

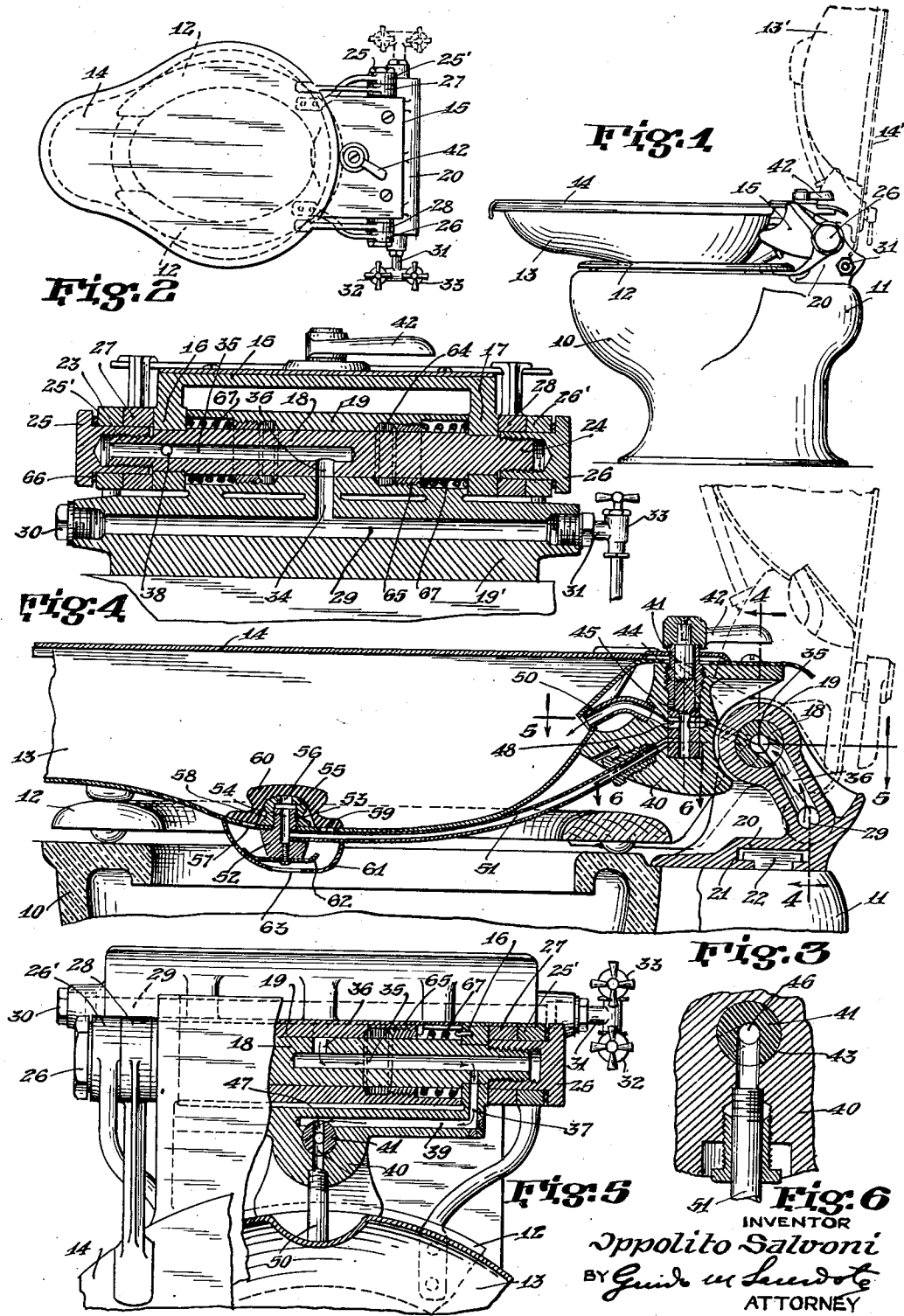
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WATER SUPPLY ARRANGEMENT FOR BIDETS

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WATER SUPPLY ARRANGEMENT FOR
BIDETS

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15 Claims. (Cl. 4—7)

This invention relates to sanitary appliances and more particularly refers to improvements in bidets adapted to be mounted on top of a water closet.

