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(54) **Title:** APPARATUS AS A SUBSTITUTE FOR CLEAN WATER CHANNEL

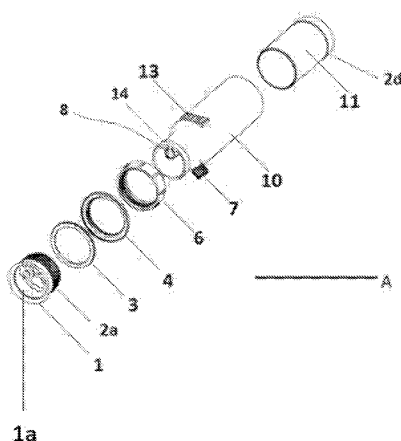


Fig. 1

(57) **Abstract:** The invention relates to an apparatus as a substitute for the clean water channel, which is produced as a separate part from the water closet and assembled to the water closet, and which provides clean water transfer into the water closet bowl. Thanks to the invention according to the application, the difficulties experienced during the production of the ceramic channel integrated with the water closet which provides entry of clean water into the water closet of the prior art and the problems such as deformation occurring when the bidet nozzle is connected to said ceramic channel or during the production of said ceramic channel are eliminated. As a consequence, the apparatus as a substitute for the clean water channel providing clean water transfer according to the application has many advantages as the assembly thereof is easy, the deformation possibility thereof during the assembly is very low, and the separate stocking for the products with and without bidet system is eliminated.

DESCRIPTION

APPARATUS AS A SUBSTITUTE FOR CLEAN WATER CHANNEL

Subject of the Invention

The invention discloses an apparatus as a substitute for clean water channel, which is
5 produced as a separate part from the water closet and provides clean water transfer into the water closet bowl.

State of the Art

The invention relates to an apparatus which provides clean water transfer into the water closet bowl. Today, a ceramic clean water inlet channel integrated with the water closet,
10 which provides clean water transfer into the water closet and which is provided in the water closets as a standard component, is disposed. Said ceramic clean water inlet channel may be deformed due to being integrated with the water closet and having an elongated structure. Problems may also be encountered during the production of the ceramic channel integrated with the water closet. Different processes are required to be applied to said clean water
15 channel for the water closets which can be produced with or without bidet system. Performing a process on the integrated ceramic channels in the water closets may damage this ceramic channel. Namely, a housing is required to be provided so as to provide the entry of bidet pipe into the ceramic clean water channel in the water closets which will comprise bidet system. During said process of providing a housing, ceramic channel disposed in the
20 water closet is damaged. Moreover, it is required to stock the water closets, the necessary processes of which are made for the mounting of the bidet pipe, and the water closets to which a bidet pipe will not be assembled, separately, which in turn means that two different product types must be kept available in the storage.

Thanks to the fact that clean water channel is not integrated with the water closet and
25 produced as a separate part in the invention according to the application, the aforementioned problems are eliminated. Thanks to the present invention, an apparatus as a substitute for the clean water channel, which can be assembled to the water closets as a separate part, is produced instead of the clean water channel integrated with the water closets. Moreover, thanks to the apparatus as a substitute for the clean water channel
30 according to the application, in case water closet comprises a bidet pipe, the processes

required for the connection of the bidet pipe are ensured to be performed easily without any deformation.

Thereby the storage problem of two types of water closets which are with and without bidet pipe is eliminated. The invention according to the application has many advantages such as
 5 eliminating the deformation likely to occur in the clean water channel in the water closets, minimizing the water closet storages causing unnecessary loss of space, easier assembly of the bidet water pipe compared to the prior art, and using the same product easily in the systems with and without bidet pipe, and has been developed in order to solve all the mentioned problems.

10 **Object of the Invention**

The object of the invention is to develop an apparatus as a substitute for the clean water channel produced as a separate part from the water closets and therefore mounted separately to the water closets, which provides eliminating the deformation likely to occur in the clean water channel disposed in the water closets and the storage of two different types
 15 of water closets which are with and without bidet pipe, and providing easy mounting of the bidet pipe.

References

1. connection body

1a. connection body mounting surface

20 **2a.** threaded section on the connection body

2b. threaded section on the bidet water pipe connection channel

2c. threaded section on the channel as an extension of the bidet end connection hole

2d. threaded section on the additional channel

2e. threaded section of the moving part inner surface

25 **3.** sealing element

4. attachment/abutment part

4a. attachment abutment part threaded surface

- 5a. bidet end connection hole
 - 6. moving part
 - 7. bidet water pipe connection channel
 - 8. L-shaped channel in the form of bracket
 - 5 9. channel as an extension of the bidet end connection hole
 - 9a. water passage hole
 - 10. main channel
 - 10a. passage port on the main channel
 - 11. additional channel
 - 10 12a. clean water inlet space
 - 12b. clean water outlet space
 - 13. support piece
 - 14. protrusion
 - 15. bowl washing apparatus
 - 15 16. inner body
 - 16a. sealing element housings on the inner body
 - 17. side channel
 - 17a. coves on the side channel
 - 18. middle channel
 - 20 19. cover
 - 20. bidet end
 - 20a. sealing element housings on the bidet end
 - 21. bidet end gasket
 - 22. mounting hole of the bidet end
 - 25 23. housing on the water closet in which the apparatus according to the invention is located
- A. Apparatus as a substitute for the clean water channel

T. Clean water pipe

U. End section of the clean water pipe

C. Gasket at the end section of the clean water pipe

X. Entry distance of the clean water pipe into the main channel

5

Description of the Figures

Figure 1: The exploded view of the apparatus according to the application

Figure 1a: The view of the apparatus according to the application when bowl washing apparatus is incorporated

10 **Figure 2:** The assembled perspective view of the apparatus according to the application when the bowl washing apparatus is mounted

Figure 3: The lateral inner assembled view of the apparatus according to the application when the bowl washing apparatus is mounted

15 **Figure 4:** The lateral assembled view of the apparatus according to the application when the bowl washing apparatus is mounted

Figure 5: The lateral view of the connection body of the apparatus according to the application

Figure 6: The front view of the bidet end connection hole disposed in the inner section of the connection body of the apparatus according to the application

20 **Figure 7:** The top view of the main channel of the apparatus according to the application

Figure 8: The front view of the main channel of the apparatus according to the application

Figure 9: The lateral view of the moving part of the apparatus according to the application

Figure 10: The front view of the moving part of the apparatus according to the application

25 **Figure 11:** The lateral view of the attachment/abutment part of the apparatus according to the application

Figure 12: The front view of the attachment/abutment part of the apparatus according to the application

Figure 13: The lateral view of the sealing element of the apparatus according to the application

Figure 14: The front view of the sealing element of the apparatus according to the application

Figure 15: The lateral view of the additional channel of the apparatus according to the application

5 **Figure 16:** The front view of the additional channel of the apparatus according to the application

Figure 17: The top view of the apparatus according to the application when clean water pipe is mounted thereto

10 **Figure 18:** The lateral view of the apparatus according to the application when clean water pipe is mounted thereto

Figure 19: The lateral view of the inner section of the apparatus according to the application when clean water pipe is mounted thereto

Figure 20a: The assembled view of the bowl washing apparatus with bidet system on the connection body

15 **Figure 20b:** The assembled view of the bowl washing apparatus without bidet system on the connection body

Figure 21a: The exploded view of the bowl washing apparatus with bidet system

Figure 21b: The exploded view of the bowl washing apparatus without bidet system

20 **Figure 22a:** The view of the connection body and the bowl washing apparatus without bidet system

Figure 22b: The view of the connection body and the bowl washing apparatus with bidet system

Figure 23: The rear view of the apparatus according to the invention when assembled on the water closet

25 **Figure 24:** The lateral view of the apparatus according to the invention when assembled on the water closet

Figure 25: The lateral view of the housing where the apparatus according to the invention will be assembled on the water closet

30 **Figure 25a:** The front view of the housing where the apparatus according to the invention will be assembled on the water closet

Figure 26: The front view of the apparatus according to the invention assembled on the water closet when the bowl washing apparatus with bidet system is assembled thereon

Detailed Description of the Invention

The invention discloses an apparatus as a substitute for the clean water channel, which is produced as a separate part from the water closet and assembled to the water closet, provides clean water transfer into the water closet bowl.

5 In the present state of the art, the water transfer into the water closet bowl is provided by means of a ceramic channel positioned on the water closet in an integrated manner. A clean water channel apparatus developed within the scope of the invention is positioned into the channel space or housing (23) formed in the water closets without said ceramic clean water channel. Generally, apparatus as a substitute for the clean water channel, which is the
10 invention according to the application, is located into place of the ceramic channel which provides the clean water coming from the elongated tubular clean water pipe (T) to be transferred into the inner section of the water closet, namely to the space/housing where the ceramic channel of the prior art is placed. Said apparatus is not integrated with the water closet unlike the ceramic clean water channel of the prior art, and is assembled
15 thereto subsequently.

