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(54) **COMBINATION FLOSS AND TOOTHBRUSH DEVICE**

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(57) **ABSTRACT**

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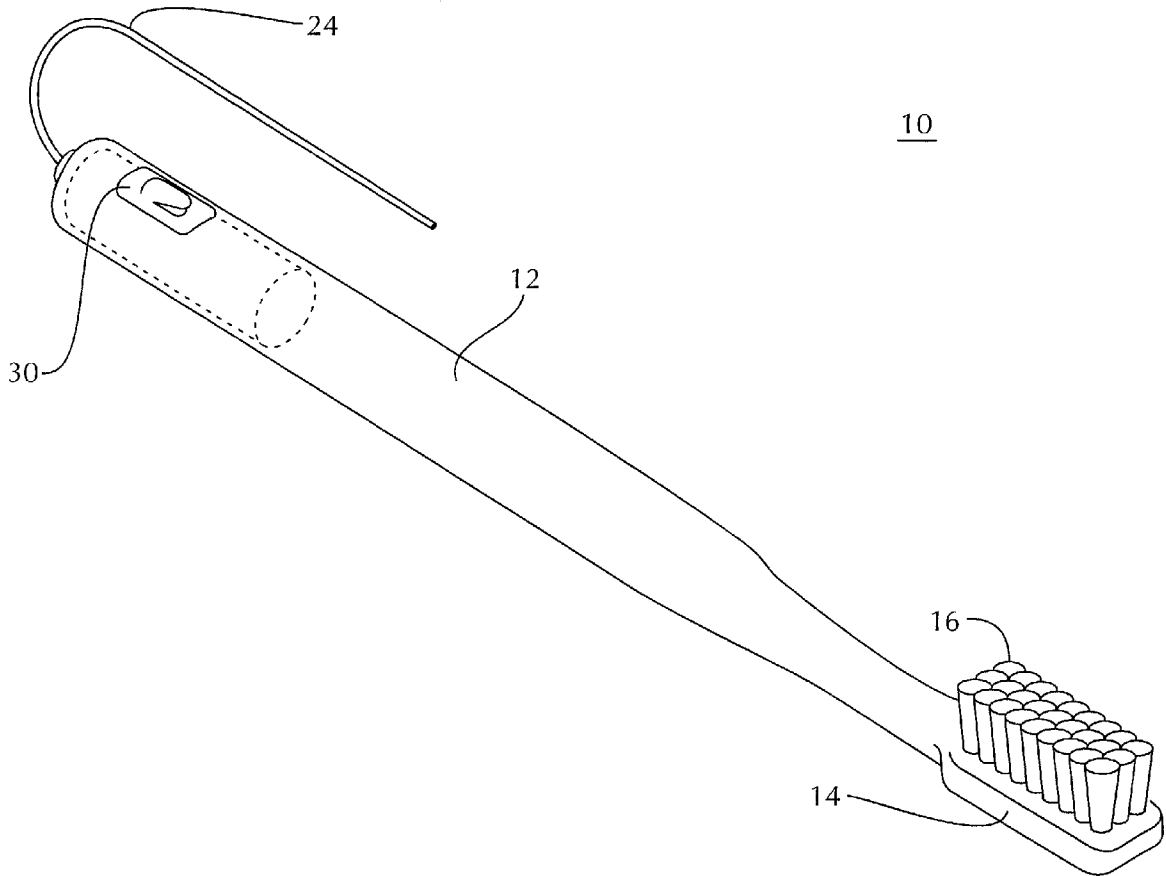
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The present invention is a combination toothbrush and dental floss dispenser. More particularly, the device is a toothbrush with an extended handle or shaft with traditional brush bristles at one end, and a dental floss dispensing means at the other end. Such may be either incorporated within the brush itself as a single piece, or, alternatively may be detachable in nature. The floss dispenser is preferably cylindrical in nature, and includes a floss cutter and hinged cover panel for the cutter.



