Feb. 13, 1940. S. LUKOMSKI 2,190,532

ADJUSTABLE LEVELING DRAIN HEAD

Filed April 16, 1938

Fig. 1

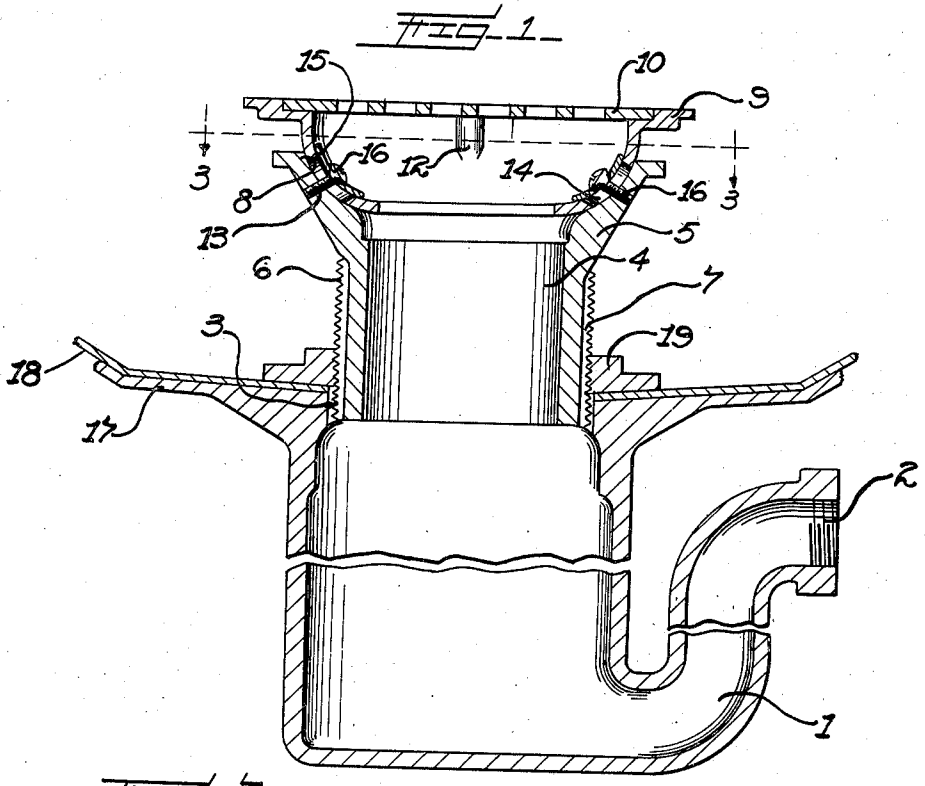


Fig. 2

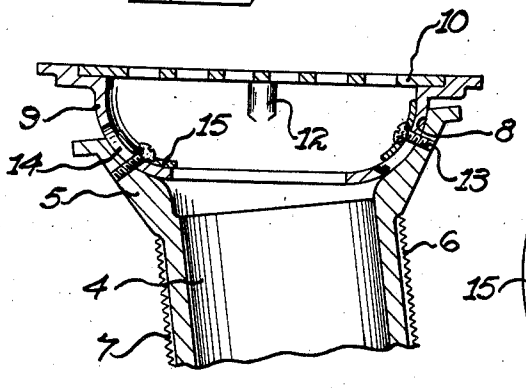
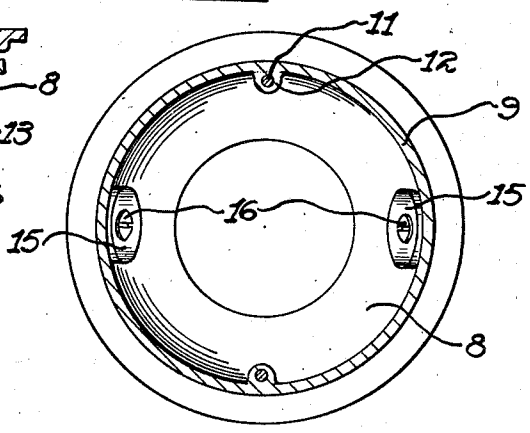


Fig. 3



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ADJUSTABLE LEVELING DRAIN HEAD

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4 Claims. (Cl. 182—31)

The present invention pertains to a novel adjustable and leveling floor drain head of the type commonly employed in shower baths although applicable also to other surfaces to be drained.

The assembly for this purpose comprises a trap or other receiver in which the drain head is mounted. The trap or receiver does not always line up as desired, and consequently the drain head would not always be level if inserted directly therein. Accordingly, it is customary to provide a floating or adjustable mounting in the receiver for the purpose of taking the drain head member. In one common form of construction, a floating ring is calked or leaded in the receiver or trap after the latter has been assembled. This method requires that the plumber carry the melting equipment to the job and also involves considerable inconvenience in melting on the job.

