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(54) **TOILET BRUSH HOLDER**

HALTER FÜR TOILETTENBÜRSTE

SUPPORT DE BROSE POUR TOILETTES

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Description

TECHNICAL FIELD

[0001] This disclosure generally relates to the technical field of bathroom products, and more particularly, to a toilet brush holder for placing a toilet brush.

BACKGROUND

[0002] A toilet brush is a sanitary appliance for cleaning a toilet, which comprises a rod-shaped handle portion and a brush head connected with one end of the handle portion. Normally, a toilet brush is equipped with a toilet brush holder for use with it. When the toilet brush isn't used anymore, it is placed in the toilet brush holder such that a convenient storage is achieved. As the residual water left on the toilet brush is prevented from dripping down on the floor, a clean and hygienic use is realized.

[0003] CN202821168U discloses an automatic open-close type toilet brush holder having an inner barrel capable of moving up and down. When the toilet brush is placed into the inner barrel, its self-weight propels the inner barrel to move down, so that the inner barrel is covered by a barrel cover hinged with the inner barrel. When there is a need to use the toilet brush, the toilet brush is lifted up, and a driving device propels the inner barrel to move up, thus opening the barrel cover such that the toilet brush may be conveniently taken out. The aforesaid barrel cover capable of being opened and closed allows the toilet brush to be stored in a closed place after use. Compared with conventional toilet brushes, the aforesaid technical solution achieves a better storage effect. However, the shortcomings of the aforesaid technical solution are: when a wet toilet brush is placed in a closed space, due to the poor ventilation, the breeding of bacteria and generation of foul smell are unavoidable. Thus, it is urgent for those skilled in the art to develop a novel toilet brush holder.

[0004] CN104013349A discloses a toilet brush holder, comprising a holder body, and a barrel body, wherein the barrel body is movably sleeved with the holder body, and an elastic member is arranged between the holder body and the barrel body, wherein the upper end of the holder body is hinged with barrel covers which are opened and closed along with the up-down movement of the barrel body, wherein the barrel body comprises an inner barrel arranged in the holder body, a portion of the holder body below the barrel covers being provided with a ventilation hole, wherein when the toilet brush is placed in the inner barrel, the barrel body overcomes the elastic force of the elastic member and moves down relative to the holder body, thereby propelling the barrel covers such that they are closed at the upper end of the holder body.

[0005] US7712609B2 discloses a toilet brush holder, comprising a holder body, and a barrel body, wherein the barrel body is movably sleeved with the holder body, and an elastic member is arranged between the holder body

and the barrel body, wherein the upper end of the holder is hinged with barrel covers which are opened and closed along with the up-down movement of the barrel body, wherein the barrel body comprises an inner barrel arranged in the holder body, wherein when the toilet brush is placed in the inner barrel, the barrel body overcomes the elastic force of the elastic member and moves down relative to the holder body, thereby propelling the barrel covers such that they are closed at the upper end of the holder body.

SUMMARY

[0006] The purpose of the present disclosure is to provide a toilet brush holder having covers capable of being automatically opened and closed. According to the present disclosure, a good storage effect is achieved. When the toilet brush is placed in the barrel body, a ventilation hole for communicating the barrel body with the exterior is formed between the barrel covers and the barrel body. The ventilation hole enables the barrel body to be communicated with the outer air, allows the residual water left on the toilet brush to be quickly drained off, and prevents the breeding of bacteria and generation of foul smell. To achieve the above purpose, the present invention comprises a toilet brush holder according to claim 1. In particular, the downward movement of the barrel body relative to the holder body allows the inner barrel to be communicated with the exterior of the holder body through the ventilation hole, the barrel body comprising an outer shell covering the exterior of the inner barrel, wherein the holder body comprises a base and a support arranged on the base, wherein the ventilation hole is formed in the upper portion of the support, the barrel covers being hinged to the upper end of the support, and the inner barrel is sleeved in the support, and wherein the support is arranged between the outer shell and the inner barrel, the lower portion of the support being provided with a through hole arranged such when the toilet brush is lifted up, the barrel body moves up relative to the holder body under the elastic force of the spring such that the interior of the holder body is communicated with the exterior through the through hole.

[0007] In another aspect of the present disclosure, the outer shell is connected with the inner barrel through connecting walls, and the upper portion of the support is provided with avoiding grooves matched with the connecting walls.

[0008] In another aspect of the present disclosure, the connecting walls comprise inclined walls inclining upwards from interior to exterior. The barrel covers are provided with abutting portions which are in guide fit with the inclined walls. When the toilet brush is lifted up, the barrel body moves upwards relative to the holder body under the elastic force of the spring, thus enabling the abutting portions to slide along the inclined walls such that the barrels covers are turned over and opened at the upper end of the holder body. In another aspect of the present

disclosure, the positions of the barrel body corresponding to the inclined walls are provided with stopping portions. The stopping portions interact with the abutting portions to define an opening angle of the barrel covers.

[0009] In another aspect of the present disclosure, the outer shell is higher than the inner barrel, and the ventilation hole is located between the upper end of the support and the upper end of the inner barrel. The through hole is located between the upper end of the base and the lower end of the outer shell. When the toilet brush is placed in the inner barrel, the lower end of the outer shell is flush with the upper end of the base, and when the toilet brush is taken out, the upper end of the outer shell is flush with the upper end of the support.

[0010] In another preferred embodiment, the elastic member is a spring, and the two ends of the spring respectively abut against the bottom of the inner barrel and the base.

[0011] In another preferred embodiment, a positioning rod extending downwards is provided in the inner barrel, and a positioning column extending upwards for allowing the positioning rod to be inserted in is arranged on the base.

[0012] Compared with the prior art, the present disclosure has the following advantages: when the toilet brush is placed in the barrel body, the weight of the toilet brush acts on the barrel body such that the barrel body overcomes the elastic force of the elastic member to move down relative to the holder body. Thus, the barrel covers are propelled to close. The toilet brush holder of the present disclosure achieves a good storage effect. Compared with the prior art, the ventilation hole is formed in the upper portion of the support below the barrel covers. When the barrel covers are closed at the upper end of the holder body, the ventilation hole is located between the lower end of the barrel covers and the upper end of the barrel body as the barrel body moves down. Thus, the inner barrel is communicated with the exterior of the holder body, and the barrel body is communicated with the outside air. By means of the aforesaid design, the residual water left on the toilet brush may be quickly drained off, so that the breeding of bacteria and generation of foul smell are avoided. When the toilet brush is lifted up, the weight of the toilet brush no longer acts on the barrel body. At this point, the barrel body moves up relative to the holder body under the elastic force of the spring such that the barrel covers are propelled to open. In this way, the toilet brush may be conveniently taken out.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013]

Figure 1 is a conceptual diagram illustrating an example structure of the present disclosure when the barrel covers are closed.

