NONSWEAT TOILET TANK AND FLUSH VALVE SEAT

D. J. PEELER

Filed Dec. 8, 1945

2 Sheets-Sheet 2

Inventor
JANIEL J. PEELER

By

Attorneys
UNITED STATES PATENT OFFICE

2,488,232

NONSWEAT TOILET TANK AND FLUSH VALVE SEAT


Application December 8, 1945, Serial No. 633,747

1 Claim. (Cl. 4—68)

1. This invention relates to improvements in nonsweat flush tanks and flush valve seats therefor.

An object of the invention is to provide an improved spaced double wall non-sweat toilet flush tank which will prevent condensation on the outer surface of the tank.

Another object of the invention is to provide a non-sweat toilet flush tank and a flush valve seat with spaced doubled walls and means for permitting condensation to drain from the inner tank.

A further object of the invention is to provide a highly efficient form of non-sweat flush tank for toilets which will be positive in action and relatively inexpensive to manufacture and produce.

Other objects will appear as the description proceeds.

In the accompanying drawings which form a part of this application:

Figure 1 is a longitudinal sectional view taken through the non-sweat toilet tank and flush valve seat;

Figure 2 is a transverse sectional view taken on the line 2—2 on Figure 1;

Figure 3 is a transverse sectional view taken on the line 3—3 on Figure 1;

Figure 4 is a vertical sectional view taken on the line 4—4 of Figure 1;

Figure 5 is a top plan view of the flush valve seat;

Figure 6 is a vertical sectional view taken through the flush valve seat, and

Figure 7 is a transverse sectional view taken on the line 7—7 of Figure 6.

Like characters of reference are used throughout the following specification and the accompanying drawings to designate corresponding parts.

In carrying out the invention, there is provided a non-sweat toilet flush tank formed with an outer tank 1 and a spaced inner tank 2, together with connecting legs 3, 4 and 5 located between the bottoms of the tanks, said tanks and legs being formed as an integral casting, and made from any desired non-corrodible material such as vitreous china, enameled iron or plastic. A cover 6 of a similar material will be provided to overlie and close the tops of both tanks 1 and 2.

Small air vent openings 7 and 8 will be formed through the end walls of the inner tank 2 to permit condensation to drip through the drain openings in a valve seat, later to be described. Also larger drain openings 9 and 10 will be formed through the wall of the hollow leg 4 adjacent the bottom of a tank 1 to permit water to drain from the space between the tanks 1 and 2.

An improved flush tank seat member is provided and is made in the form of a cylinder 11 having a central bore 12 and an enlarged upwardly extending flared head portion 13 which is hollowed out in its upper surface to provide a seat 14 to receive a flush ball (not shown). An overflow tube 15 is threaded into the internally threaded socket 16 formed on the upper part of the head 13 and is connected by the passage 17 through the head 13 with the central bore 12 in the cylinder 11. Oppositely disposed drain openings 18 and 19 are formed through the wall of the cylinder 11 and are adapted to line up with the drain openings 9 and 10 formed through the wall of the hollow leg 4, whereby water from the space between the tanks 1 and 2 will drain out through the bore 12 of the seat into the toilet bowl (not shown). An inwardly extending annular stop flange 20 is formed in the bore 12 of the cylinder 11, and is provided to limit the distance of flush L-pipe 21 may be inserted into the cylinder 11.

A rubber gasket or washer 22 will be placed about the cylinder 11 beneath the head 13 to provide a water-tight joint and a second rubber gasket or washer 23 will be placed over the lower end of the cylinder 11 next to the outer surface of the outer tank 1. A metal washer 24 will then be placed over the cylinder 11 next to the washer 23 and a threaded lock nut 25 will be screwed tightly on the cylinder 11 to form a water-tight joint where the cylinder 11 extends through the tank 1.

The usual form of flush L-pipe 21 extending up into the bore 12 of the cylinder 11 will be held in place by a washer or gasket 26 and the thread-ed cap nut 27 will be tightly screwed on to the lower threaded end of the cylinder 11.

Extending through the bore of the hollow leg 4 is a ball-cock valve outlet consisting of a pipe 28 threaded at its opposite ends. Rubber washers 29 and 30 and metal back-up washers 31 and 32 are held on the ends of the pipe 28 adjacent the tank by means of the lock nuts 33 and 34, to pro-
vide water-tight joints where the pipe 28 extends through the tank.

While the preferred form of the invention has been illustrated and described it will be understood that I do not intend to limit myself to this specific construction as many minor changes in detail of construction may be resorted to without departure from the spirit of the invention.

Having thus described the invention what I claim as new and desire to secure by Letters Patent of the United States is:

A device of the character described comprising a non-sweat toilet tank and detachable fluid valve seat, including inner and outer laterally spaced tanks, integrally formed vertically disposed legs positioned between the adjacent bottom portions of the tanks, a ball cock valve outlet extending through one of the legs, another of said legs being vertically bored and formed with oppositely disposed overflow passages communicating said bore with the space between the bottoms of the inner and outer tanks, a flush valve seat member having an enlarged head portion detachably disposed in the bore in said last mentioned leg, a depending cylindrical member integrally formed with said slot member and disposed in the bore, said cylindrical member having oppositely disposed outlet passages formed through its wall and registrable with said overflow passages in the leg, an annular valve seat formed in the upper end of said enlarged head portion, said enlarged head portion having an internally threaded upraised socket formed on its upper end, an overflow passage extending through said head and communicating with said centrally disposed vertical bore and said socket, an overflow pipe disposed in said socket, said cylindrical member being externally threaded, packing gaskets disposed about said member and adapted to engage the upper surface of the inner tank and the lower surface of the outer tank, a securing nut threaded on the threaded end of said cylindrical member and an inwardly extending internal stop flange in the vertical bore in said cylindrical member for limiting the upward movement of a flush L-pipe in the end of said cylindrical member.

DANIEL J. PEELER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>830,243</td>
<td>Magowan</td>
<td>Sept. 4, 1906</td>
</tr>
<tr>
<td>849,708</td>
<td>Wilms</td>
<td>Apr. 9, 1907</td>
</tr>
<tr>
<td>1,676,234</td>
<td>Gove</td>
<td>July 3, 1928</td>
</tr>
<tr>
<td>2,188,132</td>
<td>Groeniger</td>
<td>Jan. 23, 1940</td>
</tr>
<tr>
<td>2,359,701</td>
<td>Weaver</td>
<td>Oct. 3, 1944</td>
</tr>
</tbody>
</table>

FOREIGN PATENTS

<table>
<thead>
<tr>
<th>Number</th>
<th>Country</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,203</td>
<td>Great Britain</td>
<td>Feb. 6, 1914</td>
</tr>
</tbody>
</table>