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FLOOR DRAIN

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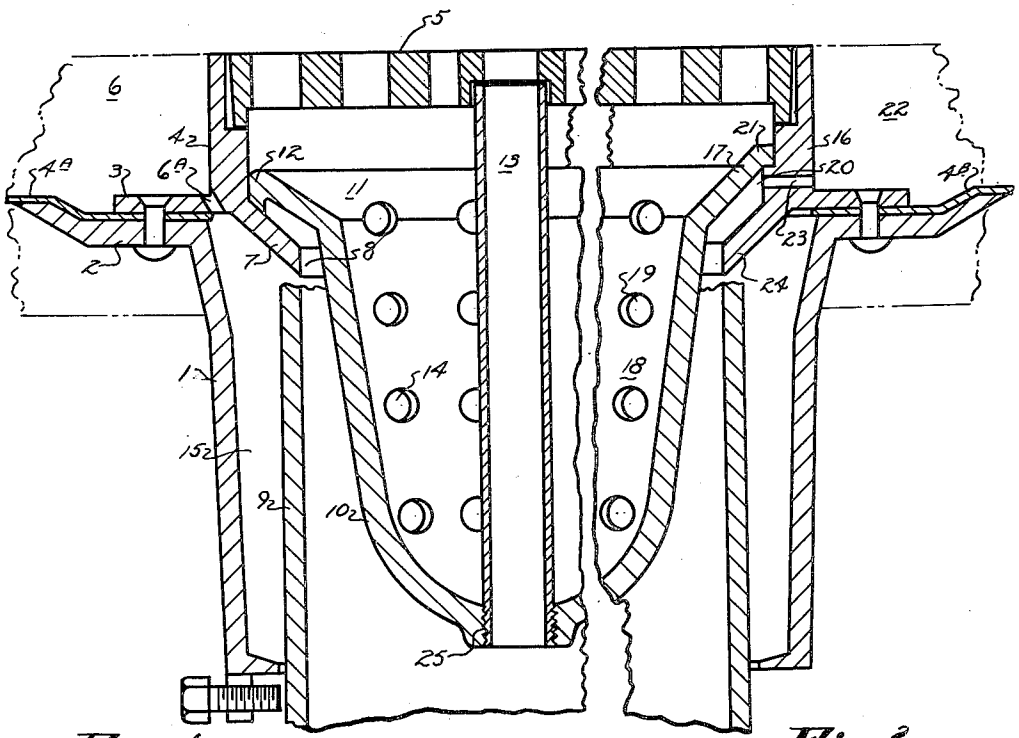

Fig. 1 Fig. 2

INVENTOR.
LAWRENCE N. BOOSEY
BY Charles E. Vaughan

ATTORNEY

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FLOOR DRAIN

Lawrence N. Boosey, Detroit, Mich.

Original application November 1, 1943, Serial No. 508,575. Divided and this application September 24, 1945, Serial No. 618,315

4 Claims. (Cl. 182—31)

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This invention relates to floor drains adapted to be positioned in a concrete floor and secured to the upper end of a waste conduit of a plumbing installation and is a division of my application Serial No. 508,575, filed November 1, 1943, (Patent No. 2,400,070, May 14, 1946).

The device disclosed herein includes a perforate basket extending into the open end of the waste conduit of such character as to prevent coarse waste material from being discharged thereinto.

These and other features and objects of the invention are hereinafter more fully described and claimed and shown in the accompanying drawing in which—

Fig. 1 is a vertical section showing the device applied to a waste conduit.

Fig. 2 is a similar view showing an alternative form of construction.

As shown in Fig. 1 the device consists of a cylindrical body 1 having a peripheral flange 2 at its upper end to which is secured a flange 3 of the head 4 carrying the grating 5 which is positioned substantially with the upper surface of the floor 6. The head 4 has an inwardly and downwardly inclined imperforate flange 7 providing a central opening 8 approximately equal to the inner diameter of the waste conduit 9 to which the flange 2 is secured in any approved manner but preferably formed integral therewith as shown. On this flange 7 of the head 4 is supported a perforate basket 10 having an outturned flange 11 at its upper end terminating in a downwardly extending rim 12 resting on the flange 7. The grating 5 has a central aperture to receive the upper end of a tube 13 extending in a vertical position and the lower end threaded in a threaded opening centrally of the bottom of the basket.

The material flowing through the grating 5 includes water and a certain amount of debris and enters the basket 10 and the water discharges therefrom through the openings 14 therein. When the basket becomes choked with debris the grating 5 may be removed thereby providing access to the basket and permitting removal thereof by the tube 13 to permit cleaning. The space 15 between the conduit 9 and the body portion 1 is usually filled with concrete or caulked with lead and the upper end of the waste conduit 9 is covered by the inclined flange 7 which prevents the hand of the workman coming in contact with the rough upper open end of the conduit 9 and further prevents floating material from accumulating on the ragged upper end thereof.