Figure 2 is a conceptual diagram illustrating an ex-

ample structure of the present disclosure when the barrel covers are opened.

Figure 3 is a conceptual diagram illustrating an explosive view of the present disclosure.

Figure 4 is a conceptual diagram illustrating a sectional view of the present disclosure when the barrel covers are closed.

Figure 5 is a conceptual diagram illustrating an enlarged structure of portion A in Figure 4.

Figure 6 is a conceptual diagram illustrating a sectional view of the present disclosure when the barrel covers are opened.

Figure 7 is a conceptual diagram illustrating an enlarged structure of portion B in Figure 6.

[0014] In the Figures: 10-Holder Body, 20-Barrel Body, 30-Barrel Cover, 40-Elastic Member, 50-Ventilation Hole, 60-Through Hole, 11-Base, 111-Positioning Column, 12-Support, 121-Avoiding Groove, 201-Connecting Wall, 202-Inclined Wall, 203-Stopping Portion, 2031-Stopping Convex Groove, 2032-Stopping Convex Block, 204-Positioning Rod, 21-Inner Barrel, 22-Outer Shell, 301-Abutting Portion, 3011-Abutting Convex Rod, 3012-Abutting Convex Block.

DETAILED DESCRIPTION

[0015] Figures are combined hereinafter to further elaborate the technical solution of the present disclosure.

[0016] As shown in Figures 1-7, a toilet brush holder comprises a holder body 10 and a barrel body 20, wherein the holder body 10 further comprises a base 11 and a support 12 arranged on the base 11. In this embodiment, the base 11 is detachably connected with the support 12, the base 11 is a bowl-shaped rotating body, and the support 12 is a cylinder structure communicated from top to bottom. The support 12 is connected to the upper portion of the base 11. Alternatively, the base 11 and the support 12 may be integrally formed.

[0017] The barrel body 20 further comprises an inner barrel 21 and an outer shell 22 covering the exterior of the inner barrel 21. The support 12 is arranged between the outer shell 22 and the inner barrel 21. In this embodiment, the outer shell 22 is connected with the inner barrel 21 through connecting walls 201, and the upper portion of the support 12 is provided with avoiding grooves 121 matched with the connecting walls 201. During assembly, the inner barrel 21 of the barrel body 20 is mounted in the support 12, and the connecting walls 201 of the barrel body 20 are assembled in the avoiding grooves 121 of the support 12, thus allowing the barrel body 20 to be movably sleeved with the holder body 10, namely, allowing the barrel body 20 and the holder body 10 to move up and down relative to each other. To make the barrel body 20 move stably relative to the holder body 10, a positioning rod 204 extending downwards may be provided in the inner barrel 21, and a positioning column 111 extending upwards for allowing the positioning rod 204

to be inserted in is arranged on the base 11. It should be noted that the outer shell 22 may partially cover the exterior of the inner barrel 21, or the barrel body 20 may not necessarily comprises the outer shell 22.

[0018] An elastic member 40 is arranged between the holder body 10 and the barrel body 20. The upper end of the holder body 10 is further hinged with barrel covers 30 which are opened and closed along with the up-down movement of the barrel body 20. More specifically, the elastic member 40 is a spring, and the two ends of the spring respectively abut against the bottom of the inner barrel 21 and the base 11. The spring force should be less than the sum of the gravity force borne by the toilet brush and the barrel body 20 but greater than the gravity force borne by the barrel body 20. Namely, when the toilet brush is placed in the barrel body 20, the barrel body 20 moves down such that the spring is in a compressed state, and when the toilet brush is taken out, the spring is reset to propel the barrel body 20 to move up. In this embodiment, four connecting walls 201 are uniformly distributed along the circumferential direction of the support 12, and the positions of the upper end of the support 12 where two opposite connecting walls 201 are located are hinged to the barrel covers 30 through pin shafts. After the two barrel covers 30 are closed, a hole for allowing the handle of the toilet brush to penetrate through is formed in the centre of the two barrel covers 30, and the head portion of the toilet brush is integrally arranged in the inner barrel 21 below the barrel cover 30. The connecting walls 201 corresponding to the two barrel covers 30 form inclined walls 202 inclining upwards from interior to exterior. The barrel covers 30 are provided with abutting portions 301 which are in guide fit with the inclined walls 202, and the positions of the barrel body 20 corresponding to the inclined walls 202 are provided with stopping portions 203. The stopping portions 203 interact with the abutting portions 301 to define an opening angle of the barrel covers 30. More specifically, each abutting portion 301 comprises an abutting convex rod 3011 and an abutting convex block 3012, and each stopping portion 203 comprises a stopping groove 2031 and a stopping convex block 2032. When the toilet brush is placed in the barrel body 20, as shown in Figures 5 and 7, the barrel body 20 moves down, and the stopping convex blocks 2032 press against the abutting convex rods 3011, thereby pulling the barrel covers such that the barrel covers 30 are inwardly turned over and closed. When the abutting convex blocks 3012 of the barrel covers 30 press against the stopping convex blocks 2032 of the barrel body 20, the barrel covers are closed to a maximum angle. When the toilet brush is taken out, as shown in Figures 5 and 7, the barrel body 20 moves up, and the stopping convex blocks 2032 push up against the abutting convex blocks at the starting position, thus enabling the barrel covers 30 to be turned over and opened to a certain angle. As the barrel body 20 continues moving up, the inclined walls 202 of the barrel body 20 abut against the abutting convex rods 3011 such that the abutting convex

rods 3011 slide obliquely along the inclined walls 202. In this way, the barrel covers 30 are further turned over and opened until the abutting convex rods 3011 are inserted into the stopping grooves 2031 and abut against the stopping convex blocks 2032. At this point, the barrel covers are opened to the maximum angle.

