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TOILET MEDICATOR

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Fig. 1.

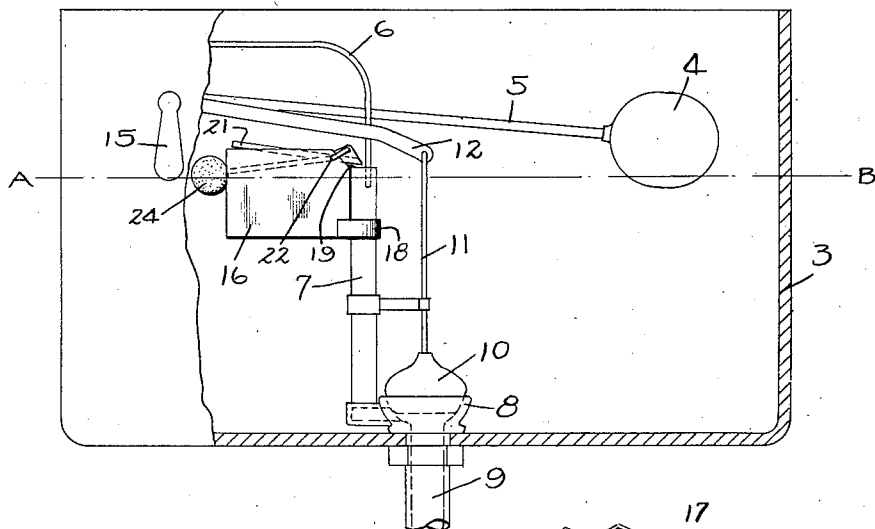
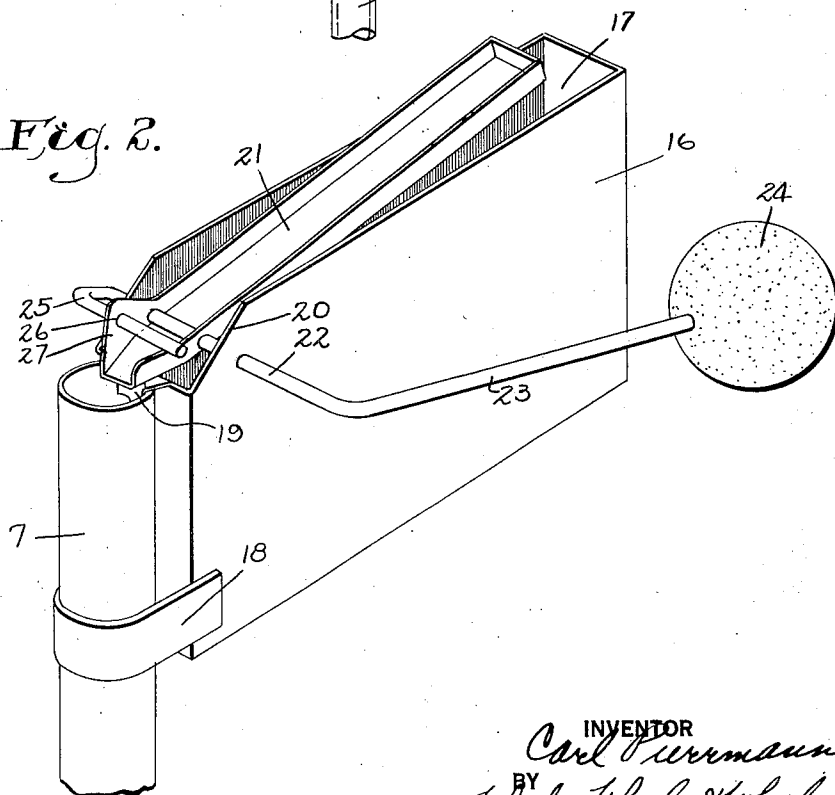


Fig. 2.



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TOILET MEDICATOR

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6 Claims. (Cl. 4—225)

This invention relates to improvements in toilet medicators.

It is the primary object of the invention to provide novel and simple means applicable to the overflow pipe of any conventional flush tank and independently operable for the deposit of a predetermined quantity of a deodorant or sterilizing liquid into the toilet bowl when the flushing operation has been completed and the bowl substantially refilled.

In the drawing:

Figure 1 is a view partially in front elevation and partially in section through a conventional flush tank organization showing my improved device applied to the overflow pipe thereof.

Figure 2 is a view in perspective showing a device embodying my invention as it appears when applied to the top of an overflow pipe which is fragmentarily illustrated.

Like parts are designated by the same reference characters throughout the views.

The flush tank 3 will be understood to contain a filling valve mechanism of any ordinary design which is not illustrated because it plays no part in the present invention. In accordance with usual practice it may be opened and closed by the float 4 mounted on lever 5 and illustrated in its uppermost position.

So long as the water supply valve is open it is conventional practice to divert a portion of the flow through a tube 6 to the overflow pipe 7 whereby to refill the toilet bowl following the flushing operation. The overflow pipe 7 communicates with the valve seat fitting 8 at the top of flush pipe 9 and bypasses the ball flush valve 10 which is of conventional design and arranged to be operated through link 11 from lever 12 and handle 15.

It is important to note that the device of this invention is mounted solely upon the overflow pipe 7 independently of the tank 3 and the mechanism therein contained. Thus it is adapted for use in almost any flush tank without changes of design. It is further important to note that the device of my invention is operated entirely independently of the flushing mechanism, having a float of its own to respond solely to changes of water level so that no adaptation to the particular flushing mechanism of any given toilet installation is required.

