July 17, 1962 A. H. MARTINI 3,044,076

HYGIENIC SPRAY TOILET SEAT

Filed June 13, 1960 2 Sheets-Sheet 1

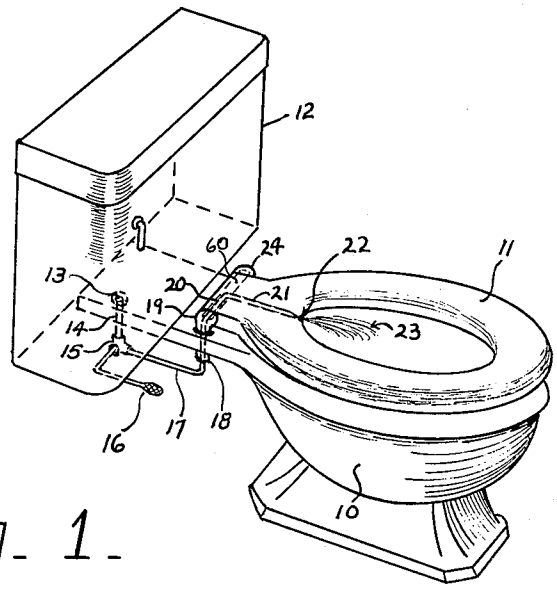


FIG. 1.

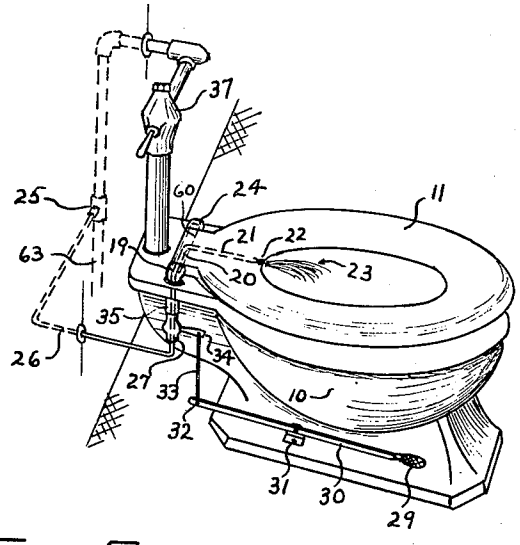


FIG. 2.

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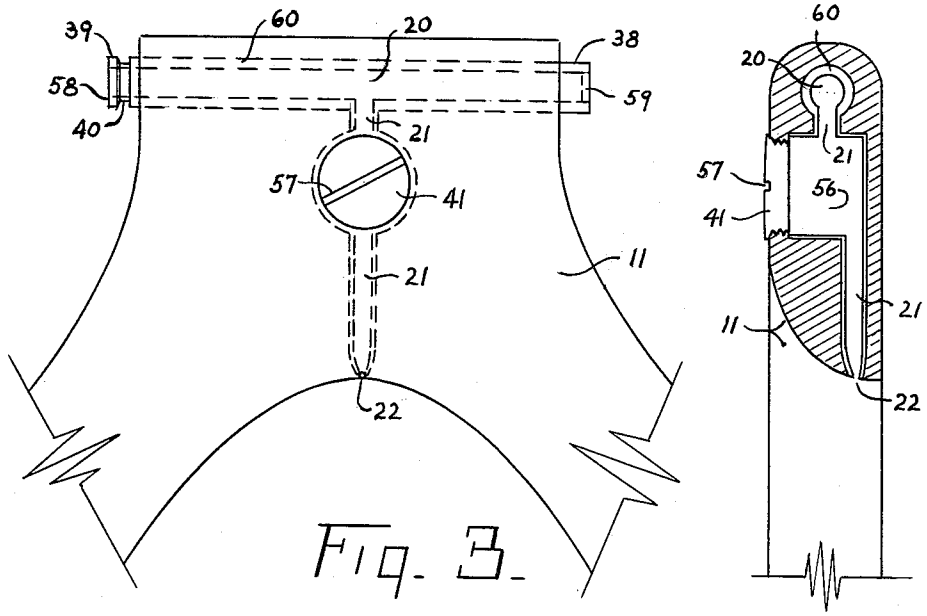


FIG. 3.

