floss heads 9 extend laterally from the shaft 14 in alignment with the base portion 4a.

In a further embodiment of the invention as shown in Figures 16 and 16a, the grippable base portion 3 comprises a tubular wall defining an inner chamber 120 with an open end 120b remote from the shaft portion 4. A removable insert 100 comprising a rack shaft 140 is housed in the inner chamber 120. The base 100b of the removable insert 100 closes the open end 120b of the inner chamber 120. It is understood that the rack shaft 140 comprises a plurality of positions in the form of recesses for holding a plurality of dental floss heads. It is also understood that the various modifications made to the rack shaft 14 apply equally to rack shaft 140.

As shown in Figures 8 and 9 the engagement and release of the grippable base portion 3 and the shaft portion 4 is achieved via mating threads on the grippable base portion 3 and the shaft portion 4. In the modification shown in Figures 11 and 12, the grippable base portion 4 comprises resiliently deformable mugs 15 for releasably engaging with corresponding recesses 16 formed in the base portion 4a of the shaft portion 4. Although not shown, it is understood that means for engagement and release of the removable insert 100 from the grippable base portion 3 could also be achieved using but not limited to either of these methods.

Figures 13 to 22 show modification of fastening means for rotatably coupling the arm 7 with the prongs 5.

In the modification of Figure 13, a screw 17 is inserted through suitably sized and shaped bores 18 formed through each prong 5 and the arm 7.

Figure 14 shows a pair of pins 19 provided at a pair of opposing outer faces of the arm 7. The pins 19 are engageable with corresponding through bores 20 formed in the prongs 5. A slot 21 is formed between the interior of the through bore 20 and outer surface of a prong 5 transversely in relation to the bore 20, such that the pin 19 of the arm 7 can access the through bore 20 laterally through the slot 21. A suitable cap (not shown) is provided for placing over a free end of each pin 19 for securing the pin 19 in engagement with the corresponding prong 5.

In the modification of Figure 15, the fastening means comprises a key member 22 provided at each of the opposing outer faces of the arm 7. Each key member 22 engages with a corresponding slot 23 formed in a rotating receiver 24 rotatably mounted at the free end 5a of each prong 5 in a seat 25 defined by the material of the prong 5. Another slot 26 is formed extending between the seat 25 and outer surface of the prong 5. When the slot 23 of the receiver 24 is aligned with the slot 26 in the prong 5, the key 22

can pass through the slot 26 into the slot 25 of the receiver 24. The keys 22 are mounted on the arm 7 in a transverse orientation with respect to the arm such that when the keys 22 engage with the aligned slots 23 and 26, the arm 7 is positioned with respect to the handle unit 2 in a third position as shown in Figure 15, intermediate the first and second positions of the arm 7. On rotation of the arm 7 from this intermediate position towards the first or the second position, the slots 23 of the receiver 24 misalign with the slots 26 of the prongs 5 and thereby secure the arm 7 in the engagement with the prongs 5 in any position of the arm 7 with respect to the prongs 5, other than the intermediate position of the arm 7.

In a further modification shown in Figures 16 to 22 the fastening means for coupling the arm 7 with the prongs 5 comprises a pair of projecting members 30 provided on each of the opposing outer faces of the arm 7 intermediate the first and second ends 7a and 7b. Each of projecting members 30 seat into a U-shaped channel 31 provided on the free end 5a of each prong 5. A tapered member 32 is formed on each of the opposing inner faces 5b of prongs 5 extending towards the grippable base portion 3 of the handle unit 2 such that the distance between the opposing inner faces 5b of prongs 5 diminishes from the free end 5a of each prong towards the grippable base portion 3 of the handle unit 2. The tapered member 32 extends around U-shaped channel 31 such that the tapered member also forms a U-shaped channel. The width of arm 7 increases from each end 7a and 7b to a maximum width at the portion 7c of the arm intermediate each end 7a and 7b where the projecting members 30 are positioned. The width of the intermediate portion 7c prevents the arm 7 from fully entering the U-shaped channel 31 unless in the correct alignment.