The apparatus as a substitute for the clean water channel according to the application comprises two basic parts, wherein these parts are at least one main channel (10) and at least one connection body (1) which provides the main channel (10) to be assembled on the water closet. Clean water pipe (T) in the present state of the art is assembled to the
20 apparatus according to the application and the clean water coming from reservoir passes through the channels of the apparatus and reaches to the water closet bowl.

The apparatus according to the application comprises at least one main channel (10) and at least one connection body (1) as mentioned above, at least one sealing element (3), at least one abutment part (4), at least one moving part (6), at least one additional channel (11) and
25 at least one bowl washing apparatus (15) assembled on the connection body. Moving part (6) is the part which fixes the main channel (10) and the connection body (1) to each other.

The connection body (1) disposed in the apparatus according to the application is seen in Figure 5 and 6. As seen in Figure 6, the connection body (1) comprises at least one hole (5a) in the inner section thereof. Said hole (5a) is the bidet end connection hole through which
30 the water coming from bidet end enters into the water closet bowl in the water closets

which will comprise a bidet end (20). The continuing section of the bidet end connection hole (5a) forms at least one channel (9) extending toward the rear section of the body and at least one water passage hole (9a) is positioned on this channel. At least one threaded section (2c) is disposed around said channel (9) as an extension of the bidet end connection hole (Figure 5) and at least one sealing element (3) is fitted into this threaded section (2c). At least one other threaded section (2a) is positioned on the connection body (1). Bowl washing apparatus (15) is positioned to the mounting surface (1a) at the front side of the connection body (1). Bowl washing apparatus (15) comprises at least one inner body (16) and at least one cover (19) positioned on the inner body. Cover (19) is assembled on the inner body (16) by adhesion. At least one side channel (17) and at least one middle channel (18) allowing for water flow to the water closet bowl are provided on the inner body. Bowl washing apparatus (15) comprises two side channels (17) at the left and right and coves (17a) so as to allow efficient water flow on the side channels. In case of using the apparatus (A) as a substitute for the clean water channel in the water closets with bidet system, bowl washing apparatus (15) will comprise a cover (19) which comprises at least one hole (22) where at least one bidet end (20) will be assembled on. Bowl washing apparatus (15) is assembled on the connection body (1) in a close-fit manner by means of the sealing elements (3) to be positioned into sealing element housings (16a) on the inner body (16). Bowl washing apparatus (15), when used in the water closets with bidet system, is assembled on the connection body (1) such that the bidet end (20) thereon will be on the same direction with the bidet end connection hole (5a). Bidet end (20) will be assembled into the bidet end connection hole (5a) by means of at least one sealing element located into the sealing element housings (20a) thereon in a close-fit manner. Bidet end (20) is positioned in the hole (22) on the cover (19) by means of at least one gasket (21). When the use of said bowl washing apparatus (15) in the water closets without bidet system is required, the use thereof without a bidet end (20) is also possible (Figure 20b). In the water closets with bidet system, on the other hand, the bowl washing apparatus (15) is assembled on the connection body (1) with a bidet end (20) being assembled thereto as seen in Figure 20a. Said bowl washing apparatus (15) provides the water closet bowl to be washed by means of the side channels (17) and the middle channel (18) disposed thereon. A cover (19) which does not comprise the hole (22) where the bidet end is assembled on the bowl washing apparatus (15) is positioned in the water closets without bidet system and a cover (19) which

comprises the hole (22) where the bidet end will be assembled is positioned in the water closets with bidet system.

As seen in Figure 1, at least one bidet water pipe connection channel (7) is positioned on the main channel (10) disposed in the apparatus according to the application. As seen in Figures 3 and 8, at least one L-shaped channel (8) in the form of bracket is disposed in the inner section of the main channel (10) in the continuing section of the connection channel (7) of the bidet water pipe. At least one threaded section (2b) is positioned around the bidet water pipe connection channel (7) and at least one sealing element (3) is positioned to this threaded section. Bidet water pipe connection channel (7) is closed to water passage in its standard state, but if water closet comprises bidet system a hole is bored in the inner section of the bidet water pipe connection channel (7) and thus it is made ready for the water passage. Thanks to said boring process, bidet water pipe connection channel (7) is opened to an L-shaped channel (8) in the form of bracket in the preferred use. A channel (9) as an extension of the bidet end connection hole disposed on the connection body (1) is fitted into the L-shaped channel (8) in the form of bracket at its other side (Figure 3). By means of the pipe coming from the bidet nozzle, the water entering into the bidet water pipe connection channel (7) enters into the L-shaped channel (8) in the form of bracket and then into the channel (9) as an extension of the bidet end connection hole fitted into the L-shaped channel (8) in the form of bracket by means of the water passage hole (9a) disposed at the end of said channel (9). From this section the water enters into the water closet bowl by means of the bidet end connection hole (5a).

At least one support piece (13) which provides the surface area to be broadened and the apparatus (A) as a substitute for the clean water channel according to the application to be assembled in an easier and more lasting manner, is disposed on the main channel (10). Said support piece (13) is rectangular in the preferred use. At least one protrusion (14) is positioned on the main channel (10). Said protrusion (14) prevents the moving part (6) positioned thereon from being displaced from the main channel (10). At least one sealing element (3) is positioned on the protrusion (14).

At least one additional channel (11) is positioned inside the main channel (10). Clean water pipe (T) which will transfer the clean water coming from the reservoir pipe is assembled to

the main channel (10). Additional channel (11) provides the clean water pipe (T) to be fixed at desired distance inside the main channel (10). Additional channel (11) is in the form of a cylindrical pipe both sides of which are open. Additional channel (11) comprises at least one clean water inlet space (12a) at its end facing the port (10a) where it is located inside the main channel (10), and at least one water outlet space (12b) at the other end, namely at the end facing the connection body. Diameter of the opening, which is disposed at the side of the additional channel (11) where clean water pipe (T) is assembled to the main channel (10), namely at the end facing the port (10a) where it is located into the main channel (10) and is referred to as clean water inlet space (12a), is smaller than the diameter of the opening at the other side or of the water outlet space (12b). Thus, the clean water pipe (T) does not advance in the additional channel (11) by entering therein and is fixed inside the main channel (10).

As clearly seen in Figure 19, gasket (C) is positioned at the end section (U) of the clean water pipe. Length of the section of the clean water pipe (T) entering into the main channel, namely the entry distance (X) of the clean water pipe into the main channel is required to be 25 mm. For the adjustment of 25 mm an additional channel (11) is located to the inner section of the main channel (10). In accordance with the length of the water closets, the main channel (10) can be longer or shorter. In this case, the additional channel (11) is again designed in a manner to maintain the 25 mm distance. For instance, when main channel (10) is shortened by cutting, the additional channel (11) is also cut to maintain the 25 mm distance. To prevent water leakage between the two channels due to the entry of the additional channel (11) into the main channel (10), at least one threaded section (2d) on the additional channel (11) and at least one sealing element (3) located on the threaded section (2d) are disposed.

During the assembly of the clean water channel apparatus (A) according to the invention, connection body (1) is positioned into the housing (23) on the water closet and one section thereof will remain at the front side of the water closet and the other section thereof will remain at the rear section in a manner not to be seen when looked from the front side of the water closet. At least one sealing element (3) is fitted to the threaded section (2a) on the connection body (1) and attachment/abutment part (4) abutting to the surface of the water closet which is not seen when looked from the outside during the assembly, namely the rear

surface of the water closet, is fitted on said threaded section (2a) in a manner to face the rear section of the sealing element (3). Attachment/abutment part (4) comprises at least one threaded surface (4a), wherein it is fixed to the threaded structure (2a) on the connection body thanks to this surface. Thus, after the connection body (1) is located into the housing

5 (23) on the water closet, as the diameter of the abutment part (4) which is fitted to the threaded surface (2a) of the connection body (1) remaining in the rear section of the water closet is bigger than the diameter of the housing where the connection body is positioned, the connection body (1) is fixed on the water closet in the housing where it is located. Sealing element (3) remains between the abutment part (4) and the water closet. At least

10 one sealing element (3) is fitted onto the protrusion (14) on the main channel (10) and a moving part (6) is assembled on the main channel (10). From the section of the connection body (1) remaining at the rear section of the water closet, the main channel (10) is assembled on the connection body (1) in a manner to comprise the moving part (6) fitted thereon and by fixing the moving part (6) on the threaded section (2a) on the connection

15 body (1) by being rotated, the main channel (10) and the connection body (1) are fixed to each other. Moving part (6) comprises in the inner surface thereof a threaded surface (2e) which will correspond to the threaded section (2a) on the connection body (1). Thereby, moving part (6) is positioned such that one section thereof will remain on the main channel (10) thanks to the protrusion (14) on the main channel (10) and the other section thereof

20 will be on the threaded section (2a) on the connection body (1) and fixes two parts to each other. A sealing element (3) can be positioned on the threaded section (2a) on the connection body between the moving part (6) and the abutment part (4). Said sealing elements (3) are O-rings in the preferred use.

