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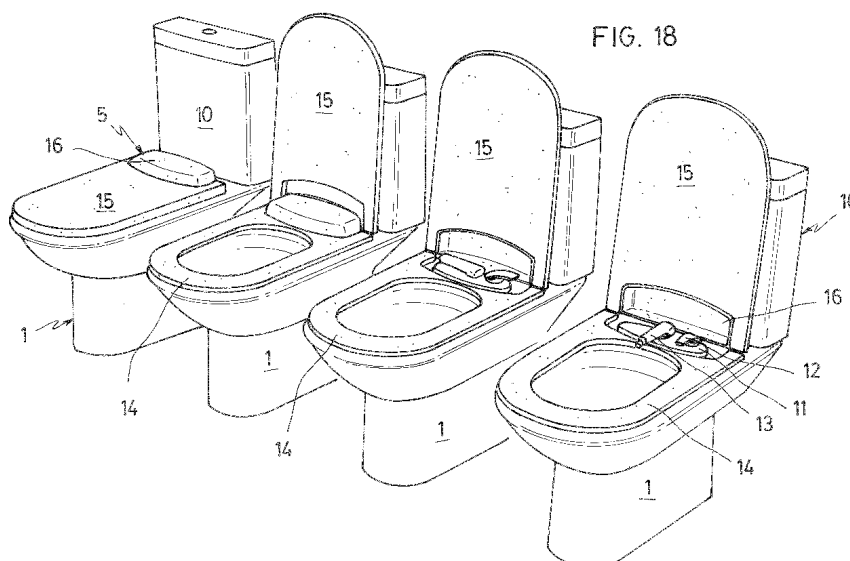
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(54) **SANITARY APPARATUS SERVING AS A TOILET AND BIDET**

(57) The invention relates to a sanitary apparatus serving as a toilet and a bidet. According to the invention, means for actuating and regulating the water flow and temperature and means for spraying the water flow are provided in the upper rear horizontal area (H) of the body of the toilet (1). between the holes used to secure the

seat and the lid of the toilet. Said flow spray means can be folded and the water flow and temperature actuation and regulation means are connected to cold water and hot water pipes by means of pipe segments that extend vertically through the above-mentioned upper rear horizontal area of the body of the toilet (1).



Description

Object of the invention

[0001] The present invention relates, as indicated in the heading, to a sanitary apparatus serving as a toilet and bidet, specifically one consisting of a toilet body which can be of the floor-mount type and flush the rinse water by means of a low level or high level cistern, or one of the hanging type anchored to an adjoining wall and having its cistern embedded in the wall itself, without excluding, nonetheless any other type of configuration of the toilet body and its installation, all of the above in such a way that the sanitary apparatus in question includes means which allow it to serve as a bidet when required, without this affecting the normal specific functioning, at the appropriate time, of the sanitary apparatus as a toilet.

Background of the Invention

[0002] The state of the art is familiar with a wide range of published applications of provisions aimed at allowing sanitary apparatus of the toilet type to function as a bidet, and can be classified into those that disclose the use of an auxiliary pan that can be engaged in the toilet bowl, those that install conduits on the toilet seat ending in the shape of inverted shower-head and those that incorporate into the body of the toilet means for fitting an inverted toilet head.

[0003] As an example of the first of the published applications, one would mention, among others, patent ES 201 448 and utility model ES 1 037 265; of the second, one would point out utility models ES 182 663, ES 287 561 and ES 1 022 162 and patent ES 2 015 038; and, finally, of the third, one would refer to utility models ES 128 971, ES 1 0530780, ES 1 068 429 and ES 1 068 056 and patents ES 2 289 387 and WO 2010/027157.

[0004] All the provisions that form the object of the preceding published applications have drawbacks in terms of their use and poor aesthetic presentation as well as their complexity, which makes them extremely costly as well as complex to use.

Description of the invention

[0005] With a view to overcoming the drawbacks pointed out above, the solution has been adopted wherein the means that perform the bidet function are disposed centrally on the body of the toilet, in an aesthetically discrete manner and without affecting the toilet body's accessories, such as the cisterns, seats and lids.

[0006] At the same time, it has been contemplated that the means for actuating and regulating the water flow and temperature and the folding and fully concealable means for spraying said water flow towards the user in the contemplated and appropriate manner for the bidet function, situated always in the rear part of the toilet body, can be disposed not only on the surface of said rear part,

but also below it or inside it.

[0007] The object of the present invention has been developed according to the preceding solution, which consists of the fact that on the upper horizontal area of the rear part of the toilet body and between the holes for securing the toilet body's seat and lid assembly, without presenting any interaction whatsoever with the latter, there are situated for serving as the bidet function, means for actuating and regulating the water flow and temperature necessary for said function and foldable and fully concealable means for spraying said water flow towards the user in the contemplated and appropriate manner for the bidet function, the actuation and regulation means being connected to cold water and hot water pipes by means of pipe segments that extend vertically through the aforesaid horizontal area of the rear part of the toilet body.

[0008] One characteristic of the invention consists of the fact that the cold water and hot water pipes, which are regulated by the actuation and regulation means, extend vertically through the horizontal area of the rear part of the toilet body along points thereof that do not affect the structure of the pipes through which the water for cleaning the inside of the toilet circulates and is sprayed at pressure following the flushing of a cistern or of a hydraulic network, both being separate from the aforesaid actuation and regulation means.

[0009] Another characteristic of the invention lies in the fact that the means for actuating and regulating the water flow and temperature and the means for spraying said flow designed to perform the bidet function are joined in a functional unit, which is situated in the horizontal, rear and upper part of the toilet body, all of the former in such a way that this functional unit is situated in the aforementioned area without there being any interaction whatsoever between said functional unit and the toilet seat and lid assembly, or with the holes that are contemplated in the aforesaid area of the toilet body for securing said assembly.

[0010] Another characteristic of the invention is determined by the fact that the means for actuating and regulating the water flow and temperature and the means for spraying said flow designed to perform the function of bidet situated in the functional unit remain concealed in their non-operating position, for which they are covered by an articulated lid which, being practicable, remains open during the performance of the operating functions of the functional unit, without there being interaction between this articulated lid and the seat and/or lid contemplated in the body of the toilet.

[0011] Another characteristic of the invention conforms to the fact that the spraying means of the water flow, which are foldable, are positioned at will, by the very user according to the need of the moment, allowing for an active position, wherein the functional unit projects and is oriented at the user, and an inactive position, wherein the spraying means remain without being oriented at the user and housed in the space of the functional unit without

projecting from it and below the articulated lid of the aforesaid functional unit.

[0012] Another characteristic of the invention is established by the fact that the functional unit comprises a supporting base on the upper horizontal part of the rear part of the toilet body, on which valves for regulating the cold water and hot water flows are incorporated, whether one for each water inlet, or a single thermostatic mixing valve for the two water inlets, used to adjust the temperature of the water to be used, and a nozzle for spraying the water for serving as a bidet, which is situated in an area of the supporting base comprised between two regulation valves or to the side of the thermostatic mixing valve, all of the above covered by a lid that is related to the aforesaid support base.

[0013] Another characteristic of the invention results from the fact that the cold water and hot water pipes may share, in one case, the space for the holes designed for the mounting bolts of the toilet body's seat and lid, in which case the special holes designed for said purpose in the horizontal area of the rear part of the toilet body are unnecessary.

[0014] Another characteristic of the invention stems from the fact that the seat and lid of the toilet body present a rear shape that does not interfere with the functional unit as they tilt, which allows for the location and use of the aforesaid bidet functional unit with the assistance of the aforesaid seat.

[0015] Another characteristic of the invention is determined by the fact that the means for actuating and regulating the water are connected to the means for spraying the water flow through a connecting pipe that runs below the upper horizontal area of the rear part of the toilet body and in a segment included in the space existing between the holes for securing the seat and lid assembly which is used to cover the upper part of the toilet body.

