



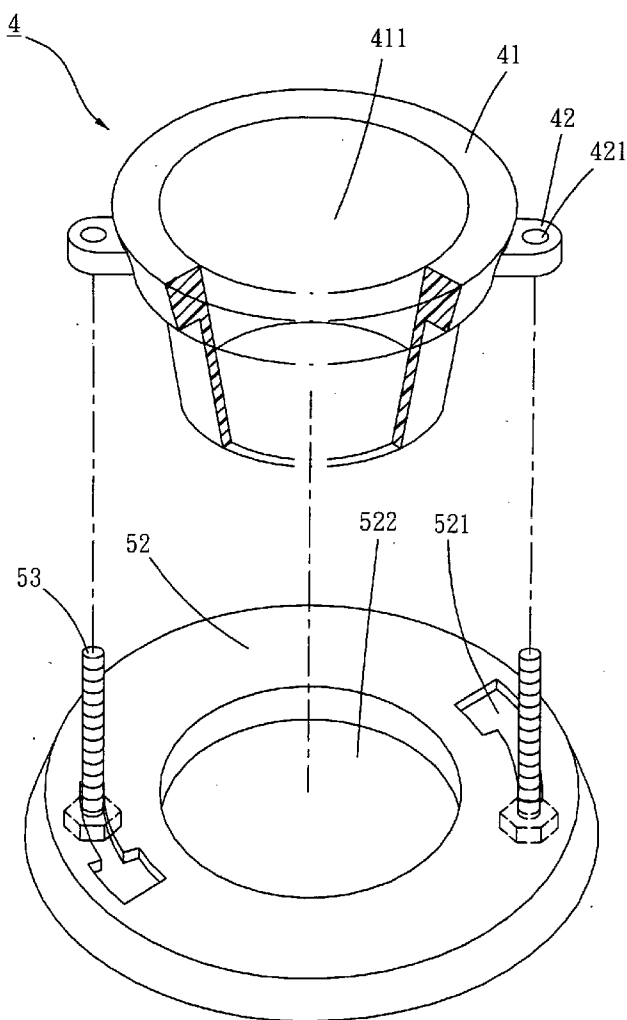
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(19) **United States**(12) **Patent Application Publication****Lee et al.**(10) **Pub. No.: US 2007/0256220 A1**(43) **Pub. Date: Nov. 8, 2007**(54) **SEALED DEVICE FOR INSTALLING TOILET STOOL**(52) **U.S. Cl. 4/252.1**(76) Inventors: **Tsai Fa Lee**, Kaohsiung City (TW);
Feng Chiu Ying Lee, Kaohsiung City (TW)(57) **ABSTRACT**

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ELLICOTT CITY, MD 21043 (US)**(21) Appl. No.: **11/418,008**(22) Filed: **May 5, 2006****Publication Classification**(51) **Int. Cl.****E03D 11/14** (2006.01)**E03D 11/00** (2006.01)

A sealed device for installing a toilet stool on the floor surface includes a sealed body and a plurality of ears protruded from the outer periphery of the sealed body. Said sealed body is made of ductile material and is fastenably mounted on the locating member by ears. The sealed body includes a central opening that served as an access between the inlet port of the drainage pipe and drainage trap outlet port of the toilet stool. By the means of the sealed device, the toilet stool is capable of being installed more rapidly and conveniently and prevents occurrence of sewage leakage.



