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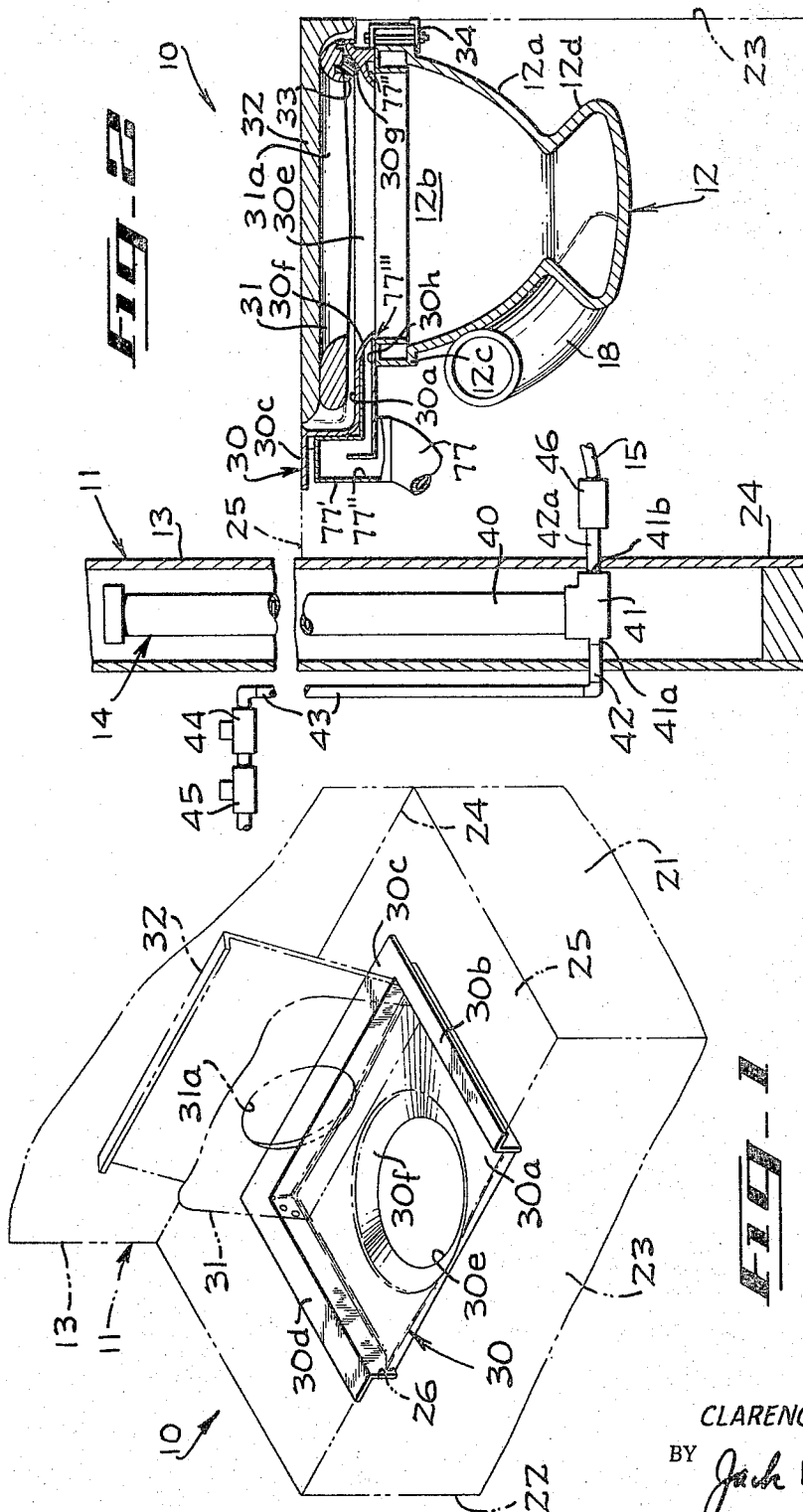
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FLUSHING AND VENTILATING TOILET UNIT

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FLUSHING AND VENTILATING TOILET UNIT
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 Continuation of application Ser. No. 192,868, May 7,
 1962, now Patent No. 3,149,346, dated Sept. 22, 1964.
 This application Sept. 20, 1963, Ser. No. 310,313
 4 Claims. (Cl. 4-213)

The present invention relates in general to toilet units, and more particularly to a water closet therefor.