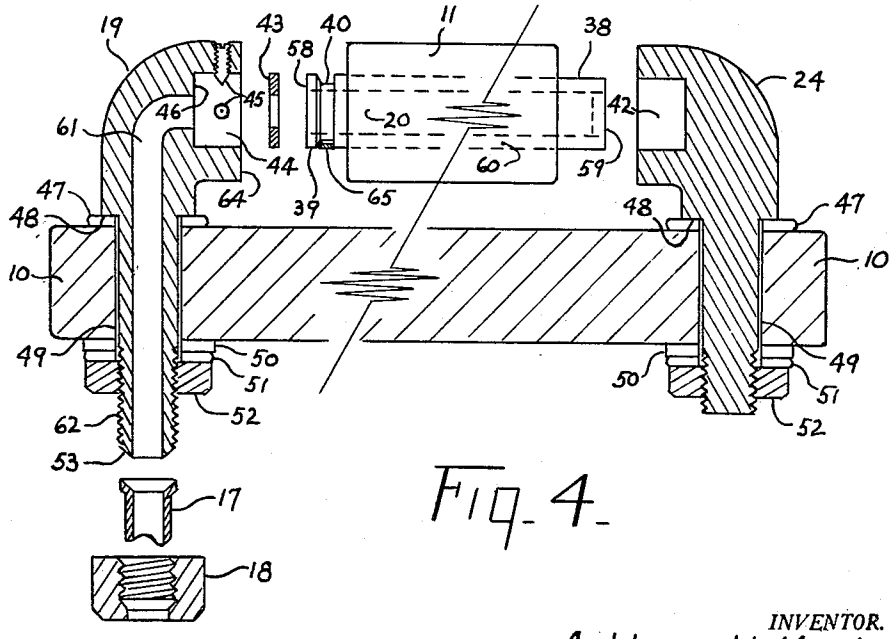


FIG. 4.

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HYGIENIC SPRAY TOILET SEAT

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3 Claims. (Cl. 4—7)

The invention relates to certain useful improvements and structural refinements in accessories for use with toilet bowls, and more particularly to a toilet seat and mounting members of sanitary design which integrally incorporate a personal hygiene device for spraying the region of the anus or pre-moistening toilet tissue for cleaning said region.

The principal object of this invention is to provide an improved device of simplified and sanitary construction for use with toilet bowls, comprising a toilet seat having an obstruction-free smooth bottom and evenly contoured top, and incorporating a spray jet flush with the surface thereof which is horizontally directed to the central open area of said seat, and which jet is in communication with a source of water supply by an internal passageway in said seat, a tubular pintle, a hollow pintle support element for pivotally mounting said seat to a toilet bowl, and a manually controlled valve in line to the water supply.

While it is widely known and understood that water is an essential element for cleaning the hands and other parts of the body, the absence of this element in a convenient form for cleaning the anus has heretofore necessitated cleaning this region of the body in a dry and inadequate manner after the toilet has been used, therefore, it is an object of this invention to greatly improve bodily hygiene by providing a convenient and controllable supply of water at the central open area of the toilet seat for use in cleaning the anus.

A still further object of this invention is to gravitationally and controllably communicate, by highly concealed and sanitary means, a supply of water to the toilet seat spray jet from the bottom of closet flush tank by connectably linking same to the lower end of the hollow pintle support element, with said means being below the flush tank support bracket of the toilet bowl.

A still further object of this invention is to provide a watertight rotational union between the trunnioned open end of the tubular pintle and the journalled bore in the hollow pintle support element to concealably communicate water from the supply source to the toilet seat spray jet.

A still further object of this invention is to provide an anus moistening device of the type referred to which is simple in construction and economical to manufacture and which may readily be adapted to any conventional toilet bowl.

With the above and other objects in view, this invention consists in the novel features of construction, combination and arrangement of parts to be hereinafter more fully described, claimed, and illustrated in the accompanying drawing, in which:

FIGURE 1 is a perspective view showing the invention as used in conjunction with a tank mounted water closet.

FIGURE 2 is a perspective view showing the same invention as in FIGURE 1, but as used in conjunction with an automatic tankless type water closet.

FIGURE 3 is a detailed top plan view and a sectional side view of the rear portion of the hygienic spray toilet seat showing the optional deodorant cavity.

