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(54) **SPRAY NOZZLE STRUCTURE FOR A BIDET HAVING AN ENEMA FUNCTION**

Publication Classification

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(57) **ABSTRACT**

Disclosed herein is a multi-functional bidet having an extra function such as an enema function for a constipated person, in addition to its normal function of cleansing pubic area and anal region. Specifically, the bidet is constructed such in a manner that an anus-cleansing function, a bidet cleansing function, and an enema function are embodied in a single nozzle; or any one function is constituted on a spray tip projected from the separate spray nozzle body; or one or two functions among the anus-cleansing function, the bidet cleansing function and the enema function are embodied in two or three spray nozzles, which are projectably inserted in the lower central portion of the bidet body so as to be arranged horizontally adjacent to one another; or one or two functions among the anus-cleansing function, the bidet cleansing function and the enema function are embodied in two or three spray nozzles, which are projectably inserted in the lower central portion of the bidet body so as to be arranged vertically adjacent to one another.

Related U.S. Application Data

(63) Continuation-in-part of application No. 11/632,073, filed on Jan. 10, 2007, now Pat. No. 7,954,181.

Foreign Application Priority Data

(30) Jul. 12, 2004 (KR) 10-2004-0053840
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Oct. 25, 2004 (KR) 10-2004-0085322