5 In three co-pending applications for patent entitled "Combined toilet and bidet," Serial No. 6062, now Patent 2,036,984, "Bidet attachment for water closets," Serial No. 12,239, now Patent 2,036,985, and "Combined water closet and bidet,"
10 Serial No. 23,073, filed May 22, 1935, respectively, I have described and claimed bidets adapted to be used in combination with an ordinary water closet, and special combinations of water closet and bidet, so designed as to afford ample room
15 for the performance of the service for which the bidet is intended.

In designing these types of bidets, I have found it desirable for the sake of appearance as well as convenience, to embody in their structure a
20 simple and reliable system of water supply, as well as improved means for discharging the water from the bidet itself.

The primary object of the present invention is to provide a novel and improved arrangement
25 for supplying water to a bidet hinged onto a water closet bowl, said bidet being preferably mounted coaxially with the seat.

Another object is to provide, in combination with a bidet adapted to be mounted on top of a water closet, a novel and improved system of
30 valves and conduits permitting of selectively directing water into the bidet so as to fill the bidet or produce an upwardly directed spray from the bottom thereof.

35 A further object is to provide a water supply arrangement for a bidet of the character specified, designed so as to permit the connection to the water supply system to be made either at the right or at the left, in order to meet different
40 conditions such as may exist with respect to the relative positions of a water closet and an adjoining wall.

A still further object is to provide, in a bidet of the character specified, novel and simple means
45 for controlling the draining of water therefrom.

Other objects and advantages of my invention will more fully appear as the description proceeds and will be set forth and claimed in the
50 appended claims.

My invention is illustrated by way of example in the accompanying drawing, in which:

Fig. 1 is a side view in elevation of a water closet bowl provided with a seat equipped with a bidet structure embodying my invention;

55 Fig. 2 is a plan view thereof;

Fig. 3 is a fragmentary vertical longitudinal section on an enlarged scale showing the way of mounting the bidet in position and supplying water thereto;

Fig. 4 is a vertical cross-section of the same 5 through line 4—4 of Fig. 3;

Fig. 5 is a fragmentary plan view partly sectioned, of the bidet mounting and water supply arrangement, through line 5—5 of Fig. 3; and

Fig. 6 is a fragmentary sectional view on an 10 enlarged scale through line 6—6 of Fig. 3.

The main features of the present invention were already described but not claimed in my co-pending application Serial No. 23,073 above mentioned, except that the drawing pertaining to 15 the present application illustrates a somewhat different and improved construction.

Referring to said drawing, 10 designates a water closet bowl made integral with the usual rearwardly extending portion 11, on which is hinged 20 supported seat 12. The bidet 13 consists of a basin-like structure which is also pivotally mounted at the rear and can be moved from the position on top of toilet seat 12, shown in full lines in Fig. 1, to the position 13', shown in dotted 25 lines in the same figure. The bidet is preferably provided with a cover 14, also pivotally mounted and movable independently of the bidet to the position shown in dotted lines at 14' in Fig. 1.

The coaxial pivotal mounting of the seat, bidet, 30 and cover is clearly illustrated in Figs. 2, 4, and 5, where it is seen that the bidet 13 is carried by a bracket 15, rearwardly extending therefrom, said bracket having two depending ears 16, 17, one at each side thereof, fixed onto a pivotal 35 shaft 18.

Said shaft is rotatable within a support 19, upwardly extending from the rear extension 11, the base plate 20 of said support being shown provided with a slot 21, through which can be in- 40 serted the head 22, of the bolts securing said support onto the bowl.

At each end, shaft 18 is formed with a threaded extension 23, 24, on which is screwed a nut such as 25, 26, said nuts in their forming pivotal sup- 45 ports for arms 25, 26, carrying the seat 12, and for arms 27, 28, carrying the cover 14.

The lower portion 19' of the support 19, is shown provided with a passage 29, extending from one side of the support to the other, one end 50 of said opening being closed by a plug 30 and the other end being provided with a fitting 31, which can in its turn be connected to sources of cold and hot water supply by means of valves 32, 33.

Plug 30 and fitting 31 are interchangeable, so 55

that the water connection can be made at either side of the support 19, in order to facilitate the installation of the device where the water closet is close to the wall, which wall in practice can be either at the right or the left of the water closet bowl.

