

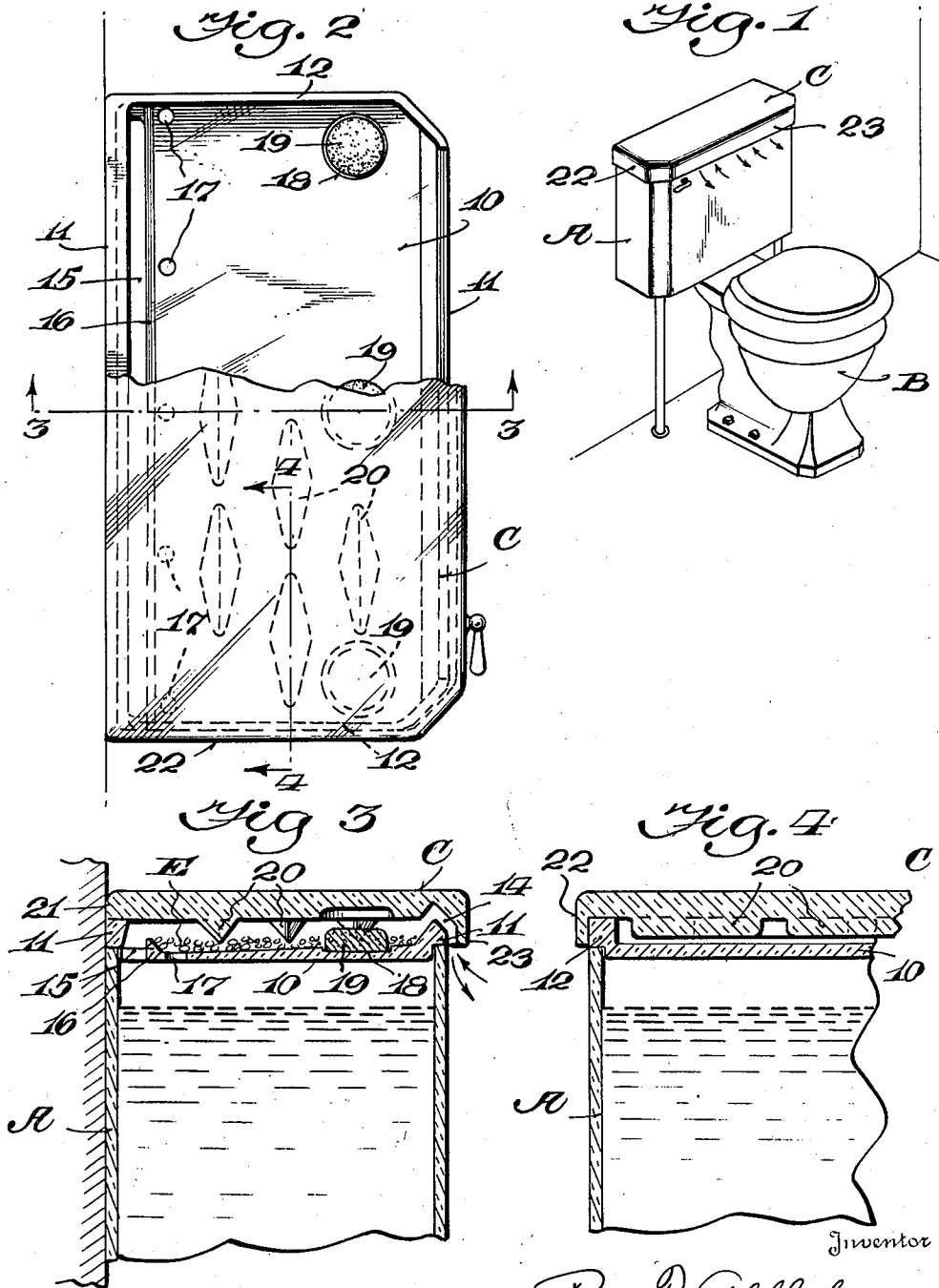
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ATTACHMENT FOR FLUSH TANKS

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ATTACHMENT FOR FLUSH TANKS

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6 Claims. (Cl. 4—228)

This invention relates to disinfecting apparatus and has particular reference to an apparatus for disinfecting or deodorizing rooms, by means of which, volatile disinfectants or substances producing fragrant odors may be caused to permeate the atmosphere.

One of the objects of the present invention is to provide a simple attachment for the flush tank of a toilet whereby the emptying of the tank will cause air to be drawn in over the disinfectant or deodorizing material, and then as the water rises in the tank, the volatile constituents of such material will be expelled into the room.

Another object is to provide an attachment of the aforesaid character which may be easily and quickly installed without the use of tools, and when in position, shall not alter the exterior appearance of the flush tank.

A further object is to provide an attachment which shall be readily accessible for removal of the disinfecting or deodorizing material, or for purpose of cleaning, and wherein any moisture or liquid that tends to collect will automatically drain into the flush tank.

With the foregoing and other objects in view, the invention may be stated to consist in the various novel features of construction and arrangement or combination, all of which will be fully described hereinafter and pointed out in the claims.

In the drawing accompanying and forming a part of this application,

Fig. 1 is a perspective view of a toilet and flush tank equipped with my invention;

Fig. 2 is a top plan view of the flush tank with parts broken away;

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2; and

Fig. 4 is a fragmentary vertical sectional view taken on the line 4—4 of Fig. 2.

The letter A designates generally a conventional flush tank which is operatively connected with the toilet bowl B in the usual manner. The tank A is normally fitted with a removable cover that is replaced in accordance with my invention, with a cover C that is similar in exterior appearance.