This application is a continuation of my copending application, Serial No. 192,868, filed May 7, 1962, for a Toilet Unit since matured into Patent No. 3,149,346, dated September 22, 1964.

An object of the present invention is to provide an improved closet bowl.

Another object of the present invention is to provide a closet bowl that can be mounted with facility and ease of operation.

Another object of the present invention is to provide a closet bowl that offers a wide latitude in positioning for facilitating the installation thereof.

Another object of the present invention is to provide a bowl flushing arrangement wherein water is stored under sufficient pressure to cleanse the closet bowl even in localities having poor pressure conditions.

Another object of the present invention is to provide an improved bowl flushing arrangement for a water closet.

Another object of the present invention is to provide a bowl flushing arrangement with reduced noise during the operation thereof.

Another object of the present invention is to provide a bowl flushing arrangement requiring less maintenance and repair.

Another object of the present invention is to provide a toilet closet with an odor reducing arrangement.

Another object of the present invention is to provide an improved arrangement for flushing a closet bowl.

Another object of the present invention is to provide a water closet wherein overflow or spill-over from the closet bowl is eliminated.

Other and further objects and advantages of the present invention will be apparent to one skilled in the art from the following description taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of a water closet embodying the present invention shown with the closet bowl seat and seat cover in substantially the upright position.

FIG. 2 is a vertical sectional view taken midway between the ends of the closet bowl seat and the seat cover with the closet bowl seat and the seat cover in horizontal or closed positions.

FIG. 3 is a side elevational view of the closet bowl shown in FIGS. 1 and 2.

FIG. 4 is a side elevational view of a mechanical linkage employed with the closet bowl shown in FIGS. 1-3, which linkage interconnects the closet bowl seat cover with auxiliary devices and the rear side of the panel of the mounting cover has been removed to expose the linkage details.

FIG. 5 is an end view of the mechanical linkage illustrated in FIG. 4.

FIG. 6 is an end elevational view of the mechanical linkage taken along line 6-6 of FIG. 4.

FIG. 7 is a plan elevational view of a portion of the mechanical linkage taken along line 7-7 of FIG. 6.

Illustrated in FIG. 1 is a water closet 10 embodying the present invention, which comprises a closet bowl cabinet 11. Disposed within the cabinet 11 and concealed from view thereby is a closet bowl 12 (FIG. 2). Located behind the cabinet 11 and concealed from view by a conventional wall or room divider 13 (FIG. 1) is a bowl flushing arrangement 14 (FIG. 2). A flexible conduit 15 (FIGS. 2 and 3) communicates with the bowl flushing arrangement 14. Connected to the conduit 15 is a flush manifold assembly 16 (FIG. 3) with tubes 16a for discharging water into suitable apertures formed in the closet bowl 12. The outlet of the closet bowl 12 is connected to a conventional waste pipe 17 (FIG. 3) through fittings 18.

The cabinet 11 includes upright, facing end walls 21 and 22. Attached to the end walls 21 and 22 is a front wall 23. Facing the front wall 23 is a wall 24, which may be also a common wall for the room divider 13. Supported by the walls 21-24 is a counter 25.

Formed in the counter 25 and in the front wall 23 is an opening 26. Seated within the opening 26 is a recessed incurvature counter sink 30, which is preferably cast iron or formed steel. The counter sink 30 includes a rectangular bottom wall 30a. Along the sides and the rear of the rectangular bottom wall 30a are upright right angle flanges 30b, 30c and 30d, which have an inverted U-shaped configuration (FIG. 1). The flanges 30b-30d engage the counter 25 for mounting the sink 30 within the opening 26. From FIG. 2, it is to be observed that the upper surfaces of the flanges 30b-30d are at even height with the upper surface of the counter 25.