Passage 29, communicates with the space housing pivotal shaft 18, by means of a branch passage 34. Pivotal shaft 18 is bored from one of its ends to a point somewhat beyond branch passage 34, so as to provide an axial passage 35, which can be reached by the water coming through passages 29, 34. To this end, pivotal shaft 18 is also provided with a radial opening 36, extending from passage 35 to the periphery of said shaft, said opening being adapted to register with passage 34, when the bidet is in its lowered position, shown in Fig. 3. It is thus apparent, that when the bidet is raised to the position in dotted lines at 13' in Fig. 1, shaft 18 acts as a cock closing the outlet of passage 34.

Water thus admitted to passage 35 will reach the bidet by way of bracket 15, one of the ears 16, of said bracket, being provided with a passage 37, registering with a radial passage 38, extending from passage 35, to the periphery of shaft 18.

Said passage 37, extends at 39, in a transversal direction to a central block 40, of bracket 15, said block forming the body of a valve comprising a rotatable member 41, actuated by a handle 42, said rotatable member being inserted in a housing 43, provided in block 40, and being retained in position by a threaded gland 44. The tightness of the valve structure is assured by means of a packing 45, compressed by said gland.

The lower end of member 41, is provided with an axial opening 46, which is in its turn provided with a radial inlet 47, registering with extension 39 of passage 37. Said opening 46, is furthermore provided with two angularly and longitudinally displaced radial outlets 48, 49, adapted to register with an inlet 50, discharging into the bidet from the upper portion thereof and a tubular inlet 51, discharging into the bidet from the bottom thereof, respectively.

In one of its angular positions, shown in Fig. 3, rotatable member 41 connects inlet 50 to the water supply circuit, so that if valves 32, 33 are opened, water will be discharged into the bidet through inlet 50 so as to fill the bidet. In its other angular position, shown in Figs. 5, 6, rotatable member 41 connects the water supply system with tubular passage 51, at the same time closing inlet 50.

The purpose of this arrangement is to either discharge water downwardly into the bidet in order to fill it, or to discharge water from the bottom of the bidet in the form of an upwardly directed spray. The tubular passage 51, leads to a block 52, formed with a threaded portion 53, inserted through the bottom of the bidet and upwardly extending therefrom, said threaded portion being provided with a central passage 54, communicating with tubular passage 51, said passage 54 being open at the upper end.

Block 52 is retained in position by means of a gland nut 55, screwed over part 53, said gland nut being provided with an outlet 56, registering with passage 54.

The bottom of the bidet is also provided with a set of perforations 57, surrounding fitted gland nut 55, and said gland nut is formed with an annular recess 58, which has the double purpose of retaining in position the rubber washer 59, shown in Fig. 3, and to provide a convenient means for attaching a rubber hose when it should be de-

sired to use the water spray for internal cleansing.

To this end rubber washer 59, which has the function of covering perforations 57, is formed with a button portion 60 adapted to be mounted over and retained by gland nut 55, said button portion 60 providing a convenient means for handling the washer 59, for the purpose of removing it when it is necessary to drain the contents of the bidet.

In order to prevent splashing, perforations 57 are covered by shell 61, at the lower side of the bidet, said shell being provided with a deflecting plate 62, and a central discharge opening 63. By virtue of this arrangement, the water issuing from perforations 57 is deflected and combined into a single stream which will issue through discharge opening 63.

In order to prevent leakages the housing of shaft 18 is provided with packings such as 64, held in position by threaded bushings such as 65, and gaskets 66 are inserted under the head of nuts 25, 26.

The bidet should be prevented from falling down on the seat with too great a force, and should preferably be retained in its inoperative position. To this end one or two torsional springs such as 67, are inserted within support 19, around shaft 18, said spring or springs being attached at one end to the support 19 and at the other end to arm 16 or 17 or both, of bracket 15. Said spring or springs are designed so as to normally retain the bidet and its cover in the raised position shown in dotted lines in Fig. 1 and to offer a certain resistance to the lowering of the bidet, said resistance, however, being just about counter-balanced by the gradually increasing leverage of the bidet when the bidet is lowered in position. In this manner a smooth and easy action without any damaging effects on the water closet seat and free from noise is assured.

It will be observed that under normal conditions the prevention of leakages does not solely depend upon the packing of articulated joints, since when the bidet is not in use, water is positively cut off from the bidet by the operation of valves 32, 33. Said valves as a rule are opened only when the bidet is in its lowered position, and therefore no material pressure is exerted by the water against the packing.