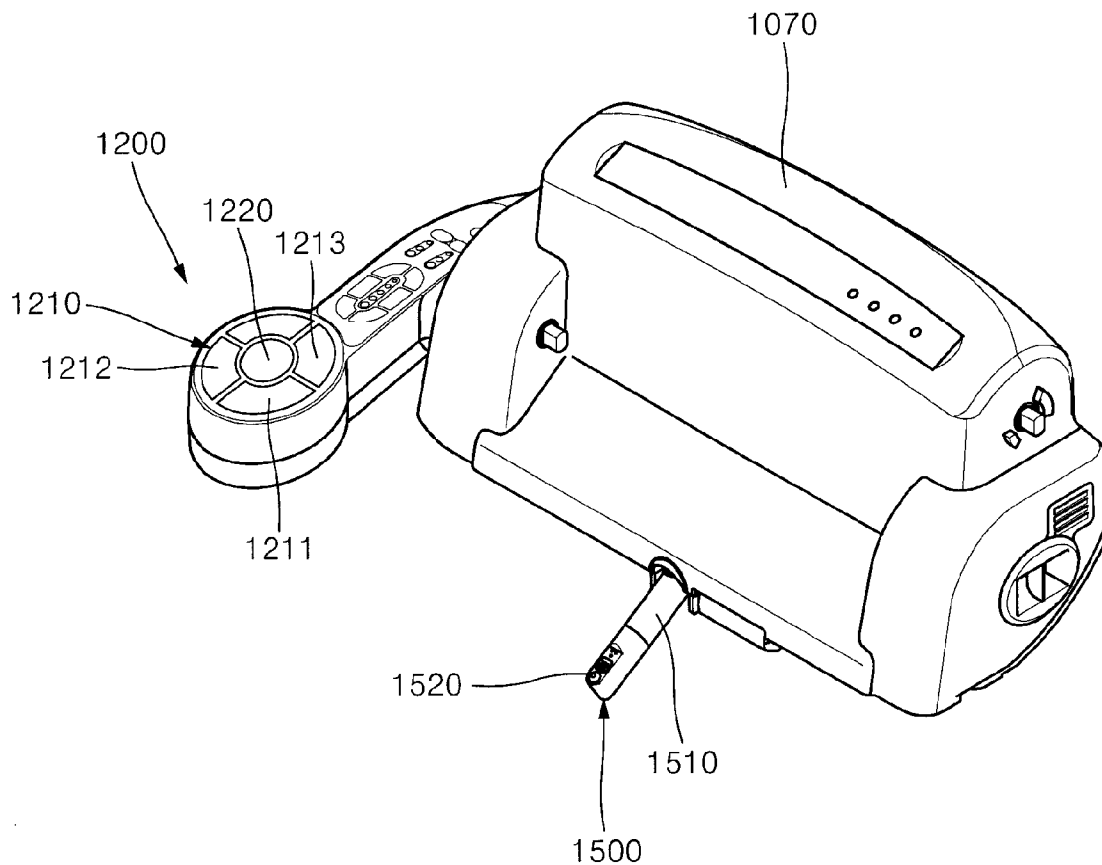


Fig. 1

Prior Art

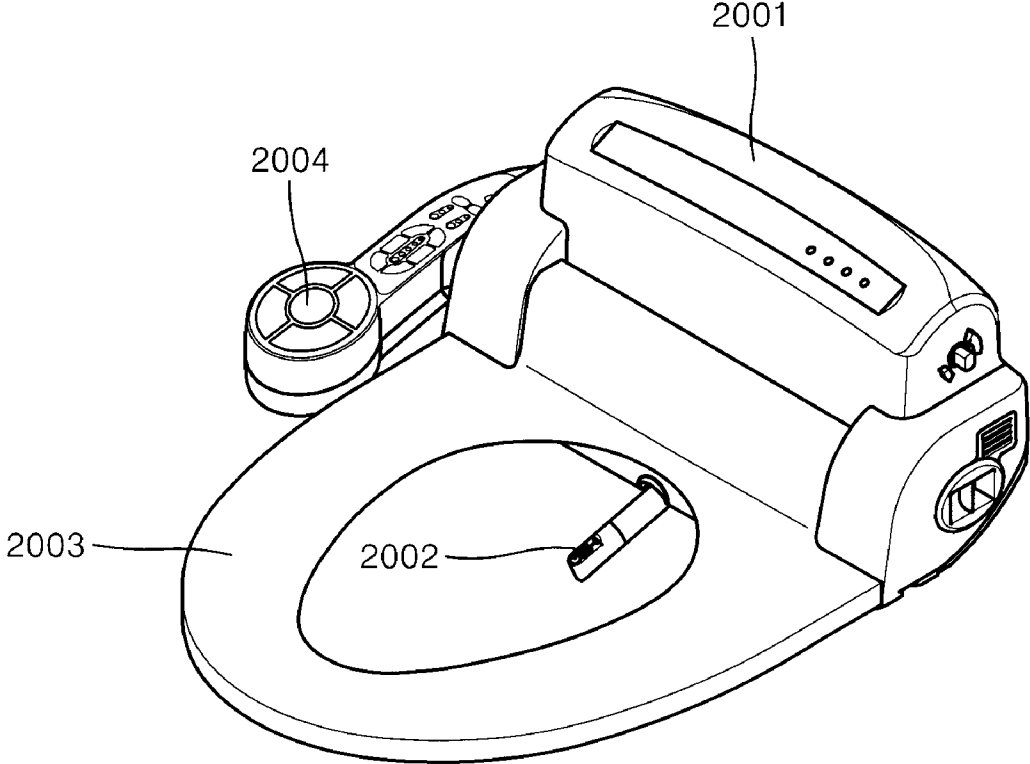


Fig. 2a

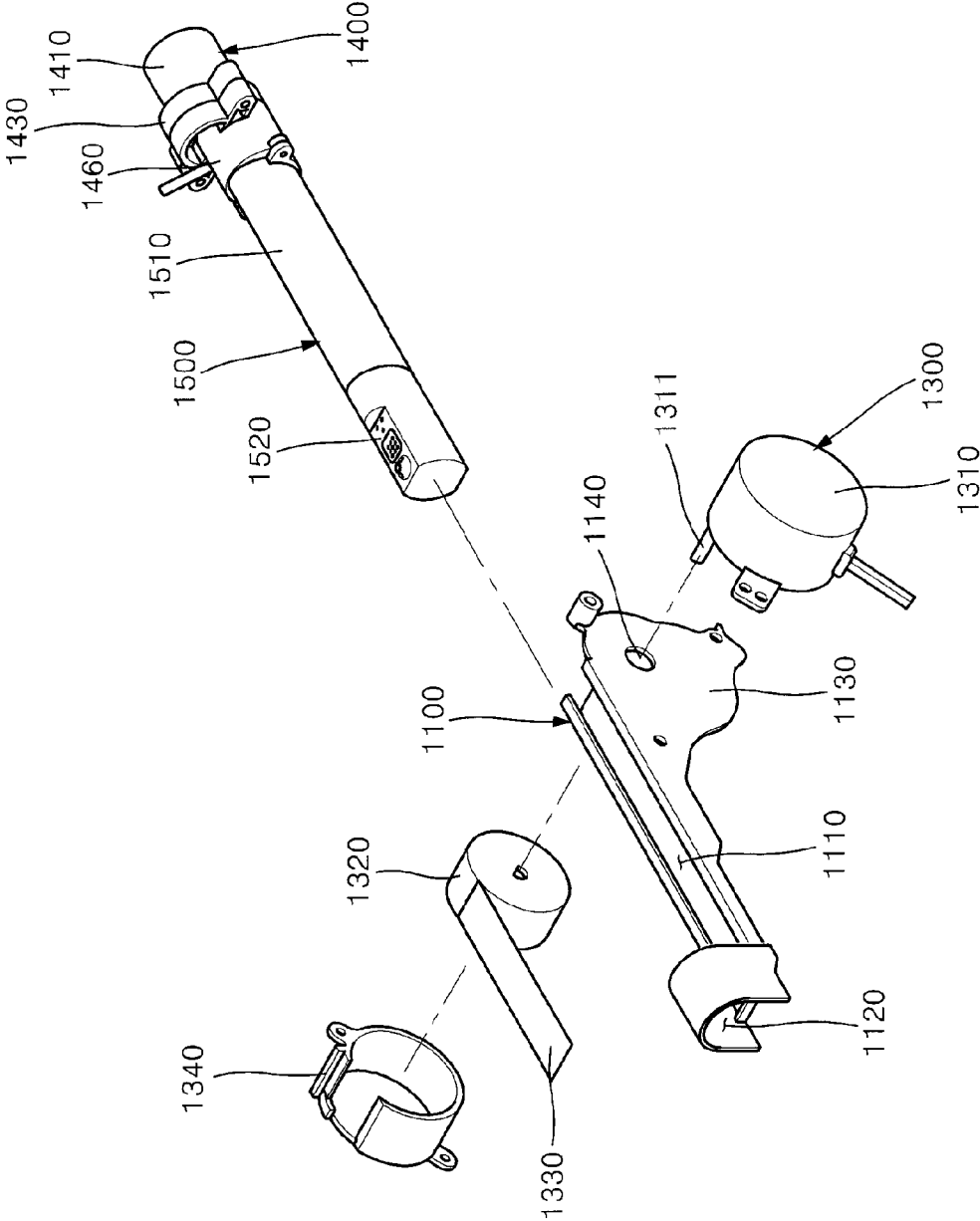


Fig. 2b

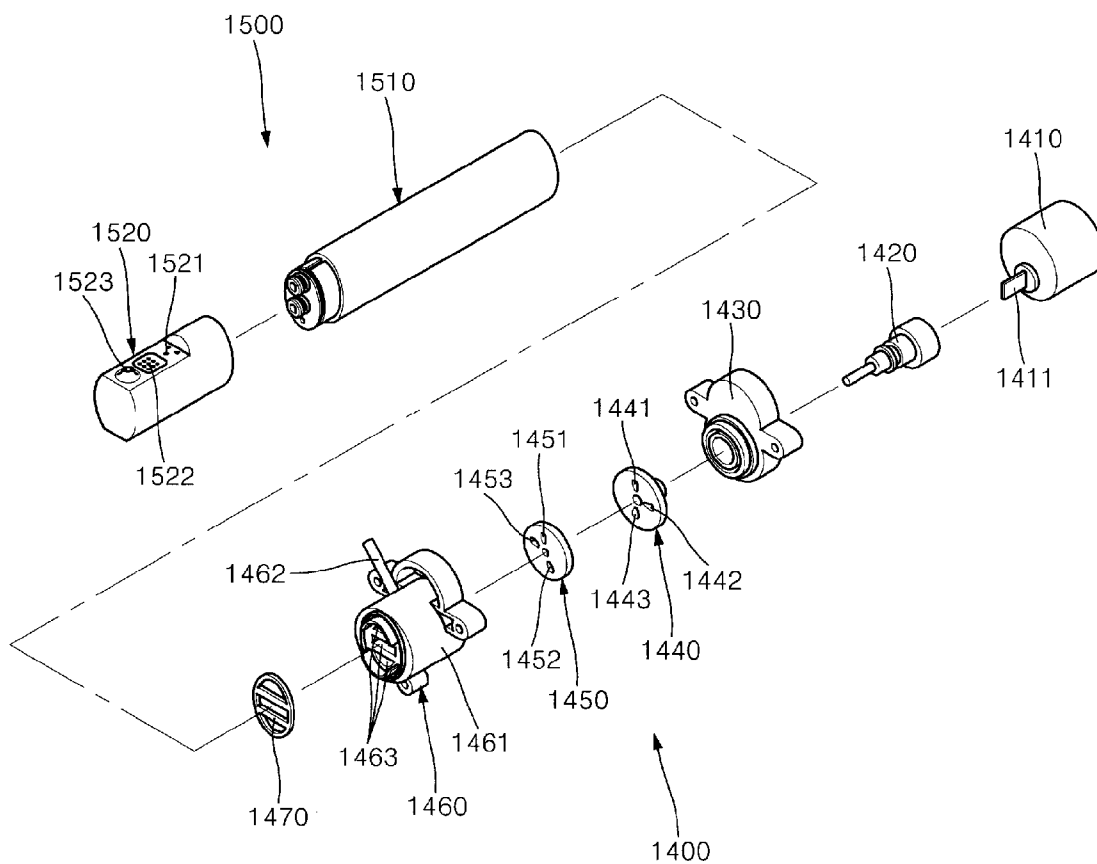


Fig. 3

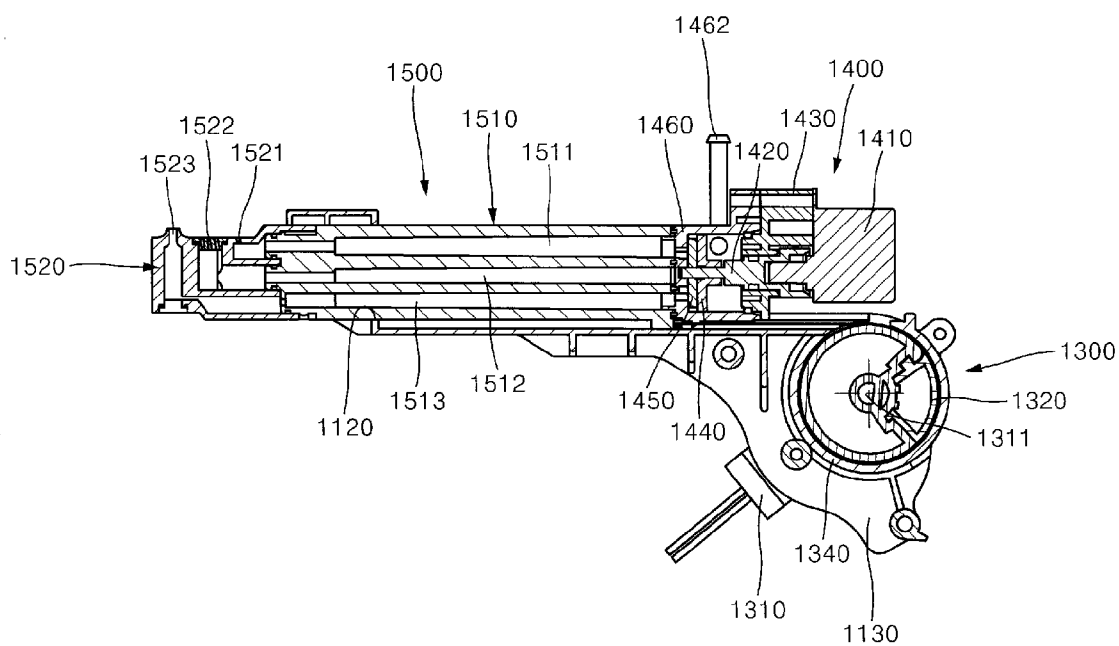


Fig. 4

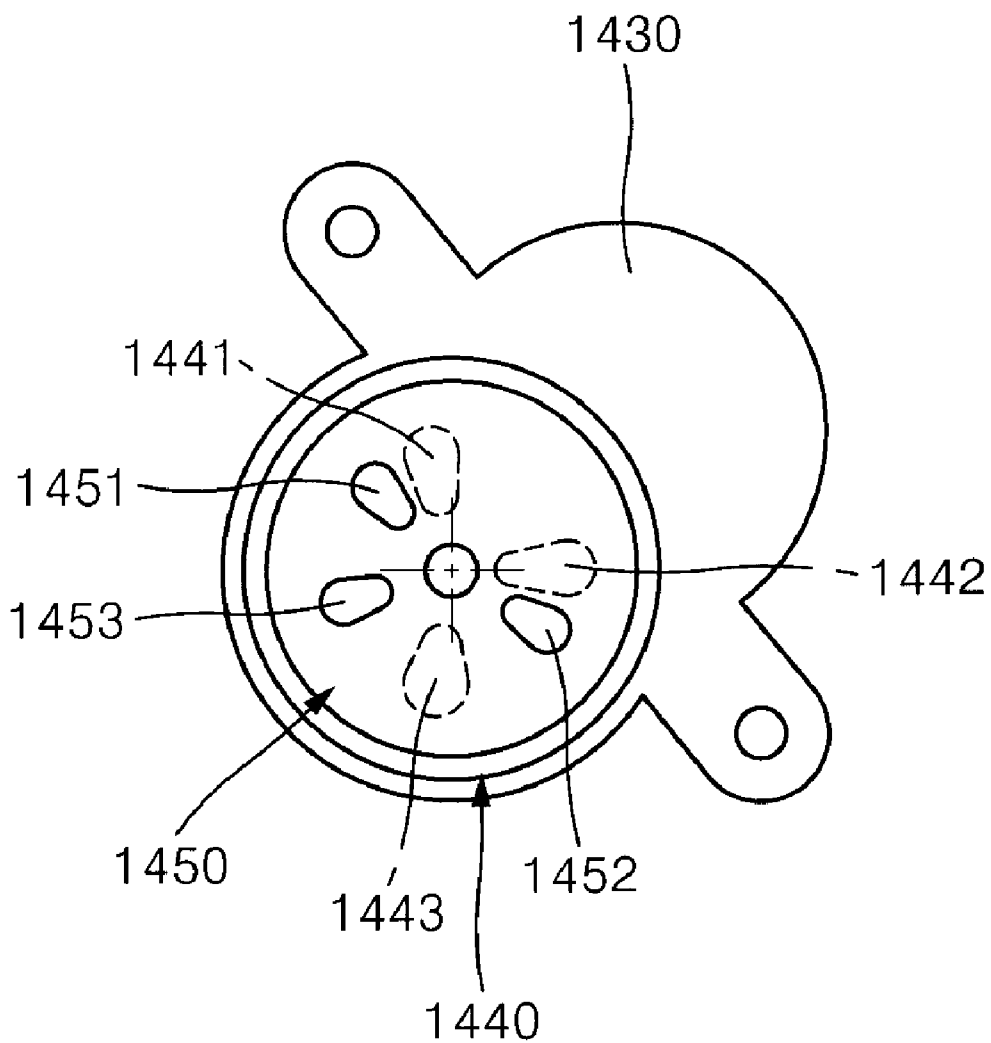


Fig. 5

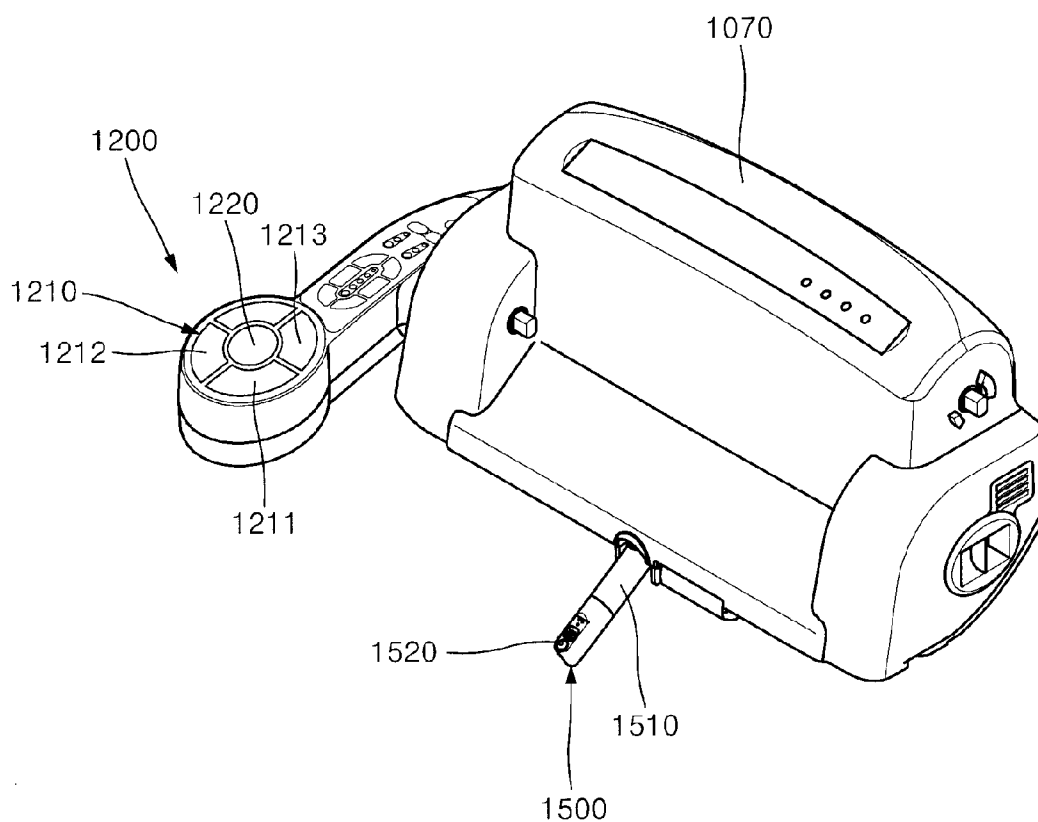


Fig. 6a

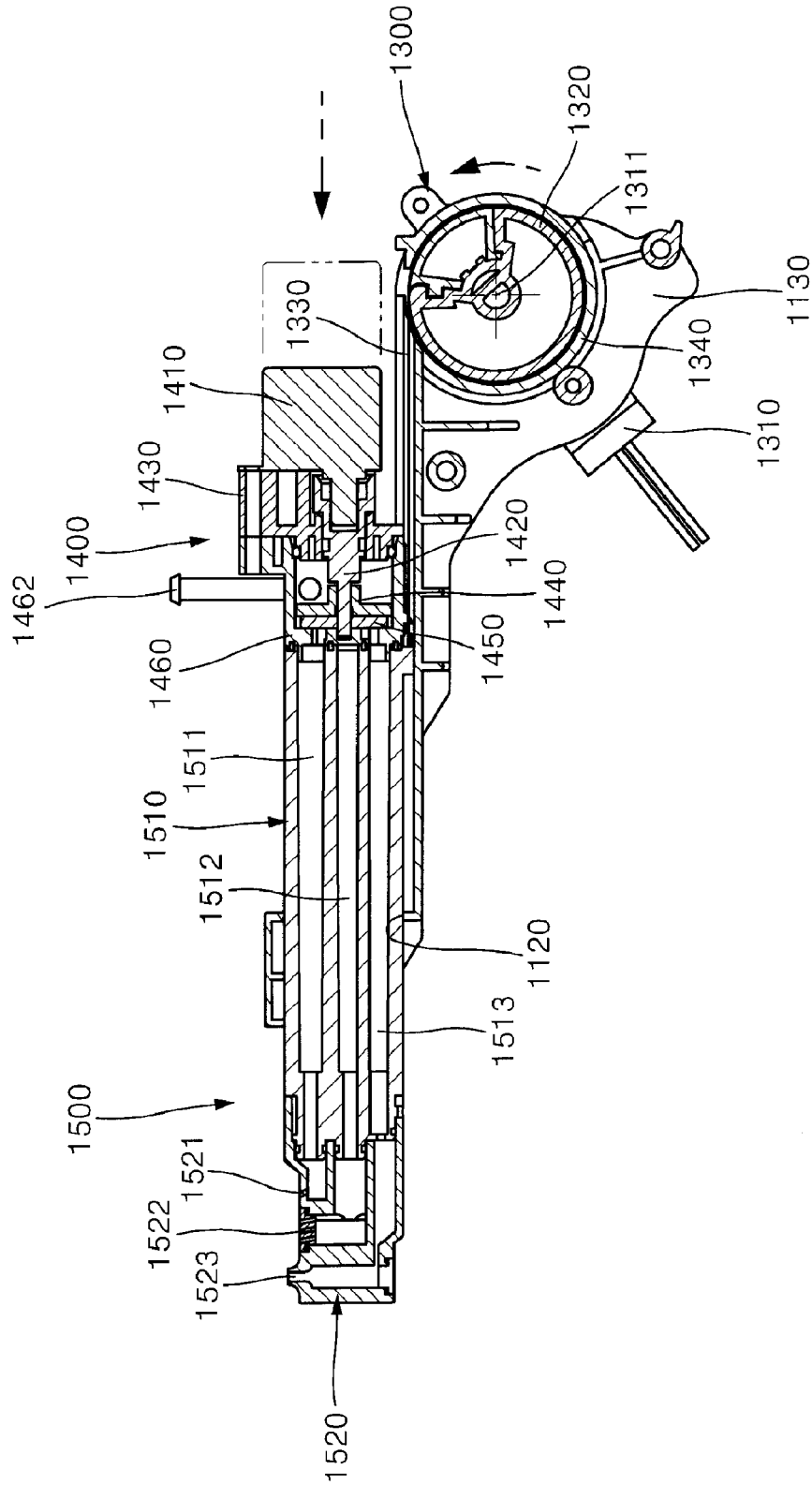


Fig. 6b

