

Sept. 29, 1959

A. H. WEDDENDORF, JR

2,905,951

SINK STRAINER

Filed July 5, 1955

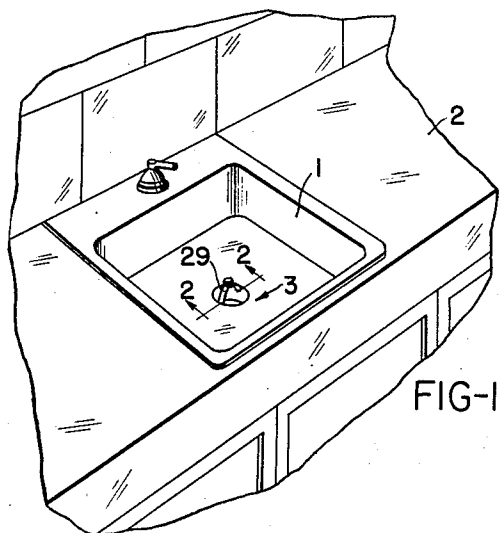


FIG-1

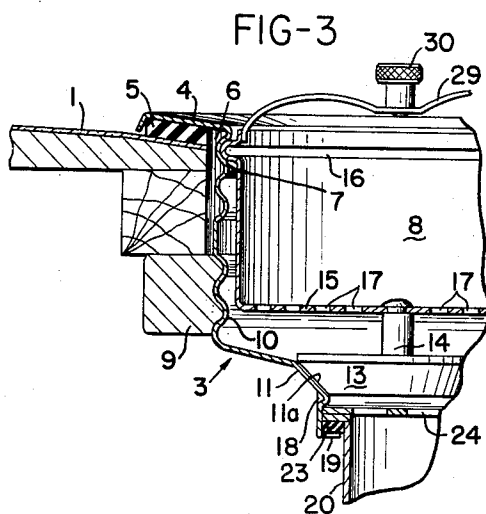


FIG-3

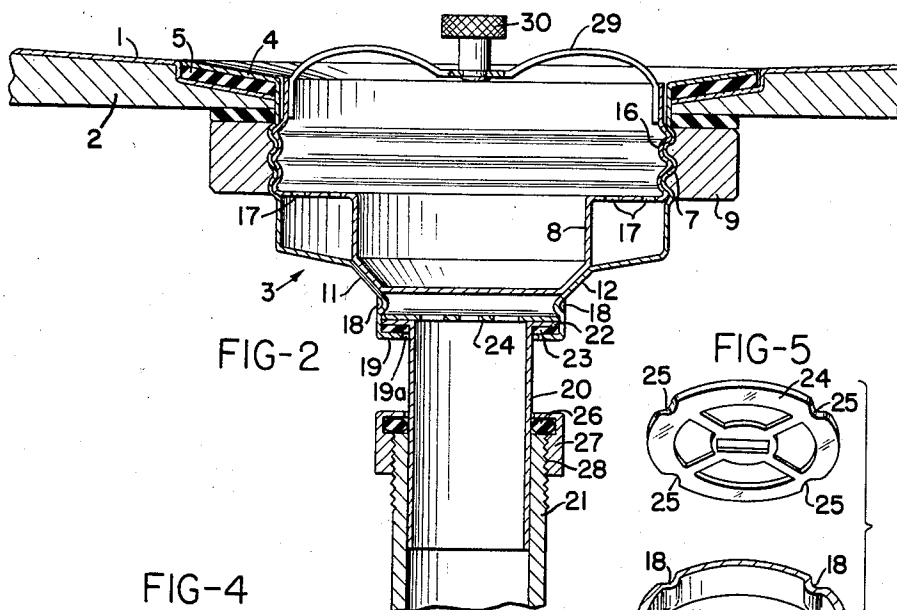


FIG-2

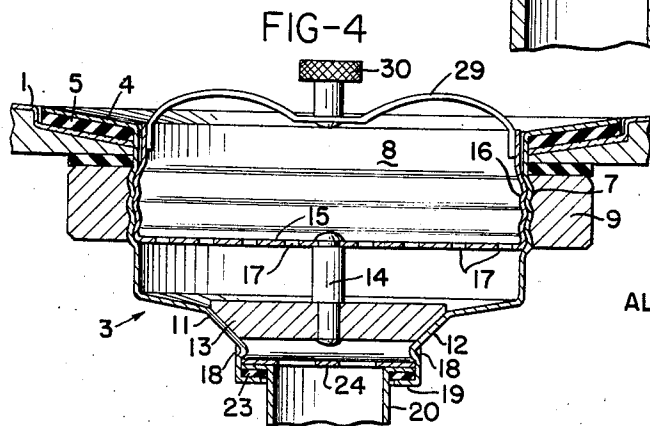


FIG-4

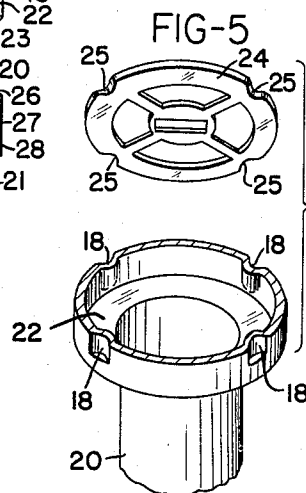


FIG-5

INVENTOR.
ALBERT HENRY WEDDENDORF JR
BY *Toulmin & Toulmin*
ATTORNEYS

1

2,905,951

SINK STRAINER

Albert Henry Weddendorf, Jr., Hamilton County, Ohio

Application July 5, 1955, Serial No. 519,956

2 Claims. (Cl. 4—287)

My invention relates to drains and particularly to a kitchen sink drain.

It is the object of the invention to provide a readily manufactured, economical and versatile drain adapted to be easily installed, easily cleaned and of such rugged construction as to be a permanent installation in a sink.

It is an object of this invention to provide a drain construction in which the component parts could be manufactured with a minimum tooling but with such precision that the formation of the parts would be of such accuracy that in mass production the parts would be interchangeable.

It is a further object to provide a construction in which the metal shells would act as locking devices and as valve supports in conjunction with the strainer.

It is an object of this invention to be able to position the strainer and the valve carried by the strainer by a simple adjustment.

It is a further object to provide an economical, simple means of installation or removal for replacement.

It is an object of the invention to provide a strainer and valve construction either in one piece or in two pieces positioned in an outer shell adjustable either for sealing the drain or for permitting drainage through the drain from the sink.

It is a further object of this invention to provide a strap-on construction of rugged character, but of such nature that it would be easily locked or unlocked together.

One of the principal advantages of this invention is the ease of assembly and disassembly and the ease of mounting and dismounting in a sink.

These and other objects and advantages will become more apparent upon reference to the following description taken in connection with the accompanying drawings, in which:

