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(54) **SELF-LOCKING STRUCTURE FOR TOILET BUMPER**

SELBSTVERRIEGELNDE STRUKTUR FÜR TOILETTENSTOSSDÄMPFER

STRUCTURE AUTOBLOQUANTE POUR BUTOIR DE TOILETTES

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Description

TECHNICAL FIELD

[0001] The present disclosure relates to the technical field of toilet, in particular to a self-locking structure for toilet bumper.

[0002] Document CN 107 348 892 A discloses a self-locking structure for a toilet bumper. **SUMMARY**

[0003] At present, after assembling the cover plate, the bumper of toilet seat in the market needs to be fixed by additional assembly of decorative ring, snap ring, snap nails and other parts. Generally, the installation way is to provide corresponding holding slots on the cover plate for the installation of snap nails and decorative rings, or install snap rings between the seat ring and the cover plate, but the structure has the following disadvantages: 1. The gap between the cover plate and the seat ring is too large and the flip stability is poor; 2. It is not only troublesome to assemble, but also increases the operating hours. At the same time, it is difficult to disassemble. The cover plate or seat ring is often scratched, which leads to the scrapping of parts and the increase of production cost.

SUMMARY

[0004] In order to solve the above problems, the present disclosure provides a self-locking structure for a toilet bumper.

[0005] In order to achieve the above object, the present disclosure provides the following technical solution:

A self-locking structure for a toilet bumper, including a fixed seat fixedly arranged on a toilet and a cover plate rotatably arranged on the fixed seat, a mounting hole is arranged on the cover plate, and a seat hinge assembly configured for hinged connection between the fixed seat and the cover plate is installed in the mounting hole, wherein the seat hinge assembly includes a hinge shaft, a first accommodation slot is provided on a peripheral surface of the hinge shaft, an elastic buckle partially protruding out of the first accommodation slot is provided in the first accommodation slot, the mounting hole is provided with an annular flange inwardly protruding at an opening of the mounting hole; the elastic buckle includes a base part, an elastic part and a guide part; one side of the base part is fixedly connected with the elastic part, and the other side of the base part is fixedly connected with the guide part; during assembly, the guide part of the elastic buckle is guided into the mounting hole from outside to inside along an axial direction of the mounting hole, so that the guide part is against the annular flange in the axial direction of the mounting hole, thereby limiting an axial movement of the seat hinge assembly.

[0006] As a further improvement, one side of the guide part is a guide inclined plane .

[0007] As a further improvement, the elastic buckle includes a disassembly part fixedly arranged on a side of

the base part, an outer circumference of the hinge shaft is fixedly sleeved with a sleeve; and the disassembly part abuts against an inner side wall of the sleeve under an elastic action of the elastic part after assembly.

[0008] As a further improvement, the elastic part is divided into a first elastic part and a second elastic part, and the first elastic part and the second elastic part bend towards each other to form a rhombus shape; and the first elastic part and the second elastic part are separated from each other, so that the elastic part forms a first opening.

[0009] As a further improvement, the fixed seat is fixedly provided with a connection column, the circumference of the hinge shaft is provided with an accommodation hole for an insertion of the connection column, and an end surface of the hinge shaft is provided with a second accommodation slot communicated with the accommodation hole; after the connection column is inserted into the accommodation hole, the connection column is clamped with the hinge shaft through a fastener.

[0010] As a further improvement, the fastener is provided with an annular insertion block inserted into the second accommodation slot, and an insertion end of the annular insertion block is provided with a second opening; an inner side of the annular insertion block close to the second opening is provided with an inwardly protruding rib, a circumference of the connection column is recessed inwardly to form a clamping groove for the insertion of the rib, and the sleeve is provided with a through hole for the connection column to pass through and through hole is opposite to the accommodation hole; one end of the connection column is inserted into the annular insertion block through the through hole and the accommodation hole in sequence, and is clamped with the rib through the clamping groove.

[0011] As a further improvement, strip-shaped insertion blocks are symmetrically arranged on the fastener, a third accommodation slot for the corresponding insertion of the strip-shaped insertion blocks is arranged on an end face of the hinge shaft, and a first hook is arranged at an insertion end of the strip-shaped insertion block; a second hook is arranged in the third accommodation slot, and the strip-shaped insertion block is engaged with the second hook in the third accommodation slot through the first hook.

[0012] The advantageous effects of the present disclosure are shown as following: the present disclosure improves some parts of the hinge shaft in the bumper, and an elastic buckle is placed in the hinge shaft, which can quickly complete the disassembly and assembly of the bumper. The elastic buckle has the advantages in light weight, small occupied space and little impact on the strength of the hinge shaft. The present disclosure can complete the fixed installation of the bumper without using snap nails, snap rings, decorative rings and other parts on the cover plate, further shorten the length of the bumper and increase the distance between the mounting holes on both sides of the cover plate, so as to improve

the swing stability of the whole toilet.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013]

FIG. 1 is a structural diagram of the present disclosure.

FIG. 2 is an exploded view of the present disclosure.

Figure 3 is the first exploded views of the seat hinge assembly.

Figure 4 is the second exploded view of the seat hinge assembly.

FIG. 5 is a front view of the present disclosure.

FIG. 6 is a cross-sectional view at A-A of FIG. 5.

FIG. 7 is a side view of the seat hinge assembly.

FIG. 8 is a cross-sectional view at B-B of FIG. 7.

FIG. 9 is a cross-sectional view at A-A of FIG. 7.

FIG. 10 is a structural diagram of an elastic buckle.

