United States Patent

Restyanszki

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[54] PORTABLE BIDET

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[51] **Int. Cl.** **A41k 3/22,** A41k 11/08

[58] **Field of Search** 4/6, 7; 128/248

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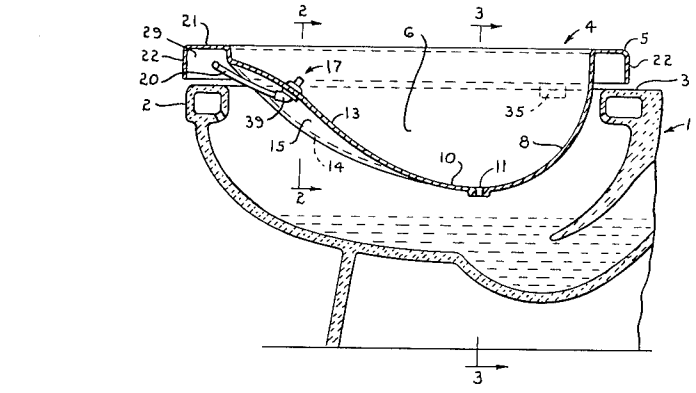
Primary Examiner—Henry K. Artis

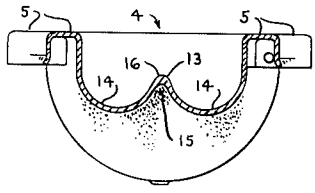
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[57] **ABSTRACT**

The invention is directed to a bidet which may be readily detachably mounted on a conventional toilet bowl for the purpose of promoting the health and sanitation of a human individual.

