

[54] TOILET BOWL ATTACHMENT

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[58] Field of Search.....4/1, DIG. 5, 10, 67, 249

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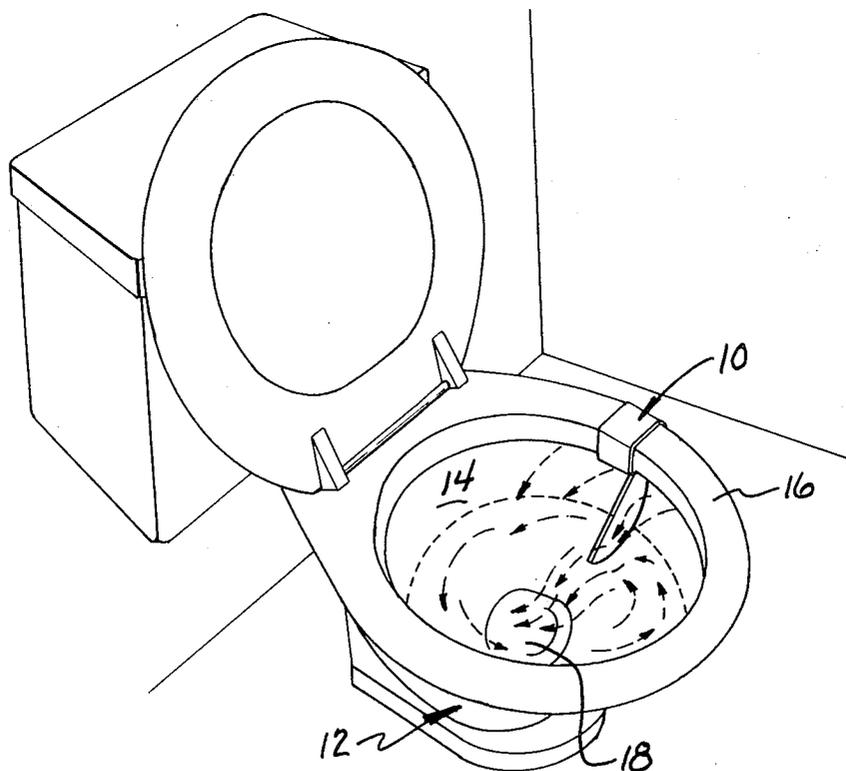
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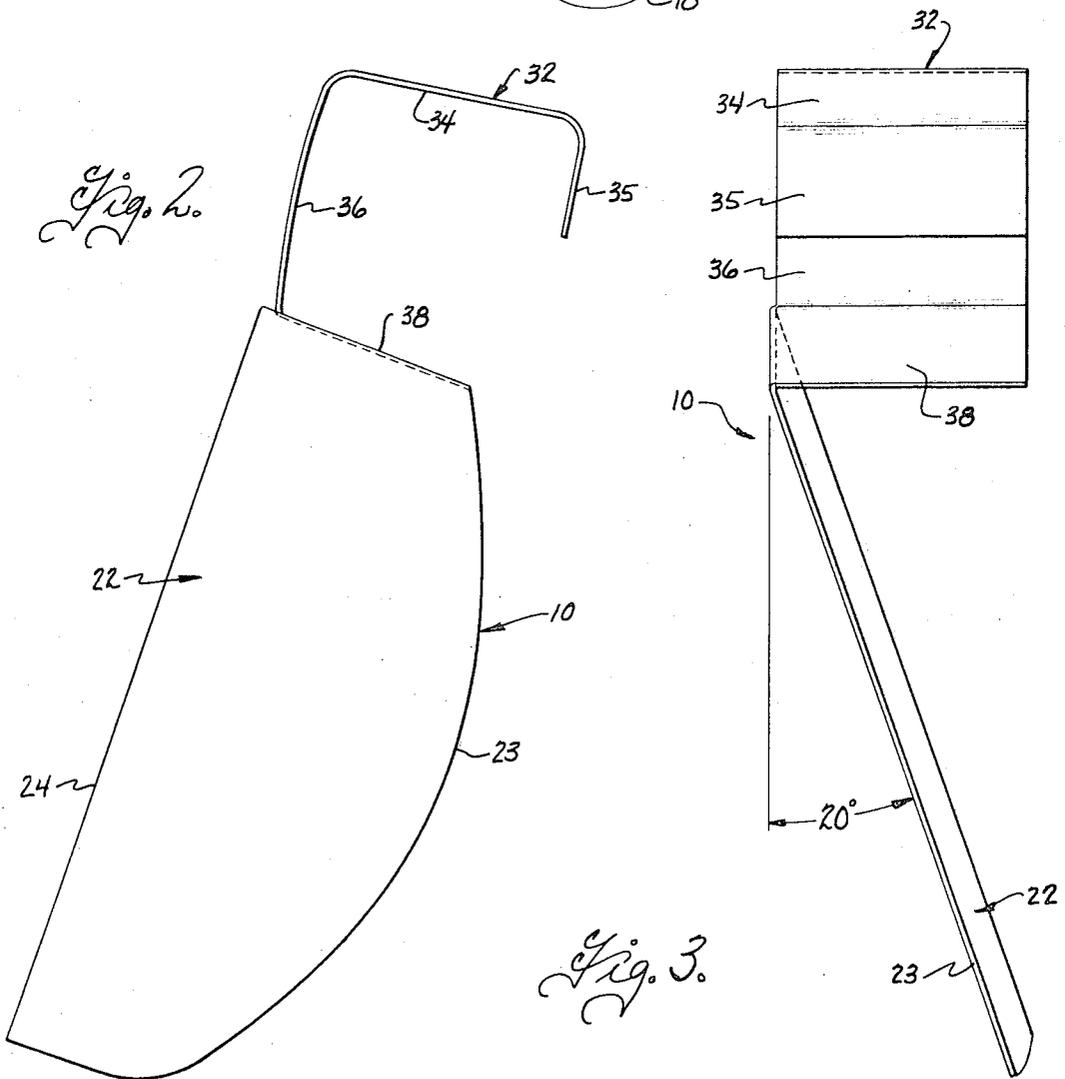
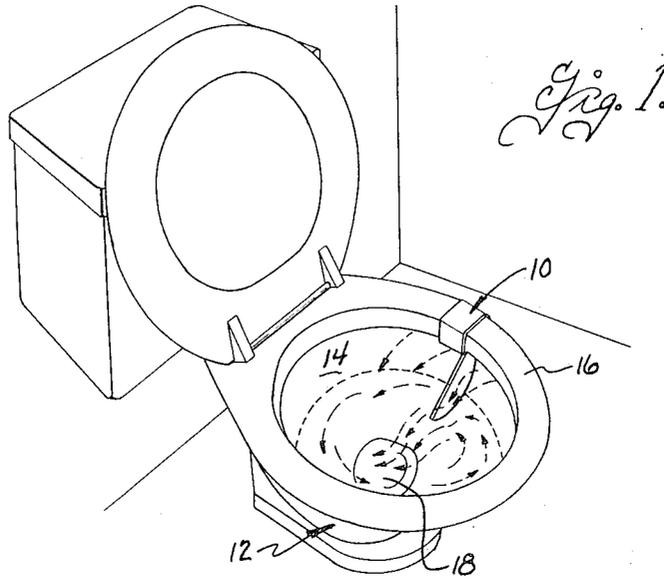
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[57] ABSTRACT