FIG. 11 is a structural diagram of the fastener.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0014] The present disclosure will be further described in detail below in combination with the accompanying drawings and specific embodiments:

As shown in FIG. 1 to FIG. 6 and FIG. 10, a self-locking structure for a toilet bumper includes a fixed seat 1 fixedly arranged on the toilet and a cover plate 2 rotatably arranged on the fixed seat 1, the cover plate 2 is provided with a mounting hole 21, and the mounting hole 21 is provided with a seat hinge assembly 3 for the hinge between the fixed seat 1 and the cover plate 2. The seat hinge assembly 3 includes a hinge shaft 31. The peripheral surface of the hinge shaft 31 is provided with a first accommodation slot 311, and the first accommodation slot 311 contains an elastic buckle 32 which partially extends out of the first accommodation slot 311. The opening of the mounting hole 21 is provided with an inward protruding annular flange 211. The elastic buckle 32 includes a base part 321, an elastic part 322 and a guide part 323. One side of the base part 321 is fixedly connected with the elastic part 322, and the other side of the base part 321 is fixedly connected with the guide part 323. During assembly, the guide part 323 of the elastic buckle 32 is guided into the mounting hole 21 from outside to inside along the axis direction of the mounting hole 21, so that the guide part 323 can be against the annular flange 211 in the axis direction of the mounting hole 21, thereby limiting the axial movement of the seat hinge assembly 3. The present disclosure improves some parts of the hinge shaft 31 in the bumper. The elastic buckle 32 is placed in the hinge shaft 31, which can quickly complete the disassembly and assembly of the bumper. The elastic buckle 32 has the advantages in light weight, small occupied space and little impact on the strength of the hinge shaft 31. The present disclosure can complete the fixed installation of the bumper without

using snap nails, snap rings, decorative rings and other parts on the cover plate 2, further shorten the length of the bumper, and increase the distance between the mounting holes 21 on both sides of the cover plate 2, so as to improve the swing stability of the whole toilet.

[0015] As shown in FIG. 6 and FIG. 10, one side of the guide part 323 is a guide inclined plane 3231, which is convenient for the guide part 323 to be clamped into the mounting hole 21, while the other side of the guide part 323 is configured for butting the annular flange 211, so as to fix the axial direction of the whole seat hinge assembly 3. In addition, the length of the base part 321 is equivalent to the radial width of the first accommodation slot 311 to limit the left and right shaking of the elastic buckle 32, so as to facilitate the smooth up and down compression of the elastic buckle 32.

[0016] As shown in FIG. 4, FIG. 6 and FIG. 10, the elastic buckle 32 includes a disassembly part 324 fixedly arranged on the side of the base part 321, and the outer circumference of the hinge shaft 31 is fixedly sleeved with a sleeve 33. And the disassembly part 324 abuts against the inner side wall of the sleeve 33 under an elastic action of the elastic part 322 after assembly. After the elastic part 322 of the elastic buckle 32 is compressed, the disassembly part 324 abuts against the inner wall of the sleeve 33. The sleeve 33 mainly plays a limiting role to prevent the elastic buckle 32 from falling out, so that the user can complete the fixation of the bumper without adding snap nails, decorative rings, snap rings and other parts. When the connection column 11 is not inserted, the user can press the disassembly part 324 through the through hole 331 of the sleeve 33, so that the guide part 323 is separated from the annular flange 211. At this time, the elastic buckle 32 is separated from the axial fixation, so that the whole seat hinge assembly 3 can be disassembled. The elastic buckle 32 makes the installation and disassembly of the bumper more convenient.

[0017] As shown in FIG. 10, the elastic part 322 is divided into a first elastic part 3221 and a second elastic part 3222. The first elastic part 3221 and the second elastic part 3222 bend towards each other to form a rhombus shape. The first elastic part 3221 and the second elastic part 3222 are separated from each other, so that the elastic part 322 forms a first opening 3223, which facilitates the insertion and elastic deformation of the elastic buckle 32.

[0018] As shown in FIG. 7, FIG. 8 and FIG. 11, the fixed seat 1 is fixedly provided with a connection column 11, the circumference of the hinge shaft 31 is provided with an accommodation hole 312 for the insertion of the connection column 11, and the end surface of the hinge shaft 31 is provided with a second accommodation slot 313 communicated with the accommodation hole 312. After the connection column 11 is inserted into the accommodation hole 312, the connection column 11 is clamped with the hinge shaft 31 through a fastener 4. The fastener 4 is provided with an annular insertion block

41 inserted into the second accommodation slot 313, and the insertion end of the annular insertion block 41 is provided with a second opening 42. The inner side of the annular insertion block 41 close to the second opening 42 is provided with an inwardly protruding rib 411, and the circumference of the connection column 11 is recessed inwardly to form a clamping groove 111 for the insertion of the rib 411. The sleeve 33 is provided with a through hole 331 for the connection column 11 to pass through and through hole 331 is opposite to the accommodation hole 312. One end of the connection column 11 is inserted into the annular opening of the annular insertion block 41 through the through hole 331 and the accommodation hole 312 in sequence, and is clamped with the rib 411 through the clamping groove 111, so as to reach a clamping action. The annular opening is communicated with the second opening 42 so that the connection column 11 can support the buckle position of the annular insertion block 41 during insertion. During disassembly, the user can forcefully pull out the cover plate 2. At this time, the buckle position of the fastener 4 is extended outward to a certain extent, and then the connection column 11 can be pulled out. In addition, the upper and lower ends of the rib 411 have a certain inclination for the insertion or extraction of the connection column 11, which also improves the deformation difficulty, thus realizing that the connection column 11 can be repeatedly forced to insertion and extract, and still maintain the buckling stability. At the same time, it also eliminates the need for spring assembly, thus effectively improving the assembly efficiency of the assembly.

