

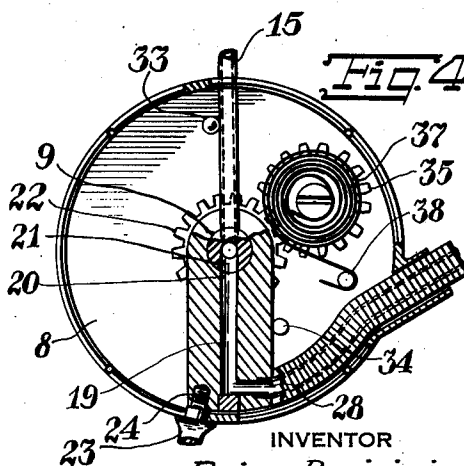
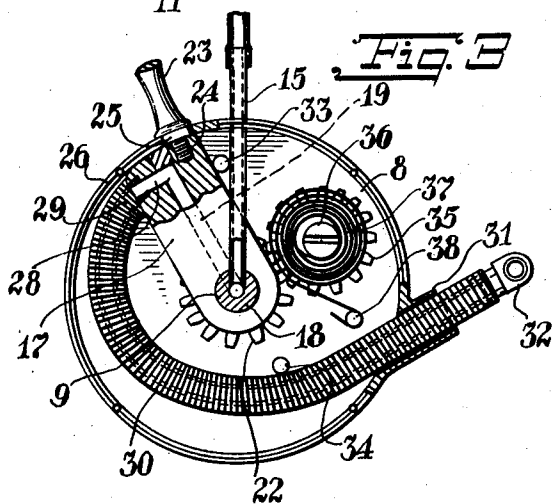
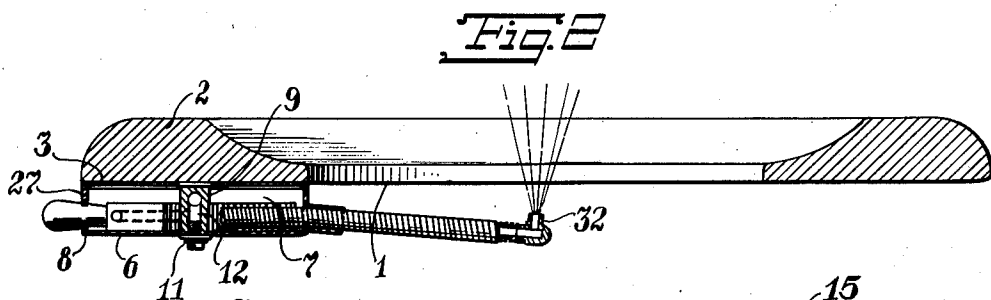
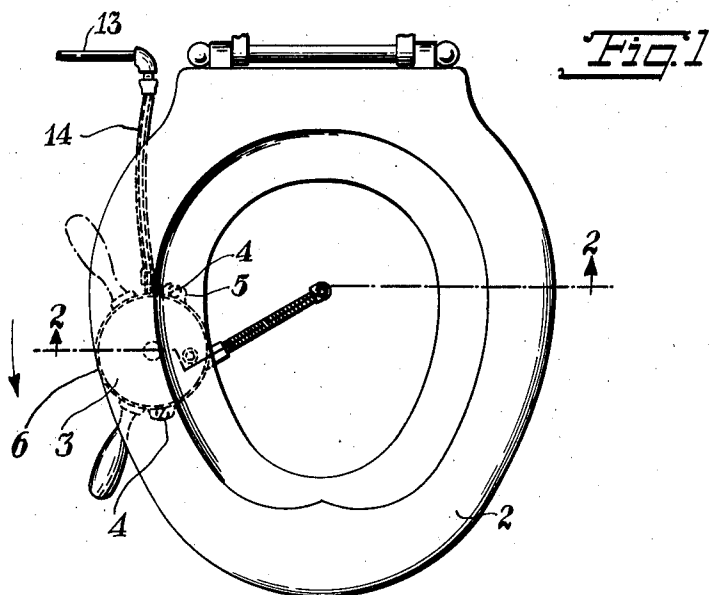
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P. PARISINI

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SPRAYING DEVICE FOR EVACUATION

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INVENTOR
Primo Parisini
BY
Benjamin Roman
ATTORNEY

UNITED STATES PATENT OFFICE

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SPRAYING DEVICE FOR EVACUATION

Primo Parisini, Corona, N. Y.

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5 Claims. (Cl. 4—7)

This invention relates to a device for conducting fluid, such as water, from a source and conveying it to the middle portion of a toilet bowl to spray it against the posterior of the sitter at termination of evacuation.

The principal object of the invention is to provide a device, apparatus, mechanism and means for efficiently carrying out the above mentioned function, for attaining improved cleanliness and sanitation in connection with evacuation.

Other objects and advantages will hereinafter appear.

In the accompanying drawing,—

Fig. 1 is a plan view of a toilet bowl seat equipped with the mechanism and device of this invention.

Fig. 2 is a transverse-sectional elevation, in an enlarged scale, of the toilet seat and mechanism illustrated in Fig. 1.

Figs. 3, 4 are plan views, in a still further enlarged scale, showing the operating device and mechanism of the invention.