[0019] The position of the holder body 10 below the barrel covers 30 is provided with a ventilation hole 50. In this embodiment, the ventilation hole 50 is formed in the upper portion of the support 12 below the barrel covers 30. For the outer shell 22 is higher than the inner barrel 21, when the barrel covers 30 are closed at the upper end of the holder body 10, the ventilation hole 50 is located between the lower end of the barrel covers 30 and the upper end of the barrel body 20 as the barrel body 20 moves down. Thus, the inner barrel 21 is communicated with the exterior of the holder body 10, and the barrel body 20 is communicated with the outside air. By means of the aforesaid design, the residual water left on the toilet brush may be quickly drained off, so that the breeding of bacteria and generation of foul smell are avoided. It should be noted that the ventilation hole 50 may comprise a plurality of vertical strip-shaped grooves, and may be an integral gap between the two adjacent connecting walls 201.

[0020] Preferably, the lower portion of the support 12 is provided with a through hole 60. When the toilet brush is lifted up, the barrel body 20 moves upwards relative to the holder body 10 under the elastic force of the spring such that the through hole 60 communicates the interior of the holder body 10 with the exterior. The through hole 60 is located between the upper end of the base 11 and the lower end of the outer shell. When the toilet brush is placed in the inner barrel 21, the lower end of the outer shell 22 is flush with the upper end of the base 11, and when the toilet brush is taken out, the upper end of the outer shell 22 is flush with the upper end of the support 12. The through hole 60 facilitates the air circulation inside the holder body 10.

[0021] The invention is defined by the appended claimed.

Claims

1. A toilet brush holder, comprising:

a holder body (10), and
a barrel body (20), wherein the barrel body (20) is movably sleeved with the holder body (10), and an elastic member (40) is arranged between the holder body (10) and the barrel body (20), wherein the upper end of the holder body (10) is hinged with barrel covers (30) which are opened and closed along with the up-down movement of the barrel body (20), wherein the barrel body (20) comprises an inner barrel (21) arranged in the holder body (10), a

- portion of the holder body (10) below the barrel covers (30) being provided with a ventilation hole (50), wherein when the toilet brush is placed in the inner barrel (21), the barrel body (20) overcomes the elastic force of the elastic member (40) and moves down relative to the holder body (10), thereby propelling the barrel covers (30) such that they are closed at the upper end of the holder body (10), wherein the downward movement of the barrel body (20) relative to the holder body (10) allows the inner barrel (21) to be communicated with the exterior of the holder body (10) through the ventilation hole (50), the barrel body (20) comprising an outer shell (22) covering the exterior of the inner barrel (21), wherein the holder body (10) comprises a base (11) and a support (12) arranged on the base (11), wherein the ventilation hole (50) is formed in the upper portion of the support (12), the barrel covers (30) being hinged to the upper end of the support (12), and the inner barrel (21) is sleeved in the support (12), and wherein the support (12) is arranged between the outer shell (22) and the inner barrel (21), the lower portion of the support (12) being provided with a through hole (60) arranged such when the toilet brush is lifted up, the barrel body (20) moves up relative to the holder body (10) under the elastic force of the spring such that the interior of the holder body (10) is communicated with the exterior through the through hole (60).
2. The toilet brush holder of claim 1, wherein the outer shell (22) is connected with the inner barrel (21) through connecting walls (201), and the upper portion of the support (12) is provided with avoiding grooves (121) matched with the connecting walls (201).
 3. The toilet brush holder of claim 2, wherein the connecting walls (201) comprise: inclined walls (202) inclining upwards from interior to exterior, wherein the barrel covers (30) are provided with abutting portions (301) which are in guide fit with the inclined walls (202), wherein when the toilet brush is lifted up, the barrel body (20) moves upwards relative to the holder body (10) under the elastic force of the elastic member (40), thus enabling the abutting portions (301) to slide along the inclined walls (202) such that the barrel covers (30) are turned over and opened at the upper end of the holder body (10).
 4. The toilet brush holder of claim 3, wherein the positions of the barrel body (20) corresponding to the inclined walls (202) are provided with stopping portions (203), wherein the stopping portions (203) in-

teract with the abutting portions (301) to define an opening angle of the barrel covers (30).

5. The toilet brush holder of claim 1, wherein the outer shell (22) is higher than the inner barrel (21), and the ventilation hole (50) is located between the upper end of the support (12) and the upper end of the inner barrel (21), wherein the through hole (60) is located between the upper end of the base (11) and the lower end of the outer shell (22), wherein when the toilet brush is placed in the inner barrel (21), the lower end of the outer shell (22) is flush with the upper end of the base, and when the toilet brush is taken out, the upper end of the outer shell (22) is flush with the upper end of the support (12).
6. The toilet brush holder of claim 1, wherein the elastic member (40) is a spring, and the two ends of the spring respectively abut against the bottom of the inner barrel (21) and the base (11).
7. The toilet brush holder of claim 6, wherein a positioning rod (204) extending downwards is provided in the inner barrel (21), and a positioning column (111) extending upwards for allowing the positioning rod to be inserted in is arranged on the base (11).

Patentansprüche

1. Halter für Toilettenbürste, umfassend:

einen Halterkörper (10) und einen Bottichkörper (20), wobei der Bottichkörper (20) beweglich mit dem Halterkörper (10) in Eingriff steht und ein elastisches Element (40) zwischen dem Halterkörper (10) und dem Bottichkörper (20) angeordnet ist, wobei das obere Ende des Halterkörpers (10) gelenkig mit Bottichabdeckungen (30) verbunden ist, die bei der Aufwärts-/Abwärtsbewegung des Bottichkörpers (20) geöffnet und geschlossen werden, wobei der Bottichkörper (20) einen Innenbottich (21) umfasst, der in dem Halterkörper (10) angeordnet ist, wobei ein Abschnitt des Halterkörpers (10) unterhalb der Bottichabdeckungen (30) mit einem Belüftungsloch (50) versehen ist, wobei, wenn die Toilettenbürste in dem Innenbottich (21) platziert wird, der Bottichkörper (20) die elastische Kraft des elastischen Elements (40) überwindet und sich relativ zu dem Halterkörper (10) nach unten bewegt, wodurch die Bottichabdeckungen (30) so angetrieben werden, dass sie an dem oberen Ende des Halterkörpers (10) geschlossen werden, wobei die Abwärtsbewegung des Bottichkörpers (20) relativ zum Halterkörper (10) es ermöglicht, dass der Innenbottich (21) über das Belüftungs-