[0016] Another characteristic of the invention consists of the fact that the connection pipe between the water actuation and regulation means and the water flow spraying means consist of an aerial pipe that runs externally below the upper rear part of the toilet body.

[0017] Another characteristic of the invention corresponds to the fact that the connecting pipe between the water actuation and regulation means and the water flow spraying means consists of a pipe that runs inside the upper rear part of the toilet body, with the condition, in this case, of the internal connecting pipe that links the actuation and regulation means with the water flow spraying means does not affect the structure of the pipes through which the water for cleaning the inside of the toilet circulates and is sprayed at pressure coming from the flushing of a cistern or a hydraulic network that is separate from the aforesaid actuation and regulation means.

[0018] Another characteristic of the invention stems from the fact that the water flow spraying means are disposed in a point that is off-centre in relation to the edge of the inner part of the toilet body corresponding to the

upper rear part thereof.

[0019] Another characteristic of the invention lies in the fact that the means for spraying the water flow are disposed in a point that is centred in relation to the inner part of the toilet body corresponding to the upper rear part thereof.

[0020] Finally, another characteristic of the invention arises from the fact that the actuation and regulation means and water flow spraying means can be covered during inactive periods by a covering lid which, while being separate from the assembly made up of the toilet body seat piece and lid piece, is superficially coplanar with the lid piece.

15 Brief description of the drawings

[0021] In order to help understand the ideas set out, and disclose at the same time several details of a constructive nature, what follows is a form of embodiment of the present invention with reference to drawings that are attached to this description, which, given their primarily illustrative nature, must be interpreted as lacking any limiting scope in respect of the breadth of the legal protection that is being applied for. In the drawings:

Figure 1 represents, in a top view, a toilet body of the floor-mount type wherein two through-holes can be appreciated for the access of the cold and hot water pipes to the functional unit.

Figure 2 represents, in a top view, a toilet body of the wall-mount type wherein two through-holes can be appreciated for the access of the cold and hot water pipes to the functional unit.

Figure 3, represents, in a rear perspective, a toilet body of the floor-mount type indicating the trajectories of the cold and hot water pipes that access the functional unit and of the rinse water flush pipe.

Figure 4, represents, in a rear perspective, a toilet body of the wall-mount type indicating the trajectories of the cold and hot water pipes that access the functional unit jointly and of the rinse water flush pipe.

Figure 5, represents, in a rear perspective, a toilet body of the wall-mount type indicating the trajectories of the cold and hot water pipes that access the functional unit separately and of the rinse water flush pipe.

Figure 6, represents, schematically in a front elevation, a toilet body and a low-level cistern, drawn in a broken line, and the base of the functional units with the spraying and regulation means of the bidet in a position of use, which is close to one according to line IV-IV of figure 17.

Figure 7 represents, in a side elevation, a toilet body of the floor-mount type and low level cistern, showing the positioning of the functional unit of the bidet and its spatial relationship in respect of the toilet seat and lid.

Figure 8, represents, in a front elevation, a first embodiment of the positioning and quality of the actuation and regulation means of the flow of water and the spraying means thereof, disposed in the base of the functional unit.

Figure 9, represents, in a top view, the embodiment of the base of the functional unit of the preceding figure.

Figure 10, represents, in a front elevation, a second embodiment of the positioning and quality of the actuation and regulation means of the flow of water and the spraying means thereof, disposed in the base of the functional unit.

Figure 11, represents, in a top view, the embodiment of the base of the functional unit of the preceding figure.

Figure 12, represents, in a front elevation, a third embodiment of the positioning and quality of the actuation and regulation means of the flow of water and the spraying means thereof, disposed in the base of the functional unit.

Figure 13, represents, in a top view, the embodiment of the base of the functional unit of the preceding figure.

Figure 14, represents, in a top view, a toilet with a low level cistern which incorporates the functional unit of the invention, with the lid, seat and functional unit disposed in a closed position.

Figure 15, represents, in a top view, the toilet of the preceding figure with the lid in the raised position.

Figure 16, represents, in a top view, the toilet of the preceding figures wherein the articulated lid of the functional unit is open, with the actuation and regulation means of the flow of bidet water and the water spraying means for the bidet function in their retracted resting position.

Figure 17, represents, in a top view, the toilet of the preceding figures wherein the actuation and regulation means of the flow of bidet water and the water spraying means for the bidet function are in their position of use.

Figure 18, represents, in perspective, the set of

drawings 12 to 15 wherein a top view is provided of the body of the toilet with its seat, lid and bidet functional unit.

Figure 19, represents, in a rear elevation, a toilet body having an aerial connecting pipe between the means of actuation and regulation and the means for spraying the water flow situated above the horizontal upper area of the rear part of the toilet body.

Figure 20, represents, in a rear elevation, a toilet body having a connecting pipe between the means of actuation and regulation and the means for spraying the water flow situated above the upper horizontal area of the rear part of the toilet body, which is incorporate inside or below said upper horizontal area of the rear part of the toilet body.

Figure 21, represents, from a top perspective, a toilet body which, associated to a flush water cistern, is provided with a seat in the position of use, a lid in the open position for use of the sanitary apparatus and the lid covering the means of actuation and regulation and the means for spraying the water flow disposed in the open position allowing access thereto, with the particularity that the means for spraying the water flow are removed from the central plane of symmetry of the toilet body.

Figure 22, represents, from a top perspective, a toilet body which, associated to a flush water cistern, is provided with the seat in a position of use, the lid in the open position for use of the sanitary apparatus and the lid that covers the means of actuation and regulation and the means for spraying the water flow disposed in the open position allowing access thereto, with the particularity that the means for spraying the water flow are in the central plane of symmetry of the toilet body.

Figure 23, represents, from a top perspective, any of the toilet bodies of figures 21 and 22, when in the not-in-use position, wherein it can be appreciated the superficially coplanar position of the lid of the toilet body and the piece that covers the actuation and regulation means and means for spraying the water flow.

Description of a preferred embodiment of the invention

[0022] Figures 1, 6 and 7 show a toilet body 1 of the floor-mount type wherein one can appreciate two through-holes 2 for access of the cold water 3 and hot water 4 pipes of a bidet functional unit 5, noting that said through-holes 2 are situated in points of the rear horizontal area H of the body 1 which do not interfere with the pipe 6 for the final flushing out of rinse water inside the

bowl of the toilet body 1, and holes 7, which are also through-holes, designed for securing the seat and lid thereof, and 7A, designed for securing of the cistern or other purposes extraneous to the invention.

[0023] Similarly, figure 2 illustrates a toilet body 1A of the wall-mount type wherein one can appreciate two through-holes 2 for access of cold water 3 and hot water 4 pipes of a bidet functional unit 5, noting that said through-holes 2 are situated in points that do not interfere with the pipe 6 for the final flushing out of the rinse water inside the bowl of the toilet body 1, with holes 7 having the same mission as in the case of the preceding drawing, while the rods 8 constitute means of anchoring the suspended toilet body 1A to a wall.

[0024] Figure 3 shows a toilet body of the floor-mount type, wherein the trajectories of the cold water 3 and hot water pipes 4 are shown accessing the functional unit 5 respectively by means of the through-holes 2 which extend vertically through the horizontal area H of the rear part of the toilet body 1A, similarly the trajectory 9 of the rinse water flush pipe can be appreciated.

[0025] In figure 4 one can see a toilet body 1A of the wall-mount type, wherein the trajectories of the cold water 3 and hot water 4 pipes are shown which access the functional unit 5 jointly and vertically through just one of the through-holes 2 made in the horizontal area H of the rear part of the body, at the same time as the trajectory 9 of the rinse water flush pipe is illustrated.