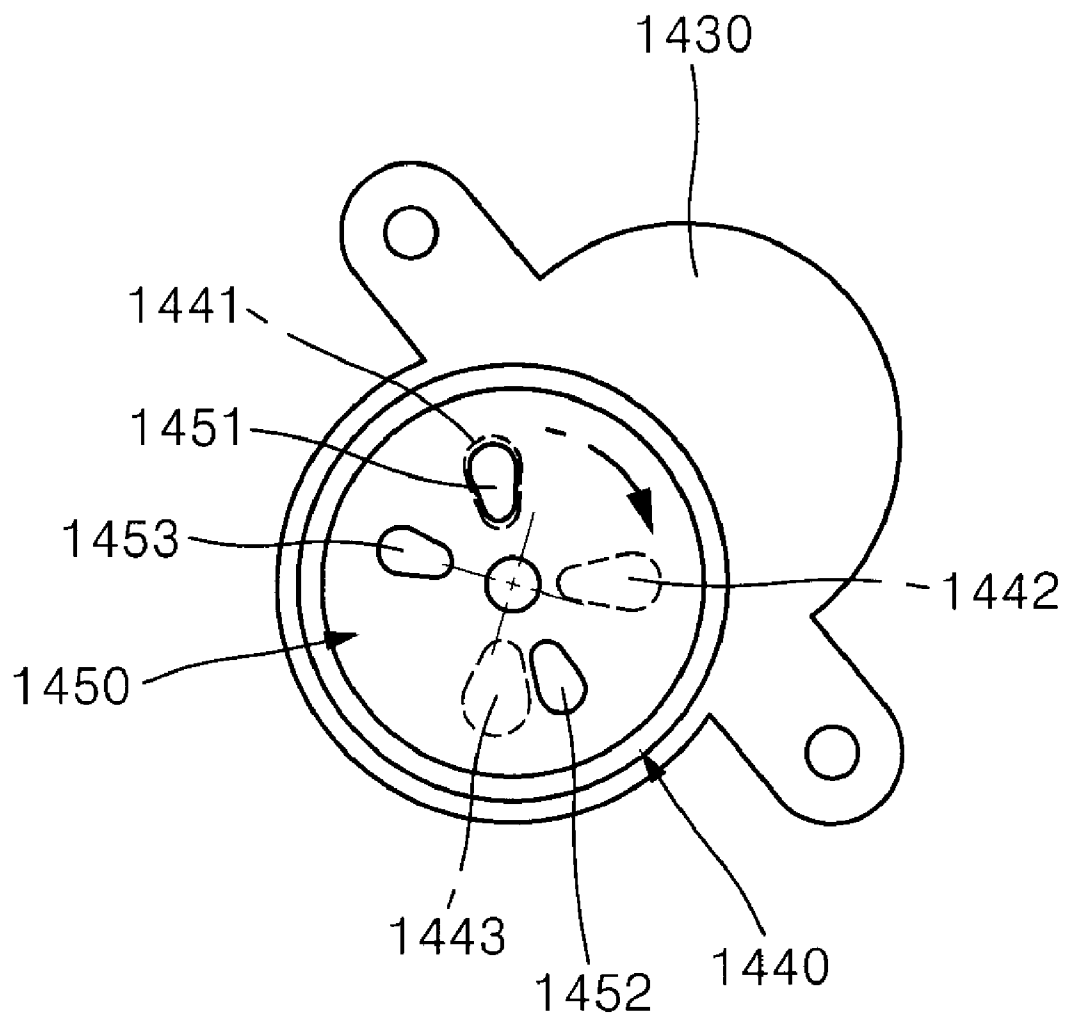


Fig. 6c

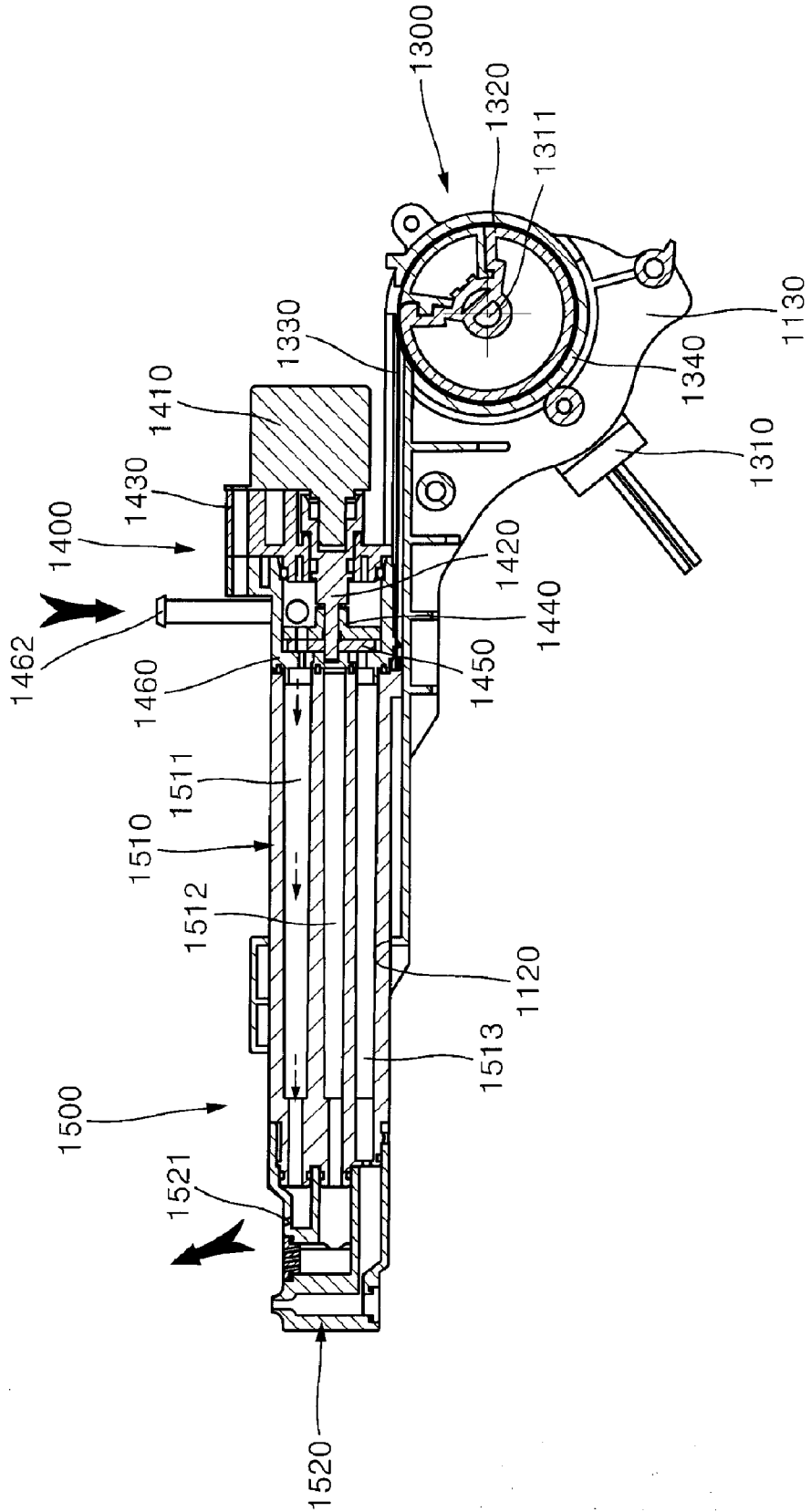


Fig. 7a

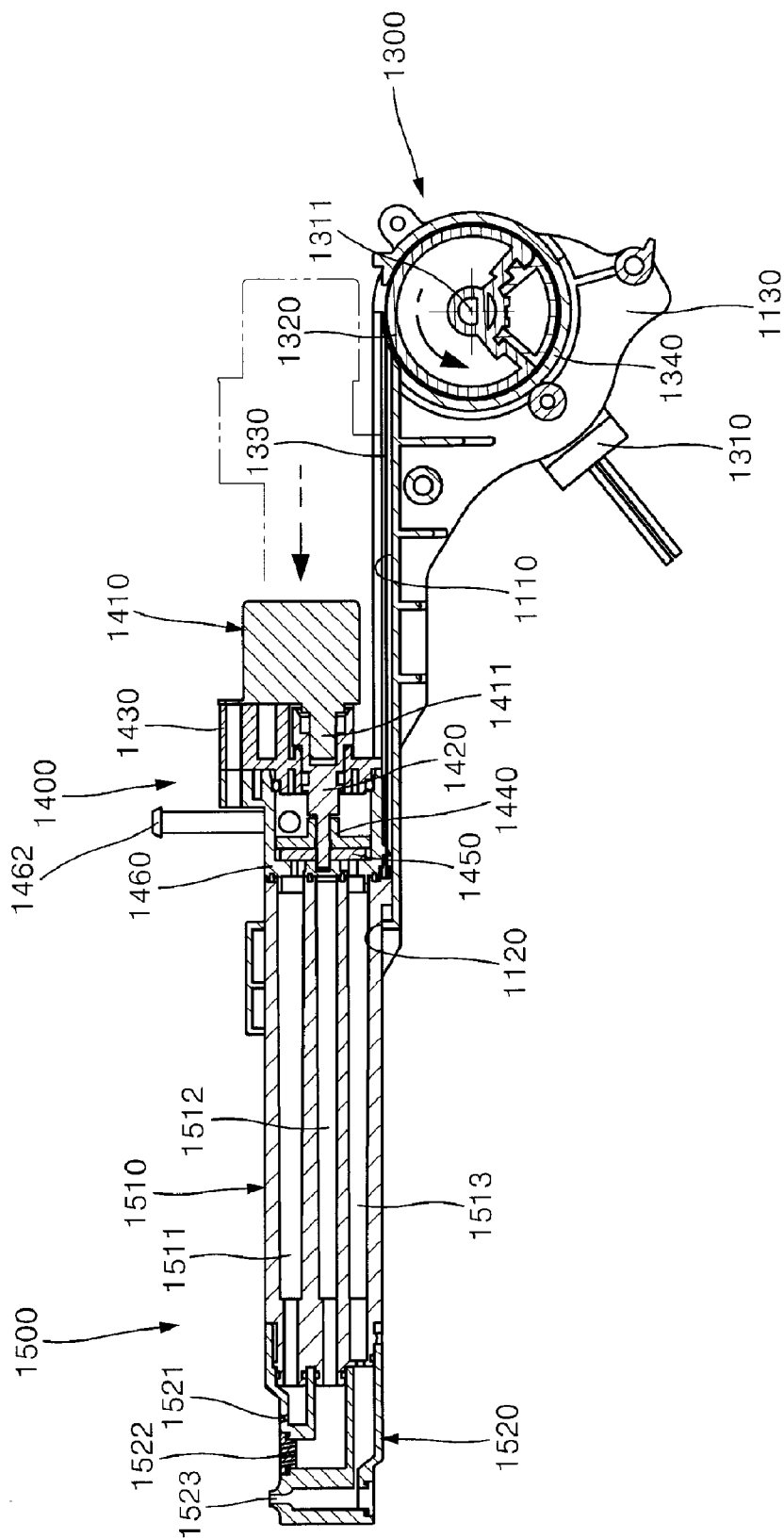


Fig. 7b

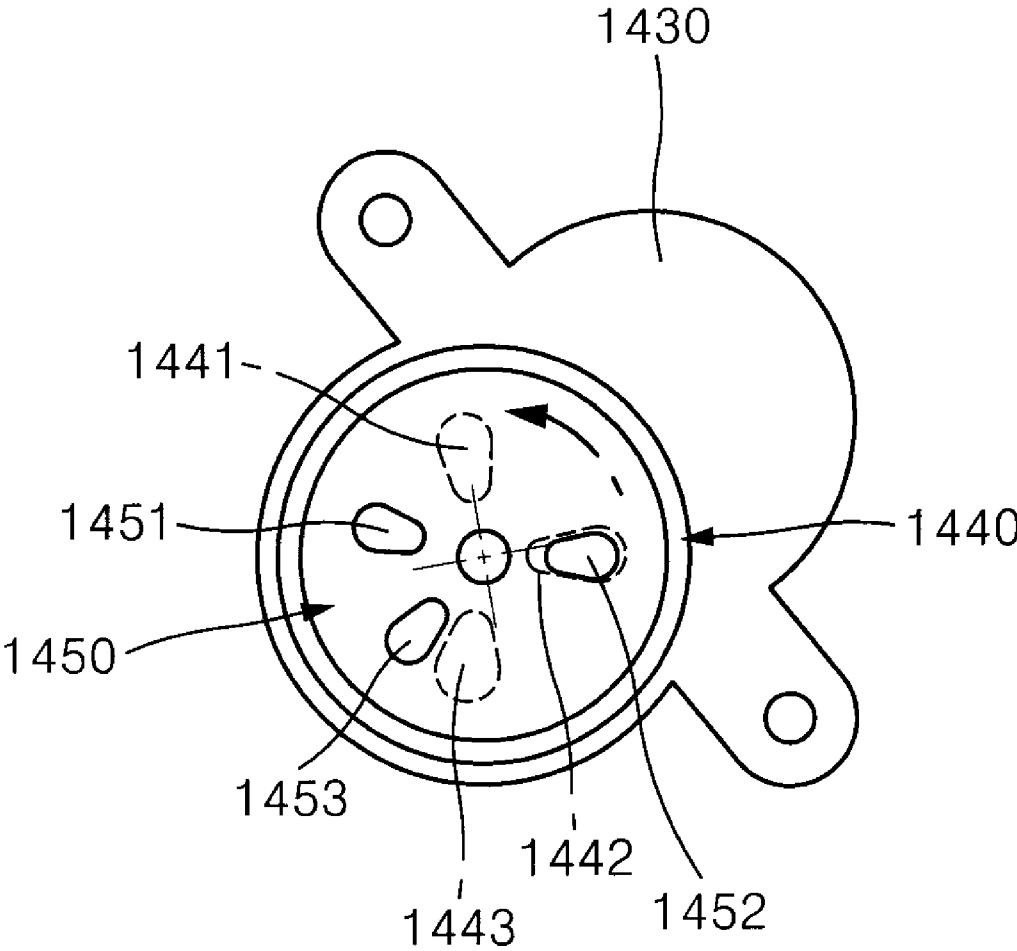


Fig. 7c

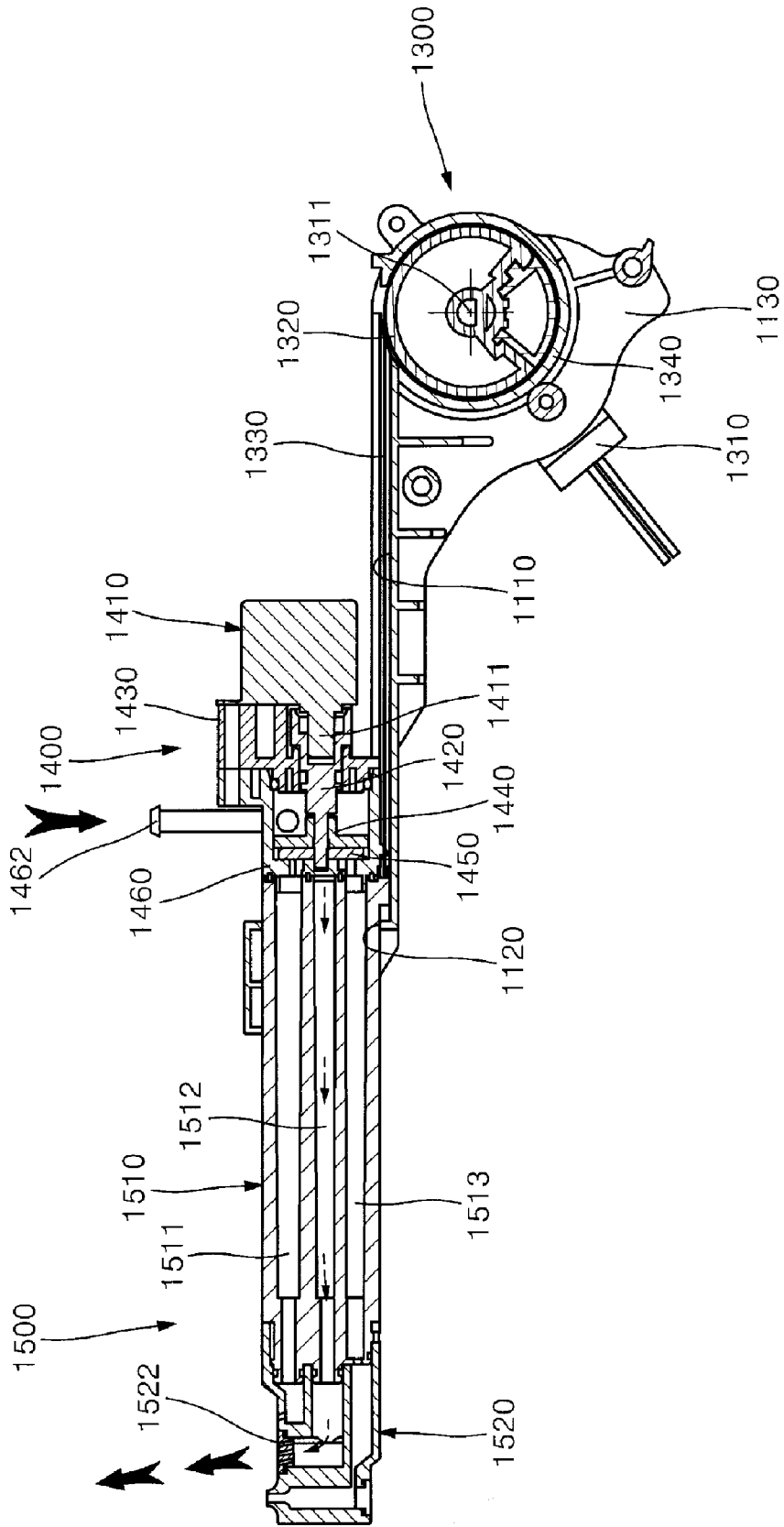


Fig. 8a

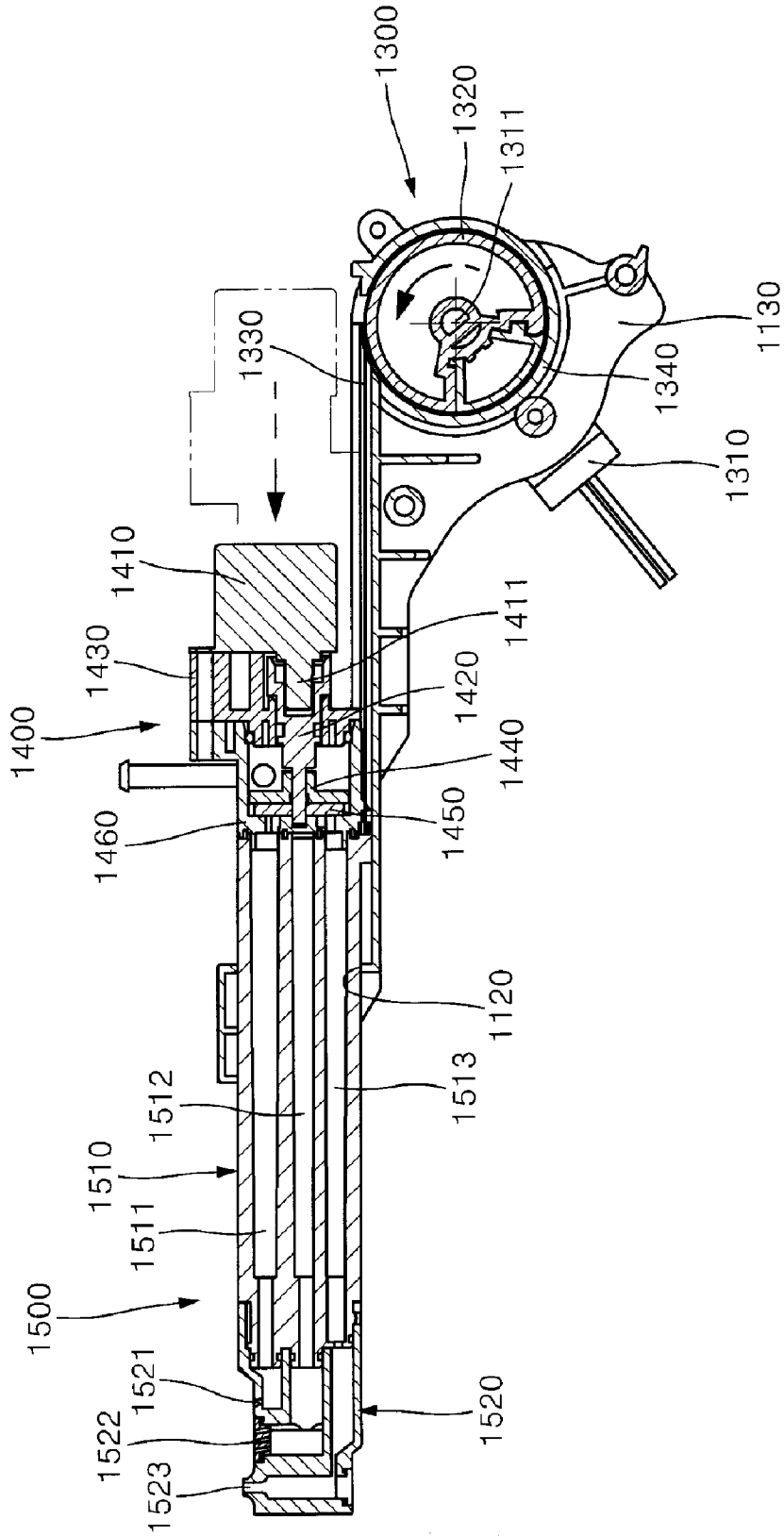


Fig. 8b

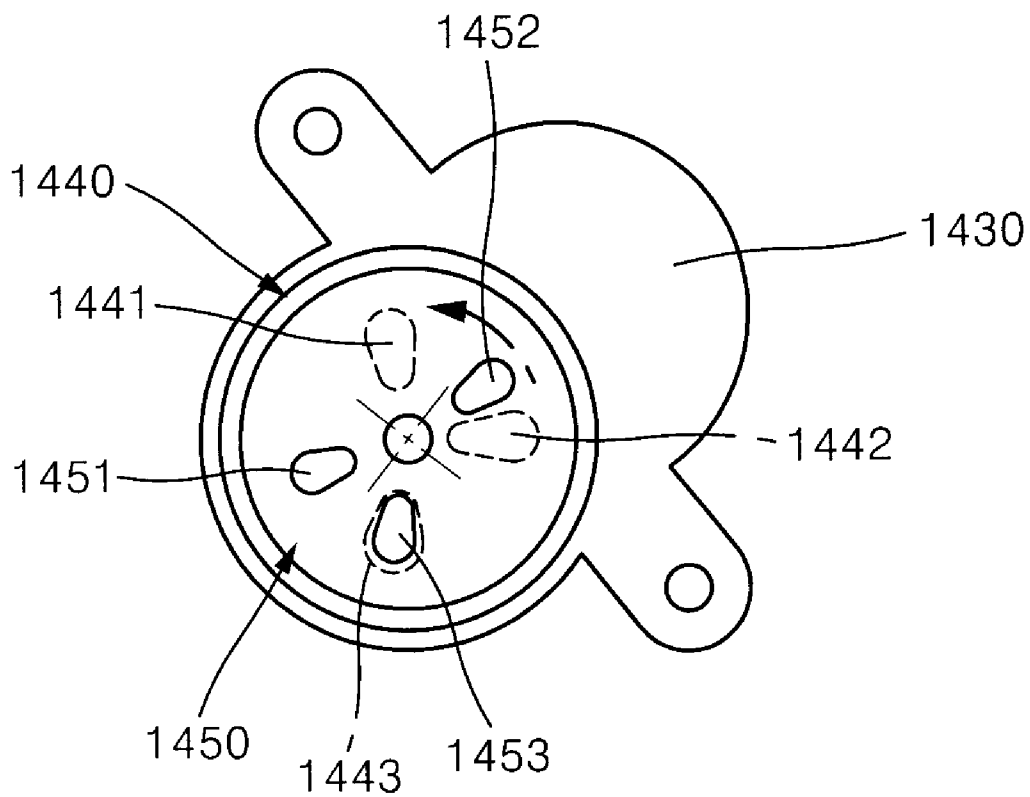


Fig. 8c

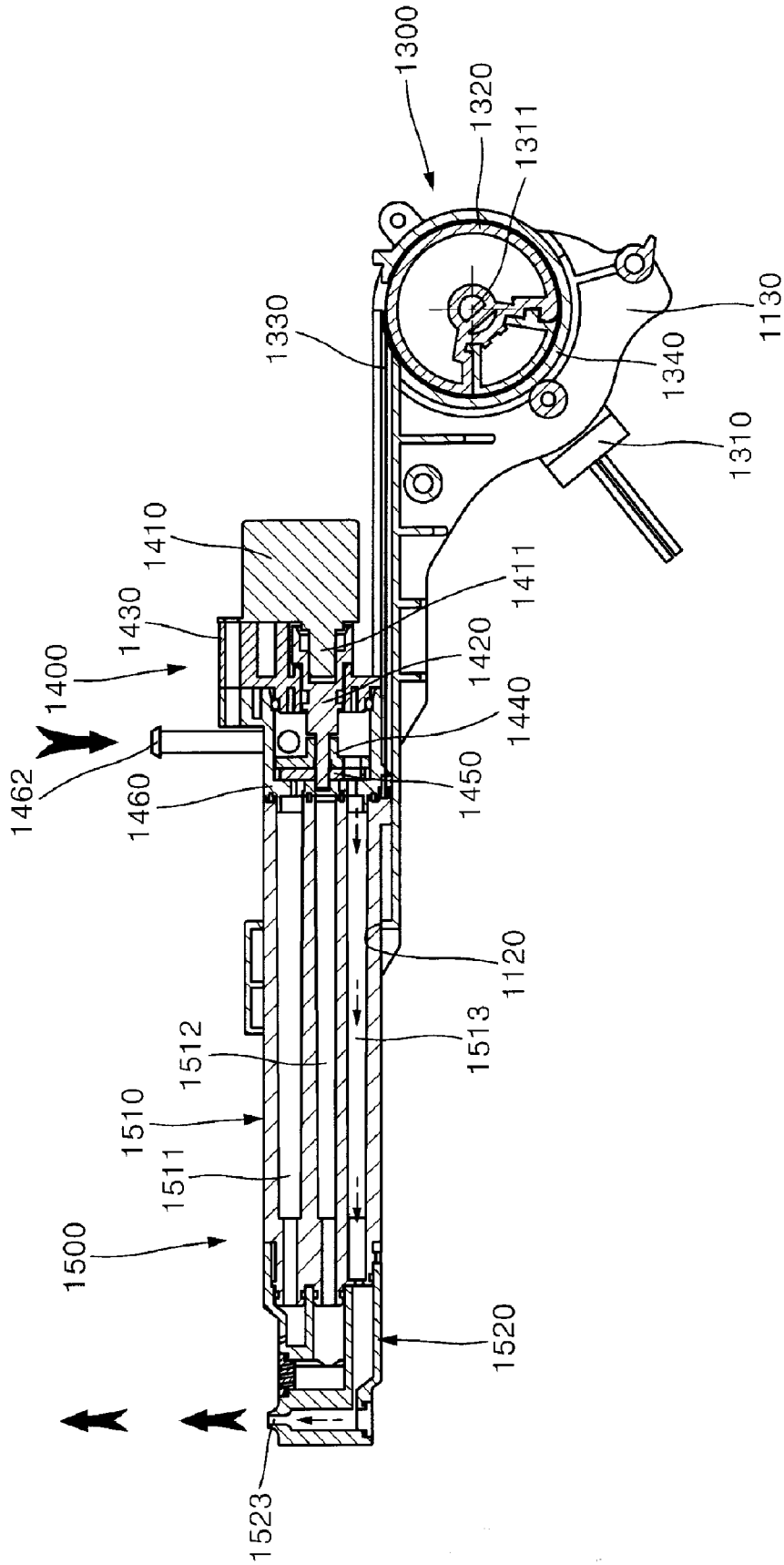


Fig. 9

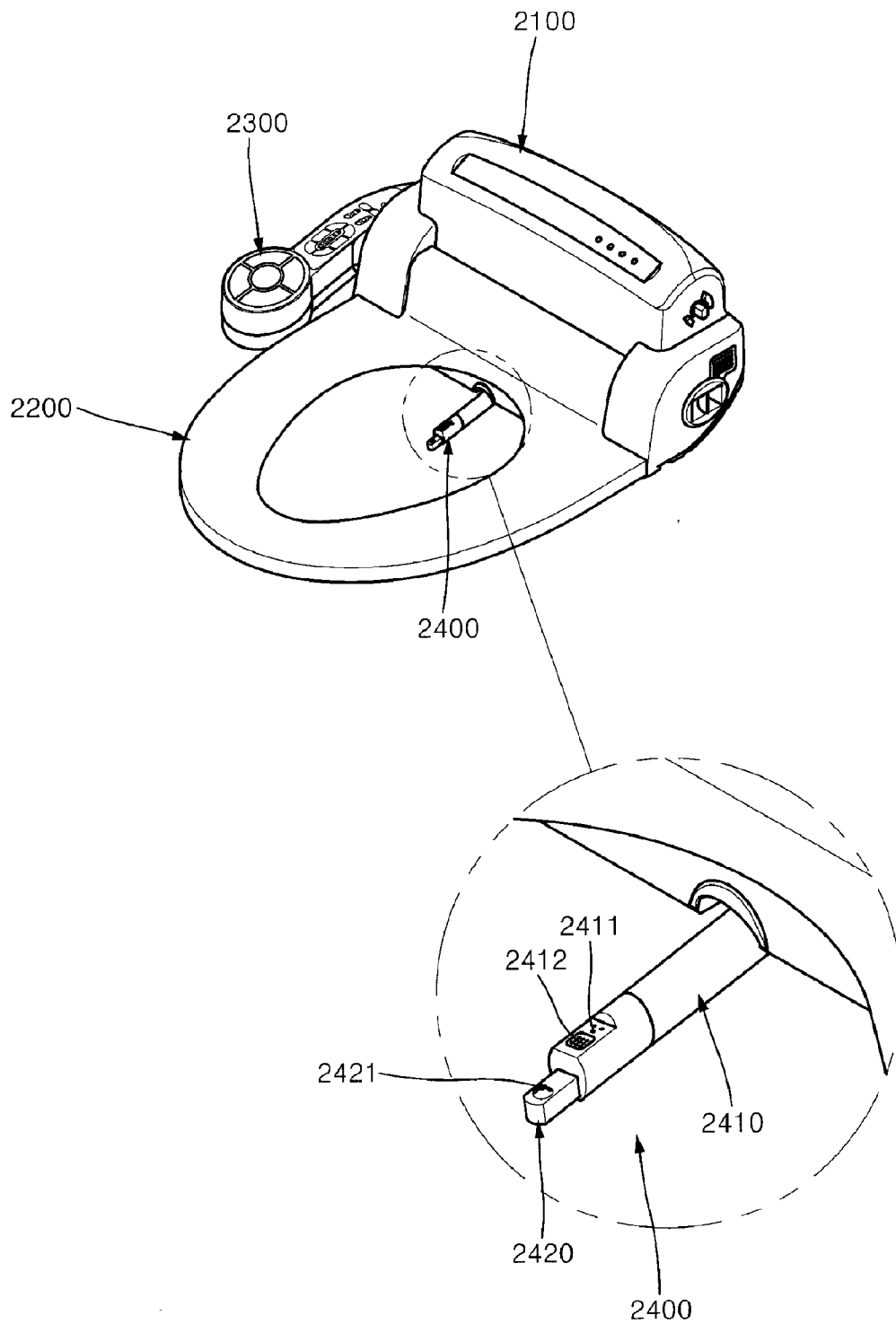


