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H. R. STOLL

STRAINER FOR SINKS AND THE LIKE

Filed July 1, 1922

Fig. 1.

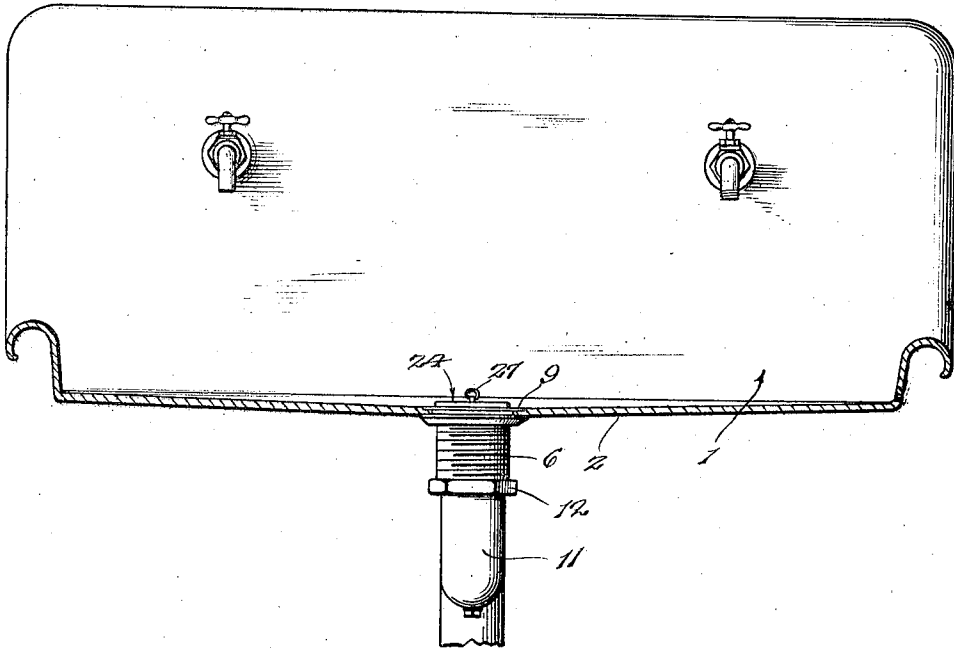


Fig. 2.

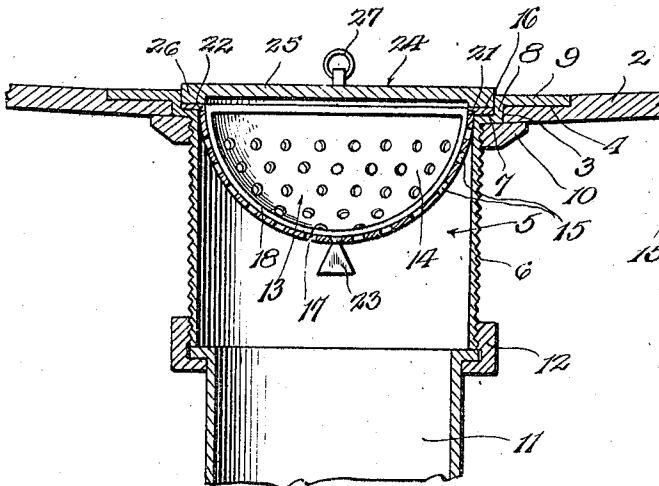
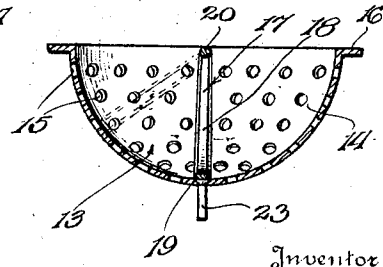


Fig. 3.



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UNITED STATES PATENT OFFICE.

HENRY R. STOLL, OF EL PASO, TEXAS.

STRAINER FOR SINKS AND THE LIKE.

Application filed July 1, 1922. Serial No. 572,204.

To all whom it may concern:

Be it known that I, HENRY R. STOLL, a citizen of the United States, residing at El Paso, in the county of El Paso and State of Texas, have invented certain new and useful Improvements in Strainers for Sinks and the like, of which the following is a specification.

This invention relates to improvements in strainers for sinks, wash basins, laundry tubs, bath tubs, and in fact all similar plumbing fixtures.

One disadvantage presented by the majority of straining fixtures of the class mentioned is that the solid waste matter collected and retained thereby must be removed by the fingers or in some other inconvenient manner and therefore the present invention has as one of its objects to so support the strainer member that the same may be readily unseated, the accumulations therein readily discharged, and the said member readily cleaned before replacement, thus enabling the cleaning of the strainer to be effected in a more sanitary and thorough manner.

The majority of straining devices of the class referred to also present the disadvantage that their perforations are liable to become clogged with grease or similar waste matter thus interfering with the draining off of the waste water in the sink, and therefore the present invention has as a further object to provide means whereby the perforations of the strainer may be cleaned of such accumulation in a convenient manner and without the necessity of removing or displacing the strainer.

A further object of the invention is to provide for the removal and cleaning of the strainer so that the accumulation of grease and similar waste matter upon its under side may be prevented, and the fixture therefore kept in a more sanitary condition.

In the accompanying drawings:

Figure 1 is a view in elevation of the fixture embodying the invention installed in a kitchen sink;

Figure 2 is a detail diametric sectional view through the fixture mounted in place as shown in Figure 1; and

Figure 3 is a diametric sectional view taken in a plane at right angles to the plane of Figure 2 and through the strainer and parts associated therewith.

