



(11) **EP 4 111 919 A1**

(12) **EUROPEAN PATENT APPLICATION**
published in accordance with Art. 153(4) EPC

(43) Date of publication:
04.01.2023 Bulletin 2023/01

(51) International Patent Classification (IPC):
A47K 1/09 (2006.01)

(21) Application number: **20921792.6**

(52) Cooperative Patent Classification (CPC):
A46B 17/08; A47K 1/09

(22) Date of filing: **08.10.2020**

(86) International application number:
PCT/JP2020/038075

(87) International publication number:
WO 2021/171680 (02.09.2021 Gazette 2021/35)

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(71) Applicant: **Panasonic Intellectual Property Management Co., Ltd.**
Osaka-shi, Osaka 540-6207 (JP)

(72) Inventor: **KAKUTA, Toru**
Osaka-shi, Osaka (JP)

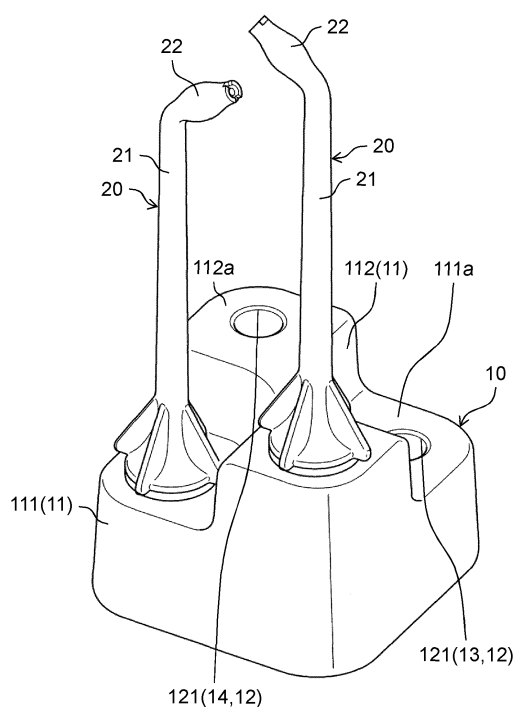
(74) Representative: **Grünecker Patent- und Rechtsanwälte PartG mbB**
Leopoldstraße 4
80802 München (DE)

(30) Priority: **27.02.2020 JP 2020031892**

(54) **STAND FOR ORAL CARE MEMBER**

(57) An oral care product stand according to the present disclosure holds an oral care product including a body extending in one direction, and an oral insertion part that is connected to the body so as to protrude in a direction intersecting the one direction and that is insertable into an oral cavity. The oral care product stand includes a stand body having a plurality of retainers each capable of holding a part to be held of the body. The retainers include at least one first retainer and a second retainer having a higher height than the first retainer.

FIG. 1



EP 4 111 919 A1

Description

TECHNICAL FIELD

[0001] The present disclosure relates to an oral care product stand.

BACKGROUND ART

[0002] As disclosed in PTL 1 below, a toothbrush stand (an oral care product stand) having multiple retainers capable of holding respective toothbrushes (oral care products) has been conventionally proposed.

[0003] Here, the oral care product such as a toothbrush has an eccentric shape in which the tip of a brush or the like protrudes with respect to an axial center of a handle. This structure requires the toothbrush stand to be provided with the retainers at a distance to prevent brushes from interfering with each other due to rotation, and thus increasing the toothbrush stand in size.

[0004] PTL 1 discloses the toothbrush stand in which a toothbrush stands inclining outward with respect to the toothbrush stand in a state where the toothbrush is held by the toothbrush stand. This structure enables brushes of respective toothbrushes to be prevented from interfering with each other while suppressing an increase in size of the toothbrush stand.

Citation List

Patent Literature

[0005] PTL 1: Unexamined Japanese Patent Publication No. H09-028594

SUMMARY OF THE INVENTION

[0006] Unfortunately, in the above-described conventional technique, since the toothbrush stands in a posture of inclining outward with respect to the toothbrush stand, and thus a tip part of the toothbrush protrudes outward of the toothbrush stand when the toothbrush is held by the toothbrush stand.

[0007] As described above, when the tip part of the toothbrush protrudes outward of the toothbrush stand, a space for the tip part of the toothbrush needs to be secured outside the toothbrush stand, and thus restricting a place for placing the toothbrush stand.

[0008] Thus, an object of the present disclosure is to provide an oral care product stand capable of further improving a degree of freedom of its installation place while preventing oral care products from interfering with each other.

[0009] An oral care product stand according to an aspect of the present disclosure holds an oral care product including a body extending in one direction, and an oral insertion part that is connected to the body so as to protrude in a direction intersecting the one direction and that

is insertable into an oral cavity. The oral care product stand includes a stand body having multiple retainers each capable of holding a part to be held of the body. The retainers include at least one first retainer and a second retainer having a higher height than the first retainer.

[0010] An oral care product stand according to another aspect of the present disclosure holds an oral care product including a body extending in one direction, and an oral insertion part that is connected to the body so as to protrude in a direction intersecting the one direction and that is insertable into an oral cavity. The oral care product stand includes a stand body having multiple retainers each capable of holding a part to be held of the body. The retainers are formed so as to allow the oral care product to be held in a state where a region where the oral insertion part can exist in plan view while the body is inclined with respect to a vertical direction falls within a region of the stand body.

[0011] The present disclosure enables providing an oral care product stand capable of further improving a degree of freedom of its installation place while preventing oral care products from interfering with each other.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012]

Fig. 1 is a perspective view illustrating a state in which an oral care product is held in an oral care product stand according to a first exemplary embodiment.

Fig. 2 is a side view illustrating a state before the oral care product according to the first exemplary embodiment is attached to an oral care device body.

Fig. 3 is a sectional view illustrating a state in which the oral care product according to the first exemplary embodiment is attached to the oral care device body.

Fig. 4 is a side view illustrating the oral care product according to the first exemplary embodiment.

Fig. 5 is a plan view illustrating a relationship between the oral care product stand according to the first exemplary embodiment and the oral care product.

Fig. 6 is a side view illustrating a state in which the oral care product is held in the oral care product stand according to the first exemplary embodiment.

Fig. 7 is a side view illustrating a state before an oral care product according to a variation 1 is attached to the oral care device body.

Fig. 8 is a sectional view illustrating a state in which the oral care product according to the variation 1 is attached to the oral care device body.

Fig. 9 is a side view illustrating an oral care product according to a variation 2.

Fig. 10 is a perspective view illustrating an oral care product stand according to a second exemplary embodiment and the oral care product.

Fig. 11 is a plan view illustrating a state in which an

oral care product is held in an oral care product stand according to a third exemplary embodiment.

Fig. 12 is a side view illustrating a state in which the oral care product is held in the oral care product stand according to the third exemplary embodiment.

Fig. 13 is a plan view illustrating a relationship between the oral care product stand according to the third exemplary embodiment and the oral care product.

Fig. 14 is a side view illustrating a relationship between oral care products each of which has a brush and which are held by the oral care product stand according to the third exemplary embodiment.

Fig. 15 is a side view illustrating a relationship between oral care products each of which has a nozzle and which are held by the oral care product stand according to the third exemplary embodiment.

DESCRIPTION OF EMBODIMENTS

[0013] Hereinafter, exemplary embodiments will be described in detail with reference to the drawings. However, unnecessarily detailed description is omitted in some cases. For example, a detailed description of already well-known matters or a redundant description of substantially the same configuration may be omitted.

[0014] Note that the attached drawings and the following description are provided for those skilled in the art to fully understand the present disclosure, and are not intended to limit the subject matter as described in the appended claims.

(First exemplary embodiment)

[0015] As illustrated in Figs. 1 to 3, a first exemplary embodiment exemplifies attachment stand 10 capable of holding (installing) nozzle attachment (attachment: oral care product) 20 as an oral care product stand.

[0016] As illustrated in Figs. 2 and 3, nozzle attachment 20 is detachably attached to oral washing device body (oral care device body) 30. Nozzle attachment 20 is attached to oral washing device body 30 to cause liquid, such as water or washing water, pressurized by a pump (not illustrated) provided in oral washing device body 30, for example, to be jetted from nozzle 22 provided at the tip of nozzle attachment 20.

[0017] The pressurized liquid is jetted from nozzle 22 to wash an oral cavity of a user or the like in a state where nozzle 22 of nozzle attachment 20 attached to oral washing device body 30 faces the oral cavity.

[0018] As described above, nozzle attachment 20 and oral washing device body 30 according to the first exemplary embodiment are a device (oral care device) capable of washing an oral cavity of a user or the like by jetting pressurized liquid from nozzle 22.

[0019] The oral care device typically includes one oral washing device body 30 and multiple nozzle attachments 20. This structure allows each of roommates such as

family members to have dedicated nozzle attachment 20 while one oral washing device body 30 is shared.

[0020] Attachment stand 10 according to the first exemplary embodiment is a stand for holding nozzle attachment 20 that is not attached to oral washing device body 30, such as when the oral care device is not used.

[0021] Thus, attachment stand 10 according to the first exemplary embodiment can hold four (multiple) nozzle attachments 20 in one stand.

[0022] Specifically, as illustrated in Fig. 1, attachment stand 10 includes stand body 11. Stand body 11 can be made of a material such as synthetic resin, for example, and is formed in such a way that region R1 in plan view (contour in plan view) has a square shape (quadrangular shape) with rounded corners (see Fig. 5). Stand body 11 can be used while being placed on mounting surface 1 such as a washstand, for example (see Fig. 6).

[0023] Stand body 11 is formed with four (multiple) holding holes 121 each of which extends in a vertical direction and opens upward when stand body 11 is placed on mounting surface 1.

[0024] In the first exemplary embodiment, each of four holding holes 121 serves as retainer 12 capable of holding nozzle attachment 20. Specifically, four holding holes 121 (retainers 12) are each formed in a central part of corresponding one of four regions into which region R1 having a substantially square shape in plan view is divided.

[0025] Nozzle attachment 20 held in retainer 12 includes nozzle body (body) 21 extending in one direction, and nozzle (oral insertion part) 22 that is connected to nozzle body 21 so as to protrude in a direction intersecting the one direction and is insertable into an oral cavity.

[0026] Protrusion (part to be held) 23 of nozzle body 21 is inserted into holding hole 121. As a result, nozzle attachment 20 is held in stand body 11.

[0027] In the first exemplary embodiment, nozzle attachment 20 is attached to oral washing device body 30 by inserting protrusion 23 of nozzle body 21 into insertion hole (connection part) 31 of oral washing device body 30. That is, in the first exemplary embodiment, protrusion (part to be held) 23 of nozzle body 21 held in retainer 12 doubles as a part to be connected to insertion hole (connection part) 31 of oral washing device body (oral care device body) 30 (see Figs. 2 and 3).

[0028] In the first exemplary embodiment, nozzle attachment 20 is attached to nozzle body 30 by engaging engagement protrusion 31a formed in insertion hole 31 of oral washing device body 30 with engagement groove 23a formed in protrusion 23 of oral washing device body 21.

[0029] When nozzle attachment 20 is attached to oral washing device body 30, liquid flow path 20a formed in nozzle attachment 20 communicates with liquid discharge path 30a formed in oral washing device body 30 (see Fig. 3).

[0030] As described above, in the first exemplary embodiment, nozzle body 21 extends in the vertical direction

(one direction) and nozzle 22 protrudes in the direction intersecting the vertical direction with regard to nozzle body 21, when nozzle attachment 20 is held in stand body 11.

[0031] At this time, nozzles 22 of respective nozzle attachments 20 may face each other, depending on a state of nozzle attachments 20 inserted into respective holding holes 121 adjacent to each other.

[0032] In the first exemplary embodiment, retainer 12 is configured to rotatably hold nozzle attachment 20, and when nozzle attachment 20 held in retainer 12 rotates, nozzles 22 of respective nozzle attachments 20 held in corresponding retainers 12 adjacent to each other may face each other.

[0033] Thus, when nozzle attachments 20 are moved downward in the vertical direction and held in respective retainers 12 to cause nozzles 22 to be positioned at the same height, a distance between two retainers 12 needs to be increased to prevent nozzles 22 adjacent to each other from interfering with each other.

[0034] When the distance between two retainers 12 is increased, attachment stand 10 increases in size in a horizontal direction, and thus restricting a placement position of attachment stand 10.

