Apr. 17, 1923.

H. DE WALLACE

1,451,943

WASTE FITTING FOR SINKS

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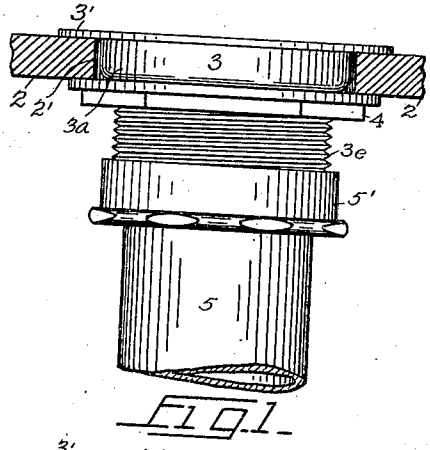


FIG. 1.

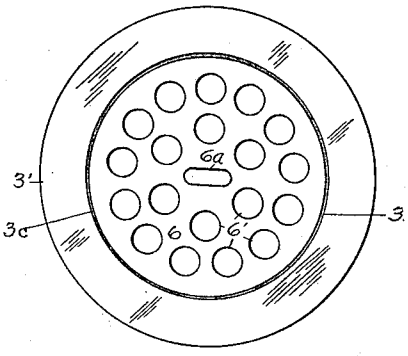


FIG. 2.

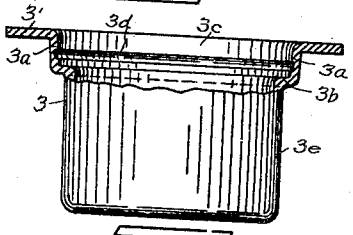


FIG. 3.

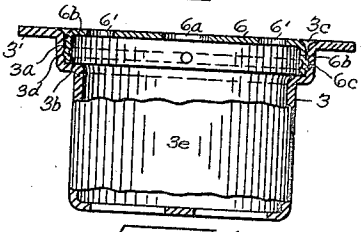


FIG. 4.

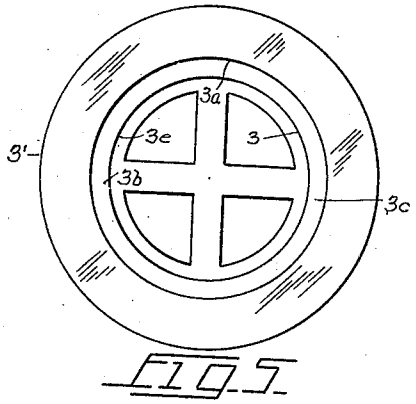


FIG. 5.

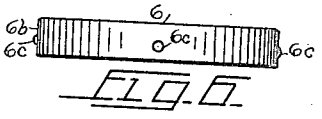


FIG. 6.

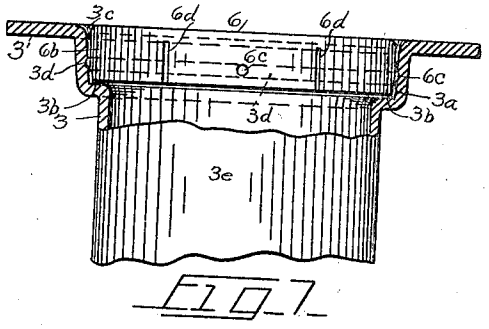


FIG. 7.

Inventor

Harry De Wallace

Patented Apr. 17, 1923. 1,451,943

UNITED STATES PATENT OFFICE.

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WASTE FITTING FOR SINKS.

Application filed February 7, 1923. Serial No. 617,529.

To all whom it may concern:

Be it known that I, HARRY DE WALLACE, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Waste Fittings for Sinks, of which the following is a specification.

This invention relates to improvements in waste-fittings, and is particularly applicable to the draining of kitchen sinks and the like.

The object of the invention is to provide a combined "sink-plug" and strainer, wherein the strainer may be readily and quickly applied to and removed from the mouth of the plug, by a very simple operation, and without requiring any particular skill, and wherein the strainer is formed with a number of projections, which snap into an annular recess formed in the mouth of the plug, for holding the strainer in place. The strainer may be readily removed, by simply prying upwardly until the retaining means are disengaged. A particular object of the invention is to provide a waste-fitting of the class, wherein the co-acting strainer locking and retaining means are embodied in the plug and strainer, thereby eliminating all extra parts, and wherein the combined fitting may be constructed by but a few simple machine operations.

The above objects and other features of the invention will be understood from the detailed description which follows, and by reference to the accompanying drawing, in which—

Figure 1 is a side elevation of an ordinary sink-plug, to which my improvement is applied. Fig. 2 is a top-plan view of the same; showing the strainer operatively applied. Fig. 3 is a partial side elevation and partial central vertical section of the waste-plug. Fig. 4 is a similar view; showing the strainer locked in the mouth of the plug. Fig. 5 is a top-plan view of the waste-plug. Fig. 6 is a side elevation of the strainer. And Fig. 7 is an enlarged broken elevational view of the combined fitting; showing the flange of the strainer split for increasing the flexibility of the same.