Referring specifically to Figures 20, 21 and 22 there is shown arm 7 being brought into engagement with handle portion 2. Projecting members 30 are engaged in U-shaped channel 31. When arm 7 is incorrectly aligned, the intermediate portion 7c abuts tapered lip 32a as the distance between the opposing inner faces 5b of prongs 5 diminishes. This prevents projecting members 30 from moving further into the U-shaped channel 31 as shown in Figure 21. Referring now to Figure 22, there is shown arm 7 correctly aligned whereby the intermediate portion 7c inserts between the arms 32a of tapered member 32 surrounding the U-shaped channel 31 thus allowing projecting members 30 to fully seat at the base of the U-shaped channel 31 (as shown in Figure 18). The resilient force of the tapered member acting on the arm 7 provides a pressure fit that is sufficient to retain the arm 7 in place during the use of the other tooth care attachment.

Although not shown from the drawings, the brush head 8 and the dental floss head 9 are releasably engaged with the arm 7 via a fastening means. This enables a user to replace the tooth care attachment as desired.

It will be understood that the preferred embodiment or embodiments of the present invention have been disclosed by way of example and that other modifications and alterations may occur to those skilled in the art without departing from the scope of the invention.

CLAIMS:

1. A tooth care implement (1) comprising

a handle unit (2) comprising a grippable base portion (3) and shaft portion (4) extending therefrom, the shaft portion (4) having a free (5a) end remote from the grippable base portion (3); and

an arm (7) having first and second ends (7a), and a tooth care attachment (8, 9) mounted at each end; the arm (7) being pivotally coupled with the handle unit (2) adjacent the free end (5a) of the shaft portion such that the arm (7) can be moved between first and second positions with respect to the shaft portion (4) of the handle unit (2), such that

in the first position a portion of the arm (7) containing the first tooth care attachment (8) extends away from the shaft portion (4) of the handle unit (2) such that the first tooth care attachment (8) can be used, and the remaining portion containing the second tooth care attachment (9) is positioned adjacent the shaft portion (4) of the handle unit (2); and

in the second position a portion of the arm (7) containing the second tooth care attachment (9) extends away from the shaft portion (4) of the handle unit (2) such that the second tooth care attachment (9) can be used, and the remaining portion containing the first tooth care attachment (8) is positioned adjacent the shaft portion (4) of the handle unit (2).

2. A tooth care implement as claimed in Claim 1, wherein the handle unit (2) comprises a lock means configured for releasably locking the arm (7) in the first or the second position with respect to the handle unit (2).

3. A tooth care implement as claimed in Claim 2, wherein the arm (7) is pivotally coupled with the handle unit (2) at a location intermediate (7c) the first and second ends of the arm (7a, 7b), such that the arm can pivot between the first and second positions.

4. A tooth care implement as claimed in Claims 2 or 3, wherein the handle unit (2) defines a cavity (6) for accommodating the portion of the arm positioned adjacent the handle unit (2) together with the tooth care attachment attached thereto, such that said portion of the arm (7) is recessed with regard to outer surfaces of the handle unit thereby concealing the unemployed tooth care attachment when the other tooth care attachment is in a ready to use position.

5. A tooth care implement as claimed in any one of the preceding claims, wherein the shaft portion (4) of the handle unit (2) comprises a pair of prongs (5) each prong having a

free end (5a), the cavity (6) being defined as the space between a pair of opposing inner faces (5b) of the pair of prongs.

6. A tooth care implement as claimed in Claim 5, wherein the arm is pivotally mounted between free ends (5a) of the prongs (5), such that in the first and second positions one portion of the arm (7) containing the unemployed tooth care attachment is accommodated in the space between the prongs (5) and the other portion of the arm with the other tooth care attachment extends away from the free ends of the prongs (5) in the ready to use position.

7. A tooth care implement as claimed in Claim 6, wherein the arm (7) is coupled with the handle unit (2) via interengageable fastening means provided on the arm and on the handle unit.

8. A tooth care implement as claimed in Claim 7, wherein the fastening means between the arm and the prongs comprises an axle (17, 19), which is inserted through suitably sized and shaped bores formed through each prong and the arm.

9. A tooth care implement as claimed in Claim 8, wherein the axle is any one of a screw, pin or rod.

10. A tooth care implement as claimed in Claim 7, wherein the fastening means comprises a pair of pins (19) provided on a pair of opposing outer faces of the arm, the pins being engageable with corresponding through bores (20) formed in the prongs (5), wherein a slot (21) is formed between the interior of the through bore and outer surface of a prong transversely in relation to the bore, thereby defining a pair of resiliently deformable flaps, such that the pin of the arm can access the through bore laterally through the slot, and wherein a cap is provided for placing over a free end of each pin for securing the pin in engagement with the corresponding prong.