12 Claims, 15 Drawing Figures





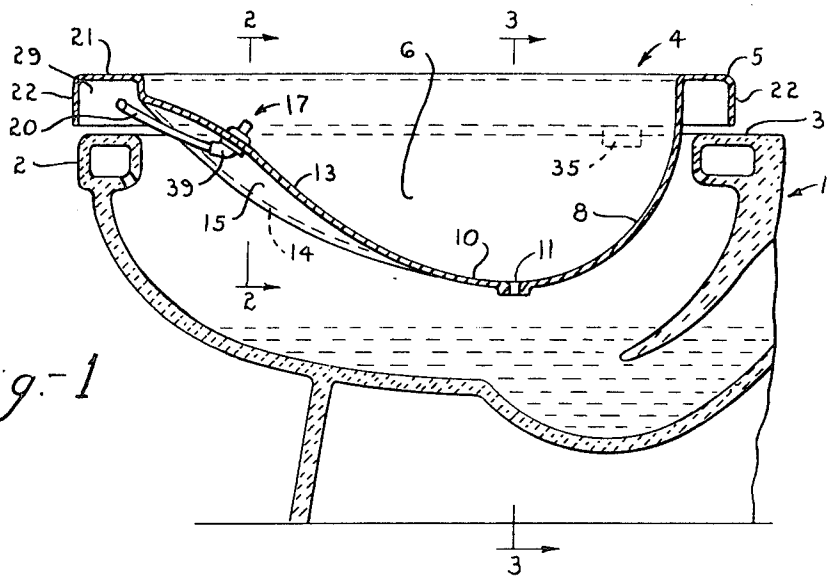


Fig.-1

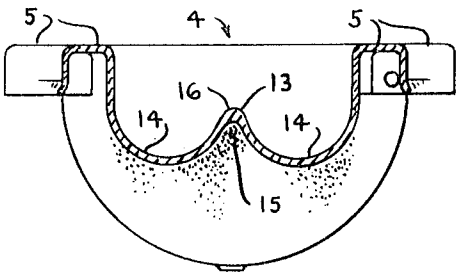


Fig.-2

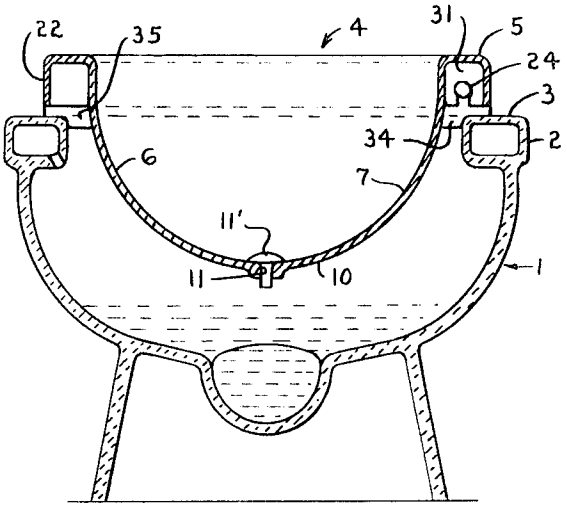


Fig.-3

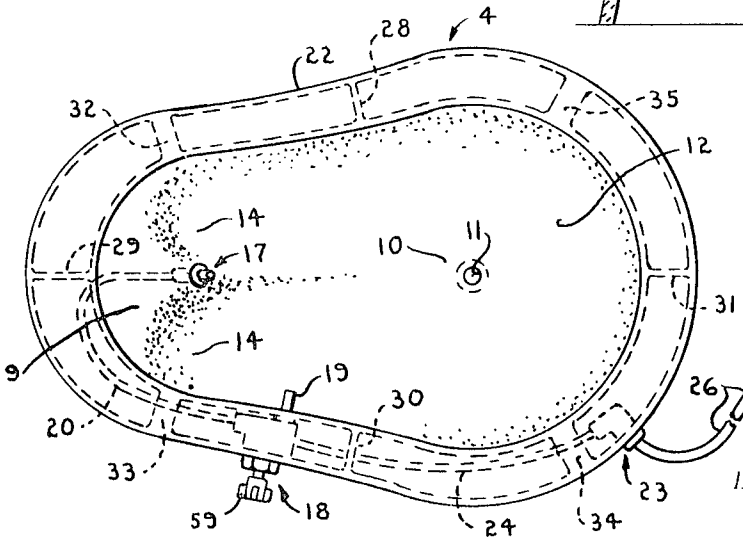


Fig.-4

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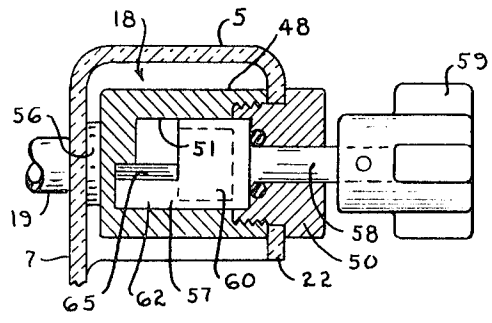