The bottom wall 30a is sloped inwardly toward a central opening 30e thereof. Along the periphery of the opening 30e, the bottom wall 30a has a greater inwardly sloped bevelled surface 30f (FIG. 2). From the foregoing arrangement, the sloped incurvature surfaces allow drainage into the central opening 30e, which is in register with the opening of the closet bowl 12. Further, the forward edge of the bottom wall 30a is sufficiently bevelled at a forward inwardly inclined surface 30g (FIG. 2) to minimize the spilling of waste liquid over the front edge of the counter sink 30. Also, the corners of the counter sink 30 are radius filleted (FIG. 1) to form smooth cleaning surfaces to minimize the collection of dirt and germs.

Pivotaly attached to the sink 30 at the upright walls of the flanges 30b and 30d is a seat 31. Formed in the seat 31 is a central opening 31a, which is in register with the opening 30e of the sink 30, when the seat 31 is in the horizontal position. A seat cover 32 is also pivotaly attached to the sink 30 at the upright walls of the flanges 30b and 30d. It is to be observed from FIG. 2 that when the seat 31 and the seat cover 32 are in the horizontal positions, the upper surface of the seat cover 32 is at even height with the upper surface of the counter 25.

The underside of the front edge of the seat 31 has secured thereto a resilient seat bumper 33 (FIG. 2), which runs parallel to the front edge of the seat 31. The bumper 33 has the forward wall thereof conforming to the contour of the wall 30g of the sink 30 (FIG. 2), when in a compressed condition while the seat 31 is in the horizontal position, which forms an air and liquid seal between the seat 31 and the incurvature sink 30.

Disposed below the incurvature sink 30 is the closet bowl 12 (FIG. 2), which has a central opening in register with central opening 30e of the sink 30. According to the present invention, the closet bowl 12 is symmetrical about a central vertical axis and has a configuration similar to a cup. An upper portion or wall 12a defines an opening 12b communicating with the opening 30e of the incurvature counter sink 30. The wall 12a has substantially a parabolic configuration. At the peripheral edge of the bowl 12 and the wall 12a thereof is an annular channel 12c having a rectangular cross-sectional area and forming an annular canal. Integrally formed with the wall 12a is a symmetrical bottom wall 12d, which has substantially a frusto-conical configuration.

The closet bowl 12 is attached to and supported by the incurvature sink 30. For this purpose, the incurvature

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sink 30 includes in the preferred embodiment an arcuate ledge or flange 30h substantially annular formed on the underside of the sloping surface 30a. Suitable means such as a plurality of clamps or brackets 34 secure the channel wall 12c to the flange 30h for supporting the closet bowl 12 from the incurvature sink 30.

The fittings 18 (FIGS. 2 and 3) have a right-angular curvature and are connected to the waste pipe 17 (FIG. 3). Fittings 18 are connected by clamps 35. Through the novel construction of the closet bowl 12 greater flexibility is afforded in positioning the bowl 12 for purposes of new installation and replacement installation. This is accomplished by the symmetrical configuration of the bowl 12 about a vertical axis and by the swivel action in the connection of the fittings 18 taken in coaction with the support mounting for the sink 30. By suspending the closet bowl 12 from the incurvature sink 30 to be supported thereby, the height of the incurvature sink 30 can be regulated.

For flushing and cleaning the closet bowl 12, the bowl flushing arrangement 14 of the present invention comprises a pressure type accumulator 40 (FIG. 2) which has a predetermined capacity for storing water to accommodate the pressure requirements of the particular installation. The accumulator 40 is concealed from view by the wall or room divider 13. At the bottom of the accumulator 40 is attached a fitting 41 that has an inlet 41a and an outlet 41b. Connected to the inlet side 41a of the fitting 41 is a conduit 42, which communicates with a riser 43. The diameter of the accumulator 40 is greater than the diameter of the conduit 42. A vacuum relief valve 44 is threaded to the riser 43. Communicating with the vacuum relief valve 44 is a check valve 45, which has the input thereof connected to a water supply.