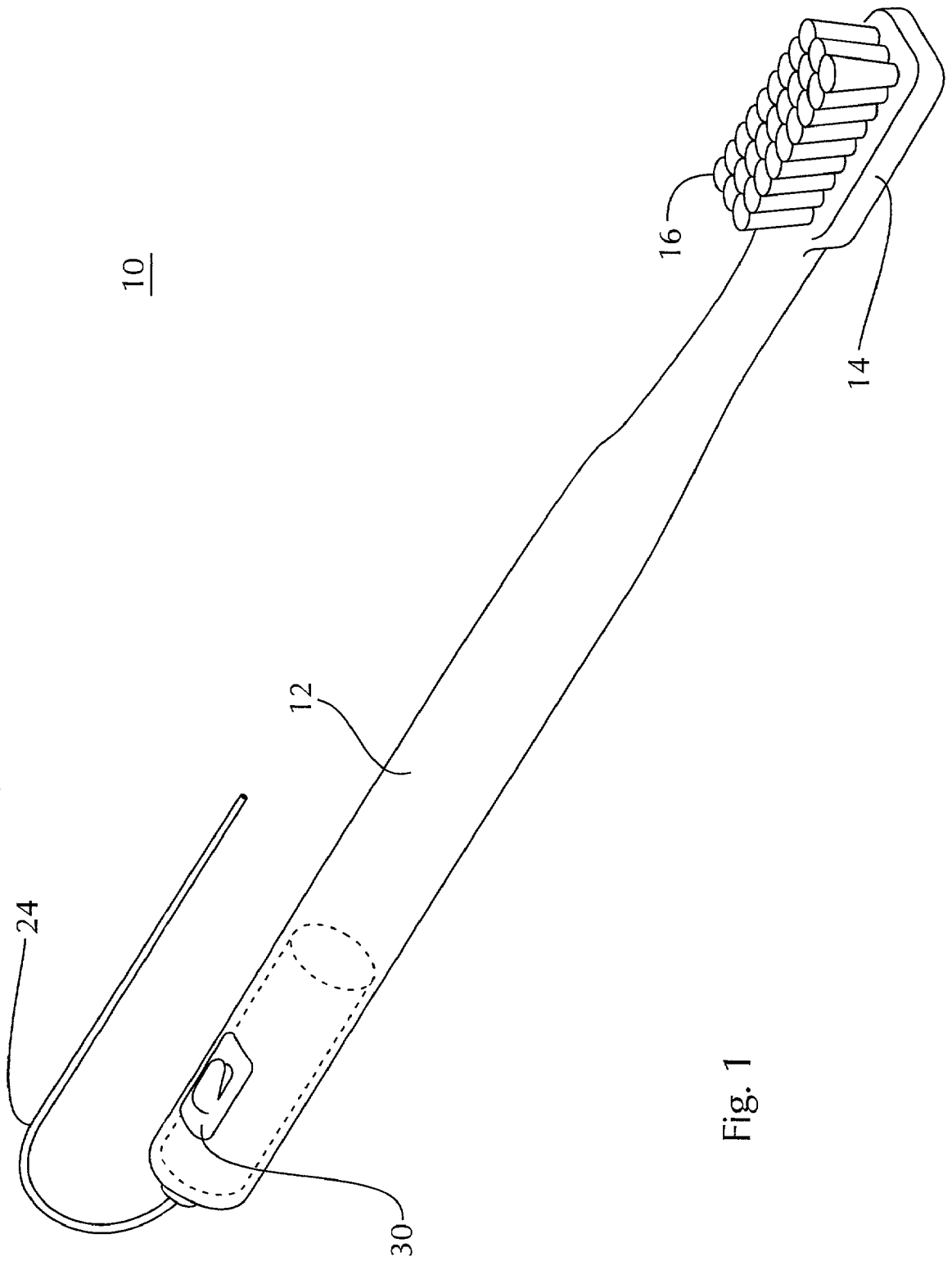


Fig. 1

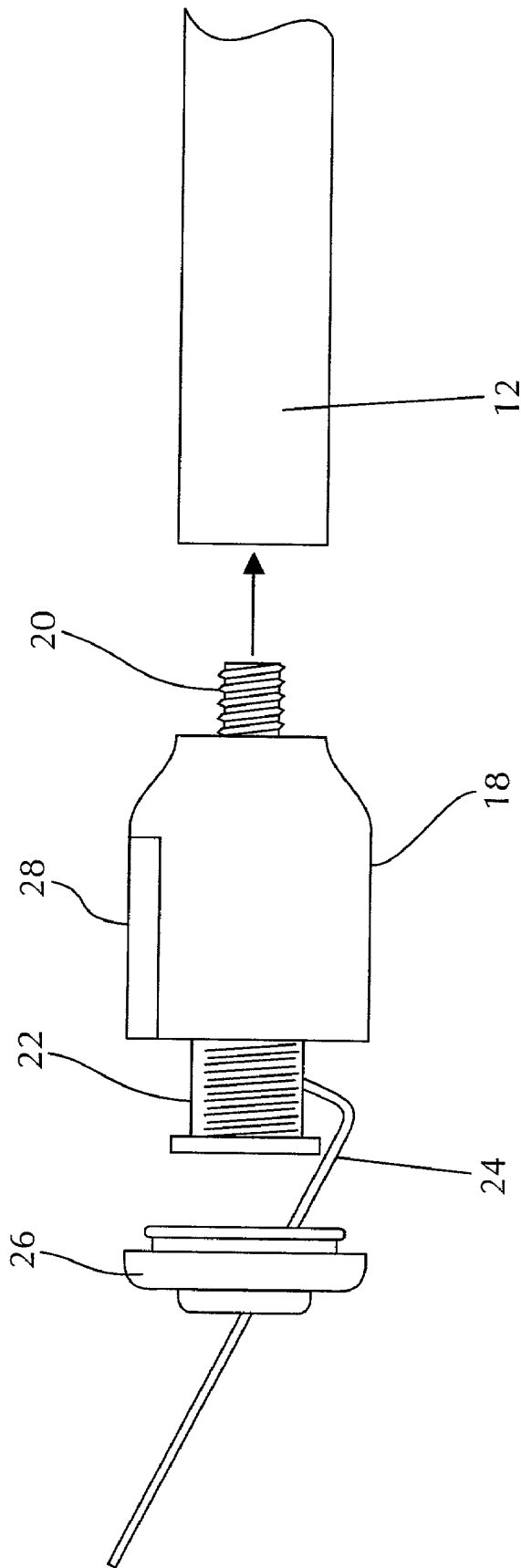