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As shown in Fig. 1 the flange 2 of the body and 3 of the head are positioned in the concrete floor 6 and an aperture 6a is provided in the flange 3 adjacent the vertical portion of the head 4 to permit water accumulating in the concrete floor above the flashing 4a to pass therefrom.

In the alternative form of the invention shown in Fig. 2 a head 16 is formed with an internal flange 20 to receive the inclined flange 17 of the basket 18 which is provided with apertures 19 for the same purpose as described relative to the apertures 14 of Fig. 1. The head, as shown in Fig. 2, has an inner flange 20 and the flange 17 of the basket is formed with an outturned terminal edge 21 resting on the flange 20 and any water accumulating in the concrete floor 22 can pass through the passageway 23 into the drain.

Thus, in either of the forms of the invention shown, the flange 11 and the flange 17 are respectively spaced from the downwardly inclined flange 7 or 24 which, in either case, prevents surface contact of the flange 11 or 17 with the flange 7 or 24 of the head and prevents the basket from becoming sealed, as by rust, to the respective flanges 7 or 24 and therefore permits ready removal of the basket subsequent to removal of the grating 5 and tube 13 which tube is threaded in the aperture 25 in the bottom of the basket through which it projects.

It is believed evident from the foregoing description, that in either of its forms, the device is comparatively simple in construction and function alike in respect to separating the debris from inflowing liquid and provide for removal of debris with the basket which, in either form, is readily removed subsequent to the removal of the grating and are further alike in the provision of means for preventing accumulation of water on the seepage apron 4a or 4b in the respective forms of the invention shown.

Having thus briefly described my invention, its utility and mode of operation, what I claim and desire to secure by Letters Patent of the United States is:

1. A drainage fitting for positioning in a concrete floor comprising a hollow body member having an external flange at its upper end and means at its lower end for centering the same with respect to a drainage conduit, a head having an external flange intermediate its ends overlying and secured to the external flange of said body, a grating removably supported by said head, a seepage apron in said floor positioned between said external flanges and having an opening approximately of the same diameter as

the open upper end of said body, said head having a downwardly and inwardly inclined flange at its terminal edge overlying the upper end of the conduit, a basket having an external flange at its upper end supported in spaced relation with the inwardly inclined flange of said head, the basket having a series of openings in its wall and an opening centrally of the bottom thereof, and a tube having one end loosely positioned in an opening provided therefor in said grating and detachably secured at its opposite end to said opening in the bottom of the basket.

2. A drainage fitting for positioning in a concrete floor comprising a body having an external peripheral flange at its upper end, a head having an external peripheral flange overlying said external body flange and a downwardly and inwardly inclined flange, a seepage apron in said floor having an opening approximately the same diameter as the opening in said body and secured between the said external flanges, means on the body for centering the same in respect to a waste conduit, a grating removably supported by said head, a basket having an external flange supported by the head in spaced relation with the inwardly inclined flange of said head, the head having an aperture providing for flow of seepage from within the floor to between the flanges on the head and the top inner wall of said body and thence into said conduit, a tube having its upper end extending into an aperture provided centrally of the grating and secured at its other end in an aperture provided therefor in the bottom of said basket whereby said basket may be easily removed from said head.

3. A drainage fitting for positioning in a concrete floor comprising a body member having an external flange at its upper end, means at the lower end for securing the same to a waste conduit, a head including a removable grating positioned within its upper end and having an external flange therebelow adapted to be secured to said external body flange, said head having an interior vertical wall, an internal upper flange integral with said wall, said drain head having an internally projecting downwardly inclined lower flange overlying the upper end of said conduit, a perforate basket having an external flange supported upon said upper internal head flange, and a tube having its upper end positioned in an opening centrally of said grating and opening at its lower end through the bottom of said basket, the lower end of said tube being threadably joined to said basket in the opening in the bottom of said basket.

4. A drainage fitting for positioning in a concrete floor comprising a hollow body member having an external flange at its upper end and means at its lower end for centering the same with respect to a drainage conduit, a head having an external flange intermediate its ends overlying and secured to the external flange of said body, a grating removably supported by said head, said head having a downwardly and inwardly inclined flange at its terminal edge overlying the upper end of the conduit, a basket having an external flange at its upper end supported in spaced relation with the inwardly inclined flange of said head, the basket having an external flange at its upper end supported in spaced relation with the inwardly inclined flange of said head, the basket having a series of openings in its wall and an opening centrally of the bottom thereof, and a tube having one end loosely positioned in an opening provided therefor in said grating and threadably secured at its opposite end within said opening in the bottom of the basket.

LAWRENCE N. BOOSEY.

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