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TOILET FLUSH TANKS

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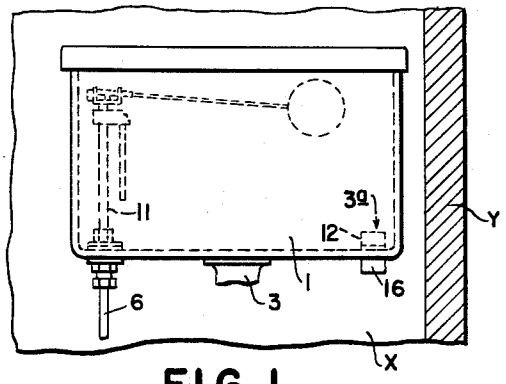



FIG. 1.

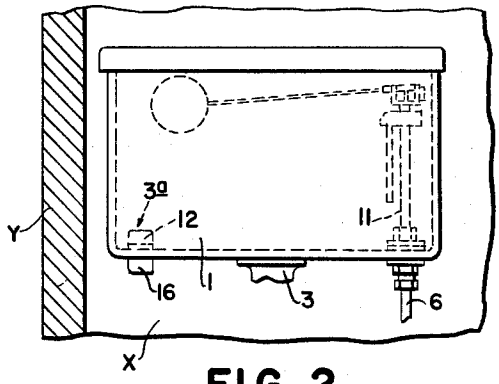



FIG. 2.

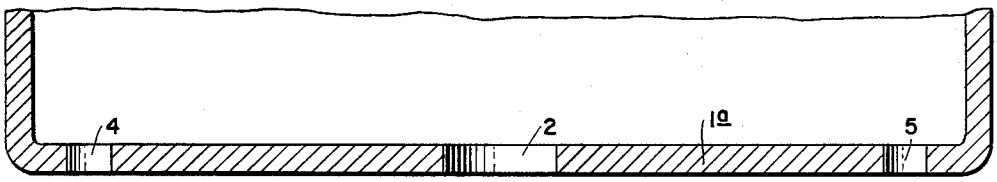



FIG. 3.

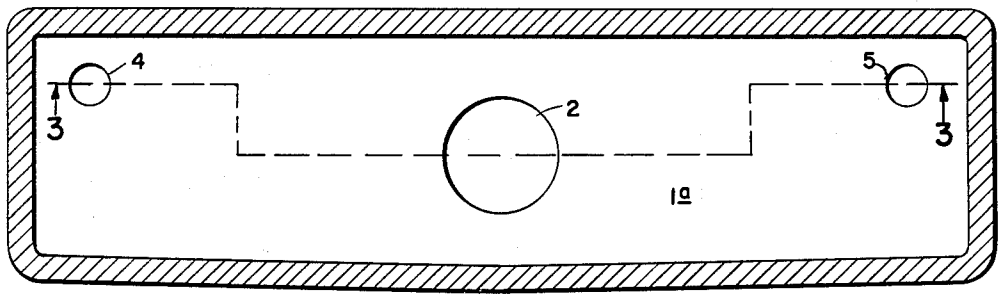



FIG. 4.

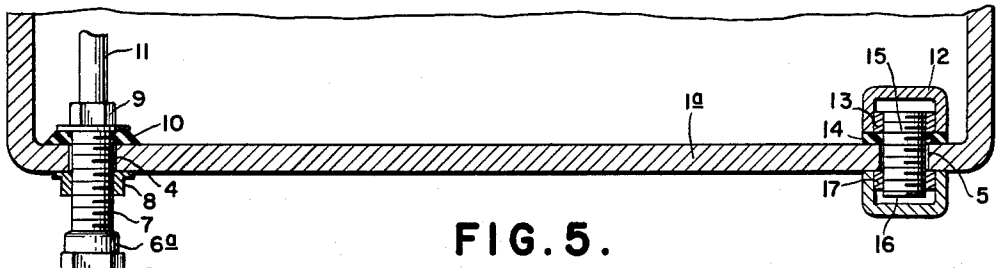



FIG. 5.

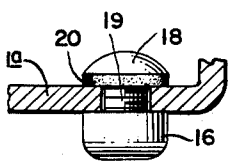



FIG. 6.

INVENTOR

Nicholas A. Cipriano

BY J. Hanson Boyden

ATTORNEY

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# TOILET FLUSH TANKS

Nicholas A. Cipriano, 9126 Lanham Severn Road, Lanham, Md.

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This invention relates to toilet flush tanks and more particularly to one piece, molded flush tanks such as are in common use.

It is customary to form the bottom of these tanks with a central outlet or discharge opening, and with another and smaller opening near one end (usually the left hand end, as viewed from the front), adapted to receive the supply or inlet pipe.

In installing such tanks, it is frequently found that the left end of the tank where the inlet pipe connection is provided is located so close to some obstruction such as a wall, radiator or large pipe, that it is very difficult for a workman to operate a wrench or other tools in the cramped space available.

The object of the present invention is to overcome this difficulty by so constructing the tank that the inlet pipe may be connected at a point adjacent either end, as desired. Thus, if the situation is such that, on account of any obstruction, the left hand end of the tank is relatively inaccessible, the inlet or supply pipe may be connected at the right hand end.