After the assembly, the bidet water pipe connection channel (7) is opened to the L-shaped

25 channel (8) in the form of bracket and the channel (9) as an extension of the bidet end connection hole is positioned inside the L-shaped channel (8) in the form of bracket.

The apparatus according to the application corresponds to the ceramic channel which is disposed in the water closets previously and provides clean water transfer into the inner section of the water closets. Namely, when the ceramic channel is removed, the apparatus

30 as a substitute for the clean water channel according to the application is located into the space/housing formed in the water closet body. In the preferred use, the invention

according to the application is made of plastic. Moreover, the apparatus according to the application can be used in all types of the water closets.

Thanks to the apparatus (A) as a substitute for the clean water inlet channel according to the application the deformation problem of the ceramic clean water inlet channel formed in the prior art is eliminated. Especially in the water closets with bidet system, a hole is required to be bored in this ceramic channel for the connection of the bidet pipe, which leads to a deformation of the ceramic channel. Thanks to the use of the apparatus according to the application, the difficulties experienced during the production of ceramic channel integrated with the water closet in the present state of the art are eliminated. Moreover, storage problem of two types of water closets which are with and without bidet pipe is eliminated and the bidet pipe is easily assembled in the water closets with bidet system.

CLAIMS

1. An apparatus (A) which provides clean water transfer into a water closet to be assembled thereon, characterized in comprising

- at least one connection body (1) to be positioned in a housing (23) on the water closet;
- at least one main channel (10) to be assembled on the connection body.

2. The apparatus as in Claim 1, characterized in comprising at least one additional channel (11) to be positioned inside the main channel (10).

3. The apparatus as in Claim 1, characterized in comprising at least one moving part (6) which provides the connection body (1) and the main channel (10) to be fixed to each other.

4. The apparatus as in Claim 1, characterized in comprising at least one abutment part (4) positioned on the connection body (1).

5. The apparatus as in Claim 1, characterized in comprising bowl washing apparatus (15) positioned on the connection body (1).

6. The apparatus as in Claim 1, characterized in comprising at least one support piece (13) positioned on the main channel.

7. The apparatus as in Claim 1, characterized in comprising at least one sealing element (3).

8. The apparatus as in Claim 1, characterized in comprising at least one threaded section (2a) on the connection body.

9. The apparatus as in Claim 1, characterized in comprising at least one threaded section (2d) positioned on the additional channel (11).

10. The apparatus as in Claim 1, characterized in comprising at least one bidet water pipe connection channel (7) on the main channel (10).

11. The apparatus as in Claim 1, characterized in comprising L-shaped channel (8) in the form of bracket following the bidet water pipe connection channel (7) in the inner section of the main channel (10).

12. The apparatus as in Claim 1, characterized in comprising bidet end connection hole (5a) on the connection body (1).

13. The apparatus as in Claim 3, characterized in comprising threaded surface (4a) on the abutment part (4).

14. The apparatus as in Claim 10, characterized in comprising at least one threaded section (2b) on the bidet water pipe connection channel (7).

15. The apparatus as in Claim 12, characterized in comprising at least channel (9) as an extension of the bidet end connection hole (5a) and at least one water passage hole (9a) on this channel.

16. The apparatus as in Claim 2, characterized in that the additional channel (11) is in the form of a cylindrical pipe and comprises an opening as a clean water inlet space (12a) at the end facing the port (10a) where it is located inside the main channel in the position where it is positioned inside the main channel (10) and at least one water outlet space (12b) at the other end, namely at the end facing the connection body, and the diameter of the clean water inlet space (12a) is smaller than the diameter of the clean water outlet space (12b).

17. The apparatus as in Claim 15, characterized in comprising at least one threaded section (2c) on the channel (9) as an extension of the bidet end connection hole (5a).

18. The apparatus as in Claim 3, characterized in comprising at least one threaded section (2e) in the inner surface of the moving part (6).

19. The apparatus as in Claim 3, characterized in comprising at least one protrusion (14) positioned on main channel which provides fixing of the moving part (6).

20. The apparatus as in Claim 5, characterized in that the bowl washing apparatus (15) positioned on the connection body (1) comprises at least one inner body (16) and at least one cover (19).

21. The apparatus as in Claim 20, characterized in that in the event of using the apparatus (A) in the water closets with bidet system, the bowl washing apparatus (15) positioned on the connection body (1) comprises at least one hole (22) where at least one bidet end (20) will be positioned on said cover (19) and bidet end (20) which is positioned with at least one gasket (21) on the hole.

22. The apparatus as in Claims 20 or 21, characterized in that the bowl washing apparatus (15) comprises side channels (17) and at least one middle channel (18) which are positioned on the inner body (16) and through which the water flow is provided into the water closet bowl.

23. The apparatus as in Claim 22, characterized in comprising coves (17a) positioned on the side channels (17) on said bowl washing apparatus (15).

