Aug. 2, 1932. C. H. ZWERMANN 1,869,401

COMBINATION CLOSET BOWL AND TANK STRUCTURE

Filed Nov. 25, 1931

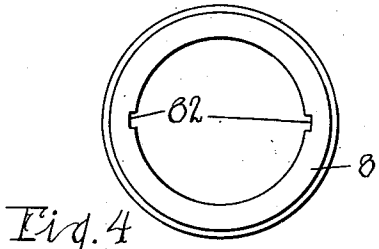


Fig. 4

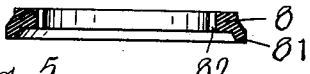


Fig. 5

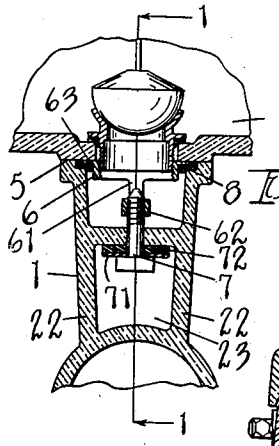


Fig. 2

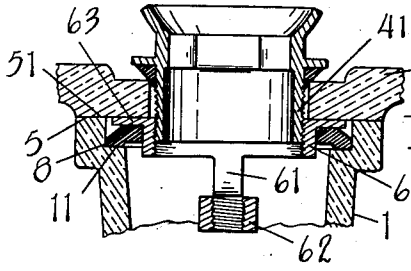


Fig. 3

Fig. 1

INVENTOR
Carl H. Zwermann
BY Chappell & Earl
ATTORNEYS

Patented Aug. 2, 1932

1,869,401

UNITED STATES PATENT OFFICE

CARL H. ZWERMANN, OF ROBINSON, ILLINOIS

COMBINATION CLOSET BOWL AND TANK STRUCTURE

Application filed November 25, 1931. Serial No. 577,185.

The objects of the invention are:

First, to provide a very simple and efficient means of supporting and securing the tank in place on the closet bowl shelf.

Objects pertaining to details will appear from the description to follow. A preferred embodiment of my invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a vertical longitudinal central section through a water closet bowl and tank embodying the features of my invention.

Fig. 2 is a detail vertical sectional view through the connecting means between the bowl and tank, taken on line 2—2 of Fig. 1.

Fig. 3 is an enlarged detail of the packing joint surrounding the outlet from the tank.

Fig. 4 is a plan view of the specially constructed washer.

Fig. 5 is a sectional view on line 5—5 of Fig. 4, showing the details of the cross section of the said washer before it is compressed.

The parts will be identified by their numerals of reference.

1 is the water closet bowl with the rearwardly projecting hollow shelf 2 for supporting and attaching the tank. This is provided with supporting side walls 22 which form a recess 23 entirely concealing from view the attaching screw hereafter to be described.

3 is the tank of vitreous china material supported on the said shelf, there being a ground joint 5 on the bottom of the tank fitting a corresponding ground joint 51 on the top of the shelf of the bowl. 4 is the usual flush valve construction, the screw threaded shank 41 of which projects well below the bottom in the usual manner and projects into an opening in the top wall of the shelf.

6 is a special nut for attaching the said flush valve structure, threaded to engage the projecting shank 41 and thus support the flush valve structure in the usual way. The nut is provided with a downwardly projecting cross bar 61 having a threaded boss 62 at the center. Attaching screw 7 projects upwardly through the lower wall of the shelf and engages the said threaded boss 62. This screw 7 is centrally located and is embraced and concealed in the recess 23 at the back of said bowl. A metal washer 71 is provided which engages a rubber packing washer 72 to securely close the opening at that point. A specially constructed packing washer 8 is disposed between the flange 63 and in a seat 11 formed in the top of the shelf.

This washer is provided with a downwardly outwardly projecting flange 81 which engages in the lower periphery of the seat and by this means adjusts itself to contact with the side wall of the seat, no matter what variation in size there may be due to the shrinking of the china in the fire. The washer 8 is notched at 82 to pass readily up over the cross bar 61.

It will thus be seen from this description that I have provided a vitreous bowl and a vitreous tank which is very readily and securely clamped in place on said bowl by the single screw shown. The parts are completely and effectively sealed water tight by the action of the said screw. The structure is simple and very economical to produce. The washer I have shown between the parts is of special construction and very effective. I desire to claim the same specifically in this relation, and I also desire to claim the invention broadly, as pointed out in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. The combination of a vitreous bowl water closet having a rearwardly projecting hollow shelf with a ground joint surface on the top having a packing seat therewithin, a vitreous tank having a joint surface corresponding thereto, a usual flush valve structure within the tank having a projecting screw shank below the bottom thereof, a nut with a flanged top for engaging the same having a cross bar with a central boss having a screw threaded aperture, a packing washer between said flange and bowl having an outwardly downwardly projecting flange to engage said seat, an attaching screw disposed through an aperture in the said shelf and engaging the said boss, and a washer and packing therefor.

2. The combination of a vitreous bowl water closet having a rearwardly projecting hollow shelf with a joint surface on the top having a packing seat therewithin, a vitreous tank having a joint surface corresponding thereto, a usual flush valve structure within the tank having a projecting screw shank below the bottom thereof, a nut with a flanged top for engaging the same having a cross bar with a central boss having a screw threaded aperture, a packing washer between said flange and bowl having an outwardly downwardly projecting flange to engage said seat, an attaching screw disposed through an aperture in the said shelf and engaging the said boss, and a packing therefor.

3. The combination of a vitreous bowl water closet having a rearwardly projecting hollow shelf with a joint surface on the top having a packing seat therewithin, a vitreous tank having a joint surface corresponding thereto, a usual flush valve structure within the tank having a projecting screw shank below the bottom thereof, a nut with a flanged top for engaging the same having a cross bar with a central boss having a screw threaded aperture, a packing washer between said flange and bowl, an attaching screw disposed through an aperture in the said shelf and engaging the said boss, and a packing therefor.

4. The combination of a vitreous bowl water closet having a rearwardly projecting hollow shelf with side walls supporting the same forming a concealed recess at the back, and a vitreous tank adapted to be supported on said shelf and secured by an attaching means comprising a central screw concealed in the said recess.

In witness whereof I have hereunto set my hand.

CARL H. ZWERMANN.