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STRAINER FOR PLUMBING FIXTURE DRAINS

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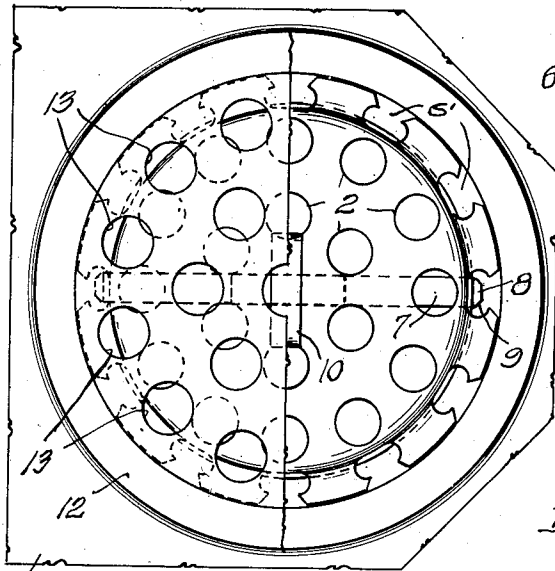


Fig. 1.

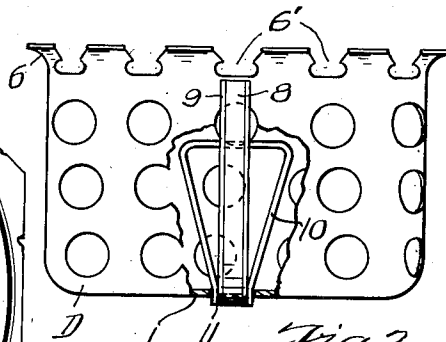


Fig. 2.

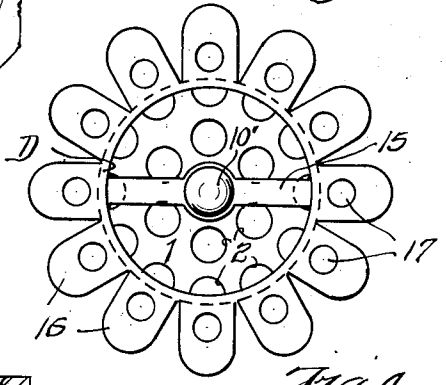


Fig. 4.

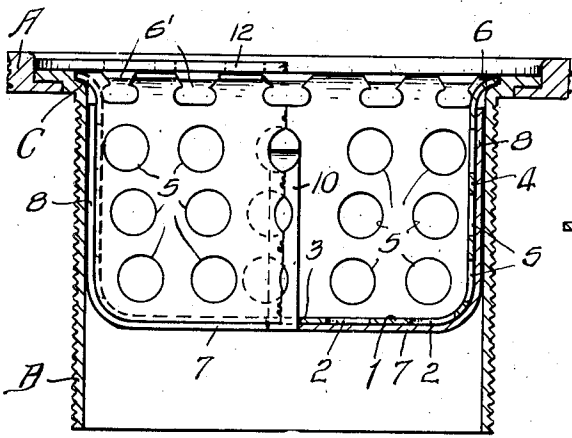


Fig. 3.

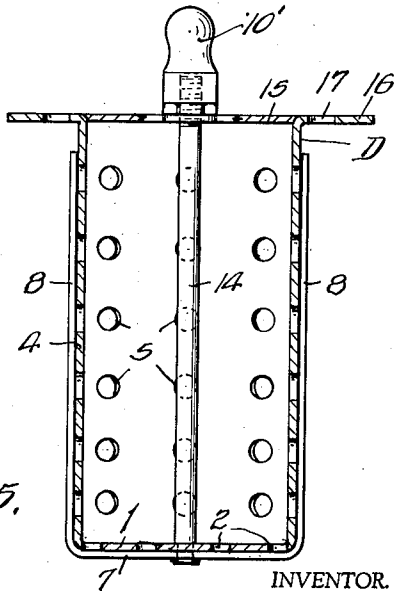


Fig. 5.

