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CLOSET COLLAR ADAPTER

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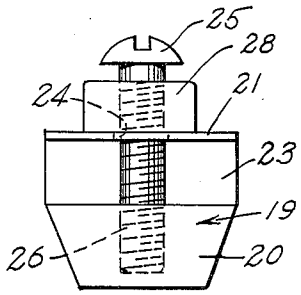


Fig. 1

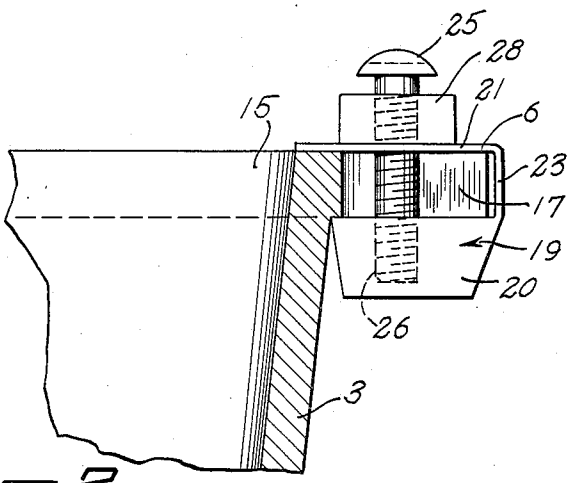
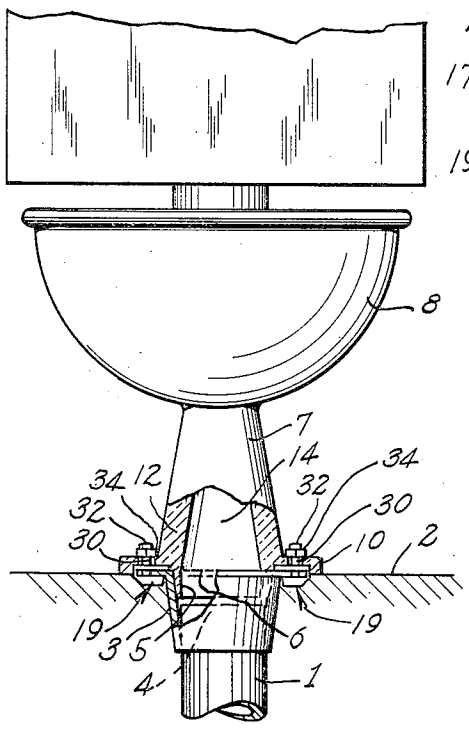


Fig. 2

Fig. 4



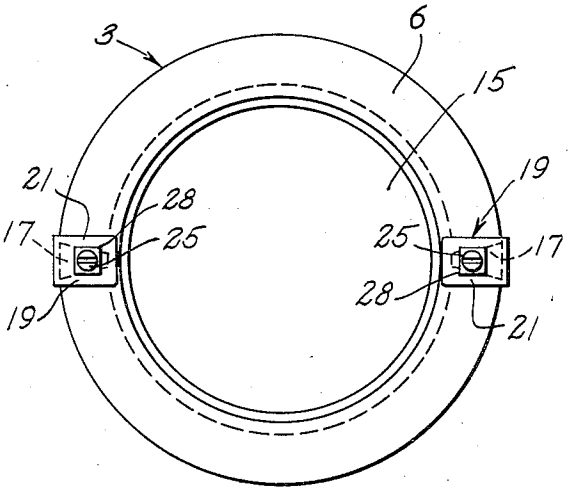


Fig. 3

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CLOSET COLLAR ADAPTER

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3 Claims. (Cl. 285—34)

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This invention relates to a closet collar adapter, and more particularly to a securing device adapted to be placed on the flange of a closet collar preparatory to the positioning of the base of a closet bowl on the same.

In the usual method of constructing the floors of bathrooms, the soil or waste pipe for the closet bowl is positioned in the sub-flooring, or some other supporting means associated with the floor structure, and the closet collar is placed on the end of the soil pipe. Flooring material is then laid or poured around the closet collar, after which the closet bowl is set in place with its base seating on the collar and secured thereto.

In the process of laying or pouring the floor about the closet collar, the material of the floor extends beneath the flange of the collar and it is frequently necessary to resort to chiseling or chipping of the floor beneath this flange to provide sufficient space for the insertion of the head or base flnage of a closet bolt in order that the bolt may be positioned in place for securing the base of the toilet bowl to the closet collar. Such an operation not only constitutes an inconvenience and loss of time, but is likely to result in injuries to the workmen due to flying chips of cement or other material during the chiseling of the same. Other difficulties arise in types of flooring where there is no adequate support beneath the closet collar to hold up the standard closet bolt while the bowl is being placed. The proper spacing of the fastening means by which the base of the closet bowl is secured to the closet collar, to conform to the spacing of the holes provided in the base of the closet bowl, is also frequently difficult to obtain without the use of some special means attached to the closet collar to maintain the proper spacing while the flooring is being positioned about the collar.

