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[54] **SINK-DRAIN DEVICE**
 3 Claims, 4 Drawing Figs.

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E03c 1/26

[50] Field of Search 4/286, 290,

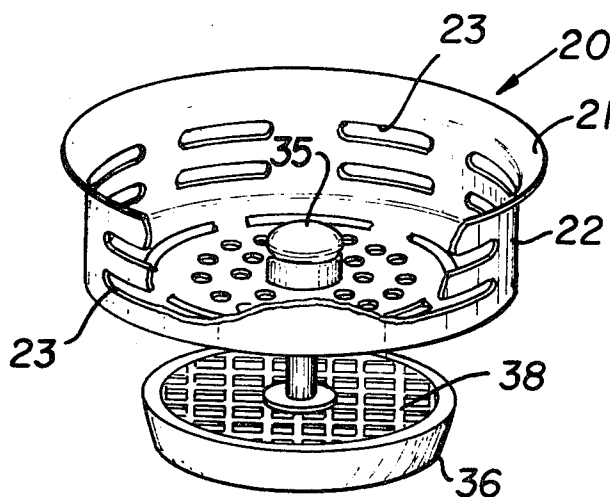
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ABSTRACT: This invention comprises an improved basket strainer or sink-drain device and includes an improved stop valve therefor. The improved strainer consists of the provision of a plurality of elongated apertures having integral baffle plates adapted to deflect the flow of waste water from the perimeter of the strainer toward the center thereof and an improved stop valve having a cuplike catch basin having a disk screen retainer thereon for entrapping all solid waste articles of an elongated configuration.



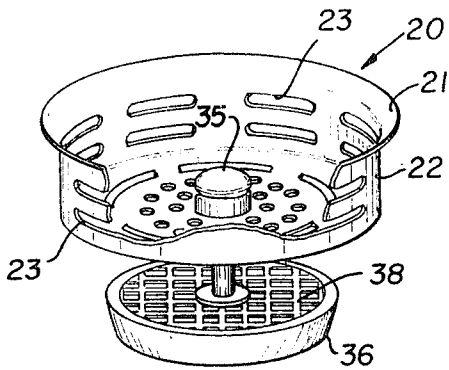


FIG. 1

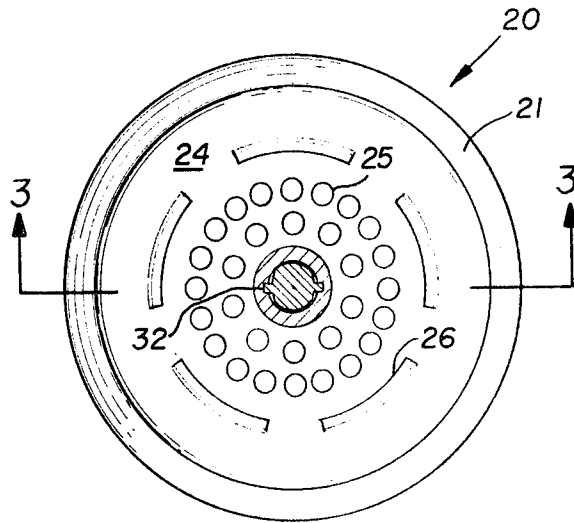


FIG. 2

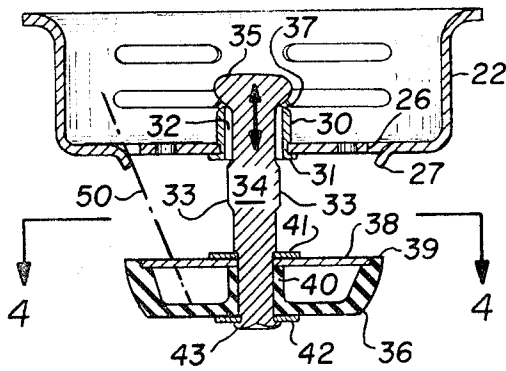


FIG. 3

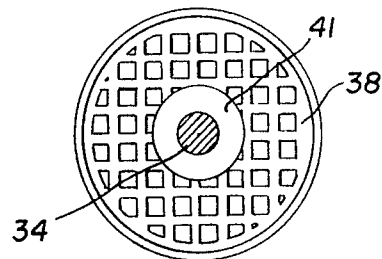


FIG. 4

SINK-DRAIN DEVICE

DISCLOSURE

Conventional removable crumb or basket strainers for kitchen sinks are adapted to fit into coaxing drain openings having valve seats therein and so are provided with manually operated stop valves to prevent liquid from draining from the sink. Such conventional baskets do not prevent elongated solid articles or particles such as fishbones, matchsticks, even toothpicks, from going down the drain and thereafter become trapped therein. Such elongated objects lodged in a waste drain line or trap have a tendency to attract other waste matter or grease to form a mass or ball and hence a costly stoppage of draining with much inconvenience results.

It is therefore a primary object of this invention to provide an improved combined basket strainer and an improved cuplike stop valve adapted to retain all elongated solid waste passing through the said strainer apertures.

It is another object to provide a basket strainer having an improved apertured bottom wall having curved elongated apertures having integral baffle plates for directing the flow of waste water.

It is a further object to provide a novel stop valve having a cuplike catch basin, said basin having a coaxing screen retainer disk on the rim thereof for capturing elongated solid material such as fishbones that are not captured by the conventional stop valves of solid rubber construction.

Still another object of the combined improved basket strainer and improved stop valve is its adaptation for use in sinks having conventional tailpipes having valve seats to engage said stop valves.