Figure 1 is an isometric view of a kitchen table sink and the top of the drain which is the subject of this invention;

Figure 2 is a section on the line 2—2 of Figure 1;

Figure 3 is a modified form of the valve construction;

Figure 4 is another modified form of the drain and valve construction; and

Figure 5 is an isometric view of the locking mechanism between the drain tube and the assembled drain mechanism.

Referring to the drawings in detail, a sink 1 is mounted in a table or drainboard 2. The sink is provided with a central drain aperture in which the subject matter of this invention is located. The supporting shell of the combination is generally designated 3. It consists of the upper overlapping flange 4 mounted on the resilient ring 5 which rests on the bottom of the sink 1. This shell depends in the opening 6 in which the mechanism is installed. The side wall of the shell is corrugated to form one-half of a locking screw 7. This portion of the screw 7 is at the upper end of the shell.

As will be explained later, this screw is engaged by a companion member on the rotatable strainer shell 8.

2

The lower portion of the supporting shell is provided with grooves acting as one-half of a locking screw to receive the nut 9 which inter-engages with the screw threads 10 of the supporting shell.

The lower portion of the supporting shell 3 converges inwardly and downwardly as at 11 to form a valve seat 12 upon which rests a valve member supported by the shell 8. This valve member in Figure 2 is a continuation of the shell 8 and in Figures 3 and 4 it comprises the plate valve 13 supported by the stem 14 on the drain bottom 15 of the drain shell 8.

In the preferred form the strainer shell 8 is corrugated to form a screw thread 16 engaging with the screw thread 7 of the supporting shell. Ports 17 act as drains. The water or other material passing therethrough can make an exit if the shell 8 is rotated and elevated so that the depending valve shell portion of the shell, can be lifted from engagement with the valve seat 11(a) forming the lower portion of the supporting outer shell.

