

O. C. CURRIE.
SANITARY TOILET.

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1,291,428.

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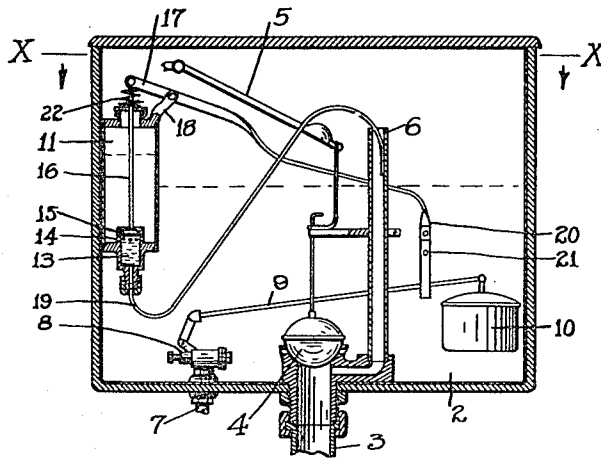


Fig. 1.

Fig. 4.

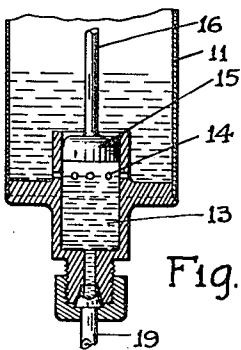


Fig. 3.

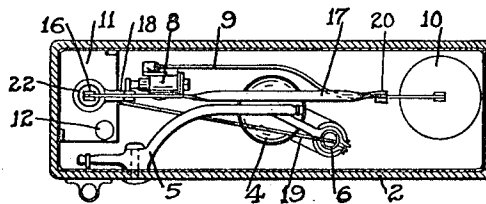


Fig. 2.

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SANITARY TOILET.

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To all whom it may concern:

Be it known that I, OTIS C. CURRIE, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Sanitary Toilets, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to sanitary toilets provided with means for discharging a disinfectant into the bowl after each flushing thereof. The primary object of the invention is a device for the purpose stated that is wholly inclosed within the flush water tank so that no part thereof is exposed to view or is in position to be readily disarranged by accident or intent and whereby the necessity for perfectly fitting joints is avoided, as all leakage is into the flush water. A further object is a means whereby a movement of the float automatically discharges disinfectant into the bowl after the flush water has passed therethrough, the said disinfectant mixing with the remaining water in the bowl until the next flushing thereof. These and other objects and the novel features of construction whereby they may be attained are hereinafter more fully described and claimed and shown in the accompanying drawings in which—

Figure 1 is a vertical section of a flush tank connected with a bowl and showing my improved means for supplying disinfectant.

Fig. 2 is a section of the flush tank on line *x-x* of Fig. 1.

Fig. 3 is a detail in section of the pump plunger employed in discharging disinfectant into the bowl.

Fig. 4 is a detail of the connection between the pump lever and the float lever.

Similar characters refer to similar parts throughout the drawing and specification.

The bowl 1 is connected in the usual manner with the flush tank 2, by means of the outlet pipe 3, the upper end of which is provided with a valve 4 that may be raised through the medium of the pivoted lever 5 and allow the water in the tank to flow into the bowl. An overflow pipe 6 is pro-

vided, the upper end of which is above the normal level of water in the tank and the bottom end of which is connected with the pipe 3 below the seat for the valve 4. Water is supplied to the flush tank through a pipe 7 leading into the bottom thereof controlled by the valve mechanism 8, which is connected by a lever 9 with the float 10. As the water level falls in the tank during the discharging thereof, the float drops and opens the valve 8 allowing more water to flow thereinto. When the valve is closed and the tank becomes filled, the float 10 rises therewith and closes the valve 8 as is usual in such devices.

