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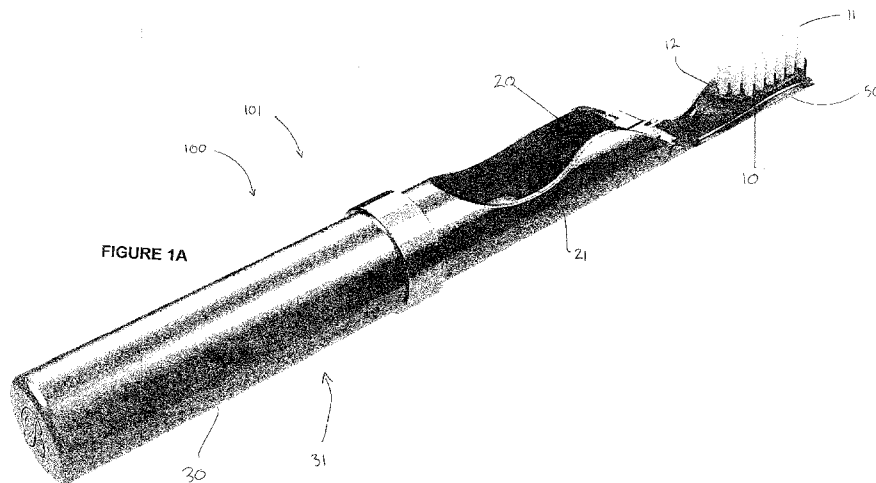
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(54) Title: AN ORAL HYGIENE DEVICE



(57) Abstract: An oral hygiene device comprising a brush housing from which a brush head can be presented for use yet be enclosed in the housing, the brush housing being connected to a container that can receive a fluid dispenser, wherein the container is, or can be connected to the brush housing to act as part of, the handle of the oral hygiene device.



AN ORAL HYGIENE DEVICE

FIELD OF THE INVENTION

The present invention broadly relates to an oral hygiene device. More specifically
5 but not exclusively the present invention relates to a combination toothbrush and
paste storage device.

BACKGROUND

There are a large variety of oral hygiene devices available today for performing a
10 variety of oral hygiene functions such as cleaning and refreshing.

One such common device is a toothbrush. Toothbrushes traditionally consist of a
body portion suitable for being held by a user, and at least one brush portion suitable
for cleaning, brushing, scrubbing, disinfecting, refreshing, wiping, massaging or
picking (herein after referred to as "cleaning") any one or more of a person's teeth,
15 gums or other surfaces located within a person's mouth or throat.

It is common to use a toothbrush(s) in conjunction with a paste, gel or liquid
(herein after referred to as "paste(s)") to facilitate the cleaning of a users mouth. The
paste is commonly supplied independently in a tube or similar container.

Through prolonged use parts of many oral hygiene devices tend to wear out. For
20 example the brush portion(s) of a toothbrush tend to wear out making them less
effective for their intended purpose. It is also common to dispose of the entire oral
hygiene device once it has worn out and replace it with a new one. It would be
beneficial to replace only the worn out portions of the oral hygiene device to save in
material wastage and costs.

25 Whilst toothbrushes and other oral hygiene devices are normally stored in a
users residence (such as in a bathroom/washroom), in some situations it is desirable
to carry a toothbrush or similar oral hygiene device to another location. For instance
when a person is travelling to another destination where they may have a need for an
oral hygiene device or for users that have an unexpected need for an oral hygiene
30 device and have chosen to carry such a device on their person in case of such an
event. In these situations carrying an oral hygiene device and/or paste in a bag or on
the person would be required. It is important to keep both paste and oral hygiene
devices clean, specifically; any parts of an oral hygiene device that would normally
come in contact with the mouth or throat during use should preferably not come in
35 contact with anything that could contaminate the device. In this sense, most oral

hygiene devices (such as toothbrushes) need to be protected in some way when being carried in a bag or on the person.

As it is common to use an oral hygiene device in conjunction with paste it is also desirable that both items can be kept together. In most situations these two items are
5 separate which is convenient for use but can make locating them individually difficult, especially in a person's handbag or toilet bag. Likewise floss string may be carried separately by a person.

It would therefore be an advantage to provide improvements to an oral hygiene device that addresses or goes at least some way towards addressing at least some of
10 the abovementioned disadvantages and/or addresses at least some of the abovementioned advantages or that will at least provide the public or industry or both with a useful choice.

In this specification where reference has been made to patent specifications, other external documents, or other sources of information, this is generally for the
15 purpose of providing a context for discussing the features of the invention. Unless specifically stated otherwise, reference to such external documents is not to be construed as an admission that such documents, or such sources of information, in any jurisdiction, are prior art, or form part of the common general knowledge in the art.

20 Further aspects and advantages of the present invention will become apparent from the ensuing description which is given by way of example only.

BRIEF DESCRIPTION OF THE INVENTION

In a first aspect the present invention may broadly be said to be an oral hygiene
25 device comprising:

a brush housing from which a brush head can be presented for use yet be enclosed in the housing,

the brush housing being connected to a container that can receive a fluid dispenser, wherein the container is or can be connected to the brush housing, to act
30 as part of the handle of the oral hygiene device.

Preferably the brush head can move relative to the housing between a stowed condition wherein it is enclosed within the housing and a presented condition where the brush head is presented for use.

Preferably the brush head is substantially enclosed within the brush housing
35 when in the stowed condition.

Preferably the brush head can move in a pivotal manner, about an axis when moving between the stowed and presented conditions.

Alternatively the brush head can slide and/or translate and/or rotate and/or twist relative to the brush housing when moving between the stowed and presented
5 conditions.

Preferably the brush head and brush housing are coupled via a linkage that can move the brush head between the stowed and presented conditions.

Preferably the linkage comprises an activation slide and at least one load bearing arm, wherein the activation slide can operatively be slid forward and backward along
10 an axis to thereby impart a load via the at least one load arm on the brush head thereby causing the brush head to move between the stowed and presented conditions.

Preferably the brush head is mounted (whether removably or not) to a head support member.

Preferably the brush head comprises a plurality of bristles supported by a bristle support member.
15

Preferably the bristle support member is configured to be engaged and disengaged with the head support member.

Preferably the bristle support member engages to the head support member via
20 a snap or press fit coupling.

Alternatively the bristle support member connects to the head support member via a bayonet coupling.

Alternatively the bristle support member connects to the head support member via complementary threads on the bristle support member and the head support.
25

Preferably the head support member is pivotally mounted to the brush housing to move the brush head between the stowed and presented conditions relative to the brush housing.

Preferably the brush housing has an opening for receiving the brush head.

Preferably the head support member is of a shape to provide a closure to the
30 opening of the brush housing.

Preferably when the brush head is in a stowed condition the opening of the brush housing, the brush housing and the head support member define a body of substantially constant external shape cross section.

Preferably when the brush head is in a stowed condition the opening of the brush
35 housing, the brush housing and the head support member define a cylindrical surface.

Preferably the fluid dispenser can receive and contain a fluid.

Preferably the fluid is any Newtonian or Non Newtonian fluid such as a liquid, paste, cream or gel.

Preferably the fluid dispenser is configured to dispense the fluid.

Preferably the dispenser comprises a mechanism that allows finite quantities of
5 fluid to be dispensed.

Preferably the container can be selectively engaged or disengaged from the brush.

Preferably the container connects to the brush via a bayonet coupling.

Alternatively the container connects to the brush via a press or snap fit coupling.

10 Alternatively the container connects to the brush via complementary threads on the brush and fluid container.

Preferably the fluid dispenser is substantially or wholly enclosed in the container.

Preferably the fluid dispenser is prevented from dispensing fluid when the container is connected to the brush housing.

15 Preferably the fluid dispenser and/or the container include at least one indicator that indicates how much fluid is in the fluid dispenser.

Preferably the container is of an external shape complementary to the external shape of the brush housing.

20 Preferably the container is of an external cross sectional shape that is the same to the external cross sectional shape of the brush housing.

Preferably the container is elongate body and the brush housing is elongate body that are aligned with each other when engaged with each other.

Preferably the elongate bodies are straight.

