June 21, 1966 M. A. ARENSBERG 3,256,531

BIDET ATTACHMENT

Original Filed June 12, 1962

FIG. 1

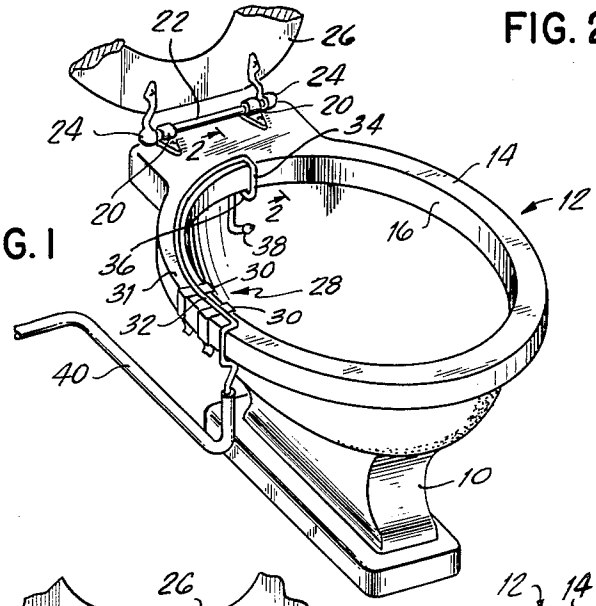


FIG. 2

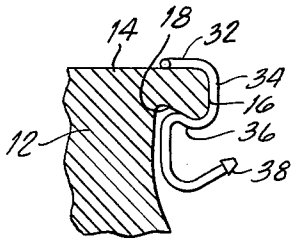
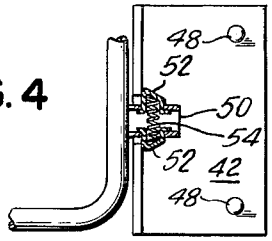


FIG. 4



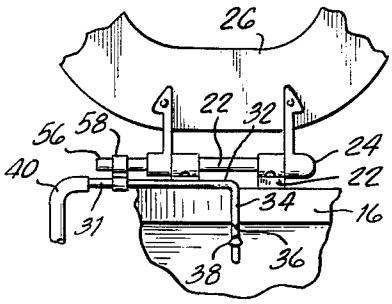


FIG. 5

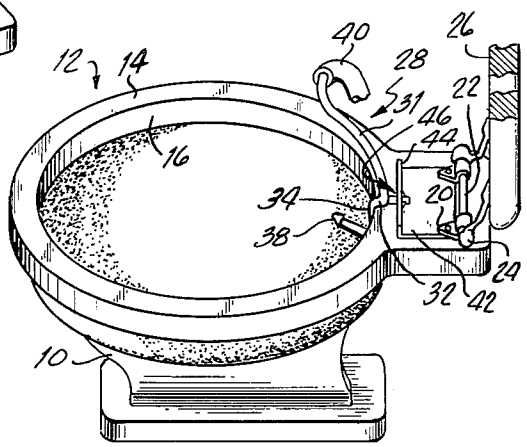


FIG. 3

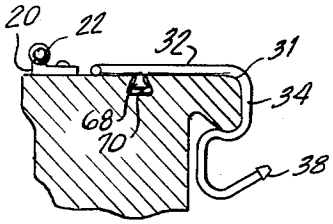


FIG. 8

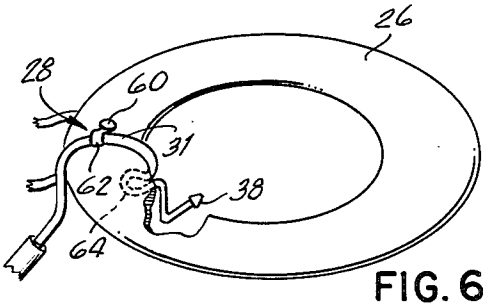


FIG. 6

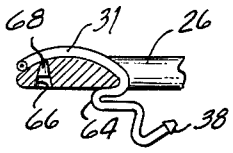


FIG. 7

United States Patent Office 3,256,531 Patented June 21, 1966

3,256,531

BIDET ATTACHMENT

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Continuation of application Ser. No. 201,961, June 12, 1962. This application July 22, 1964, Ser. No. 385,830
10 Claims. (Cl. 4—7)

This is a continuation of the copending application—Serial No. 201,961—filed June 12, 1962, now abandoned.