- loch (50) mit der Außenseite des Halterkörpers (10) in Verbindung kommt, wobei der Bottichkörper (20) eine Außenschale (22) umfasst, welche die Außenseite des Innenbottichs (21) abdeckt, wobei der Halterkörper (10) einen Sockel (11) und einen auf dem Sockel (11) angeordneten Stützkörper (12) umfasst, wobei das Belüftungsloch (50) im oberen Abschnitt des Stützkörpers (12) ausgebildet ist, wobei die Bottichabdeckungen (30) am oberen Ende des Stützkörpers (12) angelenkt sind und der Innenbottich (21) in den Stützkörper (12) eingeschoben ist und wobei der Stützkörper (12) zwischen der Außenschale (22) und dem Innenbottich (21) angeordnet ist, wobei der untere Abschnitt des Stützkörpers (12) mit einem Durchgangsloch (60) versehen ist, das so angeordnet ist, dass, wenn die Toilettenbürste angehoben wird, sich der Bottichkörper (20) unter der elastischen Kraft der Feder relativ zum Halterkörper (10) nach oben bewegt, so dass der Innenraum des Halterkörpers (10) über das Durchgangsloch (60) mit dem Äußeren in Verbindung kommt.
2. Halter für Toilettenbürste nach Anspruch 1, wobei die Außenschale (22) durch Verbindungswände (201) mit dem Innenbottich (21) verbunden ist und der obere Abschnitt des Stützkörpers (12) mit Ausparungsschlitz (121) versehen ist, die an die Verbindungswände (201) angepasst sind.
3. Halter für Toilettenbürste nach Anspruch 2, wobei die Verbindungswände (201) umfassen: schräge Wände (202), die sich nach oben hin von innen nach außen neigen, wobei die Bottichabdeckungen (30) mit Anlageteilen (301) versehen sind, die mit den schrägen Wänden (202) in Führungspassung stehen, wobei sich der Bottichkörper (20) beim Anheben der Toilettenbürste unter der elastischen Kraft des elastischen Elements (40) relativ zum Halterkörper (10) nach oben bewegt, wodurch die Anlageteile (301) entlang der geneigten Wände (202) gleiten können, so dass die Bottichabdeckungen (30) am oberen Ende des Halterkörpers (10) umgeschwenkt und geöffnet werden.
4. Halter für Toilettenbürste nach Anspruch 3, wobei die Positionen des Bottichkörpers (20), die den geneigten Wänden (202) entsprechen, mit Anschlagteilen (203) versehen sind, wobei die Anschlagteile (203) mit den Anlageteilen (301) zusammenwirken, um einen Öffnungswinkel der Bottichabdeckungen (30) zu definieren.
5. Halter für Toilettenbürste nach Anspruch 1, wobei die Außenschale (22) höher als der Innenbottich (21) ist und das Belüftungsloch (50) zwischen dem oberen Ende des Stützkörpers (12) und dem oberen Ende des Innenbottichs (21) angeordnet ist, wobei das Durchgangsloch (60) zwischen dem oberen Ende des Sockels (11) und dem unteren Ende der Außenschale (22) angeordnet ist, wobei, wenn die Toilettenbürste in den Innenbottich (21) eingesetzt ist, das untere Ende der Außenschale (22) mit dem oberen Ende des Sockels bündig ist, und wenn die Toilettenbürste herausgenommen wird, das obere Ende der Außenschale (22) mit dem oberen Ende des Stützkörpers (12) bündig ist.
6. Halter für Toilettenbürste nach Anspruch 1, wobei das elastische Element (40) eine Feder ist und die beiden Enden der Feder jeweils an der Unterseite des Innenbottichs (21) und am Sockel (11) anliegen.
7. Halter für Toilettenbürste nach Anspruch 6, wobei eine sich nach unten erstreckende Positionierungsstange (204) am Innenbottich (21) vorgesehen ist und eine sich nach oben erstreckende Positionierungssäule (111), in die die Positionierungsstange eingeführt werden kann, auf dem Sockel (11) angeordnet ist.

Revendications

1. Porte-brosse de toilette, comprenant :

un corps porteur (10), et
un corps de cylindre (20), dans lequel le corps de cylindre (20) est emmanché de manière mobile avec le corps porteur (10), et un organe élastique (40) est disposé entre le corps porteur (10) et le corps de cylindre (20), dans lequel l'extrémité supérieure du corps porteur (10) est articulée avec des couvercles de cylindre (30) qui sont ouverts et fermés avec le déplacement de haut en bas du corps de cylindre (20), dans lequel le corps de cylindre (20) comprend un cylindre interne (21) disposé dans le corps porteur (10), une portion du corps porteur (10) en dessous des couvercles de cylindre (30) étant pourvue d'un trou d'aération (50), dans lequel, lorsque la brosse de toilette est placée dans le cylindre interne (21), le corps de cylindre (20) surmonte la force élastique de l'organe élastique (40) et se déplace vers le bas par rapport au corps porteur (10), propulsant ainsi les couvercles de cylindre (30) de telle sorte qu'ils sont fermés à l'extrémité supérieure du corps porteur (10), dans lequel le déplacement vers le bas du corps de cylindre (20) par rapport au corps porteur (10) permet au cylindre interne (21) d'être mis en communication avec l'extérieur du corps porteur (10) à travers le trou d'aération (50), le corps de cylindre (20) comprenant une enveloppe externe (22) recouvrant l'extérieur du cylindre interne (21),