[0035] Thus, in the first exemplary embodiment, a degree of freedom of an installation place of attachment stand 10 is further improved, while nozzles 22 adjacent to each other are prevented from interfering with each other. Specifically, attachment stand 10 can be downsized in the horizontal direction while nozzles 22 adjacent to each other are prevented from interfering with each other.

[0036] In the first exemplary embodiment, stand body 11 includes base part 111 and protrusion 112 protruding with upper surface 112a positioned above upper surface 111a of base part 111.

[0037] Furthermore, in the first exemplary embodiment, stand body 11 is formed by integrally molding base part 111 and protrusion 112. Specifically, stand body 11 is formed in a shape in which protrusions 112 in the shape of a substantially rectangular parallelepiped are formed at two diagonal positions of base part 111 in the shape of a substantially rectangular parallelepiped. That is, in stand body 11, two protrusions 112 are formed and aligned in one diagonal direction, and two parts with no protrusion 112 are formed and aligned in the other diagonal direction.

[0038] Holding hole 121 is formed at substantially central part of upper surface 112a of each of two protrusions 112. Holding hole 121 is formed at substantially central part of each of upper surfaces 111a, of base part 111, formed and aligned in the other diagonal direction.

[0039] Each of base parts 111 formed and aligned in the other diagonal direction has upper surface 111a with a substantially central part provided with holding hole 121.

[0040] Here, in the first exemplary embodiment, by bringing lower surface 21b formed at a lower part of nozzle

body 21 into contact with upper surface 111a of base part 111, nozzle attachment 20 is restricted from being inserted into holding hole 121 formed at the substantially central part of upper surface 111a of base part 111. In contrast, in the first exemplary embodiment, by bringing lower surface 21b formed at a lower part of nozzle body 21 into contact with upper surface 112a of protrusion 112, nozzle attachment 20 is restricted from being inserted into holding hole 121 formed at the substantially central part of upper surface 112a of protrusion 112.

[0041] Upper surface 112a of protrusion 112 is positioned above upper surface 111a of base part 111.

[0042] Thus, nozzle attachment 20 held in retainer 12 formed in protrusion 112 is located above nozzle attachment 20 held in retainer 12 formed in base part 111.

[0043] This placement enables nozzle 22 of nozzle attachment 20 held in protrusion 112 and nozzle 22 of nozzle attachment 20 held in base part 111 to be positioned at heights different from each other.

[0044] The insertion of nozzle attachment 20 into holding hole 121 may be restricted by bottom surface 121a of holding hole 121. Then, multiple holding holes 121 may include holding holes 121 each having bottom surface 121a at a different height position. This structure also enables varying a height position of nozzle 22 of nozzle attachment 20.

[0045] As described above, in the first exemplary embodiment, retainer 12 includes first retainer 13 and second retainer 14 that is higher than first retainer 13. In the first exemplary embodiment, retainer 12 formed in base part 111 corresponds to first retainer 13, and retainer 12 formed in protrusion 112 corresponds to second retainer 14.

[0046] Distance p1 from center O1 of first retainer 13 to center O2 of second retainer 14 in plan view is set to be the shortest distance among multiple retainers 12. That is, two retainers 12 at the shortest distance in plan view serve as first retainer 13 and second retainer 14.

[0047] Distance p2 from center O1 of one first retainer 13 to center O1 of another first retainer 13 in plan view is set to be larger than distance p1 that is the shortest distance among multiple retainers 12. Furthermore, a distance from center O2 of one second retainer 14 to center O2 of another second retainer 14 in plan view is also set to be equal to distance p2.

[0048] That is, two retainers 12 separated from each other by more than the shortest distance (distance p1) in plan view are each configured to serve as first retainer 13 or second retainer 14.

[0049] Furthermore, as illustrated in Fig. 5, in the first exemplary embodiment, retainer 12 is formed in stand body 11 in such a way that region R2 where nozzle 22 can exist when retainer 12 holds nozzle attachment 20 falls within region R1 of stand body 11 in plan view.

[0050] This structure enables nozzle 22 to be prevented from protruding outward of stand body 11 (outside in the horizontal direction) regardless of a direction in which nozzle 22 protrudes when nozzle attachment 20 is held

in retainer 12.

[0051] In the first exemplary embodiment, as illustrated in Fig. 5, region R3 and region R4 partially overlap with each other in plan view. Here, region R3 is a region where nozzle 22 can exist when nozzle attachment 20 is held in first retainer 13. Region R4 is a region where nozzle 22 can exist when nozzle attachment 20 is held in second retainer 14 disposed at a position closest to first retainer 13 in which nozzle attachment 20 forming region R3 is disposed.

[0052] In the first exemplary embodiment, region R3 has a shape in which a truncated cone decreasing in diameter upward is disposed over a truncated cone decreasing in diameter downward, and region R3 is a region in the inside of a circle having center O1 of first retainer 13 as the center thereof in plan view (see Fig. 5). Similarly, region R4 has a shape in which a truncated cone decreasing in diameter upward is disposed over a truncated cone decreasing in diameter downward, and region R4 is a region in the inside of a circle having center O2 of second retainer 14 as the center thereof in plan view (see Fig. 5).

[0053] In other words, first retainer 13 and second retainer 14 are disposed so as to satisfy a relationship of $p1 < 2 \times b$. Here, "b" is a width from center O3 of nozzle body 21 to the tip of nozzle 22 in a direction orthogonal to the one direction. "p1" is a distance from center O1 of first retainer 13 to center O2 of second retainer 14.

[0054] This structure enables the stand body to be downsized by disposing first retainer 13 and second retainer 14 at a distance at which nozzle attachments 20 (nozzles 22) interfere with each other when being held at the same height.

[0055] Furthermore, in the first exemplary embodiment, first retainer 13 and second retainer 14 are disposed so as to satisfy a relationship of $x > a$ (see Fig. 6) where "a" is a length of nozzle 22 in the one direction and "x" is a height difference between first retainer 13 and second retainer 14.

[0056] This structure enables nozzles 22 of respective nozzle attachments 20 to be more reliably prevented from interfering with each other.

[0057] First retainer 13 and second retainer 14 are disposed so as to satisfy a relationship of $p1 > b + c$. Here, "c" is a length from center O3 of nozzle body 21 to outer surface 21a (see Fig. 4).

[0058] This structure enables nozzle 22 of nozzle attachment 20 to be more reliably prevented from interfering with nozzle body 21 of adjacent nozzle attachment 20.

[0059] In the first exemplary embodiment, one first retainer 13 and another first retainer 13 are disposed so as to satisfy a relationship of $p2 > 2 \times b$. In the first exemplary embodiment, one first retainer 13 and another first retainer 13 are disposed so as to satisfy a relationship of $p2 > 2 \times b$. Here, "p2" is a distance from center O1 of one first retainer 13 to center O1 of another first retainer 13. In the first exemplary embodiment, "p2" is also a distance from center O2 of one second retainer 14 to center

O2 of another second retainer 14.

[0060] This structure enables nozzle attachments 20 to be prevented from interfering with each other even when nozzle attachments 20 are held at the same height.

[0061] "d" included in Fig. 4 is a length in the one direction of a part of nozzle body 21, the part being positioned above an upper surface of stand body 11 (upper surface 111a of base part 111 or upper surface 112a of protrusion 112), when nozzle body 21 is held in retainer 12.

[0062] Attachment stand 10 with the structure described above enables further improvement in a degree of freedom of its installation place while preventing nozzle attachments 20 from interfering with each other.

[0063] As the oral care product stand, an attachment stand capable of holding (installing) attachment (attachment: oral care product) 20A of an electric toothbrush can be used.

[0064] Figs. 7 and 8 each illustrate an example of attachment 20A of an electric toothbrush. Attachment 20A of an electric toothbrush illustrated in Figs. 7 and 8 is detachably attached to electric toothbrush body (oral care device body) 30A.

[0065] Attachment 20A of an electric toothbrush includes body 21A extending in the one direction, and brush (oral insertion part) 22A that is connected to body 21A while protruding in a direction intersecting the one direction and is insertable into an oral cavity. By inserting vibrator (connection part) 31A formed to be able to vibrate in electric toothbrush body 30A into recess (part to be held) 23A of body 21A, attachment 20A of an electric toothbrush is attached to electric toothbrush body 30A. At this time, engagement protrusion 23aA formed in recess 23A is engaged with engagement groove 31aA provided in vibrator 31A.

[0066] When a switch (not illustrated) is operated to turn on a power supply in a state where attachment 20A of an electric toothbrush illustrated in Figs. 7 and 8 is attached to electric toothbrush body 30A, brush 22A vibrates in conjunction with vibration of vibrator 31A.

[0067] As described above, attachment 20A of an electric toothbrush and electric toothbrush body 30A illustrated in Figs. 7 and 8 are a device (oral care device) capable of brushing teeth of a user or the like by electrically vibrating brush 22A.

[0068] The oral care device illustrated in Fig. 7 and 8 also includes one electric toothbrush body 30A and multiple attachments 20A of an electric toothbrush. That is, this configuration allows each of multiple persons to have dedicated attachment 20A of an electric toothbrush while one electric toothbrush body 30A is shared.

[0069] When an attachment stand for holding multiple attachments 20A of an electric toothbrushes is configured as with attachment stand 10 described above, the attachment stand enables further improvement in a degree of freedom of its installation place while preventing attachments 20A of an electric toothbrush from interfering each other.

[0070] When attachment 20A of an electric toothbrush illustrated in Figs. 7 and 8 is held in the attachment stand, a holding protrusion is preferably formed instead of holding hole 121 to allow the holding protrusion to function as a retainer. This structure enables recess (part to be held) 23A of body 21A held by the retainer to double as a part to be connected to vibrator (connection part) 31A of electric toothbrush body (oral care device body) 30A.

[0071] Alternatively, a holding hole formed in the stand body also can be used to function as a retainer as with attachment stand 10 described above. In this case, attachment 20A of an electric toothbrush is held in the attachment stand by inserting a lower end part of body 21A into the holding hole.

[0072] Multiple retainers can be formed in the attachment stand that holds multiple attachments 20A of an electric toothbrush so as to satisfy conditions as in attachment stand 10 described above.

[0073] Attachment 20A of an electric toothbrush has a length of brush 22A in the one direction, the length being indicated as "a", and a width from center O4 of body 21A to the tip of brush 22A in a direction orthogonal to the one direction, the width being indicated as "b". A length from center O4 of body 21A to outer surface 21aA is indicated as "c", and a length in the one direction of body 21A, i.e., a length in the one direction of a part of body 21A, the part being positioned above an upper surface of the stand body when attachment 20A is held in the retainer, is indicated as "d" (see Fig. 9).

[0074] A stand capable of holding (installing) toothbrush (oral care product) 20B also can be used as the oral care product stand.

[0075] Fig. 9 illustrates an example of toothbrush 20B. Toothbrush 20B illustrated in Fig. 9 includes handle (body) 21B extending in one direction, and brush (oral insertion part) 22B that is connected to handle 21B while protruding in a direction intersecting the one direction and is insertable into an oral cavity.

[0076] When a stand for holding multiple toothbrushes 20B is configured as with attachment stand 10 described above, the stand enables further improvement in a degree of freedom of its installation place while preventing toothbrushes 20B from interfering each other.

[0077] When toothbrush 20B illustrated in Fig. 9 is held in the stand, lower end part (part to be held) 23B of the handle is inserted into a holding hole to hold toothbrush 20B in the stand. Thus, insertion of toothbrush 20B into the holding hole is restricted by a bottom surface of the holding hole.

[0078] Multiple retainers can be formed in the stand that holds multiple toothbrushes 20B to satisfy conditions as in attachment stand 10 described above.

[0079] Toothbrush 20B has a length of brush 22B in the one direction, the length being indicated as "a", and a width from center O5 of handle 21B to the tip of brush 22B in a direction orthogonal to the one direction, the width being indicated as "b". A length from center O5 of handle 21B to outer surface 21aB is indicated as "c", and

a length in the one direction of a part of handle 21B, the part being positioned above an upper surface of a stand body when toothbrush 20B is held in each retainer, is indicated as "d".

(Second exemplary embodiment)

[0080] In the second exemplary embodiment, attachment stand 10C capable of holding (installing) nozzle attachment (attachment: oral care product) 20 is also exemplified as an oral care product stand.