To achieve this, I propose to form the tank at the factory with two supply pipe openings of the same size in its bottom, one adjacent each end, one of such openings being manually closed by a removable plug, and the supply pipe connection being mounted in the other opening. The plug and pipe connection are interchangeable, so that either one may be fitted in either opening, as desired.

In order that the invention may be understood, reference is had to the accompanying drawing, forming part of this specification, and in which:

FIG. 1 is a front elevation of my improved tank as it appears when installed closely adjacent a wall on the right hand side.

FIG. 2 is a similar view showing the tank as it appears when installed closely adjacent a wall on the left hand side;

FIG. 3 is a vertical, longitudinal section on an enlarged scale taken substantiaily on the line 3—3 of FIG. 4;

FIG. 4 is a plan view of my improved tank on the same scale, the walls being shown in horizontal section;

FIG. 5 is a vertical, longitudinal section of my improved tank, similar to FIG. 3, but taken on a different section line so as to miss the central opening, and the supply pipe and plug being shown as mounted in their respective openings, similar to FIG. 1; and

FIG. 6 is a detail showing a slightly different form of plug.

Referring to the drawing in detail, and more particularly first to FIGS. 1 and 2, my improved tank is represented at 1, and is shown as supported on or parallel with a wall X. The tank is illustrated as installed in a corner, adjacent a wall Y, this wall, by way of example, being shown as on the right hand side in FIG. 1, and on the left hand side in FIG. 2.

The tank is molded in one piece of such material as glazed earthenware, commonly known as china or porcelain, or it may be formed of suitable plastic. It is shown as of the conventional elongated shape, having a flat bottom $1^a$, and side and end walls.



At its middle, the bottom is provided with the usual discharge opening 2, to which may be connected the conventional flush pipe 3, or the tank may be supported on the bowl (not shown) and formed with a special discharge fitting adapted to be received in an opening at the top of the bowl, all in a well known manner.

Instead of the usual single hole to receive the water supply pipe, my improved tank is provided in its bottom with a pair of similar holes 4 and 5, for this purpose, one near each end, at substantially the same distance from the central discharge opening. These holes are, of course, smaller than the central discharge opening 2.

The supply pipe is indicated at 6, and is shown in FIG. 5 as connected by a slip nut $6^a$ with a special fitting comprising a threaded nipple 7. When the tank is installed as shown in FIG. 1, this nipple extends through the opening 4 in the tank bottom, and is secured in position by means of a soft washer 10, engaging the inside of the tank bottom, and compressed between an abutment 9 and a clamping nut 8 threaded on the nipple and bearing against the outside surface of the tank bottom. From the abutment 9 extends upwardly an inlet pipe 11, supporting the usual ball cock, or other regulating device.

When installed in this manner, the other opening 5 in the tank bottom is closed by means of a removable plug, designated in its entirety by the numeral $3^a$. As shown in FIG. 5, this plug may advantageously consist of a threaded nipple 15, identical in size with the nipple 7, passing through the opening, and secured by nuts 12 and 16, inside and outside of the tank, respectively. A soft washer 14 is interposed between the nut 12 and the bottom of the tank. The nuts 12 and 16 are shown as similar, and may be constituted by porcelain china, or plastic caps, matching in material and color the tank itself. Internally threaded rings 13 and 17 are set into the caps 12 and 16, respectively, at the time of manufacture, to engage the threads on the nipple.

Instead of using the cap 12 on the inside of the tank, I may employ a bolt or threaded stud 19, having a head 18, and a soft washer 20 interposed between the head of the stud and the bottom of the tank.

As will be obvious to those skilled in the art, the removable plug may be constructed in various ways, and I do not wish to limit myself to the particular details shown. The only essential requirement is that the plug be of the same diameter as the nipple 7 of the supply pipe, so that this pipe and plug are interchangeable.

In practice, the manufacturer will make the tank with the two holes 4 and 5 in the bottom. One of these will be closed by means of the removable plug described, while the other will receive the supply pipe. Since the plug and supply pipe connection are of the same size and interchangeable, the plumber can connect the supply pipe either to the left hand end of the tank, as in FIG. 1, or to the right hand end of the tank, as in FIG. 2, in order to space it away from an obstruction, such as the wall Y, and thus avoid the difficulty of having to make the connection in a cramped or inaccessible location.

What I claim is:

1. An elongated horizontal flush tank having a central discharge opening and two additional openings formed in its bottom, one near each end, at substantially the same distance from said central discharge opening, a supply pipe passing through one of said additional openings and a removable and replaceable plug closing the other, said additional openings being of the same size, and said supply pipe and plug being interchangeable, whereby said sup-

ply pipe may be fitted in either of said openings as desired, while said plug is fitted in the other opening.

**2.** An elongated horizontal flush tank having a central discharge opening and two additional openings formed in its bottom, one near each end, at substantially the same distance from said central discharge opening, a supply pipe passing through one opening and a removable plug closing the other opening, said openings being of the same size, and said plug and supply pipe each comprising a similar threaded member passing through the respective openings, an abutment and packing washer on said member within the tank, and a lock nut on said member outside the tank for compressing said washer.



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LAVERNE D. GEIGER, *Primary Examiner.*

H. ARTIS, *Assistant Examiner.*