25 Preferably the container and the brush housing together, when engaged to each other, act as a handle for use by a person during use of the oral hygiene device.

Preferably the oral hygiene device also comprises a dental floss dispenser that carries floss string or ribbon that can be dispensed and severed for use by a person.

Preferably the dental floss dispenser is able to be engaged to the housing or the container or both.

30 Preferably the dental floss dispenser is removably attached to the housing or container of both.

Preferably the dental floss dispenser is engaged to the container at its distal end away from the container.

35 Preferably the dental floss dispenser is a replacement part, able to be removed and be replaced by a new dental floss dispenser when the previous one is expired.

Preferably the dental floss dispenser is able to engage at the distal end of the container at where an end cap is also and alternatively able to engage the container.

Preferably the end cap can be removed from the container to allow the dental floss dispenser to engage with the container, and in turn is able to be engaged to the
5 dental floss dispenser.

Preferably the dental floss dispenser comprises a housing in which the dental floss string or ribbon can be housed.

Preferably the housing can allow for replacement ribbon or string to be received.

Preferably the housing includes an axle on which a bobbin of string or ribbon can
10 be mounted.

Preferably the housing includes an aperture via which the string or ribbon can pass to be dispensed.

Preferably the housing carries a knife that can be used to remove the tail end of the string or ribbon from the remainder in the housing.

Preferably the housing carries a cover that can locate over the tail end of the
15 floss string or ribbon.

Preferably the cover can move between a covering condition and an exposing condition exposing the string or ribbon.

In an alternative embodiment the present invention may broadly be said to be a
20 detachable brush head for engaging with a handle for use as a toothbrush, the detachable brush head comprising:

a plurality of bristles supported by a bristle support member,

wherein the bristle support member is configured to be selectively engaged or disengaged to the handle.

Preferably the bristle support member engages to the handle via a snap or press
25 fit coupling.

Alternatively the bristle support member connects to the handle via a bayonet coupling.

Alternatively the bristle support member connects to the handle via
30 complementary threads on the bristle support member and the handle.

In a further aspect the present invention may broadly be said to be an oral hygiene device as herein described with reference to any one or more of the accompanying drawings.

The term "comprising" as used in this specification means "consisting at least in
35 part of". When interpreting each statement in this specification that includes the term "comprising", features other than that or those prefaced by the term may also be

present. Related terms such as "comprise" and "comprises" are to be interpreted in the same manner.

This invention may also be said to consist in the parts, elements and features referred to or indicated in the specification of the application, individually or
5 collectively, and any or all combinations of any two or more said parts, elements or features, and where specific integers are mentioned herein which have known equivalents in the art to which this invention relates, such known equivalents are deemed to be incorporated herein as if individually set forth.

The invention consists in the foregoing and also envisages constructions of which
10 the following gives examples only.

BRIEF DESCRIPTION OF THE DRAWINGS

Preferred embodiments of the invention will be described by way of example only and with reference to the drawings, in which:

15 Figure 1A shows a perspective view of a preferred embodiment of the invention in a presented condition,

Figure 1B shows an alternative perspective view of a preferred embodiment of the invention in a presented condition,

20 Figure 2A shows a perspective view of a preferred embodiment of the invention in a stowed condition,

Figure 2B shows an alternative perspective view of a preferred embodiment of the invention in a stowed condition,

Figure 3A shows a back elevation of a preferred embodiment of the container and fluid dispenser,

25 Figure 3B shows a side elevation of a preferred embodiment of the container and fluid dispenser,

Figure 4 shows a cross sectional perspective view of a preferred embodiment of the invention,

30 Figure 5 shows a perspective view of the preferred embodiment of the brush head coupling to the head support member, and

Figure 6 shows an alternative perspective view of the preferred embodiment of the brush head coupling to the head support member.

Figure 7 illustrates the brush with a floss cartridge attached to the container portion,

35 Figure 8 shows the floss cartridge in a condition revealing the tail end of floss string and a knife for severing the floss string,

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Figure 9 is a perspective view of the floss cartridge removed from the container,
Figure 10 illustrates the floss cartridge revealing the tail end of the floss string
and the knife,

Figure 11 is a front view of the floss cartridge,
5 Figure 12 is a back view of the floss cartridge,
Figure 13 is a side view of the floss cartridge,
Figure 14 is an opposite side view of the floss cartridge,
Figure 15 is a plan view of the floss cartridge,
Figure 16 is a bottom view of the floss cartridge,
10 Figure 17 is an exploded view of the floss cartridge,
Figure 18 is a perspective view of the brush without the floss cartridge attached,
Figure 19 shows the removal of an end cap of the container portion to expose
features of the container portion to allow for the floss cartridge to engage therewith,
Figure 20 shows the exploded end portion of the brush with the floss cartridge
15 and end cap,
Figure 21 is the assembled version of Figure 20,
Figure 22 shows the cartridge in an exposed view.

DETAILED DESCRIPTION OF THE DRAWINGS

20 The present invention is for an oral hygiene device. In the most preferred
embodiment the present invention is a toothbrush suitable for cleaning a user's teeth.
Alternative embodiments could include other features for use as oral hygiene devices
such as flossing tools and polishing tools.

The toothbrush 101 in the preferred embodiment includes a brush head 10, a
25 housing 20, a container 30 and a fluid dispenser 40.

The brush head 10 of the preferred embodiment comprises a plurality of bristles
11 supported by a bristle support member 12. The brush head 10 is mounted on a
head support member 50 that is in turn pivotally coupled to the housing 20. The
housing 20 in the preferred embodiment includes an opening or recess 21 (herein
30 after referred to as "recess") that is configured to at least in part receive the brush
head 10.

The head support member 50 in a preferred embodiment can be pivoted about
the pivot axis 51 such that the brush head 10 can be moved from a stowed condition
as shown in figures 2A and 2B to a presented condition as shown in figures 1A and 1B.

35 Whilst the preferred embodiment of the invention is shown in figures 1A, 1B, 2A
and 2B it will be appreciated that any other mechanisms could be used to move the

brush head 10 to and from a condition where it is stowed and substantially enclosed within the recess 21 to a condition where it is presented for use. Other such mechanisms could include but are not limited to, a head support member 50 that twists relative to the housing 20, a head support member 50 that slides relative to the housing 20, a head support member 50 that translates relative to the housing 20, or a head support member 50 that rotates relative to the housing 20.

In the preferred embodiment the head support member 50 is configured such that when in the stowed condition it complements the shape and configuration of the housing 20 to form a substantially continuous external surface. This can be seen in figures 2A and 2B. In the preferred embodiment in the stowed condition the housing 20 and head support member 50 retain a substantially constant cross sectional shape. Furthermore in the preferred embodiment the housing and head support member 50 in the stowed condition are substantially elongate.

Also clearly shown in figures 2A and 2B is the brush head 10 wholly enclosed within the recess 21 of the housing 20. In an alternative embodiment only the bristles 11 of the brush head 10 may be substantially enclosed in the recess 21 when in the stowed condition.

In another alternative embodiment the brush head 10 is only partially enclosed within the recess 21 when in the stowed condition.

In a preferred embodiment of the invention, the head support member 50 is connected to the housing 10 via a linkage 60. The linkage 60 in the preferred embodiment includes an activation slide member 62 and at least one load bearing arm 61. The activation slide member 62 in the preferred embodiment is mounted on the housing 20 such that it can slide forward and backward along an axis. The load bearing arm 61 is mounted to the activation slide member 62 and to the head support member 50 such that when the activation slide member 62 is moved backward and forwards along its axis it subsequently causes the head support member 50 to move between the stowed condition and the presented position and vice versa.

The brush head 10 in a preferred embodiment is removable from the oral hygiene device 100. In a preferred embodiment the bristle support 12 is configured to be selectively engaged and disengaged with the head support member 50. This is intended to allow the brush head 10 to be replaced individually of the other components of the oral hygiene device 100.

In the preferred embodiment the brush head is configured to connect with the support head member 50 via a snap or press fit coupling such as that shown in figures 5 or 6. The coupling 70 shown in figures 5 and 6 includes a retaining protrusion 71

and a complementary receiving slot 72. In the embodiment shown the retaining protrusion 71 is profiled in a T-shape, but it will be appreciated that any cross sectional profile and receiving slot with a complementary shape could be used.