Fig.-5

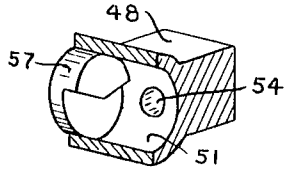


Fig.-7

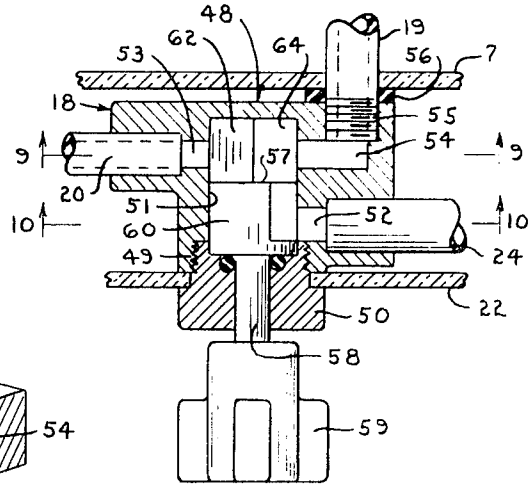


Fig.-6

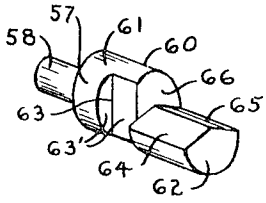


Fig.-8

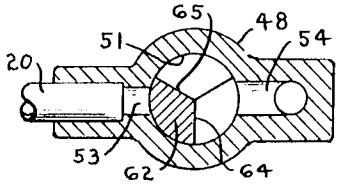


Fig.-9

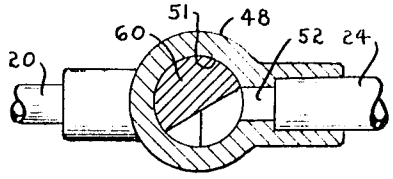


Fig.-10

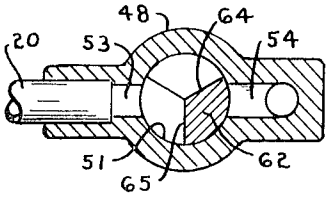


Fig.-11

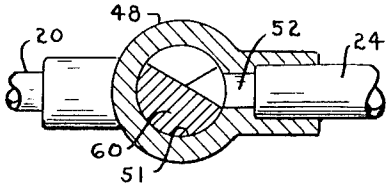


Fig.-12

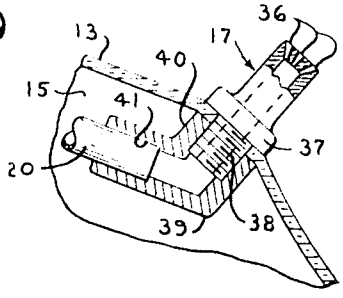


Fig.-15

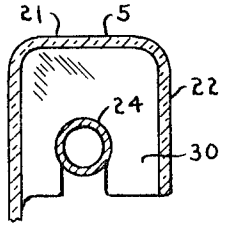


Fig.-13

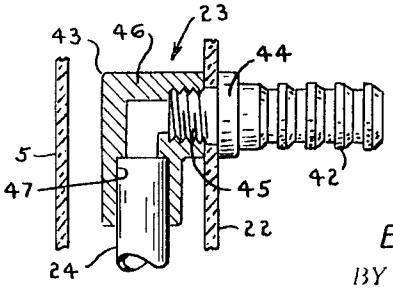


Fig.-14

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PORTABLE BIDET

The subject invention relates generally to a hygienic and therapeutic device and more particularly is directed to what may be generally referred to as a bidet or portable douche.

The primary object of the invention is to provide a device which may be utilized as a sitz bath for therapeutic purposes and/or for hygienic purposes.

One of the principal objects of the invention is to provide a device which comprises a receptacle which may be readily mounted on a conventional toilet bowl structure and means, such as a spray nozzle, carried by the receptacle which may be utilized to spray or project a liquid into and about the genital or crotch area of a human individual for sanitizing the same.

A particular objective of the invention is to provide a receptacle which is formed to provide a primary or rear dished area for conformably receiving the buttocks of an individual and a pair of substantially corresponding frontal channel areas which are adapted to conformably receive the thighs of the individual.

A specific but important object of the invention is to provide a receptacle of the character above described in which the pair of frontal channel areas are preferably formed by means of a medial sloping internal rib which may serve to separate the thighs so that the spray may more efficiently serve its intended purpose or function.

Another object of the invention is to provide a receptacle which is also provided with a side inlet or port, a drain, and a valve for controlling the flow of a liquid into the receptacle via the spray device or inlet for eventual flow down the drain into the toilet bowl.

Also, an object is to provide a light-weight receptacle which may be constructed of any material suitable for the purpose, such as a durable plastic or stainless steel whereby to facilitate handling and ease of cleansing.

A further object of the invention is to provide a device which is safe, durable, stable, readily installed and economically manufactured and assembled.