[0019] As shown in FIG. 7, FIG. 9 and FIG. 11, strip-shaped insertion blocks 43 are symmetrically arranged on the fastener 4, a third accommodation slot 314 for the corresponding insertion of the strip-shaped insertion block 43 is arranged on the end face of the hinge shaft 31. A first hook 431 is arranged at the insertion end of the strip-shaped insertion block 43, and a second hook 3141 is arranged in the third accommodation slot 314. The strip-shaped insertion block 43 is engaged with the second hook 3141 in the third accommodation slot 314 through the first hook 431, and is clamped in a snap way to facilitate assembly and fixation.

Claims

1. A self-locking structure for a toilet bumper, comprising a fixed seat (1) fixedly arranged on a toilet and a cover plate (2) rotatably arranged on the fixed seat (1), a mounting hole (21) is arranged on the cover plate (2), and a seat hinge assembly (3) configured for hinged connection between the fixed seat (1) and the cover plate (2) is installed in the mounting hole (21), wherein the seat hinge assembly (3) comprises a hinge shaft (31), a first accommodation slot (311) is provided on a peripheral surface of the hinge shaft (31), an elastic buckle (32) partially protruding out of

the first accommodation slot (311) is provided in the first accommodation slot (311); the elastic buckle (32) comprises a base part (321), an elastic part (322) and an guide part (323); one side of the base part (321) is fixedly connected with the elastic part (322), and the other side of the base part (321) is fixedly connected with the guide part (323); **characterized in that** the mounting hole (21) is provided with an annular flange (211) inwardly protruding at an opening of the mounting hole (21); and that during assembly the guide part (323) of the elastic buckle (32) is guided into the mounting hole (21) from outside to inside along an axial direction of the mounting hole (21), so that the guide part (323) is against the annular flange (211) in the axial direction of the mounting hole (21), thereby limiting an axial movement of the seat hinge assembly (3), wherein one side of the guide part (323) is a guide inclined plane (3231).

2. The self-locking structure of the toilet bumper according to claim 1, **characterized in that** the elastic buckle (32) comprises a disassembly part (324) fixedly arranged on a side of the base part (321), an outer circumference of the hinge shaft (31) is fixedly sleeved with a sleeve (33); and the disassembly part (324) abuts against an inner side wall of the sleeve (33) under an elastic action of the elastic part (322) after assembly.
3. The self-locking structure of the toilet bumper according to claim 1, **characterized in that** the elastic part (322) is divided into a first elastic part (3221) and a second elastic part (3222), and the first elastic part (3221) and the second elastic part (3222) bend towards each other to form a rhombus shape; and the first elastic part (3221) and the second elastic part (3222) are separated from each other, so that the elastic part (322) forms a first opening (3223).
4. The self-locking structure of the toilet bumper according to claim 3, **characterized in that** the fixed seat (1) is fixedly provided with a connection column (11), the circumference of the hinge shaft (31) is provided with an accommodation hole (312) for an insertion of the connection column (11), and an end surface of the hinge shaft (31) is provided with a second accommodation slot (313) communicated with the accommodation hole (312); after the connection column (11) is inserted into the accommodation hole (312), the connection column (11) is clamped with the hinge shaft (31) through a fastener (4).
5. The self-locking structure of the toilet bumper according to claim 4, **characterized in that** the fastener (4) is provided with an annular insertion block (41) inserted into the second accommodation slot (313), and an insertion end of the annular insertion block

(41) is provided with a second opening (42); an inner side of the annular insertion block (41) close to the second opening (42) is provided with an inwardly protruding rib (411), a circumference of the connection column (11) is recessed inwardly to form a clamping groove (111) for an insertion of the rib (411), and the sleeve (33) is provided with a through hole (331) for the connection column (11) to pass through and through hole (331) is opposite to the accommodation hole (312); one end of the connection column (11) is inserted into the annular insertion block (41) through the through hole (331) and the accommodation hole (312) in sequence, and is clamped with the rib (411) through the clamping groove (111).

6. The self-locking structure of the toilet bumper according to claim 5, **characterized in that** strip-shaped insertion blocks (43) are symmetrically arranged on the fastener (4), a third accommodation slot (314) for the corresponding insertion of the strip-shaped insertion blocks (43) is arranged on an end face of the hinge shaft (31), and a first hook (431) is arranged at an insertion end of the strip-shaped insertion block (43); a second hook (3141) is arranged in the third accommodation slot (314), and the strip-shaped insertion block (43) is engaged with the second hook (3141) in the third accommodation slot (314) through the first hook (431).