In the preferred embodiment the coupling 70 is configured to create interference
5 between the retaining protrusion 71 and the complementary receiving slot 72 in a press fit arrangement. Alternatively the coupling includes deformable or displaceable retaining lugs or the like suitable for creating a snap fit configuration between the brush head 10 and the head support member 50.

Alternative embodiments to this could also include connecting the brush head 10
10 to the head support member 50 using complementary threaded sections on each component allowing them to screw together.

Another alternative embodiment for connecting the brush head 10 to the head support member 50 includes using a bayonet coupling to connect them.

In the preferred embodiment the fluid dispenser 40 can dispense a fluid 80. In
15 the preferred embodiment the fluid dispenser 40 includes a fluid outlet 41 and a dispensing mechanism 42 that allows a finite amount of fluid to be dispensed at any one time. In the preferred embodiment the fluid is toothpaste or the like, however, it will be appreciated that any Newtonian or non-Newtonian fluids such as pastes, gels, creams or liquids could be used. In the preferred embodiment the fluid dispenser 40 is
20 configured to be either cheap to manufacture or easy to refill. This allows the fluid dispenser to either be re-used or to be disposed of due to its low cost to replace.

In the preferred embodiment the container 30 is configured to at least in part receive the fluid dispenser 40 and can be selectively engaged and disengaged with the housing 20. In the preferred embodiment the fluid dispenser is wholly contained within
25 the container 30 when it is engaged with the housing 20 and prevents any fluid from being dispensed.

Alternatively a portion of the fluid dispenser is always accessible to allow fluid to be dispensed.

When engaged with the housing 20 the container 30, in the preferred
30 embodiment is configured to at least in part form a handle 31 to be gripped by a user when the oral hygiene device 100 is in use.

In a preferred embodiment the container 30 is engaged with the housing via a bayonet coupling.

Alternatively the container 30 is engaged with the housing 20 via complementary
35 threaded sections on each component allowing them to screw together.

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In another alternative embodiment the container 30 is engaged with the housing 20 via a press or snap fit coupling.

In a preferred embodiment when the brush head 10 is in the stowed condition and when the container 30 is engaged with the housing 20 the oral hygiene device
5 100 has a substantially uniform external surface. In the preferred embodiment the cross section of the oral hygiene device is substantially constant. The container and housing are in the preferred embodiment elongate and inline.

In this preferred embodiment the housing 20 and the container 30 in combination, at least in part form a handle 31 suitable for being gripped by a user when
10 the oral hygiene device is being used.

In a preferred embodiment the external shapes of the container and the housing complement each other such that the oral hygiene device appears substantially uniform and has a substantially continuous outer surface.

The oral hygiene device may have incorporated therewith a dental floss
15 dispenser 200. This is for example shown in Figures 7 and 8. In one form the dispenser 200 may be integrally formed as part of the oral hygiene device or may alternatively comprise of a an accessory that can be attached to for example, the housing 20 or more preferably to the container 30 as for example shown in Figure 7. The dispenser 200, if engaged to for example the container 30, may be of a similar
20 diameter or perimeter shape as the container 30. The dispenser is preferably of a circular shape commensurate with that of the shape of the container 30. This allows for the dispenser to integrate as part of the oral hygiene device in a clean and aesthetic manner. The dispenser preferably houses floss string or ribbon 201 the tail end of which is visible in Figure 8. In Figure 8 it can be seen that as part of the
25 dispenser a removable cover 204 is provided. The removable cover 204 may for example hinge relative to the housing portion 205 of the dispenser so as to be able to move between a floss string exposing condition as shown in Figure 8 and a floss string covering condition as shown in Figure 7. The housing 205 may also carry a knife 206. This knife 206 can be used to sever the tail end of the floss string from the dispenser
30 so that the floss string can then be used by a person to clean their teeth and gums. The tail end of the floss string is able to be exposed to the outside of the dispenser by passage through the aperture 207 of the housing 205. Within the housing 205 the floss string may be located on or itself define a bobbin 208 located within the housing 205 of the floss string dispenser. The floss string bobbin may be supported on an axle
35 209 as shown in Figure 17. It can be internally supported on the axle 209 so as to allow for it to be rotated about a longitudinal axis for the purposes of facilitating the

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dispensing of string from the dispenser. The floss sting bobbin 208 may be of a kind that can allow for it to be provided in a consumable and replacement form. A cap 210 may be provided that is removable from the housing 205 so as to expose the internals of the housing 205 so that a new bobbin can be loaded therein for subsequent use.

5 The cap 210 may be removably engaged to the housing 205. The cap 210 may be the cap that in another mode of use of the present invention is used to close the container 30 as for example shown in Figure 18. The cap 210 closing the container 30 is able to be removed from the container as shown in Figure 19 and then aligned with the dispenser 200 when a dispenser is desired to be engaged to the container 30. The

10 container 30 may include fastening features at its end that are complimentary with both the dispenser 200 as well as the end cap 210. The end 211 of the dispenser 200 is preferably designed to be complimentary with the end cap 210 so that the end cap 210 can be received thereat for closing the housing portion 205 of the dispenser. Such a close condition is for example shown in Figures 21 and 22. A person can open

15 the cover 204 to expose the tail end of the floss string 201 and allow for the floss string to be drawn at least in part out from the housing 205. The knife 206 can be used to cut the floss string so that the floss string can be used by a person. When the dispenser is fully discharged and no more string is available for a user to remove therefrom the entire dispenser 200 may be discarded and replaced with a new

20 dispenser. Alternatively it may just be the bobbin 208 that is replaced, keeping the housing 204 in place. As can be seen the dispenser provides the ability to have an add on accessory to the oral hygiene device of the present invention.

CLAIMS:

1. An oral hygiene device comprising:
a brush housing from which a brush head can be presented for use yet be enclosed in the housing,
5 the brush housing being connected to a container that can receive a fluid dispenser, wherein the container is, or can be connected to the brush housing to act as part of, the handle of the oral hygiene device.
2. An oral hygiene device as claimed in claim 1 wherein the brush head can move relative to the housing between a stowed condition wherein it is enclosed within the
10 housing and a presented condition where the brush head is presented for use.
3. An oral hygiene device as claimed in claim 2 wherein the brush head is substantially enclosed within the brush housing when in the stowed condition.
4. An oral hygiene device as claimed in any of claims 2 to 3 wherein the brush head can move in a pivotal manner, about an axis when moving between the stowed and
15 presented conditions.
5. An oral hygiene device as claimed in any of claim 2 wherein the brush head can slide and/or translate and/or rotate and/or twist relative to the brush housing when moving between the stowed and presented conditions.
6. An oral hygiene device as claimed in any of claims 2 to 5 wherein the brush head
20 and brush housing are coupled via a linkage that can move the brush head between the stowed and presented conditions.
7. An oral hygiene device as claimed in any of claim 6 wherein the linkage comprises an activation slide and at least one load bearing arm, wherein the activation slide can operatively be slid forward and backward along an axis to thereby impart a
25 load via the at least one load arm on the brush head thereby causing the brush head to move between the stowed and presented conditions.
8. An oral hygiene device as claimed in any of claims 1 to 7 wherein the brush head is mounted (whether removably or not) to a head support member.
9. An oral hygiene device as claimed in claim 8 wherein the brush head comprises a
30 plurality of bristles supported by a bristle support member.
10. An oral hygiene device as claimed in claim 9 wherein the bristle support member is configured to be engaged and disengaged with the head support member.
11. An oral hygiene device as claimed in any of claims 9 or 10 wherein the bristle support member engages to the head support member via a snap or press fit
35 coupling.