Fig. 10

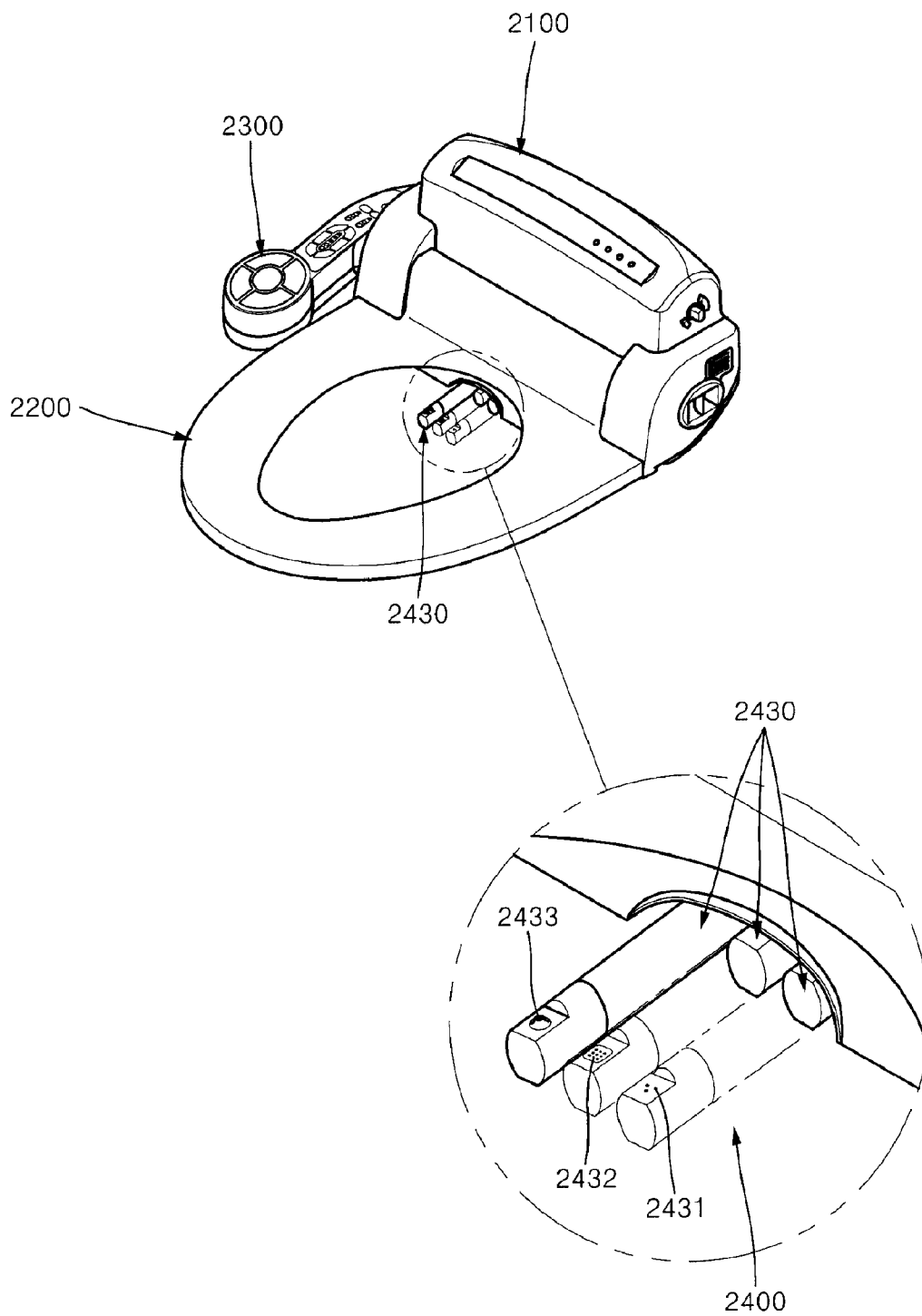


Fig. 11

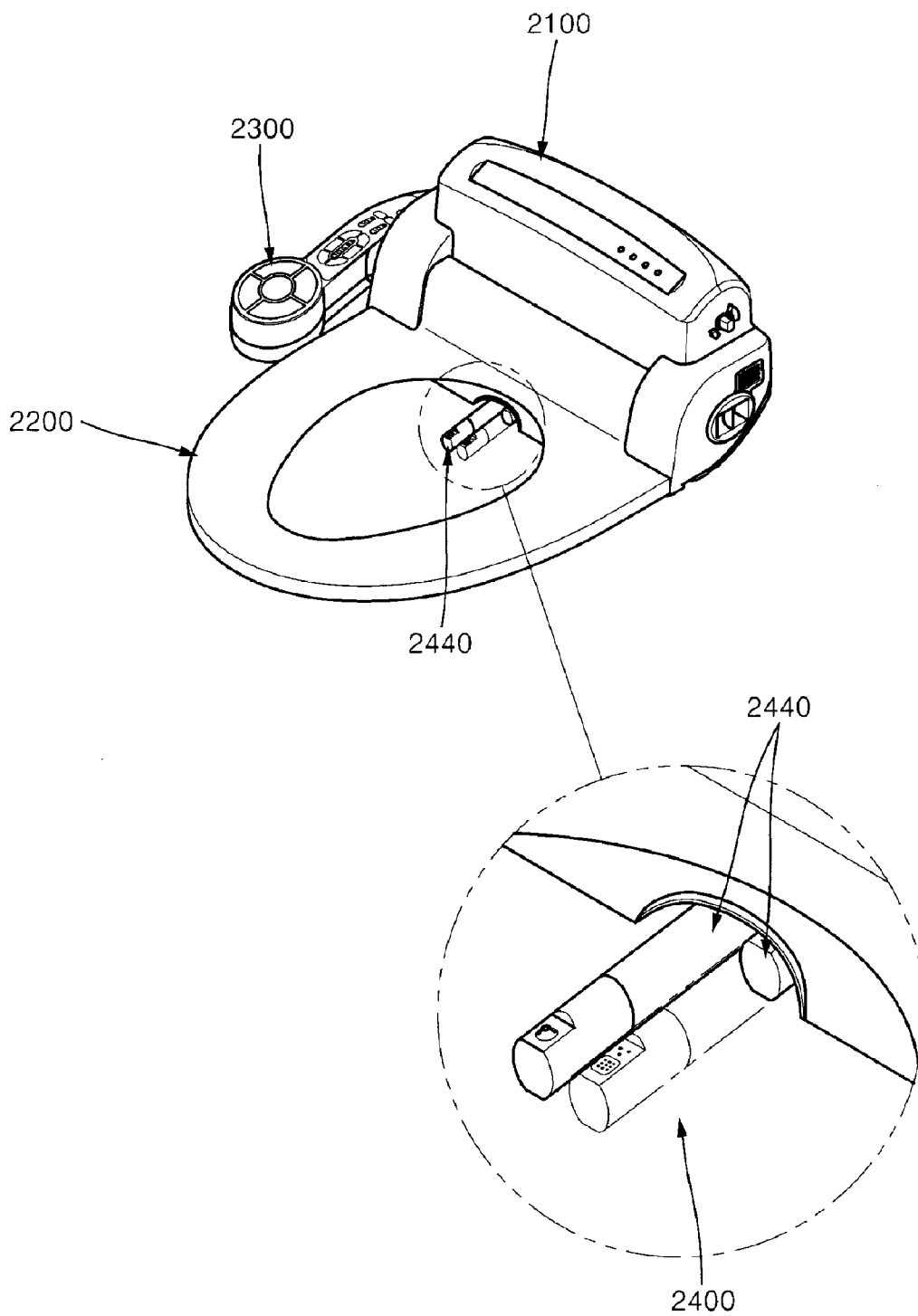


Fig. 12

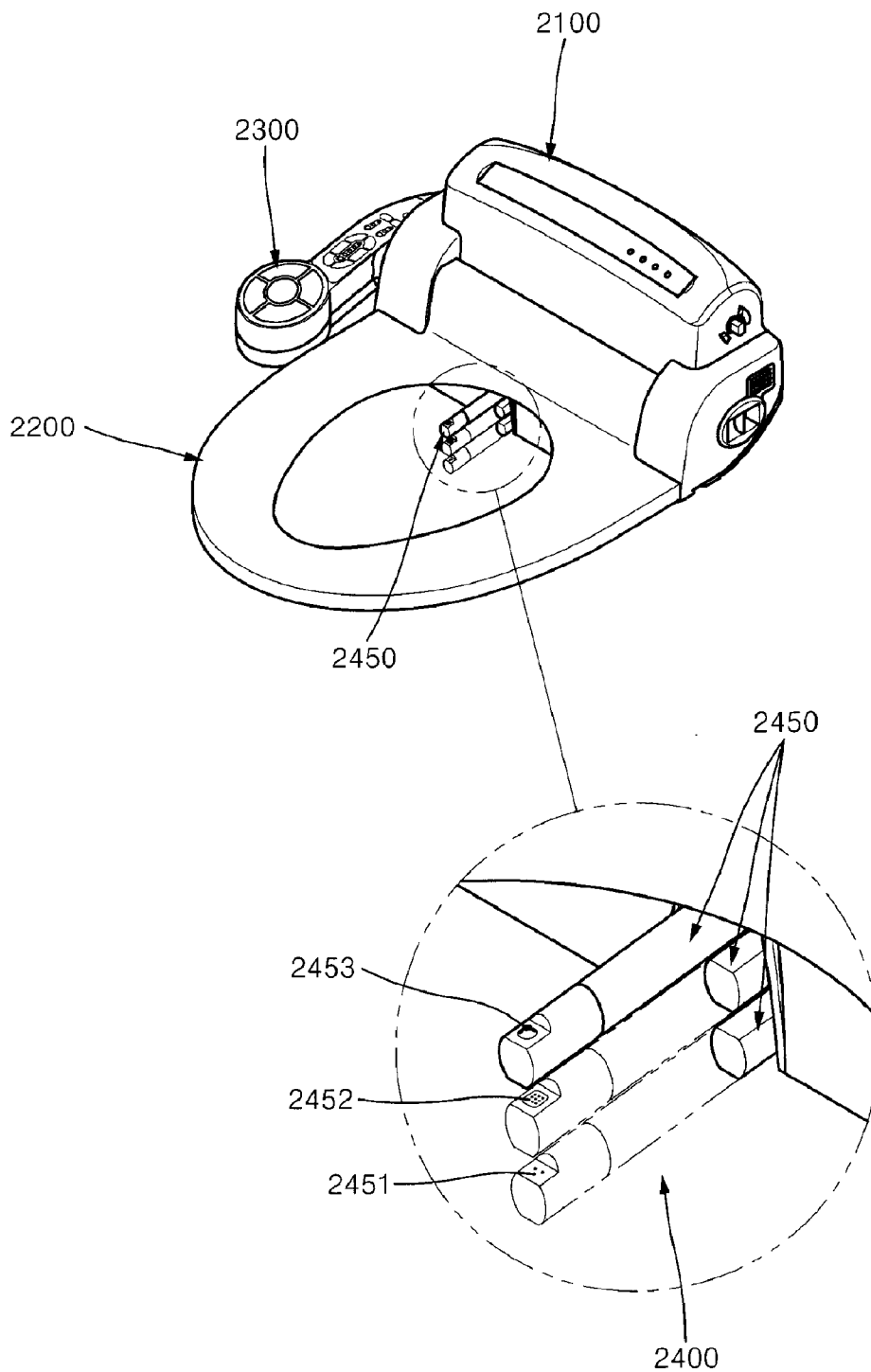


Fig. 13

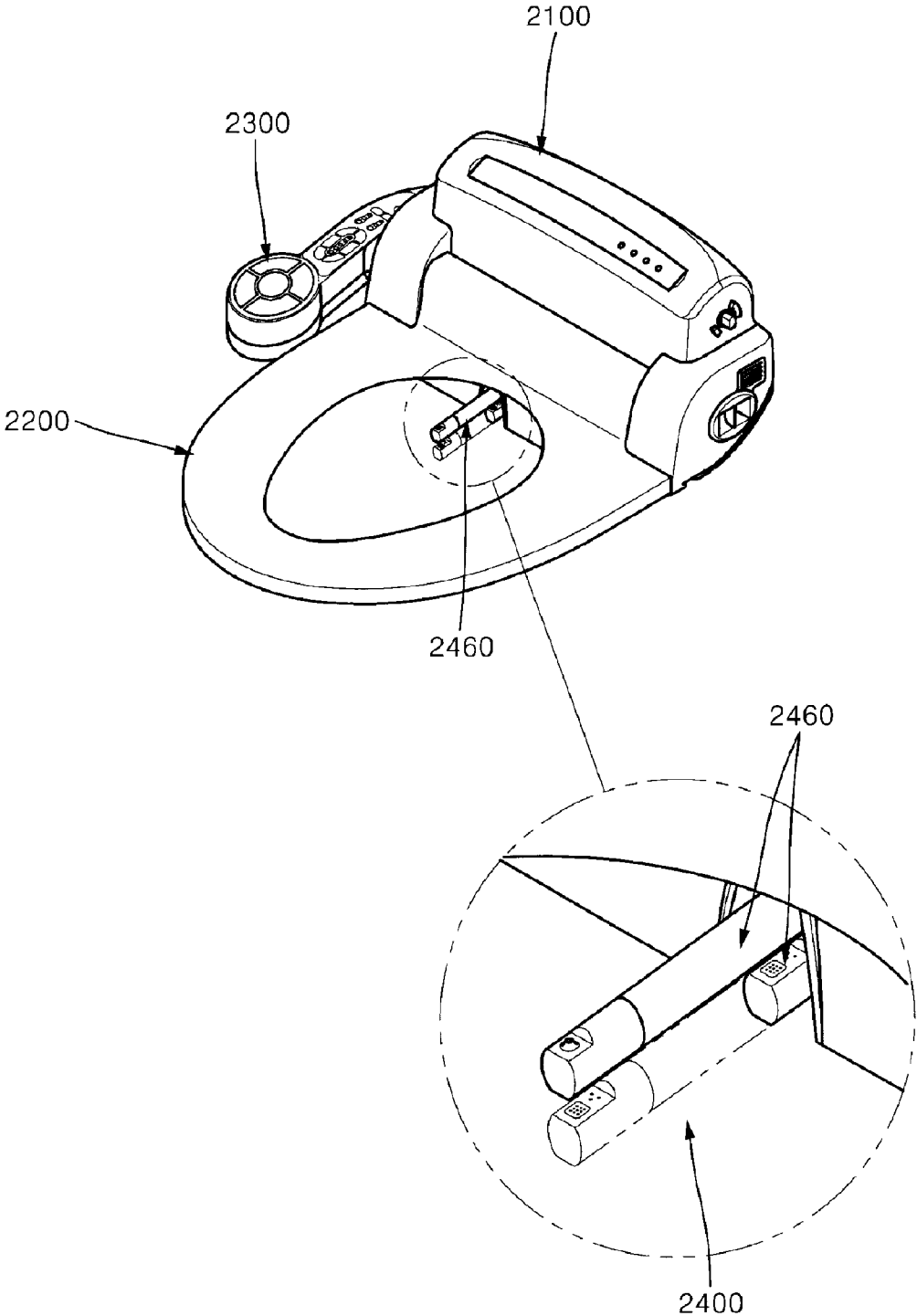


Fig. 14

Prior Art

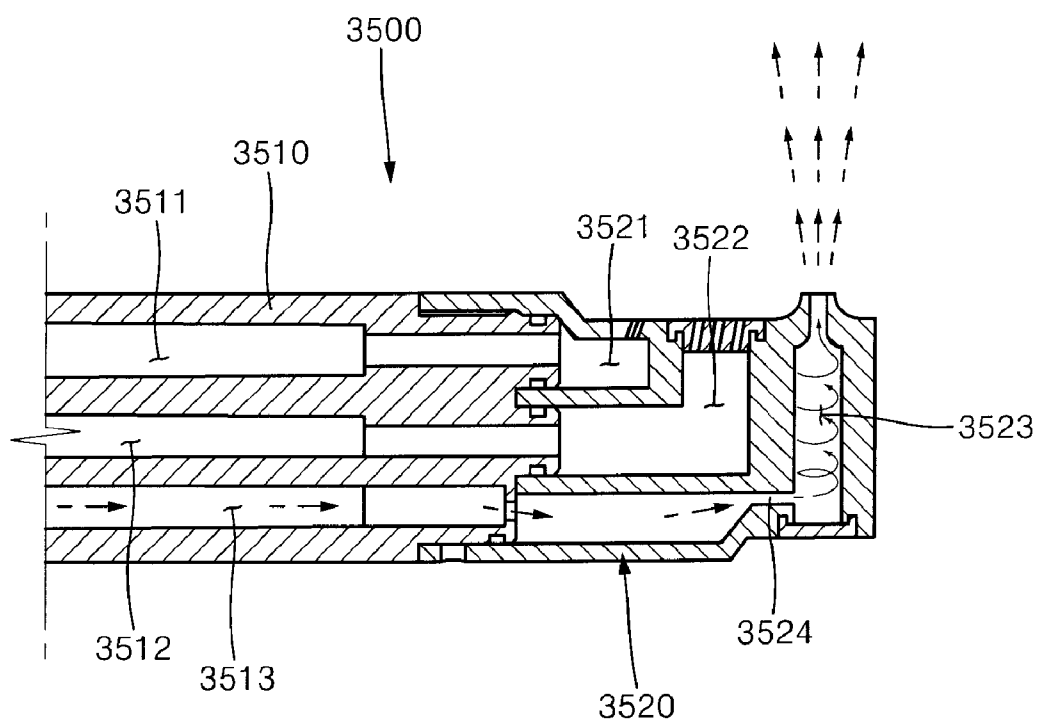


Fig. 15

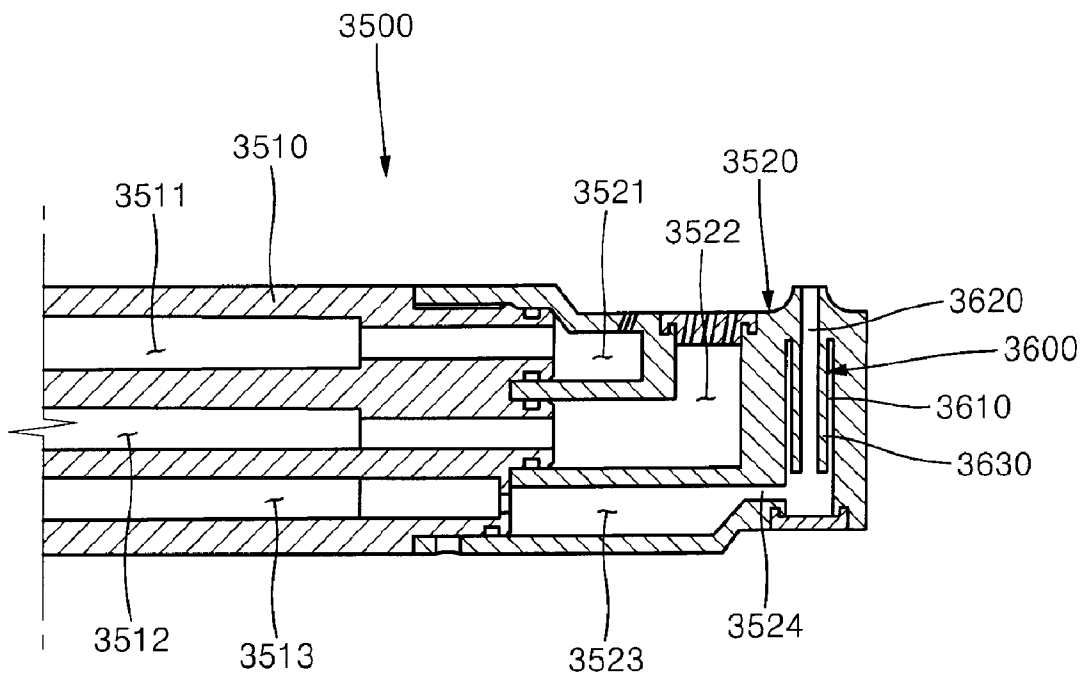
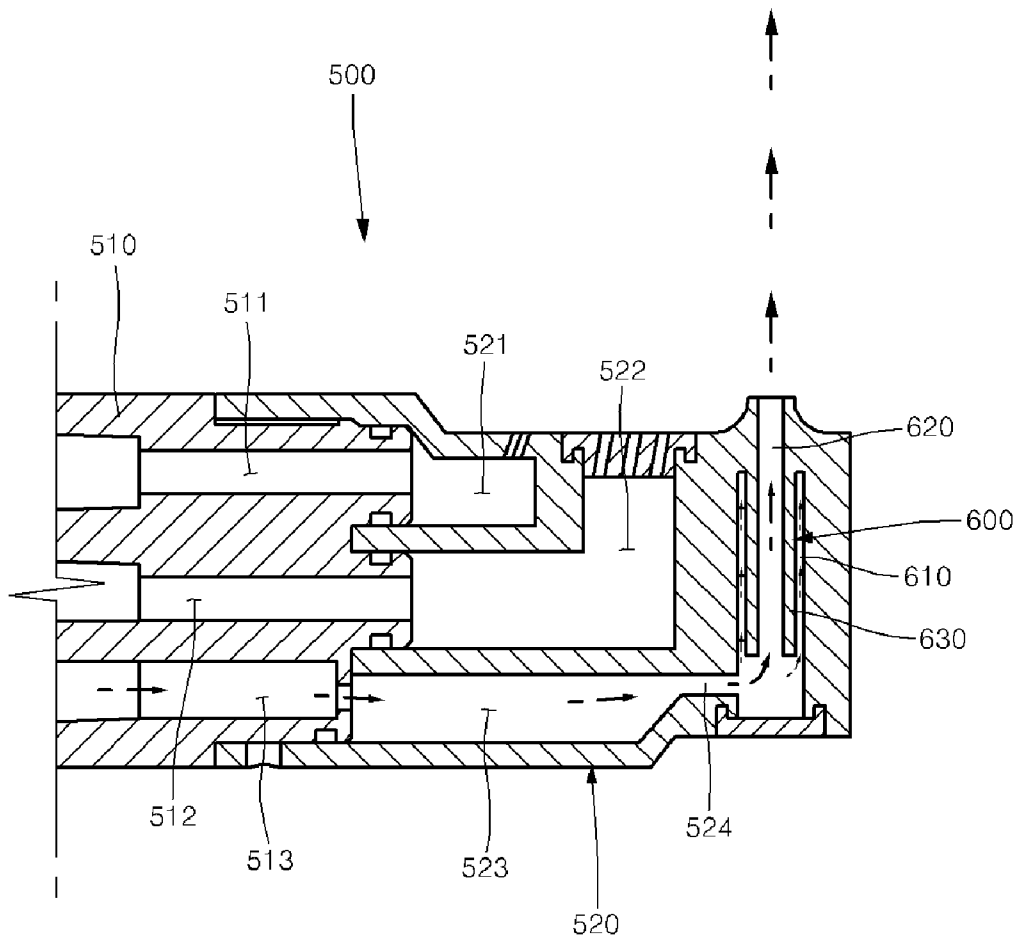


Fig. 16



SPRAY NOZZLE STRUCTURE FOR A BIDET HAVING AN ENEMA FUNCTION

CROSS REFERENCE TO RELATED APPLICATION

[0001] This application is a continuation-in-part application of U.S. application Ser. No. 11/632,073 filed on Jan. 10, 2007, which claim priorities to Korean Application Nos. 10-2004-0053840, 20-2004-0029917 and 10-2004-0085322 filed on Jul. 12, 2004, Oct. 22, 2004 and Oct. 25, 2004 respectively, the contents of which are incorporated herein by reference in their entirety.