Patentansprüche

1. Selbstverriegelungsstruktur für einen Toilettenstoßfänger, umfassend einen festen Sitz (1), der fest an einer Toilette angeordnet ist und eine Abdeckplatte (2), die drehbar an dem festen Sitz (1) angeordnet ist, wobei eine Montageloch (21) an der Abdeckplatte (2) angeordnet ist und eine Sitzgelenkbaugruppe (3), die für eine Gelenkverbindung zwischen dem festen Sitz (1) und der Abdeckplatte (2) konfiguriert ist, in dem Montageloch (21) installiert ist, wobei die Sitzgelenkbaugruppe (3) eine Gelenkwelle (31) umfasst, wobei ein erster Aufnahmeschlitz (311) an einer Umfangsfläche der Gelenkwelle (31) bereitgestellt ist und eine elastische Halterung (32), die teilweise aus dem ersten Aufnahmeschlitz (311) ragt, in dem ersten Aufnahmeschlitz (311) bereitgestellt ist; wobei die elastische Halterung (32) einen Sockelteil (321), einen elastischen Teil (322) und einen Führungsteil (323) umfasst, wobei eine Seite des Sockelteils (321) fest mit dem elastischen Teil (322) verbunden ist und die andere Seite des Sockelteils (321) fest mit dem Führungsteil (323) verbunden ist; **dadurch gekennzeichnet, dass** das Montageloch (21) mit einem ringförmigen Flansch (211) versehen ist, der an einer Öffnung des Montagelochs (21) nach

innen vorspringt; und dass während der Montage der Führungsteil (323) der elastischen Halterung (32) von außen entlang einer Axialrichtung des Montagelochs (21) in das Montageloch (21) hinein geführt wird, sodass der Führungsteil (323) in der Axialrichtung des Montagelochs (21) am ringförmigen Flansch (211) anliegt, wodurch eine axiale Bewegung der Sitzgelenkbaugruppe (3) begrenzt wird, wobei eine Seite des Führungsteils (323) eine geneigte Führungsebene (3231) ist.

2. Selbstverriegelungsstruktur für einen Toilettenstoßfänger nach Anspruch 1, **dadurch gekennzeichnet, dass** die elastische Halterung (32) einen Demontageteil (324) umfasst, der fest an einer Seite des Sockelteils (321) angeordnet ist, eine Hülse (33) fest auf einen Außenumfang der Gelenkwelle (31) gesetzt ist; und der Demontageteil (324) nach der Montage unter Einwirkung des elastischen Teils (322) an einer Innenwand der Hülse (33) anliegt.
3. Selbstverriegelungsstruktur für einen Toilettenstoßfänger nach Anspruch 1, **dadurch gekennzeichnet, dass** der elastische Teil (322) in einen ersten elastischen Teil (3221) und einen zweiten elastischen Teil (3222) unterteilt ist und der erste elastische Teil (3221) und der zweite elastische Teil (3222) zueinander hin gebogen sind, um eine Rhombenform zu bilden, und der erste elastische Teil (3221) und der zweite elastische Teil (3222) voneinander getrennt sind, sodass der elastische Teil (322) eine erste Aussparung (3223) bildet.

4. Selbstverriegelungsstruktur für einen Toilettenstoßfänger nach Anspruch 3, **dadurch gekennzeichnet, dass** der feste Sitz (1) mit einer fest angeordneten Verbindungssäule (11) versehen ist, der Umfang der Gelenkwelle (31) mit einem Aufnahmeloch (312) zum Einführen der Verbindungssäule (11) versehen ist und eine Endfläche der Gelenkwelle (31) mit einem zweiten Aufnahmeschlitz (313) versehen ist, der mit dem Aufnahmeloch (312) in Verbindung steht; wobei nach dem Einführen der Verbindungssäule (11) in das Aufnahmeloch (312) die Verbindungssäule (11) durch ein Befestigungselement (4) mit der Gelenkwelle (31) festgeklemt ist.
5. Selbstverriegelungsstruktur für einen Toilettenstoßfänger nach Anspruch 4, **dadurch gekennzeichnet, dass** das Befestigungselement (4) mit einem ringförmigen Einführblock (41) versehen ist, der in den zweiten Aufnahmeschlitz (313) eingeführt ist, und ein Einführende des ringförmigen Einführblocks (41) mit einer zweiten Öffnung (42) versehen ist; wobei eine Innenseite des ringförmigen Einführblocks (41) nah an der zweiten Öffnung (42) mit einer nach innen vorspringenden Rippe (411) versehen ist, ein Umfang der Verbindungssäule (11)

nach innen vertieft ist, um eine Klemmnut (111) zum Einführen der Rippe (411) zu bilden, und die Hülse (33) mit einem Durchgangsloch (331) für die Verbindungssäule (11) versehen ist und das Durchgangsloch (331) dem Aufnahmeloch (312) gegenüberliegt; wobei ein Ende der Verbindungssäule (11) nacheinander durch das Durchgangsloch (331) und das Aufnahmeloch (312) in den ringförmigen Einführblock (41) eingeführt ist und durch die Klemmnut (111) mit der Rippe festgeklemt ist.

6. Selbstverriegelungsstruktur für einen Toilettenstoßfänger nach Anspruch 5, **dadurch gekennzeichnet, dass** streifenförmige Einführblöcke (43) symmetrisch an dem Befestigungselement (4) angeordnet sind, ein dritter Aufnahmeschlitz (314) zum entsprechenden Einführen der streifenförmigen Einführblöcke (43) an einer Endfläche der Gelenkwelle (31) angeordnet sind und ein erster Haken (431) an einem Einführende des streifenförmigen Einführblocks (43) angeordnet ist; wobei ein zweiter Haken (3141) in dem dritten Aufnahmeschlitz (314) angeordnet ist und der streifenförmige Einführblock (43) mit dem zweiten Haken (3141) in dem dritten Aufnahmeschlitz (314) durch den ersten Haken (431) in Eingriff steht.