Fig. 2

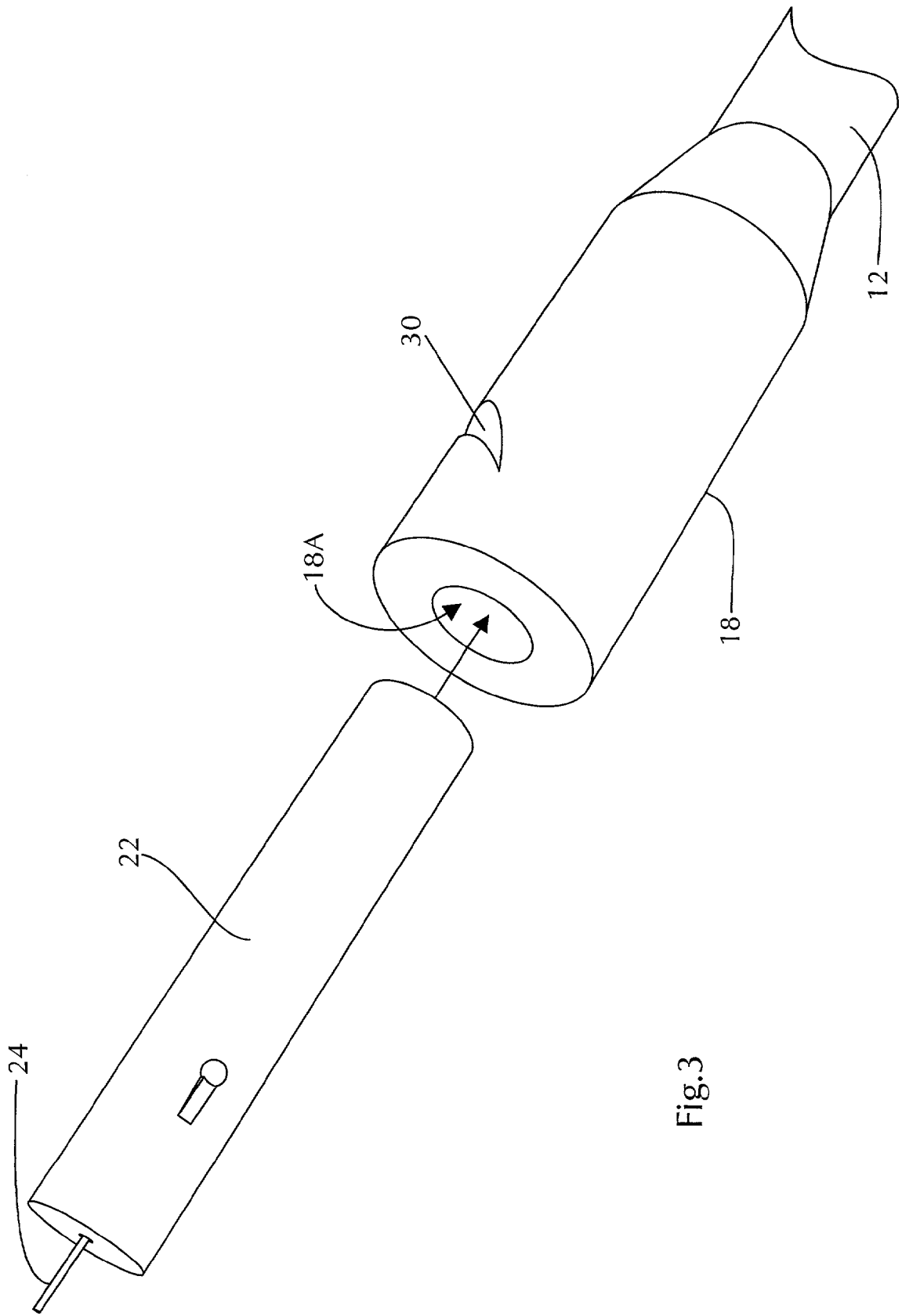


Fig. 3