[0026] Figure 5 illustrates the case wherein in a toilet body 1A of the wall-mount type the cold water 3 and hot water 4 pipes access the functional unit 5 separately and vertically each by means of one through-hole 2 made in the horizontal area H of the rear part of the body, including the illustration of the trajectory 9 of the rinse water flush pipe.

[0027] Figure 6 illustrates schematically in a front elevation, a toilet body 1 and a low level cistern 10, drawn in a broken line, and the base 11 of the functional unit 5 which incorporates the means of actuation and regulation 12 of the bidet water, with its cold water 3 and hot water 4 pipes, and the means for spraying 13 the bidet water which, being foldable, are in a position of use.

[0028] In figure 7 one can see in a side elevation, a toilet body 1 of the floor-mount type with a low level cistern 10, showing the positioning of the bidet functional unit 5, and its spatial relationship in respect of the toilet seat 14 and lid 15, noting that the functional unit 5 has an articulated lid 16 situated in the two possible positions, like seat 14 and lid 15, for the purpose of demonstrating that the movements of the former and the latter do not interfere with each other.

[0029] Figures 8 and 9 illustrate respectively in a front elevation and top view, a first embodiment of the positioning and quality of the actuation and regulation means 12 of the water flow, consisting of a thermostatic valve, and of the spraying means 13 thereof, the former being disposed at one end and the latter centred in the base 11 of the functional unit 5, said means being represented

in a continuous line for their position of use and in a broken line in their folded not-in-use position.

[0030] Similarly, figures 10 and 11 show respectively, in a front elevation and in a top view, a second embodiment of the positioning and quality of the actuation and regulation means 12 of the water flow, consisting of a thermostatic valve, and of the spraying means 13 thereof, both being disposed at one end and the other of the base 11 of the functional unit 5, said means being represented in a continuous line for their position of use and in a broken line for their folded not-in-use position.

[0031] As in the two preceding cases, figures 12 and 13 represent respectively, in a front elevation and in a top view, a third embodiment of the positioning and quality of the actuation and regulation means 12 of the water flow, consisting of respective mixer valves, and of the spraying means thereof, the former being disposed at either end and the latter centred in the base 11 of the functional unit 5, said means being represented in a continuous line for their position of use and in a broken line for their folded not-in-use position.

[0032] Figure 14 shows, in a top view, a toilet body 1 of the floor-mount type with a low level cistern 10 which incorporates the functional unit 5 of the invention, with the lid 15, seat 14 and functional unit 5 with its articulated lid 16 disposed in the closed position.

[0033] In figure 15 the toilet body 1 of figure 14 appears in the situation where the lid 15 is in the lifted position.

[0034] Figure 16 illustrates the same toilet body 1 as figures 14 and 15 wherein the articulated lid 16 of the functional unit 5 is lifted, which corresponds to the one of the first embodiment shown in figures 6 and 7 and with the actuation and regulation means 12 of the bidet water flow and spraying means 13 of the water for the bidet function in the retracted resting position.

[0035] In figure 17, the same toilet body 1 as figures 14, 15, and 16 appears wherein the actuation and regulation means 12 of the bidet water flow and spraying means 13 of the water for the bidet function are in the position of use.

[0036] Figure 18 shows a perspective of the set of drawings 14 to 17 showing in a top view the toilet body 1 with its seat 14, lid 15 and bidet functional unit 5 and the low level cistern 10 containing the rinse water.

[0037] As one can see from observing figures 17 and 18, the assembly of the seat 14 and the lid 15 presents a shape at the rear part of its installation in toilet body 1 that allows the location of the functional unit 5 and the positioning closed or open of the components of said assembly without affecting the aforesaid functional unit 5, either in its resting position or in its use for the bidet function.

[0038] At the same time it is worth noting that it is not excluded for the cold water 3 and hot water 4 pipes which cross, through the through-holes 2 extending vertically, expressly established for them, in the horizontal area H of the rear part of the toilet body 1, sharing, in one case, the space of the holes 7 designed for securing the seat

14 and the lid 15 of the toilet body 1.

[0039] Figure 19 shows, a toilet body 1, which according to the object of the invention, has an aerial connection pipe 17 between the actuation and regulation means 12 and the means for spraying the water flow 13, with its cold water 3 and hot water 4 pipes situated above the horizontal upper area H of the rear part of the toilet body 1.

[0040] The actuation and regulation means 12 consist, preferably, of a single lever mixer tap, without however excluding other means applicable to the case.

[0041] Figure 20 shows a toilet body 1 which, in accordance with the object of the invention, has an internal connection pipe 18 between the actuation and regulation means 12 and the means for spraying the water flow 13, with its cold water 13 and hot water 4 pipes situated above the horizontal upper area H of the rear part of the toilet body 1.

[0042] Figure 21 illustrates a possible embodiment of the invention, wherein one can see that the toilet body 1 is attached to a cistern 19 for flush water and which has the lid 15 of the toilet 1 in the open position, at the same time as the articulated lid 16 that covers actuation and regulation means 12 and means for spraying the water flow 13 of the bidet functional unit 15, while the seat 14 is folded down in a position for use.

[0043] One can observe that the actuation and regulation means 12 and the means for spraying the water flow 13 are disposed on one side and the other of the plane of symmetry of the toilet body 1.

[0044] In this case, the means for spraying the water flow 13 are of the retractable type and can turn to be placed in a centred position for use.

[0045] Figure 22 shows another possible embodiment of the invention wherein one can observe, similarly to the embodiment of figure 21, that the toilet body 1 is attached to a cistern 19 for flush water and that has the lid 15 of the toilet 1 in the open position, and also the articulated lid 16 that covers actuation and regulation means 12 and means for spraying the water flow 13 of the bidet functional unit 5, while the seat 14 is in the folded down position for use.

[0046] One would also note the fact that the means for spraying the water flow 13 are centred in respect of the plane of symmetry of the toilet body 1, particularly highlighting the fact that, as can clearly be seen from figure 23, there is a characteristic coplanar positioning of the surface of the toilet lid 15 in respect of the articulated lid 16 that covers the actuation and regulation means 12 and the means for spraying the water flow 13 of the bidet functional unit 5.

[0047] Finally, one would also note that in figure 17 the bidet functional unit 5 is in the position of use, with the seat 14 in the raised position, while in figure 18 the same toilet is observed with the functional unit 5 in the position of use, in this case the seat 14 being in the folded down position. The purpose of this is to demonstrate that the bidet functional unit can be used in either of the two situations.

Claims

1. Sanitary apparatus serving as a toilet and a bidet, specifically one consisting of a toilet body that can be of the floor-mount type and that flush the rinse water from a low level or high level cistern, or of the wall-mount type anchored adjoining a wall and having the cistern embedded in the wall, without excluding, nonetheless, any other type of configuration of the toilet body and installation thereof, all of the above in such a way that the sanitary apparatus in question includes means that make it possible to serve as a bidet when required without this affecting the normal specific functioning, when necessary, of the sanitary apparatus as a toilet, **characterised in that** above the upper horizontal area of the rear part of the toilet body and between the holes for securing the seat and lid assembly of the toilet body, without presenting any interaction with the latter, there are situated, for the bidet function, means for actuating and regulating the water flow and temperature necessary for said function and fully retractable and concealable means for spraying said flow of water towards the user in the contemplated and appropriate manner for the bidet function, the actuation and regulation means being connected to cold water and hot water pipes through pipe segments that extend vertically through the abovementioned horizontal area of the rear part of the toilet body.
2. Sanitary apparatus serving as a toilet and a bidet, according to the preceding claim, **characterised in that** the cold water and hot water pipes, which are regulated by the actuation and regulation means, cross vertically through respective through-holes in the horizontal area of the rear part of the toilet body through points thereof that do not affect the structure of the pipes through which the water for rinsing the inside of the toilet circulates and is sprayed from the flushing of a cistern or hydraulic network, both independent of the aforesaid actuation and regulation means.
3. Sanitary apparatus serving as a toilet and a bidet, according to claim 1, **characterised in that** the cold water and hot water pipes, which are regulated by the actuation and regulation means, cross vertically through the same through-hole of the horizontal area of the rear part of the toilet body through points thereof that do not affect the structure of the pipes through which the water for rinsing the inside of the toilet circulates and is sprayed from the flushing of a cistern or hydraulic network, both independent of the aforesaid actuation and regulation means.
4. Sanitary apparatus serving as a toilet and a bidet, according to claim 1, **characterised in that** the means for actuating and regulating the water flow

and temperature and the means for spraying said flow designed to perform the bidet function are joined in a functional unit, which is situated in the horizontal, rear and upper area of the toilet body, all of the above in such a way that this functional unit is located in the abovementioned area without there being any interaction whatsoever between said functional unit and the toilet seat and lid assembly, or with the through-holes which, for securing said assembly, are contemplated in the aforesaid area of the toilet body.