Revendications

1. Une structure autoverrouillante pour un amortisseur de siège de toilette, comprenant un siège fixe (1) agencé fixement sur les toilettes et une plaque de couvercle (2) agencée de façon rotative sur le siège fixe (1), un trou de montage (21) est agencé sur la plaque de couvercle (2), et un ensemble de charnière de siège (3) configuré pour un raccordement articulé entre le siège fixe (1) et la plaque de couvercle (2) est installé dans le trou de montage (21), dans laquelle l'ensemble de charnière de siège (3) comprend un arbre de charnière (31), une première fente de logement (311) est agencée sur la surface périphérique de l'arbre de charnière (31), une boucle élastique (32) saillant partiellement de la première fente de logement (311) est agencée dans la première fente de logement (311) ; la boucle élastique (32) comprend une partie de base (321), une partie élastique (322) et une partie de guidage (323) ; un côté de la partie de base (321) est raccordé fixement à la partie élastique (322), et l'autre côté de la partie de base (321) est raccordé fixement à la partie de guidage (323) ; **caractérisée en ce que** le trou de montage (21) est muni d'une bride annulaire (211) saillant vers l'intérieur à une ouverture du trou de montage (21) ; et **en ce que** durant l'assemblage, la partie de guidage (323) de la boucle élastique (32) est guidée dans le trou de montage (21) de l'extérieur vers l'intérieur le long du sens de l'axe du trou de montage (21), de sorte que la partie de guidage (323) est contre la bride annulaire (211) dans le sens de l'axe du trou de montage (21), limitant ainsi le mouvement axial de l'ensemble de charnière de siège (3), dans laquelle un côté de la partie de guidage (323) est un plan de guidage incliné (3231).
2. Une structure autoverrouillante pour un amortisseur de siège de toilette selon la revendication 1, **caractérisée en ce que** la boucle élastique (32) comprend une partie de désassemblage (324) agencée fixement sur le côté de la partie de base (321), la circonférence externe de l'arbre de charnière (31) est emmanchée fixement par un manchon (33) ; et la partie de désassemblage (324) vient en butée contre une paroi interne du manchon (33) sous l'action élastique de la partie élastique (322) après assemblage.
3. Une structure autoverrouillante pour un amortisseur de siège de toilette selon la revendication 1, **caractérisée en ce que** la partie élastique (322) est divisée en une première partie élastique (3221) et une deuxième partie élastique (3222), et la première partie élastique (3221) et la deuxième partie élastique (3222) se courbent l'une vers l'autre pour composer une forme de losange, et la première partie élastique (3221) et la deuxième partie élastique (3222) sont séparées mutuellement, de sorte que la partie élastique (322) forme une première ouverture (3223).
4. Une structure autoverrouillante pour un amortisseur de siège de toilette selon la revendication 3, **caractérisée en ce que** le siège fixe (1) est muni fixement d'une colonne de raccordement (11), la circonférence de l'arbre de charnière (31) est munie d'un trou de logement (312) pour l'insertion de la colonne de raccordement (11), et une surface terminale de l'arbre de charnière (31) est munie d'une deuxième fente de logement (313) communiquant avec le trou de logement (312) ; une fois que la colonne de raccordement (11) est insérée dans le trou de logement (312), la colonne de raccordement (11) est serrée par l'arbre de charnière (31) via un élément de serrage (4).
5. Une structure autoverrouillante pour un amortisseur de siège de toilette selon la revendication 4, **caractérisée en ce que** l'élément de serrage (4) est muni d'un bloc d'insertion annulaire (41) inséré dans la deuxième fente de logement (313), et une terminaison d'insertion du bloc d'insertion annulaire (41) est munie d'une deuxième ouverture (42) ; un côté interne du bloc d'insertion annulaire (41) proximal de la deuxième ouverture (42) est muni d'une arête (411) saillant vers l'intérieur, la circonférence de la colonne de raccordement (11) est évidée vers l'intérieur pour former une gorge de serrage (111) pour

l'insertion de l'arête (411), et le manchon (33) est muni d'un trou traversant (331) pour faire passer la colonne de raccordement (11) et le trou traversant (331) est à l'opposé du trou de logement (312) ; une terminaison de la colonne de raccordement (11) est insérée dans le bloc d'insertion annulaire (41) via le trou traversant (331) et le trou de logement (312) en séquence, et est serrée par l'arête (411) via la gorge de serrage (111).

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6. Une structure autoverrouillante pour un amortisseur de siège de toilette selon la revendication 5, **caractérisée en ce que** des blocs d'insertion en forme de bandes (43) sont agencés symétriquement sur l'élément de serrage(4), une troisième fente de logement (314) pour l'insertion correspondante des blocs d'insertion en forme de bandes (43) est agencée sur la face terminale de l'arbre de charnière (31), et un premier crochet (431) est agencé à une terminaison d'insertion du bloc d'insertion en forme de bandes (43) ; un deuxième crochet (3141) est agencé dans la troisième fente de logement (314), et le bloc d'insertion en forme de bandes (43) est engagé avec le deuxième crochet (3141) dans la troisième fente de logement (314) via le premier crochet (431).