Referring to the drawings:

FIG. **1** is a vertical section taken through the device and a conventional toilet bowl for the purpose of illustrating certain details of the structure;

FIG. **2** is a transverse section taken substantially on line **2—2** of the device shown in FIG. **1**;

FIG. **3** is a transverse vertical section taken substantially on line **3—3** of FIG. **1**;

FIG. **4** is a top or plan view of the device shown in FIGS. **1, 2** and **3**;

FIG. **5** is a partial vertical section taken through a portion of the device and a valve carried thereby;

FIG. **6** is a horizontal section taken through the valve shown in FIG. **5** for the purpose of illustrating certain structural details thereof;

FIG. **7** is a fragmentary perspective view of a portion of the interior structure of the valve and the relationship of its movable element to an exit port of the valve;

FIG. **8** is a perspective view depicting structural details of the movable valve element shown in FIG. **6**;

FIGS. **9** and **10** are vertical sections taken substantially on lines **9—9** and **10—10** of FIG. **6** showing the valve element in a position whereby liquid may be caused to flow from a source to a side inlet to the receptacle;

FIGS. **11** and **12** are vertical sections, similar to FIGS. **9** and **10**, showing the valve element in a position whereby liquid may be caused to flow to the spray device in lieu of the side inlet;

FIG. **13** is an enlarged vertical section taken through a channel brim of the receptacle showing a conduit means disposed therein for substantial concealment;

FIG. **14** is a partial enlarged sectional view showing a coupling structure which may be utilized in providing a connection between the valve and a source of liquid; and

FIG. **15** is a partial vertical view taken through the receptacle showing a spray device and mode of mounting the same in a frontal area of the receptacle.

Referring more particularly to FIGS. **1** through **4** of the drawing, numeral **1** generally designates a toilet bowl structure constituting a component of a conventional toilet assembly, the flush tank of which is not disclosed. The bowl is oblong or generally egg-shaped and is adapted to receive water therein from the flush tank. The bowl is provided with a continuous upper rim **2** having a top planar surface or rest **3**.

The receptacle embodying the attributes of the invention is generally designated **4** and is adapted to be mounted for support on the bowl **1**. The receptacle may be designed and constructed in various ways and may also be made of any material suitable for the purpose, such as a plastic or stainless steel. More specifically, it is preferably in the form of one-piece dished oval structure having a continuous channel shaped brim **5** which is adapted for support on the surface **3** of the bowl as shown in FIGS. **1** and **3**. It also includes a pair of substantially corresponding opposed converging curved sloping side walls **6** and **7**, a curved downwardly and forwardly extending rear wall **8** and a downwardly and rearwardly extending front wall structure **9** which is somewhat longer and less inclined than the rear wall. The side walls **6** and **7**, rear wall **8**, and front wall structure **9** are disposed in a smooth merging relationship and define a bottom wall **10** provided with a drain **11** which may be closed or opened by a plug **11**:.

The side walls **6** and **7** and rear wall **8** are primarily formed to define a generally concave primary or rear area **12** which serves to receive or seat portions of the buttocks of an individual and forwardly extending portions of the side walls **6** and **7** and the front wall structure **9** define a frontal concave formation having a width somewhat less than that of the rear area which is preferably divided by a medial raised rib **13** into a pair of substantially corresponding concave channel areas **14** for receiving the thighs of an individual. The rib forms an underlying groove **15** and an upper longitudinal downwardly and rearwardly extending or inclined convex surface **16**. The upper extremity of the rib **13** is preferably provided with an opening in which a spray device generally designated **17** is detachably secured.

The fore extremity of the receptacle, as illustrated in FIG. **1**, is preferably extended and curved so that when the receptacle is mounted on the toilet bowl, a frontal portion of the receptacle will project beyond and overlie the frontal portion of the rim **2** of the bowl.

The receptacle is also preferably provided with a valve generally designated **18** and a side inlet or tube **19** which is connected to or carried by the valve and conduit means **20** which is connected to the spray device **17** and to the valve **18**. It should be noted that a portion of the conduit means is disposed in the groove **15** formed by the rib **13** and that the remainder thereof is substantially confined or concealed from view in the brim **5**. The brim **5** is preferably in the form of an inverted channel having a continuous inner wall formed by upper portions of the side walls, rear wall and front wall structure, a top wall **21** and an outer depending flange or wall **22** so that the brim is open at the bottom whereby to facilitate accommodation of the valve **18** and the conduit means **20**. As depicted in FIGS. **4** and **14**, a coupling generally designated **23** and a conduit means **24** are also preferably housed in the brim, the conduit means serving to connect the valve and coupling, the latter being adapted for connection with a source **25** of liquid through a hose or conduit **26** extending from the coupling. The hose **25** is preferably provided with a resilient socket **27** which is adapted for detachable connection with the source **25**.

