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DRAIN FITTING

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Fig. 1.

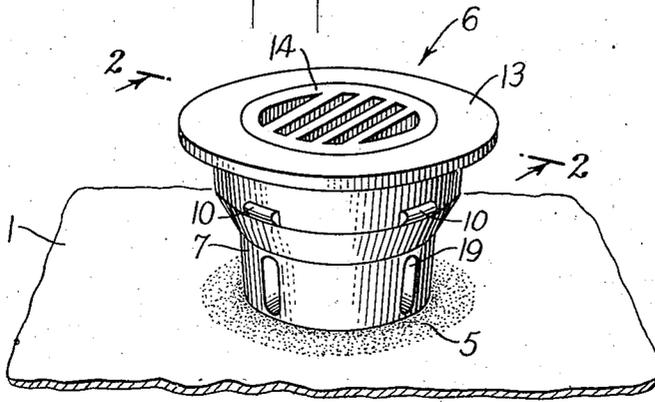
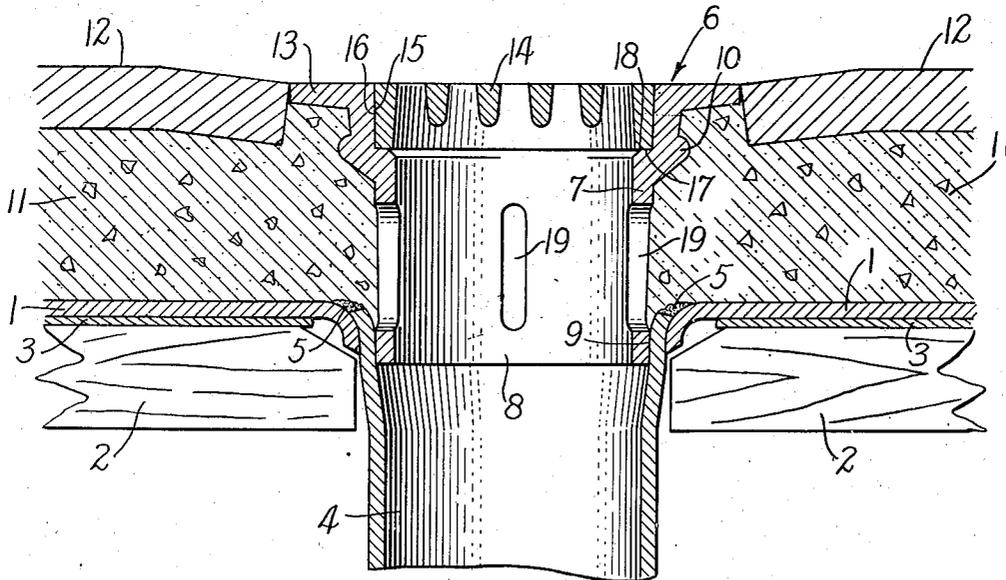


Fig. 2.



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## DRAIN FITTING

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6 Claims. (Cl. 182-31)

This invention relates to a drain fitting.

An object of the invention resides in the provision of a drain fitting which is particularly adapted for use in connection with shower bath installations and wherein the fitting is directly connected to the waste pipe and is held in position principally by the concrete base on which the tile surface is usually laid.

Another object of the invention is to so construct the strainer of the fitting that it may be replaced without positive attachment and yet may easily be removed.

A still further object of the invention is to provide the fitting with pre-formed weepholes of such construction that they will be properly placed to permit the seepage of moisture into the waste pipe regardless of the thickness of the concrete base of the tile surface.

A still further object of the invention is the provision of a fitting which may be made from non-critical material such as hard lead, but it is to be understood that the breadth of the invention contemplates the use of other materials.

In the drawing:

Figure 1 is a perspective view of the fitting showing the same in its relationship to the usual lead pan that is used under a shower bath floor; and

Figure 2 is a sectional view of the fitting showing its association with the lead pan and its supports, the concrete fill and the tile floor surface, the section of the fitting being taken generally on line 2-2 of Figure 1.

Usually shower bath floors are provided with lead pans which underlie the concrete fill which forms the base for the tile floor surface.

Prior to my invention the standard drain fitting included an internally threaded coupling which was secured by soldering or otherwise to the waste pipe and to the lead pan, extending through a hole in the lead pan to the end of the pipe which was located substantially below the pan.

An externally threaded cylinder which was embedded in the concrete fill was secured to the coupling and carried the usual strainer held in position by screws. The interconnection of the coupling and the cylinder by screw threads permitted the cylinder to be screwed into the coupling to a greater or lesser degree, according to the thickness of the concrete fill.

After the cylinder had been positioned it was the practice for the installing workman to drill holes through the cylinder to permit seepage into the waste pipe. It was not the practice to

pre-form these holes because of the fact that there was no manner of determining the extent to which the cylinder would be screwed into the coupling due to the possible variation of the thickness of the concrete fill.

My invention eliminates the coupling and provides a fitting which is directly connected to the waste pipe and is provided with pre-formed weep openings through which the seepage may occur. Referring now to the drawing the lead pan is indicated by the reference numeral 1. This pan rests upon the usual wood supports 2, between which and the pan is a liner 3.

The waste pipe 4 extends to and is directly connected with the pan 1 so that the waste pipe registers with the opening in the pan. This securement may be by any conventional means such as soldering 5.