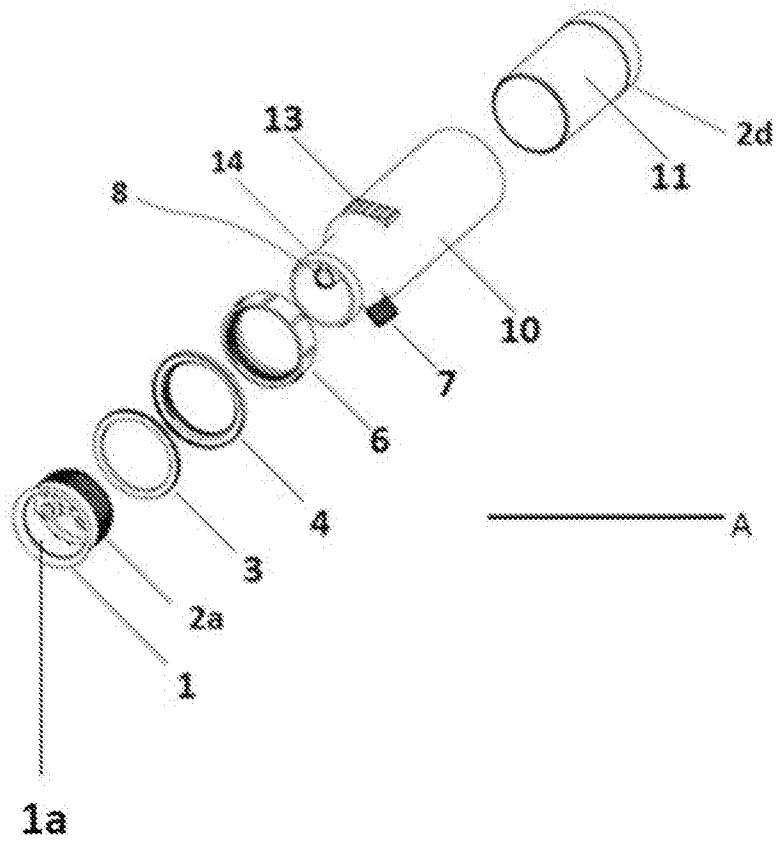


Fig. 1

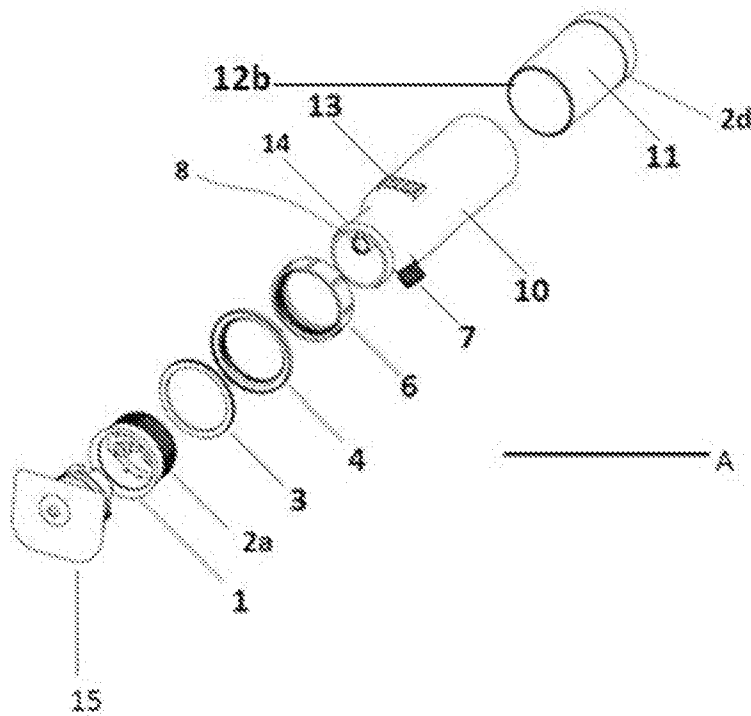


Fig. 1a

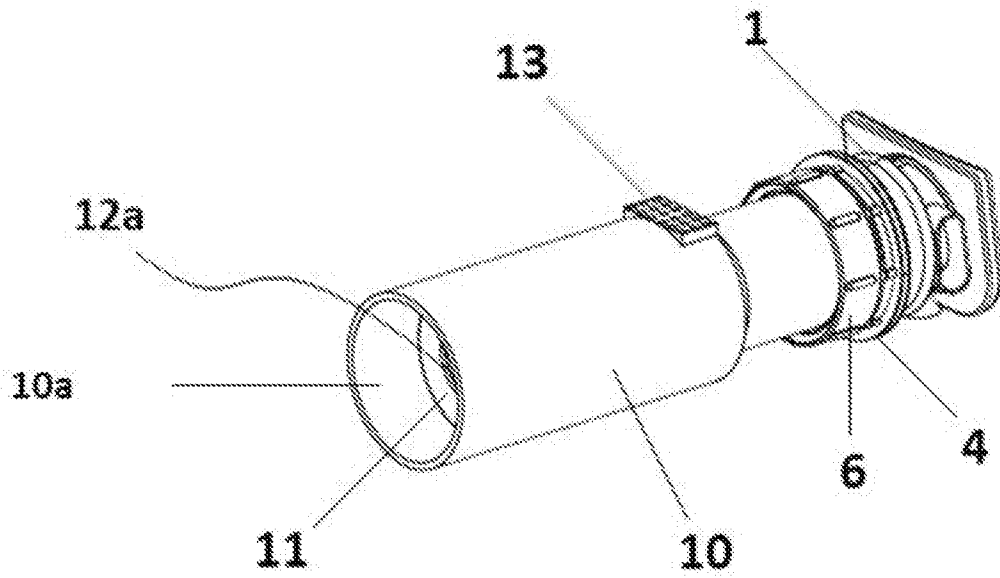


Fig. 2

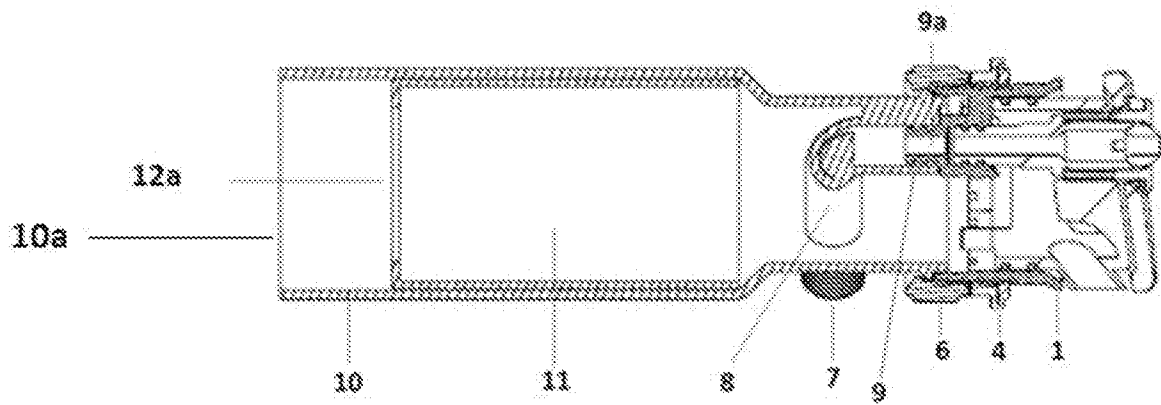


Fig. 3

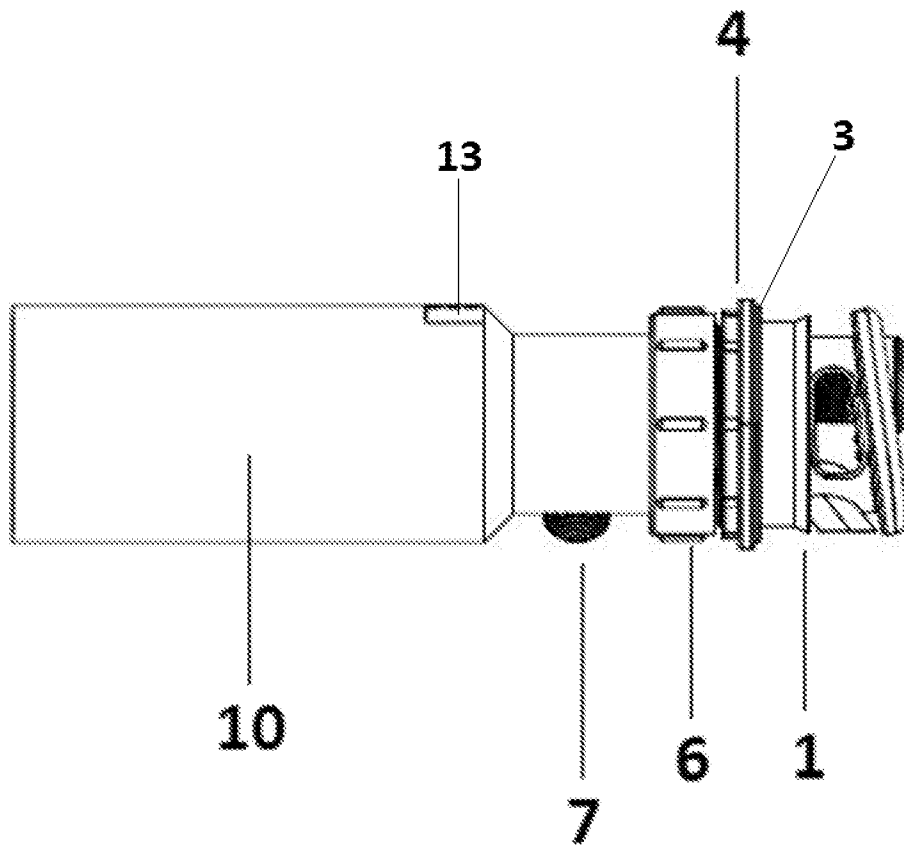


Fig. 4

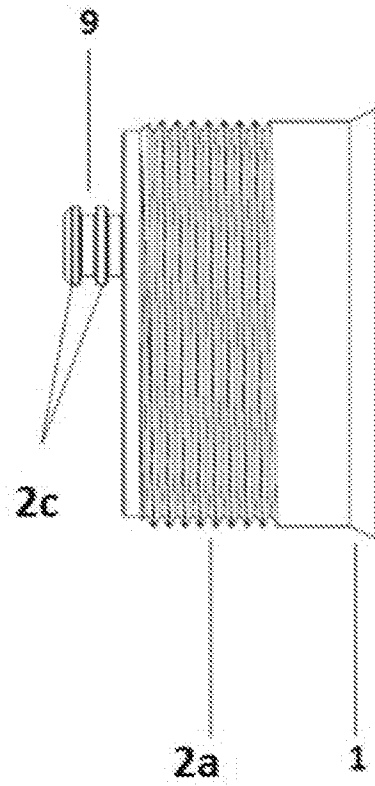


Fig. 5