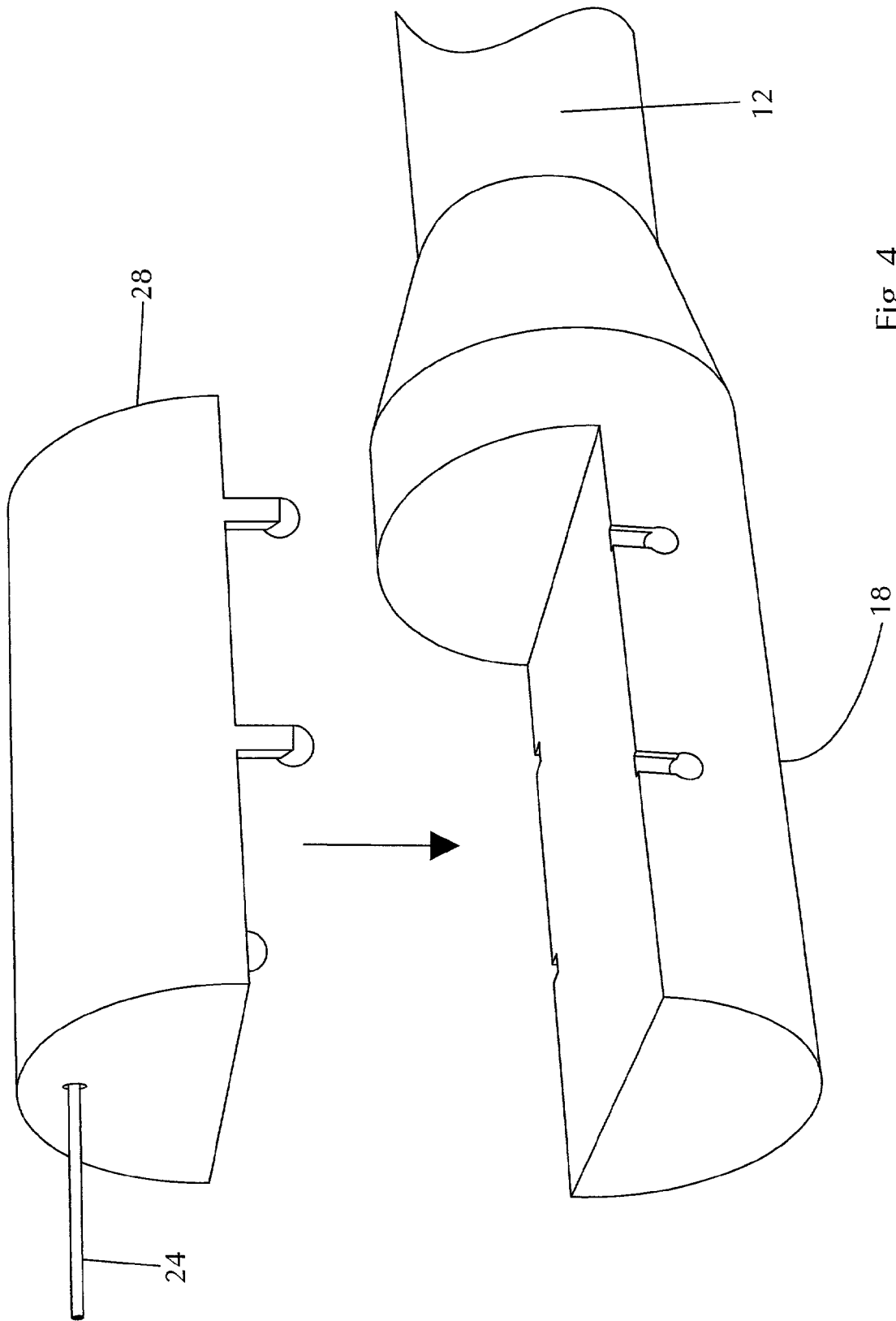
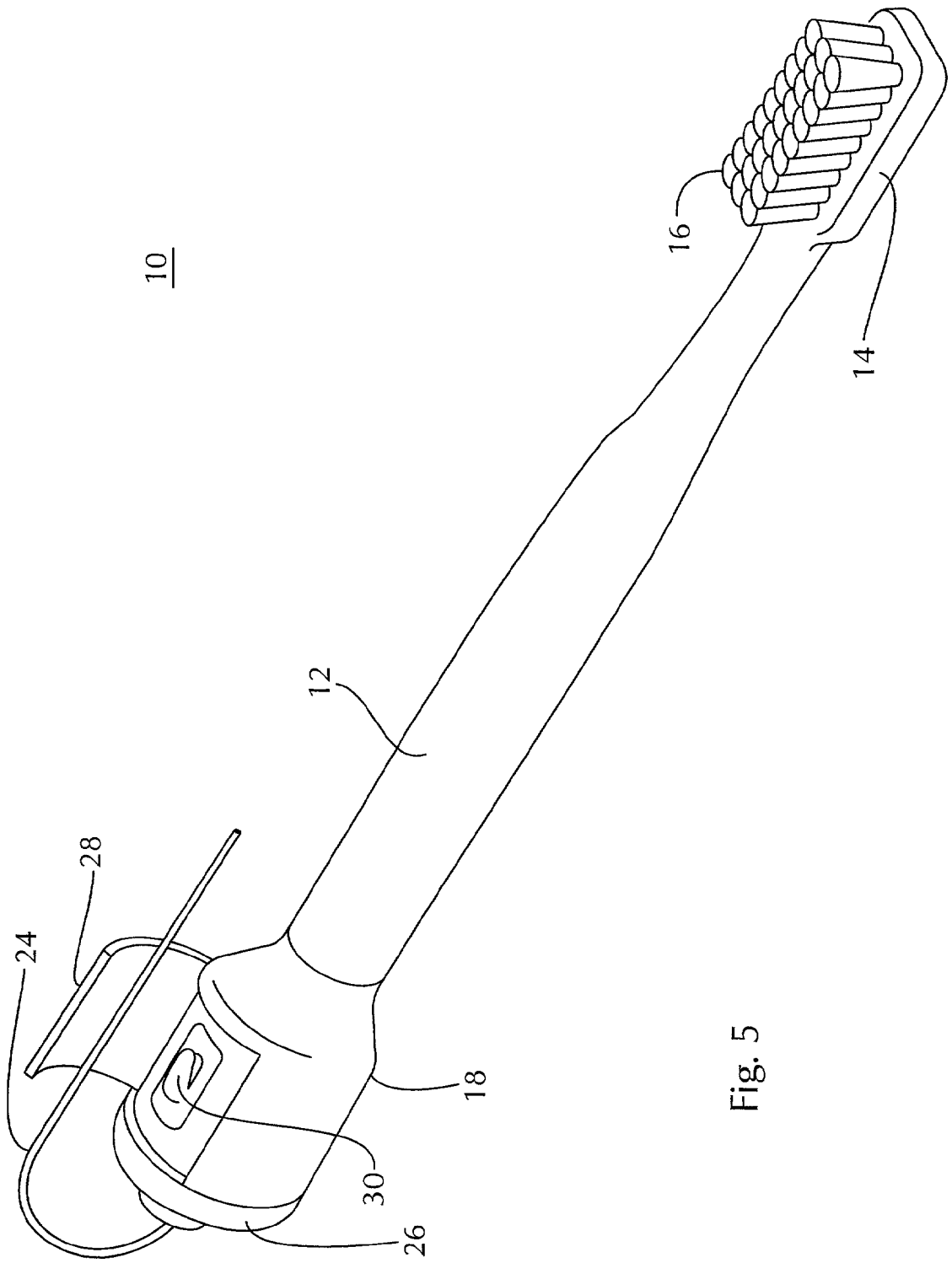