FIGURE 4 is a partial exploded sectional view of the pintle and pintle support elements.

Referring in detail to the drawings, 10 indicates a conventional type water closet to which the personal hygiene device is attached, and 11 indicates the hygienic spray toilet seat.

Referring in particular to FIGURE 1, the invention as used in conjunction with a conventional water closet having an attached water storage tank operates as follows: water from the normally filled storage tank 12 enters opening 13 in bottom of tank 12 by gravitational means and is communicated to the toilet seat 11 by tubing 14, manually operated valve 15 having automatic return feature, connecting tubing 17 with flange nut 18, the novel hollow pintle support bracket 19, the hollow passageway 20 in pintle 60, the forwardly directed passageway 21 and the spray orifice 22 from which said water is emitted into the central open area of seat 11 as spray 23.

Referring in particular to FIGURE 2, the invention as used in conjunction with a conventional toilet room water closet having an automatic type tankless flushing mechanism operates as follows: water from concealed water main 63 is communicated by means of a T pipe fitting 25 to a small connecting pipe 26 and a shut-off valve 27 having a spring return automatic shut-off mechanism which is manually actuated by handle 34. Said valve handle 34 by a suitable extension similar to handle 16 in FIGURE 1 may be used for hand operation, however, shown herein is a foot operated release which is operated by depressing foot treadle 29 which pivots release bar 30 about fulcrum on bracket 31 causing the end of release bar 32 which is fastened to release linkage 33 to rise, urging linkage 33 upward and through swivel connection 34 with valve release handle to open valve 27 and permit water to pass and enter a check valve 35 which is connected to the novel hollow pintle support bracket 19, and which communicates the pressurized flow of water through the hollow passageway thereof to the passageway 20 of tubular pintle 60 of seat 11. Said seat incorporates pintle 60 as an integral part thereof, the ends of which extend trunnion-like from each side of said seat from which points they are pivotally supported by pintle support brackets 19 and 24. Said tubular pintle 60 has one end open and the opposite end sealably closed and is intersected at a point internally within seat 11 by a forwardly directed passageway 21 which is necked down prior to emerging on seat surface as spray orifice 22 from which spray 23 is emitted.

Referring in particular to FIGURES 3 and 4 where the invention is outlined in greater detail, 11 indicates the novel toilet seating device incorporating an optional cavity 56 for introducing a deodorant into the spray water. The tubular pintle 60 is integral with and is concealed in said seat 11 except for each end thereof which projects from said seat and thereby forms the trunnion members 38 and 39. Trunnion member 39 is open at end section 58 and pintle 60 is hollow through its entire length except at end of trunnion 39 where it is plugged closed with disc 59, with the hollow portion of said pintle forming passageway 20. The pintle support brackets 19 and 24 pivotally support and mount seat 11 to any conventional toilet bowl, and more specifically bore 42 in bracket 24 engages trunnion 38 and bore 44 in bracket 19 engages trunnion 39. The resilient ring gasket 43 has a hole equal in diameter to diameter of passageway 61 in bracket 19 and fits in bore 44 so that said gasket bottoms against shoulder 46 when trunnion 39 is assembled in bore 44. Gasket 43 is firmly compressed between end section 58 of trunnion 39 and shoulder 46 of support bracket 19 as hereinafter described to provide a watertight seal at this pivotal union. Support bracket 19 and trunnion end section 58 are maintained in a close and compressed relationship by three clamping set screws 45 arranged approximately radially equidistant around opening 44 in a plane parallel to end surface 64 of bracket 19