12. An oral hygiene device as claimed in any of claims 9 or 10 wherein the bristle support member connects to the head support member via a bayonet coupling.
13. An oral hygiene device as claimed in any of claims 9 or 10 wherein the bristle support member connects to the head support member via complementary threads on the bristle support member and the head support.
- 5 14. An oral hygiene device as claimed in any of claims 8 or 9 wherein the head support member is pivotally mounted to the brush housing to move the brush head between the stowed and presented conditions relative to the brush housing.
15. An oral hygiene device as claimed in any of claims 1 to 14 wherein the brush housing has an opening for receiving the brush head.
- 10 16. An oral hygiene device as claimed in claim 15 wherein the head support member is of a shape to provide a closure to the opening of the brush housing.
17. An oral hygiene device as claimed in any of claims 15 or 16 wherein when the brush head is in a stowed condition the opening of the brush housing, the brush housing and the head support member define a body of substantially constant external shape cross section.
- 15 18. An oral hygiene device as claimed in any of claims 15 to 17 wherein when the brush head is in a stowed condition the opening of the brush housing, the brush housing and the head support member define a cylindrical surface.
- 20 19. An oral hygiene device as claimed in any of claims 1 to 18 wherein the fluid dispenser can receive and contain a fluid.
20. An oral hygiene device as claimed in claim 19 wherein the fluid is any Newtonian or Non Newtonian fluid such as a liquid, paste, cream or gel.
21. An oral hygiene device as claimed in any of claims 1 to 20 wherein the fluid dispenser is configured to dispense the fluid.
- 25 22. An oral hygiene device as claimed in any of claims 1 to 21 wherein the fluid dispenser comprises a mechanism that allows finite quantities of fluid to be dispensed.
23. An oral hygiene device as claimed in any of claims 1 to 22 wherein the container can be selectively engaged or disengaged from the brush housing.
- 30 24. An oral hygiene device as claimed in any of claims 1 to 23 wherein the container connects to the brush housing via a bayonet coupling.
25. An oral hygiene device as claimed in any of claims 1 to 23 wherein the container connects to the brush housing via a press or snap fit coupling.
26. An oral hygiene device as claimed in any of claims 1 to 23 wherein the container connects to the brush via complementary threads on the brush housing and fluid container.
- 35

27. An oral hygiene device as claimed in any of claims 1 to 26 wherein the fluid dispenser is substantially or wholly enclosed in the container.
28. An oral hygiene device as claimed in any of claims 1 to 27 wherein the fluid dispenser is prevented from dispensing fluid when the container is connected to the
5 brush housing and the fluid dispenser is located in the container.
29. An oral hygiene device as claimed in any of claims 1 to 27 wherein the fluid dispenser and/or the container include at least one indicator that indicates how much fluid is in the fluid dispenser.
30. An oral hygiene device as claimed in any of claims 1 to 29 wherein the container
10 is of an external shape complementary to the external shape of the brush housing.
31. An oral hygiene device as claimed in any of claims 1 to 30 wherein the container is of an external cross sectional shape that is the same to the external cross sectional shape of the brush housing.
32. An oral hygiene device as claimed in any of claims 1 to 31 wherein the container
15 is elongate body and the brush housing is elongate body that are aligned with each other when engaged with each other.
33. An oral hygiene device as claimed in claim 32 wherein the elongate bodies are straight.
34. An oral hygiene device as claimed in any of claims 1 to 33 wherein the container
20 and the brush housing together, when engaged to each other, act as the handle for use by a person during use of the oral hygiene device.
35. An oral hygiene device as claimed in any of claims 1 to 34 wherein the oral hygiene device also comprises a dental floss dispenser that carries floss string or ribbon that can be dispensed and severed for use by a person.
- 25 36. An oral hygiene device as claimed in claim 35 wherein the dental floss dispenser is able to be engaged to the housing or the container or both.
37. An oral hygiene device as claimed in any of claims 35 or 36 wherein the dental floss dispenser is removably attached to the housing or container of both.
38. An oral hygiene device as claimed in any of claims 35 to 37 wherein the dental
30 floss dispenser is engaged to the container at its distal end away from the container.
39. An oral hygiene device as claimed in any of claims 35 to 38 wherein the dental floss dispenser is a replacement part, able to be removed and be replaced by a new dental floss dispenser when the previous one is expired.
40. An oral hygiene device as claimed in any of claims 35 to 39 wherein the dental
35 floss dispenser is able to engage at the distal end of the container at where an end cap is also and alternatively able to engage the container.

41. An oral hygiene device as claimed in claim 40 wherein the end cap can be removed from the container to allow the dental floss dispenser to engage with the container, and in turn is able to be engaged to the dental floss dispenser.
42. An oral hygiene device as claimed in any of claims 35 to 41 wherein the dental
5 floss dispenser comprises a ribbon housing in which the dental floss string or ribbon can be housed.
43. An oral hygiene device as claimed in claim 42 wherein the ribbon housing can allow for replacement ribbon or string to be received.
44. An oral hygiene device as claimed in any of claims 42 or 43 wherein the ribbon
10 housing includes an axle on which a bobbin of string or ribbon can be mounted.
45. An oral hygiene device as claimed in any of claims 42 to 45 wherein the ribbon housing includes an aperture via which the string or ribbon can pass to be dispensed.
46. An oral hygiene device as claimed in any of claims 42 to 45 wherein the ribbon housing carries a knife that can be used to remove the tail end of the string or ribbon
15 from the remainder in the ribbon housing.
47. An oral hygiene device as claimed in any of claims 42 to 46 wherein the ribbon housing carries a cover that can locate over the tail end of the floss string or ribbon.
48. An oral hygiene device as claimed in claim 47 wherein the cover can move between a covering condition and an exposing condition exposing the string or ribbon.
- 20 49. A detachable brush head for engaging with a handle for use as a toothbrush, the detachable brush head comprising:
a plurality of bristles supported by a bristle support member,
wherein the bristle support member is configured to be selectively engaged or disengaged to the handle.
- 25 50. A detachable brush head as claimed in claim 49 wherein the bristle support member engages to the handle via a snap or press fit coupling.
51. A detachable brush head as claimed in claim 49 wherein the bristle support member connects to the handle via a bayonet coupling.
52. A detachable brush head as claimed in claim 49 wherein the bristle support
30 member connects to the handle via complementary threads on the bristle support member and the handle.
53. A detachable brush head for engaging with an oral hygiene device as claimed in claim 1.
54. An oral hygiene device as claimed herein and as shown with reference to any
35 one or more of the accompanying drawings.