Fig. 4



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Fig. 5

COMBINATION FLOSS AND TOOTHBRUSH DEVICE

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention is a combination toothbrush and dental floss dispenser. More particularly, the device is a toothbrush with an extended handle or shaft with traditional brush bristles at one end, and a dental floss dispensing means at the other end. Such may be either incorporated within the brush itself as a single piece, or, alternatively may be detachable in nature. The floss dispenser is preferably cylindrical in nature, and includes a floss cutter and hinged cover panel for the cutter.

[0003] 2. Description of the Prior Art

[0004] Numerous innovations for toothbrushes have been provided in the prior art that are described as follows. Even though these innovations may be suitable for the specific individual purposes to which they address, they differ from the present invention as hereinafter contrasted. The following is a summary of those prior art patents most relevant to the invention at hand, as well as a description outlining the differences between the features of the present invention and those of the prior art.

[0005] 1. U.S. Pat. No. 4,821,752, Invented by Widlak, Entitled "Oral Hygiene Apparatus Having Replaceable Tooth Engaging Cleaning Element And Internal Dental Filament Dispenser"

[0006] In the patent to Widlak, a personal, oral hygiene instrument is provided that incorporates a replaceable tooth engaging element and a dental filament dispenser into a single, hand held instrument. The instrument includes a hand graspable base member having an internal chamber for storing and dispensing dental filament from one end of the base member. A replaceable tooth engaging cleaning element is detachably received at the opposed end of the hand graspable base member.

[0007] 2. U.S. Pat. No. 3,782,397, Invented by McCord, Entitled "Toothbrush And Dental-Floss Dispenser"

[0008] In the patent to McCord, a toothbrush is described which is so constructed as to contain an novel dental-floss dispenser in the handle thereof.

[0009] 3. U.S. Design Pat. Des. No. 294,201, Invented by Moore, Entitled "Combination Toothbrush And Floss Holder"

[0010] The patent to Moore depicts the ornamental design for a combination toothbrush and floss holder, as shown and described.

[0011] 4. U.S. Design Pat. Des. No. 336,782, Invented by Vela et al., Entitled "Combined Toothbrush, Toothpaste Dispenser And Dental Floss Holder Unit And Cover Therefore"

[0012] The patent to Vela et al. depicts the ornamental design for a combined toothbrush, toothpaste dispenser and dental floss holder unit and cover therefore, as shown and described.