At the outlet end 41b of the fitting 41 is attached an outlet flush valve 46, which is connected to the conduit 15 (FIGS. 2 and 3) and which is also connected to a conduit 42a that is interposed between the outlet 41b of the fitting 41 and the valve 46. The conduit 42 is aligned with the conduit 42a, which normally has a greater diameter to produce a jet pump action of water flow through the fitting 41. The outlet flush valve 46 is similar to the type manufactured by the Sloan Valve Co., Chicago, Ill., as a flushometer valve, which includes the valve structure herein employed. The flexible conduit 15, in turn, communicates with the flush manifold assembly 16. The tubes 16a of the flush manifold assembly 16 discharge water into openings formed in the closet bowl 12 and into the canal 12c of the closet bowl 12, which then discharge the water for flushing the closet bowl 12. At the inward edge of the canal 12c is located an annular opening or slit through which water is discharged from the canal 12c into the closet bowl 12. It is to be observed that the components of the bowl flushing arrangement 14 are concealed from view.

Thus, water from the supply flows through the check valve 45, which maintains the water pressure in the accumulator 40 should the pressure of the supply line drop and prevents a back flow of contaminated water from entering the water supply should the outlet valve 46 fail to operate properly for any reason. From the check valve 45, water flows through the vacuum relief valve 44, which also prevents the backflow of contaminated water into the water supply line should the check valve 45 and the valve 46 fail. The water then flows through the riser 43 into the fitting 41 through the conduit 42.

When the outlet flush valve 46 is closed, water will accumulate in the accumulator 40. The accumulator 40 serves the purpose of storing water under pressure in predetermined supplemental quantities sufficient to cleanse the closet bowl 12 even though the water pressure of the water supply may be low or the supply pipe is of inadequate diameter. Upon opening the outlet flush valve 46, water will flow directly from the conduit 42 through the fitting 41, through the conduit 42a and into the

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valve 46. Simultaneously, supplemental water accumulated in the accumulator 40 will flow through the conduit 42a and the valve 46. This action depletes to some extent the water stored in the accumulator 40. When the valve 46 is operated, the cycling operation thereof commences and the valve 46 is closed automatically from its own pneumatic timing arrangement. When the valve 46 begins to close, excess water from the supply is directed into the accumulator 40. Through the above arrangement, the accumulator 40 is filled with water from the supply line with minimum noise. From the flush valve 46, water under pressure flows through the conduit 15 (FIG. 2) into the closet bowl 12 and the channel 12c thereof.

The outlet flush valve 46 is operated automatically for the flushing of the closet bowl 12. For this purpose, a flexible cable 50 (FIG. 3) is connected at one end to the flush valve 46 for actuating the same. The other end of the flexible cable 50 is attached to a mechanical linkage 52.

Included in the mechanical linkage 52 (FIGS. 3 and 4) is an actuating bar 53, which has the flexible cable 50 attached thereto for controlling the actuation of the flexible cable 50. The actuating bar 53 is connected to a lever arm 54 (FIG. 3) and the other end of the actuating bar 53 is connected to a link 55 (FIG. 4). The other end of the arm 54 is connected to a pivot pin 54', which is received by the hinge plate 57. The hinge plate 57 is an integral part of and is securely attached to the flange 30d of the incurvature sink 30.

The link 55 is an angle bell crank pivotally mounted on a pin 55'. One end of the link 55 is connected to the actuator bar 53 and the other end is pivotally connected to a damping device 66 through a plunger rod 66'. The other end of the damping device 66 is pivotally mounted to a pin 99. Also pivotally mounted to the pin 99 is a damping device 65 which is identical to the damping device 66. The other end of the damping device 65 is connected to the upper end of the link 58 through a plunger rod 65'. The link 58 is pivotally mounted on the pin 55'. The lower end of the link 58 is pivotally attached to an actuating bar 59. The other end of the actuating bar 59 is pivotally connected to one end of a lever arm 60 (FIG. 3). In turn, the other end of the lever arm 60 is attached to a pivot pin 60' which is received by the hinge plate 57.

