ORAL CAVITY CLEANING DEVICE AND A TONGUE CLEANING DEVICE

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ABSTRACT

An oral cavity cleaning device comprises a brush (2) for cleaning teeth, having a brush (2) body (3) equipped with bristles sheet element (5) with an extended shape, attached to the brush (2) by means for removably connecting the tongue cleaning device (12) to the brush (2) body (3). The present invention also relates to a tongue cleaning device (12) which has a flexible thin sheet element (5) with an extended shape.
ORAL CAVITY CLEANING DEVICE AND A TONGUE CLEANING DEVICE

TECHNICAL FIELD

[0001] The present invention relates to an oral cavity cleaning device and a tongue cleaning device.

BACKGROUND ART

[0002] A major current problem is that relating to correct cleaning and hygiene of the oral cavity.
[0003] Nowadays such cleaning is almost exclusively carried out using a common toothbrush.
[0004] However, simply cleaning the teeth, even several times a day, with a common toothbrush is not in itself enough to guarantee perfect oral hygiene.
[0005] As is known, the surface of the tongue tends to be prone to deposits of food residues and the bacteria that colonise them (white coating), mainly facultatively anaerobic gram-negative bacteria which feed on food residues on the tongue and release volatile sulphur compounds. When this proliferation of bacteria is excessive it may lead to serious periodontal diseases. These bacteria are also the main ones responsible for causing bad breath from the oral cavity.

DISCLOSURE OF THE INVENTION

[0006] The main need of the present invention is to provide a valid solution to the problem indicated above, devising an oral cavity cleaning device and a tongue cleaning device which allow the effective removal of the food residues and bacteria that may be deposited on the tongue, thus contributing to oral cavity cleaning.
[0007] Within this need, another aim of the present invention is to make available an oral cavity cleaning device and a tongue cleaning device which, due to unique production features, can offer the widest guarantees of reliability and safe use.
[0008] Yet another aim of the invention is to provide an oral cavity cleaning device and a tongue cleaning device which can be used repeatedly before being thrown away and which are very easy to use.
[0009] A further aim of the present invention is to provide an oral cavity cleaning device and a tongue cleaning device which are easily obtained starting with elements and materials that are readily available for sale and which are also competitive from an economic viewpoint.
[0010] These needs and aims and other aims better described below are achieved by an oral cavity cleaning device and a tongue cleaning device as described in the claims herein.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] Other features and advantages of the invention are more clearly indicated in the detailed description which follows with reference to the accompanying drawings which illustrate several preferred non-restricting embodiments of an oral cavity cleaning device and a tongue cleaning device according to the present invention and in which:
[0012] FIG. 1 is a bottom view with some parts transparent and partly exploded of a first embodiment of the oral cavity cleaning device according to the present invention;
[0013] FIG. 2 is a view similar to that in FIG. 1 of the first embodiment of the oral cavity cleaning device according to the present invention, in which the tongue cleaning device is partly removed from a cavity made in the body of the brush;
[0014] FIG. 3 is a partial perspective view of the body of the brush, illustrating an opening giving access to the cavity made in the body of the brush;
[0015] FIG. 4 is a bottom view of a second embodiment of the oral cavity cleaning device according to the present invention;
[0016] FIG. 5 is a partial perspective view of the alternative embodiment illustrated in FIG. 4;
[0017] FIG. 6 is an enlarged rear view of FIG. 4;
[0018] FIG. 7 is a bottom view of a third embodiment of the oral cavity cleaning device according to the invention;
[0019] FIG. 8 is a rear view of the alternative embodiment of the oral cavity cleaning device according to the invention illustrated in FIG. 7;
[0020] FIG. 9 is an exploded bottom view of a fourth embodiment of the oral cavity cleaning device according to the invention, illustrating the tongue cleaning device completely removed from a cavity formed in the body of the brush;
[0021] FIG. 10 is a perspective view of a fifth embodiment of the oral cavity cleaning device according to the invention;
[0022] FIG. 11 is a bottom view of the fifth embodiment illustrated in FIG. 10;
[0023] FIG. 12 is an enlarged rear view, partly in cross-section, of the fifth embodiment of the invention with a case portion in the closed condition;
[0024] FIG. 13 is a slightly perspective top view of a first embodiment of the tongue cleaning device;
[0025] FIG. 14 is a slightly perspective top view of an alternative embodiment of the tongue cleaning device;
[0026] FIG. 15 illustrates a possible method for use of the tongue cleaning device.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS OF THE INVENTION

[0027] In the embodiments which follow individual features, indicated relative to specific examples, may actually be interchangeable with other, different features, existing in other embodiments.
[0028] With reference to the accompanying drawings, the numeral 1 denotes as a whole an oral cavity cleaning device according to the present invention, comprising a brush 2 for cleaning teeth, with a brush 2 body 3 forming, in a known way, a grip portion 3a and equipped, for example at a head zone 3b, with bristles 4.
[0029] Again according to the invention, the oral cavity cleaning device 1 also comprises a tongue cleaning device 12, which has a thin sheet element 5, flexible and with an extended shape.
[0030] In particular, the thin sheet element 5 has a shape extended in a main direction of extension and is flexible, in such a way that it can be bent about an axis substantially at a right angle to its longitudinal extension.
[0031] The thin sheet element 5 is preferably made of plastic, so that it can, for example, easily be washed after use, and, advantageously, it has a shape with blunt or rounded edges, to prevent it from injuring the tongue during use.
The material used to make the thin sheet element 5 preferably renders it easy to wash with water. Moreover, it should also be possible to sterilise said material which should not cause allergies. It should be noticed that the thickness and length dimensions of the thin sheet element 5 may vary according to specific requirements. Advantageously, the thin sheet element 5 has a substantially constant transversal extension substantially along its entire longitudinal extension. However, it should be added that the longitudinal ends 5a, 5b of the thin sheet element 5 may, for example, be rounded to provide a more comfortable grip.