TECHNICAL FIELD

[0002] The present invention relates to a bidet having additional functions. Particularly, the invention relates to a multi-functional bidet, in which an enema function is provided, along with its normal functions of cleansing the anal or pubic region of the human body, thereby enabling a pleasant relief, in particular, of a constipated person.

BACKGROUND ART

[0003] A bidet is used for washing the genital and anal areas using cleaning water of appropriate temperature sprayed from the center of the bidet, instead of a toilet paper after relief stool.

[0004] Although such a bidet has been developed originally for washing the pubic area for females, now it is popular among people of all ages and both sexes, since it is known to be more hygienic to wash the anus with water instead of paper after relief. Cleansing the pubic/anal regions with water avoids germ infection, and is very useful for preventing hemorrhoids and other anal disease. In addition, it is very effective for women with gynecology diseases. It is also very useful for the elderly or obese people to relieve themselves with great convenience.

[0005] As shown in FIG. 1, such a bidet is composed of a bidet body 2001 rested on top of a toilet bowl and having a water container for storing filtered tap water, a bidet/cleansing nozzle (or an anus-cleansing nozzle) 2002 for spraying the stored cleansing water to the pubic area or anal region according to a user's selection, a toilet seat 2003 for a user to sit on for relief, and a control panel 2004 for controlling the bidet's functions depending on situations.

[0006] With the bidet having the above-described construction, after a user sits on the toilet seat 2003 and relieves himself or herself, he or she selects and presses either a bidet cleansing button or an anal cleaning button. Then, by the water pressure of the cleansing water stored in the water container of the body 2001, the selected bidet-cleansing nozzle (or anus nozzle) 2002 is projected with a certain distance while pressurizing a restoring spring (not shown). Thereafter, the cleansing water is sprayed with a pressure suitable to the selected function to thereby cleanse the pubic area or anus, which is then dried with a warm air, thereby carrying out the pubic/anal area cleansing work.

[0007] Recently, many additional functions have been added to the original functions of the bidets and thus its use has been widely extended. For example, it includes a massaging function bidet with a massage mode, in which the spray pressure of warm water is controlled; an infrared emitting function bidet with an infrared light emitter inside the toilet bowl; an aroma pack inserted nozzle tip used for reducing bad

smell or inflammation treatment; a bidet with an electrolytic water generator to sterilize water without chemical treatments; and a bidet having an alarm for ringing the alarm in case where the relieving time is unusually extended.

[0008] However, these previous attempts including the massaging, the infrared emitting, the aroma pack, and the showering function are not directly directed to the core function of a bidet, but simply added to the common bidets. In fact, they are not the attempts to improve the convenience of relief or the users' hygienic.

[0009] Among them, the electrolytic water generator and the relieving time control alarm approaches can be considered as attempts in order to prevent genital and anal areas infections by using the electrolytic water as a cleansing water and reducing the relieving time. However, it makes the system more complicated because extra additional electrolytic water generator, timer and alarm devices are needed. Also, these approaches are not directly related to the solutions to the problems concerning the relief, such as constipation.

[0010] Accordingly, there is need to provide a multi-functional bidet, which does not need any additional equipment, while directly improving user's sanitary concerns such as constipation.

DISCLOSURE OF INVENTION

[0011] The present invention has been made to solve the above problems in the art, and it is an object of the invention to provide a multi-functional bidet is provided, which can improve convenience of relief and sanitary concerns, called a core function of the bidet, and thus the user's health, without necessity of complicating the bidet structure or increasing the cost thereof owing to addition of other separate equipment.

[0012] In order to accomplish the above object, according to one aspect of the invention, there is provided a bidet having an enema function. The bidet of the invention comprises: a) a support mounted on the bottom face of a bidet body; b) a controller mounted on aside of the bidet body and for selecting an anus-cleaning function, a bidet-cleaning function, and an enema function, and interrupting a selected function; c) an operator attached to an end portion of the support and for moving a three-directional nozzle correspondingly so as to perform the function selected by the controller; d) a waterway converter for converting a waterway in order for a cleansing water to be supplied according to the function selected in the controller; and e) a spray-nozzle structure having the three-directional nozzle, wherein the three-directional nozzle is moved to a sliding space of the support and sprays the cleansing water passed through the waterway convert, thereby carrying out the function selected in the controller.

[0013] Preferably, the support comprises: a) the sliding space where the three-directional nozzle slides thereon, the sliding space being mounted slantedly on the bottom face of the bidet body; b) a guidance space provided at the other end portion of the sliding space and for preventing escape of the three-directional nozzle sliding on the sliding space; and c) a support plate integrally provided and having a support hole fluid-communicatively formed vertically to an end portion of the sliding space.

[0014] Preferably, the operator comprises: a) an operating motor affixed to one side of the support plate such that a rotating axle is projected in the support hole of the support, the operating motor being clockwise or counterclockwise rotated in order for the three-directional nozzle to be located correspondingly to the function selected in the controller; and

b) a take-up member combined with the rotating axle of the operating motor and being rotated in the same manner of the operating motor; wherein an accommodating member affixed to the other side of the support plate receives the take-up member so as to prevent a leaf spring wound around the take-up member from escaping.

[0015] In addition, preferably, the waterway converter comprises: a) a stepping motor having a rotating axle projected therefrom, the rotating axle being clockwise or counterclockwise rotated so as to supply a cleaning water to the function selected in the controller; b) a connection member connected to the rotating axle of the stepping motor and being rotated in the same manner as the stepping motor; c) a fixed member mounted on one side of the stepping motor and receiving the connection member such that the end portion of the connection member is projected; d) a guidance member connected to a projected portion from the fixed member in order for the connection member to be freely rotated, the guidance member having a cleansing guide hole, a bidet guide hole, and an enema guide hole fluid-communicatively formed in the inner side thereof; e) a conversion member connected to an end portion of the connection member and closely contacted with the guidance member, the conversion member having a cleansing drain hole, a bidet drain hole, and an enema drain hole fluid-communicatively formed such that the direction of the cleaning water is fluid-communicated respectively with the cleansing guide hole, the bidet guide hole, and the enema guide hole of the guidance member according to the rotation of the stepping motor; f) a support member for receiving the guidance member mounted on the connection member and the conversion member in the inside of a body such that the outer circumferential face of the guidance member is tightly contacted with the inner circumferential face of the body, the body having an inlet hole projected on the outer circumferential face thereof for inflowing the cleaning water, a moving hole being fluid-communicatively formed in a side face of the body so as to be fluid-communicated respectively with the cleansing drain hole, the bidet drain hole, and the enema drain hole; and g) a packing mounted on the outer circumferential face of the moving hole of the support member.

[0016] Furthermore, the guidance member may be constructed in such a manner that the bidet guide hole is fluid-communicatively formed at the position perpendicularly crossing the center of the cleansing guide hole fluid-communicatively formed in the upper portion of the guidance member, and the enema guide hole is fluid-communicatively formed at the position facing the cleansing guide hole.

[0017] The conversion member may preferably be constructed in such a manner that the cleansing drain hole and the enema drain hole are fluid-communicatively formed between the cleansing guide hole and the enema guide hole, and the bidet drain hole is fluid-communicatively formed between the bidet guide hole and the enema guide hole.

[0018] The three-directional nozzle may comprise: a) a cleansing water moving pipe connected to an end portion of the support member so as to receiving the packing of the waterway converter, the cleansing water moving pipe having a cleansing moving hole, a bidet moving hole, and an enema moving hole fluid-communicatively formed so as to lie in the same line as the cleansing guide hole, the bidet guide hole, and the enema guide hole; and a spraying cap connected to an end portion of the cleansing water moving pipe and having a cleansing spraying hole, a bidet spraying hole, and an enema

spraying hole fluid-communicatively formed so as to be fluid-communicated with the cleansing moving hole, the bidet moving hole, and the enema moving hole.

[0019] According to another aspect of the invention, there is provided a bidet having an enema function. The bidet of the invention comprises: a bidet body rested on the upper portion of a toilet bowl and having a water container for storing cleansing water filtered from tap-water, a toilet seat for a user to be seated to relieve himself or herself, a controller for controlling the function of bidet depending on the user's need, and a spraying nozzle member for spraying the stored cleansing water into the user's pubic area or anus area depending on the user's selection; wherein the spraying nozzle member includes a spray nozzle body having two spray holes fluid-communicated therewith, the two spray holes being selected from a cleansing hole for spraying a cleansing water for anus cleaning, a bidet hole for spraying a cleansing water for pubic-area cleaning, and an enema hole for spraying an enema water, and a spray tip is projectably inserted in one side of the leading edge of the spray nozzle body, the spray tip being fluid-communicated with the unselected spray hole from the cleansing hole, the bidet hole, and the enema hole.

[0020] Preferably, the spray hole fluid-communicated with the spray nozzle body is a single spray hole configured so as to perform two functions by spraying the cleansing water in different pressures and directions.

[0021] According to yet another aspect of the invention, there is provided a bidet having an enema function. The bidet of the invention comprises: a bidet body rested on the upper portion of a toilet bowl and having a water container for storing cleansing water filtered from tap-water, a toilet seat for a user to be seated to relieve himself or herself, a controller for controlling the function of bidet depending on the user's need, and a spraying nozzle member for spraying the stored cleansing water into the user's pubic area or anus area depending on the user's selection; wherein the spraying nozzle member is constructed in such a way that two or three spray nozzles are projectably inserted in the lower portion of the center of the bidet body and arranged horizontally so as to be placed adjacent to one another, each spray nozzle having one or two spray holes fluid-communicated therewith, the spray holes being selected from a cleansing hole for spraying a cleansing water for anus cleaning, a bidet hole for spraying a cleansing water for pubic-area cleaning, and an enema hole for spraying an enema water.

[0022] According to further aspect of the invention, there is provided a bidet having an enema function. The bidet of the invention comprises: a bidet body rested on the upper portion of a toilet bowl and having a water container for storing cleansing water filtered from tap-water, a toilet seat for a user to be seated to relieve himself or herself, a controller for controlling the function of bidet depending on the user's need, and a spraying nozzle member for spraying the stored cleansing water into the user's pubic area or anus area depending on the user's selection; wherein the spraying nozzle member is constructed in such a way that two or three spray nozzles are projectably inserted in the lower portion of the center of the bidet body and arranged vertically so as to be placed adjacent to one another, each spray nozzle having one or two spray holes fluid-communicated therewith, the spray holes being selected from a cleansing hole for spraying a cleansing water for anus cleaning, a bidet hole for spraying a cleansing water for pubic-area cleaning, and an enema hole for spraying an enema water.

[0023] In case where two spray nozzles are comprised, preferably the spray hole included in the spray nozzle having two spray holes is a single spray hole configured so as to perform two functions by spraying the cleansing water in different pressures and directions.

[0024] According to further aspect of the invention, there is provided a spray nozzle structure for a bidet having an enema function. The spray nozzle structure comprises a spray cap having an enema hole for carrying out an enema function, wherein a guide groove is formed projectedly downwardly from the upper portion of an enema spray hole so as to prevent turbulence of a cleansing water passing through the discharge hole formed inside the enema spray hole of the spray cap, and the spray nozzle structure comprises a cleansing water guide rib having a guide hole fluid-communicatively formed in a straight line inside the guide groove, the guide hole guiding the cleansing water discharged with a pressure such in a way as to stimulate an anus.

[0025] Preferably, the guide hole may have the same area as the discharge hole formed inside the spray hole.

[0026] According to all the embodiments of the present invention, the inventive bidet includes essential constitutional elements such as a bidet body rested on the upper portion of a toilet bowl and having a water container for storing cleansing water filtered from tap-water, a toilet seat for a user to be seated to relieve himself or herself, a controller for controlling the function of bidet depending on the user's need, and a spraying nozzle member for spraying the stored cleansing water into the user's pubic area or anus area depending on the user's selection, the spraying nozzle member being a specific applicable object of the present invention. The present invention can be also implemented by various configurations including a double spraying nozzle member structure having an enema function applied thereto.

BRIEF DESCRIPTION OF DRAWINGS

[0027] Further objects and advantages of the invention can be more fully understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

[0028] FIG. 1 is a perspective view showing the structure of a conventional bidet;

[0029] FIG. 2a and FIG. 2b are an exploded perspective view of a first embodiment of the invention;

[0030] FIG. 3 is a cross-sectional side view of the first embodiment of the invention when assembled;

[0031] FIG. 4 is a cross-sectional front view of the first embodiment of the invention when assembled;

[0032] FIG. 5 is a perspective view of the first embodiment of the invention when installed;

[0033] FIG. 6 shows the operational state of an anal cleaning mode of the first embodiment, where FIG. 6a shows the movement of the nozzle in the support so as to cleanse anal region, FIG. 6b is a cross-sectional view of the waterway converter, and FIG. 6c is a cross-sectional view of the waterway converter where the cleansing water passed through the waterway converter is sprayed to the spray cap;

[0034] FIG. 7 shows an operation of a bidet cleansing mode of the first embodiment, where FIG. 7a shows the movement of the nozzle in the support for carrying out the bidet cleansing, FIG. 7b is a cross-sectional view of the waterway converter, and FIG. 7c is a cross-sectional view of the waterway converter where the cleansing water passed through the waterway converter is sprayed to the spray cap;

[0035] FIG. 8 shows an operation of an enema mode of the first embodiment, where FIG. 8a shows the movement of the nozzle in the support for carrying out the enema function, FIG. 8b is a cross-sectional view of the waterway converter, and FIG. 8c is a cross-sectional view of the waterway converter where the cleansing water passed through the waterway converter is sprayed to the spray cap;

[0036] FIG. 9 is a partial enlarged view of the spraying nozzle structure according to a second embodiment of the invention;

[0037] FIG. 10 is a partial enlarged view of the spraying nozzle structure in case of comprising three nozzles according to a third embodiment of the invention;

[0038] FIG. 11 is a partial enlarged view of the spraying nozzle structure in case of comprising two nozzles according to the third embodiment of the invention;

[0039] FIG. 12 is a partial enlarged view of the spraying nozzle structure in case of comprising three nozzles according to a fourth embodiment of the invention;

[0040] FIG. 13 is a partial enlarged view of the spraying nozzle structure in case of comprising two nozzles according to the fourth embodiment of the invention;

[0041] FIG. 14 is a cross-sectional view of a common spraying nozzle;

[0042] FIG. 15 is a cross-sectional view of a spray nozzle for the enema hole according to the embodiment of the invention; and

[0043] FIG. 16 is a cross-sectional view illustrating the operation of a spray nozzle for the enema hole according to the embodiment of the invention.

BEST MODE FOR CARRYING OUT THE INVENTION

[0044] The preferred embodiments of the invention will be explained in detail with reference to the accompanying drawings.

