

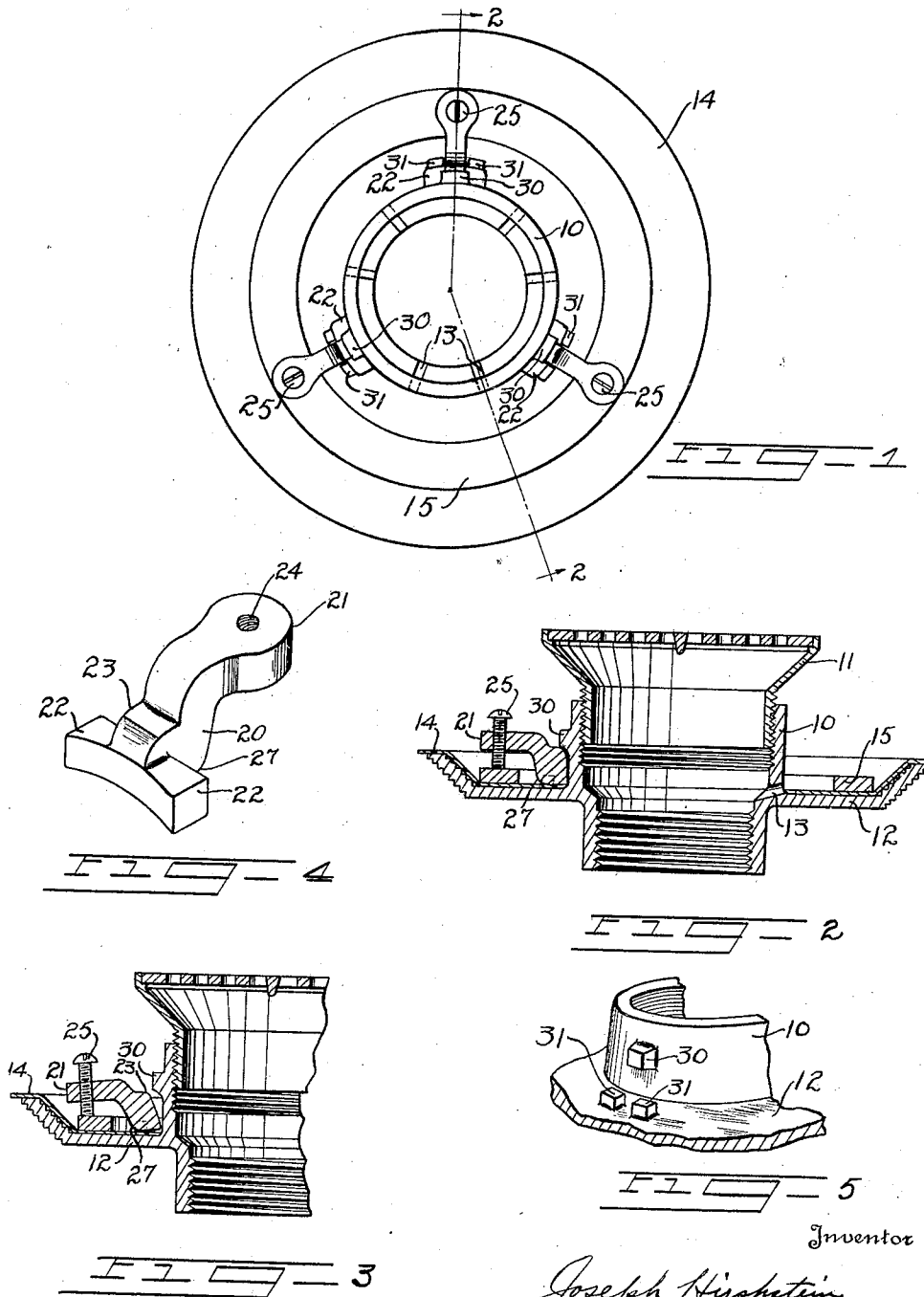
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J. HIRSHSTEIN

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DRAIN

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Inventor

Joseph Hirschstein
By *Ruth Macklin Solnick & Sears*

Attorneys

UNITED STATES PATENT OFFICE

JOSEPH HIRSHSTEIN, OF CLEVELAND, OHIO, ASSIGNOR TO THE JOSAM MANUFACTURING COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF DELAWARE

DRAIN

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This invention pertains to drains for roofs or floors and more particularly to the provision of means for effecting a water tight connection between the side of the drain and the enclosing material. The usual practice for maintaining a water tight connection between the drain body and the floor or roof, is to employ a sheet of waterproofing material which is placed beneath the floor, and is shaped to surround the drain body. One form of means for securing the flashing has necessitated the drilling and tapping of the drain body at spaced points. This cannot be done in a satisfactory manner, except at the manufacturing plant, and consequently considerable caution must be exercised in preparing the proper drain for each order, since some drains do not require the clamping apparatus.

An object of the present invention is to provide means for holding the flashing in place against the drain body, without necessitating the use of a tapped opening in the body, and without requiring cementing material, or the making of any holes through the flashing. Thus I provide fastening means which may be readily installed on the job in an expeditious manner.