The constructional detail of the invention may vary from those shown without departing from the inventive idea; the drawing should therefore be understood as being intended for illustrative purposes only and not in a limiting sense.

I accordingly reserve the right to carry my invention into practice in all those ways and manners which may enter, fairly, into the scope of the appended claims.

I claim:

1. In a device of the character described, comprising a bidet and a support therefor, a pivotal mounting for said bidet, means for admitting water to said bidet, and valve means operatively associated with said bidet controlling said water admitting means.

2. In a device of the character described, a bidet, a support therefor provided with a water passage, means for supplying water to said passage, and a member pivotally mounted in said support, carrying said bidet, said member having a passage adapted to lead water from said first mentioned passage to the inside of said bidet, said second mentioned passage registering with said first mentioned passage when said bidet is moved to operative position, said member closing said

first mentioned passage when said bidet is moved to its inoperative position.

3. In a device of the character described, comprising a bidet, a support therefor, and a source of water supply, a pivotal mounting for said bidet adapted to function as a valve establishing a connection between said source of water supply and the inside of said bidet when said bidet is moved to operative position, and cutting off said connection when said bidet is moved to its operative position.

4. In a device of the class described, a bidet, a support therefor on which said bidet is pivotally mounted, means for leading water to said bidet through said support, said support being connectable to a source of water supply at either end thereof, and means for plugging the end of said support which is not connected to the source of water supply.

5. In a device of the character described, comprising a bidet and a support therefor, a member pivotally mounted on said support, carrying said bidet, said member being provided with a water inlet and with two outlets, one leading to a filling and the other to a spray discharge outlet in said bidet, and means for selectively connecting either member outlet to said inlet.

6. In a device of the character described, comprising a bidet and a support therefor, a member pivotally mounted on said support, carrying said bidet, said member being provided with a water inlet and with two outlets, one leading to a filling and the other to a spray discharge outlet in said bidet, and a multiple way valve adapted to selectively connect either member outlet to said inlet.

7. In a device of the character described, a bidet provided with a filling discharge outlet and a spray discharge outlet, a support therefor provided with a water passage connectable to a source of water supply, a member pivotally mounted on said support, carrying said bidet, said member being provided with a water inlet communicating with said passage when said bidet occupies its operative position, and with two outlets leading to said filling and spray discharge outlets respectively, and means for selectively connecting either member outlet to said inlet.

8. In a device of the character described, a bidet provided with a filling discharge outlet and a spray discharge outlet, a support therefor provided with a water passage connectable to a source of water supply, a member pivotally mounted on said support, carrying said bidet,

said member being provided with a water inlet communicating with said passage when said bidet occupies its operative position, and with two outlets leading to said filling and spray discharge outlets respectively, and means for selectively connecting either member outlet to said inlet, said member closing said passage when said bidet occupies its inoperative position.

9. In a device of the character described comprising a bidet, a support therefor, and means for pivotally mounting said bidet on said support, means preventing undue acceleration in the movement of the bidet when lowered from its inoperative to its operative position.

10. In a device of the character described comprising a bidet, a support therefor, and means for pivotally mounting said bidet on said support, means preventing undue acceleration in the movement of the bidet when lowered from its inoperative to its operative position, said last mentioned means comprising a spring interposed between said pivotal mounting means and said support.

11. In a device of the character described comprising a bidet, a support therefor, and means for pivotally mounting said bidet on said support, means preventing undue acceleration in the movement of the bidet when lowered from its inoperative to its operative position, said last mentioned means comprising a spiral spring concealed within said support, interposed between said pivotal mounting means and said support.

12. In a device of the character described, a bidet having a water inlet comprising a gland shaped discharge member adapted for connection to a rubber tube.

13. In a device of the character described, a bidet having a spray discharge nozzle at the bottom thereof, openings surrounding said nozzle for draining water from said bidet, and a rubber washer having a button adapted to be removably mounted over said nozzle, forming a closure for said openings.

14. In a device of the class described a bidet, a support therefor on which said bidet is pivotally mounted, and means for leading water to said bidet through said support, said support being connectable to a source of water supply at each end thereof.

15. In a device of the character described, a bidet having a spray discharge nozzle at the bottom thereof, openings surrounding said nozzle for draining water from said bidet, and hand operable means controlling said openings.

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