- dans lequel le corps porteur (10) comprend une base (11) et un support (12) disposé sur la base (11), dans lequel le trou d'aération (50) est formé dans la portion supérieure du support (12), les couvercles de cylindre (30) étant articulés sur l'extrémité supérieure du support (12), et le cylindre interne (21) est emmanché dans le support (12), et dans lequel le support (12) est disposé entre l'enveloppe externe (22) et le cylindre interne (21), la portion inférieure du support (12) étant pourvue d'un trou traversant (60) disposé de telle sorte que, lorsque la brosse de toilette est soulevée, le corps de cylindre (20) se déplace vers le haut par rapport au corps porteur (10) sous la force élastique du ressort de telle sorte que l'intérieur du corps porteur (10) communique avec l'extérieur à travers le trou traversant (60).
2. Porte-brosse de toilette selon la revendication 1, dans lequel l'enveloppe externe (22) est reliée au cylindre interne (21) par des parois de liaison (201), et la portion supérieure du support (12) est pourvue de rainures d'évitement (121) appariées aux parois de liaison (201).
3. Porte-brosse de toilette selon la revendication 2, dans lequel les parois de liaison (201) comprennent :
- des parois inclinées (202) s'inclinant vers le haut de l'intérieur vers l'extérieur, dans lequel les couvercles de cylindre (30) sont pourvus de portions de butée (301) qui sont en ajustement de guidage avec les parois inclinées (202), dans lequel lorsque la brosse de toilette est soulevée, le corps de cylindre (20) se déplace vers le haut par rapport au corps porteur (10) sous la force élastique de l'organe élastique (40), permettant ainsi aux portions de butée (301) de coulisser le long des parois inclinées (202) de telle sorte que les couvercles de cylindre (30) sont retournés et ouverts à l'extrémité supérieure du corps porteur (10).
4. Porte-brosse de toilette selon la revendication 3, dans lequel les positions du corps de cylindre (20) correspondant aux parois inclinées (202) sont pourvues de portions d'arrêt (203), dans lequel les portions d'arrêt (203) interagissent avec les portions de butée (301) pour définir un angle d'ouverture des couvercles de cylindre (30).
5. Porte-brosse de toilette selon la revendication 1, dans lequel l'enveloppe externe (22) est plus haute que le cylindre interne (21), et le trou d'aération (50) est situé entre l'extrémité supérieure du support (12) et l'extrémité supérieure du cylindre interne (21), dans lequel le trou traversant (60) est situé entre l'extrémité supérieure de la base (11) et l'extrémité inférieure de l'enveloppe externe (22), dans lequel, lorsque la brosse de toilette est placée dans le cylindre interne (21), l'extrémité inférieure de l'enveloppe externe (22) affleure l'extrémité supérieure de la base, et lorsque la brosse de toilette est retirée, l'extrémité supérieure de l'enveloppe externe (22) affleure l'extrémité supérieure du support (12).
6. Porte-brosse de toilette selon la revendication 1, dans lequel l'organe élastique (40) est un ressort, et les deux extrémités du ressort viennent respectivement en butée contre le fond du cylindre interne (21) et la base (11).
7. Porte-brosse de toilette selon la revendication 6, dans lequel une tige de positionnement (204) s'étendant vers le bas est prévue dans le cylindre interne (21), et une colonne de positionnement (111) s'étendant vers le haut pour permettre l'insertion de la tige de positionnement est disposée sur la base (11).