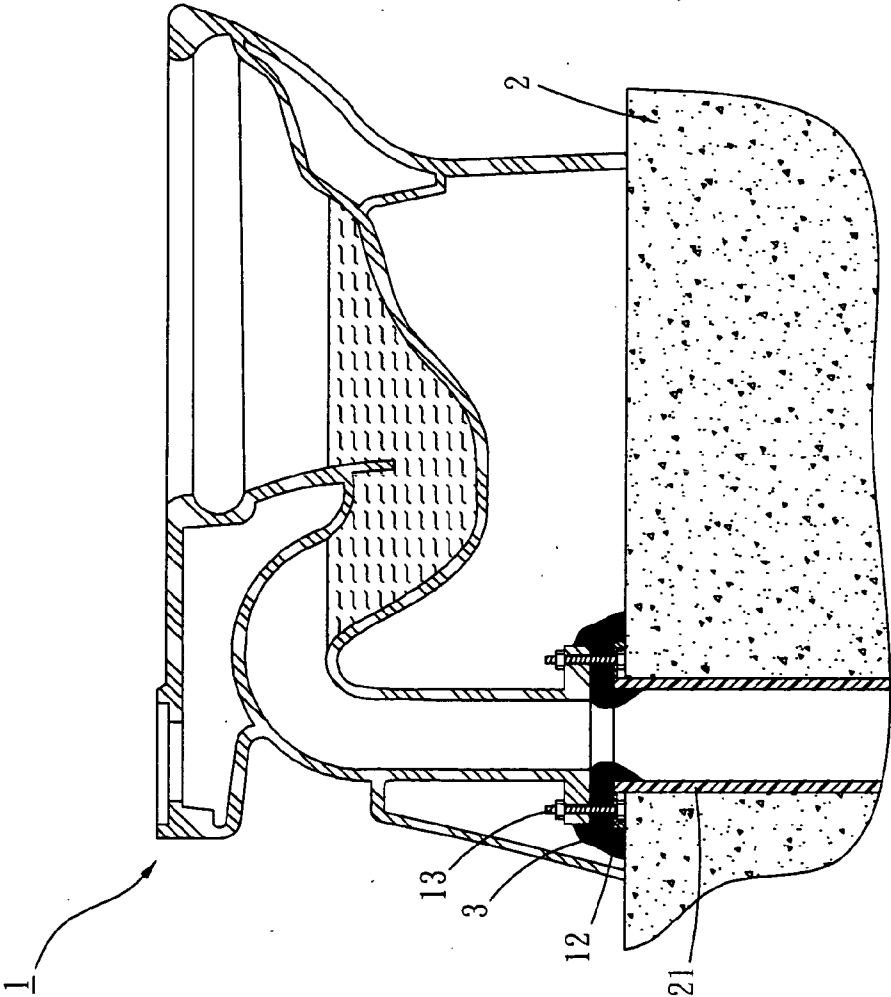


Fig. 1(Prior Art)

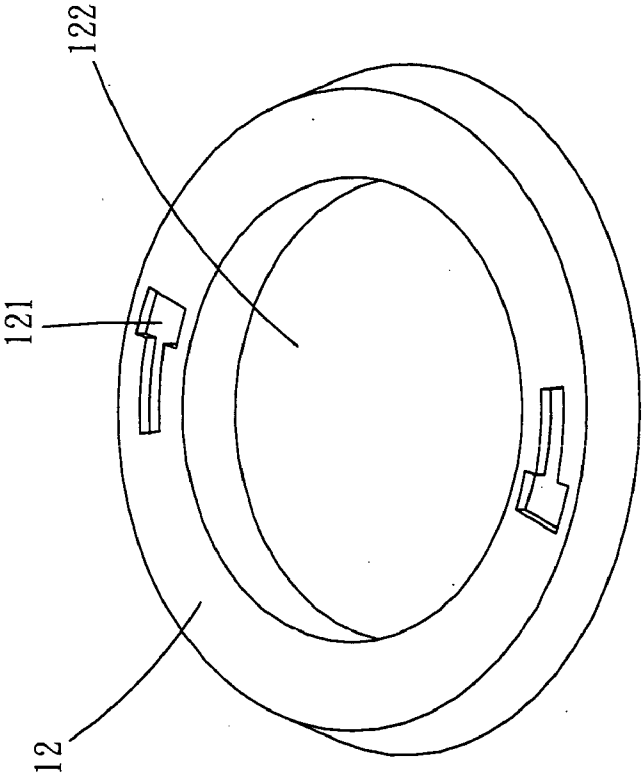


Fig. 2(Prior Art)