5. Sanitary apparatus serving as a toilet and a bidet, according to claim 4, **characterised in that** the means for actuation and regulation of the water flow and temperature and the means for spraying said flow designed to perform the bidet function situated in the functional unit remain concealed in the not-in-use position, to which effect they are covered by an articulated lid which, being practicable, remains open during execution of the operative functions of the functional unit, without there being any interaction between this articulated lid and the seat and/or lid of the toilet body contemplated therein.
6. Sanitary apparatus serving as a toilet and a bidet, according to claim 4, **characterised in that** the means for spraying the water flow, which are positioned at will by the user according to the need of the moment, allow active positioning, in which case the functional unit projects and is oriented at the user, and an inactive positioning, in which case the spraying means rest without being oriented at the user and housed in the space of the functional unit without projecting from it and below the articulated lid of said functional unit.
7. Sanitary apparatus serving as a toilet and a bidet, according to claim 4, **characterised in that** the functional unit comprises a supporting base on the upper rear part of the toilet body, incorporating regulation valves for the flow of cold and hot water, whether one for each water inlet, or one single thermostatic mixing valve for the two water inlets used to adjust the temperature of the water to be used, and a nozzle for spraying the water in the treatment with the bidet, which is situated in an area of the supporting base comprised between two regulation valves or to the side of a thermostatic mixing valve, all of the above covered by a lid related to the aforesaid supporting base.
8. Sanitary apparatus serving as a toilet and a bidet, according to claim 4, **characterised in that** the cold water and hot water pipes that cross, through appropriate holes and vertically, the horizontal area of the rear part of the toilet body can share, in one case, the space for the holes designed for the mounting bolts securing the seat and lid of the toilet body.

9. Sanitary apparatus serving as a toilet and a bidet, according to claim 4, **characterised in that** the seat and lid assembly of the toilet body present a rear shape that does not interfere in their tilting with the functional unit, which allows the location and use of the aforesaid bidet functional unit with the assistance of the aforesaid seat.
10. Sanitary apparatus serving as a toilet and a bidet, according to claim 1, **characterised in that** the water actuation and regulation means are connected to the means for spraying the water flow through a connection pipe that runs below a horizontal upper area of the rear part of the toilet body and across a segment included in the space existing between the holes for securing the seat and lid assembly used to cover the upper part of the toilet body.
11. Sanitary apparatus serving as a toilet and a bidet, according to claim 1, **characterised in that** the connection pipe between the water actuation and regulation means and the means for spraying the water flow consist of an aerial pipe that runs externally below the upper rear part of the toilet body.
12. Sanitary apparatus serving as a toilet and a bidet, according to claim 1, **characterised in that** the connection pipe between the water actuation and regulation means and the means for spraying the flow of water consist of a pipe that runs inside the rear upper part of the toilet body.
13. Sanitary apparatus serving as a toilet and a bidet, according to claim 12, **characterised in that** the internal connection pipe that links the actuation and regulation means with the means for spraying the water flow does not affect the structure of the pipes through which the water for rinsing the inside of the toilet circulates and is sprayed from the flushing of a cistern or hydraulic network which is independent from the aforesaid actuation and regulation means.
14. Sanitary apparatus serving as a toilet and a bidet, according to claim 1, **characterised in that** the means for spraying the water flow are disposed in a point that is off-centre in respect of the edge of the inner part of the toilet body corresponding to the upper rear part thereof.
15. Sanitary apparatus serving as a toilet and a bidet, according to claim 1, **characterised in that** the means for spraying the water flow are disposed in a point that is centred in respect of the inner part of the toilet body corresponding to the upper rear part thereof.
16. Sanitary apparatus serving as a toilet and a bidet, according to claim 1, **characterised in that** the ac-

tuation and regulation means and the means for spraying the water flow can be covered during inactive periods by a covering lid which, while being independent of the assembly consisting of the seat and lid of the toilet body, is superficially coplanar with said lid of the toilet body. 5

