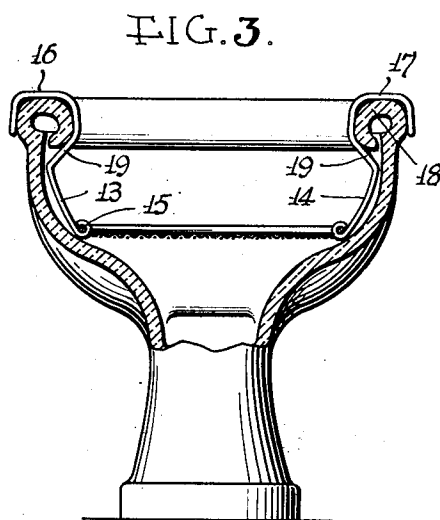
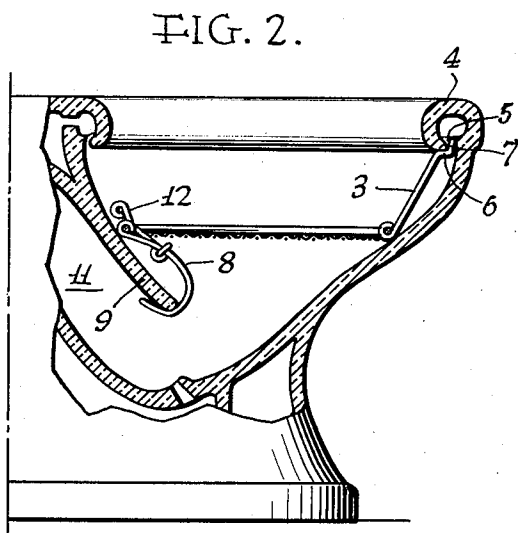
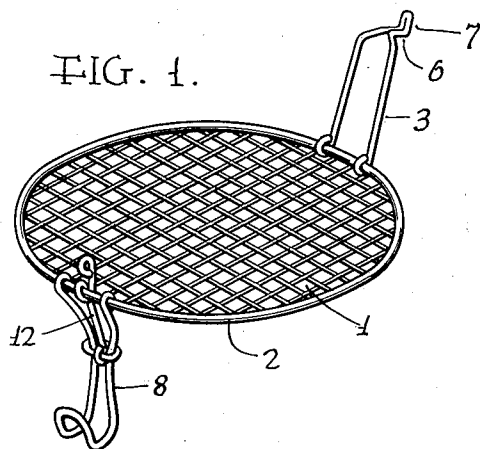


May 27, 1952

H. HOFFMAN ET AL
GUARD FOR TOILET BOWLS

2,598,543

Filed Feb. 9, 1949



Inventors:
Harry Hoffman
Louis Hoffman
by their Attorneys
Howson & Howson

UNITED STATES PATENT OFFICE

2,598,543

GUARD FOR TOILET BOWLS

Harry Hoffman and Louis Hoffman,
Philadelphia, Pa.

Application February 9, 1949, Serial No. 75,402

4 Claims. (Cl. 4—257)

1

This invention relates to guard screens for toilet bowls, said screen functioning to prevent stoppages in the bowl passages and in the associated soil pipe arising from inadvertent dumping of foreign substances, such for example as rags, brushes, soap cakes, and other foreign bodies, into the bowl.

A principal object of the invention is to provide a screen that will fit neatly within the bowl so as to effectively cover the entire area embraced by the walls of the bowl, said screen having attached thereto as an integral part of the guard structure means for anchoring the screen in the bowl against the displacing effect of the water flowing into the bowl in the flushing operation.

Another object is to provide in a guard screen of the stated character anchoring means which utilizes in part the overhang of the upper edge of the bowl.

Still another object is to provide anchoring means which utilizes the depending flange at the front of the siphon passage.

In the attached drawings:

Fig. 1 is a view in perspective of a screen guard made in accordance with the invention;

Fig. 2 is a sectional view showing the screen of Fig. 1 installed in a toilet bowl; and

Fig. 3 is a sectional view illustrating another embodiment of the invention.