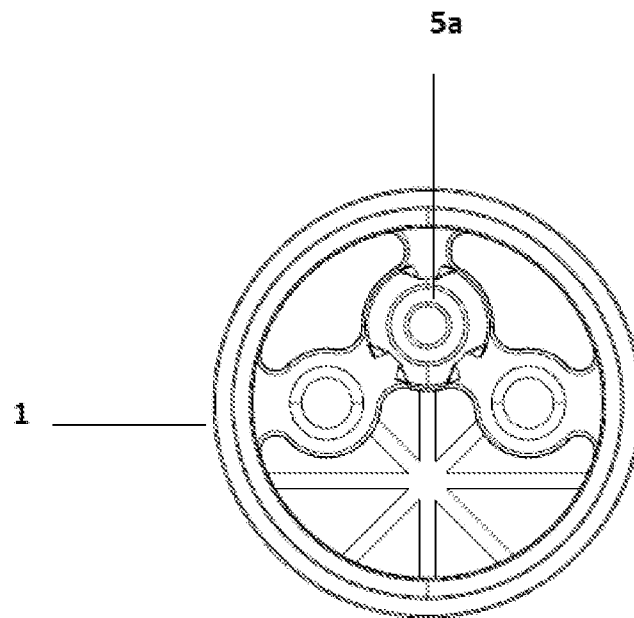


Fig. 6

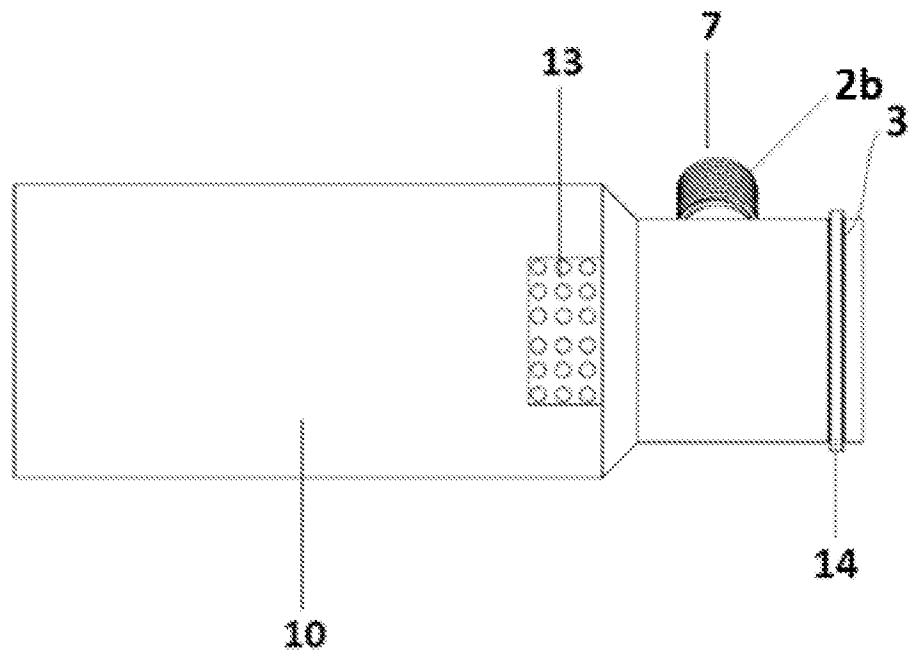


Fig. 7

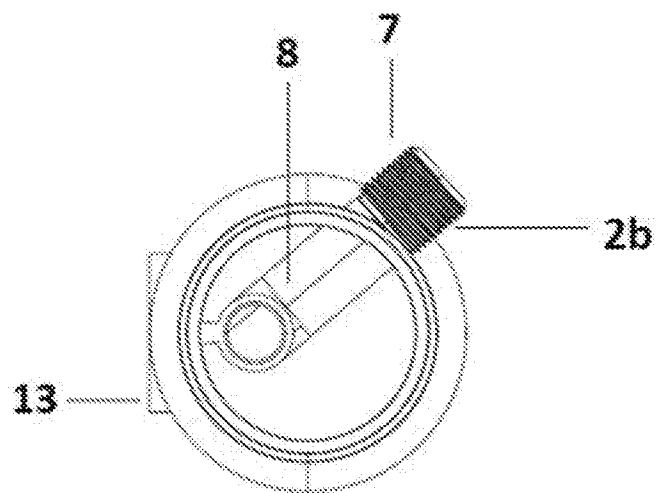


Fig. 8

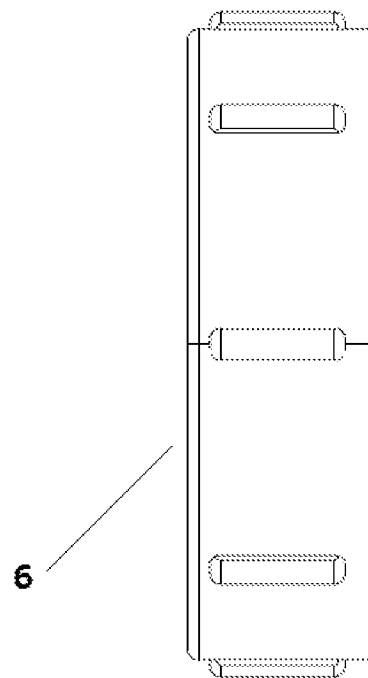


Fig. 9

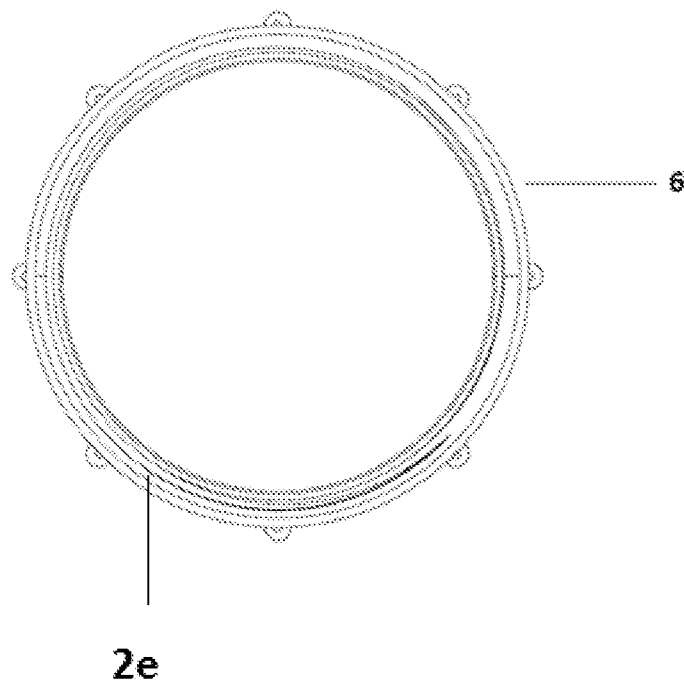


Fig. 10

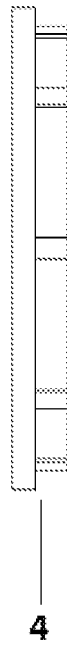


Fig. 11

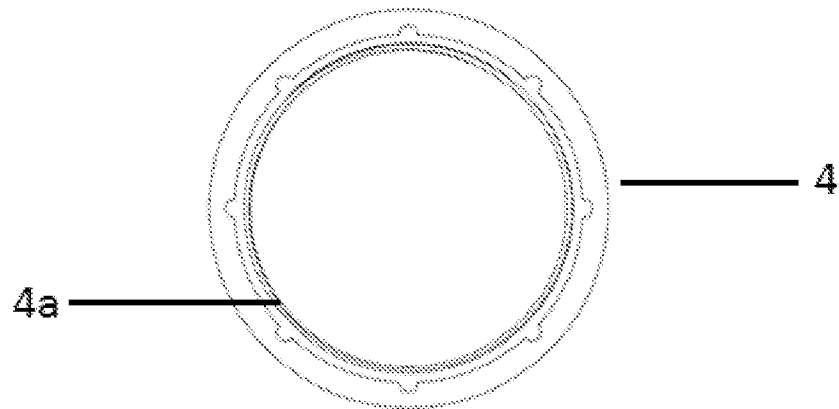