The attachment includes a flat deflector plate which extends downwardly from the peripheral rim to deflect water downwardly toward the outlet and thereby reduce the quantity of water required in a flushing operation. The plate has one edge shaped complementary to the toilet bowl and contiguous to it. The plate is mounted by an inverted U-shaped bracket which engages the rim.

6 Claims, 3 Drawing Figures





TOILET BOWL ATTACHMENT

BACKGROUND

The invention pertains generally to toilet bowls and more particularly to attachments for toilet bowls.

A considerable quantity of water is used each time a toilet is flushed. It is desirable to provide an apparatus which reduces the amount of water necessary to accomplish such flushing.

SUMMARY

The present invention relates to a toilet bowl attachment.

It is an object of the present invention to provide a toilet bowl attachment which reduces the quantity of water required for flushing.

Another object is to provide a toilet bowl attachment which deflects the water downwardly toward the outlet.

These, and other objects and advantages of the present invention, will become apparent as the same becomes better understood from the following detailed description when taken in conjunction with the accompanying drawings.

DRAWINGS

FIG. 1 is a perspective view of a water closet and a toilet bowl having the attachment of the present invention mounted thereon;

FIG. 2 is a front elevation of the attachment; and

FIG. 3 is a side view as seen from the right of FIG. 2.

DESCRIPTION

Reference is now made more particularly to the drawings which illustrate the best presently known mode of carrying out the invention and wherein similar reference characters indicate the same parts throughout the several views.