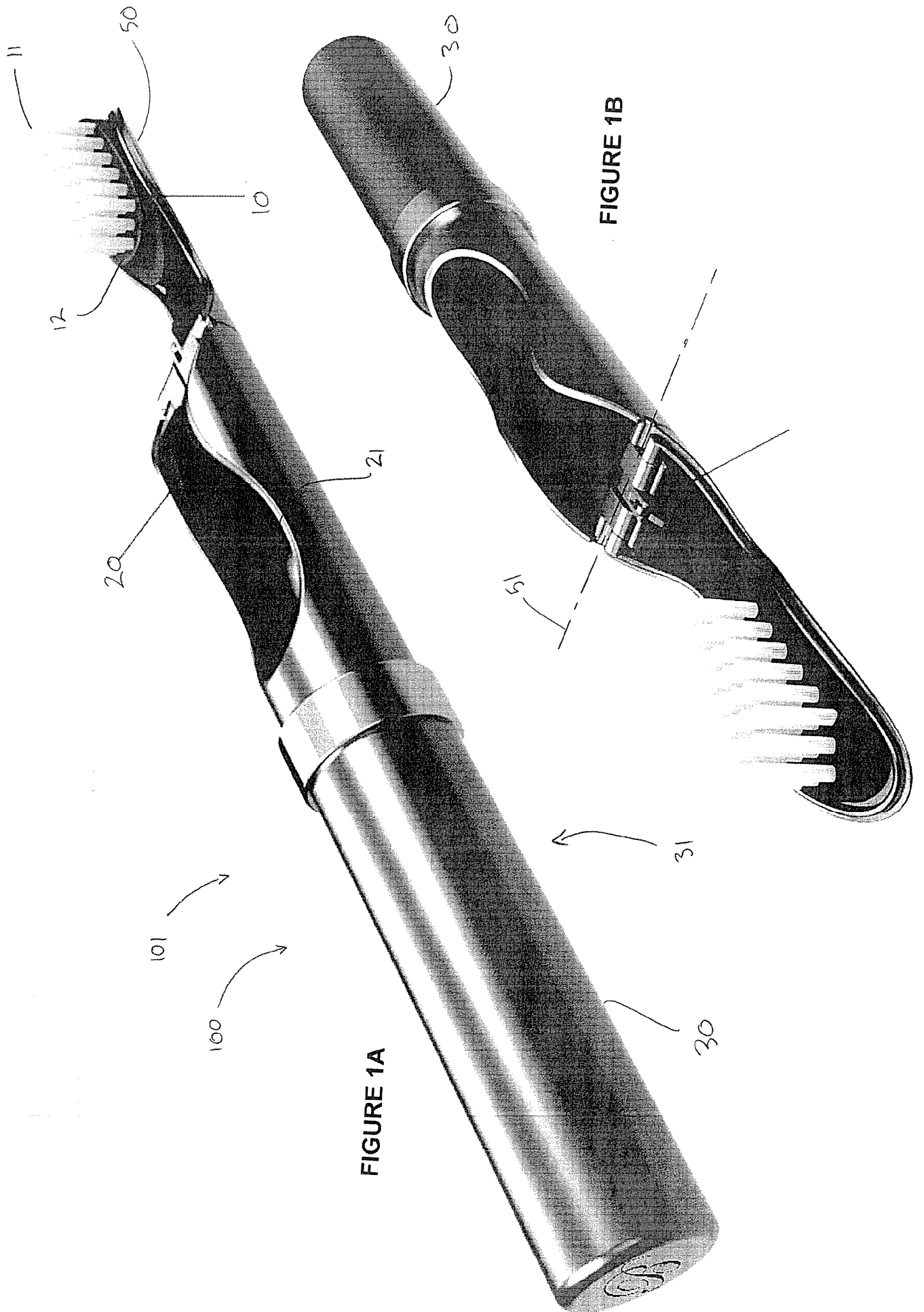
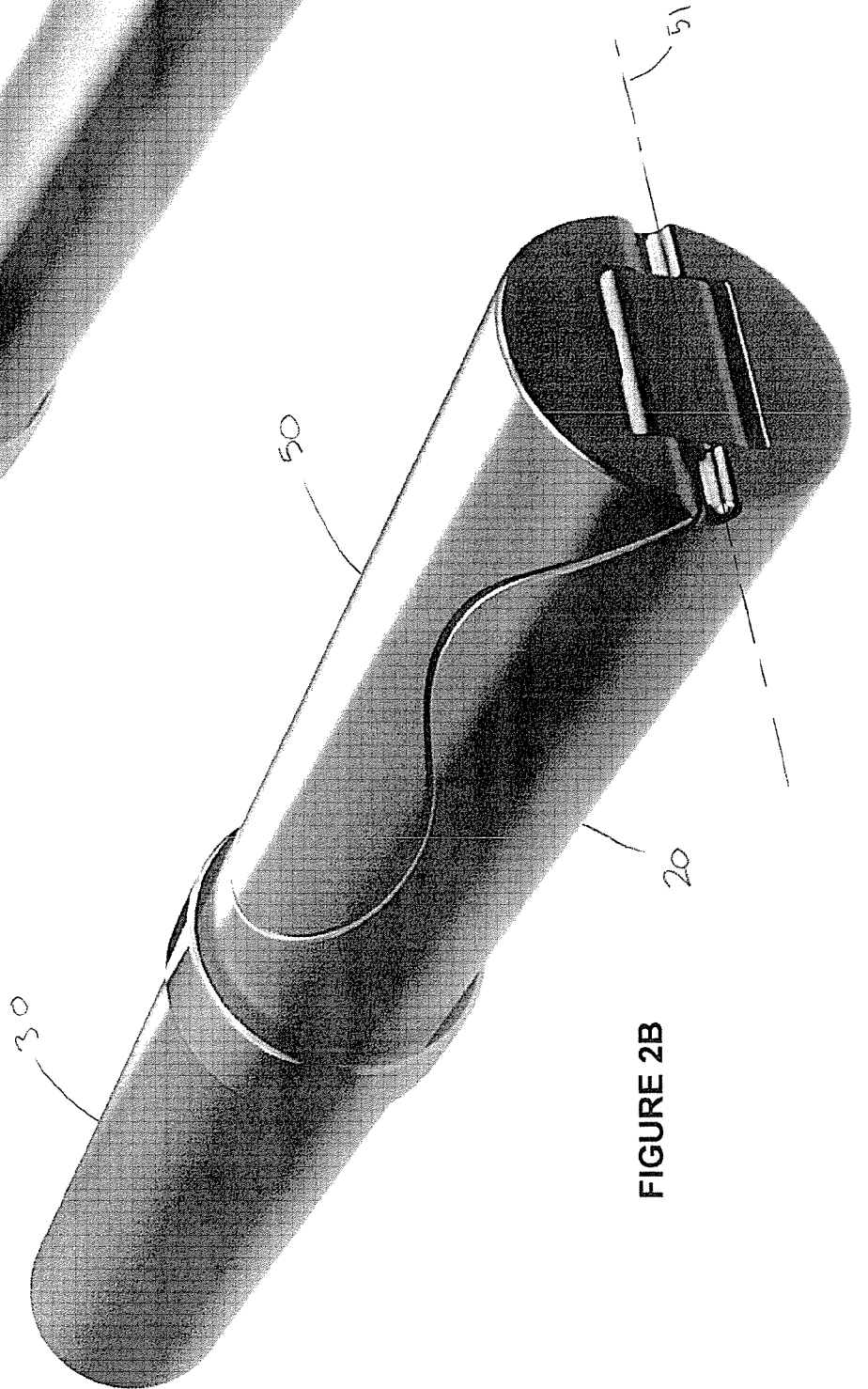
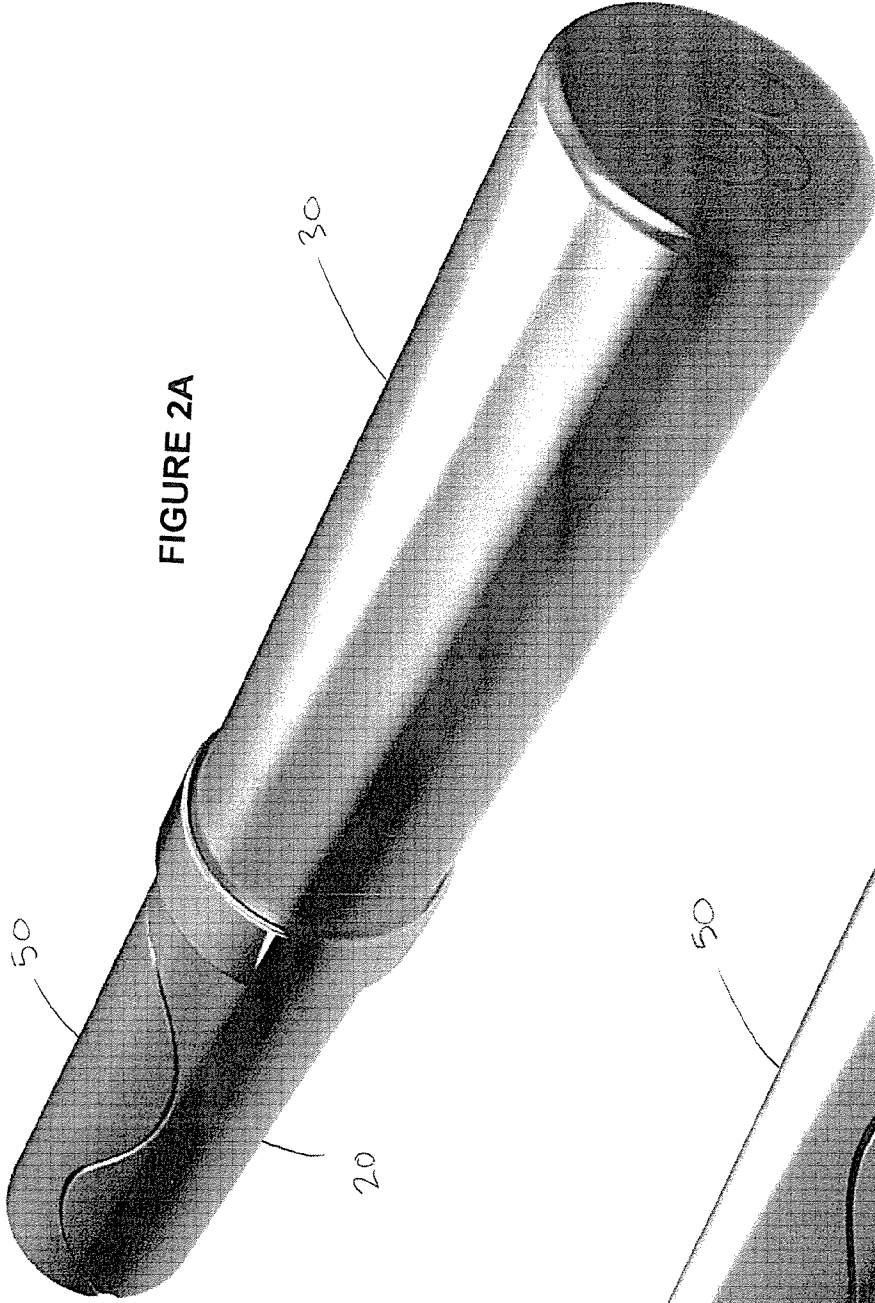