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FIG. 1

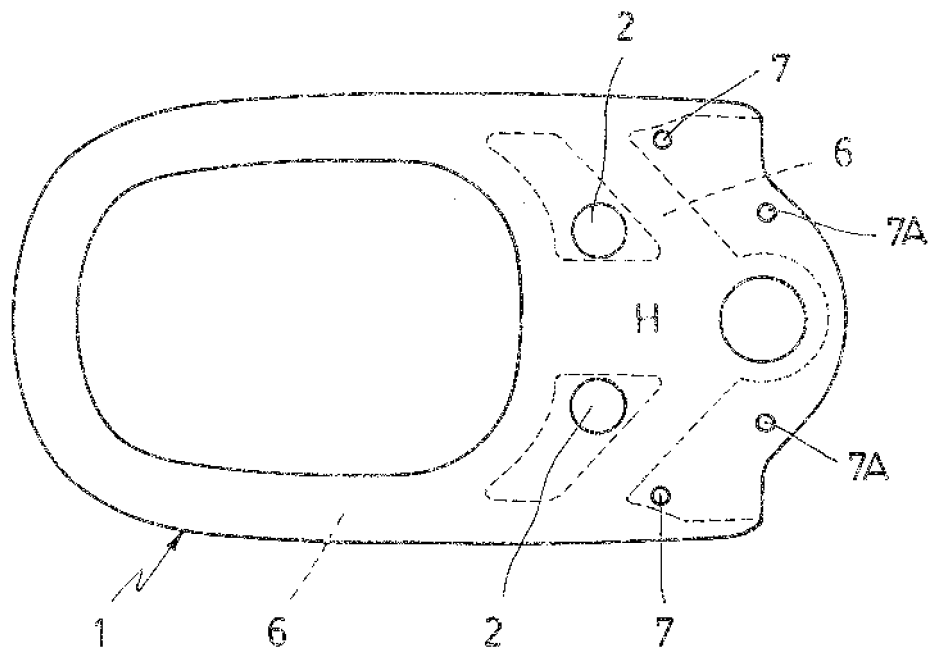


FIG. 2

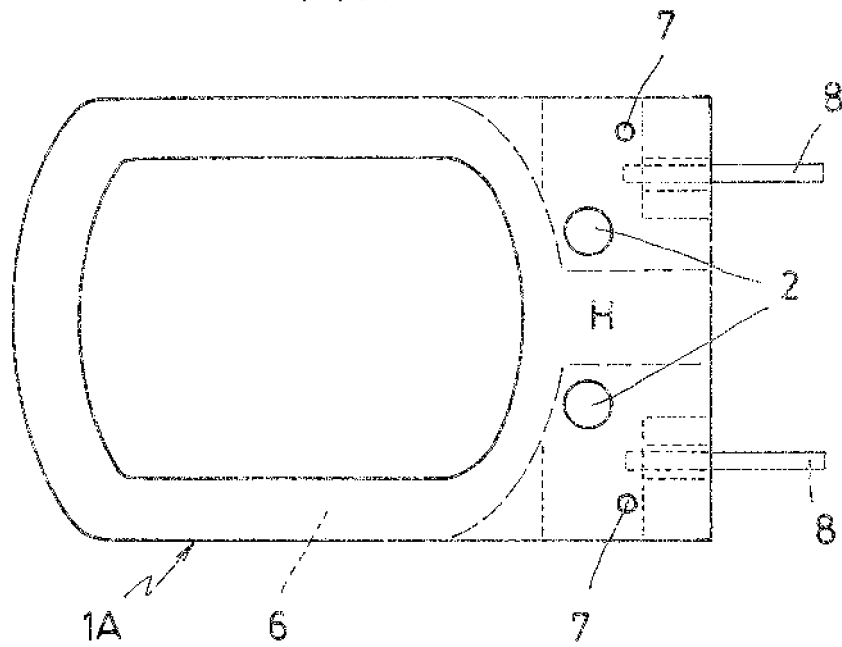


FIG. 3

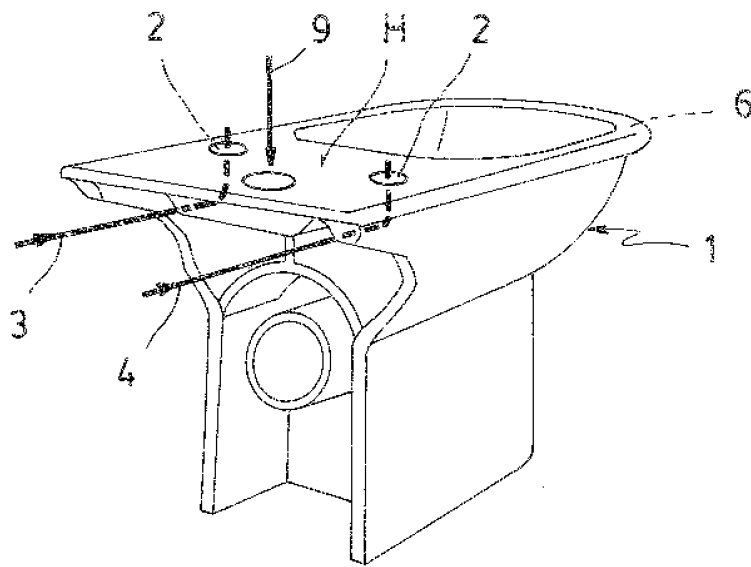


FIG. 6

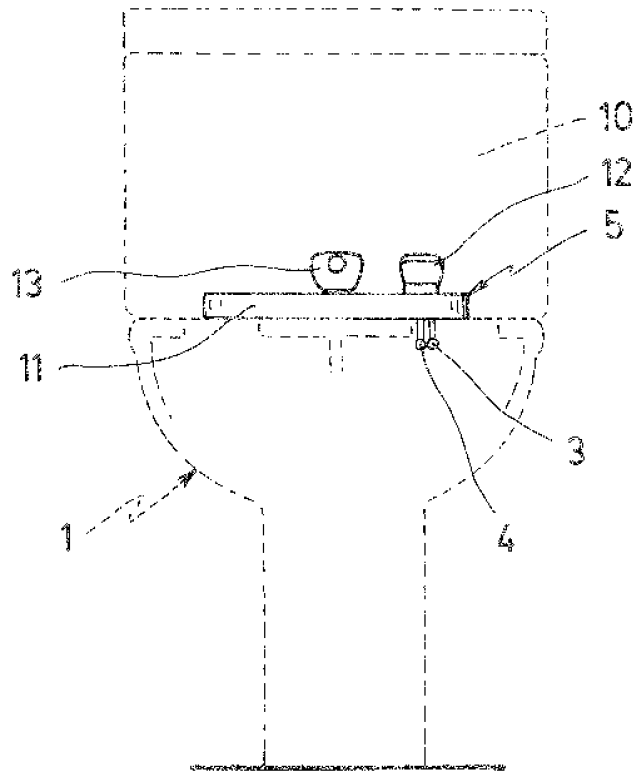


FIG. 4

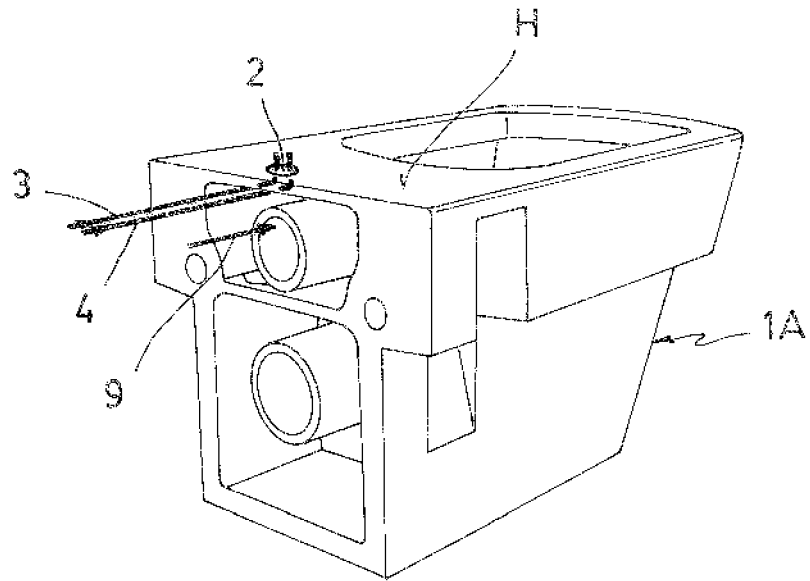