[0013] 5. U.S. Design Pat. No. Des. 328,978, Invented by Hainline, Entitled "Combined Toothbrush And Holder With Integral Dental Floss Dispenser"

[0014] The patent to Hainline depicts the ornamental design for a combined toothbrush and holder with integral dental floss dispenser, as shown and described.

[0015] 6. U.S. Design Pat. Des. 362,341, invented by Sprague, entitled "Combined Toothbrush With Cover And Dental Floss Dispenser"

[0016] The patent to Sprague depicts the ornamental design for a combined toothbrush with cover and dental floss dispenser, as shown and described.

[0017] 7. U.S. Pat. No. 5,415,187, Invented by Heneveld, Entitled "Combination Toothbrush, Toothpaste Dispenser And Dental Filament Dispenser"

[0018] The patent to Heneveld depicts the ornamental design for a combination toothbrush, toothpaste dispenser and dental filament dispenser, as shown and described.

[0019] It is suggested that the closest prior art to the present invention is Patent Number 4,821,752, invented by Widlak (first above-listed). The invention is entitled "Oral Hygiene Apparatus Having Replaceable Tooth Engaging Cleaning Element And Internal Dental Filament Dispenser." However, the Widlak device features removable brush bristles as an important part of the invention, and specifically claims that the connection between the toothbrush shaft and floss dispensing unit is via snap fasteners. [See part numbers "40" and "42" in FIGS. 2 and 3; See also Column "6", Line "7" reference to "first retention rib snapably receivable . . ."].

[0020] As outlined above, the other prior art patents largely entail elements such as: an improved floss cutter cover for safety purposes; a foldable toothbrush and floss dispenser; decorative toothbrushes and floss dispensers with particular graphics; dental floss dispensers within toothbrush holders, rather than attached to the toothbrush itself; and enhanced devices that also include toothpaste dispensers.

[0021] In contrast to the above, the present invention device is a toothbrush with a dental floss dispensing member at one end. The cylindrical floss dispenser includes a floss cutter and hinged cover panel, and may be incorporated directly within a toothbrush handle. Alternatively, it may be detachable and affixed to the toothbrush shaft via threaded connection. The floss spool within the dispenser housing may be replaced, when necessary. The toothbrush item may be of varying lengths, may be constructed of varying materials, and may bear colors or graphics. Spools of varying quantities of floss may be used to provide a quantity that corresponds to the lifespan of the brush.

SUMMARY OF THE INVENTION

[0022] As noted, the present invention is a combination toothbrush and dental floss dispenser. More particularly, the device is a toothbrush with an extended handle or shaft with traditional brush bristles at one end, and a dental floss dispensing means at the other end. Such may be either incorporated within the brush itself as a single piece, or, alternatively may be detachable in nature. The floss dispenser is preferably cylindrical in nature, and includes a floss cutter and hinged cover panel for the cutter.

[0023] In the preferred mode, the dispensing unit is within the toothbrush itself, providing a product of a shape and configuration that users are already familiar and comfortable

with. In an alternate mode, the dispensing unit is affixed to the toothbrush shaft via threaded connection, by simply twisting on an off. In still other embodiments, the dispenser may be affixed to the toothbrush via snap fasteners or other means. Importantly, the dental floss spool located within the dispenser housing may be replaced. In all instances, the toothbrush item may be of varying lengths and sizes, may be constructed of varying materials, and may bear colors or additional graphics thereon. As an additional feature, spools of varying quantities of floss may be removably installed in the device, such as to provide an amount of floss that corresponds to the expected life span of the toothbrush. As is the case with traditional dental floss, the floss of the present item may be one of a number of flavors.

[0024] Accordingly, it is an object of the invention to provide a device that aids in personal hygiene in multiple ways.

[0025] It is an additional goal of the invention to provide a device that is compact in size, and easy to store or transport.

[0026] It is another object of the invention to provide a device that is manufactured of lightweight, relatively inexpensive materials, functioning to keep manufacturing and shipping costs to a minimum.

[0027] Furthermore, it is a goal of the present invention to provide a device that forms a single unit, functioning to keep all components thereof together for the purposes of safety and convenience.

[0028] It is an additional goal of the invention to provide a device that can be produced in multiple sizes, according to the needs of the particular user.

[0029] It is an additional goal of the invention to provide a device that can include indicia and graphics thereon, particularly to provide a fun item for children to use on a daily basis.

[0030] It is an additional goal of the invention to provide a device that offers a variety of means of attachment of the principal components, for versatility in manufacture and production.

[0031] Finally, it is an important goal of the present invention to provide a device that is suitable for usage by great quantities of people, offering previously unattained quality and convenience at reasonable costs.