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## UNITED STATES PATENT OFFICE

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## STRAINER FOR PLUMBING FIXTURE DRAINS

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5 Claims. (Cl. 4—291)

My invention relates to strainers, and, more particularly to strainers adapted for use in connection with all types of plumbing fixture drains.

The object of my invention is to provide novel rotatable means for cleaning the outer surfaces of a plumbing fixture drain strainer.

A further object of the invention is the provision of novel means for simultaneously cleaning the outer surfaces of a plumbing fixture drain strainer and the adjacent side wall of the plumbing fixture drain.

A still further object of the invention is to provide a rotatable cleaning device for strainers for plumbing fixture drains which is simple in construction, economical in cost of manufacture and highly efficient for the purposes intended.

With the above and other objects in view, the invention consists in the novel features of construction, arrangement and combination of parts hereinafter more fully described and finally pointed out in the claims hereto appended.

Referring to the drawing forming a part of this specification, wherein like characters of reference denote similar parts throughout the several views:

Fig. 1 is a top plan view of a plumbing fixture drain showing a strainer positioned therein provided with my novel external cleaner device, and showing a sink and the like as well as the apertured cover plate therefor as partly broken away.

Fig. 2 is a side elevation of a strainer embodying the features of my invention, the strainer proper being broken away to illustrate the cleaning device therefor.

Fig. 3 is a view of the device shown partly in side elevation and partly in sectional elevation.

Fig. 4 is a top plan view of a modified form of strainer.

Fig. 5 is a sectional view of the modified form of the strainer and cleaner therefor for use in connection with floor drains, bell-traps and boiler drains, and the like.

Referring to the drawing, the reference numeral A designates the floor of a sink, bath-tub, shower drain and the like, while reference character B designates a plumbing fixture drain member having the internal shoulder C, which fixture suspends from the drain member B. The drain pipe connection, not shown, is connected with the plumbing fixture drain B in the usual well known manner.

The reference character D designates, generally, a suitable cylindrical plumbing fixture strainer including a bottom wall, or floor designated

1 having drain outlets 2, a central bearing opening 3 in the floor 1 thereof, and the side wall 4 having drain outlets 5. The upper edge portion of the side wall 4 is preferably, although not necessarily, flanged outwardly as at 6, and is provided with cut-outs 6' adapted to rest upon the internal shoulder C of the drain fixture B for supporting the strainer D in position within the plumbing fixture drain B. The cut-outs provide drain openings for the flange 6.

A suitable cleaning device is rotatably carried by the strainer D and includes a scraper which comprises a U-shaped wall cleaning member and embodies a bottom wall scraping, or cross-member 7 terminating in opposed upwardly projecting scraper arms, or blades 8. The arms, or blades 8 are adapted to slidably engage the outer face of the side wall of the strainer D and the inner face of the wall of the plumbing fixture drain B. The upper extremities of the scraper arms 8 terminate just short of the flanged outer end of the strainer B and the side edges of the blades 8 are beveled, as at 9.

The cleaning device is rotatably supported in position by means of a suitable handle 10 disposed within the strainer D and projecting downwardly through the central bearing opening 3 in the bottom wall of the strainer, and is suitably secured at its lower end to the cross-member 7 of the cleaning device, as at 11, as by soldering, or otherwise.

It will be here observed that by turning the handle 10 in either direction, rotary action is imparted to the scraper blades 8, which causes the blades to remove, or scrape grease and foreign substances adhering to the outer faces of the strainer D, and the inner face of the plumbing fixture drain B, as the blades 8 are disposed between the side wall 4 of the strainer D and the plumbing fixture drain B and in frictional engagement therewith, thus, it is apparent that it is not necessary to remove the strainer D from the plumbing fixture drain B in order to remove grease and foreign substances accumulated on and between the side wall 4 of the strainer D and the inner wall of the plumbing fixture drain B.