[0081] Attachment stand 10C according to the second exemplary embodiment is basically and substantially similar in configuration to attachment stand 10 described in the first exemplary embodiment described above, and includes stand body 11C as illustrated in Fig. 10. Stand body 11C can be made of a material such as synthetic resin, for example, and is formed having a contour in plan view in a square shape (quadrangular shape) with rounded corners.

[0082] In the second exemplary embodiment, stand body 11C includes base part 111C that is in a substantially rectangular parallelepiped shape and four (multiple) holding holes 121C extending in the vertical direction and opening upward when stand body 11C is placed on mounting surface 1. Four holding holes 121C each serve as retainer 12C capable of holding nozzle attachment 20.

[0083] That is, when protrusion (part to be held) 23 of nozzle body 21 is inserted into holding hole 121C, nozzle attachment 20 is held in stand body 11C. At this time, insertion of nozzle attachment 20 into holding hole 121 formed in base part 111C is restricted by bringing lower surface 21b formed in the lower part of nozzle body 21 into contact with upper surface 111aC of base part 111C.

[0084] Also in the second exemplary embodiment, attachment stand 10C can be downsized in the horizontal direction while nozzles 22 adjacent to each other are prevented from interfering with each other.

[0085] Specifically, stand body 11C is configured such that retainer 12C can be changed in height.

[0086] In the second exemplary embodiment, stand body 11C includes height raising part 112C in the shape of a block that is detachably attached to base part 111C. By attaching height raising part 112C to base part 111C, a part of an upper surface of stand body 11C (upper surface 112aC of height raising part 112C) is positioned above upper surface 111aC of base part 111C.

[0087] In the second exemplary embodiment, height raising part 112C in the shape of a block has a size of about 1/4 of that of base part 111C in plan view. Height raising part 112C includes holding hole 121C formed in a substantially central part of upper surface 112aC, and connection protrusion 112bC that is insertable into holding hole 121 formed in base part 111C.

[0088] When height raising parts 112C are attached to two respective holding holes 121C formed on a diagonal line of base part 111C, stand body 11C has a shape substantially similar to that of attachment stand 10 de-

scribed in the first exemplary embodiment.

[0089] As described above, in the second exemplary embodiment, nozzles 22 of respective nozzle attachments 20 held in stand body 11C are different from each other in height position by attaching one or more height raising parts 112C to base part 111C.

[0090] Attaching multiple height raising parts 112C to the same position enables forming three or more stairsteps. For example, when height raising parts 112C different in number are attached to four respective holding holes 121C formed in base part 111C, stand body 11C can be formed in which four holding holes 121C are all different in height position.

[0091] One or more height raising parts 112C are attached to base part 111C. As a result, multiple retainers 12C formed in stand body 11C includes first retainer 13C and second retainer 14C having a higher height than first retainer 13C. In the second exemplary embodiment, retainer 12C formed in base part 111C corresponds to first retainer 13C, and retainer 12C formed in height raising part 112C corresponds to second retainer 14C.

[0092] Multiple retainers 12C (first retainer 13C and second retainer 14C) are formed in attachment stand 10C so as to satisfy conditions as in attachment stand 10 described above when one or more height raising parts 112C are attached. In the second exemplary embodiment, the conditions as in attachment stand 10 described above are satisfied, when one height raising part 112C is attached and when two height raising parts 112C are attached in a diagonal line.

[0093] This structure also enables further improvement in a degree of freedom of an installation place of while preventing nozzle attachments 20 from interfering with each other.

[0094] By allowing a protrusion of the stand body to be stretchable in the height direction by forming the protrusion in a shape of bellows, the stand body in which the retainer is variable in height can be provided.

(Third exemplary embodiment)

[0095] In the third exemplary embodiment, stand 10D capable of holding (installing) toothbrush (oral care product) 20B is exemplified as the oral care product stand.

[0096] As illustrated in Figs. 11 and 12, stand 10D according to the third exemplary embodiment includes stand body 11D. Stand body 11D can be made of a material such as synthetic resin, for example, and is formed having a contour in plan view in a square shape (quadrangular shape) with rounded corners.

[0097] In the third exemplary embodiment, stand body 11D includes base part 111D that is in a substantially rectangular parallelepiped shape. Upper surface 111aD is provided with four (multiple) holding holes 121D opening upward. Four holding holes 121D each serve as retainer 12D capable of holding toothbrush 20B. In the third exemplary embodiment, insertion of toothbrush 20B into holding hole 121D is restricted by bottom surface 121aD

of holding hole 121D.

[0098] In the third exemplary embodiment, holding hole 121D is formed so as to open upward in a state of being inclined with respect to the vertical direction when stand body 11D is placed on mounting surface 1.

[0099] By inserting lower end part 23B of handle 21B of toothbrush 20B into holding hole 121D, toothbrush 20B is held in retainer 12D in a state where handle 21B is inclined with respect to the vertical direction. In the third exemplary embodiment, when four toothbrushes 20B are held, toothbrushes 20B are disposed along four respective sides of stand body 11D.

[0100] Also in the third exemplary embodiment, improved is a degree of freedom of an installation place while brushes 22B adjacent to each other are prevented from interfering with each other. Specifically, stand 10D can be downsized in the horizontal direction while brushes 22B adjacent to each other are prevented from interfering with each other.

[0101] Specifically, when toothbrush 20B is held in retainer 12D, region R5 where brush (oral insertion part) 22B can exist in plan view falls within region R1 of stand body 11D (see Fig. 13).

[0102] In the third exemplary embodiment, region R5 where brush (oral insertion part) 22B can exist has a shape in which a circular cylinder is inclined along a side of stand body 11D, and the region R5 has a substantially elliptical shape in plan view.

[0103] This structure enables brush 22B to be prevented from protruding outward of stand body 11D (outside in the horizontal direction) regardless of a direction in which brush 22B protrudes, when toothbrush 20B held in retainer 12D.

[0104] In the third exemplary embodiment, retainers 12D adjacent to each other are disposed along corresponding sides of stand body 11D so as to satisfy a relationship of $p1 < 2 \times b$. Here, "b" is a width from center O6 of handle 21B to the tip of brush 22B in the direction orthogonal to the one direction. "p1" is a distance from center O6 of one of retainers 12D adjacent to each other and disposed along corresponding sides of stand body 11D to center O6 of the other of retainers 12D.

[0105] This structure enables the stand body to be downsized by disposing two retainers 12D at a distance at which toothbrushes 20B (brushes 22B) interfere with each other when being inserted vertically and held at the same height.

[0106] At this time, two retainers 12D adjacent to each other in a diagonal line are disposed so as to satisfy a relationship of $p2 > 2 \times b$. Here, "p2" is a distance from center O6 of one of retainers 12D adjacent to each other in the diagonal line to center O6 of the other of retainers 12D.

[0107] In the third exemplary embodiment, as illustrated in Fig. 13, regions R5 adjacent to each other are prevented from overlapping with each other in plan view.

[0108] That is, even when toothbrush 20B held in retainer 12D rotates, brushes 22B are prevented from in-

terfering with each other.

[0109] When the oral insertion part is a brush as in toothbrush 20B illustrated in the third exemplary embodiment or attachment 20A of an electric toothbrush illustrated in Figs. 7 and 8, setting "a", "b", "d", and " $\theta 1$ " to satisfy $d\cos\theta 1 + b\sin\theta 1 < p1 + b$ and $d\cos\theta 1 - b\sin\theta 1 > b$ under the condition of $p1 < 2 \times b$ described above enables preventing regions R5 adjacent to each other from interfering with each other (see Fig. 14).

[0110] Here, "a" is a length of the oral insertion part (brush) in one direction, and "b" is a width from the center of the body to the tip of the oral insertion part (brush) in the direction orthogonal to the one direction. "d" is a length in one direction of a part of the body, the part being positioned above an upper surface of the retainer when the body is held in the retainer. " $\theta 1$ " is an angle formed by the body and an upper surface of the base part.

[0111] Even when the oral insertion part is nozzle 22 as in nozzle attachment 20 illustrated in the first exemplary embodiment, setting "a", "b", "d", and " $\theta 1$ " to satisfy $d\cos\theta 1 + b\sin\theta 1 < p1 + b$ and $d\cos\theta 1 - b\sin\theta 1 > b$ under the condition of $p1 < 2 \times b$ described above enables preventing regions R5 adjacent to each other from interfering with each other.

[0112] However, when the oral insertion part is nozzle 22, region R5 has a shape, in which a truncated cone decreasing in diameter upward is disposed over a truncated cone decreasing in diameter downward, instead of the shape of a circular cylinder.

[0113] Thus, as illustrated in Fig. 15, when largest ellipse E1 in one of regions R5 of respective nozzle attachments 20 adjacent to each other and straight line L1 close to ellipse E1 of the other of regions R5 are prevented from overlapping with each other when viewed along one side of stand body 11D, regions R5 adjacent to each other can be prevented from interfering with each other.

[0114] Specifically, setting "a", "b", "d", and " $\theta 1$ " to satisfy $d1 > e1$ under the condition of $p1 < 2 \times b$ described above enables preventing regions R5 adjacent to each other from interfering with each other (see Fig. 15). Here, "e1" is a length from center O6 of ellipse E1 to contact point EP on ellipse E1, contact point EP being in contact with tangent L2 parallel to straight line L1. "d1" is a length from center O6 of ellipse E1 to intersection LP, intersection LP being defined as an intersection between a straight line passing through center O6 and contact point EP, and straight line L1 close to ellipse E1 of the other of regions R5.

[Operation and effect]

[0115] Hereinafter, a characteristic configuration of the oral care product stand described in each of the exemplary embodiments above and effect provided by the configuration will be described.

(1) The oral care product stand described in each of the exemplary embodiments above holds an oral

care product including a body extending in one direction, and an oral insertion part that is connected to the body so as to protrude in a direction intersecting the one direction and that is insertable into an oral cavity. The oral care product stand includes a stand body having multiple retainers each capable of holding a part to be held of the body. The retainers include at least one first retainer and a second retainer having a higher height than the first retainer.

[0116] Holding oral care products in respective retainers different in height as described above enables preventing the oral care products from interfering with each other, even if the oral care products be disposed at a distance at which the oral care members held at the same height interfere with each other.

[0117] That is, the oral care product stand described in (1) enables further improvement in a degree of freedom of its installation place while preventing oral care products from interfering with each other.

[0118] In the oral care product stand described in (1) above, each of the retainers may be formed in the stand body in such a way that a region where the oral insertion part can exist when the oral care product is held falls within a region of the stand body in plan view.

[0119] This structure prevents the oral insertion part of the oral care product from protruding outward of the stand body when the oral care product is held in each of the retainers, and thus enabling more reliable improvement in a degree of freedom of an installation place of the oral care product stand.

[0120] (3) The oral care product stand described in (1) or (2) above may be configured such that a region where the oral insertion part can exist when the oral care product is held in the first retainer partially overlaps with a region where the oral insertion part can exist when the oral care product is held in the second retainer disposed closest to the first retainer in plan view.

[0121] In the above structure, the first retainer and the second retainer are disposed at a distance at which the oral care products interfere with each other when being held at the same height, and the stand body can be downsized.

[0122] (4) The oral care product stand described in any one of (1) to (3) above may be configured such that the plurality of retainers comprises three or more of the plurality of retainers. Two retainers at the shortest distance in plan view may serve as the first retainer and the second retainer. Two retainers separated from each other by more than the shortest distance in plan view may serve as the first retainer or the second retainer.

[0123] In the above structure, the stand body including three or more retainers with a simpler structure can be downsized.

[0124] (5) The oral care product stand described in any one of (1) to (4) above may be configured such that the stand body is configured in such a way that the plurality of the retainers are variable in height.

[0125] By the above structure, the stand body having various shapes suitable for usage is provided.

[0126] (6) The oral care product stand described in any one of (1) to (5) above may be configured such that the first retainer and the second retainer are disposed so as to satisfy a relationship of $x > a$, where "a" is a length of the oral insertion part in one direction, and "x" is a height difference between the first retainer and the second retainer.

[0127] In the above structure, oral insertion parts of respective oral care products can be more reliably prevented from interfering with each other.