[0032] The novel features which are considered characteristic for the invention will be set forth in the claims when submitted. The invention itself, however, both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best understood from the description of the embodiments to be submitted when read and understood in connection with drawings relating thereto.

BRIEF DESCRIPTION OF PREFERRED EMBODIMENTS

[0033] FIG. 1 is a three-quarter front perspective view of the present invention, illustrating the principal components in a single-piece mode of production, shown for the purposes of example only.

[0034] FIG. 2 is a side perspective, exploded view of the present invention, illustrating the principal components and one method of attachment, shown for the purposes of example only.

[0035] FIG. 3 is a three-quarter front perspective view of the replaceable spool of the present invention, shown for the purposes of example only.

[0036] FIG. 4 is a three-quarter front perspective view of a detached snap-on type cap for the present invention, shown for the purposes of example only.

[0037] FIG. 5 is a three-quarter front perspective view of the present invention, illustrating the principal components and their general location of attachment in one mode of production, shown for the purposes of example only.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0038] Regarding FIG. 1, which is a three-quarter front perspective view of the present invention, illustrating the principal components in a single-piece mode of production, shown for the purposes of example only, FIG. 2, which is a side perspective, exploded view of the present invention, illustrating the principal components and their method of attachment in the preferred mode, FIG. 3, which is a three-quarter front perspective view of the replaceable spool, FIG. 4, which is a three-quarter front perspective view of a detached snap-on type cap for the present invention, FIG. 5 is a three-quarter front perspective view of the present invention, illustrating the principal components and their general location of attachment in one mode of production, shown for the purposes of example only.

[0039] The combination floss and toothbrush device comprises an elongated shaft (12) which comprises a brush head (14) at one end thereof. The brush head (14) comprises a plurality of bristles (16) thereon. In the single-piece mode, the floss dispenser (18) within the shaft is generally cylindrical in nature and comprises an aperture at a first end thereof through which floss (24) may be pulled by a user.

[0040] In the modular version, a floss dispenser (18) is removably affixed to a distal end of the shaft (12), the floss dispenser (18) generally cylindrical in nature and comprising an aperture at a first end thereof through which floss (24) may be pulled by a user.

[0041] The floss dispenser (18) further comprises a cap (28) affixed to an outer surface thereof. The cap (28) functions to removably cover a floss cutting device (30). A spool (22) containing the floss (24) is removably inserted through aperture (16) and placed within floss dispenser (18).

[0042] A male member (20) extending from a second end of the floss dispenser (18) and received by a female counterpart upon the shaft (12). This functions to allow the user to pull the floss (24) from the spool (22) and cut the floss utilizing cutting device (30) to use the floss (24) in its intended manner.

[0043] In general, the shaft is a traditional elongated toothbrush handle, constructed of lightweight and durable plastic, nylon, acrylic or polymers. Thus, the same can be constructed of non-toxic materials and may be of a length of seven to nine inches, for the purpose of example, consistent with ordinary toothbrushes. Moreover, the shaft may com-

prise rubber or latex grips thereon, functioning to allow the user to better grip the toothbrush device, especially in light of the fact that the user's hands are likely to be wet.

[0044] The brush bristles appear at one end of the elongated handle or shaft, and are also constructed of plastic, nylon, acrylic or polymers, much like traditional toothbrushes. The brush head may be angled to a previously-determined degree, if desired by the manufacturer, and the bristles may be soft, medium, or firm in nature.

[0045] Appearing at the distal end of the handle is the floss dispenser, shown fully attached to the handle in FIG. 5. The dispenser is substantially cylindrical in this particular embodiment, but may be of alternate designs or shapes in additional modes. The dispenser includes a sufficient quantity of floss therein, such floss extending outwardly from the extreme end of the floss dispenser. The length of the floss may be intended to correlate to the expected life span of the toothbrush. The floss may be flavored and/or colored, if desired.

[0046] As noted, the dispenser further comprises a floss cutter, which may be constructed of steel with sufficient sharpness, and cutter cover for the purpose of providing safety and keeping the floss and cutter clean. The cutter cover may be hingedly attached as shown in this figure, or alternatively may affix to the dispenser via snap fit or threaded engagement.

[0047] In addition, as illustrated, the floss spool is substantially cylindrical so as to fit tightly within the floss dispenser. Importantly, the spool is replaceable such that the user can keep the toothbrush for an extended period of time if desired. As such, the user can simply purchase additional floss in the form of a spool and affix the same within the housing.

[0048] As further shown in FIG. 2, an end cap is rigidly affixed to the distal end of the floss dispenser. The end cap functions to allow the floss to extend therethrough in a controlled manner, with such floss fitting securely through an aperture in the center of the end cap. The cap may be conveniently removed by the user for the purpose of replacing the floss spool.

[0049] Also shown in this figure is the threaded connection between the floss dispenser and toothbrush handle, as utilized in the preferred mode of production. Thus, the male threaded member appears on one end of the floss dispenser, with the female or receiving end appearing on the end of the handle or shaft. With such a construction, the user can simply attach the dispenser to the toothbrush handle by a simple twisting motion. The threaded connection provides a strong and secure fit between the components, such that the parts will not become detached unless desired.