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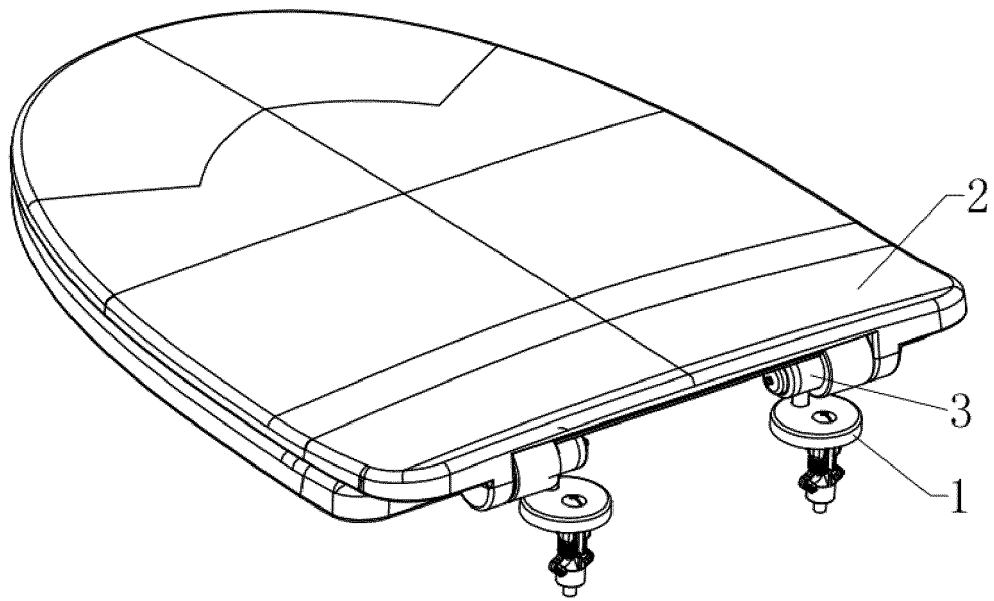