The brim **5**, as shown in FIG. **4**, is preferably reinforced by a plurality of spaced relatively thin transverse ribs **28, 29, 30** and **31** and a plurality of thick webs **32, 33, 34** and **35** which serve to impart rigidity to the channel. As depicted in FIG. **13**, the rib **30**, for example, may be notched so that the conduit means **24**, preferably in the form of a resiliently flexible plastic tube, may be pressed into the notch for automatically anchoring the conduit in place. It should be noted that the conduit **24** also extends through an aperture in the web **34** and that the

conduit **20** similarly extends through an aperture provided in the web **33** whereby to assist in holding the conduits in position. The webs are of a size so that rabbeted portions thereof project below the brim to provide bumpers which serve to receive and rest upon the rim **3** of the bowl whereby to assist in stabilizing the position of the receptacle thereon as shown in FIG. **3**.

The spray device **17** may be designed and constructed in various ways but as shown more in detail in FIG. **15**, preferably comprises a nozzle having an outer tubular portion with an end wall provided with a plurality of divergent openings or ports **36**, an intermediate flange **37** for engaging a flat on the rib **13**, an inner threaded tubular portion **38** which extends through an aperture in the flat, and an angular tubular fitting **39** having an internally threaded portion **40** which is adapted to detachably receive the threaded portion **38** of the nozzle for clamping the nozzle in place. The fitting also includes a portion having an internal cylindrical seat **41** which is adapted to detachably receive an end of the conduit **20** located in the groove **15** in a conventional manner. The spray device is preferably carried by an upper extremity of the rib and is so angularly disposed or located that the jets or spray of liquid will be directed against the individual in the area desired.

The coupling generally designated **23** may be designed and constructed as desired, but is preferably constructed as shown in FIG. **14** and comprises a pair of conventional tubular members **42** and **43**. The member **42** includes a portion adapted to be detachably received in an inner end of the hose or conduit **26** as shown in FIG. **4**, an intermediate flange **44** which bears against an outer surface of the depending wall **22** of the brim **5** and an externally threaded portion **45** which extends through a hole provided therefor in the flange **22** for detachable connection with an internally threaded portion **46** of the member **43**. The member **43** has a portion provided with a cylindrical seat **47** for detachably receiving the right end of the conduit **24**. It should be noted that the member **43** and the threaded portion of member **42** are housed within the confines of the brim and that the conduits have ends secured in cylindrical seats provided in a body **48** of the valve.

The valve **18** may be designed and constructed in various ways but is preferably constructed as exemplified in FIGS. **5** through **12**. Referring particularly to FIGS. **5** and **6**, the valve includes the body **48** which has an internally threaded portion **49** for receiving an externally threaded portion of a nut **50** which extends through a hole in the flange **22** of the brim **5** for engagement with the threaded portion **49** for detachably securing the body in the brim and the nut to and against the flange **22**. The body is provided with a cylindrical chamber **51**, an entrance port or passage **52** connected to the conduit means **24** and a pair of aligned exit ports **53** and **54** or passages which are respectively communicatively connected to the conduit means **20** and the tube **19**. The body is also provided with a tubular internally threaded portion **55** disposed at right angles to and communicating with the port **54** and the tube **19** extends through a hole in the side wall **7** of the receptacle and has an inner externally threaded portion which is received in the threaded portion **55**. This tube may assist in supporting the valve body and a resilient washer **56** is preferably carried by the tube and interposed between the body and receptacle whereby to assist in stabilizing the body. A valve element **57** is rotatable in the chamber **51** and a stem **58** of the valve extends through the nut and carries a knob **59** whereby the element may be manipulated to control the flow and quantity of liquid received through the entrance port **52** to either of the exit ports **53** and **54**, the latter of which respectively lead to the spray device **17** and the tube **19**.