In adapting my invention to a flush tank of this general character, I provide a removable tray which may be made entirely of ceramic material or of sheet metal having a baked enamel finish, or of any other suitable material. This tray has a bottom wall 10 and upwardly and outwardly extending side walls 11 and end walls

12 that are adapted to rest on the upper edges of the corresponding walls of the flush tank A. It will be noted that the front wall 11 of the tray is preferably bevelled on its top surface to define one wall of a discharge passage 14 to be referred to hereinafter. Adjacent the rear side wall, the bottom surface 10 of the tray is formed with an elongated aperture 15 which communicates with the interior of the flush tank. Preferably the forward edge 16 of this slot is extended above the bottom surface 10 of the tray to form a baffle, and immediately in front thereof there are formed a plurality of drain apertures 17. Ordinarily the deodorant material in granular form as indicated at E is sprinkled on the bottom wall 10 of the tray to a suitable depth. However, it may be desirable to use the deodorant material in cake form, in which case, the bottom surface 10 is preferably formed with slight depressions 18 to facilitate the placement of such cakes which are indicated at 19.

Cooperating with the tray is the cover C which to all outward appearances is identical with the cover that is normally used. However, the under top surface of this cover is provided with a plurality of projections 20 that are illustrated as being diamond shaped in plan view, and which form a series of baffles for the air passing over the deodorant material. The back edge 21 of the cover is adapted to lie flush with the rear wall 11 of the tray and the rear wall of the flush tank, as illustrated in Fig. 3. Preferably the end walls 22 and the front wall 23 of the cover are turned downwardly and extend a sufficient distance to cover the tray and thus provide a neat appearance. As clearly shown in Fig. 3, the front wall 23 is spaced outwardly a slight distance from the front edge 11 of the tray to define the other wall of the air passage 14. Also the under surface of the cover adjacent the front edge is recessed to cooperate with the upper beveled surface of the tray front wall 11 to form a continuation of this passage which communicates with the chamber containing the deodorant material.

In use, no tools are required as the tray and cover may be easily and quickly installed by removing the standard tank cover, then placing the tray in position so as to rest on the top edges of the flush tank. If granular deodorant material is used, it is then sprinkled to a suitable depth in the tray, or if deodorant cakes are used, these are placed in the depressions 18 in the tray, after which the cover C is positioned on top of the tray and tank.

When the toilet is flushed, the lowering of the level of the water in the flush tank will cause air to be drawn in through passage 14 as indicated by the arrows in Figs. 1 and 3, then over the deodorant material and through slot 15 and apertures 17 into the flush tank. As the water level rises in the tank, the flow of this deodorant laden air will be reversed and it will again pass over the deodorant material and then be expelled through passage 14 into the room.

Since most of the deodorant materials are of a somewhat deliquescent nature, it is desirable to drain the moisture therefrom as it forms. To this end, I preferably slope the bottom surface 10 of the tray slightly downwardly toward the rear thereof so that the moisture thereon will drain through the apertures 17 into the water in the flush tank. This is not only desirable from the standpoint of prolonging the life of the deodorant material, but the water in the tank is mixed with the liquid from the deodorant material and hence the toilet bowl will be deodorized when the toilet is flushed. The apertures 17 also permit the tray to be washed while it remains in position, since the water used for this purpose will drain freely into the flush tank.

What I claim is:

1. An attachment for a flush tank of the character described comprising a tray adapted to be supported by the top walls of the tank, and interposed between the tank and the cover therefor, said cover cooperating with said tray to provide a chamber for deodorant material, said chamber having passages communicating with the interior of the flush tank and with the atmosphere exteriorly of the flush tank.

2. An attachment for a flush tank of the character described comprising a tray adapted to rest on the top walls of the tank, said tray having an aperture formed in the bottom wall thereof and communicating with the interior of said tank, and a cover cooperating with said tray to provide a chamber for deodorant material, said cover and tray having spaced walls defining a passage from said chamber to the atmosphere exteriorly of the flush tank.

3. An attachment for a flush tank of the character described comprising a tray adapted to rest on the top walls of said tank, said tray having an aperture formed in the bottom wall thereof and communicating with the interior of said tank, a cover cooperating with said tray to pro-

vide a chamber for deodorant material, and a plurality of baffles in said chamber for directing the air in a tortuous passage over the deodorant material, said cover and tray having spaced walls defining a passage from said chamber to the atmosphere.

4. An attachment for a flush tank of the character described comprising a tray adapted to be supported by the top walls of the tank, a cover cooperating with said tray to provide a chamber for deodorant material, said cover having walls extending downwardly and overlapping said tray to conceal the same, and one of said walls being spaced from said tray to provide a passage from said chamber to the atmosphere.

5. An attachment for a flush tank of the character described comprising a tray having marginal walls adapted to rest upon the top walls of the flush tank and lie substantially flush with the side walls thereof, said tray having its bottom surface depressed below the plane of the top walls of said tank and being provided with an elongated aperture adjacent the rear edge thereof communicating with the interior of said tank, and a cover adapted to overlie said tray and having depending walls overlapping the marginal walls of the tray to conceal the same, said cover cooperating with said tray to provide a chamber for deodorant material, and one of said depending walls of the cover being spaced from said tray and flush tank to provide a passage from said chamber to the atmosphere.

6. An attachment for a flush tank of the character described comprising a tray having marginal walls adapted to rest upon the top walls of a flush tank and lie substantially flush with the side walls thereof, said tray having its bottom surface depressed below the plane of the top walls of said tank and being provided with an elongated aperture adjacent the rear edge thereof communicating with the interior of said tank, the bottom surface of said tray being sloped downwardly toward the rear thereof and being provided with a baffle along the front edge of said aperture and a plurality of smaller apertures in front of said baffle, and a cover adapted to overlie said tray and cooperating therewith to form a chamber for deodorant material, said cover and tray having spaced walls defining a passage connecting said chamber with the atmosphere.

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