FIGURE 1A

FIGURE 1B



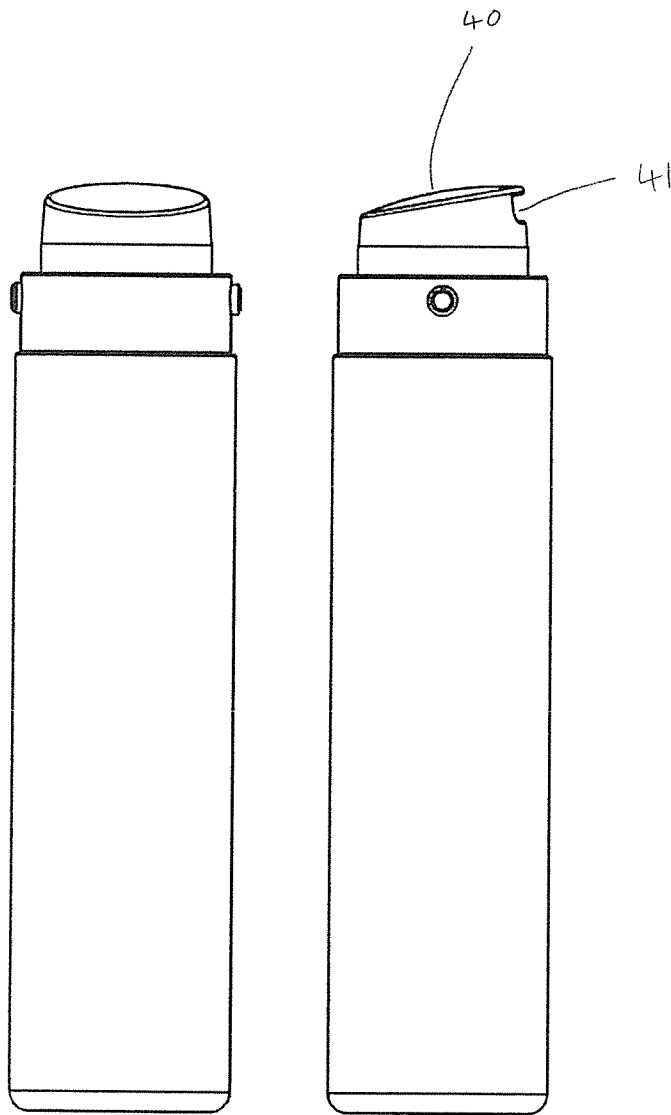


FIGURE 3A

FIGURE 3B

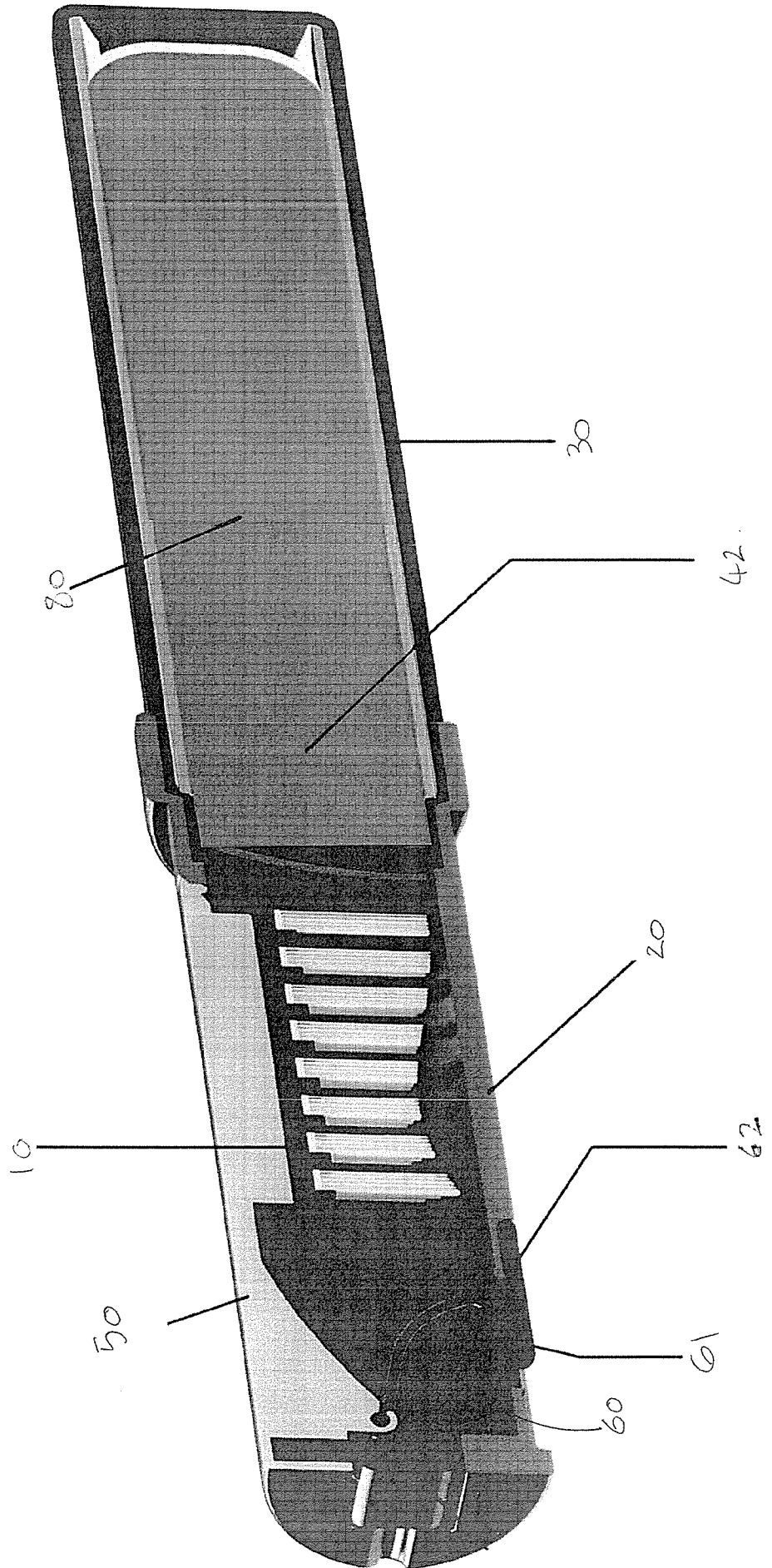


FIGURE 4