In accordance with my invention I provide a narrow box 16 having an interior chamber 17 in which the desired deodorant or disinfecting solution is stored. A strap 18 attached to the bottom of the box is arranged to receive a conven-

tional overflow pipe 7. A hook 19 at the upper margin of the box engages over the top of the conventional pipe 7.

It will be noted that the box is cut away at 20 to provide clearance for the combined ladle and dispensing trough 21 which is mounted to oscillate upon a rock shaft 22 which is extended in the form of arm 23 to carry the float 24. The rock shaft 22 oscillates in apertures provided near the top corner of box 16 as clearly shown in the drawing. The rock shaft 22 and arm 23 are preferably made of relatively soft wire which may be bent to position the float as desired to accommodate any particular range of water level variation in a given installation. Since the box is mounted directly from the overflow pipe 7 the position of the ladle and dispensing trough 21 will always have a predetermined relation to the overflow pipe.

While the dispensing trough 21 may be mounted on the rock shaft 22 in any desired manner, I prefer to provide the rock shaft with a hooked portion 25 bent back along the shaft to engage in the aperture 26 of an ear 27 formed integrally with one of the side walls of the trough. The bearing portions of shaft 22 extend through holes in the sides of the trough aligned with the holes in the box 16, being inserted therethrough before the arm 23 is bent and the float 24 attached.

Thus the trough 21 is positioned against lateral displacement solely by reason of the fact that it is confined by the walls of the box 16 and the trough requires no soldered connection to the rock shaft, but is caused by the hooked portion 25 of the rock shaft to oscillate in accordance with the position of the float. This arrangement facilitates either right or left hand mountings since the rock shaft 22 may be inserted through the aligned apertures of the box and trough from either side and it will then be bent to provide the arm 23, and the float 24 will be attached to actuate the trough from the lowermost or dipping position of its closed end 28 to the uppermost or dispensing position of such end.

Both views of the drawing show the dispensing ladle 21 in dispensing position. When the flush valve 10 is manipulated to drain the contents of the flush tank into the toilet bowl, the supply valve will be actuated in the usual way by float 4 with no reference to the device of this invention. The decrease in water level occasioned by the flushing operation will allow the float 24 of my device to fall, thereby lowering the closed free end 28 of my dispensing trough to a position near

the bottom of the chamber 17 where it will be immersed in any liquid therein contained.

When the flushing operation has been completed the flush valve 10 will close itself in the usual way allowing a restoration of the water level in the flush tank as well as in the bowl of the toilet. The level in the bowl will be built up in the usual way during the filling of the flush tank by flow through tube 6 and overflow pipe 7. Not until the flush tank is substantially filled to its uppermost level represented by the line A—B, in Fig. 1, will the dispensing trough 21 pass the horizontal and become inclined toward the overflow pipe 7 as illustrated both in Fig. 1 and Fig. 2. At this time the toilet bowl will have been almost refilled and consequently all of the medicament supplied thereto will be retained therein until the next flushing operation.

Obviously the shape of the dispensing trough as illustrated is such that only a few drops of the deodorant or other solution can be lifted in the closed end of the trough and dumped into the overflow pipe. A few drops will ordinarily be sufficient for the reason that there is no waste such as would occur if the medicament were deposited in the flush tank and largely lost in the flushing operation. If, however, it is desired to deposit a greater amount of material, it will be obvious that the shape of the closed end 28 of the dispensing trough 21 may be changed accordingly to provide a deeper ladle portion.

I claim:

1. In a device of the character described, the combination with a receptacle, of a strap connected with an end portion of said receptacle and adapted to receive an overflow pipe and a hook connected with the receptacle above the strap and engageable in the mouth of such pipe.

2. In a device of the character described, the combination with a receptacle having a delivery portion, of a hook connected with said portion and engageable with the mouth of a flush tank overflow pipe, and means below said hook for positioning said receptacle with respect to such a pipe.

3. In a device of the character described, the

combination with a box-like receptacle provided adjacent the upper margin with a hook, of a rock shaft journal adjacent said hook and provided with a float for its operation and a dispensing trough having a dispensing portion overlying the hook for discharge into a pipe with which said hook is engaged, said trough having at its free end remote from said hook a closed portion for the elevation of material to be dispensed.

4. In a device of the character described, a box provided at an upper end portion with a hook engageable with the overflow pipe of a flush tank, means at the same end of the box below the hook for engagement with such a pipe for steadying the box thereon, a rock shaft journaled in the sides of said box and provided with a bendable arm, a float carried by said arm, and a trough mounted on said rock shaft and having a closed free end portion oscillatable between a lowered and elevated position in said box, one end of said trough over said hook being open and arranged in the elevated position of the closed end of the trough to discharge the contents of the trough into the pipe upon which the box is mounted.

5. A device of the character described comprising in unitary combination a receptacle provided with mechanically operable means for a flush tank overflow pipe, means for discharging from said receptacle into said pipe predetermined portions of the contents of the receptacle, and float controlled means carried by the receptacle for actuating said discharging means.

6. In a device of the character described, the combination with a receptacle, of means carried thereby for engagement with a flush tank overflow pipe for the support of said receptacle, a dipper mounted for oscillation upon said receptacle and having a discharge portion positioned for discharge into the overflow pipe upon a predetermined degree of oscillation of the dipper with respect to the receptacle, and a float connected with the dipper for the oscillation thereof and carried by the receptacle from said pipe.

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