[0045] FIG. 2a and FIG. 2b are an exploded perspective view of a first embodiment of the invention, and FIG. 3 is a cross-sectional side view of the first embodiment of the invention when assembled. FIG. 4 is a cross-sectional front view of the first embodiment of the invention when assembled, and FIG. 5 is a perspective view of the first embodiment of the invention when installed. FIG. 6 shows the operational state of an anal cleaning mode of the first embodiment. That is, FIG. 6a shows the movement of the nozzle in the support so as to cleanse anal region, FIG. 6b is a cross-sectional view of the waterway converter, and FIG. 6c is a cross-sectional view of the waterway converter where the cleansing water passed through the waterway converter is sprayed to the spray cap. FIG. 7 shows an operation of a bidet cleansing mode of the first embodiment. That is, FIG. 7a shows the movement of the nozzle in the support for carrying out the bidet cleansing, FIG. 7b is a cross-sectional view of the waterway converter, and FIG. 7c is a cross-sectional view of the waterway converter where the cleansing water passed through the waterway converter is sprayed to the spray cap. FIG. 8 shows an operation of an enema mode of the first embodiment. That is, FIG. 8a shows the movement of the nozzle in the support for carrying out the enema function, FIG. 8b is a cross-sectional view of the waterway converter, and FIG. 8c is a cross-sectional view of the waterway converter where the cleansing water passed through the waterway converter is sprayed to the spray cap. FIG. 9 is a partial enlarged view of the spraying nozzle structure according to a second embodiment of the invention. FIG.

10 is a partial enlarged view of the spraying nozzle structure in case of comprising three nozzles according to a third embodiment of the invention. FIG. **11** is a partial enlarged view of the spraying nozzle structure in case of comprising two nozzles according to the third embodiment of the invention. FIG. **12** is a partial enlarged view of the spraying nozzle structure in case of comprising three nozzles according to a fourth embodiment of the invention, and FIG. **13** is a partial enlarged view of the spraying nozzle structure in case of comprising two nozzles according to the fourth embodiment of the invention. FIG. **14** is a cross-sectional view of a common spraying nozzle, and FIG. **15** is a cross-sectional view of a spray nozzle for the enema hole according to the embodiment of the invention.

[0046] As shown in FIGS. **2a** to **8c**, the bidet according to the first embodiment of the invention comprises a support **1100** mounted on the bottom face of a bidet body **1070**, a selection button **1210** mounted in one side of the bidet body and for selecting an anal cleansing, a bidet cleansing, an enema function, a controller **1200** with a stop button **1220** for interrupting the function selected by the selection button **1210**, an operator **1300** connected to the end portion of the support **1100** and for moving a three-directional nozzle **1500** correspondingly so as to carry out the function selected by the controller **1200**, a waterway converter **1400** for converting the waterway in order to provide cleansing water according to the function selected in the controller **1200**, and a three-directional nozzle **1500**, which moves to a sliding space **1110** in the support **1100** to perform the function selected in controller **1200**, and sprays the cleansing water passed through the waterway converter **1400**. The construction of the above bidet having an enema function will be hereafter explained in greater detail.

[0047] The support **1100** is provided with the sliding space **1110** where the three-directional nozzle **1500** slides thereon. The sliding space **1110** is mounted slantedly on the bottom face of the bidet body **1070**. The support **1100** is provided with a guidance space **1120** provided at the other end portion of the sliding space **1110** and for preventing escape of the three-directional nozzle sliding on the sliding space **1110**. The support **1100** is provided with a support plate **1130** integrally provided and having a support hole **1140** fluid-communicatively formed vertically to an end portion of the sliding space **1110**.

[0048] The operator **1300** is provided with an operating motor **1310** affixed to one side of the support plate **1130** such that a rotating axle **1311** is projected in the support hole **1140** of the support **1100**. The operating motor **1310** is clockwise or counterclockwise rotated in order for the three-directional nozzle **1500** to be located correspondingly to the function selected in the controller **1200**. The operator **1300** is provided with a take-up member **1320** combined with the rotating axle **1311** of the operating motor **1310** and being rotated in the same manner of the operating motor **1310**. Here, an accommodating member **1340** affixed to the other side of the support plate **1130** receives the take-up member **1320** so as to prevent a leaf spring **1330** wound around the take-up member **1320** from escaping.

[0049] The waterway converter **1400** is provided with a stepping motor **1410** having a rotating axle **1411** projected therefrom. The rotating axle **1411** is clockwise or counterclockwise rotated so as to supply a cleaning water to the function selected in the controller **1200**. The waterway converter **1400** is provided with a connection member **1420**

connected to the rotating axle **1411** of the stepping motor **1410** and being rotated in the same manner as the stepping motor **1410**. The waterway converter **1400** is provided with a fixed member **1430** mounted on one side of the stepping motor **1410** and receiving the connection member **1420** such that the end portion of the connection member **1420** is projected. The waterway converter is provided with a guidance member **1440** connected to a projected portion from the fixed member **1420** in order for the connection member **1420** to be freely rotated. The guidance member **1440** has a cleansing guide hole **1441**, a bidet guide hole **1442**, and an enema guide hole **1443** fluid-communicatively formed in the inner side thereof, and a conversion member **1450** connected to an end portion of the connection member **1420** and closely contacted with the guidance member **1440**. The waterway converter is provided with the conversion member **1450** having a cleansing drain hole **1451**, a bidet drain hole **1452**, and an enema drain hole **1453** fluid-communicatively formed such that the direction of the cleaning water is fluid-communicated respectively with the cleansing guide hole **1441**, the bidet guide hole **1442**, and the enema guide hole **1443** of the guidance member **1440** according to the rotation of the stepping motor **1410**. The waterway converter is provided with a support member **1460** for receiving the guidance member **1440** mounted on the connection member **1420** and the conversion member **1450** in the inside of a body **1461** such that the outer circumferential face of the guidance member **1440** is tightly contacted with the inner circumferential face of the body **1461**. The body **1461** has an inlet hole **1462** projected on the outer circumferential face thereof for in-flowing the cleaning water. Here, a moving hole **1463** is fluid-communicatively formed in a side face of the body **1461** so as to be fluid-communicated respectively with the cleansing drain hole **1451**, the bidet drain hole **1452**, and the enema drain hole **1453**. The waterway converter is provided with a packing **1470** mounted on the outer circumferential face of the moving hole **1463** of the support member **1460**.

[0050] The guidance member **1440** is constructed in such a manner that the bidet guide hole **1442** is fluid-communicatively formed at the position perpendicularly crossing the center of the cleansing guide hole **1441** fluid-communicatively formed in the upper portion of the guidance member **1440**, and the enema guide hole **1443** is fluid-communicatively formed at the position facing the cleansing guide hole **1441**.

[0051] The conversion member **1450** is constructed in such a manner that the cleansing drain hole **1451** and the enema drain hole **1453** are fluid-communicatively formed between the cleansing guide hole **1441** and the enema guide hole **1443**, and the bidet drain hole **1452** is fluid-communicatively formed between the bidet guide hole **1442** and the enema guide hole **1443**.

[0052] The three-directional nozzle **1500** is provided with a cleansing water moving pipe **1510** connected to an end portion of the support member **1460** so as to receive the packing **1470** of the waterway converter **1400**. The three-directional nozzle **1500** is provided with the cleansing water moving pipe having a cleansing moving hole **1511**, a bidet moving hole **1512**, and an enema moving hole **1513** fluid-communicatively formed so as to lie in the same line as the cleansing guide hole **1441**, the bidet guide hole **1442**, and the enema guide hole **1443**. The three-directional nozzle **1500** is provided with a spraying cap **1520** connected to an end portion of the cleansing water moving pipe **1510** and having a

cleansing spraying hole 1521, a bidet spraying hole 1522, and an enema spraying hole 1523 fluid-communicatively formed so as to be fluid-communicated with the cleansing moving hole 1511, the bidet moving hole 1512, and the enema moving hole 1513.

[0053] The assembling process of the first embodiment of the inversion will be hereafter explained below.

[0054] First, the operating motor 1310 of the operator 1300 is tightly contacted to one side of the support plate 1130 of the support 1300, then the rotating axle 1311 of the operating motor 1310 is fixed to one side of the support plate 1130 in order to penetrate to the support hole 1140 of support plate 1130. Then, a leaf spring 1330 is connected to the rotating axle 1311 of the protracted operating motor 1310, and a take-up member 1320 is installed in the sliding space 1110 of the support 1100. The take-up member 1320 is housed in a housing member 1340 and is fixed to the other side face of the support plate 1130.

[0055] In addition, a connection member 1420 is mounted on the rotating axle 1411 of the stepping motor 1410 of the waterway converter 1400. By housing the connection member 1420, a fixed member 1430 is closely contacted to the stepping motor 1410 in order for the end portion thereof to be protracted. A guide member 1440 and a conversion member 1450 are installed at the protracted connection member 1420 through the fixed member 1430.

[0056] At this time, as shown in FIG. 4, in the state that the cleansing guide hole 1441, the bidet guide hole 1442, and the enema guide hole 1443 of the guidance member 1440 are not fluid-communicatively connected with the cleansing drain hole 1451, the bidet drain hole 1452, and the enema drain hole 1453 of the conversion member 1450, a fixed member 1430 is tight-contactedly connected with the body of the support member 1460 such that the outer circumferential face of the guidance member 1440 is closely contacted to the inside of the body of the support member 1460. A packing 1470 is mounted on the inner side of the support member 1460.

[0057] On the other hand, a cleansing water moving pipe 1510 is closely contacted to the cross-section of the support member 1460 in which the packing 1470 is installed. Then, the cleansing water moving pipe 1510, the support member 1460, and the stepping motor 1410 are fixed using screws.

[0058] The three-directional nozzle 1500, in which the spray cap 1520 is mounted on the end portion of the cleansing water moving pipe 1510, is projected into the guidance space 1120 through the sliding space 1110 of the support 1100. In this state, the leaf spring 1330 is connected to the lower end portion of the cleansing water moving pipe 1510.

[0059] As mentioned above, the support 1100 with the three-directional nozzle 1500 assembled therewith is installed in the inner side of the bidet body 1070. The controller 1200 is assembled to one side of the bidet body 1070. The operator 1300 and the waterway converter 1400 are connected to the controller in order to transmit the signals. The assembly is rested on the bidet body, as shown in FIG. 5.

[0060] Hereafter, the procedures of using the first embodiment of the invention, which is assembled as described above, is explained.

[0061] First, the power is turned on so as to be able to transmit the signals from the controller 1200, the operator 1300, and the waterway converter 1400. In case where a user finishes his or her relief and needs an anus cleansing, an anal cleansing button 1211 of the controller 1200 is pushed. The signal from the pressed anus-cleansing button 1211 is trans-

mitted to the operator 1300 by means of the control of the controller 1200. As shown in FIG. 6a, the operating motor 1310 of the operator 1300 rotates in clockwise direction. The take-up member 1320, which is connected to the rotating axle 1311 of the operator motor 1310, rotates; at the same time, the leaf spring 1330, which is wound around the take-up member 1320, is pushed and moved to the sliding space 1110 of the support 1100.

[0062] At this time, the three-directional nozzle, which is connected to the end portion of the leaf spring 1330, rotates as much as the predefined angle of the operating motor 1310. The three-directional nozzle 1500 is projected to the guide space 1120 of the support 1100 and placed in a position to cleanse anus.

[0063] In this way, when the three-directional nozzle 1500 is positioned in the position to cleanse anus, the operating motor 1310 stops its rotation by the control of the controller 1200. Based on the arrangement of FIG. 4, the stepping motor 1410 of the waterway converter 1400 is rotated clockwise at a predefined angle such that the connection member 1420, which is connected to the rotating axle 1411 of the stepping motor 1410 is rotated, as shown in FIG. 6b. At the same time, the conversion member 1450 connected to the connection member 1420 is rotated such that a cleansing drain hole 1451 of the conversion member 1450, a cleansing guide hole 1441 of the guide member 1440, and a cleansing moving hole 1551 of the cleansing water moving pipe 1510 are fluid-communicated. Then, by the control of the controller 1200, the cleansing water stored in the water container of the bidet body 1070 is supplied.

[0064] The cleansing water supplied as described above is in-flown inside the body 1461 through the inlet 1462 of the support member 1460. Then, via the communicated cleansing guide hole 1441 of the guide member and the communicated cleansing drain hole 1451 of the conversion member 1450, as shown in FIG. 6c, the cleansing water is ejected to a cleansing spraying hole 1521 of the spraying cap 1520 through a cleansing moving hole 1511 of the cleansing moving pipe 1510, thereby cleansing the anal region.

[0065] On the other hand, when the predefined time is expired or the anus cleansing function is completed, a user can push a stop button 1220 of a controller 1200 in order to stop the spraying of the cleansing water.

[0066] At this time, the stepping motor, which is rotated in a positive direction by the control of the controller 1200, is rotated in a reverse direction. Then, the conversion member 1450, which is connected to the stepping motor 1410, is rotated in a reverse direction such that the cleansing guide hole 1441 of the guide member 1440, the cleansing drain hole 1451 of the conversion member 1450, and the cleansing moving hole of the cleansing water moving pipe 1510 is closed. Simultaneously, the operating motor 1310 of the operator 1300 is rotated in a reverse direction, and the take-up member 1320, which is connected to the rotating axle 1311 of the operating member 1310, is rotated in a reverse direction, so that the leaf spring 1330, which is moved into the sliding space 1110, is wound in order for the three-directional nozzle 1500 to be restored to its original state, thereby standing by for the next operation.

[0067] In addition, when the user relieves himself or herself and needs a bidet cleansing, a bidet-cleansing button 1212 of the controller 1200 is pressed. Then, the signal of the pressed bidet-cleansing button 1212 is delivered to the operator 1300 by the control of the controller 1200. As shown in FIG. 7a, the

operating motor **1310** of the operator **1300** is rotated in a positive direction, and the take-up member **1320** connected to the rotating axle **1311** of the rotating operating motor **1310** is rotated. At the same time, the leaf spring **1330**, which is wound around the take-up member **1320**, is pushed toward the sliding space **1110** of the support **1100**.

[0068] At this time, the three-directional nozzle **1550**, which is connected to the end portion of the leaf spring **1330**, is rotated as much as the predetermined angle of the operating motor **1310**. Therefore, the three-directional nozzle **1550** is projected to a guide space **1120** of the support **1100** to be positioned so as to carrying out a bidet cleansing.

[0069] In this way, when the three-directional nozzle **1500** is positioned for a bidet cleansing, the rotation of the operating motor **1310** is stopped by the control of the controller **1200**. In the configuration of the FIG. 4, the stepping motor **1410** of the waterway converter **1400** is rotated in a reverse direction to the predefined angle. Then, as shown in FIG. 7b, the conversion member **1450**, which is connected to the connection member **1420**, is rotated such that the bidet drain hold **1452** of the conversion member **1450**, a bidet guide hole **1442** of the guide member **1440**, and a bidet moving hole **1512** of the cleansing water moving pipe **1510** are all fluid-communicated. Then, by the control of the controller **1200**, the cleansing water stored in the water container of the bidet body **1070** is supplied.

[0070] The cleansing water supplied as described above is in-flown inside the body **1461** through the inlet **1462** of the support member **1460**. Then, via the communicated bidet guide hole **1442** of the guide member **1440** and the bidet drain hole **1452** of the conversion member **1450**, as shown in FIG. 7c, the cleansing water is smoothly ejected to a cleansing spraying hole **1521** of the spraying cap **1520** through a bidet moving hole **1512** of the cleansing moving pipe **1510**, thereby cleansing the anal region.

[0071] On the other hand, when the predefined time is expired or the bidet cleansing function is completed, a user can push a stop button **1220** of a controller **1200** in order to stop the spraying of the cleansing water.

[0072] At this time, the stepping motor **1410**, which is rotated in a positive direction by the control of the controller **1200**, is rotated in a reverse direction. Then, the conversion member **1450**, which is connected to the stepping motor **1410**, is rotated in a reverse direction such that the bidet guide hole **1442** of the guide member **1440**, the bidet drain hole **1452** of the conversion member **1450**, and the bidet moving hole **1512** of the cleansing water moving pipe **1510** is closed to shut off the supply of the cleansing water. Simultaneously, the operating motor **1310** of the operator **1300** is rotated in a reverse direction, and the take-up member **1320**, which is connected to the rotating axle **1311** of the operating member **1310**, is rotated in a reverse direction, so that the leaf spring **1330**, which is moved into the sliding space **1110**, is wound in order for the three-directional nozzle **1500** to be restored to its original state, thereby standing by for the next operation.