Appropriately, there are means for removably connecting the tongue cleaning device 12 to the body 3 of the brush 2. For example, inside the brush handle there may be a housing able to at least partly receive the thin sheet element 5.

In particular, in an embodiment said means for a removable connection may consist of an extended cavity 6 formed inside the brush 2 body 3, preferably at its grip or handle portion 3a, and designed to at least partly receive the thin sheet element 5.

As illustrated in particular in FIGS. 1, 2 and 3, substantially at the end of the brush 2 body 3 opposite the head zone 3b, there may be an opening 7 giving access to the extended cavity 6, through which the thin sheet element 5 can be inserted in and removed from the cavity 6.

With reference to FIG. 7, alternatively, the cavity 6 may be made inside a sleeve or pocket, formed between the brush body 3 and a retaining element 8 and which may, for example, be open at both its longitudinal ends 5a, 5b.

In particular with reference to FIGS. 1 and 2 and FIG. 9, advantageously, it may be possible to cover the access opening 7 with a cap or plug 9 to close the cavity 6 and prevent the thin sheet element 5 from coming out of the cavity 6 through the opening 7 once it has been placed inside the cavity.

The cap 9 may, appropriately, be fixed to one end of the thin sheet element 5, so that it forms a single body with it, as illustrated in FIG. 14.

According to an alternative embodiment illustrated in particular in FIG. 4, the above-mentioned means for a removable connection consist of at least a peg 10 projecting from the brush 2 body 3 and able to engage with a respective seat formed in the thin sheet element 5. A pair of pegs 10 is preferably used, located in the brush 2 body 3 grip portion 3a and able to form a removable connection by snapping into respective holes made at the ends of the thin sheet element 5.

With reference to FIG. 2, it may be seen how the thin sheet element 5 may also be kept connected to the brush 2 body 3 even after removal from the above-mentioned means for a removable connection, by a thread-like element 11 with one of its ends attached to one end of the thin sheet element 5 and with its other end attached to the brush 2 body 3 in any suitable way.

Use of the invention as regards the oral cavity cleaning device is as follows. Use of the tongue cleaning device is similar to that described relative to the oral cavity cleaning device.

Thanks to the brush 2, the user can clean his/her teeth correctly, in the known way.
1. An oral cavity cleaning device comprising a brush (2) for cleaning teeth, having a brush (2) body (3) equipped with bristles (4), characterised in that it also comprises a tongue cleaning device (12) having a thin sheet element (5) which is flexible and has an extended shape.

2. The oral cavity cleaning device according to claim 1, characterised in that it comprises means for removable connection of the tongue cleaning device (12) to the brush (2) body (3).

3. The oral cavity cleaning device according to claim 2, characterised in that the means for a removable connection comprise an extended cavity (6) formed inside the brush (2) body (3) and designed to at least partly receive the thin sheet element (5).

4. The oral cavity cleaning device according to claim 3, characterised in that the means for a removable connection comprise a closing cap (9) designed to cover an opening (7) which gives access to the cavity (6).

5. The oral cavity cleaning device according to claim 4, characterised in that the cap (9) is fixed to one end of the thin sheet element (5).

6. The oral cavity cleaning device according one or more of the claims from 3 to 5, characterised in that the brush (2) body (3) comprises a pair of half-shells (15a), (15b), hinged together along an edge, allowing them to pass from a closed condition, in which they delimit the extended cavity (6), to an open condition in which they allow access to the cavity (6), and vice versa.

7. The oral cavity cleaning device according one or more of the claims from 2 to 6, characterised in that the means for a removable connection comprise at least one peg (10) projecting from the brush (2) body (3), the peg being able to engage with a respective seat formed in the thin sheet element (5).

8. The oral cavity cleaning device according to claim 7, characterised in that the means for a removable connection comprise a pair of pegs (10).

9. The oral cavity cleaning device according to claim 8, characterised in that the pegs (10) are located in a grip portion (3a) of the brush (2) body (3) and can form a removable connection, by snapping into place, in respective holes made at the ends of the thin sheet element (5).

10. The oral cavity cleaning device according to any of the foregoing claims, characterised in that it also comprises a thread-like element (11) one end of which is attached to one end of the thin sheet element (5), the other end being attached to the brush (2) body (3), to keep the thin sheet element (5) connected to the brush (2) body (3).

11. The oral cavity cleaning device according to any of the foregoing claims, characterised in that the thin sheet element (5) is made of plastic.

12. A tongue cleaning characterised in that it comprises a thin sheet element (5) with a shape extending along a main direction of extension and flexible.

13. The tongue cleaning device according to claim 12, characterised in that the thin sheet element (5) has a shape with blunt or rounded edges.

14. The tongue cleaning device according to claim 12 or 13, characterised in that the thin sheet element (5) has a substantially constant transversal extension substantially along the entire longitudinal extension.

15. The tongue cleaning device according to any of the claims from 12 to 14, characterised in that the thin sheet element (5) has rounded longitudinal ends (5a), (5b).

16. The tongue cleaning device according to any of the claims from 12 to 15, characterised in that the thin sheet element (5) is made of plastic.

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