Fig. 12

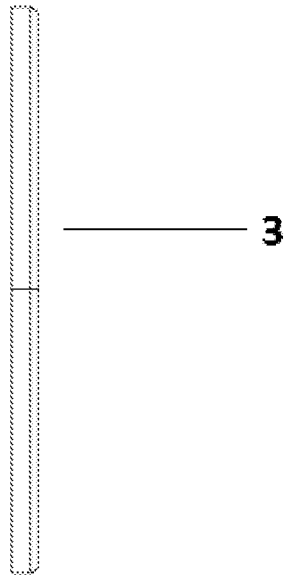


Fig. 13

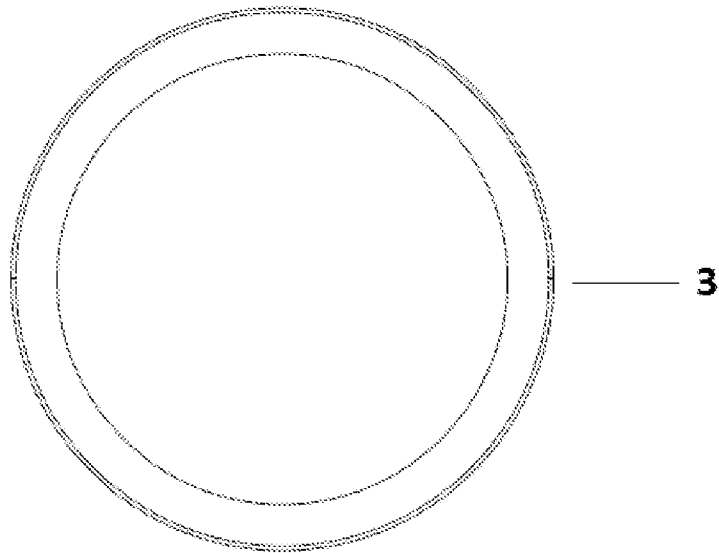


Fig. 14

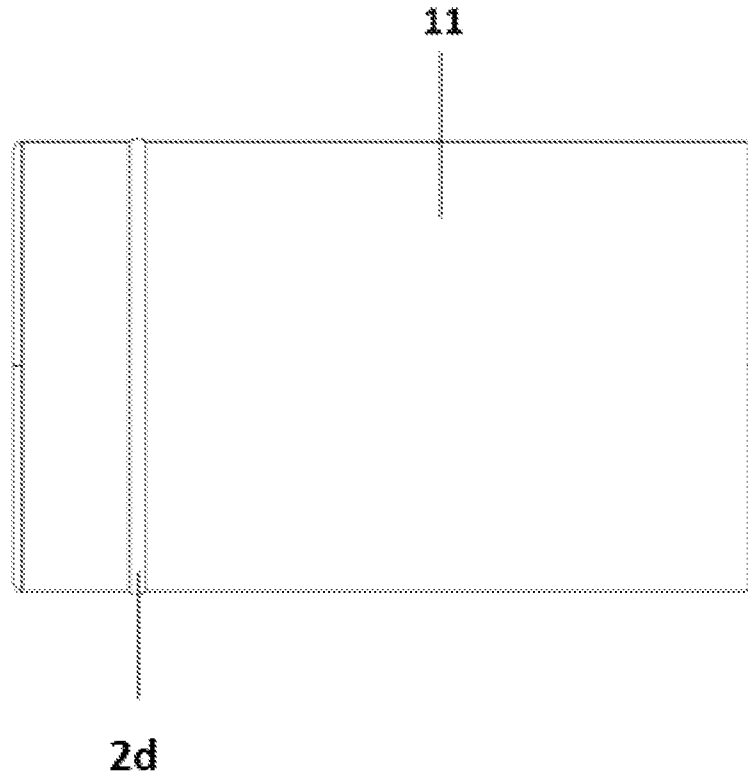


Fig. 15

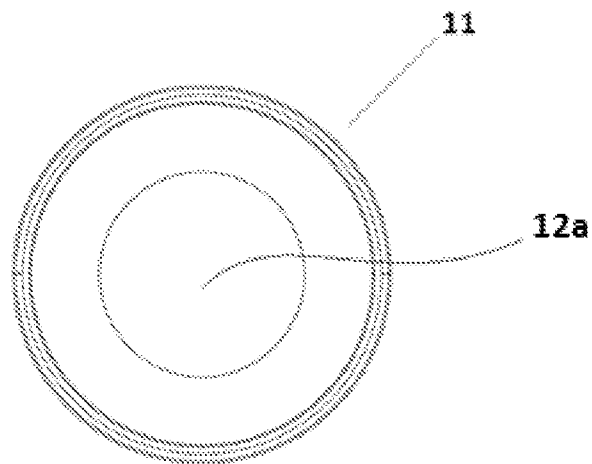


Fig. 16

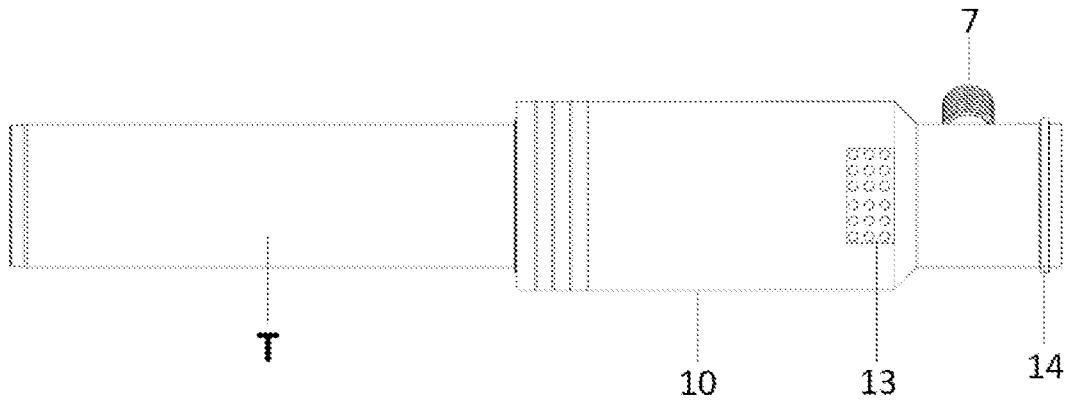


Fig. 17

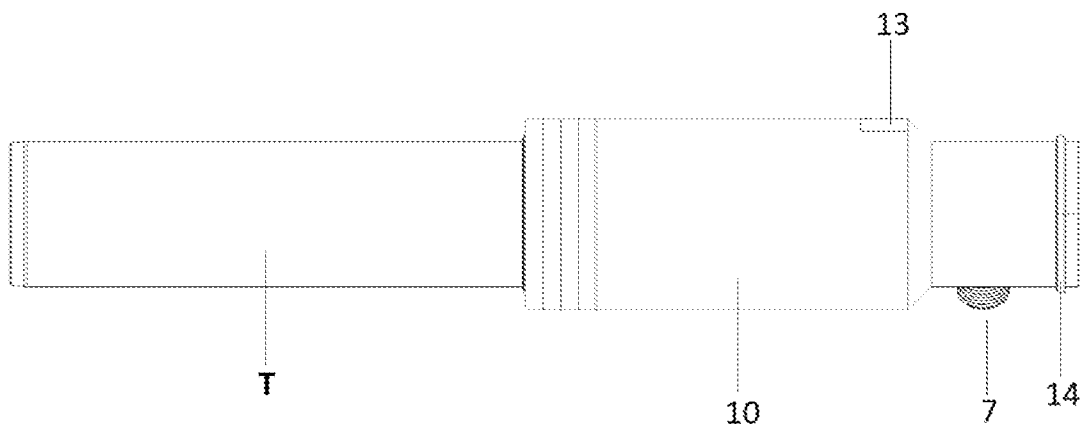