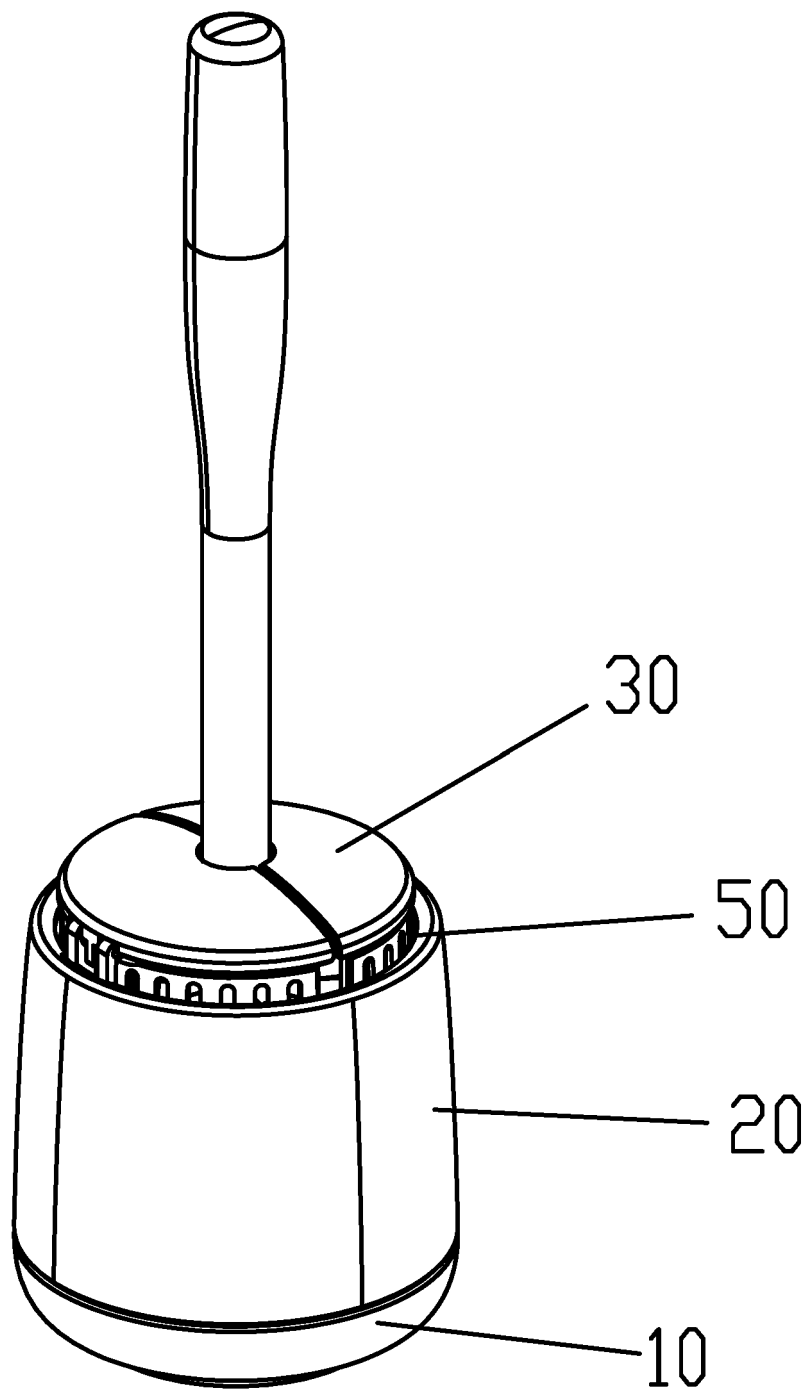


FIG. 1

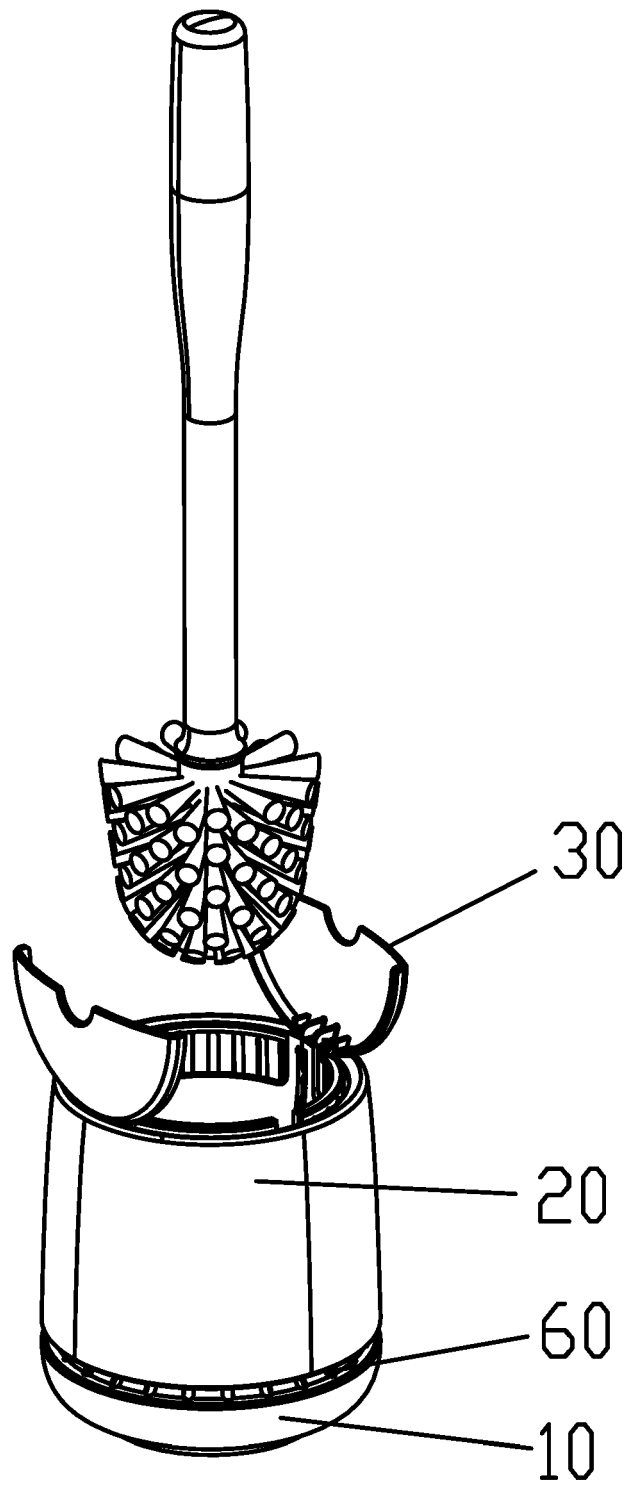


FIG. 2

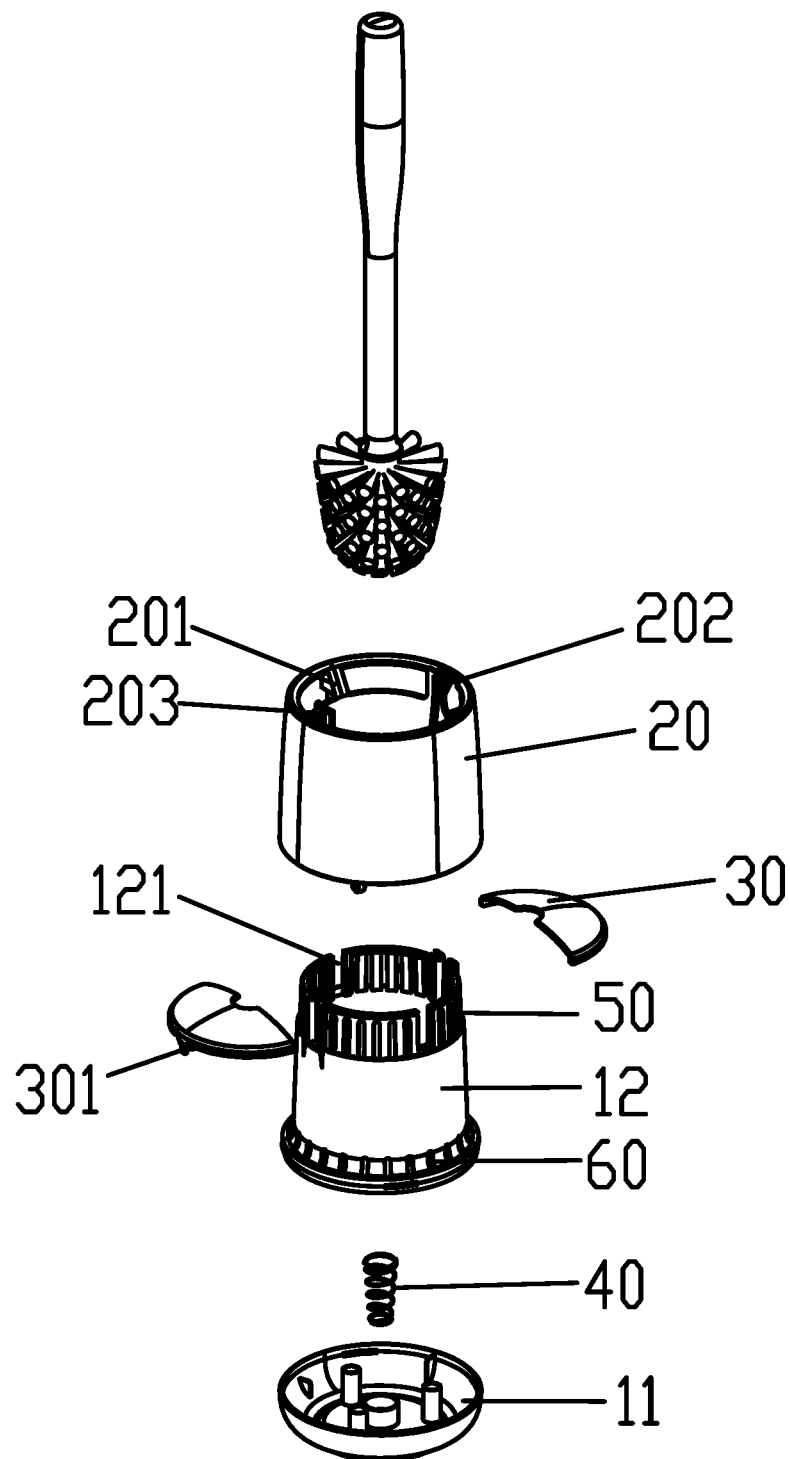