and at a distance therefrom which approximately centers the set screws **45** over groove **40** in trunnion **39** when said trunnion is assembled in bore **44** with gasket **43** as previously described. Floating loosely in groove **40** is a split ring band **65** which completely encircles groove **40** except for small lateral spilt opening, which is sprung into said groove and which has a cross sectional shape corresponding to sectional shape of groove **40**, notably that side wall of said groove and edge of split ring band **65** nearest trunnion end **58** are bevelled with complementary angles, with the said ring band being of a lesser thickness than depth of groove **40** and of a lesser width than width of said groove measured at outer peripheral surface of trunnion **39**. Split ring band **65** is engaged by pointed tips of the three set screws **45** after bracket **19**, gasket **43** and trunnion **39** are assembled as previously described, which engagement by said set screws causes band **65** to be compressed into a smaller diameter and thus to be forced deeper into groove **40** thereby acting on bevel of said groove in such a way to cause trunnion **39** to move deeper into bore **44** and thus compress gasket **43** to provide a watertight seal. In so doing pointed ends of set screws **45** bite into outer surface of band **65** locking said band in a fixed relationship with bracket **19** so that when trunnion **39** rotates due to seat **11** being adjusted to a different position, that slippage occurs between said band and said trunnion member. Pintle support brackets **19** and **24** are affixed and mounted to water closet **10** by placing threaded ends of said brackets through conventional holes **49** in water closet **10** so that shoulders **48** on said brackets together with support washers **47** bear directly on top flat surface of water closet **10**, after which resilient washers **50**, locking washers **51** and nuts **52** are applied to the threaded ends of brackets **19** and **24** to securably position and hold seat **11** in a fixed relationship with water closet **10**. The hollow support bracket **19** is in communication with a source of water supply by means of connecting tube **17** whose flanged end complements bevel **53** on lower end of bracket **19**, which bevelled surfaces are drawn tightly together by nut **18** when same is tightened on threads **62**.

In FIGURE 3 the optional cavity for a deodorant is indicated by numeral **56**, the screw cover over said cavity by **41** and the turn slot in said cover by **57**. The hollow pintle **60** is in communication with the source of water supply, which water flows through passageway **20** of pintle **60** and passageway **21** of seat **11** as previously described to spray jet **22**, intersecting passageway **21** is cavity **56** which is of suitable size and shape and is entirely contained within seat **11**. Thus, when desired a loosely fitting deodorant capsule may be placed in cavity **56** wherein the water flowing through passageway **21** to spray jet **22** acquires a clean and refreshing scent.

Having thus described my invention, what is claimed as new is:

1. In a personal hygiene device associated with a toilet bowl and a toilet seat,

(*a*) a tubular pintle mounted at the rear of said seat and having portions which extend from the opposite sides of said seat, one of said extending portions having in its outer periphery an annular groove which is beveled, on the side thereof nearest the end of said one portion, toward the seat,

(*b*) a pair of pintle supports adapted to be mounted in fixed relation to said bowl for engaging said extending portions to pivotally support the pintle and seat for movement with respect to said bowl, the one of said supports which engages said one extending portion being hollow for conducting liquid to said pintle,

(*c*) a split contractable ring beveled complementary to said groove and mounted in said groove,

(*d*) a resilient ring gasket positioned between said one extending portion and said one of said supports to form a liquid seal therebetween, and

(*e*) means for urging said one end of said pintle into liquid sealing engagement with said gasket and said one support to provide a liquid seal during pivotal movement of the seat relative to the bowl, said urging means being carried by said one support and being disposed in non-sliding engagement with said ring for changing the diameter thereof in said groove, whereby the pintle is moved relative to said one support in response to the relative sliding movement between the beveled side of said groove and the complementary bevel of said ring.

2. A personal hygiene device for mounting on a toilet bowl which is operatively connected to a source of water, said device comprising:

(*a*) a toilet seat having a centrally disposed opening,

(*b*) a hollow pintle mounted at the rear of said seat and extending from the opposite sides thereof,

(*c*) means fixed on said bowl for mounting said pintle for pivotal movement with respect to said bowl and including means for connecting the pintle to said source of water so that water flows through said pintle,

(*d*) means disposed within said seat for conducting water from said pintle to the central opening of said seat to form an anus spray, one portion of said conducting means between said pintle and said opening being enlarged to receive a hygienic water treating capsule,

(*e*) means in said seat defining a passageway extending between the exterior of the seat and said one portion of said conducting means, said passageway being substantially as large in cross section as said one portion to permit said capsule to be inserted therethrough into said one portion, and

(*f*) a removable cover for said passageway disposed in liquid sealing engagement with said seat to prevent water from escaping to the exterior of said seat through said passageway.

3. A personal hygiene device in accordance with claim 2 and wherein:

(*a*) said passageway extends between the top surface of said seat to said cavity, and

(*b*) said cover when in liquid sealing engagement with said seat forms a substantially flush continuation of the top surface of said seat over said passageway.

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