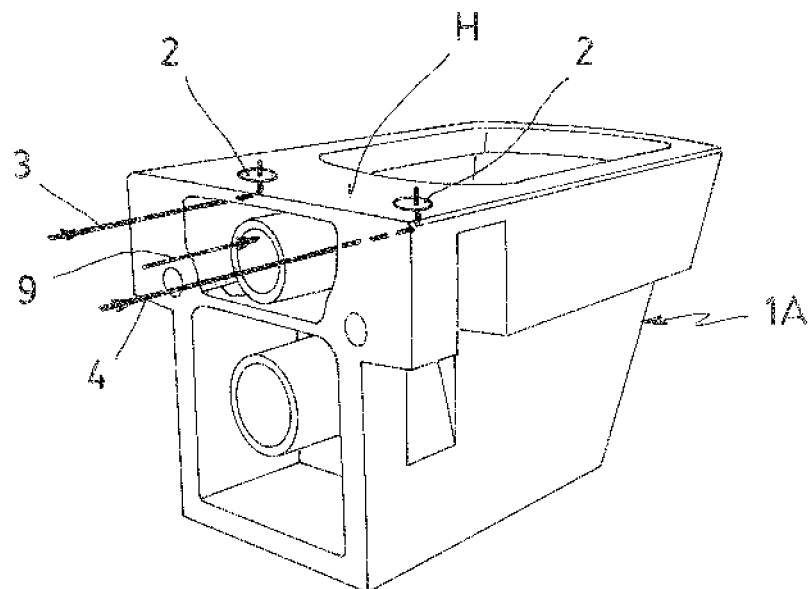
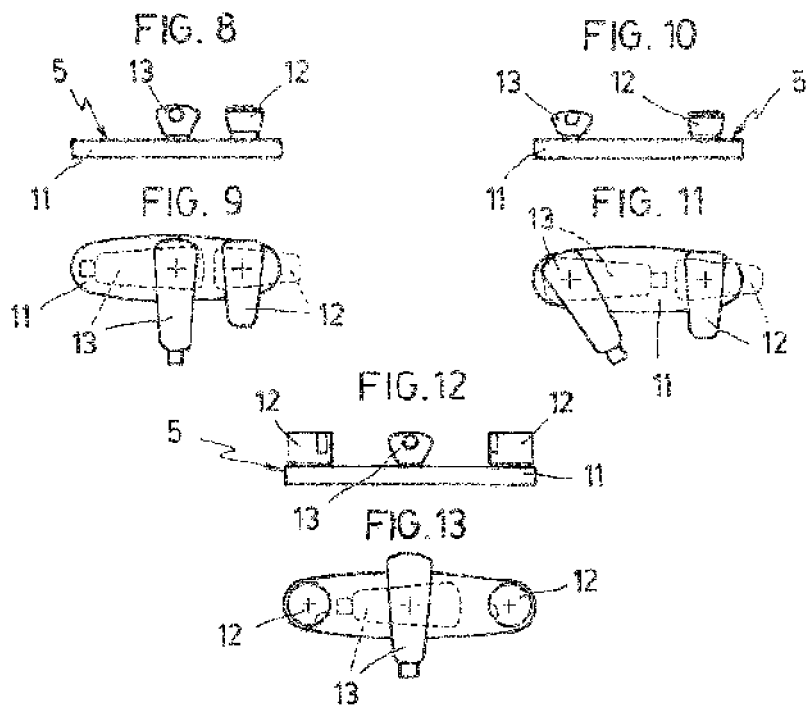
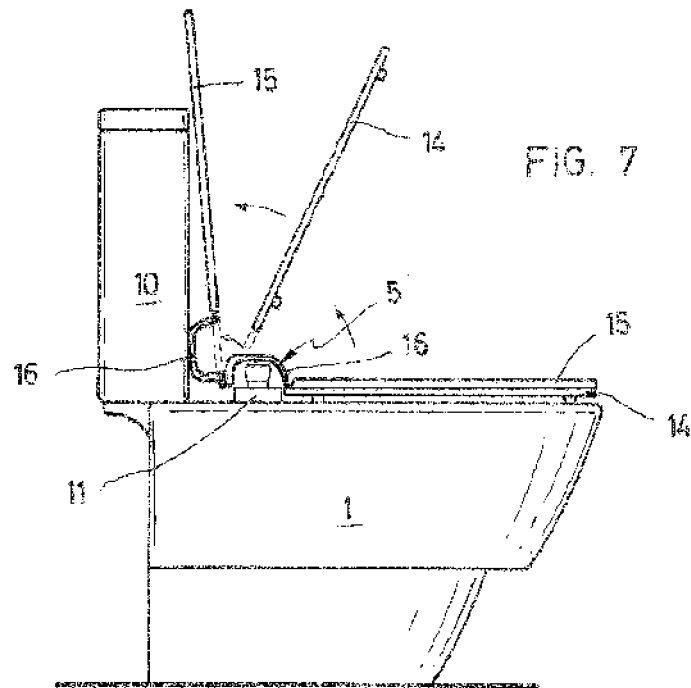
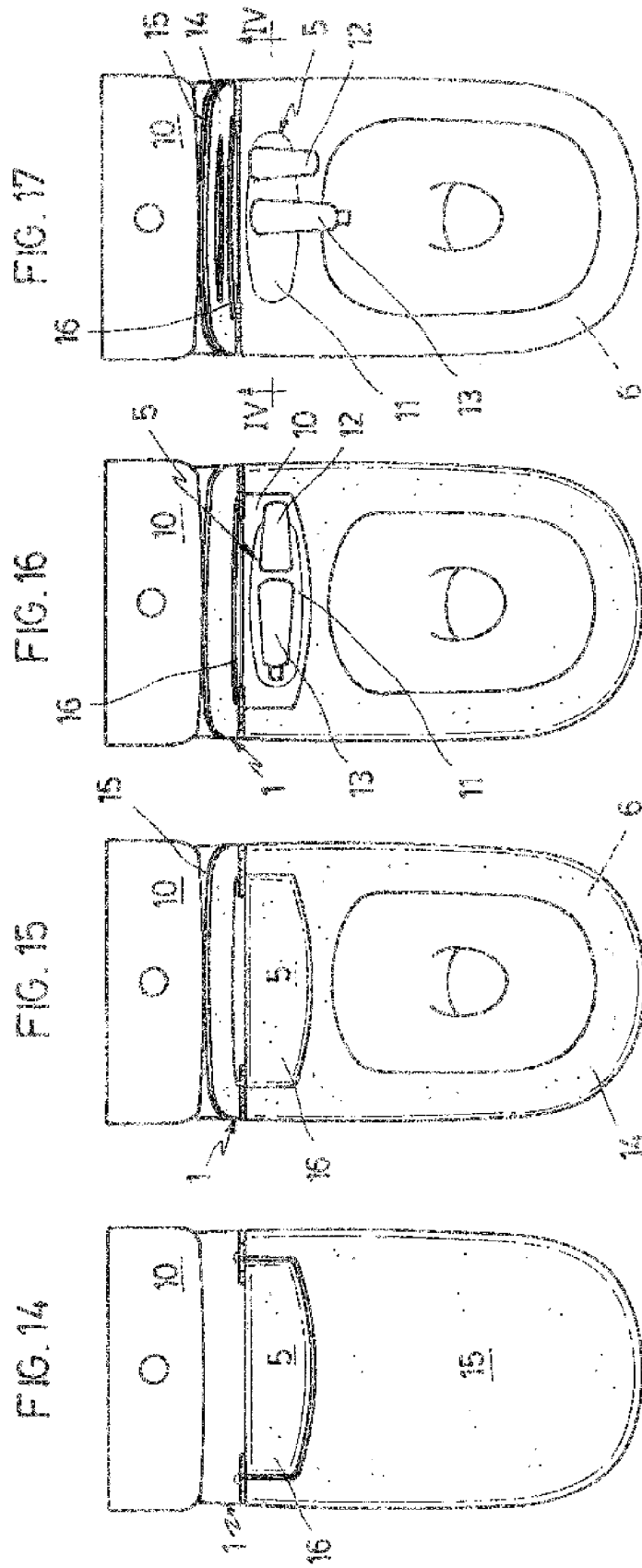


FIG. 5







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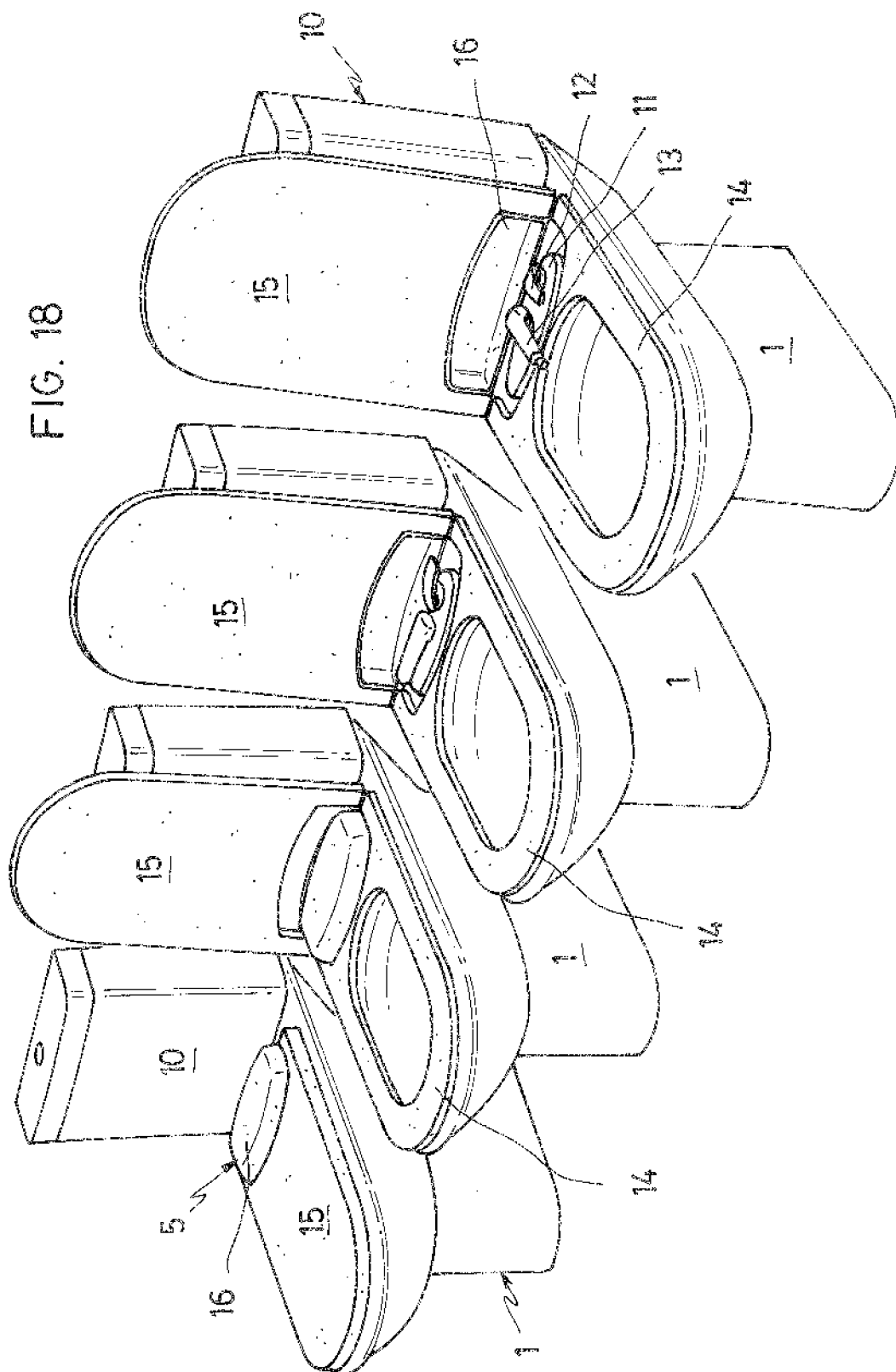