The mouth of the strainer can be closed in the usual manner by means of a suitable drain plate 12 having the usual drain openings 13 therein.

In the modification shown in Figs. 4 and 5, the strainer is relatively longer, and the bottom wall scraping or cross-member 7 is connected with an exterior handle 10' by means of a rod 14, which

rod is supported at its upper end by means of a cross-member 15 spaningly secured across the mouth of the strainer body D.

The flange ears 16 in the modification are equivalent to the curved flange 6 in Figs. 2 and 3 and are provided with drain openings 17 which are equivalent to the cut-outs 6' in Figs. 1, 2 and 3, and the ears 16 are shown as directed at a right angle to the body of the strainer D, whereas in Figs. 1, 2 and 3 the flanged upper end of the strainer D is shown as curved outwardly.

From the foregoing description, it will be apparent that I provide a plumbing fixture drain strainer provided with simple and novel means for simultaneously cleaning the outer face of the side wall of the strainer and the inner face of the wall of the plumbing fixture drain by merely turning a handle within the strainer for imparting rotary action to scraper blades disposed between the strainer plumbing fixture drain, and, it will also here be apparent that the cleaning device is adapted for use in connection with strainers employed to all types of plumbing fixture drains and including floor drains, such as showers, bell-traps and boiler drains.

The many advantages of the herein described invention will readily suggest themselves to those skilled in the art to which it appertains.

From the foregoing description, it is apparent that a simple device for this purpose has been disclosed, but it is to be understood that I do not desire to restrict, or limit myself to the very details of the construction shown and described, which is merely illustrative, it being obvious that changes, not involving the exercise of invention, may be made without conflicting or departing from the spirit of the invention within the scope of the appended claims.

What I claim is:

1. In combination with a cylindrical drain fixture for floors, sinks, traps, boiler drains, and the like, of a strainer supported therein with the side wall thereof spaced from the side wall of the drain fixture; scraper blades in the space between the side wall of the strainer and the drain fixture, and a handle operable from within the strainer and connected with the scraper blades for rotating the blades to simultaneously remove foreign substances from the outer wall of the

strainer and the inner adjacent wall of the drain fixture.

2. A strainer for sinks and the like comprising an apertured basket like member having a flat bottom wall, an upright handle rotatably supported centrally of the bottom wall, and a scraper blade secured to the lower end of the handle for cleaning the outer surface of the basket like member.

3. A waste pipe fitting comprising a cylindrical member having a perforated bottom and side wall, a perforated top closure plate for said member, an apertured cylindrical strainer basket removably seated in the upper end of the cylindrical member, a U-shaped cleaning member spanning the basket from the bottom side thereof, said member including scraper arms engaging the outer surface of the basket and the inner side wall of the cylindrical member, said scraper arms having beveled side edges, and a handle attached to the cleaning member and extending upwardly through the apertured bottom wall of the basket for rotating the cleaning member relative to the basket to exteriorly clean the basket without removing the basket from the cylindrical member.

4. A strainer for drain fittings comprising a perforated cylindrical basket, an outwardly projecting flange at the upper end of the basket, a cleaning member spanning the lower end of the basket and including scraper blades projecting upwardly and in scraping engagement with the outer face of the side wall of the basket, and a handle member attached to the cleaning member and extending upwardly therefrom centrally of the basket and rotatable relative to the basket to actuate the scraper blades.

5. A strainer for plumbing fixture drains having, in combination, a cup-shaped strainer having a flat perforated bottom wall, a perforated side wall and a flange at the free end of the side wall, a scraper blade contacting the outer face of the bottom of the strainer and the major part of the outer face of the side wall of the strainer, and an upright handle rotatable centrally of the strainer and secured at its lower end to the scraper blade to impart scraping movement thereto.

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