In the drawing, 2 represents the bottom of a sink or like fixture, having a drain opening 2′, to receive the expanded top-end of a waste-plug or bushing 3, the latter being shown with the usual substantially horizontal annular flange 3′, which overlaps the bottom around the opening 2′. The central opening in the flange 3′ comprises the mouth of the waste outlet. Below the flange 3′, the bushing 3 is formed with a substantially vertical annular wall or seat 3^a, which terminates at an annular horizontal ledge or shoulder 3^b, and together said wall and said ledge form the usual strainer socket, as 3^c. Between the flange 3′ and the ledge 3^b, the said wall is formed with an annular, preferably shallow semi-circular recess or groove 3^d. 3^e represents the barrel of the bushing, which is usually threaded, as shown in Fig. 1, to receive a nut 4, by which the fitting is clamped in place. A common waste-pipe, as 5, is usually secured to the barrel 3^e, by means of a gland-nut 5′.

My improved strainer comprises a shallow inverted cup-shaped disc 6, the plane body of which is usually perforated, as at 6′, for straining the waste water as it gravitates from the sink, and the center of the disc is usually provided with a slotted opening 6^a, into which any suitable prying instrument may be inserted, for removing the strainer from the socket 3^c of the plug. The depending annular flange 6^b of the strainer is preferably arranged at right angles to the plane of the perforated disc, and the depth of the said flange is substantially the same as the depth of the socket 3^c, so that when the strainer is inserted in the socket 3^c until its top face comes flush with the corresponding face of the flange 3′, the bottom margin of the flange 6^b rests upon the ledge 3^b. The diameter of the flange portion of the strainer is preferably slightly less than the diameter of the socket 3^c, at the juncture of the wall 3^a with the ledge 3^b, as best seen in Fig. 7. This slight clearance between the said parts facilitates the upward tilting of one side of the strainer, for freeing it from the socket 3^c. The strainer is held in the socket 3^c, and is prevented from accidental displacement, by means of a number of integral teats or humps 6^c, which are formed in the flange 6^b, in a simple manner, by forcing portions of the metal outwardly radially, as best seen in Figs. 4, 5 and 7. The teats 6^c are preferably disposed in a common plane, and are arranged to register with and to engage the annular recess 3^d of the plug with a snap, when the strainer is inserted in the mouth 3^c, to the extent shown in Figs. 4 and 7. In

the preferred arrangement, three or four teats 6^c are employed, and these are preferably equidistantly spaced, for properly balancing the disc 6, when it is first inserted in the socket 3^c, and for preventing the disc from wobbling or canting when subjected to the pressure required for effecting the snapping engagement of the teats with the annular recess 3^d. The teats 6^c are of such length that when the strainer is first dropped into the socket 3^c, they come to a light bearing against the wall 3^a immediately above the recess 3^d. To lock the strainer in place, it only requires a slight downward pressure of the hand to force the teats into the groove 3^d. This latter operation is facilitated by a slight flexing of the relatively thin gauge metal of the flange 6^b adjacent the said teats. In case the strainer 6 is made of heavier gauge metal, which lacks the requisite flexibility, as explained, the flange 6^b may be slotted or split vertically, as shown at 6^d, in Fig. 7.

My improved waste-fitting is extremely simple. By the provision of the annular recess 3^d, and the radial teats 6^c, both the plug and the strainer may be manufactured very cheaply, because, as compared with older devices of the class, a large number of tedious and expensive operations, such as thread-cutting and lug-forming, are eliminated. Furthermore, the provision of the novel strainer locking means, herein shown and described, obviates the employment of any extra parts, for holding the strainer and plug interlocked.

Having thus described my invention, what I claim, is—

1. In a waste-fitting for sinks and the like, a bushing having an upwardly facing strainer socket, the wall of said socket being formed with an annular groove, and a strainer comprising a plane perforated disc and a depending annular flange, the strainer adapted to loosely fit said socket, and its depending flange being provided with radial outwardly facing teats which are adapted to snap into said annular groove when the strainer is forced downwardly into said socket.

2. In a waste-fitting, the combination of a waste bushing comprising a barrel having a lateral flange surrounding its top end, the top portion of the barrel adjacent said flange being enlarged and formed with an annular inwardly facing recess, and a strainer comprising a flat perforated disc portion and a depending annular flange, the height of the strainer being substantially equal to the depth of the enlarged portion of the barrel, and the outer surface of said depending flange being formed with a number of radial teats arranged in an annular row adapted to engage said annular recess for locking and holding the strainer in place.

3. In a waste-fitting, the combination of a waste-bushing adapted to be inserted through the drain opening of a sink, the top of said bushing having a lateral flange adapted to overlie the bottom of the sink around the drain opening, the body of said bushing immediately below the said flange being expanded laterally for providing an annular ledge, and the space between said ledge and said flange comprising a strainer socket whose vertical wall is formed with an annular groove, and a perforated disc strainer having a depending annular flange, the diameter of the flange portion of the strainer being less than the diameter of said socket, and the external surface of said depending flange being provided with a plurality of regularly spaced teats adapted to first engage the wall of said socket immediately above said annular groove and then to snap into the said groove when the strainer is forced downwardly into said socket.

In testimony whereof I affix my signature.

HARRY DE WALLACE