[0128] (7) The oral care product stand described in any one of (1) to (6) above may be configured such that the first retainer and the second retainer are disposed so as to satisfy a relationship of $p1 < 2 \times b$, where "b" is a width from the center of the body to the tip of the oral insertion part in a direction orthogonal to the one direction, and "p1" is a distance from the center of the first retainer to the center of the second retainer.

[0129] In the above structure, the stand body is downsized more reliably while preventing the oral care products from interfering with each other.

[0130] (8) The oral care product stand described in any one of (1) to (7) above may be configured such that the first retainer and the second retainer are disposed so as to satisfy a relationship of $p1 > b + c$, where "b" is a width from the center of the body to the tip of the oral insertion part in a direction orthogonal to the one direction, "c" is a length from the center of the body to an outer surface of the body, and "p1" is a distance from the center of the first retainer to the center of the second retainer.

[0131] In the above structure, the oral insertion part of one of the oral care products adjacent to each other is prevented more reliably from interfering with the body part of another of the oral care products.

[0132] (9) The oral care product stand described in any one of (1) to (8) above may be configured such that the stand body includes multiple first retainers. A primary retainer of the plurality of the first retainers and a secondary retainer of the plurality of the first retainers may be disposed so as to satisfy a relationship of $p2 > 2 \times b$, where "b" is a width from the center of the body to the tip of the oral insertion part in a direction orthogonal to the one direction, and "p2" is a distance from the center of the one of the first retainers to the center of the other of the first retainers.

[0133] In the above structure, oral care products can be prevented from interfering with each other even when the oral care products are held at the same height.

[0134] (10) The oral care product stand described in any one of (1) to (9) above may be configured such that the oral care product is rotatably held in each of the retainers.

[0135] In the above structure, provided is an oral care product stand capable of further improving a degree of freedom of its installation place while preventing oral care products from interfering with each other, the oral care

product stand having a configuration in which the oral care products rotate while being held in the respective retainers. In the above structure, the oral care products can be more easily held in the respective retainers, or more easily taken out from the respective retainers.

[0136] (11) The oral care product stand described in any one of (1) to (10) above may be configured such that the oral care product is an attachment detachably attached to an oral care device body.

[0137] This configuration enables providing an oral care product stand capable of further improving a degree of freedom of its installation place while preventing attachments detachably attached to the oral care device body from interfering with each other.

[0138] (12) The oral care product stand described in (11) above may be configured such that a part to be connected to a connection part of the oral care device body of the attachment doubles as the part to be held.

[0139] As above, if the part to be connected to the connection part of the oral care device body of the attachment doubles as the part to be held, an oral care product stand dedicated to the attachment can be provided. The attachment does not need a part to be held that is provided separately from the part to be connected, so that the attachment can have a simple structure.

[0140] (13) The oral care product stand described in each of the exemplary embodiments above holds an oral care product including a body extending in one direction, and an oral insertion part that is connected to the body so as to protrude in a direction intersecting the one direction and that is insertable into an oral cavity.

[0141] The oral care product stand includes a stand body having multiple retainers each capable of holding a part to be held of the body.

[0142] The retainers are each formed so as to allow the oral care product to be held in a state where a region where the oral insertion part can exist in the plan view in a state where the body is inclined with respect to a vertical direction falls within a region of the stand body.

[0143] This structure above enables preventing the oral care products from interfering with each other even when the oral care products are disposed at a distance at which the oral care members interfere with each other when the body is held along the vertical direction.

[0144] That is, in the oral care product stand described in (13), a degree of freedom of its installation place is more improved while preventing oral care products from interfering with each other.

[0145] In addition, the oral care product is held in a state where the oral insertion part can fall within a region of the stand body in the plan view while the oral care product is inclined with respect to a vertical direction. As a result, the stand body can be downsized in its height direction.

[Others]

[0146] Although the content of the oral care product

stand according to the present disclosure is described, the present disclosure is not limited to the description, and it is obvious to those skilled in the art that various modifications and improvements can be made.

[0147] For example, although each of the exemplary embodiments above exemplifies the attachment stand with the bottom surface in a quadrangular shape with rounded corners, the bottom surface of the attachment stand may have various shapes such as a circular shape and a triangular shape.

[0148] Specifications, such as shape, size, and layout, of the stand body, the retainer, and other details can be changed as appropriate.

[0149] As described above, the oral care product stand according to the present disclosure is capable of further improving a degree of freedom of its installation place, so that the oral care product stand can be used as a stand for placing various oral care products for cleaning and washing the inside of an oral cavity, such as an attachment of an electric toothbrush, a nozzle of an oral washer, and a toothbrush.

REFERENCE MARKS IN THE DRAWINGS

[0150]

10	attachment stand (oral care product stand)
11	stand body
12	retainer
13	first retainer
14	second retainer
10C	attachment stand (oral care product stand)
11C	stand body
111C	base part
12C	retainer
13C	first retainer
14C	second retainer
10D	stand (oral care product stand)
11D	stand body
12D	retainer
20	nozzle attachment (attachment: oral care product)
21	nozzle body (body)
21a	outer surface
22	nozzle (oral insertion part)
23	protrusion (part to be connected: part to be held)
20A	attachment of electric toothbrush (attachment: oral care product)
21A	body
21aA	outer surface
22A	brush (oral insertion part)
23A	recess (part to be connected: part to be held)
20B	toothbrush (oral care product)
21B	handle (body)
21aB	outer surface
22B	brush (oral insertion part)
23B	part to be held
30	oral washing device body (oral care device

	body)
31	insertion hole (connection part)
30A	electric toothbrush body (oral care device body)
31A	vibrator (connection part)
5	R1 region of stand body in plan view
	R2 region where oral insertion part can exist when oral care product is held
	R3 region where oral insertion part can exist when oral care product is held in first retainer
10	R4 region where oral insertion part can exist when oral care product is held in second retainer
	a length of oral insertion part in one direction
	b width in direction orthogonal to one direction from center of body to tip of oral insertion part
15	c length from center to outer surface of body
	p1 distance from center of first retainer to center of second retainer
	p2 distance from center of one first retainer to center of another first retainer
20	x height difference between first retainer and second retainer

Claims

25

1. An oral care product stand that holds an oral care product comprising a body extending in one direction, and an oral insertion part that is connected to the body so as to protrude in a direction intersecting the one direction and that is insertable into an oral cavity, the oral care product stand comprising:

30

a stand body having a plurality of retainers each capable of holding a part to be held of the body, wherein the plurality of retainers includes at least one first retainer and a second retainer having a higher height than the first retainer.

35

40

2. The oral care product stand according to Claim 1, wherein each of the plurality of retainers is formed in the stand body in such a way that a region where the oral insertion part can exist when the oral care product is held falls within a region of the stand body in plan view.

45

50

3. The oral care product stand according to Claim 1 or 2, wherein a region where the oral insertion part can exist when the oral care product is held in the first retainer partially overlaps with a region where the oral insertion part can exist when the oral care product is held in the second retainer disposed closest to the first retainer in plan view.

55

4. The oral care product stand according to any one of Claims 1 to 3, wherein

- the plurality of retainers comprises three or more of the plurality of retainers,
two retainers at a shortest distance in plan view serve as the first retainer and the second retainer, and
two retainers separated from each other by more than the shortest distance in plan view serves as the first retainer or the second retainer. 5
5. The oral care product stand according to any one of Claims 1 to 4, wherein
the stand body is configured in such a way that the plurality of retainers are variable in height. 10
6. The oral care product stand according to any one of Claims 1 to 5, wherein 15
- the first retainer and the second retainer are disposed so as to satisfy a relationship of $x > a$, where
a is a length of the oral insertion part in the one direction, and
x is a height difference between the first retainer and the second retainer. 20
7. The oral care product stand according to any one of Claims 1 to 6, wherein 25
- the first retainer and the second retainer are disposed so as to satisfy a relationship of $p1 < 2 \times b$, where
b is a width from a center of the body to a tip of the oral insertion part in a direction orthogonal to the one direction, and
p1 is a distance from a center of the first retainer to a center of the second retainer. 30
8. The oral care product stand according to any one of Claims 1 to 7, wherein 40
- the first retainer and the second retainer are disposed so as to satisfy a relationship of $p1 > b + c$, where
b is a width from the center of the body to the tip of the oral insertion part in a direction orthogonal to the one direction, 45
c is a length from the center of the body to an outer surface of the body, and
p1 is a distance from the center of the first retainer to the center of the second retainer. 50
9. The oral care product stand according to any one of Claims 1 to 8, wherein 55
- the at least one first retainer comprises a plurality of first retainers, and
a primary retainer of the plurality of the first retainers and a secondary retainer of the plurality
- of the first retainers are disposed so as to satisfy a relationship of $p2 > 2 \times b$,
where
b is a width from the center of the body to the tip of the oral insertion part in a direction orthogonal to the one direction, and
p2 is a distance from a center of the primary retainer of the plurality of the first retainers to a center of the secondary of the plurality of the first retainers.
10. The oral care product stand according to any one of Claims 1 to 9, wherein
the oral care product is rotatably held in each of the plurality of retainers.
11. The oral care product stand according to any one of Claims 1 to 10, wherein
the oral care product is an attachment detachably attached to an oral care device body.
12. The oral care product stand according to Claim 11, wherein
a part to be connected to a connection part of the oral care device body of the attachment doubles as the part to be held.
13. An oral care product stand that holds an oral care product including a body extending in one direction, and an oral insertion part that is connected to the body so as to protrude in a direction intersecting the one direction and that is insertable into an oral cavity, the oral care product stand comprising:
- a stand body having a plurality of retainers each capable of holding a part to be held of the body, the plurality of retainers are each formed so as to allow the oral care product to be held in a state where a region where the oral insertion part can exist in the plan view while the body is inclined with respect to a vertical direction falls within a region of the stand body.