The invention has for its principal object the elimination of the foregoing problems, and to this end there is provided a closet collar adapter for application to the flange of a closet collar prior to positioning the same in place on the soil pipe and laying or pouring the material of the floor around the closet collar.

A further object of the invention is the provision of a securing means for attaching the base of a closet bowl in position on a closet collar, which means is adapted to be applied to the closet collar prior to the positioning of the same in the floor, to assure proper spacing of the securing means with relation to associated portions of the base of the closet bowl, and also assuring an unobstructed and dirt-free passage for the reception of fastening means adapted to cooperate with the base of the closet bowl and the securing means provided on the closet collar.

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To the accomplishment of the foregoing ends, the invention consists of a securing member of generally U shape adapted to fit over the flange of the closet collar and having a threaded opening for the reception of a securing bolt to secure the member in place on the flange while the closet collar is being placed in position on the soil pipe and the flooring material is being laid or poured around the collar. Means is provided for properly spacing the attaching means to conform with bolt holes provided in the base of the closet bowl, and for assuring dirt-free bolt-receiving openings and clean threads for cooperation with the threaded attaching means by which the base of the closet bowl is secured to the closet collar.

The full nature of the invention will best be understood from the following description constituting a specification of the same, when taken in conjunction with the annexed drawings, wherein:

Figure 1 is an end elevational view of the invention, showing the temporary means by which the same is secured to the flange of the closet collar;

Figure 2 is a cross-sectional view of a portion of the closet collar showing the invention in position on the flange of the collar;

Figure 3 is a plan view of a closet collar showing how the same appears with the closet collar adapter secured in place, ready for positioning of the collar on the soil pipe; and

Figure 4 is an elevational view, partly in cross-section, showing the manner in which the closet collar adapters are used in securing the base of the closet bowl in position on the closet collar after the flooring material has been laid or poured around the collar.

Although the invention is described hereinafter in connection with the particular application illustrated in the drawings, it is to be understood that the same constitutes a securing device capable of employment with a wide range of different types of fastening means, and particularly as a connecting device for parts provided with flanged portions adapted to be secured together by screw-threaded fastenings.

Referring to the drawings in greater detail, 1 indicates a soil pipe of the usual type, positioned with its upper end somewhat below the level of the floor 2, and adapted to receive a closet collar 3 seated over the upper end 4 of the pipe. An

outwardly extending flange 6 is provided at the top of the closet collar, which rests at the level of the floor 2 when the collar is in position on the soil pipe, and which serves for the attachment of the base 7 of a closet bowl 8 to the soil pipe.

As will be seen in Figure 4, the base 7 of the closet bowl has an outwardly and downwardly extending flanged portion 10, extending over the flange 6 of the closet collar, and a downwardly extending circular rim 12 surrounding the opening 14, which rim is seated at the top of the closet collar about the opening 15 thereof when the closet bowl is positioned on the closet collar. The base 7 is also formed with a downwardly extending, tapered circular flange 5 which fits into the opening 15 of the collar.

Prior to the placing of a closet bowl in position, the soil pipe 1 is secured in place in the sub-flooring or other supporting structure associated with the floor, and the closet collar 3 is seated over the upper end of the soil pipe. Flooring material is then laid or poured about the closet collar and extends beneath the flange 6 of the same. In the ordinary operation of positioning the closet collar and constructing the floor as just described, the slots 17 at opposite sides of the flange 6 are sometimes completely filled with the flooring material, and it then becomes necessary to remove this material as well as portions of the flooring lying beneath the flange 6 in the vicinity of the slots 17, before it is possible to secure the base of the closet bowl in position on the closet collar. In order to obviate the inconvenience of chipping or otherwise removing portions of the flooring material from the slots 17 and from beneath the flange 6 of the closet collar, adapters, indicated generally by 19, are secured in place embracing the flange 6 and covering the slots 17, prior to the positioning of the closet collar on the soil pipe, and the laying or pouring of the flooring material.

The adapters 19, as best seen in Figures 1 and 2, are of generally U shape, having a lower arm 20 and an upper arm 21 joined by the base or connecting portion 23 of the U. The lower arm 20 of the adapter is of considerably greater thickness than the upper arm 21, and is preferably beveled about all four sides. This lower arm is of sufficient length to abut the wall of the closet collar when the adapter is positioned over the flange 6. The upper arm 21 may be of much thinner material than the lower arm, and is sufficiently long to extend over the flange 6 to the opening 15 through the closet collar. Both the upper and lower arms are wide enough to completely cover the slots 17 when the adapter is positioned on the flange 6. The upper arm 21 has an opening 24 for the passage of a bolt 25, which is threaded into an opening 26 in the lower arm. The threaded opening 26 preferably does not extend all the way through the lower arm 20, as will be plainly seen from an inspection of Figures 1 and 2.