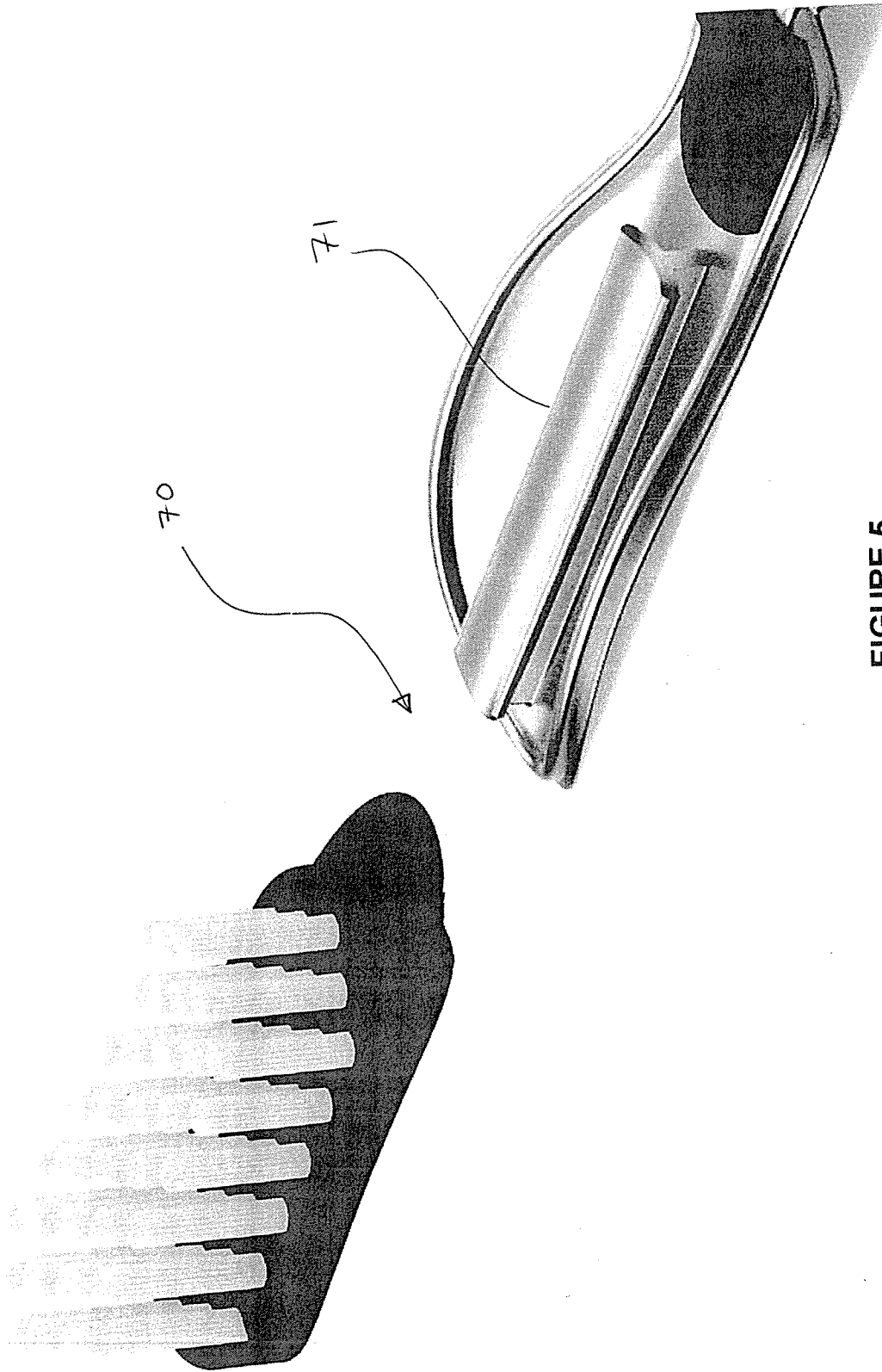


FIGURE 5

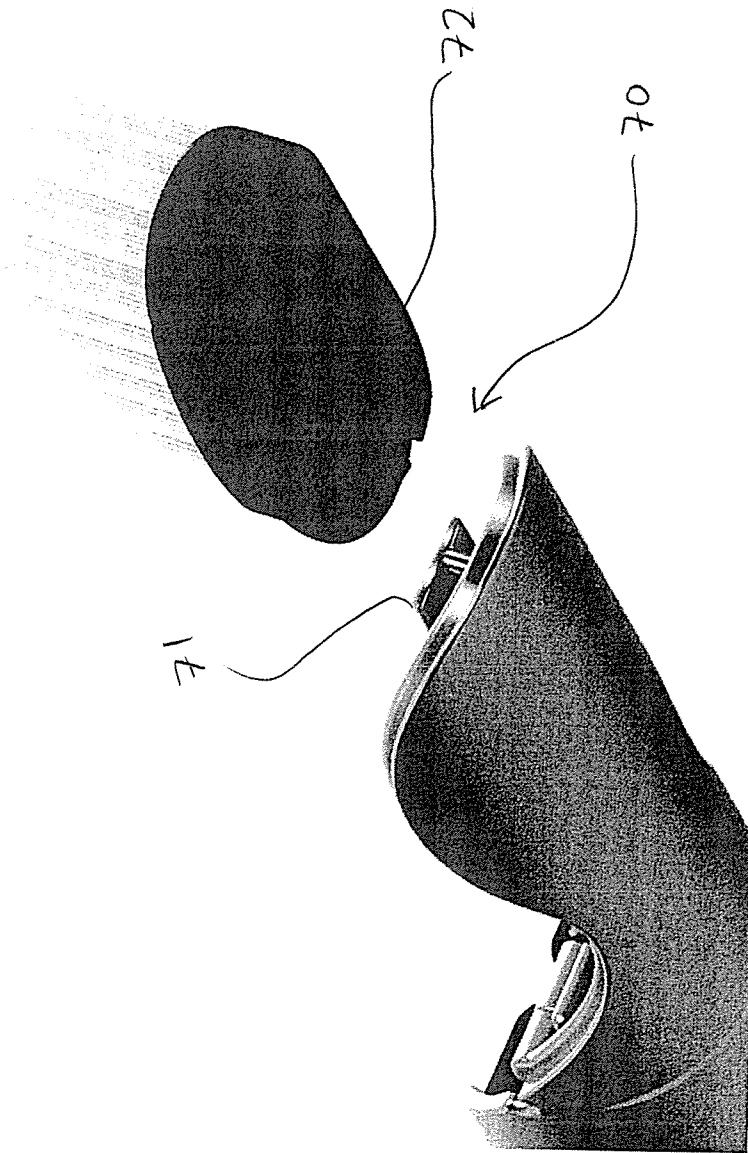
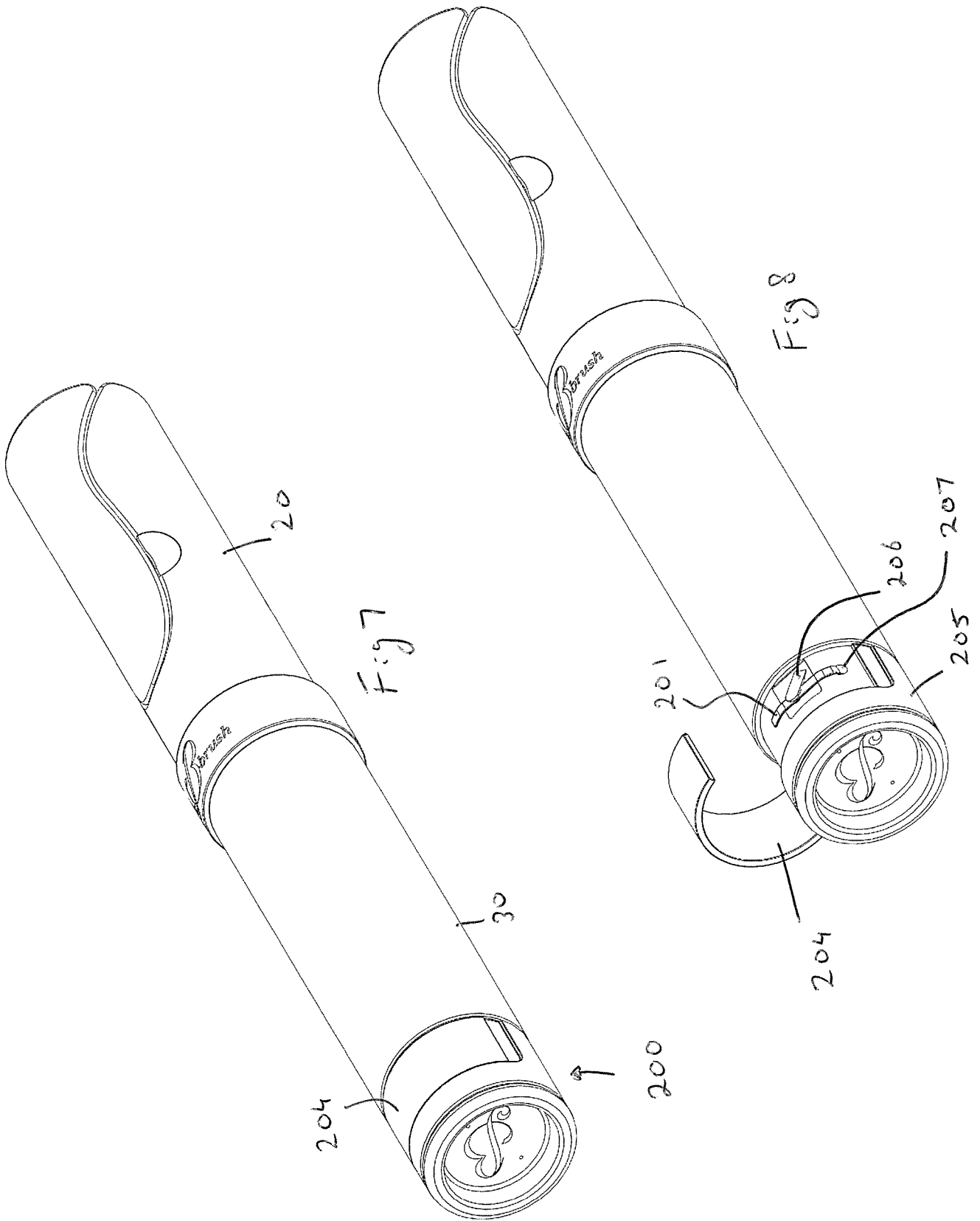


