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ROOF DRAIN.

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Fig. I

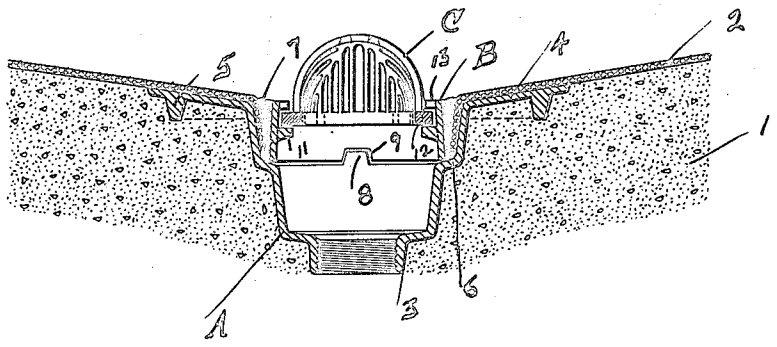
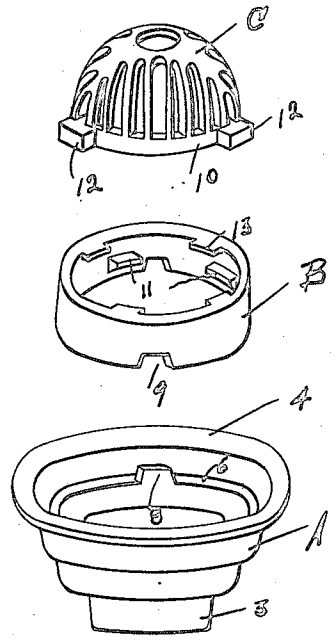


Fig. III



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ROOF DRAIN.

Application filed March 3, 1922. Serial No. 540,753.

To all whom it may concern:

Be it known that I, JOSEPH C. SANDERS, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Roof Drains, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to roof drains, and has for its main object to provide an inexpensive roof drain that is easy to install and which is of such construction that there is little liability of roof gravel and other refuse becoming packed around the strainer or wedged between the strainer and the part of the drain that surrounds same in such a way as to interfere with the free removal of the strainer.

Another object is to provide a roof drain that is equipped with a strainer that can be removed easily but which is so constructed that there is little liability of the strainer being accidentally "knocked off" or displaced from its normal operative position over the drain pipe.

Figure I of the drawings is a vertical sectional view of a portion of a roof equipped with a drain constructed in accordance with my invention; and

Figure II is a perspective view, illustrating the various parts of the drain separated.

In Figure I of the drawings, which illustrates the preferred form of my invention, 1 designates a roof constructed of concrete or any other suitable material, 2 designates a top covering which may consist of sheet material or a substance that is spread over the top surface of the roof while in a plastic state, and A designates the main element of my improved drain, hereinafter referred to as the basin member, which is set in the roofing material 1 in such a manner that water on the surface of the roof will drain into same and thus be conducted off the roof through a drain pipe (not shown) that is connected to an internally screw-threaded flange 3 at the lower end of the basin member A. The member A is of basin form in general outline and is provided at its upper edge with a laterally-projecting flange 4 whose top face is adapted to be set flush or substantially so with the top face of the roofing material 1, thereby enabling the top covering 2 of the roof to be lapped over said flange 4 and forced downwardly into the upper end portion of the basin member A, as shown in Figure I. Preferably, the flange 4 is flared upwardly slightly and provided on its underside with ribs 5 or the like that tend to hold the basin member A firmly imbedded in the roofing material 1. The side wall of the member A is slightly tapered and stepped or constructed in such a way as to form a horizontally-disposed shoulder or ledge 6 at a point below the upper end of the member A and a removable caulking ring B is mounted on said ledge so as to cooperate with the upper end portion of the tapered side wall of the member A to form an annular chamber in which a self-hardening, plastic substance 7 can be arranged so as to form a water-tight joint between the member A and the top covering 2 of the roof and also secure the edge portion of said top covering that is turned downwardly into the upper end of the member A. If desired, means may be provided for preventing the caulking ring B from turning or rotating relatively to the basin member A of the drain, the means herein illustrated for this purpose consisting of lugs 8 on the ledge 4 of the basin member that fit in notches 9 in the lower edge of the caulking ring B.