This invention relates to improvements in lavatory sanitary fixtures and particularly to devices for attachment to toilet bowls for cleansing and irrigating the anal and vaginal areas of the user.

Such devices have hitherto possessed extremely complicated and unsightly structures while failing to meet appropriate sanitary standards.

An object of the present invention is to provide a simple sanitary device of the type described which is easily attachable to a standard toilet while nevertheless affording a thorough cleansing action and yet being essentially unexposed.

Another object of the invention is to provide an attachment of the type described which can be readily maintained in its position upon the bowl and minimize vibrations and other undesirable responses to the flow of liquid therethrough.

To this end and according to a feature of this invention there is provided for toilet bowls having a thickened upper rim portion and a seat portion hingedly supported at the rear for covering the rim portion, attachment means adapted to be secured to one of the portions; and there is secured to said attachment means for conducting the flow of irrigating liquid, tube means having a hose connector section adapted to be connected to a source of pressurized cleansing liquid, and a clip section communicating with said hose connector section and adapted to engagingly conform to the cross-sectional shape of the one portion at the rear of the bowl so as to resiliently secure to said one portion. A nozzle adapted to communicate with the clip section is secured thereto below the one portion and pointed up at the area to be irrigated.

According to another feature of this invention, the device is secured to the upper rim of the bowl. According to still another feature of the invention, the device is secured to the seat of the toilet bowl. The cleansing device may be provided with a fixed member for permanent attachment to this seat or rim portion of the toilet bowl and with a resilient portion supporting the two means which attach to the fixed portion.

The above and other features and objects of the invention will appear more clearly from the following detailed description, when taken in connection with the accompanying drawings wherein:

FIG. 1 is a perspective view of a toilet bowl illustrating the sanitary device according to the invention resiliently secured to the toilet bowl;

FIG. 2 is a cross-sectional view of the upper rim at the rear of the toilet bowl in FIG. 1 together with a portion of the tube forming a part of the sanitary device according to the invention, as shown in FIG. 1;

FIG. 3 is a perspective view of a toilet having mounted thereon another embodiment of the sanitary device according to the invention;

FIG. 4 is a detail plan view of the attachment and tube members of the sanitary device in FIG. 3;

FIG. 5 is a detail front elevation of another embodiment of the sanitary device according to the invention; and

FIG. 6 is a perspective view of yet another embodiment of the sanitary device according to the invention.

FIGS. 7 and 8 are cross-sectional views of still another embodiment of the sanitary device according to the invention.

In FIG. 1 a toilet bowl 10 possesses an upper rim generally designated 12 having an upper surface 14 and an interior vertical surface 16. The rim 12 joins the remainder of the bowl with a receding interior surface 18 seen in FIG. 2. Forming a part of the entire bowl assembly are a pair of support members 20 holding a rod 22 which in turn supports, by means of bearings 24 a wooden seat 26. The members 10 and 26 both form a part of the bowl.

The sanitary device is generally designated 28 and mounted by means of clips 30 to the side of the rim 12. The device comprises the tube 31 which may be made of stainless steel or other suitable material which is soldered or welded or otherwise joined to the clips 30. The tube 31 comprises a number of integral communicating sections of which the section 32 extends from the side of the bowl where it is joined to the clips 30 to the rear of the bowl along the rim thereof and toward the center of the bowl at the rear. There it joins with the vertical depending section 34 passing downwardly along the surface 16 at the rear of the bowl. Section 34 joins with the bottom section 36 engaging the surface 18 at the bottom of the rim at the rear of the bowl. (See FIG. 2.) The section 36 terminates in an upwardly directed sweep and a nozzle 38 pointed at the area of the user to be irrigated. The sections 32, 34 and 36 form a clip which resiliently secures onto the rim at the surraces 14, 16 and 18. This clip portion is sufficiently narrow between the sections 32 and 36 to securely hold the tube 31 upon the rim. This relationship is known as a force fit.

