No. 659,514 Patented Oct. 9, 1900.

E. S. DUFFY.

SINK STRAINER.

(Application filed Jan. 25, 1900.)

(No Model.)

Fig. 1.

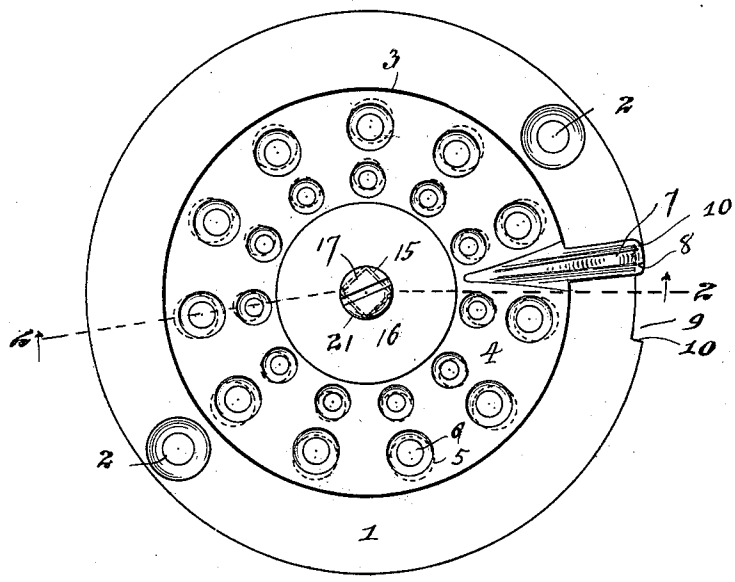
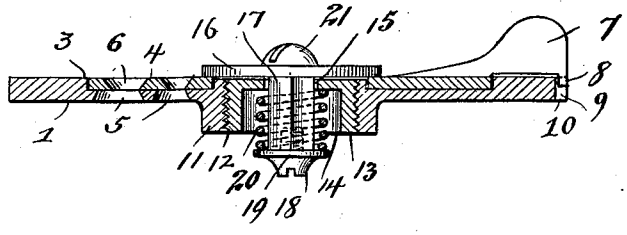


Fig. 2.



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UNITED STATES PATENT OFFICE.

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SINK-STRAINER.

SPECIFICATION forming part of Letters Patent No. 659,514, dated October 9, 1900.

Application filed January 25, 1900. Serial No. 2,723. (No model.)

To all whom it may concern:

Be it known that I, EDWARD S. DUFFY, of Chicago, Illinois, have invented certain new and useful Improvements in Sink-Strainers, of which the following is a specification.

This invention relates to sink-strainers, and refers more specifically to a strainer constructed to act either as a strainer or valve at will.

The object of the invention is to provide a simple effective device of the character referred to of simple, economical, and durable construction; and the invention consists in the matters hereinafter described, and more particularly pointed out in the appended claims, and will be readily understood from the following description, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a strainer embodying my invention, and Fig. 2 is a transverse sectional view taken on the indirect line of 2 2 of said Fig. 1 and looking in the direction of the arrows.

Referring to said drawings, 1 designates as a whole the main base-plate, constructed of suitable size and conformation to fit within the usual drain-aperture in the bottom of a sink and provided with a plurality of screw-apertures 2, whereby it may be secured within its seat. 3 designates an annular recess formed in the upper surface of said plate, the bottom surface of which is dressed off smooth to receive and form an accurate fit with a valve-plate 4, constructed to fit within said recess. Through the bottom wall of the recess are formed a plurality of strainer holes or ports 5, and through the valve-plate 4 are provided corresponding strainer-holes 6, which are so spaced with relation to the ports 5 as to be simultaneously brought into or out of register with said ports by slight bodily rotation of the valve-plate within its seat. In order to thus rotate the valve-plate, the latter is provided with an upstanding thumb-piece 7, which is desirably constructed to project radially outward over that part of the plate lying radially outside of the valve-plate and is provided with a downwardly-extending lug or stop 8, which extends within a recess 9, formed in the margin of the base-plate, having shoulders 10 at each of its ends which coöperate with said stop to limit the movement of the valve-plate in each direction.