The pivot pin 54' is partially disposed within a Teflon sleeve, not shown, and is contoured at the ends thereof and engages the seat cover 32 so that movement of the seat cover 32 rotates the pin 54' and the lever arm 54 therewith. A Teflon sleeve, not shown, receives the pin 60' in the same manner as does the pivot pin 54' except that the pin 60' engages the toilet seat 31 so that movement of the toilet seat 31 rotates the pin 60' and the lever arm 60 therewith. A mounting cover 67 (FIG. 3) is fixedly attached to the flange 30d of the sink and encloses the mechanical linkage 52.

While the seat cover 32 is being raised to the vertical position (FIG. 3), the flush valve 46 through the cable 50 and the mechanical linkage 52 is prepared for the flushing operation. The seat cover 32 will remain in the raised position as long as it is beyond the upright position. The mechanical linkage 52 functions as mechanical stops against continued movement.

In order to flush the closet bowl 12, an operator moves the seat cover 32 toward the horizontal or closing position (FIG. 2) until the seat cover 32 again passes the vertical position. Thereupon, gravity moves the seat cover 32 to the closing position.

As the seat cover 32 reaches the horizontal or closed position, the mechanical linkage 52 actuates the flexible cable 50 for operating the flush valve 46 to open the same for flushing the closet bowl 12. The flush valve 46 cycles and shuts off automatically. The seat 31 is raised and lowered in the same manner as the seat cover 32, except

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that it does not actuate the cable 50 or the valve 46. The damping devices 65 and 66 assure that the toilet seat 31 and the seat cover 32 do not slam, but lower gradually and slowly.

An odor reducing arrangement 70 is provided for the water closet 10 which comprises an electrical mercury switch 71 (FIG. 3) that is closed by the movement of the mechanical linkage 52 when the seat cover 32 is raised from its horizontal or closed position and remains closed until the seat cover 32 is returned to substantially its closed position. The closing of the switch 71 completes a circuit over conductors 72 and 73 through a junction box 74 for operating a fan or a blower 75.

The blower 75 is mounted in a flue adapter 76 in such a manner as to expel air under pressure through the outlet of flue adapter 76 into a house flue 78, which in turn has an outlet above the roof of a house. Attached to the inlet of flue adapter 76 is a flexible pipe 77 (FIGS. 2 and 3). The other end of the pipe 77 is connected to an outlet of an air channel adapter 77' which is securely fastened to the sink 30. The inlet end of the air channel adapter 77' is formed to fit between the sink 30 and the bowl 12 to communicate with the air channel 77'' (FIG. 2). The air channel 77'' is substantially an annular channel adjacent the opening 12b of the bowl 12 and opening 30e of the sink 30 for communication therewith. Air channel 77'' is formed by the upper wall of the channel 12c and the underside of the sink 30 when they are mounted to each other. Since the opening 30e is somewhat smaller in diameter than the opening 12b, the mismatch results in an opening 77''' (FIG. 2) which is also annular to the openings 12b and 30e. In operation, blower 75 creates a vacuum in pipe 77, adapter 77', channel 77'', and opening 77''', which causes air to be drawn from the bowl 12 and other adjacent areas into the opening 77''' through channel 77'', adapter 77', pipe 77 into flue adapter 76 where it passes through blower 75 and is discharged into house flue 78 from which it is forced by the blower 75 into the atmosphere.

An anti-spill mechanism 80 (FIG. 3) is provided for the water closet 10, which includes a chamber 82 communicating with the bowl 12 through an opening (not shown) in wall 12a. Disposed within chamber 82 is a float (not shown) which is freely received by the chamber 82. Securely attached to the float is a stem (not shown) the lower end of which passes loosely through a hole drilled into the top of valve assembly 84 and is threaded into the valve flapper (not shown) of valve assembly 84.