The other end of the tube 31 extends at the portion beyond the clips 30 outwardly from the bowl and connects to a rubber, plastic or other elastic hose for connection to a source of cleansing fluid such as for example, water. Any source of cleansing fluid is contemplated by the invention although water is cheapest and preferred. The invention contemplates heating means for the cleansing fluid either before the tube 40 or along the tube 31. Conventional valve means are contemplated along the flow of cleansing fluid.

In the usual manner, the seat 26 is provided with rubber supports which engage the rim 12 to raise the seat slightly from the rim when the seat is articulated downwardly at the bearings 24 to cover the rim. A toilet seat cover is contemplated although not shown.

Thus when the seat is lowered sufficient room remains between it and the rim so as not to harm the tube 31 and the remainder of the sanitary device 28. A user may rest upon the seat in the usual manner and when desired open the valve (not shown) to permit the flow of pressurized fluid from the pressurized source through the tube 40, the tube 31 comprising sections 32, 34 and 36, and through the nozzle 38. The nozzle 38 is conveniently aimed at the part of the user to be irrigated. The nozzle may have means for spraying the liquid over a larger area. The invention also contemplates the nozzle including an atomizing device to which is connected by means of a tube (not shown) a source of medicinal substance. The medicinal substance is drawn by the force of the jet passing through the nozzle toward the body of the user in mixture with the cleansing liquid.

The nozzle is also adjustable to vary the force of the jet.

In FIG. 3 the toilet bowl 10 supports upon its rim 12, at the rear thereof, another embodiment of the sanitary device 28. The tube 31 connects to the flexible tube 40 to a source of pressurized cleansing fluid. The respective sections 32, 34 and 36 again form a clip to the rear of the rim 12 and terminate in a nozzle 38 directed upwardly against the portion of the user to be irrigated. A bracket 42 standing upon the back of the rim 12 includes an upstanding plate 44 having cut therein a win-

dow **46**. (See FIGS. 3 and 4.) The bracket **42** is held onto the rim by the supports **20** which pass through holes **48** within the bracket.

The tube **31** connects to the bracket **42** by means of a blind stem **50** welded or otherwise suitably joined to the tube **31** at its section **32** and passing through the window **46**. A pair of radially extending plungers are biased outwardly by means of springs **54** within their interior and may be movable relative to the blind stem **50** upon which they are supported by two fingers squeezing them together. This permits the blind stem to be passed through the window while the plungers **52** are squeezed together and upon release of the plungers secures the blind stem and the rod **31** to the bracket. The plungers are tapered at their rear so that the assembly of the stem and the plungers may be simply pressed through the window **46** with the taper accomplishing the squeezing of the plungers. This is in effect a ratchet lock.

The embodiment of FIGS. 3 and 4 operate similar to the embodiment of FIGS. 1 and 2. It should be noted that the upstanding face **44** of bracket **42** must be sufficiently low to permit the seat **26** to be hingedly moved downwardly upon the rim **12**.

According to the embodiment illustrated in FIG. 5 the sanitary device **28** has its tube **31** secured to the rim **12** by virtue of the sections **32**, **34** and **36** forming a clip. In addition a bearing secured to the tube **31** and slipped over a shaft **56** holds the cleansing device so that the tube **40** may be connected to the tube **31** and to a source of cleansing fluid under pressure. The shaft **56** is an extension of the rod **22**, either integral or by way of connection. The bearing **58** may be secured to the shaft **56** resiliently or to the shaft **56** may secure temporarily to the bearing **24**. Both of these combinations are contemplated by the invention,

According to the embodiment of FIG. 6 a bracket **60** is affixed to the seat **26**. A resilient clip member **62** is secured to the tube **31** and detachably connects to the member **60**. The tube **31** possesses at one end a connection to a hose **40**. The other end of the tube **31** is twisted into a loop or hairpin structure **64** to form a clip at the inner rear of the seat **26**. It is understood that the bracket **60** is mounted on the rear of the seat. The clip thus formed between the upper portion of tube **31** and the loop **64** secures the device **28** upon the seat. The tube furthermore extends downwardly and terminates in a nozzle **38** aimed at the portion of the user to be irrigated.