FIG. 19

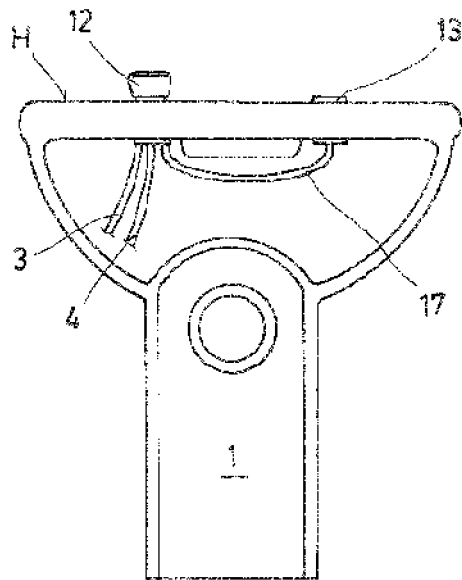


FIG. 20

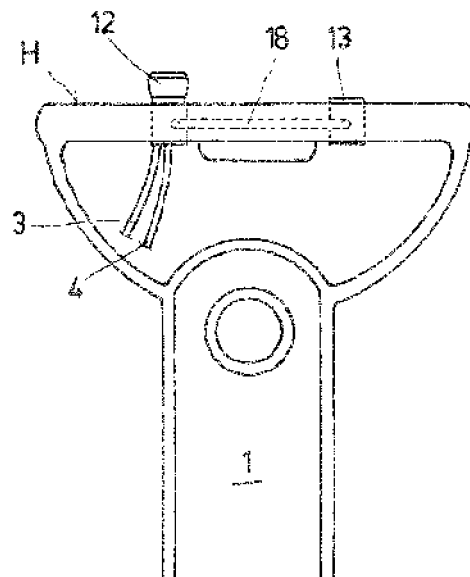


FIG. 21

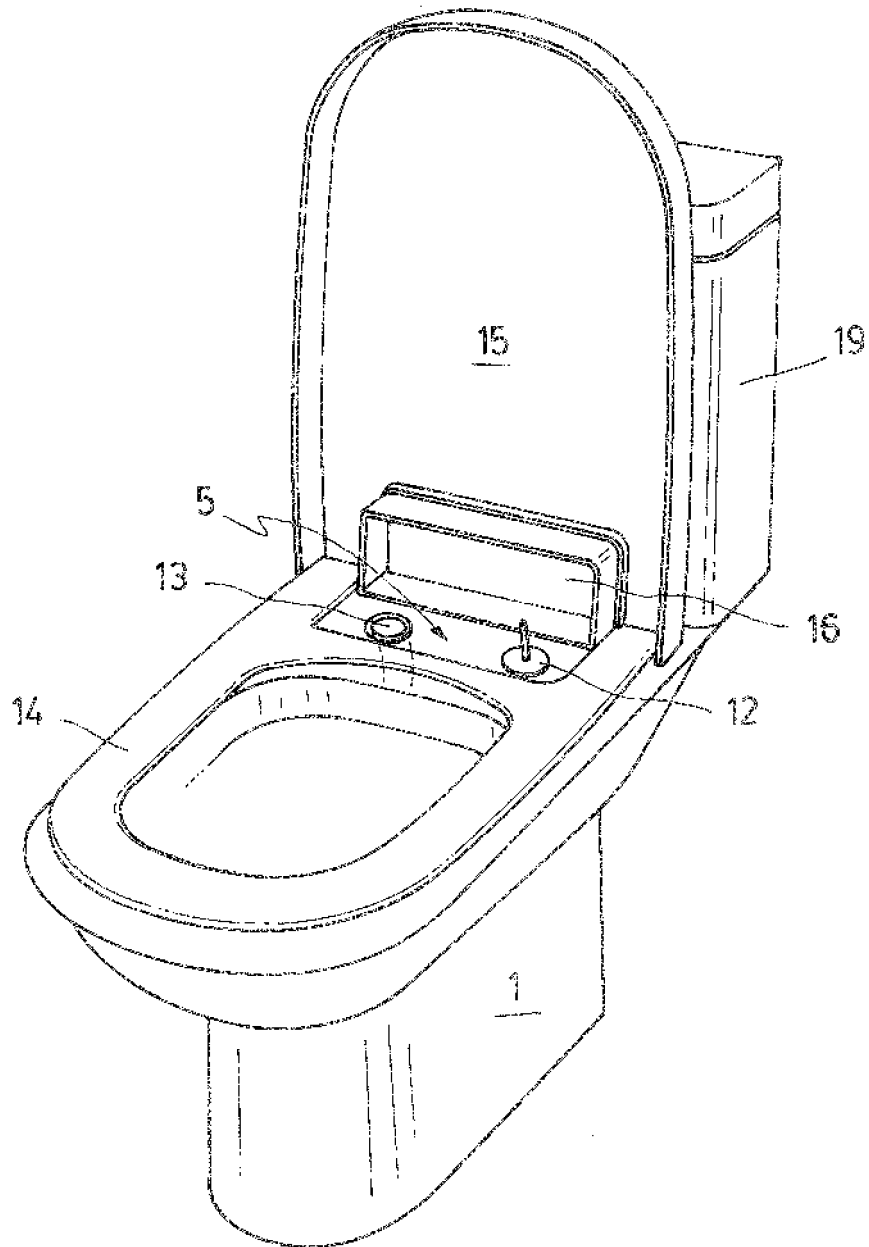


FIG. 22

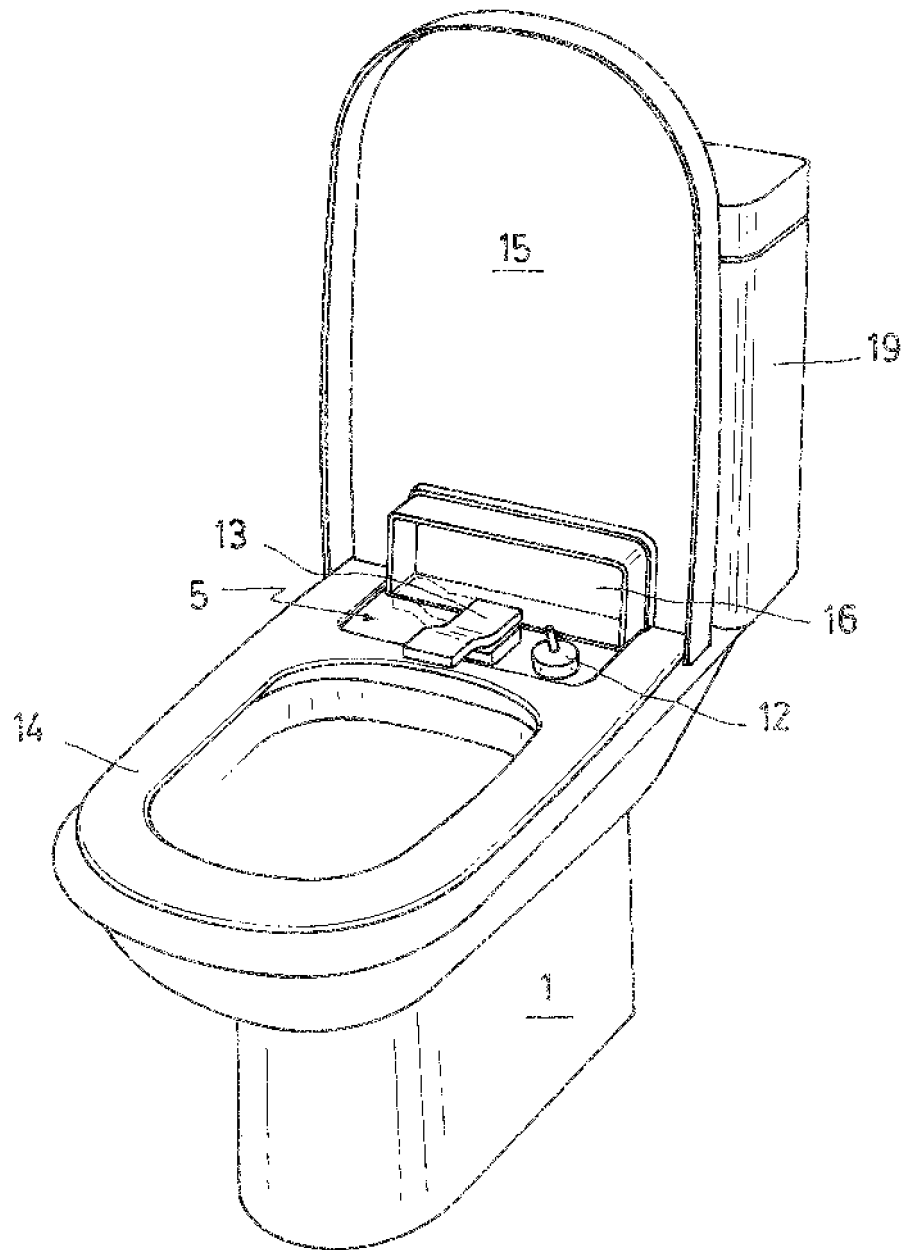
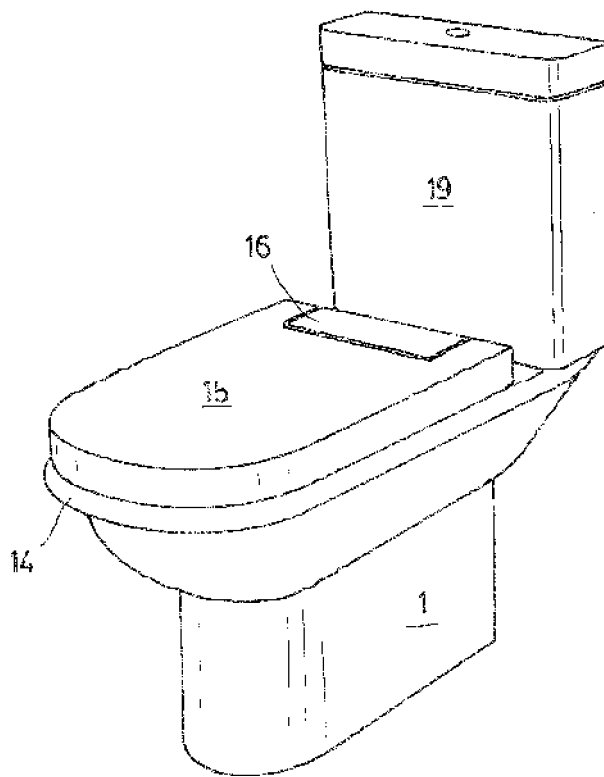


FIG. 23



INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2011/070330

A. CLASSIFICATION OF SUBJECT MATTER

A47K4/00 (2006.01)

E03D9/08 (2006.01)

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A47K, E03D

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

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

EPODOC, INVENES

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1489239 A1 (LISIEWICZ LECH) 22/12/2004, figures 1 - 4. paragraphs[1 - 6];	1-4,6,8,10-12, 14-15
Y		7
Y	CA 1086453 A1 (LUTZ RAINER) 30/09/1980, page 7, line 7 - page 12, line 20; figures 1 - 7.	7
A		1,4,5
A	EP 1959061 A2 (DIDONE GINO) 20/08/2008, figures 1 - 8. paragraphs[30 - 54];	1,5-7
A	US 4334329 A (MIYANAGA FRANK H) 15/06/1982, lines 10 - 20; figures 1 - 4.	1, 10-12
A	WO 9210622 A2 (TRIPEPI MARIO) 25/06/1992, figures 1 - 16. paragraphs[2 - 8];	1-3, 14

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

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance.	
"E" earlier document but published on or after the international filing date	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"O" document referring to an oral disclosure use, exhibition, or other means.	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other documents , such combination being obvious to a person skilled in the art
"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

Date of the actual completion of the international search
11/10/2011

Date of mailing of the international search report
(17/10/2011)

Name and mailing address of the ISA/

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S. De Miguel De Santos

Telephone No. 91 3493270

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2011/070330