During the sequence which would actuate the anti-spill mechanism 80 the following occurs: water under pressure flowing from the valve 46 through the pipe 15 enters the valve assembly 84. Substantially all of the water would pass through the valve assembly 84 into the flush manifold 16, thence through openings into the bowl 12, causing the water level in the bowl 12 to rise. Some of the water flowing into the valve assembly 84 is allowed to pass along the stem and through the hole drilled therefor into the chamber 82. The water seeking its own level would either pass through the opening through the wall 12a into bowl 12 or would rise to a level equal to the level in the bowl 12. The float, normally above the water high level but at a predetermined level, has its weight pressing on the stem which in turn is holding the valve flapper (not shown), down and out of the water flow path. As the water level in the chamber 82 reaches the maximum level, the float becomes buoyant and pulls up on the stem which in turn pulls the valve flapper in the valve 84 up slightly into the water flow path. The water then forces the flapper closed cutting off the surge of water to the bowl 12. The flapper will remain closed until the pressure in the pipe 15 is diminished and the level in the chamber 82 is reduced below the float buoyant level. Whereupon the weight of the float will return the flapper to its normally open position. It should be evident that the level in the chamber 82 will fall with the level in the

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bowl 12 and the level in the bowl 12 will return to normal upon the removal of the constriction in the fittings 18.

Reduction of the pressure in the pipe 15 occurs as follows: when the flapper in valve assembly 84 closes the pressure in the pipe 15 and the valve 46 rapidly rises the system pressure, the reaction in the valve 46 is to equalize differential chamber pressures required to open the valve 46. This equalization causes the valve 46 to close. The system pressure now contained in the pipe 15 by the valve 46 at one end and the valve 84 at the other end is allowed to bleed off through a small meter hole in the valve flapper of the valve 84 into the flush manifold 16. The amount of water passing through the meter hole is insufficient to significantly change the level in the bowl 12. Therefore, the danger of spilling due to this hole is not present. The chamber 82 has a cap at the upper end to prevent the escape of liquid and entrance of foreign objects.

An automatic flushing arrangement 90 for children as illustrated in FIGS. 3 and 4, comprises a plate 91 having a rectangular configuration. The plate 91 (FIG. 3) is fixedly attached to the panel of the wall 23 of the cabinet 11 directly in front of the bowl 12. One end of the plate 91 and the link 92 are pivoted about a pin 91', which moves between a vertical position and a horizontal position. At the other end the link 92 is pivotally attached to a push bar 93 (FIGS. 3 and 4). The upper end of the push bar 93 is pivoted to a bell crank 94 (FIG. 4) which is mounted on the mounting cover 67 by a pivot pin 95.

Attached to the upper end of the lever 94 is a horizontally disposed slide bar 96 formed with a horizontal slot 97. A guide pin fixed to the side of the mounting cover 67 and received by the slot 97 guides the slide bar 96 in its horizontal movement. The slide bar 96 has a wedge configuration at its end 96'. When the plate moves from the vertical position to the horizontal position away from the closet bowl 12, the push rod 93 moves in an upward direction. This action causes the bell crank 94 to pivot about the pin 95 in a clockwise direction as viewed in FIG. 4.

Clockwise rotation of the bell crank 94 moves the slide bar 96 to the right (as viewed in FIG. 4) causing the wedge shaped end 96' to come into contact with an arm 100. Further movement of the slide bar 96 to the right causes the arm 100 to pivot counter clockwise (as viewed in FIG. 6) about a pin 100'. The arm 100 has a longitudinal slot through which passes the pin 55'. The pin 100' passes through a lateral hole in the near side of the arm 100 then through the pin 55' and then through another lateral hole in the far side of the arm 100. A weight 101 securely fastened to the lower end of the arm 100 urges the arm 100 to a neutral position when the urgency of the slide bar 96 is removed. At opposite ends of the arm 100 there are forked shape configurations as detailed in FIG. 7. Prongs 102 and 103 are rigidly fixed members. Attached to the shorter prong 103 is a latch 104. The latch 104 is pivotally attached to the prong 103 by a pin 104'. A spring 105 urges the latch 104 toward the locked position substantially as shown in FIG. 7. The space between the latch 104 (in the locked position) and the prong 102 is sufficient to freely accommodate either the link 55 or link 58.