Fig. 18

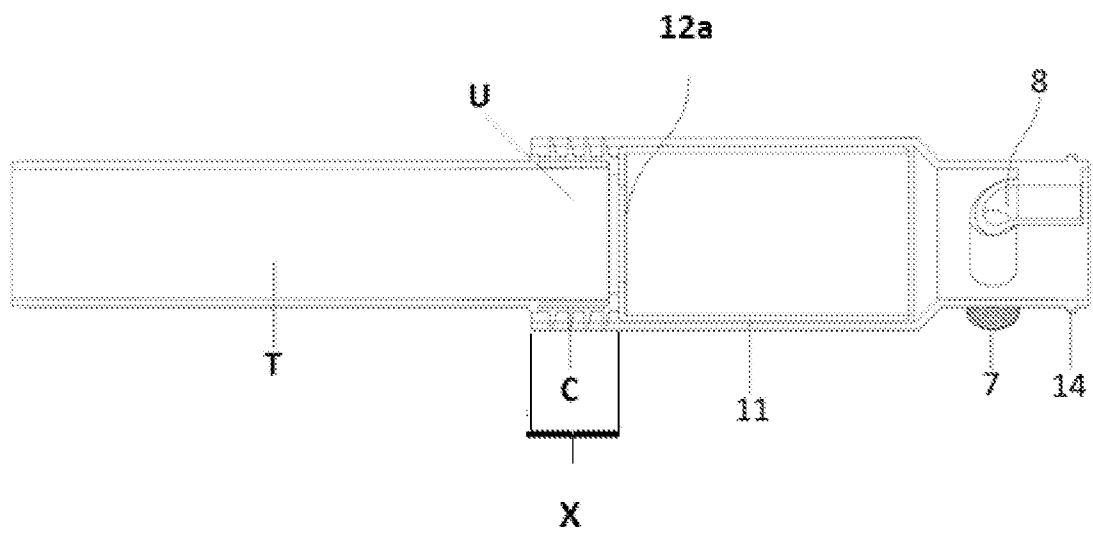


Fig. 19

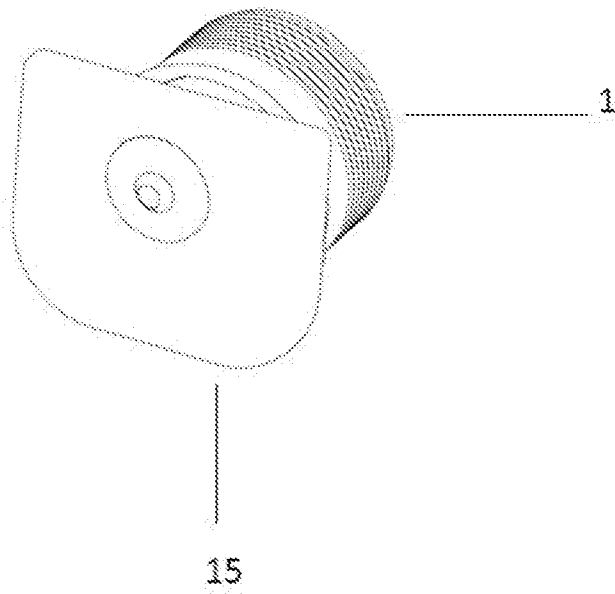


Fig. 20a

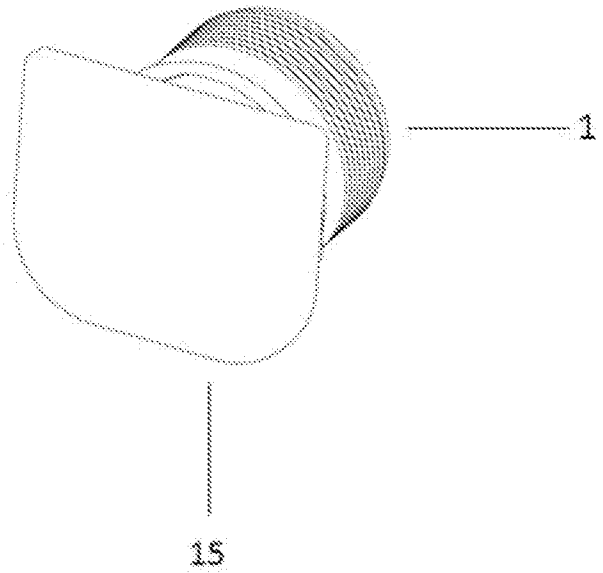


Fig. 20b

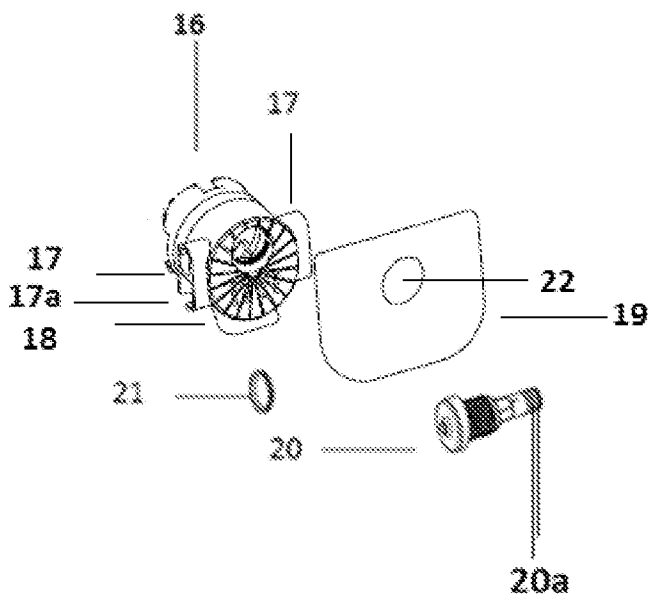


Fig. 21a

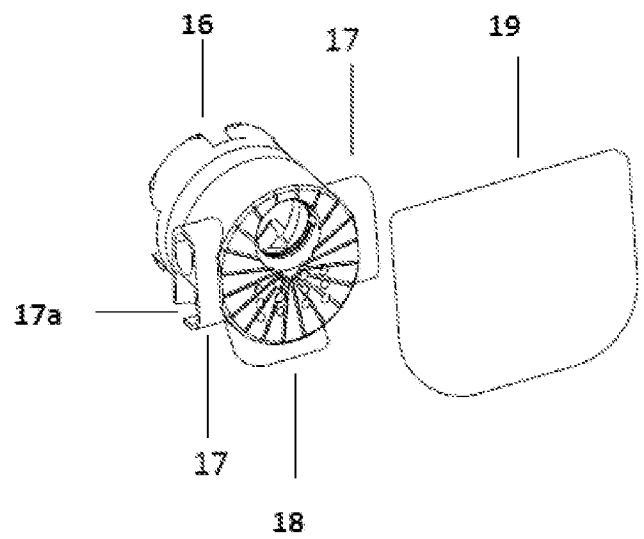


Fig. 21b

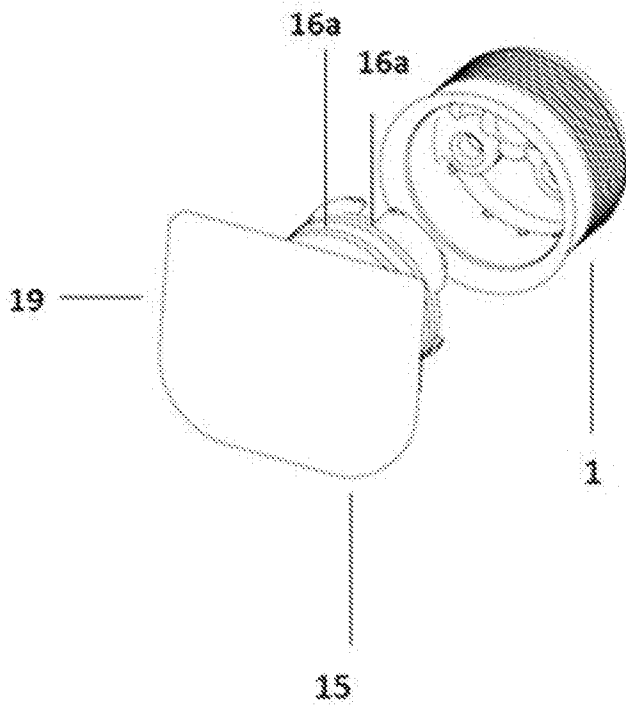


