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DEODORIZER FOR TOILET BOWLS

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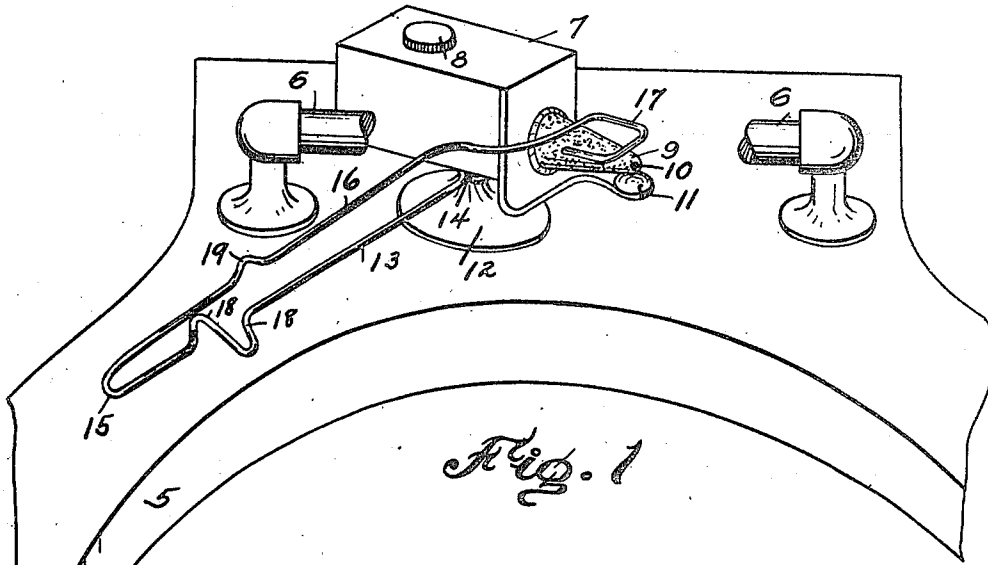


Fig. 1

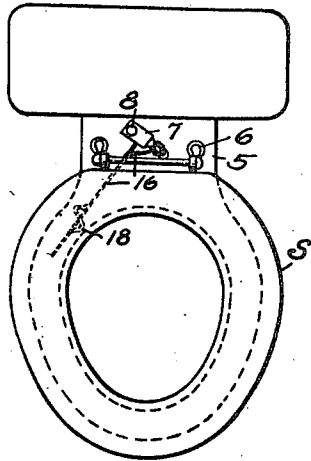


Fig. 2

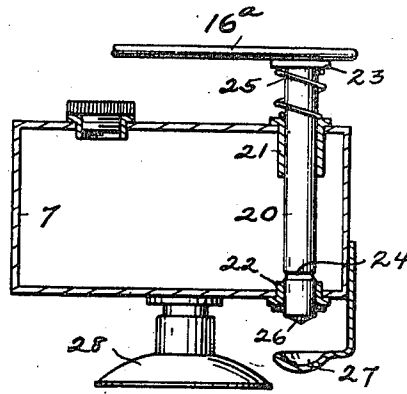


Fig. 3

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DEODORIZER FOR TOILET BOWLS

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5 Claims. (Cl. 4-222)

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The object of the present invention is to provide a simple and inexpensive deodorizer primarily intended for use in conjunction with toilet bowls, though capable of use in other relations.

It is an important object of the invention to construct an article of this nature in such manner that it may be dispensed as an article of manufacture and in the form of a simple attachment adapted to be easily and quickly applied by unskilled persons. It is also an object of the invention to so locate the attachment that no part of it will project within the closet bowl. Thus the attachment will itself remain clean and undefiled while the interior of the bowl may be wiped around without interference by the attachment. The invention will be best understood by reference to the accompanying drawings, wherein:

Figure 1 is a perspective view of the attachment showing the same applied to the rear portion of the rim of a toilet bowl and with the toilet seat removed.

Figure 2 is a plan view of a toilet assembly having the device of the invention applied thereto, and

Figure 3 is a sectional view through a modified form of the dispensing tank.

Like numerals designate corresponding parts throughout the figures of the drawings.

In the drawings, 5 designates the rear portion of the rim of a toilet bowl and 6 is the usual hinge for supporting the toilet seat S. The embodiment of the invention illustrated in Figures 1 and 2 comprises a tank 7, having a filling cap 8 and a rubber nipple 9. The outlet orifice of this nipple indicated at 10 is disposed over a small cup 11 that is preferably carried by an extension of the end wall of the tank. The tank may be firmly engaged with and supported upon the rim 5 by a rubber suction cup 12. Means are provided for causing the movement of the toilet seat to eject a drop of a highly volatile, pungent, deodorizing liquid into the cup 11. The said means projects from the tank which is located outside of the line of the toilet seat to a point beneath the toilet seat S (see Fig. 2) at one side thereof and comprises a lower run 13 of wire which is rigidly affixed at one end to the tank, as at 14 and which is bent upon itself at 15 and continued to constitute an upper run 16. A portion of this upper run, in the particular form illustrated, the free end, overlies the nipple 9. In the particular form shown this free end is bent to loop formation 17 to give sufficient bearing upon the nipple to bring about the ejection

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of a drop of the deodorizing fluid when the downward movement of the toilet seat presses the upper run downwardly. The lower run 13 is provided with the lateral bends 18 which lie flat upon the top of the rim of the toilet bowl and prevent any lateral twisting which would throw the run 16 out of alignment with the run 13. The run 16 upon the other hand is provided with an upstanding hump 19 upon which the lower side of the toilet seat rests. The structure constituted by the runs 13 and 16 and the bend 15 is made of a spring material such as stout spring wire of such resilience as to maintain the toilet seat, when not in use, in slightly elevated position. As before stated, downward movement of the toilet seat, when being used, moves the upper run 16 and consequently the loop 17 downwardly and with such force as to bring about the ejection of the drop of deodorizer.