The fitting 6 is substantially circular in cross section and its outer wall 7 is tapered toward the open end 8 that engages with the waste pipe 4 so that the fitting may be forced into the waste pipe to produce a snug fit, with the result that the fitting and the waste pipe will be held in a proper association by the developed friction. This securement of the fitting to the waste pipe may be augmented, if desired, by soldering at 9.

Of course when the fitting and pipe are both made of lead the malleability of the lead will lend itself to a tight fit. Moreover the tapering of the outer wall of the fitting permits the fitting to be forced into the drain pipe to different extents so that the fitting may be adapted to concrete fills of various thicknesses.

Adjacent the upper end of the fitting a plurality of lugs 10 are located and are adapted to be embedded in the concrete fill 11 on which the tile floor surface 12 is supported, so that the concrete fill will prevent any movement of the fitting after it has been installed and the concrete emplaced.

The upper end of the fitting is provided with the usual flange 13 and with a removable strainer 14. The outer wall 15 of the strainer is tapered downwardly and is adapted to frictionally engage an inclined wall 16 into which the strainer fits. Thus a frictional engagement will be developed which will maintain the strainer in position. However, to prevent the strainer from becoming jammed in the opening the shoulder 17 on the inner wall of the fitting will engage with the lower end 18 of the strainer and thus limit the downward movement of the strainer beyond the danger point.

The fitting is provided with a plurality of weep-

hole slots 19 which are arranged around its periphery and extend longitudinally of the fitting to provide communication with the waste pipe so that the seepage from the shower may find its way through the slots to the waste pipe.

In installing the fitting, after the waste pipe 4 and pan 1 have been properly associated in position, the workman simply pushes the fitting into the waste pipe until its upper surface is flush with the position which the upper surface of the tile which is to be subsequently applied will assume. Of course at times the concrete fill 11 will be greater in thickness than at other times and consequently the degree to which the fitting is forced into the waste pipe will vary with the thickness of the concrete. After the fitting has been positioned the concrete is then poured and the tile floor surface applied, with the result that the fitting will be securely held in position.

It may at times be desirable to protect the weephole slots 19 against becoming filled with the concrete after the concrete is poured. This may be done by wrapping a piece of material, such as paper, around the outer wall of the fitting to cover the slots. This will prevent the flowing of the concrete into the slots and yet will permit the seepage of the water through the slots even before the material becomes disintegrated, which of course it will do due to the reaction that takes place as the concrete is poured. The application of such a strip of material, however, is not always necessary. Its necessity depends to a great extent upon the character of the concrete that is poured.

It will be realized that by making the weephole slots relatively long they may be pre-formed and therefore will function regardless of the distance, from a practical point of view, to which the fitting is forced into the waste pipe. In other words, if the fitting is forced into the waste pipe to such an extent that part of each of the slots will be thereby covered, the remaining portions of the slots will be sufficient to permit the seepage to pass into the waste pipe.

Thus it will be seen that I have provided a fitting of the character above set forth which will eliminate the coupling between the fitting and the waste pipe, which will securely be held in place by the concrete fill and which will adapt itself in its pre-formed state to application to waste pipes regardless of the variation in thickness of the concrete fill.

Moreover I have produced a fitting which may be made entirely of non-critical material such as hard lead, and yet which is so constructed that it will properly function, and so that the strainer may be removed at will for cleaning purposes.

It is of course to be understood that this invention is not limited to the use of non-critical materials or to hard lead but the construction may be embodied in various other materials.

5 What I claim is:

1. A waste pipe fitting substantially circular in cross section and having an outer wall tapered toward an open end, a strainer in said fitting at the opposite end, a lug extending from the outer wall of the fitting adjacent the strainer, and a longitudinal slot in the fitting establishing communication between the inside and the outside of the fitting.

2. A construction including a pan, a lead waste pipe connected with said pan, a layer of floor material on said pan, a waste pipe fitting extending into and having frictional engagement with said pipe, and a lug extending from the fitting and embedded in said floor material.

3. A construction including a pan, a lead waste pipe connected with said pan, a layer of floor material on said pan, a waste pipe fitting extending into and having frictional engagement with said pipe, and a lug extending from the fitting and embedded in said floor material, the said fitting having a slot arranged longitudinally therein and establishing communication between its outside and inside whereby seepage is permitted into the waste pipe.

4. A construction including a pan, a lead waste pipe connected with said pan, a layer of floor material on said pan, a waste pipe fitting extending into and having frictional engagement with said pipe, a lug extending from the fitting and embedded in said floor material, and a removable strainer in said fitting.

5. A construction including a pan, a lead waste pipe connected therewith, a hard lead fitting substantially circular in cross section and having an outer wall tapered toward the drain pipe, said fitting being telescoped into the drain pipe and being held frictionally therein, a lug extending from the outer wall of the fitting, the fitting having a slot extending longitudinally thereof and establishing communication between the inside and outside thereof, and a floor material surrounding said fitting and embedding said lug.

6. A construction including a pan, a lead waste pipe connected therewith, a hard lead fitting substantially circular in cross section and having an outer wall tapered toward the drain pipe, said fitting being held frictionally therein, a lug extending from the outer wall of the fitting, and a floor material surrounding said fitting and embedding said lug.

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