FIG. 1

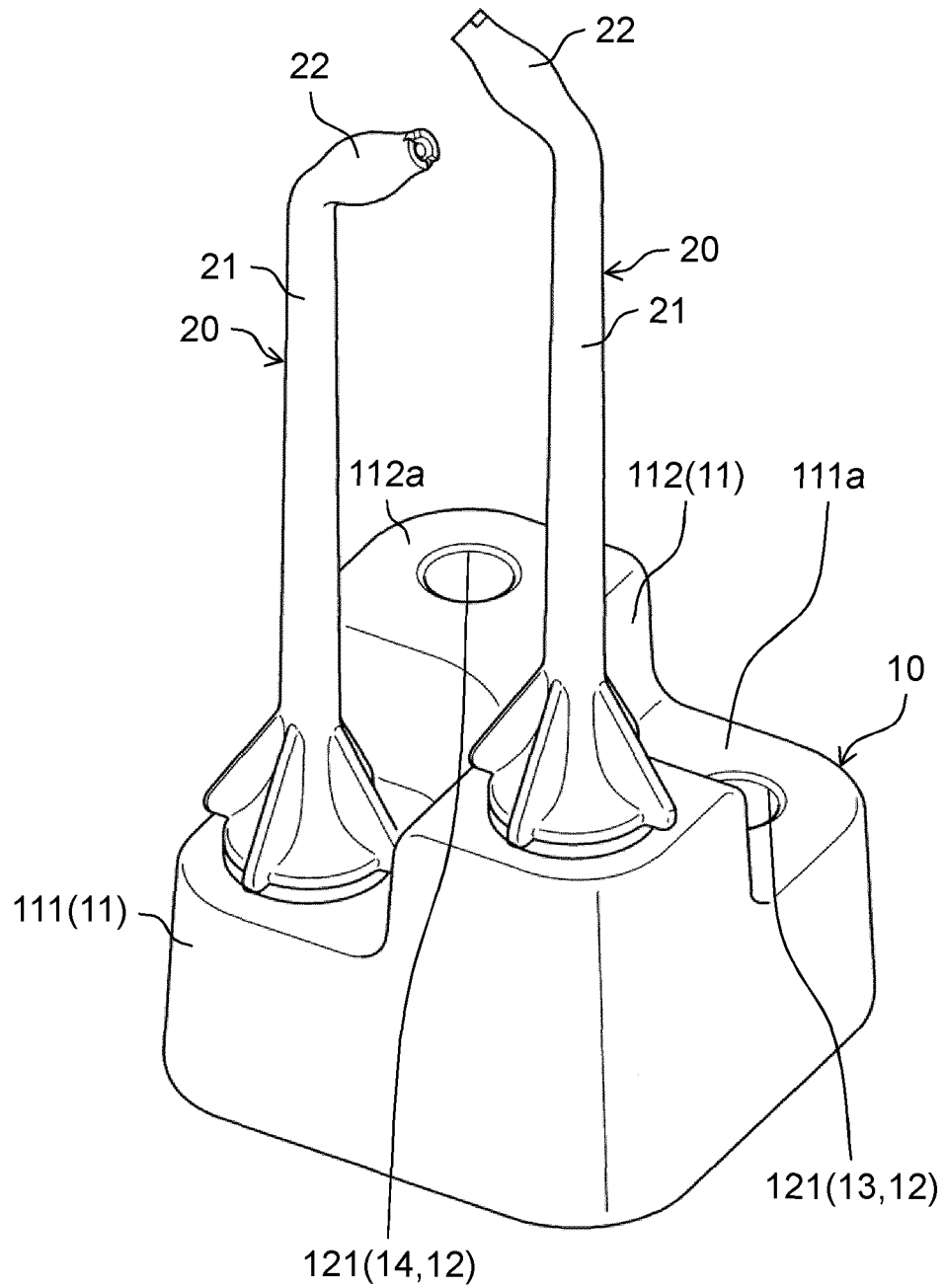


FIG. 2

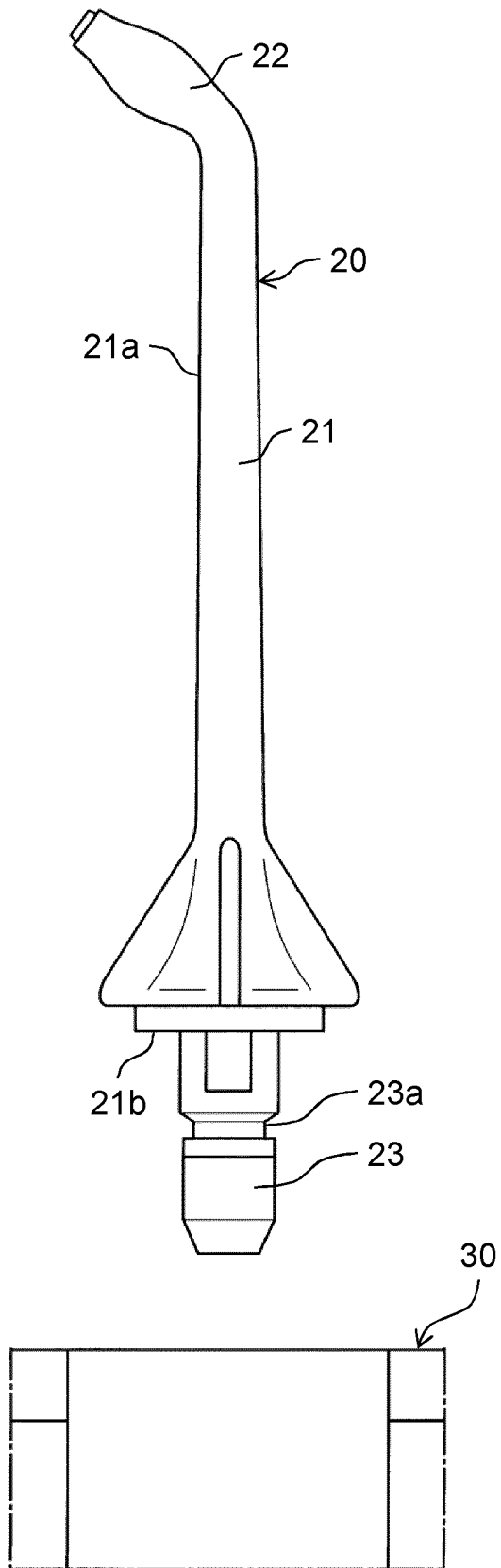


FIG. 3

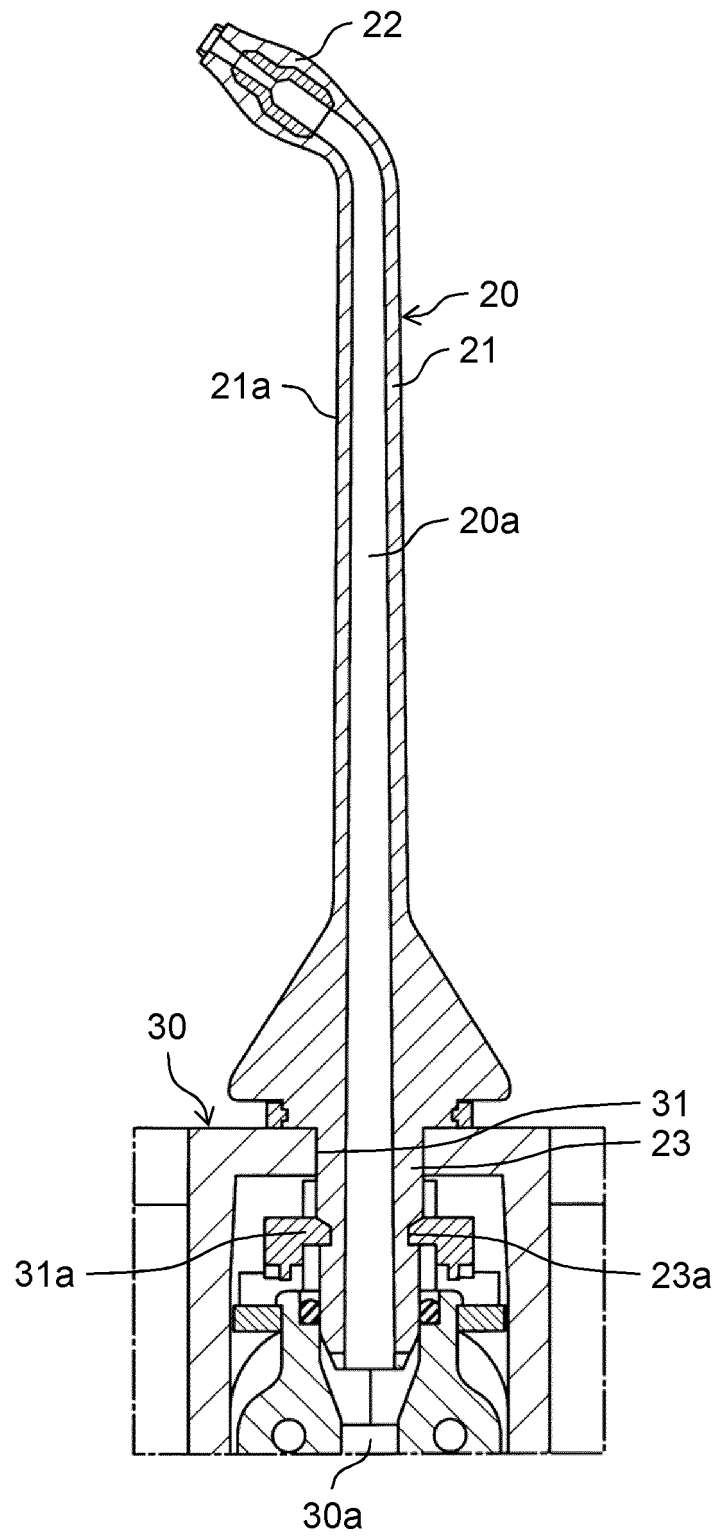


FIG. 4

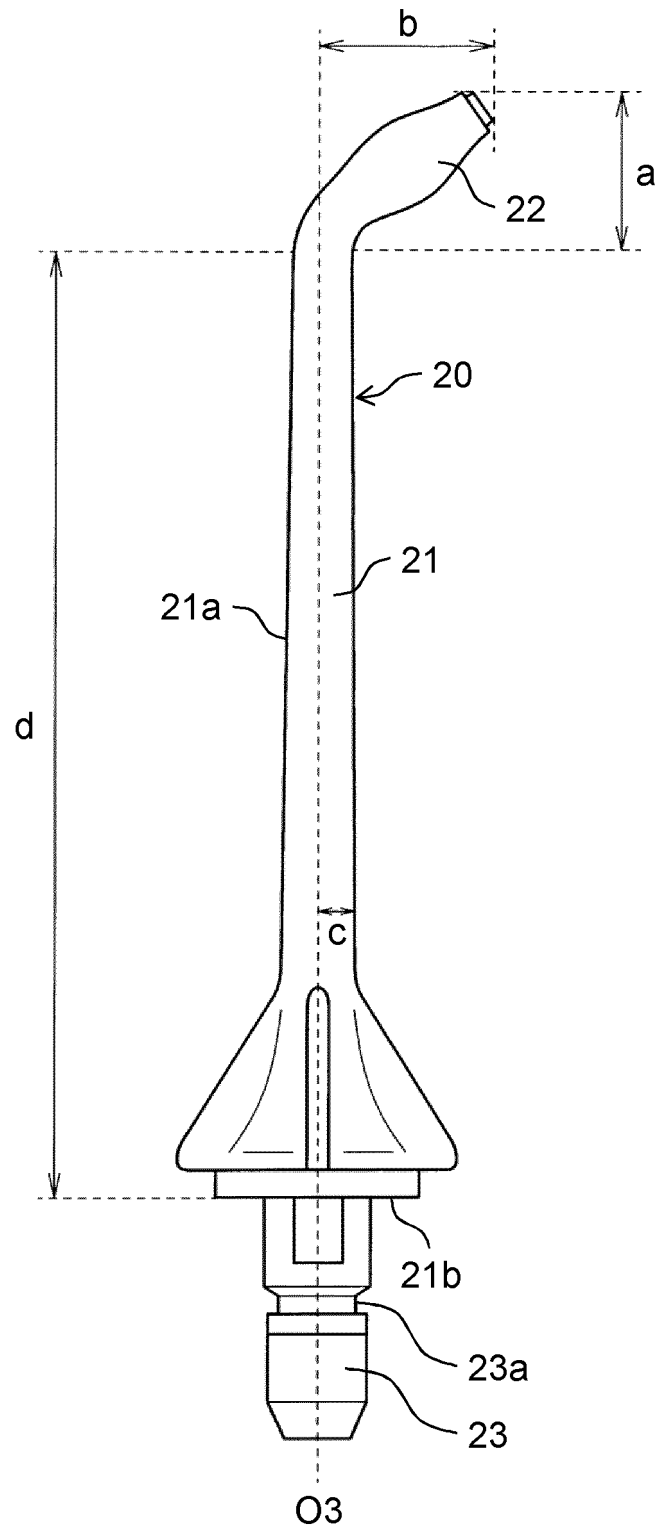


FIG. 5

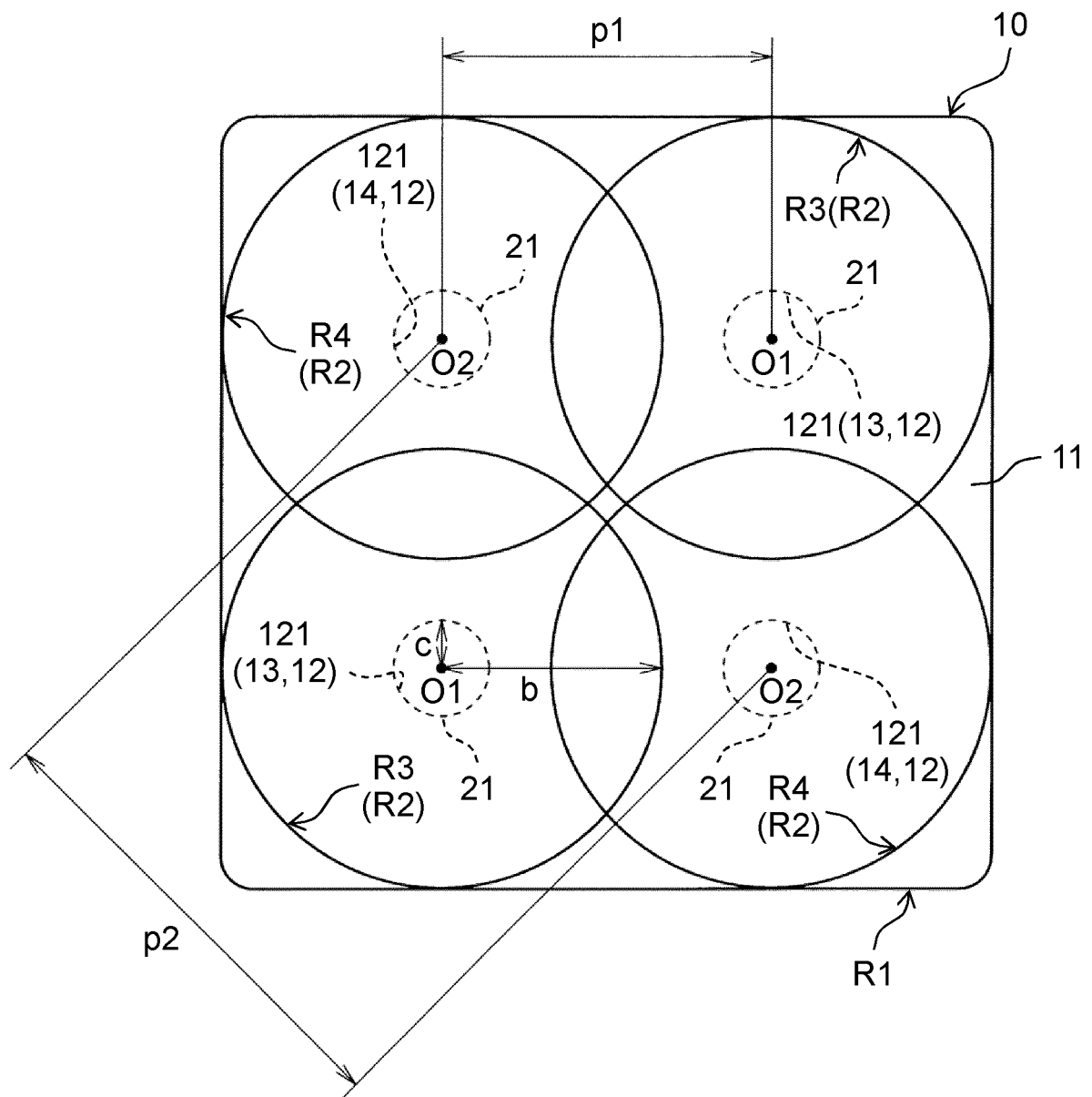


FIG. 6

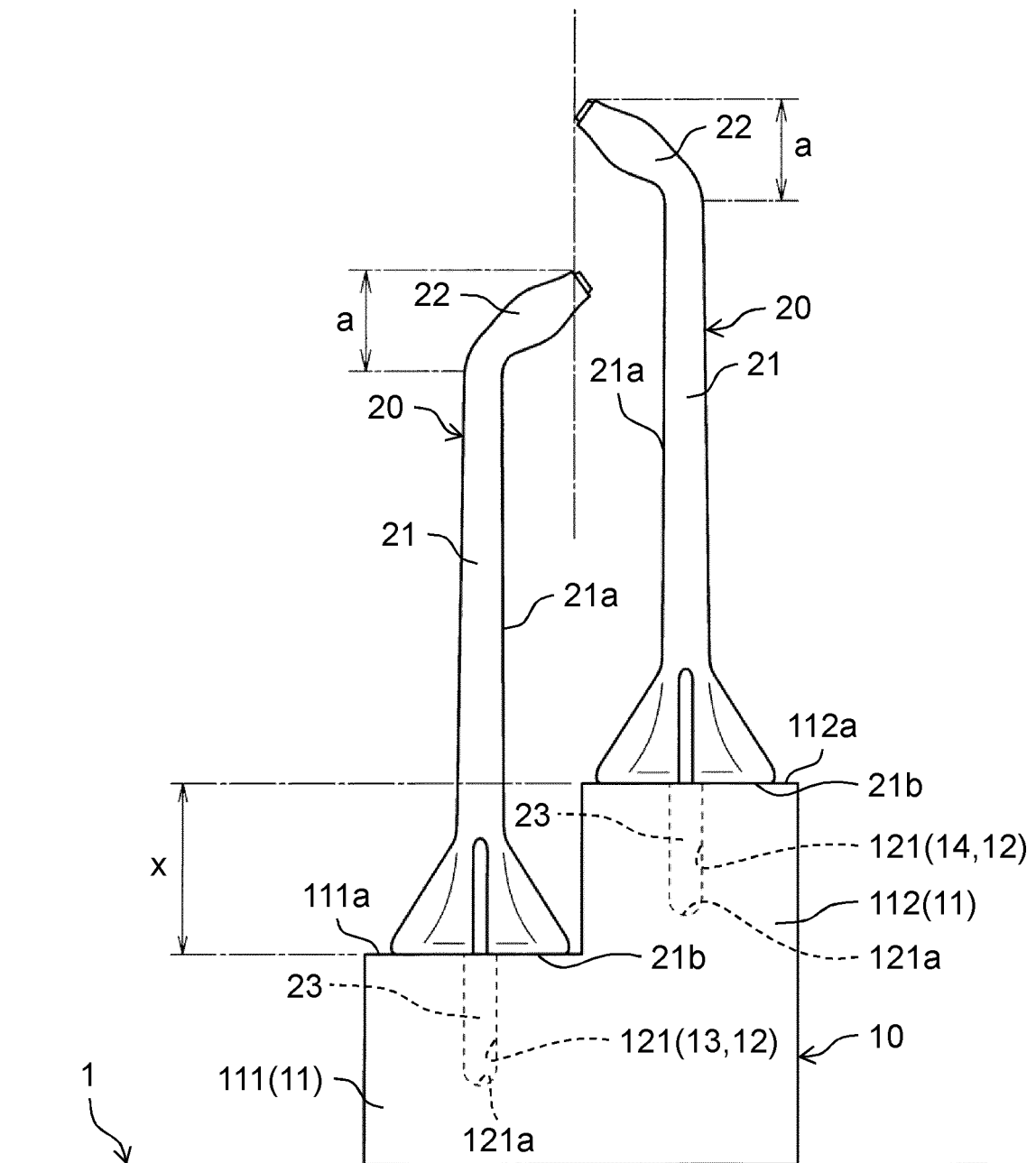


FIG. 7

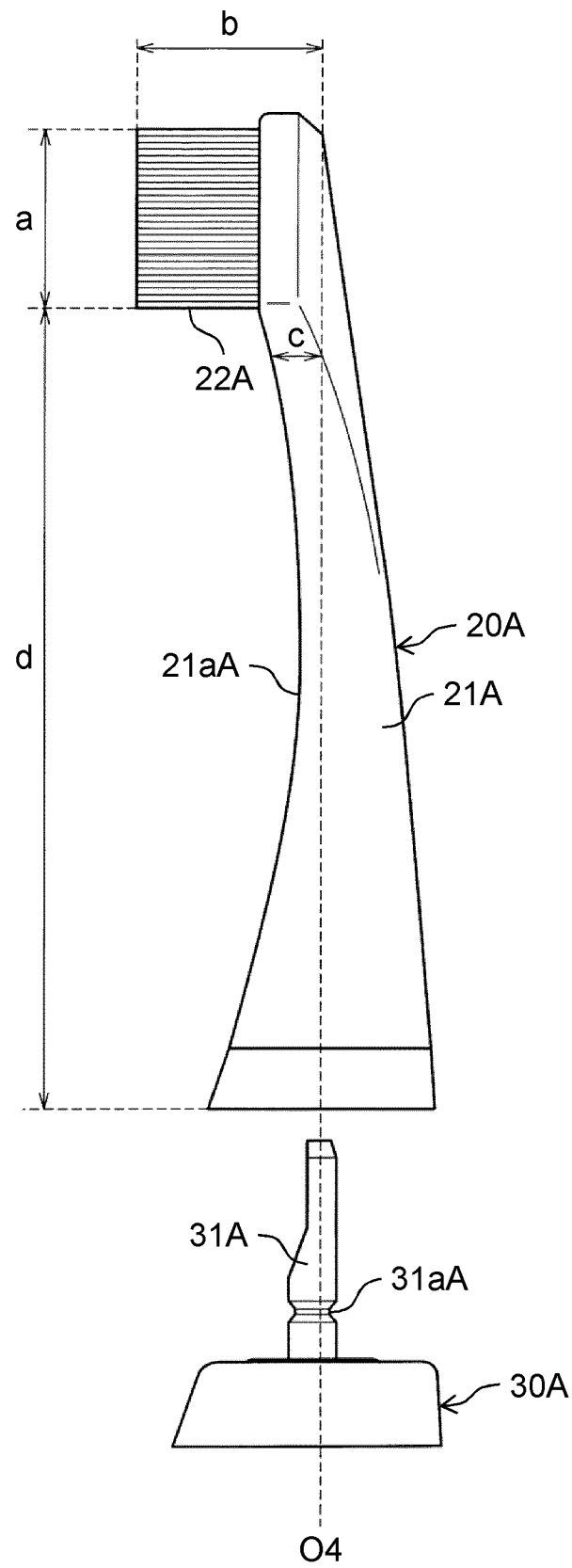


FIG. 8

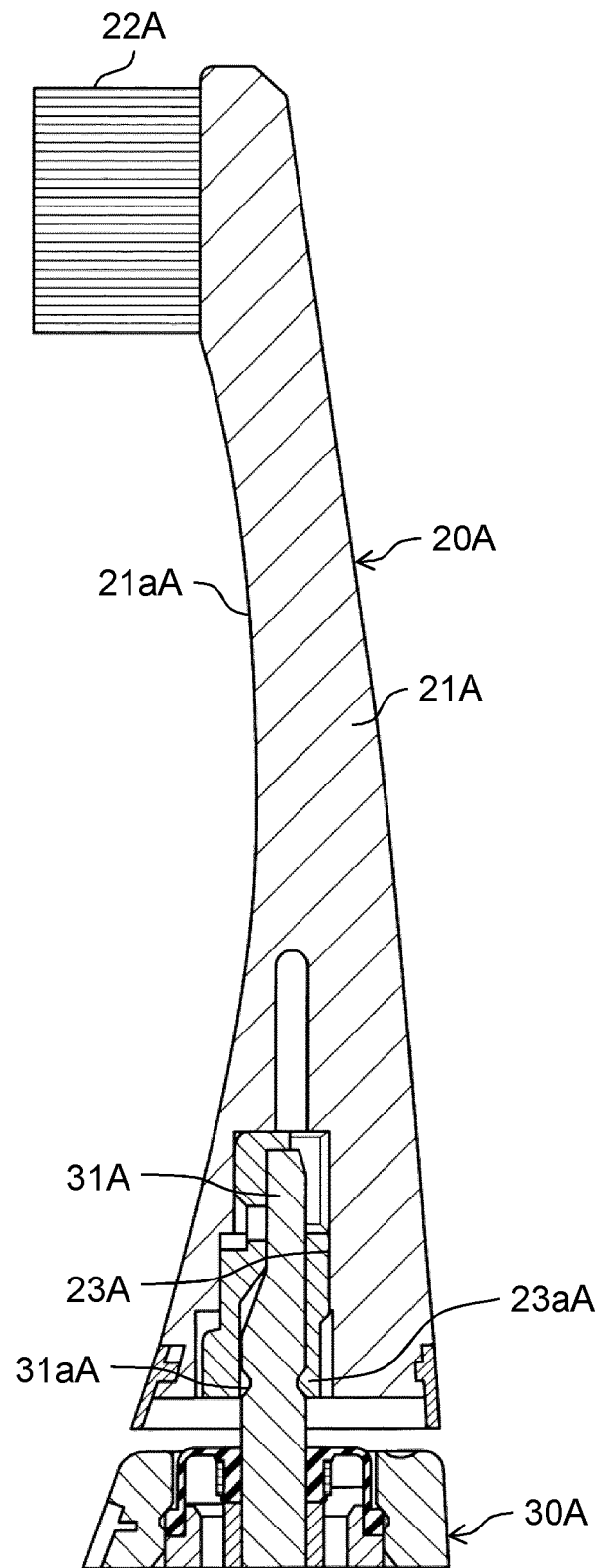


FIG. 9

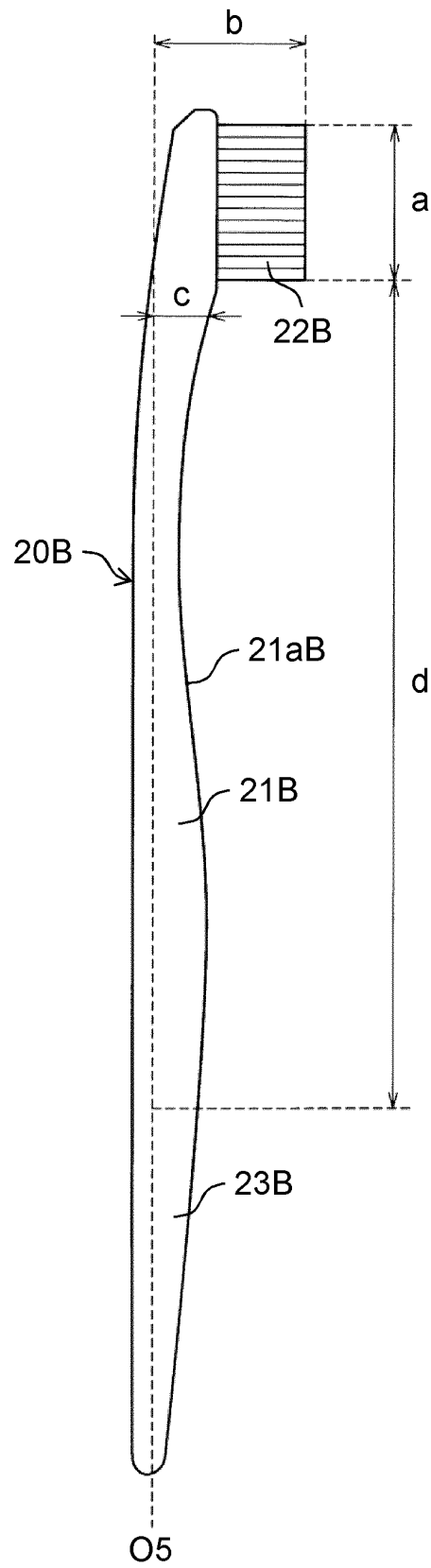


FIG. 10

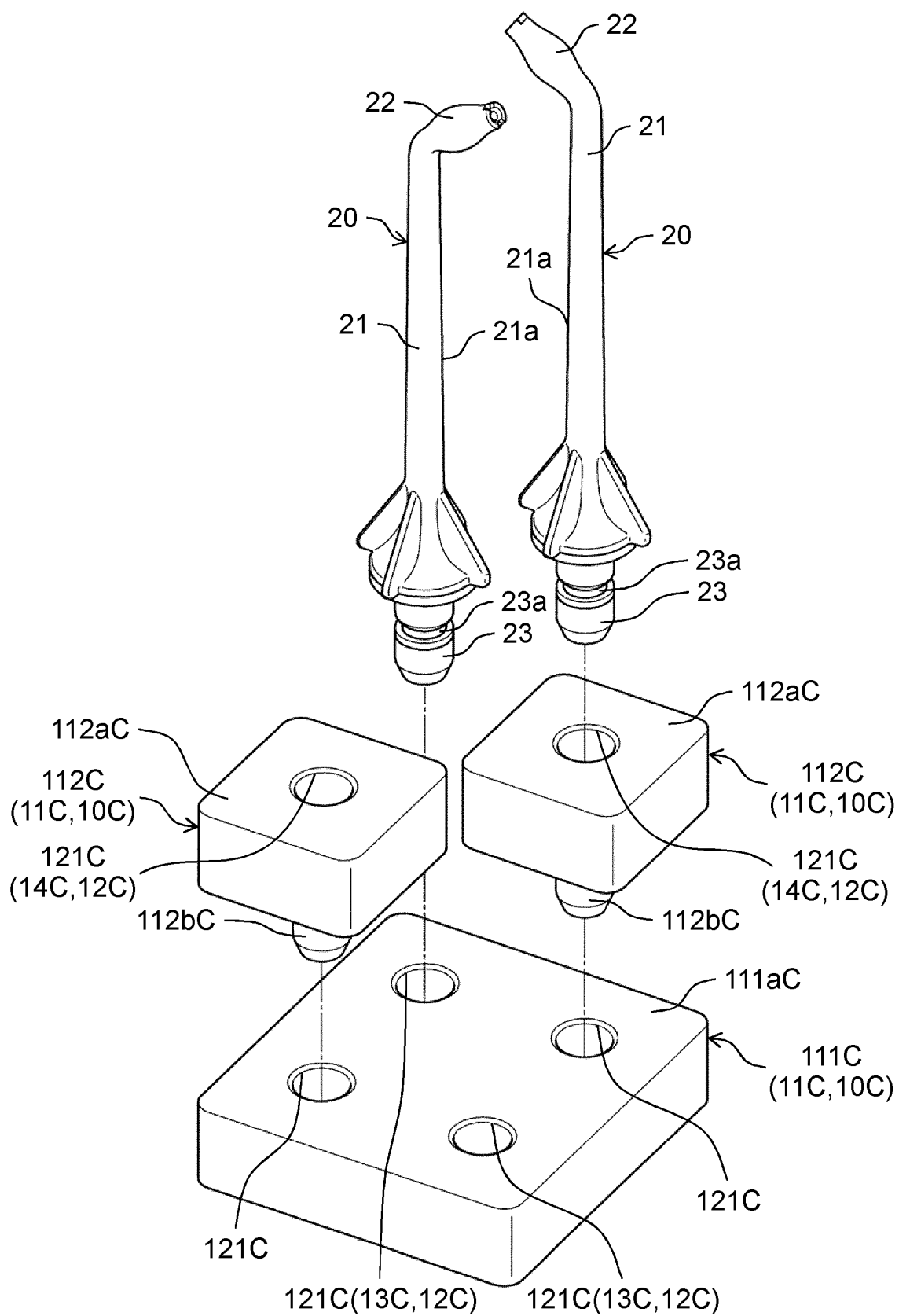


FIG. 11

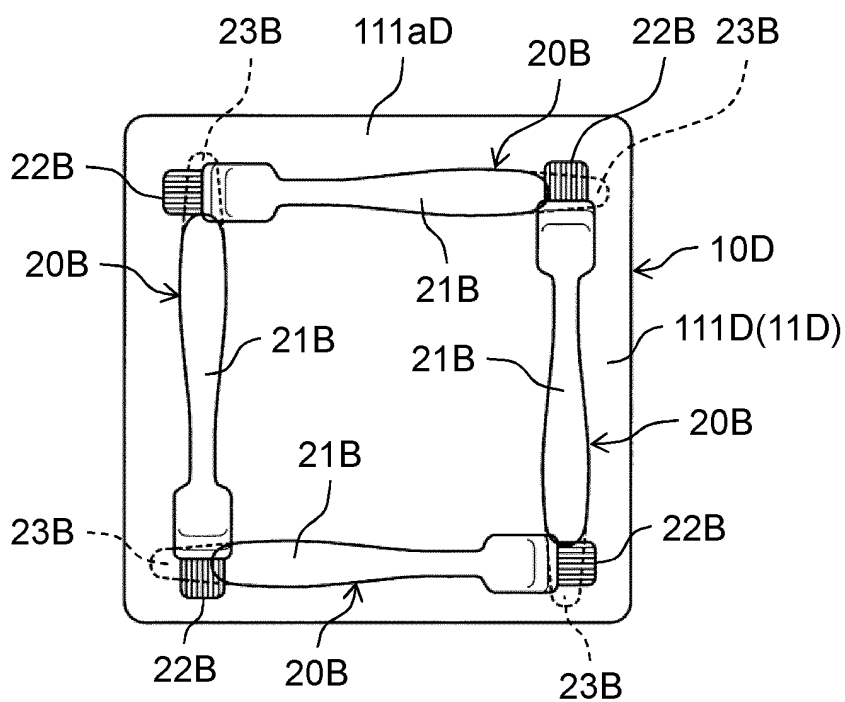


FIG. 12

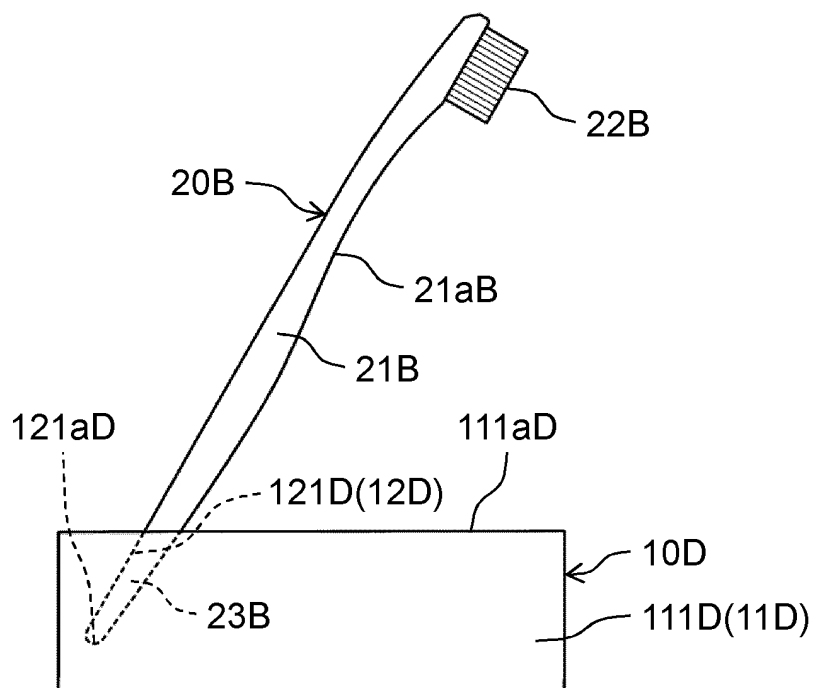


FIG. 13

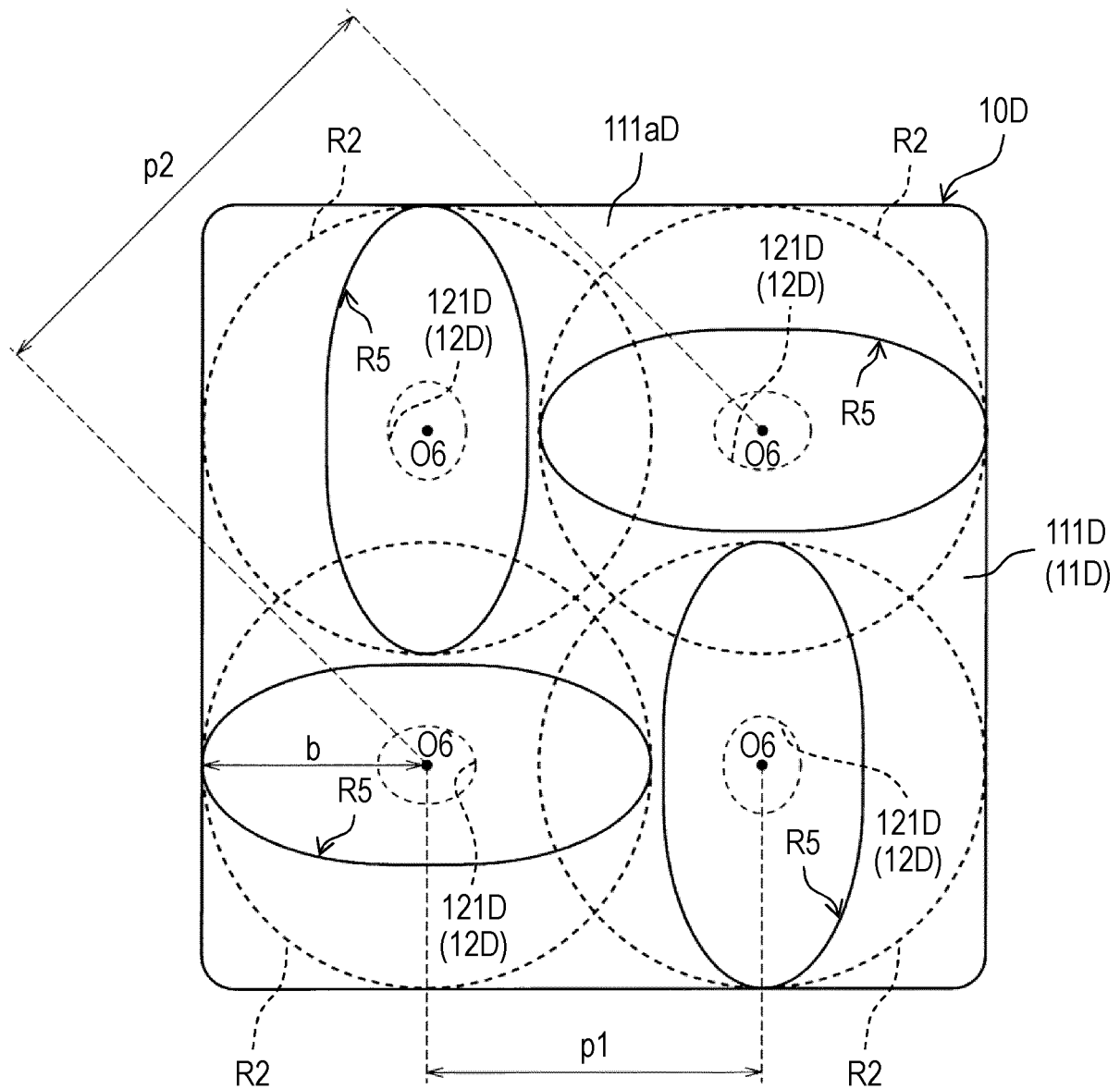


FIG. 14

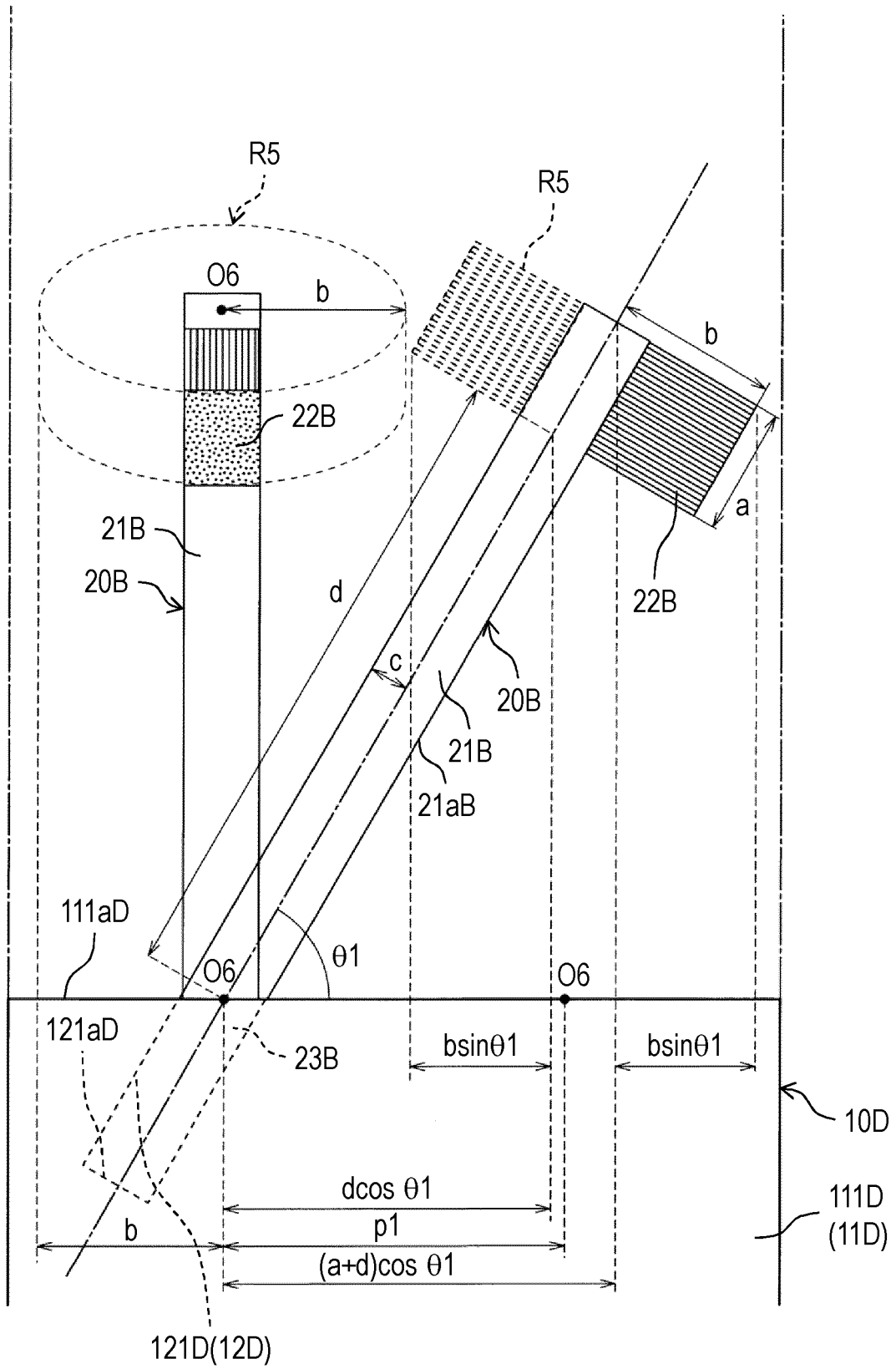
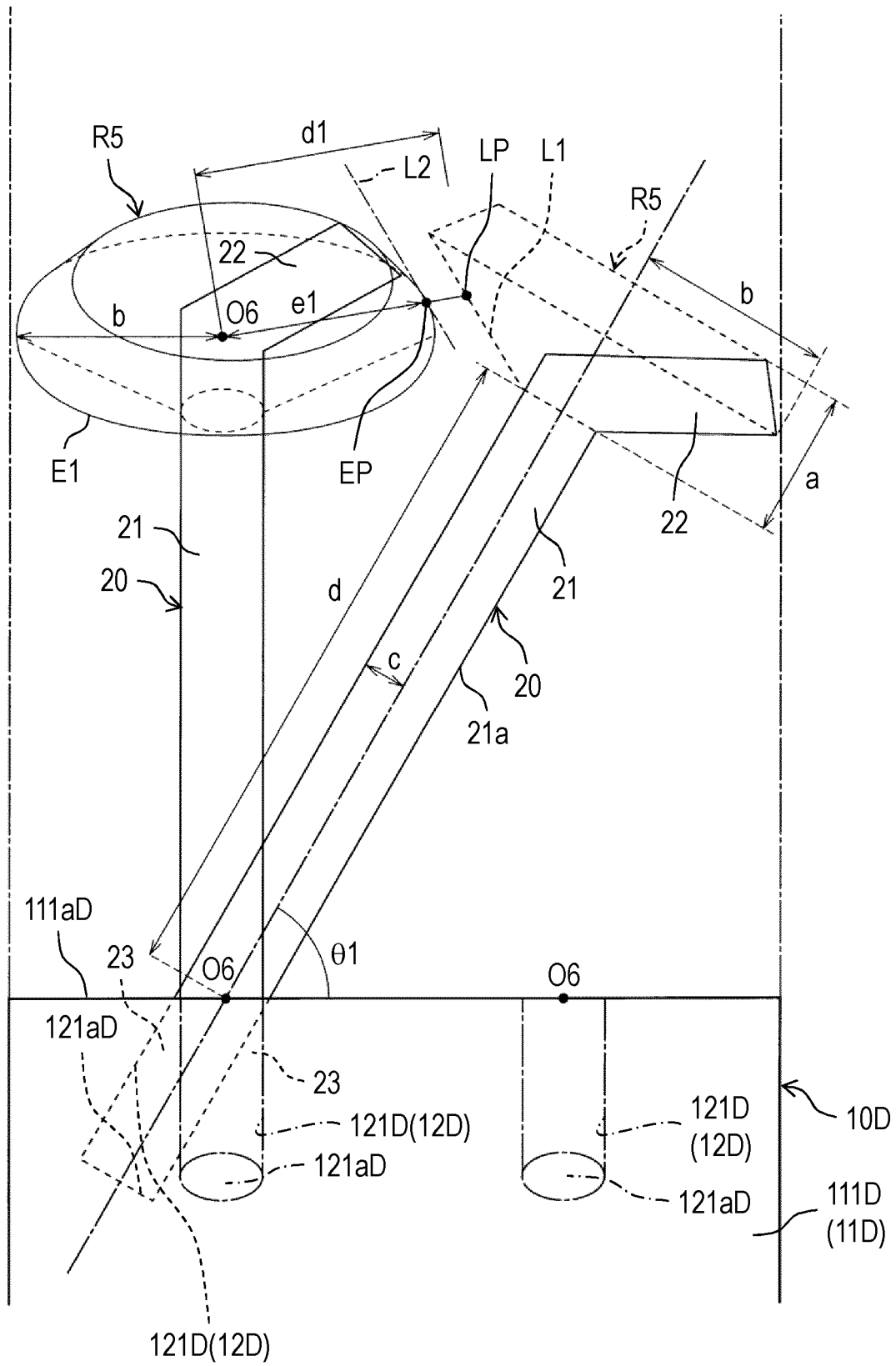


FIG. 15



5

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2020/038075

10

A. CLASSIFICATION OF SUBJECT MATTER

A47K 1/09 (2006.01) i

FI: A47K1/09 Z

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A47K1/09

15

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Published examined utility model applications of Japan 1922-1996

Published unexamined utility model applications of Japan 1971-2020

Registered utility model specifications of Japan 1996-2020