In operation, a child desiring to use the water closet 10 would lower the front panel 91 of the wall 23 to the horizontal position against the urgency of the spring in a pneumatic device 98. To the front panel of the wall 23 is secured the plate 91. The pneumatic device 98 has the rod 98a thereof attached to the bell crank 94 and is anchored at the pin 99. The child would then step up on the plate 91 and be raised to a desired height above the floor. The plate 91, when horizontal, may be approximately six inches above the floor level. Through the above described linkage, the prongs on the arm 100 are positioned in the paths of the links 55 and

58. As the child raises the seat cover 32, the linkage 52 moves and the link 55 thereof rotates as previously described. In its movement, the link 55 contacts and depresses the latch 104 against the urgency of the spring 105, passing by the latch 104, which then moves to the locked position under the urgency of the spring 105, and is stopped by the prong 102 at a position less than vertical. When released by the child, the seat cover 32 moves slightly to the closed position by gravity but is stopped by the latch 104 from closing. During the above movement of the seat cover 32, the valve 46 is prepared for opening and the fan 75 is turned on by the switch 71. If necessary the child raises the seat 31 and it is held in a near vertical position as previously described for the seat cover 32.

When finished the child steps down from the plate 91. The plate 91 through the urgency of the spring in the pneumatic device 98 returns slowly to the vertical position. The device 98 prevents the slamming of the plate 91 and the panel 23 secured thereto. When the plate 91 approaches the vertical position, the slide bar 96 is removed from the arm 100 which is returned to the neutral position by the weight 101. As the arm 100 returns to the neutral position, the latches 104 retaining the seat cover 32 and seat 31 in position are swung out of the paths of the links 55 and 58 allowing the seat 31 and the seat cover 32 to close to the horizontal position as previously described. Connected to the lower end of the lever 94 is a rod 98a of pneumatic damping device 98. The pneumatic damping device 98 is anchored to the cover 67 by the pin 99 where the pneumatic damping devices 65 and 66 are similarly anchored. The damping devices 65, 66 and 98 are identical except that the damping device 98 also has an integral spring, which urges the rod 98a into the contracted rod position. This spring action through the above-described linkages moves the panel 91 to or holds it in the vertical position.

As the seat cover 32 reaches the horizontal or closed position, the mechanical linkage 52 actuates the flexible cable 50 for operating the flush valve 46 to open the same for flushing the closet bowl 12. The flush valve 46 cycles and shuts off automatically. It is damping devices 65 and 66 that prevent the seat 31 and the seat cover 32 from slamming and allow the same to lower gradually and slowly.

In the use and operation of the present invention, the closet bowl 12 is disposed within the cabinet 11 and the flushing arrangement 14 is disposed within the wall or room divider 13.

When the seat cover 32 is raised to the vertical position (FIG. 3), the flush valve 46 through the cable 50 and the mechanical linkage 52 is prepared for the flushing operation. At the same time, the switch 71 (FIG. 3) is closed by the mechanical linkage 52 to energize the blower motor 75. Air is circulated through the channel 77 (FIGS. 2 and 3) and from the closet bowl 12 for discharge through the conduit 77 and flue 78.

For flushing the closet bowl 12, an operator moves the seat cover 32 toward the horizontal or closing position (FIG. 2) until the seat cover 32 advances beyond the vertical position. Thereupon, gravity moves the seat cover 32 to the closing position.