With reference to Figs. 1 and 2 of the drawings, the screen may be made of a piece of wire mesh 1 contoured to fit the inside of the toilet bowl as shown in Fig. 2. Preferably, and as illustrated, the mesh is bound at the edges by a wire or other band 2. The screen may be shaped and dimensioned to seat above, below or at the normal water level in the bowl, but preferably somewhat above said level.

At the front of the screen and pivotally attached to the band 2 is a front anchor member 3 which, when the screen is installed in the bowl, extends upwardly under the hollow inturred bead 4 which forms the overhanging rim of the bowl. This hollow rim constitutes a water channel from which flushing water is discharged through an opening 5 into the bowl. The member 3 is offset at its upper end to form a shoulder 6, which, as shown in Fig. 2, abuts the under side of the rim while the extremity or tip 7 enters the opening 5.

At the back of the screen is a rear anchor member 8. Like the front member 3, the member 8 may be made of stiff resilient wire and is pivotally attached to the band 2. This rear member is in

2

the form of an out turned hook which, when the screen is installed, engages under the flange 9 which forms the front wall of the siphon passage 11 of the fixture. In the present instance the member 8 includes a handle element 12 which is pivoted to the band 2 and which extends upwardly above the screen to facilitate manipulation of the hooked member when installing and removing the screen.

In installing the screen, the hooked member 8 is first engaged under the flange 9, and the front anchor member 3 then inserted under the rim 4. This latter operation will require flexure of the member 3 which is made resilient for that purpose. When installed the screen is securely anchored in position, being held down at both front and rear against displacement by upsurge of water in the bowl. The screen may be readily removed in obvious manner.

In the embodiment of Fig. 3, substantially the same results are obtained by use of anchor elements of different form. In this case the said elements, 13 and 14, are pivotally attached to the band 15 at opposite sides respectively of the screen. When the screen is installed the said elements extend upwardly so that the hooked ends 16 and 17 may embrace the hollow rim 18 of the bowl as illustrated. Each of the hooked ends are formed however with a shoulder 19 which fits under the inner overhang of the rim so that the anchor elements may act to hold the screen down against the upwardly directed pressures described above.

It will be apparent that the screen supported in stable manner within the bowl will effectively prevent the flushing down into the passages of foreign bodies accidentally thrown into the bowl, but will permit free passage of water. The device is of particular value when used on cleaning days when buckets of cleaning water, frequently containing cakes of soap, cloths and brushes, may be dumped into the protected bowls, without danger of the foreign bodies passing into and stopping the drain passages.

It will be apparent that the device may be made from various materials other than wire, such for example as plastic, and where wire is used it is preferred to use a rubber or plastic sheathed product both to avoid rusting and to protect the ceramic material of the bowl.

We claim:

1. A guard for toilet bowls comprising a screen shaped to fit the interior of the bowl so as to exclude foreign bodies from the drain passages, and anchoring means for the screen including

3

resilient arms pivotally attached to the screen, at least one of the arms being arranged for engagement under an inward overhang of the rim portion of the bowl.

2. A guard for toilet bowls according to claim 1 wherein the said one arm comprises a projecting part arranged to enter an opening in the under side of said inward overhang.

3. A guard for toilet bowls according to claim 1 wherein another of said arms is hooked and arranged for interlocking engagement under the depending flange which forms the forward wall of the siphon passage of the bowl.

4. A guard for toilet bowls comprising a screen shaped to fit the interior of the bowl so as to exclude foreign bodies from the drain passage, and means for anchoring the screen in the bowl including a depending hook holding-down element attached to the screen and arranged for interlocking engagement under the depending flange which forms the forward wall of the

4

siphon passage of the bowl and when so engaged resisting upward displacement of the screen in the bowl.

HARRY HOFFMAN.
LOUIS HOFFMAN.

REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
405,509	Smith	June 18, 1889
1,166,298	Wospil	Dec. 28, 1915
1,241,002	Nevens	Sept. 25, 1917
1,927,192	Werner	Sept. 19, 1933

FOREIGN PATENTS

Number	Country	Date
21,703	Great Britain	Nov. 15, 1895