FIG. 1

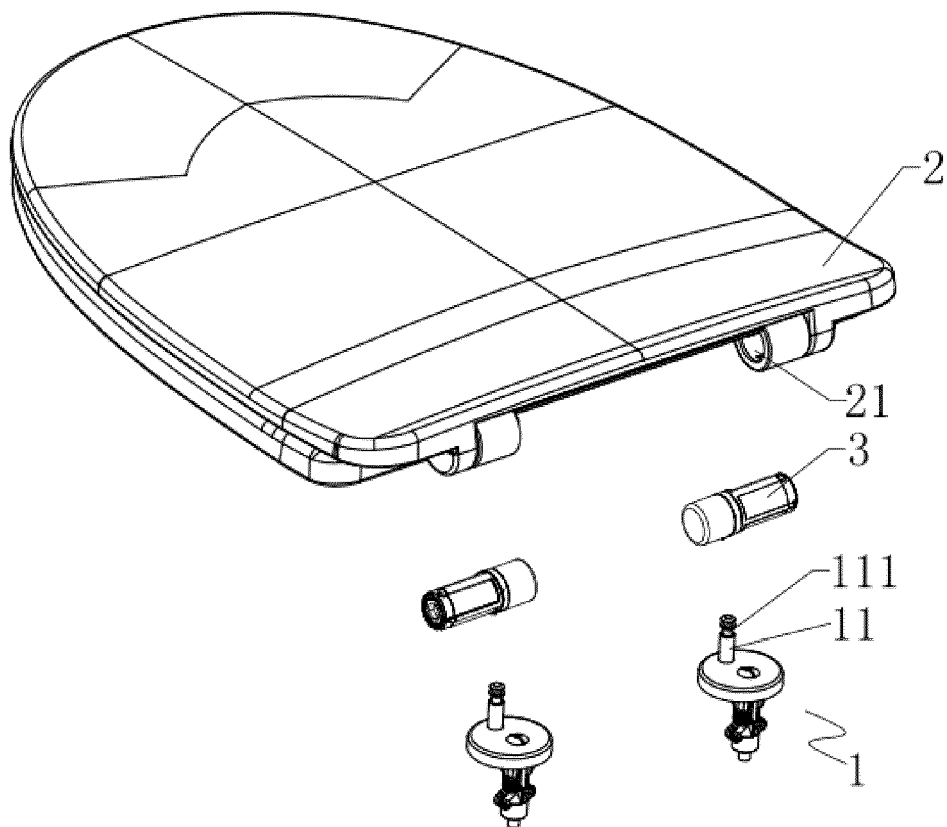


FIG. 2

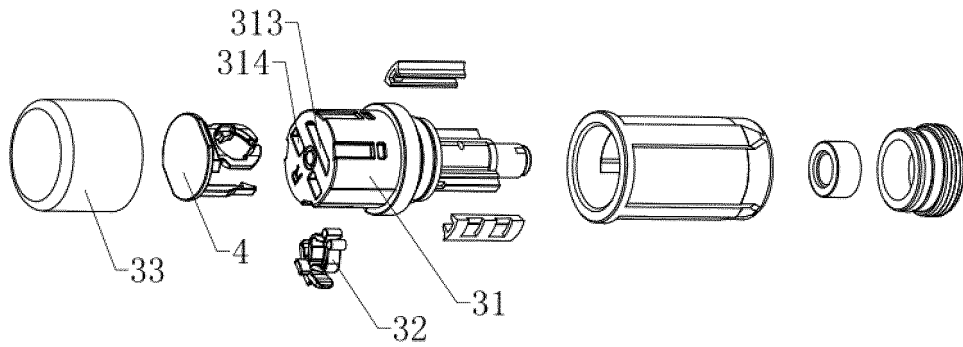


FIG.3

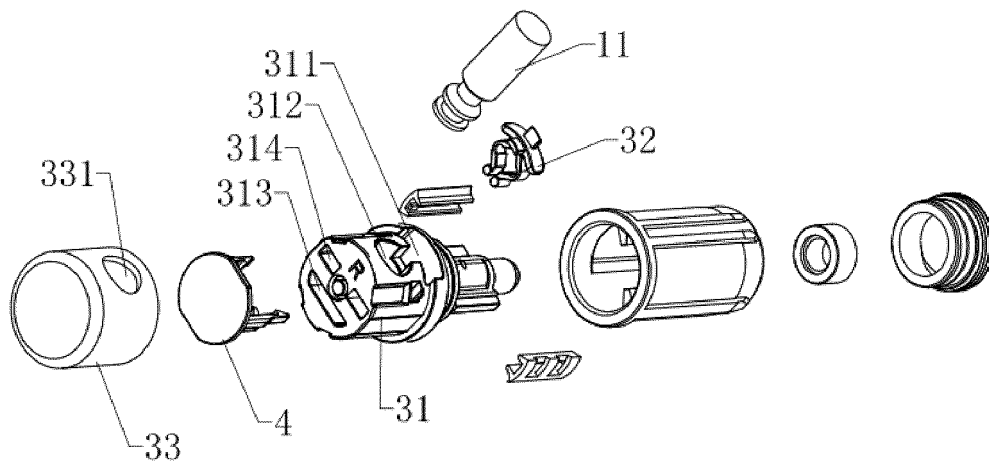


FIG.4

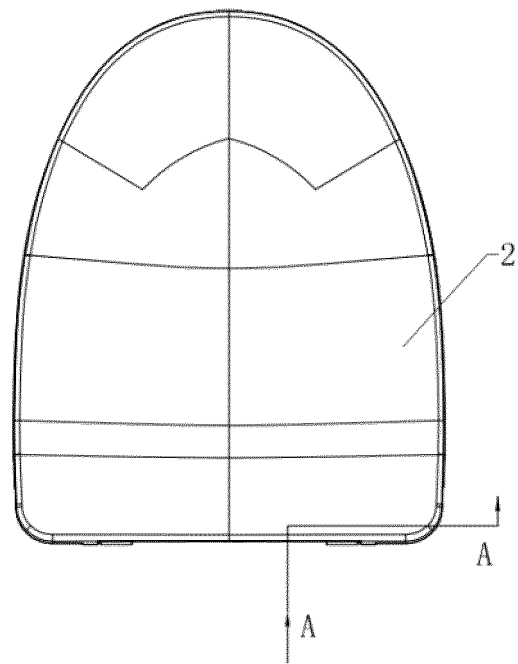


FIG. 5

A-A

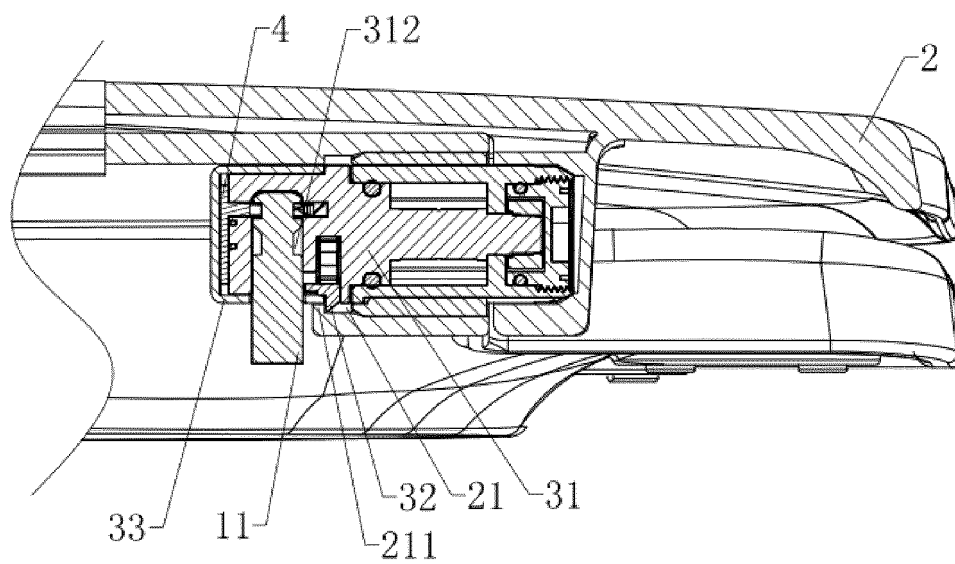


FIG. 6

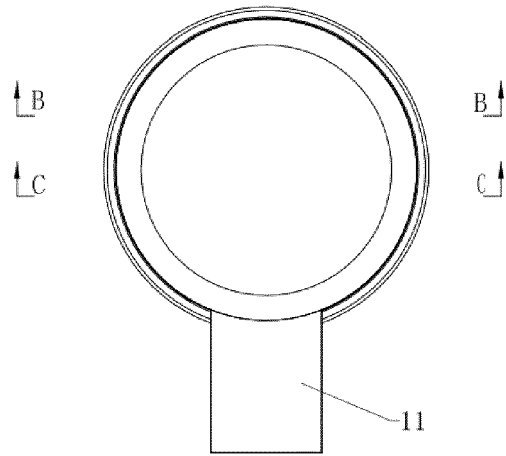


FIG. 7