The principal object of the present invention is to provide a drain assembly that overcomes these difficulties in a device that is durable, simple in construction and comparatively low in cost. In this device, the drain head member is screwed directly into the receiver or trap, and an auxiliary member carrying the strainer is adjustably mounted on the top of the drain head member. More specifically, the upper end of the drain head member is in the form of a spherical seat, and the auxiliary member is a spherical bowl having universal adjustability on the seat. This bowl carries the strainer plate. When the top of the bowl has been leveled to the floor and before mounting of the strainer plate, the bowl is secured in the proper adjustment on the seat, by suitable fastening devices, and the strainer plate is then applied. This arrangement does away with floating or adjustable parts in the receiver or trap and provides a device that is readily installed without calking, leading or similar operations. Further, by reason of the integral character of the upper end of the receiver or trap, the sheet lead pan usually mounted upon the last named member is more readily secured in place. For this purpose, the threaded part of the head member carries a clamping nut by means of which the lead pan is secured directly on the upper end of the receiver or trap.

The invention is fully disclosed by way of example in the following description and in the accompanying drawing, in which

Figure 1 is a vertical section of an assembly according to the invention;

Figure 2 is a similar section illustrating the adjustability, and

Figure 3 is a section on the line 3—3 of Figure 1.

Reference to these views will now be made by use of like characters that are employed to designate corresponding parts throughout.

In Figure 1 is illustrated a trap 1 of more or less conventional design having a lateral outlet 2 to be coupled to a waste pipe that usually stands vertical. It will be understood that the trap as well as the drain head, presently to be described, lies beneath the surface to be drained.

The upper end of the trap is tapped at 3 for direct insertion of the drain head, and in this respect differs from many traps for this purpose which are provided with a floating or adjustable tapped ring to receive the drain head.

The drain head, according to this invention, is a tubular member 4 having its upper end flared at 5. The tubular portion is externally threaded at 6 to be screwed into the tapped end 3 of the trap, as clearly illustrated in Figure 1. Seepage channels 7 are preferably cut across the breadths 6 for an obvious purpose.

In the flared end or inlet 5 is formed a seat 8 which is preferably conical for a purpose presently to be described. On the seat is mounted a bowl 9 similarly shaped on its outer surface adjacent to the seat. Thus, the members 5 and 9 are related to each other as the elements of a ball and socket joint, whereby the bowl 9 is universally adjustable in the seat 8 of the inlet 5.

In the top of the bowl 9 is mounted a strainer 10 held by screws 11 passing therethrough and into tapped lugs 12 on the bowl, as shown in Figure 3.

The inlet 5 is formed with a suitable number of tapped holes 13 adjacent to which is a considerably larger hole 14 in the wall of the bowl. Two such sets of holes are preferred, although one may suffice. Over each hole 14 is a washer 15 suitably dished to seat in the bowl and preferably of such size as to cover the hole 14. The holes 14 are of such size as to register with the holes 13 in any likely adjustment of the bowl on the seat 8. After the adjustment is made, the screws 16 passing through the washers and holes 14 are tightened in the tapped holes 13.

In the use of the device, it will be recognized that, assuming that the strainer 10 is to lie horizontal, the trap 1 and head 4 do not always line up on the desired vertical axis. Consequently, in prior devices, the drain does not screw directly into the trap but rather into a floating or adjustable ring that must be set in the top of the trap, as by means of calking or leading.

Either of these operations is time-consuming and further require that the plumber bring the necessary melting equipment to the job. This difficulty, as well as the inconvenience of melting on the job, is avoided in the present invention wherein the drain head is screwed directly into the trap as already set forth. The bowl 9 carrying the strainer is brought to the height of the floor by screwing the head more or less into the trap, and is leveled with the floor by adjustment of the bowl on its seat 8. As a matter of practice, the washers 15 and screws 16 may be pre-assembled in loose condition and the screws tightened after the strainer has been leveled.

The upper end of the trap 1 is formed with a wide flange 17 for supporting the usual sheet lead pan 18. On the threads 6 is a clamping nut 19 for securing the pan 18 against the upper end of the trap. This securing operation is also facilitated and simplified, by the means described, because of the absence of floating or otherwise adjustable parts in the upper end of the trap.

Although a specific embodiment of the invention has been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention, as indicated by the appended claims.

What I claim is:

1. A drain head assembly comprising a tubular head member having a spherical seat in its upper end, a bowl of substantial depth having a spherical portion fitted in said seat and rotatably adjustable therein, a strainer carried by said bowl, said head member having holes through said seat and said bowl having larger holes registering with the first holes, and securing means passing through the registering holes.

2. A drain head assembly comprising a receiver, a tubular head member threaded directly therein, a bowl mounted and universally adjustable on the upper end of said member, a strainer carried by said bowl, and means for securing said bowl in adjusted position on said member, and a nut on the threaded portion of said head member and adapted to clamp a lead pan against said receiver.

3. A drain head assembly comprising a receiver, a tubular head member threaded directly therein and having a spherical seat in its upper end, a bowl having a spherical portion fitted in said seat and rotatably adjustable therein, a strainer carried by said bowl, and means for securing said bowl in adjusted position on said member, and a nut on the threaded portion of said head member and adapted to clamp a lead pan against said receiver.

4. A drain head assembly comprising a receiver, a tubular head member threaded directly therein and having a spherical seat in its upper end, a bowl of substantial depth having a spherical portion fitted in said seat and rotatably adjustable therein, a strainer carried by said bowl, said head member having holes through said seat and said bowl having larger holes registering with the first holes, and securing means passing through the registering holes.

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