The drain is provided with a removable strainer C, herein shown as of the bee-hive type, which is mounted inside of the caulking ring B in such a manner that the lower edge portion 10 of said strainer is spaced far enough away from the inner side of the caulking ring to form an annular slot between said parts of sufficient size to permit small sized roof gravel that is washed against the strainer by the surface water, to pass downwardly through said slot into the drain pipe. Accordingly, there is little liability of the roofing gravel or trash or refuse on the roof becoming packed around the base of the strainer or becoming wedged between the lower edge portion 10 of the strainer and the caulking ring B in such a way as to interfere with the easy removal of the strainer. In addition to providing an outlet for any substance or objects that would tend to bind the strainer C in the caulking ring, the annular slot between said caulking ring and the unflanged lower edge portion 10 of the strainer, increases the outlet area for the surface water and permits the surface water to escape through the openings in the

strainer and also between the lower edge portion of said strainer and the portion of the drain in which said strainer is positioned. The strainer C is sustained by a plurality of inwardly-projecting lugs 11 on the inside of the caulking ring B on which laterally-projecting lugs 12 on the lower edge portion 10 of the strainer rest. In order to prevent the strainer from being accidentally kicked off or dislodged from operative position over the drain pipe, the caulking ring B is provided with a set of inwardly-projecting locking lugs 13 arranged in such relation with the strainer sustaining lugs 11 on the caulking ring that the lugs 12 on the strainer C can be moved into co-operation with said locking lugs 13 by turning the strainer slightly after it has been inserted in the caulking ring, the lugs 12 on the strainer being long enough to engage the sustaining lugs 11 and the locking lugs 13 at the same time.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A roof drain, comprising a basin member adapted to be set in a roof and provided adjacent its upper end with a ledge, a removable caulking ring sustained by said ledge and spaced away from the upper part of the side wall of said basin member for the purpose described, and a removable strainer arranged inside of and sustained by said caulking ring and provided with an unflanged lower edge portion which is spaced away from the inner side of said caulking ring so as to form a slot for the purpose described.

2. A roof drain, comprising a basin member that is adapted to be set in a roof, a caulking ring arranged inside of the upper end portion of said basin member and spaced away from the side wall of same so as to receive a means that is used to secure the top covering of the roof to the drain, a strainer arranged inside of said caulking ring with its lower edge portion spaced away from the inner side of said ring so as to form an annular slot for the purpose described, and co-operating means on said strainer and caulking ring for sustaining said strainer.

3. A roof drain, comprising a basin member adapted to be imbedded in a roof and provided adjacent its upper end with a ledge, a removable caulking ring sustained by said ledge and spaced away from the side wall portion of said basin member, means for preventing said caulking ring from turning relatively to said basin member, a removable strainer arranged inside of said caulking ring with its lower edge portion spaced away from said ring so as to form an annular slot between said parts, means for sustaining said strainer, and means for preventing said strainer from being accidently displaced.

4. A roof drain, comprising a basin member adapted to be imbedded in a roof and provided adjacent its upper end with a ledge, a removable caulking ring sustained by said ledge, co-operating interlocking devices on said ledge and caulking ring for preventing the caulking ring from turning, a removable strainer arranged within said caulking ring, and co-operating lugs on said ring and strainer for sustaining said strainer.

5. A roof drain, comprising a basin member adapted to be set in a roof and provided adjacent its upper end with a ledge, a removable caulking ring arranged inside of said basin member and sustained by said ledge, upwardly-projecting lugs on said ledge that fit in notches in the lower edge of said caulking ring, a removable strainer arranged inside of said caulking ring with its lower edge portion spaced away from said ring so as to form a slot between said parts, inwardly-projecting lugs on said ring, outwardly-projecting lugs on said strainer that rest on the lugs on said caulking ring, and locking lugs on said ring that are adapted to overlap the lugs on said strainer when said strainer is arranged in operative position.

JOSEPH C. SANDERS.