Jan. 28, 1930. R. DE LAMPRECHT 1,745,010

DISINFECTING DEVICE FOR SANITARY FLUSHING TANKS

Filed Oct. 31, 1928

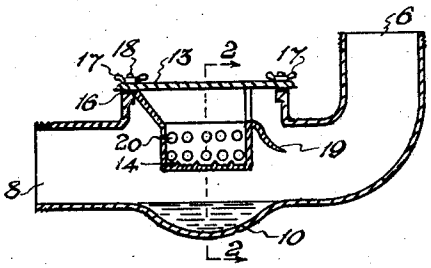


Fig. 1.

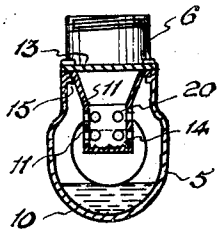


Fig. 2.

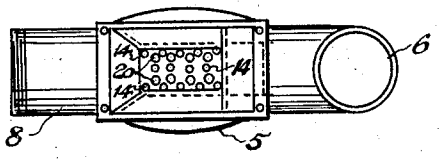


Fig. 3.

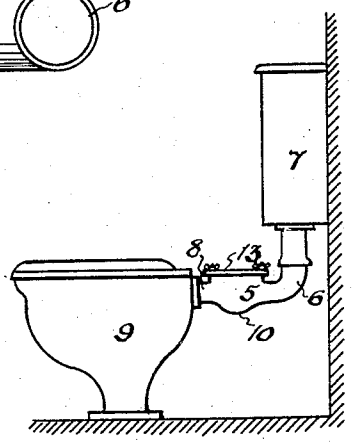


Fig 4.

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UNITED STATES PATENT OFFICE

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DISINFECTING DEVICE FOR SANITARY FLUSHING TANKS

Application filed October 31, 1928. Serial No. 316,181.

This invention relates to improvements in disinfecting and deodorizing the bowls of sanitary appliances, such as water closets, urinals, and similar fittings which are intermittently flushed through by the discharge of a quantity of water from a flush tank situated conveniently to the appliance.

The object of the invention is to provide a neat, accessible and unobtrusive fitting, situated intermediate of the flush tank and the bowl, and adapted to receive and retain a small cake or slab of soluble deodorizing or disinfecting material in a perforated chamber or case, the latter being so disposed within the fitting that a portion of the flush water from the tank passes into the perforated chamber and over the cake of deodorizing material, thence draining downwards into the base of the fitting, and being swept into the bowl with the next discharge of the flush water.

The perforated chamber is so adapted as to be easily removed for the replacement of the deodorizing material when required and is firmly secured in position by a cover held by wing nuts or other simple attachments easily manipulated by an unskilled attendant.

The deodorizing material may be of any form or composition provided that it is so reasonably soluble in cold water that the passage of the portion of flush water over it results in the latter being sufficiently charged with the deodorant to effect the necessary cleansing of the bowl when swept into and through it by the flush water.

My invention is more clearly described by reference to the drawings accompanying and forming part of this specification, which illustrate a convenient embodiment of the invention and in which:

Figure 1 represents a central longitudinal section through the fitting and the perforated chamber.

Figure 2 is a cross section on the line 2—2 in Fig. 1.

Figure 3 is a plan of the fitting with perforated chamber in position, the cover being supposed removed.

Figure 4 is a view showing the fitting in its correct position intermediate between a flush tank and a toilet bowl.

In these views the numeral 5 indicates the body of the fitting, with inlet pipe 6 adapted for attachment to the flush tank 7, and with inlet pipe 8 adapted to the bowl 9 or other similar appliance. The fitting 5 is arranged with a depression 10 situated under the position of the perforated chamber 11, and intended to catch and retain the solution of deodorant, draining into it from the chamber.

Over the top of the fitting 5 is an opening 12 closed by a cover 13, giving access to the fitting for the purpose of inserting therein the perforated chamber 11, the latter being supported by ledges 15 on the sides of the opening 12, and secured in position by means of the cover 13. The matter is made watertight by means of a washer 16 of resilient material which is compressed when the wing nuts 17 are tightened upon the bolts 18 securing the cover 13.

The perforated chamber 11 is provided with a projecting fin 19 so disposed as to lie in the path of the flush water descending the inlet branch 6, and cause a portion of same to pass over the fin and thus into the top of the chamber 11. The sides, bottom and ends of this chamber are provided with a plurality of apertures 20 to allow the flush water entering the top to drain off and fall into the depression 10 underneath.

The cake of deodorizing material is placed in the chamber 11, and is kept from lying closely upon the base of same and thus blocking up the base apertures, by a plurality of upwardly extending conical projections 14 formed in the base of the chamber 14.

To operate and assuming that the fitting 5 is in the position shown in Figure 4, the cover 13 is removed, and the deodorizing material placed in the chamber 11, the cover 13 being then replaced and tightened up by means of the wing nuts 17. Upon the discharge of the water from the flush tank 7, the flush water passing down the inlet branch 6 impinges upon the projecting fins 19 and a portion of the water is deflected upward and passes into the top of the chamber 11 over the deodoriz-

ing material therein, and thence drain downwards through the apertures 20, taking some of the deodorizing material into the solution and discharging it into the depression 10 in the base of the fitting 5. This solution is, upon the next emptying of the flush tank 7, swept into the bowl 9, the deodorizing solution being replaced by a further quantity draining out of the chamber 11 into the depression 10 as before.

Having now particularly described my invention, I declare that what I claim is:

1. A disinfecting device for a sanitary flushing tank comprising, a delivery pipe connected to said flushing tank and having an enlargement intermediate of its ends, said enlargement being adapted to retain a portion of each delivery of flushing water flowing through said pipe, a perforated receptacle within said enlargement, a solid soluble disinfectant enclosed within said receptacle, a projecting fin secured to said receptacle and adapted to deflect a portion of the said flushing water from said tank into said receptacle, means within said enlargement adapted to support said perforated receptacle, an aperture in said enlargement adapted for the insertion and withdrawal of said receptacle, closure means for said aperture.

2. A disinfecting device for a sanitary flushing tank comprising, a delivery pipe comprising a horizontal portion and a vertical portion, said horizontal portion having an enlargement of its cross sectional area intermediate of its ends, a removably secured perforated receptacle within said enlargement, a solid soluble disinfecting compound supported within said receptacle and clear of said perforations.

3. A disinfecting device comprising a body having an inlet and an outlet and an enlargement between the inlet and the outlet, said enlargement including a bowl-like depression in its bottom and having an opening in its top, a receptacle suspended in said enlargement and including a perforated basket-like portion located in the path of flow of water through said body and further located above the bowl-like depression whereby to be spaced from the contents of said bowl-like depression, and means to deflect a portion of the water flowing through said body and deliver same into said receptacle above said basket-like portion for the purpose described.

4. A disinfecting device comprising a body having an inlet and an outlet and an enlargement between the inlet and the outlet, said enlargement including a bowl-like depression in its bottom and having an opening in its top, a receptacle suspended in said enlargement and including a perforated basket-like portion located above the bowl-like depression whereby to be spaced from the contents of said bowl-like depression, means to deflect water into said receptacle above said basket-like portion, said receptacle above said basket-like portion being closed on three sides, and said deflecting means being located on the open side.

In testimony whereof I affix my signature.

RODOLPH DE LAMPRECHT.