The bolt 25 may have a nut 28 threaded on the same, for a purpose later to be made apparent.

The above-described closet bowl adapters are placed in position over the flange 6 of the closet collar with the bolt 25 extending into the slots 17 of the flange, as best seen in Figures 2 and 3. The nuts 28 on the bolts 25 are preferably brought into close engagement with the upper arms 21 of the adapters when in position, in order to completely close the openings 24 in the upper arms.

When the adapters have been placed in position as just described, it will be seen that the upper and lower arms of the same, and the connecting portions 23 embrace the flange 6 and completely close the slots 17. It will also be seen that due to the fact that the nut 28 is in close engagement with the upper arm 21, and the bolt 25 does not extend all the way through the lower arm 20, the entrance of foreign material into the slot 17 is completely prevented. Thus, with the adapters attached to the closet collar, the slots 17 are kept at all times free of any foreign matter which might cause inconvenience in fastening the base of the closet bowl into position on the closet collar. Furthermore, the adapters may be accurately dimensioned so that when properly placed in position on the flange 6, the opening 24 and the threaded holes 26 will be spaced apart to exactly fit corresponding openings 30 in the flanged portion 10 of the base of the closet bowl to receive fastening members 32 used to secure the closet bowl in place on the closet collar.

In making use of the closet collar adapters, the same are positioned on the flange 6, as previously described, before the closet collar is placed in position on the end of the soil pipe 1. After the closet collar has been placed on the soil pipe, the flooring material is laid or poured into position about the collar, extending beneath the flange 6. Subsequently, the bolts 25 and nuts 28 are removed from the adapters, and the closet bowl is set in place over the collar with the openings 30 of the flanged portion 10 in alignment with openings 24 and threaded holes 26 of the adapters. Screw-threaded fastenings 32, such as pieces of brass rod, are then inserted through the holes 30, holes 24 and into the holes 26 in the lower arms of the adapters. Suitable securing means, such as nuts 34, which may have washers positioned beneath them, are then threaded upon the extending ends of the members 32, to hold the closet bowl in position on the collar.

It will thus be seen that the invention as above described provides a simple attachment to be placed on closet collars prior to placing the same in position on the soil pipe, and adapted to completely eliminate the necessity for removing portions of the adjacent flooring material beneath the closet collar in order to secure sufficient space for the insertion of the securing means by which the closet bowl is held in place on the collar.

While the invention has been shown and described with reference to a particular embodiment of the same, it will, of course, be understood that many changes can be made in the shape and proportions of the various parts, and in the materials employed, without departing from the spirit of the invention or the scope of the appended claims.

Having thus clearly shown and described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. The combination with a closet collar flange formed with a slot and a toilet bowl base flange formed with a bolt hole, the closet collar and toilet bowl base flanges being registered with the slot and the bolt hole aligned; of an adapter comprising an upper horizontal arm to overlie the closet collar flange and closing the upper side of the slot therein, a lower horizontal arm to underlie the closet collar flange and its slot and closing the lower side of the slot, a connecting portion extending between and connecting said upper and lower arms and closing the outer end of said slot, said upper arm being formed with a bolt hole, said lower arm being substantially

thicker than said upper arm and formed with a threaded socket aligned with said bolt hole in said upper arm, and a bolt threaded downwardly through and closing said bolt hole in said upper arm, extending through said closed collar flange slot, and threaded into said socket, said bolt projecting above said upper arm into the bolt hole of the toilet bowl base flange.

2. An adapter comprising an upper relatively thin plate-like arm formed with a bolt hole, a lower relatively thick arm formed with a threaded socket aligned with said bolt hole, said socket opening through the top of said lower arm, a relatively thin plate-like member connected to and between one end of and parallelly spacing said upper and lower arms, and a bolt threaded downwardly through and closing said bolt hole and threaded into said socket.

3. In an adapter for securing the base flange of a toilet bowl to the flange of a closet collar, the closet collar flange being formed with a slot, a lower horizontal arm adapted to be positioned beneath the closet collar flange and close the slot therein, said lower arm being of substantial thickness to form a corresponding cavity in fill-in material placed around and beneath the closet collar flange, a threaded socket formed in the top of said lower arm, an upper arm adapted to rest upon the top of said closet collar flange and close

the upper end of said slot, a connecting portion extending between and connected to the outer ends of said upper and lower arms for closing the outer end of said slot, said upper arm being formed with a bolt hole vertically aligned with said threaded socket, a bolt threaded downwardly through said threaded hole, extending through said slot, and threaded into said threaded socket, said bolt being of a length to have a substantial upper portion including a head extending above said upper arm with the lower end of the bolt fully threaded into said socket, and a nut on said upper portion of the bolt threaded down upon said upper arm and securably compressing said upper and lower arms against the top and bottom of said closet collar flange.

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