The preferred means for carrying out my invention is shown in the drawings, wherein Fig. 1 is a plan view of a drain having my invention embodied therein; Fig. 2 is a vertical section taken through the drain on a plane indicated by the line 2—2 in Fig. 1; Fig. 3 is a similar section showing one of the clamping members in position for removal; Fig. 4 is a perspective view of one of the fastening members; and Fig. 5 is a perspective view of part of the drain body.

The drain illustrated is one wherein the body 10 is provided with an adjustable head 11, which is adapted to be positioned flush with the floor or roof level, and is also provided with a seepage collecting pan or receptacle 12. The pan surrounds the drain body and is adapted to discharge into the drain through openings 13, any liquid which may be collected by the pan. This pan collects liquid which may leak between the drain and the floor material. Consequently, in

order to prevent leakage from working under the floor, or through it, a layer of waterproofing material indicated at 14, extends a material distance from the drain and beneath the surfacing material. This waterproofing material or "flashing" is usually of lead. To hold the flashing downwardly against the pan I provide a ring 15 which is arranged to engage a horizontal seat in the bottom of the pan. To hold this flashing firmly in position, I employ a plurality of spaced clamping members preferably three, which are spaced equi-distantly around the body, and are provided with means for urging the ring downwardly into clamping engagement with the flashing.

Each clamping member is so made that it may be readily placed into operative position with reference to the drain body, without cutting into the drain body. As illustrated in Fig. 4, each member has an upwardly extending arm 20, which terminates in a horizontally disposed pad 21. A lug 22 extends laterally from each side of the arm 20 and adjacent the bottom thereof, while a shoulder 23 is formed in the arm above the top surface of the lugs. Moreover, the pad has a threaded opening 24 through which a set screw 25 may extend.

To hold each clamping member in position, the drain body has spaced groups of lugs, there being one group to each clamping member. Fig. 5 shows one of such groups as comprising a lug 30 which extends laterally from a vertical portion of the body, and two upwardly extending lugs 31 which are spaced from the wall of the body a distance slightly greater than the thickness of the lugs 22. Moreover, the lug 30 is positioned at a sufficient height above the horizontal seat 12 to permit engagement with the shoulder 23 when the clamping member is in place.

Each clamping member has a bottom portion of the arm 20 rounded, as at 27, to permit turning of the arm with reference to the body, whereby the clamping member may be inserted into place or removed from the drain. Such operation may be accomplished by loosening the set screw, and then lower-

ing the pad 21 until the shoulder 23 clears the lug 30 as shown in Fig. 3. The clamping member may then be lifted out of place. Conversely, the member may be inserted into position by placing the lugs 22 between the lugs 31 and the body, and then raising the arm until the shoulder 23 engages beneath the lug 30. Thereupon the set screw may be tightened until the lower end thereof engages the clamping ring. Thereafter, each set screw may be selectively adjusted to attain the desired clamping pressure.

A clamping device made in accordance with my invention is advantageous, in that the flashing may be satisfactorily held in position against the drain without requiring the use of a threaded connection with the drain body. Consequently, all drain bodies may be made in the same way and then those which are intended for use with waterproofing material may be furnished with additional clamping members.

I claim:

1. In combination, a drain having an upwardly extending portion and a laterally extending portion, an arm provided with a T-shaped head portion adapted to engage the outwardly and laterally extending portions of said body at the juncture of said portions with each other, a lug on said upwardly extending portion overlying and contacting with the upper side of said head portion and lugs on said laterally extending portion radially abutting the outside vertical surfaces of said T-shaped head portion of said arm whereby the arm is held against movement in one direction with reference to the drain body, a sheet of waterproofing material disposed above the laterally extending portion of said drain, and means associated with said arm for urging the waterproofing material into clamping engagement with the horizontal portion of said drain.

2. In combination, a drain having a horizontal basin integrally formed therewith, a sheet of water-proofing material and means for clamping the water-proofing material to the wall of the basin, said means comprising a ring disposed above said water-proofing material, an arm having an end thereof adapted to engage the wall of the drain and basin wall at their juncture, the basin wall being provided with means to engage the end of the arm opposite the drain wall, whereby any movement of the end of the arm away from said basin beyond a pre-determined point is prevented, and a clamping screw associated with the end of the arm for engaging the ring and forcing it into clamping engagement with said material.

3. In a drain in combination, a drain body having an outwardly extending flange, a sheet of water-proofing material and means for clamping the water-proofing material to

said flange, said means comprising a ring disposed above said material, a removable arm having a head depending therefrom, said head being adapted to engage the drain body wall and outwardly extending flange at their juncture, a lug extending outwardly from the drain body wall adapted to engage the top of the head of the arm, a plurality of lugs extending upwardly from the outwardly extending flange, and being adapted to engage the head of the arm opposite the drain body wall, whereby any movement of the arm away from the outwardly extending flange, beyond a pre-determined point, is prevented, and a ring screw associated with the arm for engaging the ring and forcing it into clamping engagement with said material.

In testimony whereof, I hereunto affix my signature.

JOSEPH HIRSHSTEIN.