[0050] It is important to note that several alternate attachment means may be utilized by the present invention. For the purposes of example, the fastening means may comprise snap fasteners rather than the threaded connection, such that the user can simply press the dispenser on to the end of the toothbrush.

[0051] In an alternate mode, the components may be configured in a telescopic manner, with the dispenser extending outwardly from an interior cavity located within

the end of the toothbrush handle. In such a mode of production, the dispenser may simply slide out of the handle to be used effectively.

[0052] Such design provides convenience and a compact assembly to save space for storage or for ease of travel. The total device may even be travel-sized, for the purposes of increased user convenience.

[0053] Importantly, it is suggested that the highly convenient presence of the dental floss within the toothbrush will make people floss their teeth more often. Due to the main device being already used by the person multiple times per day, it is very easy for the person to remember to floss their teeth, much to their benefit. In addition, the person need not look for a separate and small dental floss container, which can be easily lost or misplaced.

[0054] In addition, also in an effort to make a great variety of users utilize the device more often, the brush handle, bristle portion, or dispensing portion may bear any of a variety of colors, designs, or patterns thereon. Such may be fluorescent colors, such as a neon blue, green, red, pink, yellow, purple or orange. Patterns may include animals, sporting figures, cartoon characters, and a host of other fun and interesting items.

[0055] Finally, as is the case with traditional or existing dental floss, such may be flavored for the purpose of better appealing to both children and adults. For the purposes of example, such may be cinnamon, spearmint, or peppermint.

[0056] Therefore, in total, the present invention effectively aids in personal hygiene, is compact in size, is manufactured of lightweight, inexpensive materials, and offers a variety of means of attachment of the principal components for versatility in manufacture and production. With regards to all descriptions and graphics, while the invention has been illustrated and described as embodied, it is not intended to be limited to the details shown, since it will be understood that various omissions, modifications, substitutions and changes in the forms and details of the device illustrated and in its operation can be made by those skilled in the art without departing in any way from the spirit of the invention.

[0057] Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can readily adapt it for various applications without omitting features that, from the standpoint of prior art, constitute essential characteristics of the generic or specific aspects of this invention. What is claimed as new and desired to be protected by Letters Patent is set forth in the appended claims.

What is claimed is:

1. A combination floss and toothbrush device comprising:

an elongated shaft (12) which comprises a brush head (14) at one end thereof, the brush head (14) comprising a plurality of bristles (16) thereon;

a floss dispenser (18) removably affixed to a distal end of the shaft (12), the floss dispenser (18) generally cylindrical in nature and comprising an aperture at a first end thereof through which floss (24) may be pulled by a user;

- the floss dispenser (18) further comprising a cap (28) affixed to an outer surface thereof, the cap (28) functioning to removably cover a floss cutting device (30);
- a spool (22) containing the floss (24) removably inserted through aperture (16) and placed within floss dispenser (18);
- a male member (20) extending from a second end of the floss dispenser (18) and received by a female counterpart upon the shaft (12); and
- functioning to allow the user to pull the floss (24) from the spool (22) and cut the floss utilizing cutting device (30) to use the floss (24) in its intended manner.
2. The combination floss and toothbrush device as described in claim 1, wherein the floss is flavored.
 3. The combination floss and toothbrush device as described in claim 1, wherein the brush head is angled to a previously-determined degree.
 4. The combination floss and toothbrush device as described in claim 1, wherein the shaft comprises a gripping means thereon.
 5. The combination floss and toothbrush device as described in claim 1, wherein the cap is detachable and is snapped into place.
 6. The combination floss and toothbrush device as described in claim 1, wherein the device is of a single-pieced construction.
 7. The combination floss and toothbrush device as described in claim 1, wherein the device is of a modular construction.
 8. The combination floss and toothbrush device as described in claim 1, wherein the device is travel-sized.
 9. The combination floss and toothbrush device as described in claim 1, wherein the device comprises indicia thereon in the form of previously determined text, graphics, designs, colors, and glow in the dark elements.
 10. The combination floss and toothbrush device as described in claim 1, wherein the length of the floss is variable, and is intended to correlate to an expected life of the toothbrush.
 11. The combination floss and toothbrush device as described in claim 1, wherein the length of the shaft is variable.
 12. The combination floss and toothbrush device as described in claim 1, wherein the device is manufactured of materials selected from the group consisting of lightweight and durable plastic, nylon, acrylic or polymers.
 13. The combination floss and toothbrush device as described in claim 1, wherein the bristles are selected from the group consisting of soft, medium, and firm.
 14. The combination floss and toothbrush device as described in claim 1, wherein the floss is colored.
 15. The combination floss and toothbrush device as described in claim 1, wherein the device is telescopic in nature.

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