FIGURE 6



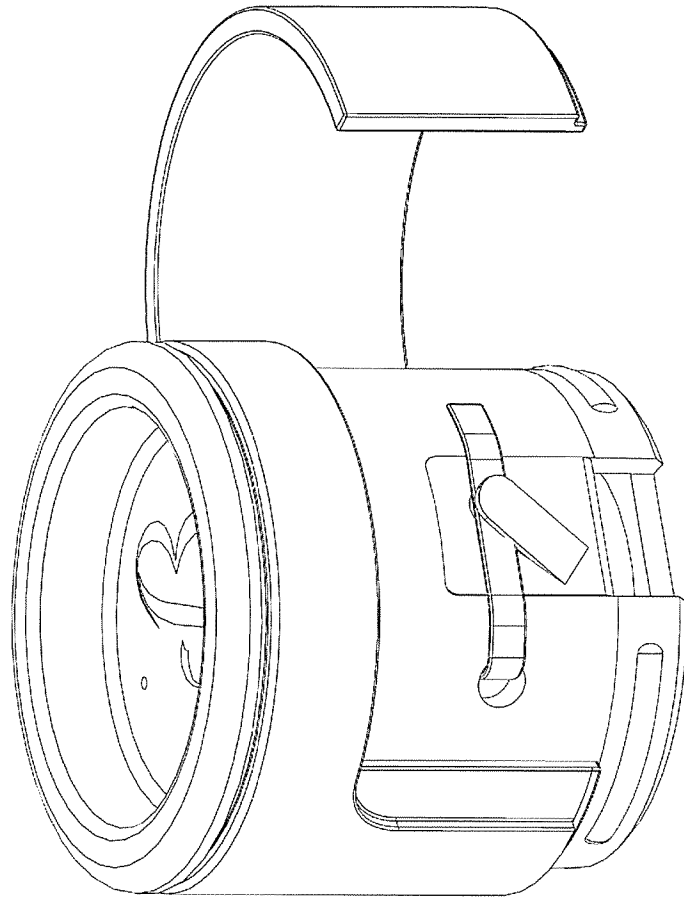


Fig 10

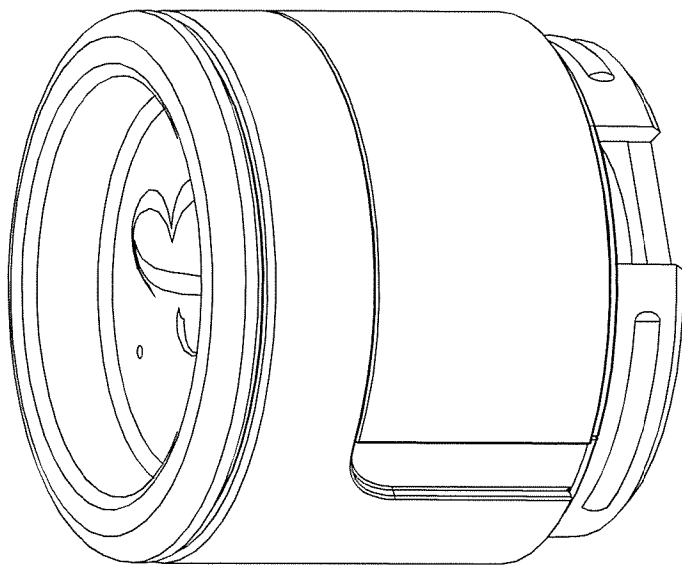


Fig 9

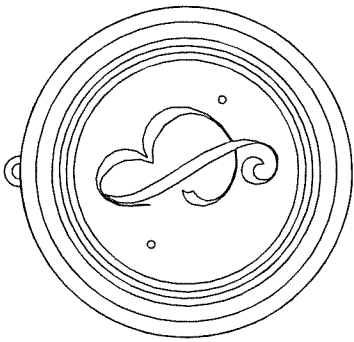


Fig 15

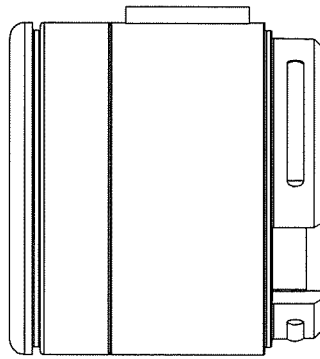


Fig 14

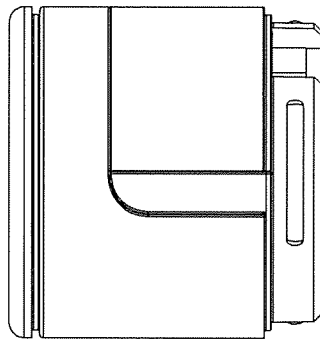


Fig 11

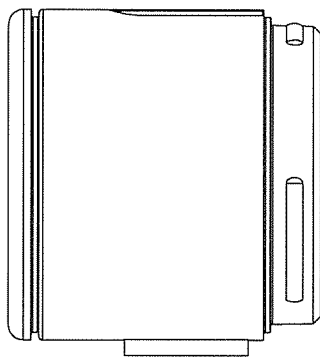


Fig 13

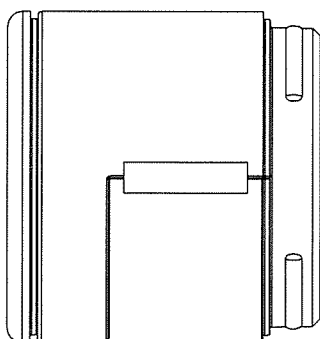


Fig 12

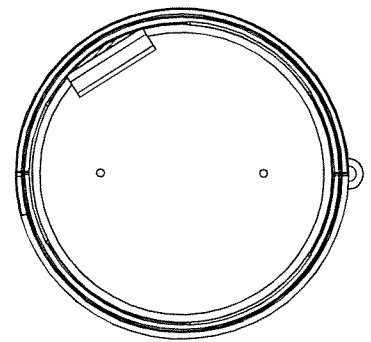


Fig 16