[0073] Furthermore, if a constipated user pushes an enema button **1213** of the controller **1200** in order to relieve himself or herself, then, the signal of the enema button **1213** is transmitted to the operator **1300** by the control of the controller **1200**. As shown in FIG. 8a, the operating motor **1310** of the operator **1300** is rotated in a positive direction, and the take-up member **1320** connected to the rotating axle **1311** of the rotating operating motor **1310** is rotated. At the same time, the

leaf spring **1330**, which is wound around the take-up member **1320**, is pushed toward the sliding space **1110** of the support **1100**.

[0074] At this time, the three-directional nozzle **1550**, which is connected to the end portion of the leaf spring **1330**, is rotated as much as the pre-set angle of the operating motor **1310**. Therefore, the three-directional nozzle **1550** is projected to a guide space **1120** of the support **1100** to be positioned so as to carrying out an enema function.

[0075] In this way, when the three-directional nozzle **1500** is positioned for an enema function, the rotation of the operating motor **1310** is stopped by the control of the controller **1200**. In the configuration of the FIG. 4, the stepping motor **1410** of the waterway converter **1400** is rotated in a reverse direction to the predefined angle. Then, as shown in FIG. 8b, the conversion member **1450**, which is connected to the connection member **1420**, is rotated such that the enema drain hold **1453** of the conversion member **1450**, an enema guide hole **1443** of the guide member **1440**, and an enema moving hole **1513** of the cleansing water moving pipe **1510** are all fluid-communicated. Then, by the control of the controller **1200**, the cleansing water stored in the water container of the bidet body **1070** is supplied.

[0076] The cleansing water supplied as described above is in-flown inside the body **1461** through the inlet **1462** of the support member **1460**. Then, via the communicated enema guide hole **1443** of the guide member **1440** and the enema drain hole **1453** of the conversion member **1450**, as shown in FIG. 8c, the cleansing water is discharged with a high pressure to an enema spraying hole **1521** of the spraying cap **1520** through an enema moving hole **1512** of the cleansing moving pipe **1510**. Therefore, the high-pressure cleansing water stimulates the user's anus and is introduced into the inside of the rectum, thereby performing the enema function.

[0077] On the other hand, when the user pushed the stop button **1220** of a controller **1200** in order to stop the enema function, the stepping motor **1410**, which is rotated in a reverse direction by the control of the controller **1200**, is rotated in a positive direction. Then, the conversion member **1450**, which is connected to the stepping motor **1410**, is rotated in a reverse direction such that the enema guide hole **1443** of the guide member **1440**, the enema drain hole **1453** of the conversion member **1450**, and the enema moving hole **1513** of the cleansing water moving pipe **1510** is closed to shut off the supply of the cleansing water. Simultaneously, the operating motor **1310** of the operator **1300** is rotated in a reverse direction, and the take-up member **1320**, which is connected to the rotating axle **1311** of the operating member **1310**, is rotated in a reverse direction, so that the leaf spring **1330**, which is moved to the inside of the sliding space **1110**, is wound in order for the three-directional nozzle **1500** to be restored to its original state, thereby standing by for the next operation.

[0078] Next, according to a second embodiment of the invention, a nozzle tip having one function among the three functions of cleansing, bidet, and enema is accommodated inside the main body of the spray nozzle having the rest functions only such that it can be separately projected.

[0079] Specifically, in the second embodiment of the invention, among a cleansing hole for spraying a cleansing water, a bidet hole for spraying a cleansing water for bidet-cleaning, and an enema hole for spraying enema liquid (water), two selected spray holes is fluid-communicatively formed in the upper end face of a spray nozzle body. At one side of the

leading edge of the spray nozzle body, the unselected one spray hole among the cleansing, bidet, and enema holes is fluid-communicatively formed in the upper end face thereof so that the spray tip is projectably inserted.

[0080] According to the second embodiment of the invention, in case where the enema function is constructed in a separately projectable way, as shown in FIG. 9, a cleansing hole 2411 and a bidet hole 2412 is fluid-communicatively formed in the spray nozzle body 2410. At one side of the leading end of the spray nozzle body 2410, an enema hole 2421 is fluid-communicatively formed in the upper end face thereof so that the spray tip 2420 is projectably inserted and housed.

[0081] In addition, in case where the bidet cleansing function is constructed in a separately projectable way, a cleansing hole and an enema hole is fluid-communicatively formed in the spray nozzle body. At one side of the leading end of the spray nozzle body, a bidet hole is fluid-communicatively formed in the upper end face thereof so that the spray tip is projectably inserted and housed. According to the second embodiment of the invention, in case where the anus cleansing function is constructed in a separately projectable way, a bidet hole and an enema hole is fluid-communicatively formed in the spray nozzle body. At one side of the leading end of the spray nozzle body, a cleansing hole 2411 is fluid-communicatively formed in the upper end face thereof so that the spray tip is projectably inserted and housed.

[0082] As understood from the above-described construction of the second embodiment, a cleansing hole and a bidet hole, or a bidet hole and an enema hole can be fluid-communicatively constructed on the top face of the spray nozzle body 2410. Accordingly, the spray tip 2420 can have respectively the enema hole, the bidet hole, and the cleansing hole formed fluid-communicatively therein.

[0083] Here, the cleansing hole/bidet holes, the cleansing hole/enema holes, and the bidet/enema holes provided in the spray nozzle body may be formed respectively of two spray holes, or constructed of a single spray nozzle such that it can spray the cleansing water with different pressures and in different directions to thereby carrying out two different functions.

[0084] With the bidet of the second embodiment having the above-described construction, in case where a user needs a function, which can be performed by one of the spray holes provided in the spray nozzle body, he or she presses a certain predetermined button on the controller 2300 so that the spray nozzle body is projected with a certain distance by the pressure of the water stored in the water container and the cleansing water of appropriate pressure is sprayed from a spray hole corresponding the selected function, thereby carrying out the cleansing function. When the user presses a certain button in the controller 2300 in order to operate a function, which can be performed by a spray hole provided in the spray tip, the spray nozzle body is projected with a certain distance by the pressure of the cleansing water stored in the water container and further the spray tip is projected from the leading edge of the spray nozzle body. Thereafter, the cleansing water having a certain appropriate pressure is sprayed from the spray hole on the spray tip to thereby carry out the corresponding cleansing work.

[0085] Next, according to a third embodiment of the invention, among the cleansing, bidet, and enema functions, selected one or two functions are embodied in two or three spray nozzles. The two or three spray nozzles are projectably

inserted in the central lower portion of the bidet body such that they are arranged horizontally adjacent to one another.

[0086] Specifically, according to the third embodiment of the invention, two or three spray nozzles are projectably inserted in the lower portion of the center of the bidet body and arranged horizontally so as to be placed adjacent to one another. Each spray nozzle has one or two spray holes fluid-communicated therewith. The spray holes are selected from a cleansing hole for spraying a cleansing water for anus cleaning, a bidet hole for spraying a cleansing water for pubic-area cleaning, and an enema hole for spraying an enema water.

[0087] As understood from the above-described construction of the third embodiment of the invention and also is shown in FIG. 10, each of a cleansing hole 2431, a bidet hole 2432, and an enema hole 2433 may be constituted separately in each of three spray nozzles 2430. As shown in FIG. 11, two spray nozzles 2440 may be provided in such a manner that two spray holes selected from the cleansing, bidet, and enema holes are formed in one spray nozzle, and the remaining one spray hole is formed in the other spray nozzle.

[0088] As shown in FIG. 11, in case where total two spray nozzles 2440 are provided in such a way that two selected spray hole from the cleansing, bidet, and enema holes is fluid-communicatively formed in one spray nozzle 2440 and one remaining spray hole is fluid-communicatively formed in the other spray nozzle 2440, the spray nozzle having two spray holes, i.e., the cleansing/bidet holes, the cleansing/enema holes, and the bidet/enema holes may have two spray holes fluid-communicatively formed. Alternatively, a single spray hole is fluid-communicatively formed such that it can spray the cleansing water with different pressures and in different directions to thereby perform two different functions.

[0089] Next, according to a fourth embodiment of the invention, among the cleansing, bidet, and enema functions, selected one or two functions are embodied in two or three spray nozzles. The two or three spray nozzles are projectably inserted in the central lower portion of the bidet body such that they are arranged vertically adjacent to one another.

[0090] Specifically, according to the fourth embodiment of the invention, two or three spray nozzles are projectably inserted in the lower portion of the center of the bidet body and arranged vertically so as to be placed adjacent to one another. Each spray nozzle has one or two spray holes fluid-communicated therewith. The spray holes are selected from a cleansing hole for spraying a cleansing water for anus cleaning, a bidet hole for spraying a cleansing water for pubic-area cleaning, and an enema hole for spraying an enema water.

[0091] As understood from the above-described construction of the fourth embodiment of the invention and also is shown in FIG. 12, each of a cleansing hole 2451, a bidet hole 2452, and an enema hole 2453 may be constituted separately in each of three spray nozzles 2450. As shown in FIG. 13, two spray nozzles 2460 may be provided in such a manner that two spray holes selected from the cleansing, bidet, and enema holes are formed in one spray nozzle, and the remaining one spray hole is formed in the other spray nozzle.

[0092] As shown in FIG. 13, in case where total two spray nozzles 2460 are provided in such a way that two selected spray hole from the cleansing, bidet, and enema holes is fluid-communicatively formed in one spray nozzle 2460 and one remaining spray hole is fluid-communicatively formed in the other spray nozzle 2460, the spray nozzle having two spray holes, i.e., the cleansing/bidet holes, the cleansing/

enema holes, and the bidet/enema holes may have two spray holes fluid-communicatively formed. Alternatively, a single spray hole is fluid-communicatively formed such that it can spray the cleansing water with different pressures and in different directions to thereby perform two different functions.

[0093] With the bidet having the above-described construction according to the third and fourth embodiment of the invention, when a button of the controller 2300 corresponding to a desired function is pressed, a spray nozzle for the desired function is projected with a certain distance by means of the pressure of the cleansing water stored in the water container inside the body and then the cleansing water having an appropriate pressure is sprayed to carry out the cleansing function.

[0094] Further, as shown in FIG. 14, a conventional three-directional nozzle 3500 having an enema function includes a cleansing water moving pipe 3510 and a spray cap 3520 communicating with the cleansing water moving pipe 3510. The cleansing water moving pipe 3510 includes a cleansing water moving hole 3511, a bidet water moving hole 3512 and an enema moving hole 3513. The spray cap 3520 includes a cleansing spray hole 3521, a bidet spray hole 3522 and an enema spray hole 3523.

[0095] To realize the enema function of the three-directional nozzle 3500 having the above-mentioned construction, cleansing water flows from the enema moving hole 3513 of the cleansing water moving pipe 3510 into the enema spray hole 3523 of the spray cap 3520 after passing through a discharge hole 3524 having a diameter smaller than that of the enema spray hole 3523 and, thereafter, the pressurized cleansing water is sprayed from the enema spray hole 3523 to the anus of a user, thus stimulating the anus and being injected into the rectum of the user and thereby creating in the user the desire to evacuate the bowels.

[0096] However, when the cleansing water flows through the enema spray hole 3523, a vortex is formed in the cleansing water as it passes through the enema spray hole 3523 because the direction of flow of the cleansing water is changed and there is a difference in the cross-diameter of the flow between the enema spray hole 3523 and the discharge hole 3524. The vortex causes the cleansing water to be undesirably dispersed when it is sprayed from the enema spray hole 3523 so that the cleansing water may fail to desirably or accurately stimulate the anus of the user, thereby possibly reducing the effects of the enema function.

[0097] Therefore, a specially designed spray nozzle structure is needed in order to prevent the turbulent current and thus secure a higher-pressure of water, and avoid scattering of the sprayed water stream. The enema nozzle structure of the invention to meet these purposes will be explained below.

[0098] As shown in FIG. 15, a spray nozzle structure of the invention for a bidet having an enema function comprises a spray cap 3520 having an enema hole for carrying out an enema function. A guide groove 3610 is formed projectably downwardly from the upper portion of an enema spray hole 3523 so as to prevent turbulence of a cleansing water passing through the discharge hole 3524 formed inside the enema spray hole 3523 of the spray cap 3520. In addition, the spray nozzle structure of the invention comprises a cleansing water guide rib 3630 having a guide hole 3620 fluid-communicatively formed in a straight line inside the guide groove 3610. The guide hole 3620 guides the cleansing water discharged with a pressure such in a way as to stimulate an anus.

[0099] The procedures of using the spray nozzle structure will be described below.

[0100] First, when a constipated user is seated on the bidet and pushes the enema button of the controller in order to relieve himself or herself, the operator is rotated according to the control of the controller such that the three-directional nozzle 3500 is placed in a position to be able to carry out the enema function. At this state, as described above in conjunction with the embodiments, the waterway converter is rotated in order for the enema drain hole to be fluid-communicated with the enema moving hole 3513 of the cleansing water moving pipe 3510. Thereafter, the cleansing water stored in the water container of the bidet body is supplied according to the control of the controller

[0101] As shown in FIG. 16, the cleansing water is introduced into the enema spray hole 3523 of the spray cap 3520 through the enema moving hole 3513 of the cleansing water moving pipe 3510. In the above state, the cleansing water passes through the discharge hole 3524, which is formed in the spray cap 3520 and has a diameter smaller than that of the enema spray hole 3523. Part of the cleansing water which has passed through the discharge hole 3524 is introduced into the guide groove 3610 of the cleansing water guide rib 3630 which longitudinally extends downwards in the spray cap, thereby preventing turbulence of the cleansing water. At the same time, a remaining part of the cleansing water from which turbulence has been removed is strongly sprayed under pressure in a straight line through the guide hole 3620 which is formed in the spray cap by the cleansing water guide rib 3630, the guide hole 3620 having the same diameter as that of the discharge hole 3524.

[0102] At this time, the cleansing water does not generate turbulence and thus bubbles so that it can stimulate smoothly an anus and also be introduced into the inside of the rectum, thereby performing the enema function for relief.

INDUSTRIAL APPLICABILITY

[0103] As described above, a bidet having an enema function according to the present invention is constructed such in a manner that an anus-cleansing function, a bidet cleansing function, and an enema function are embodied in a single nozzle; or any one function is constituted on a spray tip projected from the separate spray nozzle body; or one or two functions among the anus-cleansing function, the bidet cleansing function and the enema function are embodied in two or three spray nozzles, which are projectably inserted in the lower central portion of the bidet body so as to be arranged horizontally adjacent to one another; or one or two functions among the anus-cleansing function, the bidet cleansing function and the enema function are embodied in two or three spray nozzles, which are projectably inserted in the lower central portion of the bidet body so as to be arranged vertically adjacent to one another.

[0104] Therefore, according to the present invention, a novel multi-functional bidet is provided, which can improve convenience of relief and sanitary concerns, called a core function of the bidet, and thus the user's health, without necessity of complicating the bidet structure or increasing the cost thereof owing to addition of other separate equipment.

[0105] While the present invention has been described with reference to the particular illustrative embodiments, it is not to be restricted by the embodiments but only by the appended claims. It is to be appreciated that those skilled in the art can

change or modify the embodiments without departing from the scope and spirit of the present invention.

What is claimed is:

1. A spray nozzle structure for a bidet having an enema function, the spray nozzle structure comprising a spray cap having an enema hole for carrying out an enema function, wherein a guide groove is formed projectedly downwardly from the upper portion of an enema spray hole so as to prevent turbulence of a cleansing water passing through the discharge

hole formed inside the enema spray hole of the spray cap, and the spray nozzle structure comprising a cleansing water guide rib having a guide hole fluid-communicatively formed in a straight line inside the guide groove, the guide hole guiding the cleansing water discharged with a pressure such in away as to stimulate an anus and having the same area as the discharge hole.

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