A toilet bowl attachment, generally designated 10, is shown in FIG. 1 as mounted on a toilet bowl 12. The toilet bowl is of the type having a bowl with a concave inner surface 14, a peripheral rim at the upper edge of the bowl and extending inwardly from the bowl inner surface, and a plurality of spouts at the peripheral rim through which water passes for flushing the toilet, as shown by the arrows in FIG. 1. The purpose of the attachment is to direct the flow of water downwardly toward the outlet 18 to force refuse through the outlet with less water than would otherwise be required. For this purpose, the apparatus is preferably positioned with at least two spouts in front and at least one spout in back of the attachment.

The attachment 10 includes a flat deflector blade 22 having one edge 23 which is complementary to the inner bowl surface. In this manner, edge 23 is contiguous to the bowl inner surface 14 throughout its entire length. The opposite edge 24 is advantageously straight and would extend inwardly from the rim 16 in mounted position. Preferably, the plate 22 has a width at least as wide as the distance from the inner surface 14 of the top edge of the bowl to the inner extremity of the rim 16. The flat plate 22 also advantageously has a length extending at least to the normal water level in the bowl and is shown in FIG. 1 as extending below such water level. It is preferred that the flat plate 22 be inclined in the direction of water flow and, as best seen

in FIG. 3, it is preferred that this be at an angle of about 20° to the vertical.

Advantageously, the attachment is removably mounted on the toilet bowl by means of an inverted U-shaped bracket 32. As seen in FIGS. 2 and 3, the bracket includes an upper leg 34 for overlying the top of the rim and an outer leg 35 for engaging the outer edge of the rim. An inner leg 36 extends downwardly from upper leg 34 and is joined to the plate 22 by means of extension 38 which underlies the rim 16.

It has been found that this attachment will save approximately 1 gallon of water at each flushing. This, of course, will amount to considerable savings in water consumption. The flat plate 22 is set at an angle of 20° from the vertical and inclined in the direction of water movement. In the northern hemisphere, for example, the device is mounted on the right side of the toilet bowl as one faces the bowl, and the flat plate 22 is inclined to the rear. When the toilet is flushed, the swirling water is deflected downwardly toward the outlet 18 and forces the refuse through the trap with less water than would otherwise be required.

In the embodiment illustrated, the attachment is advantageously made of aluminum but any suitable material can be utilized. It is also possible to use other mounting means than the specific means described.

While a preferred embodiment of the invention has herein been illustrated and described, this has been done by way of illustration and not limitation, and the invention should not be limited except as required by the scope of the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A toilet bowl attachment for a toilet bowl of the type having a bowl with a concave inner surface, a peripheral rim at the upper edge of the bowl and extending inwardly of the bowl inner surface, and a plurality of spouts at the peripheral rim through which water passes for flushing the toilet; the attachment comprising: deflector means defining a surface which, in mounted position, extends downwardly from the rim and inwardly from the bowl inner surface to deflect the water downwardly toward the outlet; the surface having one edge shaped to lie contiguous to the bowl inner surface; and mounting means for mounting the deflector means in the mounted position and between adjacent spouts with at least two spouts in front and at least one spout in back of the deflector means.

2. A toilet bowl attachment as set forth in claim 1 wherein the deflector means has a width at least as wide as the distance from the inner surface of the top edge of the bowl to the inner extremity of the rim, and a length extending at least to the normal water level in the bowl.

3. A toilet bowl attachment as set forth in claim 1 wherein the deflector means is a flat plate presenting a planar surface generally perpendicular to the bowl inner surface but inclined downwardly in the direction of water movement.

4. A toilet bowl attachment as set forth in claim 3 wherein the flat plate has a straight edge opposite said one edge, the straight edge being inclined inwardly from the rim, and the flat plate being inclined downwardly at an angle of about 20° from the vertical.

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5. A toilet bowl attachment as set forth in claim 1 wherein the mounting means includes an inverted U-shaped mount attached at the upper end of the deflector means and engaging the rim to detachably mount the attachment on the toilet bowl.

6. A toilet bowl attachment as set forth in claim 5 wherein the deflector means is a flat plate presenting a planar surface generally perpendicular to the bowl

inner surface, the flat plate having a width at the top as wide as the distance from the inner surface of the top edge of the bowl to the inner extremity of the rim, the flat plate having a straight edge opposite said one edge and inclined inwardly from the rim, and the flat plate being inclined downwardly in the direction of water movement at an angle of about 20° from the vertical.

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