Located within the tank 2 is a disinfectant container 11 having a capped opening 12 for the filling thereof. The upper end of the container is situated above the normal level of water in the tank 2, and is provided at the bottom with a pump chamber 13 extending a short distance upward into the container and provided with inlet ports 14 at the bottom of the container. A piston 15 is reciprocable in the pump chamber and is provided with a stem 16 extending upward through an opening provided in the upper end of the tank and is there pivotally attached to the operating lever 17, pivotally mounted on a bracket 18 on the container 11.

When this lever 17 is down, as shown in Fig. 1, the plunger 15 is raised above the openings 14 in the pump chamber 13 and disinfectant in the tank 13 may flow through the said openings 14 into the pump chamber. The lower end of the pump chamber is provided with a tube 19 leading into the upper end of the overflow pipe 6. With the pump chamber filled with disinfectant as above described, raising of the pump lever 17 forces disinfectant from the pump chamber 13 into the overflow pipe 6 and thence downward through the pipe 3 into the bowl.

The lever 17 is made somewhat flexible and is provided with a downwardly turned end 20 which is forked as shown in Fig. 4, at the upper end of which fork is provided a small grooved wheel 21. The float lever 9 operates in this fork 20 which is of such length that the lever 9 is never wholly withdrawn therefrom. A spring 22 is provided on the pump plunger 16, between the end of the lever 17 and the disinfectant tank, tending to hold the pump plunger raised as shown in Fig. 1, under which condition

the pump chamber 13 becomes filled with disinfectant. Prior to assuming this position, the water in the tank has been discharged through the pipe 3 and, as the tank
5 again fills through the valve 8, the float 10 rises and when it has raised sufficiently to engage the roller 21 in the fork of the lever 17, the said lever is raised forcing the plunger down and discharging the disinfectant
10 through the tube 19 into the overflow pipe 6, and thence through the pipe 3 into the bowl, which it will be noted remains in the bowl as it flows thereinto subsequent to the flushing thereof. When the bowl is
15 again flushed and the water discharged from the tank 2, the float falls and the pump plunger rises providing a new charge of disinfectant in the pump chamber which is subsequently delivered into the bowl at the
20 time of the filling of the tank 2.

The lever 17 is made flexible in order to allow the float valve to rise to the proper height to close the valve 8 which may occur after the plunger has completed its stroke in
25 the chamber 13. Careful adjustment of the parts is, therefore, avoided, as the plunger may complete its stroke before the float has raised sufficiently to close the valve 8.

From the foregoing description it becomes
30 evident that the device is automatically operated, delivering the disinfectant to the bowl after each flushing thereof, that the parts are simple in construction, inexpensive to manufacture and that careful packing of
35 the various joints is not required as all leakages occur within the flush water in an inclosed tank whereby the odors from such leakage are not perceptible in the room in
40 which the device is placed and, furthermore, that the parts are entirely hidden from view and are not in position to be tampered with.

Having thus briefly described my invention, its utility and mode of operation, what I claim and desire to secure by Letters Patent of the United States is—

1. In apparatus of the character described, a flush-water tank having an outlet, manual means for discharging the water from said tank a disinfectant container within the tank, a pump in said tank connected with the container and adapted to receive a quantity of disinfectant therefrom, said pump being adapted to discharge into the outlet within the tank, a float and means controlled thereby for maintaining a normal
50 supply of water in said tank, and means for discharging the pump operated by movement of the float during the filling of the tank.

2. In an apparatus of the character described, a flush water tank having an outlet, a manually operable valve controlling the outlet, a disinfectant container within the tank, a pump in said container adapted to receive a certain quantity of disinfectant therefrom, an overflow pipe opening above the normal level of water in the tank and opening into the outlet below the valve, a tube extending from the discharge end of the pump into the open end of the said
60 overflow, a float and means controlled thereby for maintaining a normal supply of water in said tank, a lever for operating the pump, the said lever being connected with the float, whereby on upward movement thereof the lever is operated to discharge the contents of the pump into the overflow.
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In testimony whereof, I sign this specification in the presence of two witnesses.

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Witnesses:

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