C (continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of documents, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 3705691 A1 (UHLE KARLHEINZ DR) 01/09/1988, Abstract from DataBase WPI. Retrieved of Epoque. Número of Acceso, an:1988-251185.	1, 4-7
A	DE 2530913 A1 (LUTZ RAINER) 20/01/1977, Abstract from DataBase WPI. Recuperada of Epoque. Accession Number an:1977A6781Y	1,4,7

Form PCT/ISA/210 (continuation of second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES2011/070330

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

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

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 9, 13
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

Lack of technical features.

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

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

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

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

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

EP 2 601 872 A1

INTERNATIONAL SEARCH REPORT

International application No.

PCT/ES2011/070330

Information on patent family members

Patent document cited in the search report	Publication date	Patent family member(s)	Publication date
EP1489239 A	22.12.2004	EP20040460023 PL360722 A	03.06.2004 27.12.2004
CA1086453 A	30.09.1980	DE2622131 ABC FR2352116 AB JP53007950 A DD130834 A DE2714814 ABC CH615092 A CH621377 A IT1192230 B	01.12.1977 16.12.1977 24.01.1978 10.05.1978 05.10.1978 15.01.1980 30.01.1981 31.03.1988
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Form PCT/ISA/210 (patent family annex) (July 2009)

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- ES 201448 [0003]
- ES 1037265 [0003]
- ES 182663 [0003]
- ES 287561 [0003]
- ES 1022162 [0003]
- ES 2015038 [0003]
- ES 128971 [0003]
- ES 10530780 [0003]
- ES 1068429 [0003]
- ES 1068056 [0003]
- ES 2289387 [0003]
- WO 2010027157 A [0003]