Published registered utility model applications of Japan 1994-2020

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

20

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 26225/1979 (Laid-open No. 125125/1980) (HITACHI MAXELL, LTD.) 04 September 1980 (1980-09-04)	1, 2, 10-12
Y	page 2, line 13 to page 4, line 16, fig. 1, 2	7-9
A	page 2, line 13 to page 4, line 16, fig. 1, 2	3-6
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 46800/1978 (Laid-open No. 148532/1979) (SANYO ELECTRIC CO., LTD.) 16 October 1979 (1979-10-16) page 1, line 17 to page 2, line 2, fig. 1	7-9
A	page 1, line 17 to page 2, line 2, fig. 1	3-6

40

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

45

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

50

Date of the actual completion of the international search
09 December 2020 (09.12.2020)Date of mailing of the international search report
22 December 2020 (22.12.2020)Name and mailing address of the ISA/
Japan Patent Office
3-4-3, Kasumigaseki, Chiyoda-ku,
Tokyo 100-8915, Japan

Authorized officer

Telephone No.

55

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2020/038075

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
See extra sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-12

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

5

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/JP2020/038075

10

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
JP 55-125125 U1	04 Sep. 1980	(Family: none)	
JP 54-148532 U1	16 Oct. 1979	(Family: none)	

15

20

25

30

35

40

45

50

55

Form PCT/ISA/210 (patent family annex) (January 2015)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2020/038075

<Continuation of Box No. III>

Document 1: Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 26225/1979 (Laid-open No. 125125/1980) (HITACHI MAXELL, LTD.) 04 September 1980 (1980-09-04) page 2, line 13 to page 4, line 16, fig. 1, 2 (Family: none)

(Invention 1) Claims 1-12

Claims 1-12 lack novelty in light of document 1, and thus do not have a special technical feature.

Therefore, claims 1-12 are classified as invention 1.

(Invention 2) Claim 13

Claim 13 and claim 1 classified as invention 1 share the common technical feature of an oral care member stand "holding an oral care member having: a body part extending in one direction; and an oral cavity insert part which is connected to the body part in order to protrude in the direction crossing to the one direction and can be inserted in an oral cavity, the oral care member stand being provided with a stand body having a plurality of holding parts capable of holding held parts of the body part." However, this technical feature does not make a contribution over the prior art in light of the disclosure of document 1, and thus cannot be considered a special technical feature. Furthermore, there are no other identical or corresponding special technical features between these inventions.

Furthermore, claim 13 is not dependent on claim 1. In addition, claim 13 is not substantially identical or equivalent to any of the claims classified as invention 1.

Therefore, claim 13 cannot be classified as invention 1.

In addition, claim 13 has the special technical feature in that the "holding parts are formed to hold the oral care member while a region, in which the oral cavity insert part can be present in plan view, is within a region of the stand body while inclining the body part toward a vertical direction," and thus is classified as invention 2.

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- JP H09028594 B [0005]