The organization described above is preferably such that when the valve element **57** is rotated to a predetermined position liquid under pressure from source **25** will flow through the hose **26**, conduit means **24**, entrance port **52** of the valve, chamber **51**, exit port **54**, and through the tube **19** into the receptacle whereby to assist in at least partially filling the same and/or for flushing and cleansing the receptacle. When the valve element is moved to a different position as evidenced in FIGS. **11** and **12**, the flow of liquid from the source to the tube **19** is stopped or interrupted so that liquid from the source will flow through the hose **26**, conduit means or conduit **24**, valve **18** and the conduit means or conduit **20** to the spray device **17**.

Referring more specifically to the structural characteristics of the valve element **57**, the same preferably includes cylindrical portion **60** having a cylindrical surface **61** and a portion **62**. The cylindrical portion **60** is preferably interrupted by a notch **63** defined by surfaces **63** and the portion **62** is defined by the surface **61** having a circumferential extent of 240*L*and a pair of planar radial surfaces **64** and **65** disposed at an angle of 120*L* The portion **62** has an end surface constituting the inner end of the valve element and the cylindrical portion **60** is provided with an end face **66** which is parallel to the end face of the portion **62**.

In view of the foregoing and referring particularly to FIGS. **6**, **9**, and **10**, it should be manifest that the valve element **57** is in a position whereby liquid will flow from the source **25** through the hose **26**, conduit **24**, entrance port **52**, chamber **51** and out through the exit port **54** and into the receptacle through the tube **19** in view of the relationship of the notch **63** in the cylindrical portion **60** and the structural characteristics of the portion **62** and their relationship to the valve chamber **51** and ports. During such flow of liquid from the source to and through the tube **19**, it should be evident that the cylindrical portion **60** of the valve element serves to block or close the exit port **53** leading to the spray device.

When the valve element is rotated to the position shown in FIGS. **11** and **12**, as described above, the portion **62** of the element serves to block or close the exit port **54** leading to the tube **19** and cause the liquid to flow from the source through the entrance port **52** to the exit port **53** and to the spray device **17** through the conduit **26** due to the structural characteristics of the notch **63** and the oblique angular relationship between the faces **64** and **65** of the portion **62** of the element. Otherwise expressed, the valve **18** may be readily manipulated to control the flow to and through the tube **19** or to the spray device **17**.

In view of the foregoing description, it should be apparent that the receptacle or device, due to its portable character, may be carried to any location where desired and may be readily utilized by simply mounting it on a conventional toilet bowl so that the bumpers **32** conformably receive an inner portion of the rim **3** of the bowl as shown in FIG. **3** whereby to assist in locating and stabilizing the position of the receptacle. After the receptacle is mounted, the socket **27** may be connected or plugged into a source of liquid, the temperature of which has been previously determined. More specifically in this regard, after the socket is connected to the source, the valve **18** may, for example, be manipulated so that liquid will first flow through the tube **19** into the receptacle and if the temperature of the liquid from the source **25** is not correct, then the source may be regulated to obtain the temperature desired prior to utilizing the spray device. Also, when the plug **11** is in place to close the drain **11**, the receptacle may, for example, be filled with relatively hot water so that an individual may take a sitz bath for therapeutic purposes.

Also, if so desired, the drain may be left open in which event, the valve **18** may be manipulated to cause liquid of the correct temperature to flow through the spray device **17** and against the genital or crotch area of an individual for sanitizing the same. It should be obvious that liquid may be caused to flow through either the tube **19** or the spray device **17** whereby to assist in cleansing the interior of the receptacle after it has been utilized for either of its intended purposes.

Having thus described my invention, it is obvious that various modifications may be made in the same without departing from the spirit of the invention and, therefore, I do not wish to be understood as limiting myself to the exact forms, constructions and arrangements, and combinations of parts herein shown and described.