To the underside 1 of toilet bowl seat 2 is secured a plate 3, by means of screws 4 passing through wings 5 of the latter and threading into said seat, and a casing 6 for the mechanism 7 of the device 8 is in turn secured to the plate 3. A hub 9 is centrally secured to the casing wall 10 by means of a cap-screw 11 passing through said wall and threading into a bore 12 of the hub, in the manner shown in Fig. 2. Water is conducted through a pipe line 13, Fig. 1, coupled to a hose 14 which is in turn coupled to a pipe 15 that threads at 16 into the hub 9 and leads to its bore 10. A lever 17 having a bearing 18 fitting over the hub 9 as a journal and being thus pivoted about the latter is swingable thereabout from a position shown in Fig. 3 to that shown in Fig. 4. Said lever is provided with a longitudinal bore 19 the terminal 20 of which registers with an outlet opening 21 of the hub 9, leading to its bore 12, when the lever is in the position shown in Fig. 4, and the lever is also provided with a gear-sector 22 concentric with the hub 9. A manipulating handle 23 for lever 17 threads therewith at 24, and a shank-portion 25 of said handle passes through a slot 26 formed in the circular side wall 27 of casing 6. The bore 19 of lever 17 is provided with an outlet 28 to which is secured the end 29 of a flexible tube 30 that extends therefrom around sector 22 and projects from the casing 6 through a lug 31 thereof, terminating in a nozzle 32. When lever 17 is swung to the position shown in Fig. 3 its stroke is limited by abutment against stop-pin 33, and when swung to the position illus-

trated in Fig. 4 it abuts against stopping-pin 34. A gear 35 mounted upon an axle 36 meshes with the sector 22, and a spring 37 secured to said axle and to a fixed pin 38 becomes wound under a tension when the lever 17 is actuated to the location shown in Fig. 4, while release of the handle 23 and the lever from said location causes the spring to rotate the gear 35, in an anti-clockwise direction as viewed in Figs. 3, 4, and through the sector 22 swing the lever 17 to the position shown in Fig. 3. When the lever 17 is in the latter position the flexible tube 30 with its nozzle 32 are in the retracted state shown, while swinging said lever to the location shown in Fig. 4 projects the tube 30 outwardly from the lug 31 and extends it with its nozzle 32 situated in the middle of the toilet bowl and seat 2, as illustrated in Fig. 1.

In the operation of the device and its utilization, water is conducted through pipe line 13, hose 14, and pipe connection 15 to bore 12 of hub 9, which together with the lever 17 constitute the valving mechanism of the device. Normally, the mechanism parts are disposed with the lever 17 as shown in Fig. 3, retained thereat by the action of the tension of spring 37, thereby shutting the valve or water feed and maintaining the flexible tube 30 in retracted state to fully clear the bowl and seat opening. When the sitter desires to utilize the spray he grasps the handle 23 and swings it forwardly fully, which manipulation swings the lever 17 to the position shown in Fig. 4 and projects the flexible tube 30 to the disposition shown in Fig. 1, with its nozzle 32 located at the middle of the bowl and seat 2. Thereupon, the water flows bore 12 through outlet 21, bore 19, outlet 28, and tube 30 to nozzle 32, wherefrom it issues upwardly as an efficient spray for washing the posterior. The handle 23 may be then released to automatically shut the valve, retract the tubular cable 30, and restore the mechanism to the condition shown in Fig. 3. The sitter may then resort to usual toilet paper for drying. If desired, in some situations or seasons, the water fed to the device may be pre-warmed, and liquids or fluids other than water may be resorted to for feed and spraying with this device.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:—

1. A spraying device for evacuation in connection with a toilet bowl having the combination of means for feeding fluid to the device, a valve mechanism for said fluid, an extensible tube for conveying said fluid being actuatable from a posi-

tion clear of the middle of the bowl to a location at the middle of the bowl, said extensible tube being connected to said valve mechanism so as to be actuable by the mechanism, said mechanism when operated to open the valve actuating and projecting said tube and conveying said fluid, and said mechanism when operated to close the valve actuating and withdrawing said tube.

2. A spraying device for evacuation in connection with a toilet bowl having the combination of means for feeding fluid to the device, a valve mechanism for said fluid, an extensible tube for conveying said fluid being actuable from a position clear of the middle of the bowl to a location at the middle of the bowl, said extensible tube being connected to said valve mechanism so as to be actuable by the mechanism, said mechanism when operated to open the valve actuating and projecting said tube and conveying said fluid, and a spring operating said mechanism to close the valve and to withdraw said tube.

3. A spraying device for evacuation in connection with a toilet bowl having the combination of means for feeding fluid to the device, a valve for said fluid, an extensible tube for conveying said fluid being actuable from a position clear of the middle of the bowl to a location at the middle of the bowl, a lever for operating said valve, said tube joined to said lever, said lever having a gear-sector, a gear meshing with said sector, a spring joined to said gear, said lever when operated to

open said valve projecting said tube and conveying fluid therethrough, and said spring rotating said gear to actuate said sector and lever to close said valve and withdraw said tube.

4. A spraying device for evacuation in connection with a toilet bowl having the combination of means for feeding fluid to the device, a valve for said fluid, a lever for operating said valve, a flexible tube for conveying said fluid being joined to said lever, said lever having a gear-sector, a gear meshing with said sector, a spring joined to said gear, said lever when operated to open said valve carrying said tube to bring it from a position clear of the middle of the bowl to a location at the middle of the bowl and conveying the fluid through the tube, and said spring rotating said gear to actuate said sector and lever to close said valve and withdraw said tube.

5. A spraying device for evacuation in connection with a toilet bowl having the combination of means for feeding fluid to the device a valve for said fluid a lever for operating said valve, a flexible tube for conveying said fluid being joined to said lever, said lever when operated to open said valve carrying said tube to bring it from a position clear of the middle of the bowl to a location at the middle of the bowl and conveying the fluid through the tube, and a spring actuating said lever to close said valve and withdraw said tube.

PRIMO PARISINI.