The invention thus provides a sanitary device of extremely simple structure which is mounted removably from a toilet device and yet provides sufficient rigidity to pass cleansing fluid without vibration and to be almost totally inconspicuous. The tube **31** need extend down only so far as to provide the proper angle of jet for irrigation. Interference with the water level within the toilet bowl is thus positively avoided.

According to FIG. 7 the tube **31** secures partially onto the seat **26** by means of the bend **64**. In addition, an upwardly tapered hole **66** in the rear of the seat receives a clip **68** mounted on the tube **31** for further securing the tube **31** to the seat.

In FIG. 8 the tube **31** forms a clip from the sections **32**, **34**, and **36** for securing the tube to the rear of rim **12** (similar to that in FIGS. 1 to 5). However, according to FIG. 8, an upwardly tapered recess in the rear of the top surface **14** of the rim **12** receives the tube-mounted clip **68** further securing the tube **31**.

While various embodiments of the invention have been described in detail it will be obvious to those skilled in the art that the invention may be otherwise embodied without departing from the scope of the invention as set forth in the following claims:

What is claimed is:

1. For toilet bowls having a bowl portion and a hinged seat portion wherein each portion includes a rim, a sanitary cleansing device comprising, tube means for conducting flow of irrigating liquid, said tube means having two resilient attachment means for removably holding said tube means on one of the rims so as to be detachable without use of tools, one of said attachment means comprising a portion of said tube means bent into a C-shaped clip conforming substantially to the one of the rims and dimensioned to produce a force fit with the one of the rims, and nozzle means at the end of said tube means, said tube means when attached terminating at the nozzle end within the bowl, said tube means being secured to the one rim by said two attachment means exclusively.

2. For toilet bowls having a bowl portion and a hinged seat portion wherein each portion includes a rim, a sanitary cleansing device comprising, a fluid carrying tube, resilient attachment means for detachably holding said tube on one of the rims, said tube when attached terminating at one end within the bowl, and nozzle means at the one end of said tube, said detachment means comprising a portion of said fluid carrying tube bent into a C-shaped clip conforming substantially to the one of said rims and dimensioned to produce a force fit with the one of the rims, whereby chatter due to intermittent fluid flow through said tube is suppressed.

3. For toilet bowls having a thickened upper rim and hinged seat portion covering the rim, a sanitary device comprising, attachment means for removably engaging the rim, and a fluid-carrying tube secured to said attachment means, said tube including a hose connector end for connection to a source of liquid pressure and a nozzle end, resilient clip means intermediate said attachment means and said nozzle end for removably clasping the rim and preventing chatter due to fluid flow, said clip means comprising a section of said fluid-carrying tube which is bent into a C-shape dimensioned to produce a force fit with said rim and resiliently clippable to said rim, said nozzle end of said tube being shaped to depend into said bowl and point upwardly.

4. For toilet bowls having a bowl portion and a hinged seat portion wherein each portion includes a rim, a sanitary cleansing device comprising, tube means for conducting flow of irrigating liquid, said tube means having two resilient atatchment means for removably holding said tube means on the rim of said seat portion, one of said attachment means comprising a portion of said tube means bent into a C-shaped clip conforming substantially to the rim of said seat portion, and nozzle means at the end of said tube means, said tube means when attached terminating at the nozzle end within the bowl.