These and other objects of this invention will become clear upon reading the following descriptive disclosure of an illustrative embodiment shown in the accompanying drawing in which:

FIG. 1 is a perspective view, broken away in part, showing the improved basket strainer and the improved stop valve,

FIG. 2 is a top plan view of the strainer, with the handle partly in section, in order to illustrate the conventional keyway means of lifting the stop valve by its handle through the coaxing slotted hub of a basket strainer for subsequent rotation of the handle to permit retention of the stop valve in its lifted position on the hub rim,

FIG. 3 is a section view taken substantially on line 3-3 of FIG. 2 and showing in dotted outline the entrapment of an elongated object or obstacle by and between a baffled aperture that directed the object and the entrapment screen and the cup cavity of the cup-shaped stop valve and

FIG. 4 is section view taken on line 4-4 of FIG. 3 and showing the screen or apertured disk used to trap elongated material that passes through the basket strainer.

Turning now to the drawing, the basket strainer is provided with a cylindrical cuplike casing 20 having an outer rim 21. The vertical sidewall 22 is provided with apertures 23 of conventional configuration. The bottom wall 24 is provided with round apertures 25.

The improved feature of the basket strainer of this invention resides in the provision in the bottom wall of baffled apertures 26 having integral baffles 27 formed by the displacement of the metal used to form apertures 26. Apertures 26 are of elongated configuration and suitably removed from the vertical wall 22 to permit waste water to easily drain into them. The depending baffle plates 27 are disposed at an angle of about 45° to the horizontal plane for directing the flow of drain water toward the handle of the stop valve. Preferably a plurality of four or more elongated baffled apertures of suitable length are disposed in a strainer bottom wall.

The strainer casing 20 is provided with a conventional apertured cylindrical hub 30 in the center of the bottom wall 24, said hub being peened over to form a locking flange 31 against the bottom wall. The hub 30 is of suitable thick-wall construction and is provided with a pair of diametrically opposed slots

32 forming a passageway for the diametrically opposed integral keyway abutments 33 of handle 34. Handle 34 is provided at its top end with a finger knob 35 for lifting the stop valve from its seated position in a sink tailpipe.

After the abutments 33 are lifted above slots 32, the handle 34 is rotated a few degrees to permit the abutments to rest on the hub rim 37 thereby allowing the stop valve 36 to be retained in its lifted unseated position, and permitting the sink water to drain into the drainpipe.

Conventionally the stop valve is of solid rubber construction but according to this invention it is given a cuplike construction in order to trap elongated objects that cause stoppages in drainpipes. Such a cuplike construction forms a catch basin for the deleterious material. Moreover, the catch basin is provided with a screen or suitably perforated disk 38 disposed in a coaxing channel in the cup rim 39 to further assist in the entrapment of said elongated material objects.

Clearly, the improved construction of this invention is critical in the capture of that material that causes stoppage of drainpipes.

The stop valve catch basin may be made of rubber or plastic, or even of metal and still provide good valve-seating surfaces.

The catch basin stop valve 36 construction is provided with a centrally located apertured hub 40 to receive the bottom end of the handle 34. The circular screen 38 is provided with a central aperture to receive handle 34. A retainer washer 41 is used on the top of screen 38 and another washer 42 is used on the bottom of the stop valve 36. The base of the handle 34 is peened over to form a locking flange 43, thereby rigidly locking both the screen 38 and valve element to the handle.

In the use or operation of this invention to drain dishwater from a sink, the handle 34 is lifted by its integral knob 35 permitting passage of handle abutments 33 through slots 32 of the basket hub 30. Upon rotation of the so lifted handle, the abutments 33 come to rest on the hub 30 rim 37 thereby unseating the lifted stop valve 36 secured to handle 34 from the sink tailpiece and allowing the water to drain through basket strainer apertures 25 and 26. In this invention any elongated solid material 50 disposed near the basket vertical wall 22 is flushed through apertures 26 into the screen 38 and the cup-shaped stop valve catch basin. The flushing of such elongated objects is directed by the baffles so that an end of the object is guided into the screen 38 and the said catch basin stop valve.

This invention is illustrated herein by an embodiment thereof but its scope is not limited by this illustration. Thus, for example, the basket strainer 20 and its hub 30 may be molded of suitable plastic material as a single integral unit. Moreover, the size as to the length and width of the baffled apertures may be varied especially in the case of the all plastic modification where the size of the baffle plate may be made of any width, as desired, to obtain the desired directed flow of drain water therethrough.

Other modifications of this invention will become self-apparent upon reading this disclosure of elongated baffled apertures disposed in an outermost circular configuration adjacent to the cylindrical vertical wall 22 of the basket strainer, but all such modifications are deemed to fall within the scope of both the disclosure and also of the claims herein.

I claim:

1. In a combined basket strainer having a liftable stop valve for valve seating with a conventional tailpiece attached to a sink to permit drain water to pass into said tailpiece, the improvement consisting essentially of the provision of a plurality of outwardly disposed elongated apertures having integral baffle plates in the bottom wall of said basket strainer and also the provision of a cuplike catch basin stop valve having a disk-shaped screen on the top rim thereof and over said catch basin whereby elongated objects which might cause drainpipe stoppage are directed by said baffle plates into entrapment relationship in said screen and said catch basin.

2. The combined improved basket stop valve combination of claim 1 wherein the baffle plates of said elongated apertures

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are disposed at an angle of about 45° to the horizontal plane of said strainer bottom wall.

3. The combination of claim 2 wherein the catch basin stop

valve is provided with an annular cavity and a centrally disposed hub and said screen is disposed in the top rim over said catch basin cavity.

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