FIG. 3

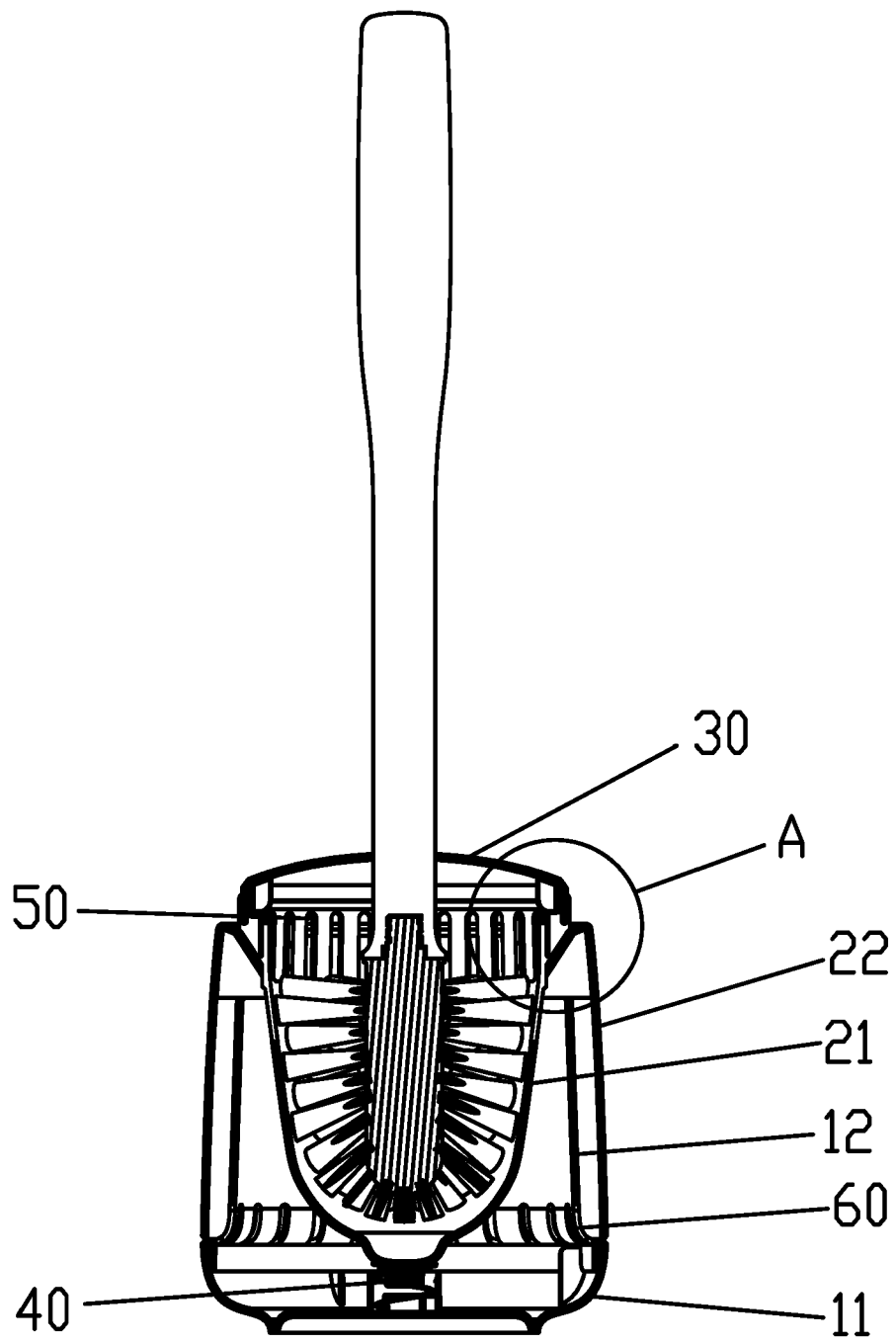


FIG. 4

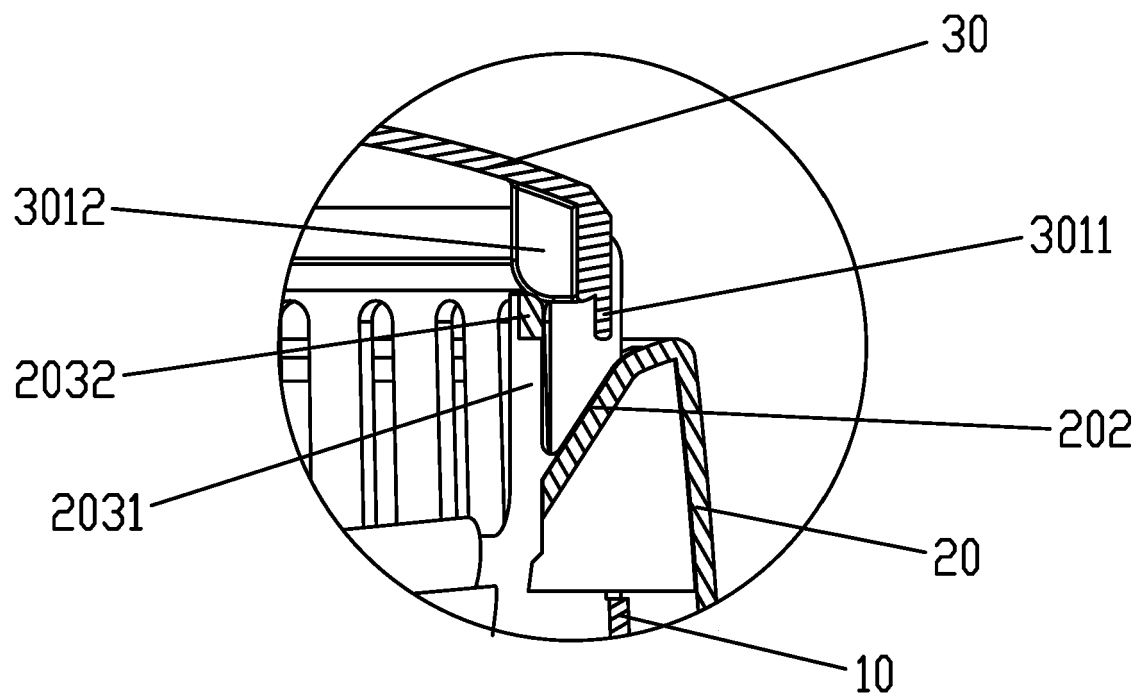


FIG. 5

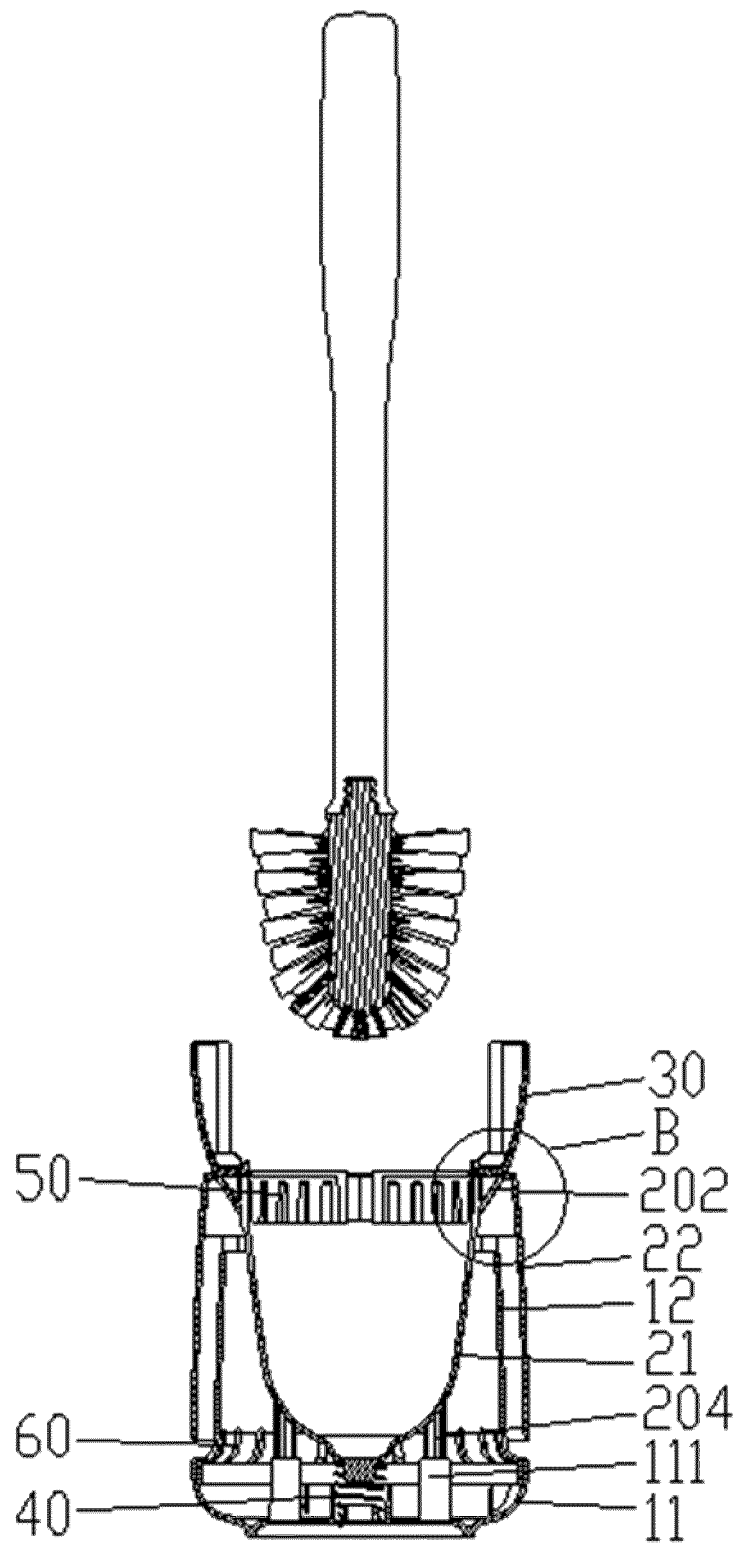