5. For toilet bowls having a thickened upper rim and a seat hingedly supported at the rear of the bowl for covering the rim, a sanitary cleansing device comprising, removable attachment means adapted to engage the upper rim such as to be removable therefrom without use of tools, and a tube secured to said attachment means for conducting flow of irrigating fluid; said tube including a hose connector end for connection to a source of fluid under pressure, and a nozzle end; resilient C-shaped clipping means intermediate said attachment means and the nozzle end for removably clipping the rim and preventing chatter due to fluid flow, said clipping means comprising a section of said fluid carrying tube which is bent in a C-shape and dimensioned to produce a force fit with said rim, said nozzle end of said tube being shaped to depend into said bowl and to point upwardly at the area to be irrigated, said attachment means and said clipping means being the exclusive means for attaching said tube to the bowl so that said tube is removable from the bowl without use of tools.

6. For toilet bowls having a thickened upper rim and a seat hingedly secured to the bowl for covering the rim, a sanitary cleansing device comprising a fixed member adapted to be secured to said bowl at the rear thereof, resilient attachment means adapted to be secured to and

detached from said fixed member without use of tools, and tube means secured to said attachment means for conducting the flow of irrigating liquid, said tube means including an input end adapted to be connected to a source of fluid under pressure and a nozzle end, resilient C-shaped clipping means intermediate said attachment means and the nozzle end for removably clipping the rim whereby chatter due to fluid flow through said tube is suppressed, said clipping means comprising a section of tube means which are shaped in the form of a vertical-C having opposite arms, said opposite arms when said clipping means are unstressed being spaced from each other a distance less than the vertical dimension of the rim portion they engage, said nozzle end of said tube being shaped to depend into said bowl and to point upwardly at the area to be irrigated, said attachment means and said clipping means being the exclusive means for attaching said tube to the bowl so that said tube is removable from the bowl without use of tools.

7. For toilet bowls having a thickened upper rim and a seat hingedly secured to the bowl by bolts and covering the rim, a sanitary cleansing device comprising a fixed member adapted to be secured to said bowl at the rear thereof, resilient attachment means adapted to be secured to and detached from said fixed member without use of tools, and tube means secured to said attachment means for conducting the flow of irrigating liquid, said tube means including an input end adapted to be connected to a source of fluid under pressure and a nozzle end, resilient C-shaped clipping means intermediate said attachment means and the nozzle end for removably clipping the rim and comprising a section of said tube means which are shaped in the form of a vertical-C having opposite arms, said opposite arms when said clipping means are unstressed being spaced from each other a distance of less than the vertical dimension of the rim portion they engage, said nozzle end of said tube being shaped to depend into said bowl and to point upwardly at the area to be irrigated, said attachment means and said clipping means being the exclusive means for attaching said tube to the bowl so that said tube is removable from the bowl without use of tools, said fixed member having a plate mounted on said rim by bolts holding the seat and forming a window, said attachment means including a spring actuated plunger means adapted to fit through said window and having a blind stem connected to said tube means.

8. For toilet bowls having a thickened upper rim and

a seat hingedly secured to the bowl by a rod and covering the rim, a sanitary cleansing device comprising a fixed member adapted to be secured to said bowl at the rear thereof, resilient attachment means adapted to be secured to and detached from said fixed member without use of tools, and tube means secured to said attachment means for conducting the flow of irrigating liquid, said tube means including an input end adapted to be connected to a source of fluid under pressure and a nozzle end, resilient C-shaped clipping means intermediate said attachment means and the nozzle end for removably clipping the rim and comprising a section of said tube means which are shaped in the form of a vertical-C having opposite arms, said opposite arms when said clippings means are unstressed being spaced from each other a distance less than the vertical distance of the rim portion they engage, said nozzle end of said tube being shaped to depend into said bowl and to point upwardly at the area to be irrigated, said attachment means and said clipping means being the exclusive means for attaching said tube to the bowl so that said tube is removable from the bowl without use of tools, said fixed member including an extension of the rod holding the seat, said attachment means including a bearing device.

9. A device as in claim 2 wherein said rim has an opening and wherein said attachment means further comprises a resilient stud adapted to resiliently fit into said opening and secure the position of said tube.

10. A device as in claim 2 wherein said seat has an opening and said attachment means further include a resilient prong adapted to resiliently fit into the opening and hold the tube onto the seat.

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