B-B

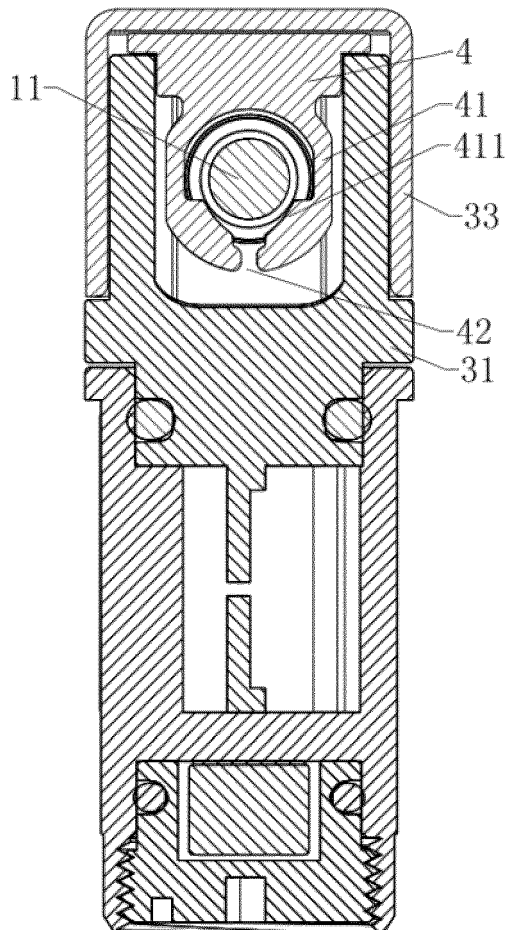


FIG. 8

C-C

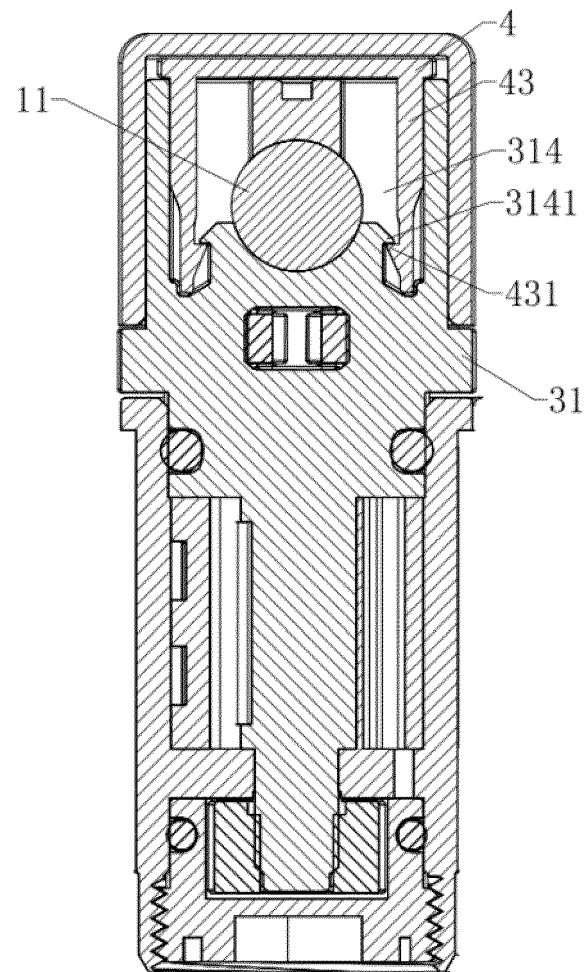


FIG.9

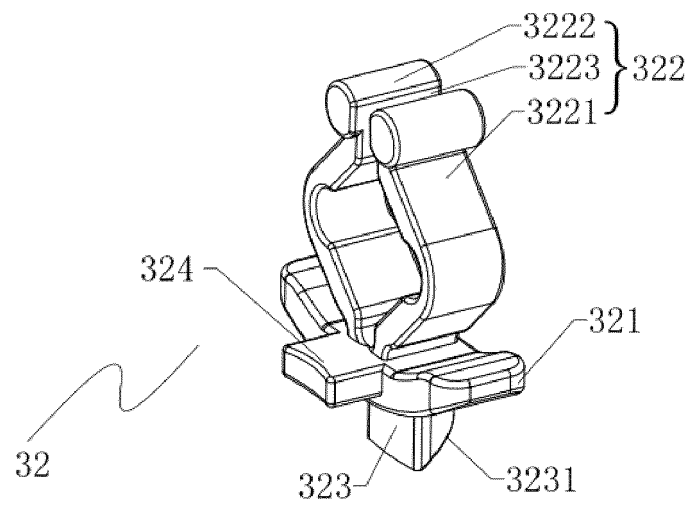


FIG.10

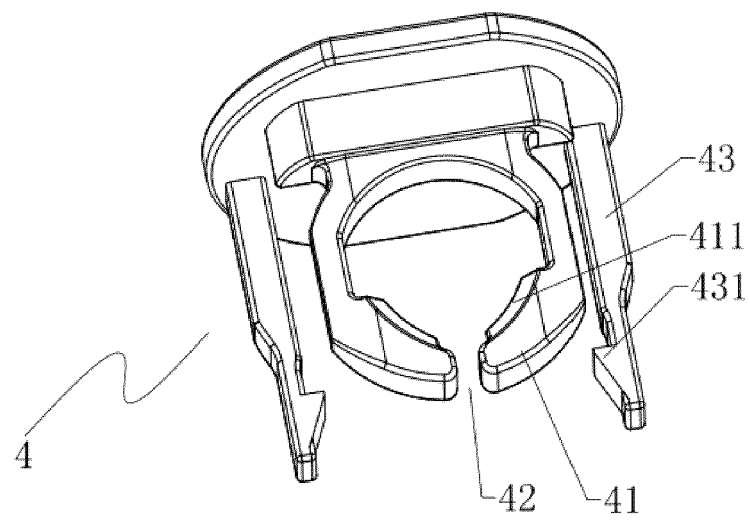


FIG.11

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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