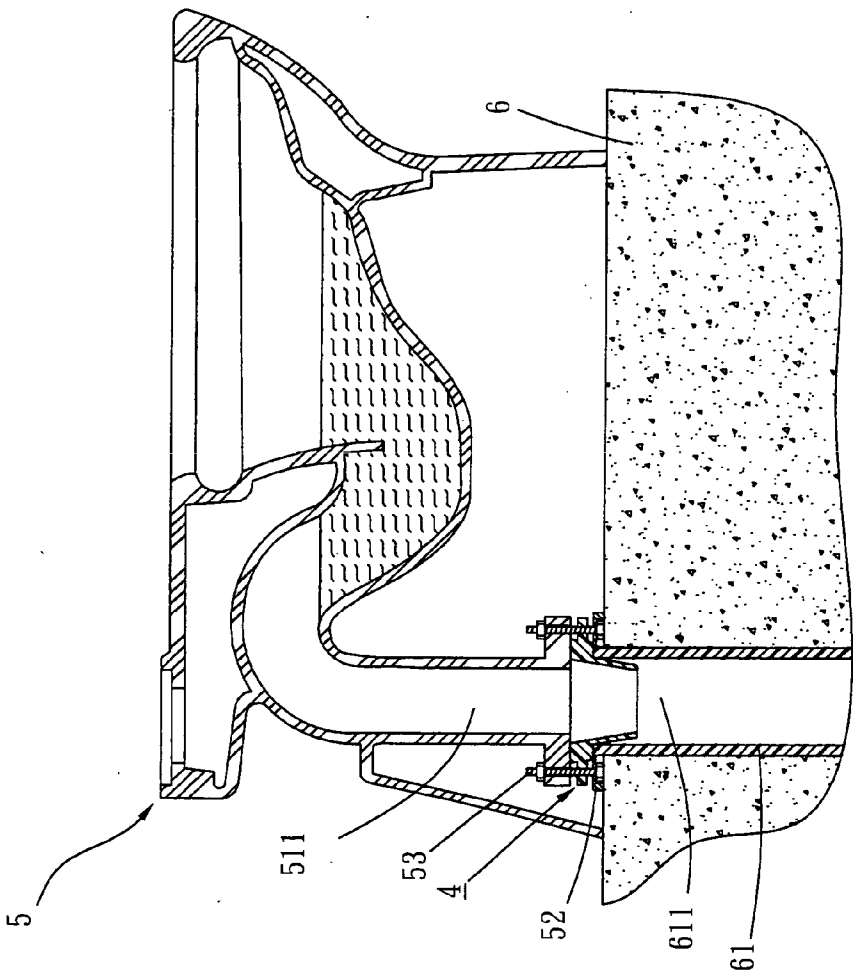


Fig. 3

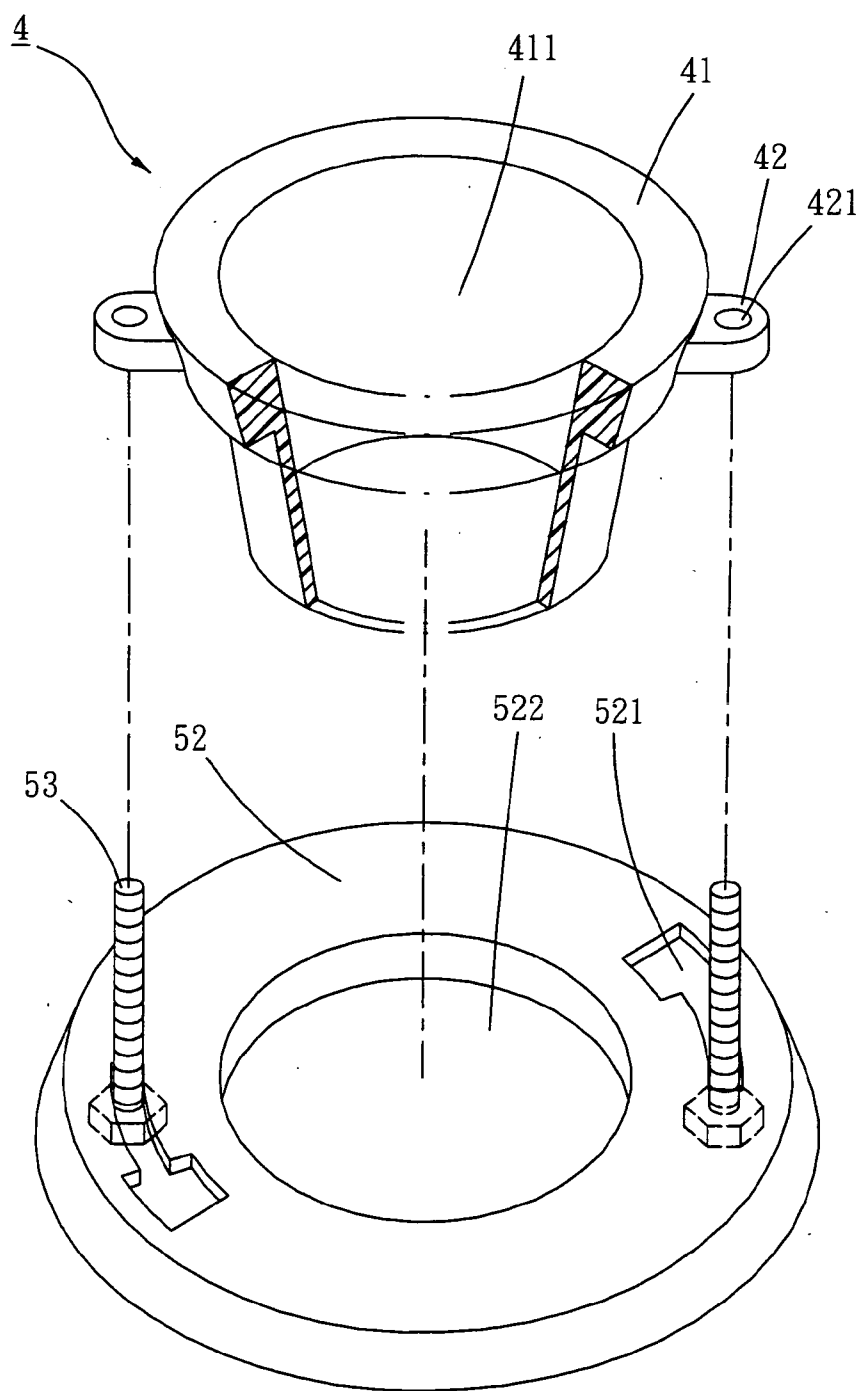


Fig. 4

SEALED DEVICE FOR INSTALLING TOILET STOOL

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a sealed device for installing the toilet stool on the floor, in particular to facilitate the stool installation and prevent the occurrence of sewage leakage.

[0003] 2. Description of the Related Art

[0004] Generally, a stool is installed on the floor surface by means of securing with concrete or fastener. In particular, the concrete is the most common way to be applied for installing a stool. The defect focuses on the inconvenience of dismantling the stool from the floor when the drainage pipe is obstructed and required to be cleaned. Besides extra expense of repairing may be raised if the stool is destroyed during the stool dismantlement.

[0005] Referring to FIGS. 1 and 2, some have attempted to address aforesaid problems by providing an improved method for installing the toilet stool 1. Said floor surface has a locating member 12 sleeveably mounted on the inlet port of drainage pipe 21 and provided with a central opening 122 and a plurality of bores 121 on the outer periphery of said locating member 12. Each of the bores 121 is adapted to permit a fastener 13 extending therethrough so as to secure with the stool 1 on the floor 2. Furthermore, said locating member 12 and the stool 1 have an unctuous material 3 located there between so as when the stool 1 is installed, the unctuous material 3 is simultaneously squeezed to fill the gaps between stool 1 and locating member 12.

[0006] In use, the conventional method for installing the stool has several defects.

[0007] 1. Due to reason that the stool has to secure with the fastener mounted on the locating member, it is difficult to aim the fastener at the hole on the stool.

[0008] 2. Due to the reason that said unctuous material is a sort of semi-liquid material, the gaps are easily to be generated if the stool is installed without cautiousness. In order to prevent the occurrence of leakage, the stool has to be vertically and evenly put on the floor. Therefore, at least two installers are required. Besides, said unctuous material has the tendency to extend inward when being squeezed which results of obstruction of the pipe.

SUMMARY OF THE INVENTION

[0009] Therefore, the object of present invention is to provide a sealed device for installing a stool on the floor, which includes a ductile sealed body and a plurality of ears protruded from the outer periphery of the sealed body, that is capable of overcoming the aforesaid drawback of the prior art.