In order to hold the valve-plate in spring-pressed engagement with its seat, means are provided as follows: At its center the base-plate is provided with a downwardly-extending boss 11, which is centrally apertured and internally threaded, as indicated at 12, to receive a correspondingly-threaded plug 13. Said plug 13 is provided at its under side with a central recess 14 and with an aperture 15 of reduced diameter, extending from the recess through the upper end wall of the plug. 16 designates a pressure-plate arranged to rest centrally upon the valve-plate and provided at its center with a downwardly-depending shank 17, which extends through the plug 13 and desirably a short distance below the same. At its lower end said shank is provided with a cap-screw 18 of sufficiently-larger diameter than the shank to form a ledge 19, between which and the inner surface of the upper wall of the recess 14 is interposed a coiled expansion-spring 20.

In order to hold the pressure-plate from rotation while the cap-screw 18 is being engaged or disengaged from the shank, it is conveniently provided at its upper side with a boss 21, slotted for the engagement of a screw-driver.

The assembling and operation of the device constructed as described may be briefly described as follows: The screw-plug 13 is first seated within the base-plate, care being taken that it be not turned into its seat far enough to project above the upper surface of the valve-plate upon which the pressure-plate rests. The valve-plate is next placed in position and the shank of the pressure-plate passed downwardly through the recessed plug to bring said plate into bearing with the valve-plate, whereupon the coiled spring is placed upon the shank of the pressure-plate and the screw-cap applied. The strainer assembled as described is seated in the drain-aperture of the sink in the usual manner.

The construction of the strainer, which enables the screw-plug 13 to be removed bodily so as to leave an internally-threaded aperture of the size of the said plug extending entirely through the strainer, is of importance.

Should the drain-pipe below the sink become clogged, a hose may be attached by means of a suitable screw-coupling adapted to screw into the plug-aperture and this hose connected at its opposite end directly with the pressure-main, thus subjecting the drain-pipe to the direct and unobstructed water-pressure of the mains, which will ordinarily be sufficient to dislodge the obstruction and clear the drain-pipe.

While I have herein shown what I deem to be a preferred embodiment of my invention, yet it will be obvious that the details thereof may be modified without departing from the invention, and I do not, therefore, wish to be limited to the precise details shown except as they may be made the subject of specific claims.

I claim as my invention—

1. In a strainer for sinks and the like, the combination of a main base-plate provided in its upper surface with an annular recess and at its center with a screw-threaded plug-aperture, a plurality of strainer-openings formed through said strainer-plate at points within the recess, an annular valve-plate arranged to fit within said recess and provided with apertures corresponding to and adapted to be brought into and out of register with the strainer-holes of the base-plate by rotary movement, a screw-plug seated in said plug-aperture provided with an aperture, a pressure-plate arranged to rest upon the valve-plate and provided with a shank arranged to depend through the screw-plug, a screw-cap applied to the end of the shank of the pressure-plate, a coiled spring interposed between said screw-cap and the end wall of the screw-plug and stops arranged to limit the rotation of the valve-plate in each direction, substantially as described.

2. In a strainer for sinks and the like, the combination of a main base-plate provided in its upper surface with an annular recess and at its center with a screw-threaded plug-aperture, a plurality of strainer-openings formed through said strainer-plate at points within the recess, an annular valve-plate arranged to fit within said recess and provided with apertures corresponding to and adapted to be brought into and out of register with the strainer-holes of the base-plate by rotary movement, a screw-plug seated in said plug-aperture provided in its under surface with a recess and with an aperture extending from said recess through the upper end wall of the plug, a pressure-plate arranged to rest upon the valve-plate and provided with a shank arranged to depend through the screw-plug, a screw-cap applied to the end of the shank of the pressure-plate, a coiled spring interposed between said screw-cap and the upper end wall of the screw-plug and stops arranged to limit the rotation of the valve-plate in each direction, substantially as described.

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