Aug. 10, 1926. 1,595,516

L. HAPP

DRAIN STOPPER

Filed Oct. 27, 1925

FIG. 1

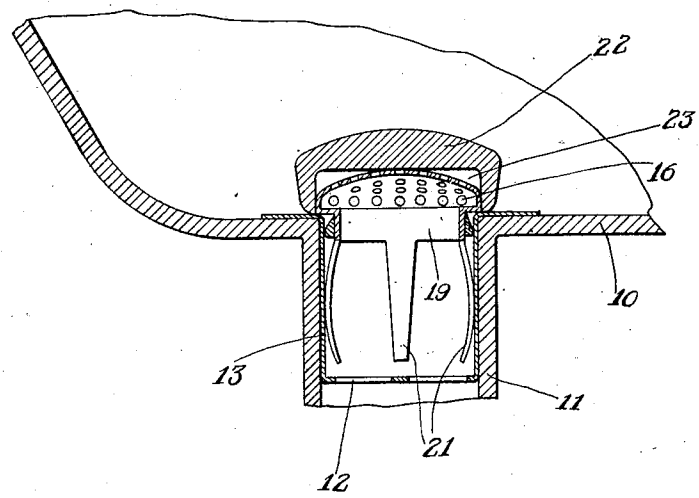
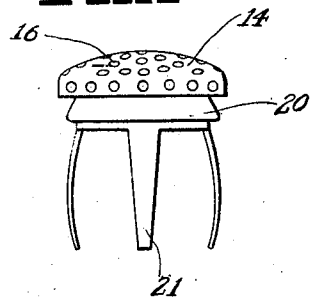


FIG. 2



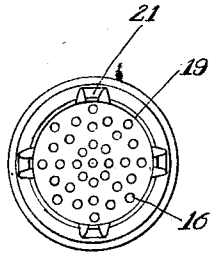


FIG. 3

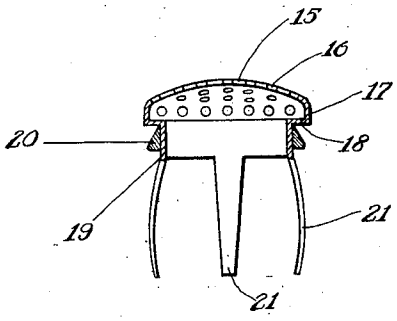


FIG. 4

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DRAIN STOPPER.

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The main object of this invention is to provide for drain pipes, a strainer which cooperates with a stopper, either one of which may be selectively used for either straining liquid passing into a drain pipe, or stopping the flow of liquid into a drain pipe. The average type of strainer now applied to drain pipes lies at a level below the bottom of a basin or liquid receptacle, such as a bath tub or the like. In draining one of these receptacles, the sediment passes into the drain pipe and cakes upon the surface of the strainer, clogging the pipe. It is to eliminate the difficulty of cleaning the strainer that the device is designed. This device consists of a plate raised above the surface of the receptacle, and has strainer holes therein thru which the water may pass to the drain pipe. The sediment will, with this device, settle around the strainer above and on the surface of the receptacle, and may easily be cleaned away.

The above and other objects will become apparent in the description below, in which characters of reference refer to like-named parts in the drawing.

Referring briefly to the drawing, Figure 1 is a longitudinal sectional elevational view thru the corner of a bath tub, showing the strainer fixed in place in the drain pipe and surmounted by the stopper.

Figure 2 is a front elevational view of the strainer per se.

Figure 3 is a bottom plan view of Figure 2.

Figure 4 is a sectional elevational view taken centrally thru the strainer.

Referring in detail to the drawing, the numeral 10 indicates the bottom of a bath tub. This bath tub serves as a receptacle for liquid and is drained thru a pipe 11 which communicates with one corner of the bath tub or other receptacle to which the device may be applied. These pipes are normally provided with perforated diaphragms 12 which are sunken below the level or bottom 10 of the bath tub, the diaphragm usually forming part of a section of tubing 13, as illustrated. A removable strainer is shown in this application which fits into the drain pipe, the strainer head 14 thereof lying above the bottom 10 of the receptacle and being adapted to be secured in place in a leak-proof manner. This strainer head consists of a dome-shaped roof 15 perforated by openings 16 over its entire area. The roof merges with an encircling wall 17 whose lower edge has an internal flange 18 formed integral therewith, the wall 17 also being provided with additional perforations. The outer corner of the integral flange 18 serves as a shoulder and rests upon the bottom 10 of the receptacle when the latter is mounted in place in the drain pipe. From the flange, a cylindrical neck 19 extends downwardly, and on the neck, a tapering semi-rigid and flexible rubber ring 20 is mounted. A plurality of flexible jaws 21, curving outwardly, extend downward from the neck 19 and are tapered lengthwise so as to be readily fitted into place in the interior of the drain pipe.

The entire head of the strainer, including the dome-shaped roof 15 and encircling wall 17, projects above the surface of the bottom 10 of the receptacle. This projecting strainer head is adapted to be entirely covered by a resilient or flexible stopper 22 which is comprised of a solid block of material such as rubber and has an annular chamber 23 therein which is adapted to snugly fit over the strainer head, the annular wall of the chamber 23 lying in contact with an encircling wall 17 of the strainer head.

The device consists of two members, a strainer for draining liquid thru a drain pipe free from sediment, and a stopper which is adapted to cover the entire strainer head when it is not desired to drain the contents of the receptacle to which the device is applied. The stopper 22 is simply inserted or slipped over the strainer head of the device. This covers the perforations 16 on the annular wall 17 and the dome-shaped roof 15 of the strainer head and prevents any liquid from seeping past the stopper into the drain pipe. The strainer head is fitted into the drain pipe in a leak-proof manner so that all water must pass thru the perforations 15 in order to enter the drain pipe. This is accomplished by providing a rubber ring such as 20, which has an angular outwardly extending contacting surface, said surface being adapted to be pressed against the interior face of the drain pipe wall and provide a leak-proof fit. The strainer head is guided into the drain pipe 11 by the flexible jaws 21 which

normally deflect outwardly and are adapted to contact with the walls in said drain pipe serving as a guide for positioning the strainer head and neck 19 of said head within the upper end of the drain pipe.

I claim:—

In a strainer, a perforated hollow head normally raised above the surface of the fixture to which the device is applied, resilient arms curved outwardly and extending downwardly from said head for guiding the latter into a drain pipe, the curved portions of said arms being normally in frictional contact with said drain pipe, a rubber ring encircling the strainer, said rubber ring being tapered on its outer face, the larger diameter being at the bottom, said ring forming a leak-proof fit between the strainer head and drain pipe, said head comprising an encircling wall and a domed roof, and a hollow stopper adapted to be slipped over the head to close and cover the perforations in said head.

In testimony whereof I affix my signature.

LOUISE HAPP.