I claim:

1. A device of the character described comprising a receptacle having a continuous channel brim adapted for support on the rim of a conventional toilet bowl, said receptacle having converging sloping front and back walls and opposing converging side walls which are joined and merged to define a rear area for accommodating the buttocks of a human individual and a frontal area having a medial rib dividing the same into a pair of means for supporting the thighs and a bottom wall provided with a drain, and said rib being provided with means whereby a liquid when connected to a source may be directed into and/or against the genital area of the body.

2. A bidet comprising a receptacle adapted for support upon a conventional toilet bowl structure, said receptacle being dished to provide a primary rear area for receiving the buttocks of a human individual and a pair of frontal areas for receiving the thighs, said receptacle also having a continuous inverted channel brim, and means carried by and projecting below said brim serving to locate and stabilize the position of said receptacle in relation to such a structure.

3. A bidet comprising a receptacle adapted for support upon a conventional toilet bowl structure, said receptacle being dished to provide a primary area for receiving the buttocks of a human individual and a pair of frontal areas for receiving the thighs, a spray nozzle disposed between said channel areas, a valve carried by said receptacle, and conduit means carried by and substantially concealed by said receptacle and connecting said spray nozzle and said valve, said valve being connectible with a source of liquid for controlling the flow of liquid through said nozzle.

4. The bidet defined in claim 3, in which said receptacle is provided with a drain and an outlet and said valve is connectible with said outlet so that the valve may control the flow of liquid to the nozzle or outlet for eventual flow to said drain.

5. The bidet defined in claim 3, in which said receptacle is provided with a channel brim area and the conduit means and said valve are disposed therein for substantially concealing the same.

6. The bidet defined in claim 3, in which said receptacle is of a one-piece construction having a channel brim which is reinforced by a plurality of spaced ribs and webs, the latter being formed to facilitate mounting and stabilizing the receptacle on the bowl structure.

7. A bidet of the kind described comprising a receptacle adapted for mounting upon the rim of a conventional toilet bowl, having frontal area, first means carried by said frontal area whereby a liquid may be ejected rearwardly and upwardly, a second means carried by said receptacle and located in spaced relation to said first means whereby a liquid may be caused to flow in a direction substantially transverse to that of said first means, and a valve for controlling the flow of liquid to either said first or second means.

8. The bidet defined in claim 7, in which said receptacle is provided with a continuous brim having bumpers which are formed to receive an inner portion of the rim of such a bowl for locating the receptacle in a predetermined stable position on the rim.

9. The bidet defined in claim 7, in which said receptacle is formed to provide a rear concave area which is adapted to receive the buttocks of a human individual and the frontal area is divided into a pair of channels for receiving the thighs, said first means comprises a spray device which is located between said channels whereby the spray will be directed rearwardly and upwardly, said valve is housed in said receptacle, and conduit means communicatively connects said spray device and said valve whereby the latter may control fluid from a source to said spray device.

10. The bidet defined in claim 7, in which said receptacle is provided with an inverted channel brim which is reinforced by a web provided with receiving means, and said conduit means is of a resiliently flexible character and press fitted into said receiving means for holding said conduit means in place.

11. Bidet structure comprising a receptacle adapted to be mounted on a conventional toilet bowl, said receptacle having a rear concave area for receiving the buttocks of a human individual and a pair of frontal inclined channels for receiving the thighs of the individual, a spray device carried by said receptacle and located between said channels whereby the spray will be directed into the crotch area of the individual, a manual operable valve connectible with a source of liquid carried by said receptacle, and conduit means carried by said receptacle for establishing communicative relationship between said spray device and said valve.

12. A device comprising a receptacle adapted to be mounted upon the rim of a conventional toilet bowl, said receptacle being provided with a drain having a removable plug therein, means whereby a liquid may be disposed into the receptacle so that the latter may be used as a sitz bath, said receptacle also being provided with means to direct a spray of liquid against the crotch area of a human individual after the plug is removed and the liquid dispensing means is rendered inoperative so that said device may be utilized as a bidet.

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