The present invention is directed to the apparatus employed and not to the deodorizing liquid. I may use any suitable liquid as long as it is sufficiently volatile to readily permeate the atmosphere and of such pungency and odor as to accomplish the desired result of overcoming objectionable odors. It is clear that the nature of the liquid may be varied within wide ranges and that the liquid may also have germicidal or insecticidal properties.

In the modification illustrated in Figure 3, a tank 7a is traversed by a plunger 20, said plunger moving in guides 21 and 22. The plunger is provided with a head 23 by which it may be thrust downwardly, as for example, by the free end of a wire run 16a, corresponding to the run 16. The plunger is provided with a circumferential groove 24 and is normally held in elevated position by spring 25.

When the plunger is thrust downwardly the groove moves from a position inside of the tank to a position outside of the tank and a small quantity of liquid trapped in said groove trickles down the exposed portion of the plunger and from its pointed lower end 26 into a cup 27 which corresponds to the cup 11. This tank may be held in place in any desired relation by a suction cup 28.

It is to be understood that the invention is not limited to the precise construction set forth but that it includes within its purview whatever changes fairly come within either the terms or the spirit of the appended claims.

Having described my invention, what I claim is:

1. A device of the character described compris-

ing a container for a deodorizing liquid, means carried by the container and adapted to engage the top of a toilet bowl to support the container upon the toilet bowl and wholly thereabove and at a point outside of the line of the toilet seat, a dispensing valve carried by the container and means for actuating said valve by movement of the toilet seat, said means comprising a length of wire bent upon itself to form a pair of runs, the end of one of which runs is secured to the tank and the free end of the other of which runs overlies said valve, said runs being connected at their ends, remote from the tank, by a resilient bend, said runs being of such length and being disposed in such direction as to project beneath a toilet seat at such a point between said seat and the top rim of the toilet bowl, that downward movement of the toilet seat depresses that run which overlies said valve, against the resilient action of said bend, to thereby actuate said valve to eject some of the deodorizing liquid.

2. A device of the character described comprising a container for a deodorizing liquid, means carried by the container and adapted to adhesively engage the flat upper face of a toilet bowl to support the container upon the toilet bowl at a point outside of the line of the toilet seat and wholly above the level of the top of the bowl, a dispensing valve carried by the container and means for actuating said valve by movement of the toilet seat consisting of a pair of runs of spring wire the end of one of which runs is secured to the tank and the free end of the other of which runs overlies said valve, said runs being connected at their ends, remote from the tank, by a resilient bend, said runs being of such length and being disposed in such direction as to project beneath a toilet seat to such a point between said seat and the top rim of the toilet bowl, that downward movement of the seat in use will depress that run which overlies said valve against the resilient action of said bend and thereby depress said valve to eject some of the deodorizing liquid, the other of said runs being provided with lateral bends which lie horizontally upon the top of a rim of the toilet seat to prevent twisting of the said runs out of their proper relation.

3. A structure as recited in claim 2, wherein the upper run is provided with an upstanding hump upon which the lower side of the seat rests.

4. A structure as recited in claim 1, wherein the valve is in the form of a plunger, said plunger

being provided with a dispensing groove movable when the plunger is moved from a point inside of the tank to a point outside of the tank, spring means for moving said plunger to move the groove inside of the tank and a cup carried by the tank for receiving a deodorizing liquid discharged from said groove.

5. A deodorizing attachment for toilet bowls of the type having a flat and smooth upper face and a seat hinged thereto, said attachment comprising a containing tank for a deodorizing liquid, said tank carrying means upon its bottom by which said tank is directly and adhesively affixed to said flat smooth face of the toilet bowl at a point outside of the line of the seat and with the tank and its contents disposed wholly above the upper face of said bowl, an elastic perforated discharge nipple projecting outwardly beyond a wall of the tank, a seat actuated member for compressing said nipple to eject a limited amount of the deodorizing liquid therefrom when said seat is depressed, said member comprising a length of spring wire bent upon itself to form two runs, one end of one run being rigidly affixed to the tank and the other and free end of the other run being shaped to overlie and constrict the elastic nipple when said end is depressed against the spring action of said wire by the downward movement of the seat in use to thereby eject some of the deodorizing liquid from said valve, the said two runs projecting from said tank obliquely over the top of the toilet bowl to a position where the bight portion of the wire lies between the top edge of the bowl and the underside of the toilet seat and a cup carried by the tank in position to receive the ejected liquid.

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