Fig. 22a

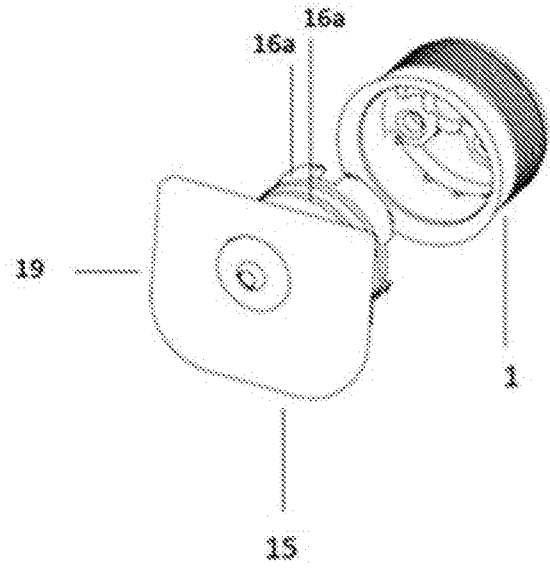


Fig. 22b

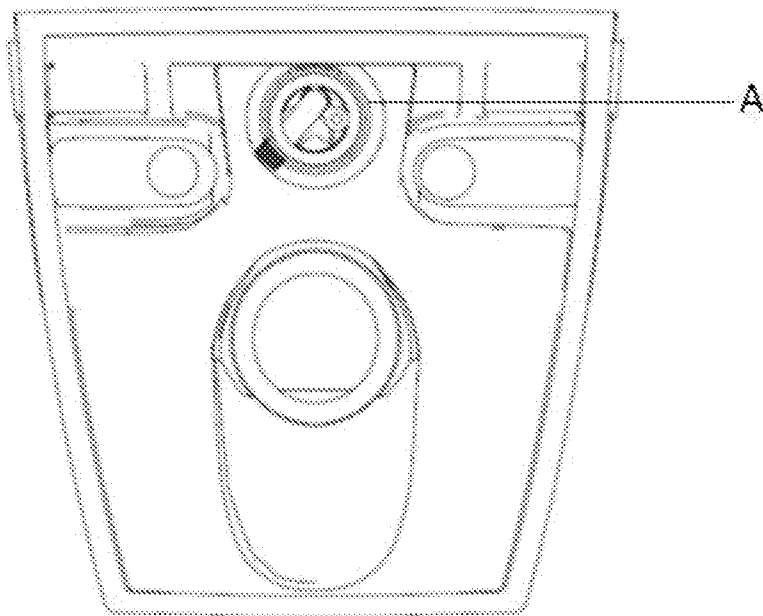


Fig. 23

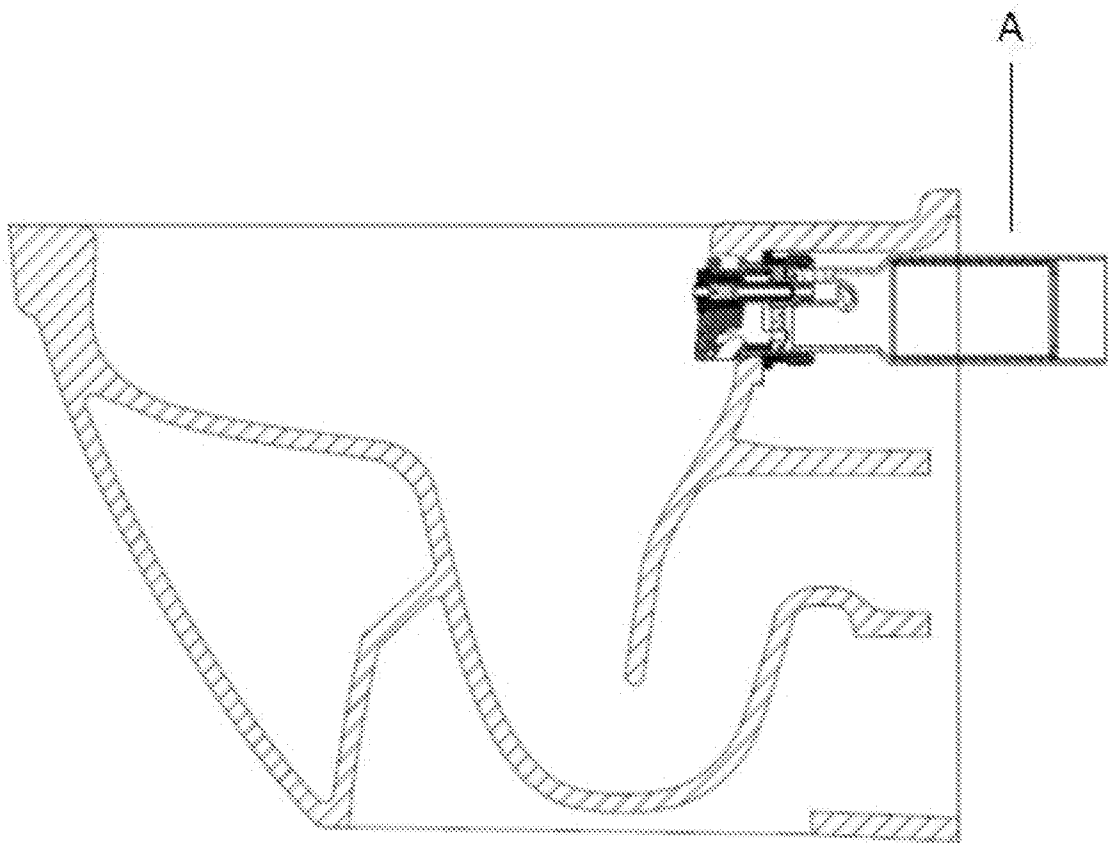


Fig. 24

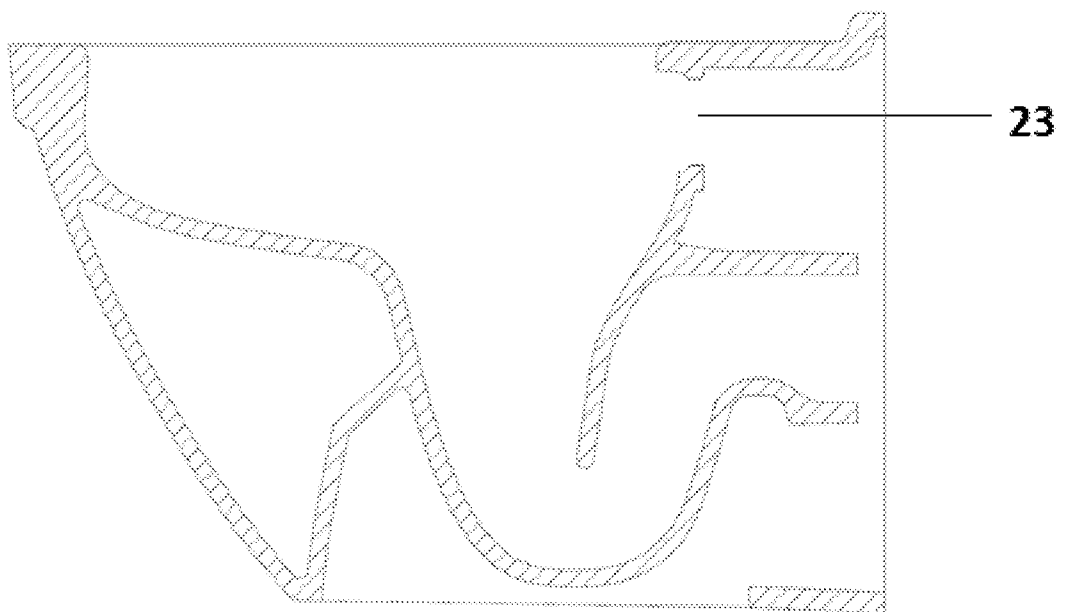


Fig. 25

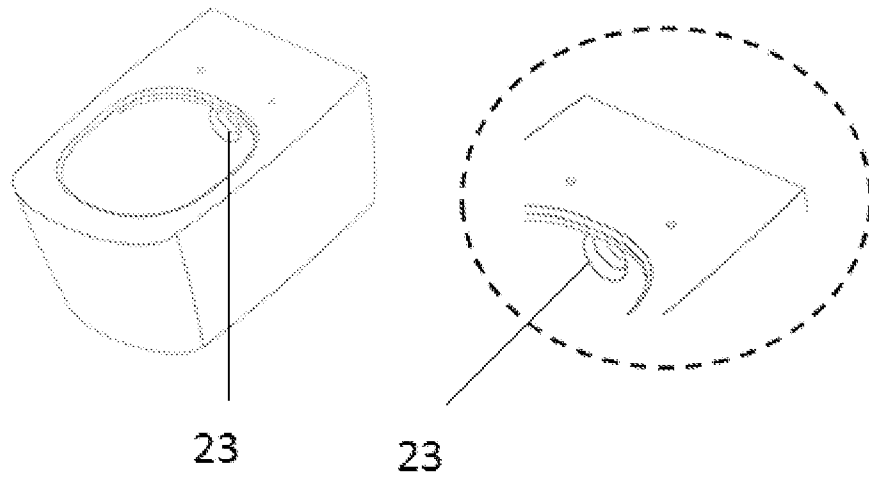


Fig. 25a

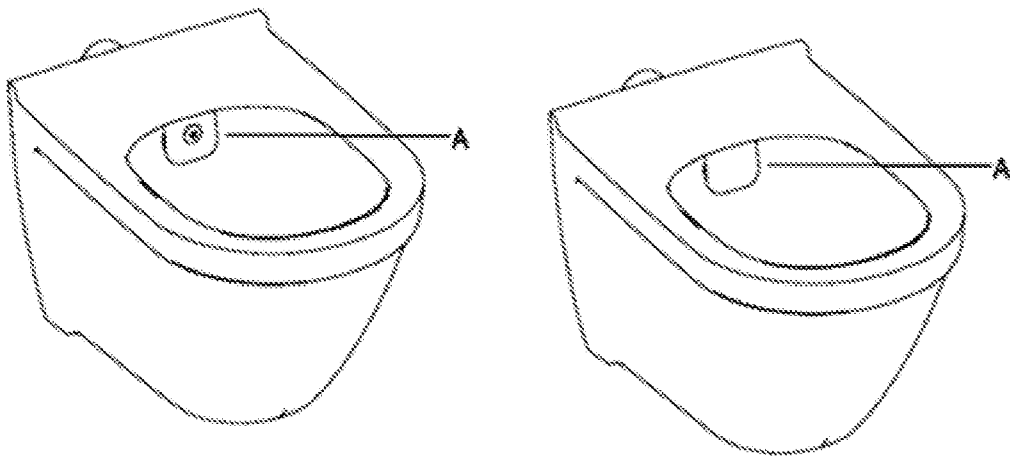


Fig. 26