11. A toothcare implement as claimed in Claim 7, wherein the fastening means comprises a pair of projecting members (30) provided on a pair of opposing outer faces of the arm, wherein the projecting members (30) seat at the base (31b) of a U-shaped channel (31) formed at the free end (5a) of each prong (5), wherein a tapered member (32) is formed on each of the opposing inner faces (5b) of each prong (5) extending from the free end (5a) of each prong (5) towards the grippable base portion (3) such that the distance between the opposing inner faces of the prongs diminishes from the free end of each prong to the grippable base portion, wherein the arm (7) and tapered member (32) are complimentary shaped such that the projecting members (30) seat correctly at the

base (31b) of U-shaped channel (31) when the arm (7) and prongs (5) are in correct alignment.

12. A tooth care implement as claimed in Claim 7, wherein the fastening means comprises a key member (22) provided at each of the opposing outer faces of the arm, wherein each key member is engageable with a corresponding slot (23) formed in a rotating receiver (24) rotatably mounted in a seat (25) defined at the free end (5a) of each prong (5), wherein another slot (26) is formed extending between the seat (25) of the receiver (24) and outer surface of the prong (5) such that when the slot (23) of the receiver (24) is aligned with the slot (26) in the prong (5), the key (22) can be engaged with the slot (23) of the receiver (24) by passing it through the second slot (26), wherein the keys (22) are located on the arm (7) in such orientation that when the keys (22) engage with the aligned slots (23, 26) in the prongs (5) and in the receiver (24), the arm (7) is positioned with respect to the handle unit (2) in a third position, intermediate the first and second positions of the arm (7), and wherein on rotation of the arm from this intermediate position towards the first or the second position, the slots (23) of the receiver (24) misalign with the slots (26) of the prongs (5) and thereby secure the arm (7) in the engagement with the prongs (5) in any position of the arm (7) with respect to the prongs (5), other than the intermediate position of the arm (7).

13. A tooth care implement as claimed in any of Claims 2 to 12, wherein the locking means comprises a catch arrangement configured for releasably fastening the portion of the arm positioned adjacent the handle unit.

14. A tooth care implement as claimed in Claim 13, wherein the catch arrangement comprises a snap fit and release mechanism (10) comprising a resiliently deformable member (11) formed on each of the inner opposing faces (5b) of the prongs (5) such that when the arm (7) enters the cavity (6) the two resiliently deformable members (11) deform and resiliently engage the arm (7) thereby locking the arm (7) with respect to the handle unit (2).

15. A tooth care implement as claimed in Claim 13, wherein the catch arrangement is formed at the point of attachment of the arm to the handle unit.

16. A tooth care implement as claimed in any of Claims 1 to 15, wherein the handle unit defines an internal chamber (12, 120) adapted for storage of one or more tooth care attachments.

17. A tooth care implement as claimed in Claim 16, wherein the grippable base portion of the handle unit comprises a tubular wall and the internal chamber (12, 120) is defined by the tubular wall.

18. A tooth care implement as claimed in Claim 17, wherein a holder means (14, 140) is provided in the internal chamber (12, 120), the holder means being configured for holding the one or more of tooth care attachments.

19. A tooth care implement as claimed in Claim 18, wherein the holder means (14, 140) comprises a rack shaft extending along the internal chamber (12, 120), the rack shaft comprising a plurality of positions for holding tooth care attachments.

20. A tooth care implement as claimed in Claim 19, wherein the rack shaft (14) is attached to the shaft portion (4), such that when the shaft portion (4) and the grippable base portion (3) are engaged, the rack shaft (14) enters the internal chamber (12) through an open end (12a) of the grippable base portion (3) and the open end is blocked by the body of the shaft portion (4).

21. A tooth care implement as claimed in Claim 19, wherein the rack shaft (140) comprises a removable insert.

22. A tooth care implement as claimed in any preceding claim, wherein the arm (7) is releasably coupled with the handle unit (2).

23. A tooth care implement as claimed in any preceding claim, wherein each of the first and second ends (7a, 7b) of the arm (7) comprises a means for releasably engaging with a tooth care attachment.

24. A tooth care implement as claimed in any preceding claim, wherein, the tooth care attachment at the first end of the arm (7) comprises a tooth brush head (8) and the tooth care attachment at the second end of the arm (7b) comprises a disposable dental floss head (9).

25. A tooth care implement as claimed in Claim 24, wherein the dental floss head is a single use head which comprises a bracket member having a length of dental floss taught thereacross.

26. A tooth care implement substantially has herein described with reference to and ash shown in the accompanying drawings.