This supporting outer shell is crimped at intervals at 18. The crimp in the side walls is just above the inwardly turned supporting portion 19 which has the following function:

The drain tube 20 which connects the supporting shell and strainer shell with the discharge pipe 21 is provided with an outwardly turned flange 22 resting on the gasket 23 supported by the inwardly turned flange 19.

In order to lock this assembly together, the annular locking plate 24, which has notched portions 25, is pressed into position on top of the drain tube's 20 flange 22 with the notched portions 25 aligned with the crimps 18 and then the plate 24 is rotated into a position of non-alignment of the notched portions 25 and crimps 18 i.e., a position in which portions of the plate 24, intermediate the notches, abut the undersides of crimps 18.

The lower end of the drain tube which is slidably mounted within the discharge line 21 is embraced by the O ring 26 within the locking ring 27 threaded at 28 on the outside of the drain pipe 21.

The strainer shell has a strap 29 mounted on top so as to facilitate rotation of the strainer shell. A button 30 is provided on this strap to facilitate this rotation and the lifting of the strainer shell.

It will be apparent that the combination consists of the supporting shell, the interlocking strainer shell with a valve member intermittently engageable with the lower portion of the supporting shell to control the flow of liquid and material therethrough from the drain to the drain pipes 20 and 21.

In Figure 4, the locking nut 9 is directly opposite the upper screw threads 7 and 16.

Operation

In assembling this drain mechanism, the supporting shell is placed in position in the aperture in the bottom of the sink 1, the drain tube 20 is then put into position by being inserted in the bottom aperture of the supporting shell at 19(a). The washer 23 has already been put into position on the shoulder 19. The flange 22 of the drain tube 20 then engages the top of the washer, the lock ring 24 is then pressed into position and rotated into locking position. The lower end of the drain tube is inserted and locked into the plumbing at 21.

The strainer shell 8 is then screwed into position and the locking nut 9 is also rotated into locking position. The adjustment of the strainer shell determines whether there will be direct flow from the sink to the sewer or whether the water will be kept in the basin 1 due to the engagement of the valve shoulder 10 of the strainer shell with the supporting shell 3 as at 11, or whether the plate valve 13 is in engagement with the shoulder 11(a) of the supporting shell.

3

The construction consists of the basic parts of the supporting shell which supports the drain tube in locked position and which acts as a support for the strainer shell and its valve member. The two shells together act as the halves of a valve for controlling the flow of liquid and other materials from the sink into the sewer.

It will be understood that this invention is susceptible to modification in order to adapt it to different usages and conditions, and, accordingly, it is desired to comprehend such modifications within this invention as may fall within the scope of the appended claims.

I claim:

1. In a drain for a sink, the combination of a flanged, corrugated supporting shell, said corrugation forming inner and outer threads on the side walls, means on the supporting shell below the threaded side wall forming a valve seat, means on the lower end of said supporting shell to form a support for a drain tube, a perforated strainer shell located within said supporting shell and having a threaded outer side wall in threaded engagement with said inner corrugated side wall of the supporting shell, means on the bottom of said strainer shell forming a valve, said valve cooperating with said valve seat in the bottom of the supporting shell to be opened and closed by rotation of the strainer shell within the supporting

4

shell, means to detachably lock said drain tube in the bottom of said supporting shell, and means engaging the outer corrugated side wall for clamping same to a support.

2. The combination in accordance with claim 1, in which the means to detachably lock said drain tube in the bottom of a supporting shell includes crimp portions formed in said supporting shell adjacent the bottom free end thereof at spaced intervals therearound, a flange portion on the upper free end of said drain tube and a locking plate supported by said flange, said locking plate being provided with a plurality of spaced crimp portions which, upon rotation, will interlock with the crimp portions in said supporting shell to lock the drain tube into position.

References Cited in the file of this patent

UNITED STATES PATENTS

20	1,820,673	Oakley	Aug. 25, 1931
	2,225,693	Frances	Dec. 24, 1940
	2,278,566	Schaible	Apr. 7, 1942
	2,279,683	Judell et al.	Apr. 14, 1942
	2,569,615	Link	Oct. 2, 1951
25	2,702,565	Moritz et al.	Feb. 22, 1955