FIG. 6

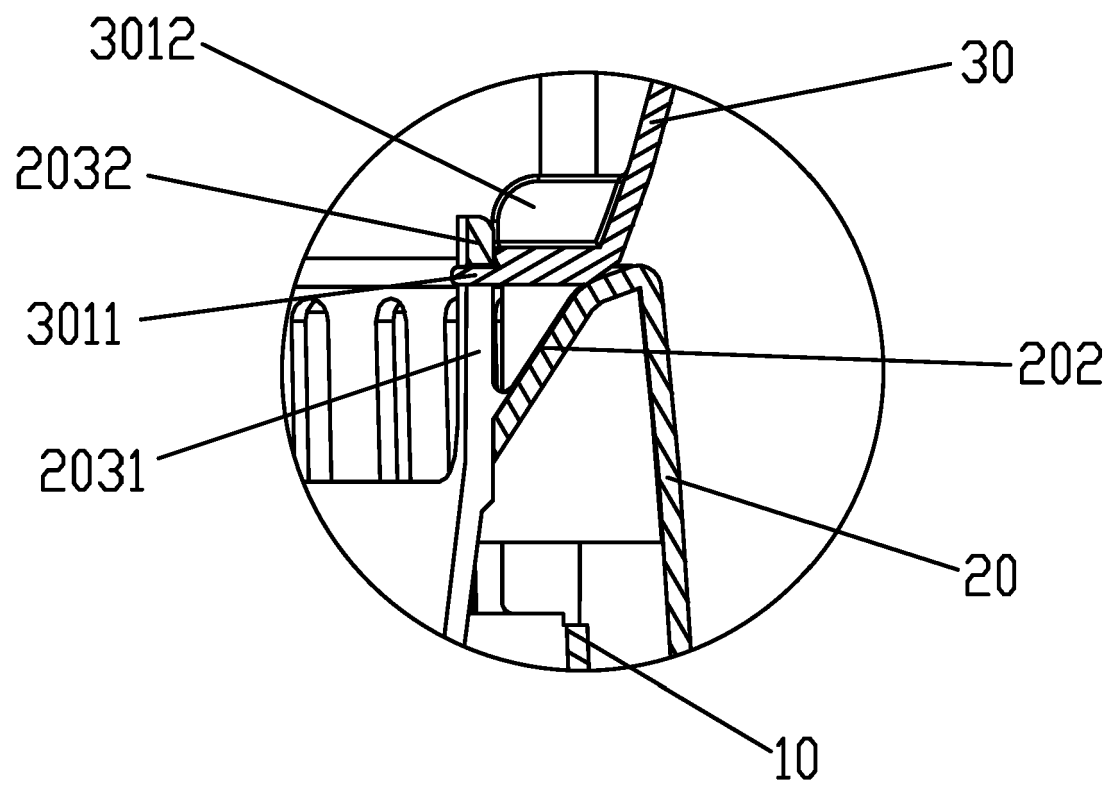


FIG. 7

REFERENCES CITED IN THE DESCRIPTION

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