[0010] The present invention relates to a sealed device for installing a toilet stool on the floor that comprises a sealed body and a plurality of ears with apertures protruded from the outer periphery of said sealed body; a locating member is sleeveably mounted on the inlet port of the drainage pipe. Said sealed body is fastenably mounted between the stool and the locating member by ears. The sealed body includes

a central opening that served as an access between the inlet port of the drainage pipe and drainage trap outlet port of the toilet stool. By the means of the sealed device, the toilet stool is capable of being installed more rapidly and conveniently and prevents occurrence of sewage leakage.

[0011] The present invention will become more obvious from the following description when taken in connection with the accompanying drawings which show, for purposes of illustration only, a preferred embodiment in accordance with the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] FIG. 1 shows a conventional method to install the stool on the floor;

[0013] FIG. 2 is a perspective view to show the conventional locating member;

[0014] FIG. 3 shows the sealed device of present invention installed between outlet port of drainage tray and inlet port of drainage pipe;

[0015] FIG. 4 is a perspective view to show the installation of sealed device of present invention and locating member;

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0016] Referring to FIGS. 3 and 4, the sealed device 4 of the present invention for installing the toilet stool 5 on the floor 6; a drainage pipe 61 is built inside the floor 6 and includes an inlet port 611 defined on the surface of the floor 6. A located member 52 sleeveably mounted on the inlet port 611 of said drainage pipe 61, and provided with an opening 522 defined on the center thereof for accommodating a sealed device 4 and a plurality of bores 521 defined on the outer periphery of the locating member 52; each of said bores 521 has a fastener 53 extending therethrough. The toilet stool 5 having drainage trap outlet port 511 defined on the bottom thereof for feeding into the drainage pipe 61; a sealed device 4 is adapted to install between the drainage trap outlet port 511 and located member 52 and comprising a sealed body 41 having an opening 411 axially defined on the centre thereof and a plurality of ears 42 horizontal protruded from the outer periphery of the sealed body 41. Said opening 411 provide a passage to connect with the drainage trap outlet port 511 and inlet port 611 of the drainage pipe 61. Each of the ears 42 includes an aperture 421 adapted to be extending by the fastener 53 on the locating member 52 so as to immobilize the fastener 53. Besides, the sealed body 41 has a cone defined on one end that is capable to accommodate in the opening 522 of locating member 52.

[0017] Referring to the FIGS. 3 and 4, during the operation, the opening 522 of locating member 52 receives the sealed body 41 and the fasteners 53 extending through on the apertures 421 of the ears 42 so as to secure the sealed device 4 on the locating member 52. At this time, the stool 5 is installed on the floor surface by aiming the drainage trap outlet port 511 at the sealed device 4 and together secured by fasteners 53.

[0018] To sum up with above description, the present invention provides the following advantages:

[0019] 1. By the means of the apertures on the ears and bores on the locating member, said fasteners are capable to firmly stand without immobilizing so as to assist the installation of stool.

[0020] 2. Due to the reason that the sealed device is ductile solid material, the stool can be installed without caring so much about the angle and strength. Therefore, one single installer can accomplish the stool installation.

[0021] 3. Due to the reason that sealed device is ductile material, said sealed device has good effect to fill the gaps between the drainage tray outlet port and inlet port of drainage pipe so as to prevent the leakage of sewage.

[0022] While we have shown and described the embodiment in accordance with the present invention, it should be clear to those skilled in the art that further embodiments may be made without departing from the scope of the present invention.

I claim:

1. A sealed device for installing a toilet stool on the floor; a drainage pipe is built inside the floor and includes an inlet

port defined on the surface of the floor. A located member is sleeveably mounted the perimeter of the inlet port and has an opening defined on the centre thereof and a plurality of bores disposed on the outer periphery thereof with fastener extending therethrough. A toilet stool having drainage trap outlet port defined on the bottom thereof for feeding into the drainage pipe; A sealed device is adapted to install between the drainage trap outlet port and located member and comprising:

A sealed body made of ductile material, having an opening axially defined on the centre thereof. Said opening provide an access to connect with the drainage trap outlet port and inlet port of the drainage pipe.

A plurality of ears horizontal protruded from the outer periphery of the sealed body. Said each of the ears includes an aperture for being extended through by the fastener on the locating member.

2. The sealed device as claimed in claim 1, wherein said sealed body has a cone defined on one end.

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