

SPECIFICATION

TITLE OF THE INVENTION

DRAIN SECTION STRUCTURE OF TOILET STOOL

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a drain section structure of a toilet stool and more particularly to a structure of connecting the drain section of the toilet stool to a drain pipe on a floor.

2. Statement of the Prior Art

For convenience of explanation, a conventional toilet stool will be described by referring to FIGURE 5, which is a fragmentary sectional view of the conventional toilet stool, illustrating a prior drain section structure.

As shown in FIGURE 5, a conventional siphon jet type toilet stool has a bowl 1 including an upper annular rim 2, a water supply chamber 3, a rim water passage 4 communicated to the chamber 3, a trap 6 with an inlet port 7 and an outlet port 9 a jet outlet port 8 formed in a wall of the water supply chamber 3 to be directed to the inlet port 7, and a drain section 13.

The drain section 13 has a bottom plate portion 10 provided with a drain hole 11. The drain hole 11 is communicated with the trap 6 through the outlet port 9 and is adapted to be connected to a drain pipe (not shown) on a floor.

Heretofore, a piping work of the drain pipe has been carried out so that the drain pipe can be connected to the drain hole 11 in the bottom plate portion 10. In the case of



exchanging an existing toilet stool for a new one having the same drain structure, the exchanging work will be easily effected without changing a pipe arrangement.

However, there are various kinds of toilet stools. In the case that a new toilet stool to be installed has a drain hole disposed at a different position from that of the existing toilet stool, it is necessary to change the pipe arrangement to set the new one which entail cost.

Summary of the Invention

An object of the present invention is to provide a drain section structure of a toilet stool which can be installed on a drain pipe without changing a pipe arrangement.

A drain section structure of a toilet stool in accordance with the present invention comprising a bowl including an upper annular rim, a water supply chamber, a trap, and a drain section and a drain plate adapted to be attached to the drain section for connecting the bowl to a drain pipe on a floor. The drain plate is provided at an eccentric position relative to a center thereof with a drain hole to be connected to the drain pipe, so that the position of the drain hole can be displaced by altering an attaching direction of the drain plate.

Preferably, the drain plate is made of a synthetic resin material.

It is possible to change the position of the drain hole in the drain plate by altering the attaching direction of the drain plate since the drain plate is attached to the bottom plate portion of the toilet stool and the drain hole is formed



in the drain plate eccentrically relative to the center of the plate. Accordingly, it is possible to exchange the existing toilet stool for new one having a different position of the drain hole without changing any pipe arrangement.

When the drain plate is made of a synthetic resin material, the drain plate can be formed into a desired shape at a working place, thereby enhancing workability of the drain hole.

Brief Description of the Drawings

FIGURE 1 is an exploded perspective view of a drain section structure of a toilet stool of the present invention;

FIGURES 2A and 2B are perspective views of the drain section structure of the toilet stool shown in FIGURE 1, illustrating different attaching positions (A) and (B) of a drain plate;

FIGURE 3 is a plan view of a drain plate;

FIGURE 4 is a longitudinal sectional view of the drain plate taken along lines IV-IV in FIGURE 3; and

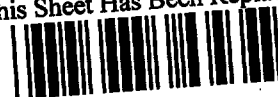
FIGURE 5 is a fragmentary sectional view of a conventional toilet stool, illustrating a prior drain section structure.

Detailed Description of the

Preferred Embodiments

Referring now to FIGURES 1 to 4, an embodiment of a drain section structure of a toilet stool in accordance with the present invention will be explained below.

As shown in FIGURES 1, 2A and 2B, a drain section 13 of a toilet stool includes a portion extending from an outlet port of a trap to a drain hole to be connected to a drain pipe. The



toilet stool of the present invention has the same construction as the conventional toilet stool such as a siphon jet type toilet stool shown in FIGURE 5 except the drain section 13.

The drain section 13 of the toilet stool shown in FIGURE 1 is provided with a bottom plate 14 which constitutes a coupling portion to the drain pipe. The bottom plate portion 14 is provided in its center with an ellipse aperture 15. A drain plate 17 with a drain hole 16 is sealingly attached to a periphery 18 of the aperture 15 by an adhesive or bolts.

The size of drain plate 17 is made slightly larger than that of the aperture 15 and is made of a synthetic resin material having a suitable strength and durability. The drain plate may be attached to the aperture 15 to coincide with the aperture 15.

The drain hole 16 is formed in the plate 17 eccentrically relative to a center 20 on the plate 17 as shown in FIGURE 3, and the drain hole 16 is provided on its periphery with a boss 21 (FIGURE 4) adapted to be connected to the drain pipe (not shown) on the floor.

Shapes of the aperture 15 and drain plate 17 should not be limited to those illustrated in the drawings. The drain plate 17 may be either fitted in the aperture 15 or attached to the periphery 18 of the aperture 15. For example, the drain plate 17 may be formed into any shape such as circle, rectangle, rectangle rounded at four corners ellipse, or polygon.

FIGURE 3 shows the drain plate 17 the four corners of which are rounded. In the drain plate 17 shown in FIGURE 3, the drain



hole 16 is arranged on a long axis of the plate 17 by one half of the diameter of the hole 16 away from the center 20 and symmetrically with respect to a short axis.

Since the drain hole 16 in the drain plate 17 is eccentrically formed with respect to the center 20, the position of the drain hole 16 can be displaced by altering the direction of the drain plate 17. In the illustrated embodiment, the drain hole 16 can have two positions by disposing the drain plate 17 forwardly and reversely with respect to the long axis. (see FIGURES 2A and 2B).

Consequently, a new toilet stool having a different position of the drain hole 16 can be easily connected to the drain pipe on the floor without changing the pipe arrangement.

Moreover, the drain plate 17 made of a synthetic resin material can be easily cut at a working place so that the position of the drain hole 16 is finely adjusted to the drain pipe.

If a plurality of drain plates 17 having different positions of the drain holes 16 are prepared for the toilet stools beforehand, the drain plates 17 can be applied to the drain pipes at different positions on the floor. The drain section structure of the present invention can be applied to a toilet stool having a separable trap structure.



What is Claimed is:

1. A drain section structure of a toilet stool, comprising:

a bowl including an upper annular rim, a water supply chamber, a trap, and a drain section; and

a drain plate adapted to be attached to said drain section for connecting said bowl to a drain pipe on a floor;

said drain plate being provided at an eccentric position relative to a center thereof with a drain hole to be connected to said drain pipe, so that said position of said drain hole can be displaced by altering an attaching direction of said drain plate.

2. A drain section structure of a toilet stool, according to Claim 1 wherein said drain plate is made of a synthetic resin material.