As the seat cover 32 approaches the closed position, the switch 71 is opened to deenergize the fan blower motor 75. In addition, the mechanical linkage 52 actuates the flexible cable 50 for operating the flush valve 46 to open the same. Thereupon, water flows from the supply over a path including valves 45 and 44, conduit 43, fitting 41 and valve 46. Simultaneously, water under pressure in the accumulator 40 is also being discharged through the fitting 41 and through the valve 46. Water passing through the valve 46 flows through the conduit 15, valve assembly 84, and the flush manifold assembly 16 for

discharge into the closet bowl 12. The flush valve 46 is thereby cycled and shuts off automatically.

It is to be understood that modifications and variations of the embodiments of the invention disclosed herein may be resorted to without departing from the spirit of the invention and the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

1. A toilet unit comprising a closet bowl with an opening, a seat cover pivotally mounted above said closet bowl for movement between opened and closed positions, air conducting means defining an air passageway along the opening of said closet bowl, flue means communicating with said air conducting means for forming a passageway for the escape of air to reduce odor, blower means communicating with said flue means, linkage means connected to said seat cover and responsive to the movement of said seat cover to the open position to activate said blower means for urging air to flow from said air conducting means into said flue means and responsive to the movement of said seat cover to the closed position to deactivate said blower means, a toilet seat pivotally mounted above said closet bowl and below said seat cover for movement between opened and closed positions and connected to said linkage means and damping means connected through said linkage means to said toilet seat and said seat cover for regulating the movement of said toilet seat and said seat cover toward the closed position.

2. A toilet seat comprising a closet bowl with an opening, a seat cover pivotally mounted above said closet bowl for movement between opened and closed positions, means for discharging water into said closet bowl, a valve connected to said means for controlling the discharge of water into said closet bowl, air conducting means defining an air passageway along the opening of said closet bowl, fluid means communicating with said air conducting means for forming a passageway for the escape of air to reduce odor, bowl means communicating with said fluid means, linkage means connected to said seat cover and responsive to the movement of said seat cover toward the open position for preparing said valve for flushing operation and for activating said blower to urge air to flow from said air conducting means into said fluid means and responsive to the movement of said seat cover toward the closed position for opening said valve to discharge water into said closet bowl and to deactivate said blower means, a toilet seat pivotally mounted above said closet bowl and below said seat cover for movement between opened and closed positions and connected to said linkage means, and damping means connected to said toilet seat and said seat cover through said linkage means for regulating the movement of said toilet seat and said seat cover toward the closed position.

3. A toilet unit comprising a closet bowl with an opening, a seat cover pivotally mounted adjacent said closet bowl for movement between opened and closed positions, means for discharging water into said closet bowl, a valve connected to said means for controlling the discharge of water into said closet bowl, air conducting means defining an air passageway along the opening of said closet bowl, flue means communicating with said air conducting means for forming a passageway for the escape of air to reduce odor, blower means communicating with said flue means and said air conducting means and interposed therebetween, linkage means operated by the movement of said seat cover, a flexible cable connected to said linkage means and said valve for opening said valve to discharge water into said closet bowl in response to the operation of said linkage means, and a switch actuated by the operation of said linkage means for activating said blower means for drawing air out of said air conducting means and for expelling the air into said flue means.

4. A toilet unit comprising a closet bowl with an opening, a seat cover pivotally mounted above said closet bowl for movement between opened and closed positions, means

for discharging water into said closet bowl, a valve connected to said means for controlling the discharge of water into said closet bowl, air conducting means defining an air passageway along the opening of said closet bowl, flue means communicating with said air conducting means for forming a passageway for the escape of air to reduce odor, blower means communicating with said flue means and said air conducting means and interposed therebetween, linkage means operated by the movement of said seat cover, a flexible cable interconnecting said linkage means and said valve and operated by said linkage means responding to the movement of said seat cover toward the open position for preparing said valve for flushing operation, and a switch actuated by said linkage means responding to the movement of said seat cover to the opened position to draw air out of said air conducting means and for expelling air into said flue means, said flexible cable being operated by said linkage means responding to the movement of said seat cover toward the closed position for opening said valve to discharge water into said closet bowl, said switch being actuated by said linkage means responding to the movement of said seat cover toward the closed position to deactivate said blower means.

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