In the drawings the fixture embodying the invention is illustrated as employed in connection with a kitchen sink but it will be understood that it may be installed in other plumbing fixtures of a similar character. The sink is indicated in general by the numeral 1 and its bottom by the numeral 2, the said bottom being formed at a suitable point with a circular opening 3 and in its upper side with a rabbet or countersink 4 which surrounds the said opening as is usual in such fixtures. The fixture embodying the invention comprises a body which is indicated by the numeral 5 and which is of cylindrical form and exteriorly threaded as at 6. This body is provided exteriorly at its upper end with a circumscribing outstanding flange 7 having a portion turned upwardly as at 8 and a portion directed outwardly as at 9. The portion 8 of the flange 7 seats snugly within the opening 3, and the portion 9 in the countersink 4. A ring nut 10 is threaded onto the body 5 and is adapted to be tightened to bear against the under side of the sink bottom 2 as best shown in Figures 1 and 2 of the drawings, to bind the flanged upper end of the body 5 firmly to the said sink bottom and within the opening 3. The waste pipe which leads from the sink and conducts the waste water is indicated by the numeral 11 and the same is coupled by a coupling nut 12 with the lower end of the body 5 as shown in Figure 2.

The strainer of the fixture is indicated in general by the numeral 13 and the same comprises a bowl 14 preferably of hollow semi-spherical form although it may be made shallower if found desirable. The strainer bowl is provided substantially throughout its area with a number of perforations 15 through which the waste water may flow but which will not permit the passage of any solid waste matter in particles of such size as will be liable to clog the waste pipe 11. At its upper edge the bowl 14 is provided with an outstanding circumscribing flange 16 which rests upon the upper side of the flange 7 inwardly of the upstanding portion 8 of said flange as clearly shown in Figure 2, the strainer bowl being in this manner firmly supported within the upper end of the body 5.

Within the strainer bowl there is arranged a scraper member adapted to be manipulated to cut or scrape away any grease or other

similar waste matter accumulating upon the inner side of the bowl and interfering with the passage of the waste water through the perforations 15. This scraper member is indicated in general by the numeral 17 and the same comprises a blade 18 which is of arcuate form and of such length and so curved from end to end as to fit within the bowl 14 and extend circumferentially of the inner surface of the wall thereof. The blade 18 is preferably beveled upon its inner side at its opposite edges to form scraping or shearing edges indicated by the numeral 19. A cross bar 20 extends transversely between the ends of the blade 18 and may be integrally connected therewith or secured or connected thereto in any desired manner, and this bar is provided at its ends with small trunnions 21 which fit in bearing seats 22 formed at diametrically opposite points in the circumference of the top of the bowl 14, the member 17 being in this manner suspended by its upper corners for oscillatory motion within the bowl and so that in such motion its edges 19 may scrape over the inner surface of the wall of the bowl and remove any accumulations upon said surface. The cross bar 20 constitutes a means whereby the scraper member 17 may be oscillated in the manner and for the purpose stated, it being only necessary to rotate this bar between the fingers in order to effect such movement of the scraper blade. Also the bar constitutes a handle member whereby the strainer as a whole may be lifted from its seat within the upper end of the body 5. In order that the strainer, after its removal may be conveniently held in the hand while being cleaned, a finger knob 23 is preferably provided upon the under side of the bowl 14 at the central portion thereof.

The stopper of the fixture is indicated in general by the numeral 24 and may be formed from any material found suitable for the purpose and preferably comprises a flat circular body 25 the marginal portion 26 of which is adapted to seat more or less snugly in the opening defined by the portion 8 of the flange 7 and to rest upon the upper side of the flange 16 of the strainer bowl. A finger ring or the like indicated by the numeral 27 may be provided upon the upper side of the body 25 of the stopper to provide for its convenient handling in fitting it into place and removing it.

When the stopper 24 is to be employed,

it is simply fitted into place as shown in Figures 1 and 2 and its presence does not in any way disturb the arrangement of the strainer. When the stopper is removed, which may be accomplished likewise without disturbing the strainer, the waste water will flow through the perforations in the strainer bowl and out through the waste pipe 11, solid waste matter being collected and retained however within the strainer bowl from which it may be conveniently discharged, after all of the water has been drained away, by lifting the bowl out of place and dumping its contents. At such time the bowl may be readily cleaned and then refitted into place. If there is no considerable accumulation of solid matter and should the perforations 15 become fouled or clogged, this condition may be remedied by rotating the cross bar 20 back and forth between the fingers thus imparting a swinging motion to the scraper member 17 causing its scraping edges 19 to move over the inner surface of the wall of the bowl.

Having thus described the invention, what is claimed as new is:

1. In a device of the class described, a body, a strainer arranged within the body and comprising a perforated bowl, an arcuate blade supported for oscillation within the bowl to be moved over the inner surface of the bowl, and a cross bar extending substantially chordal to the blade and constituting means whereby oscillatory motion may be imparted to the said blade.

2. In a device of the class described, a body, a strainer disposed within the body and comprising a perforated bowl, and a scraper for the bowl comprising an arcuate blade, a cross bar extending between the ends of the blade, and bearing elements at the said ends of the blade and bar pivotally seated in the wall of the bowl whereby to suspend the blade for oscillation.

3. In a device of the class described, a body, a strainer disposed within the body and comprising a perforated bowl, a scraper for the bowl comprising an arcuate blade, bearing elements at the ends of the blade seating in the wall of the bowl and supporting the blade for oscillation within the bowl over the inner surface thereof, and means associated with the blade and located wholly within the bounds of the bowl for manipulation to oscillate the blade.

In testimony whereof I affix my signature.

HENRY R. STOLL. [L.S.]