No. 803,814. PATENTED NOV. 7, 1905.

E. S. DUFFY.

SINK STRAINER.

APPLICATION FILED FEB. 6, 1905.

Fig. 1.

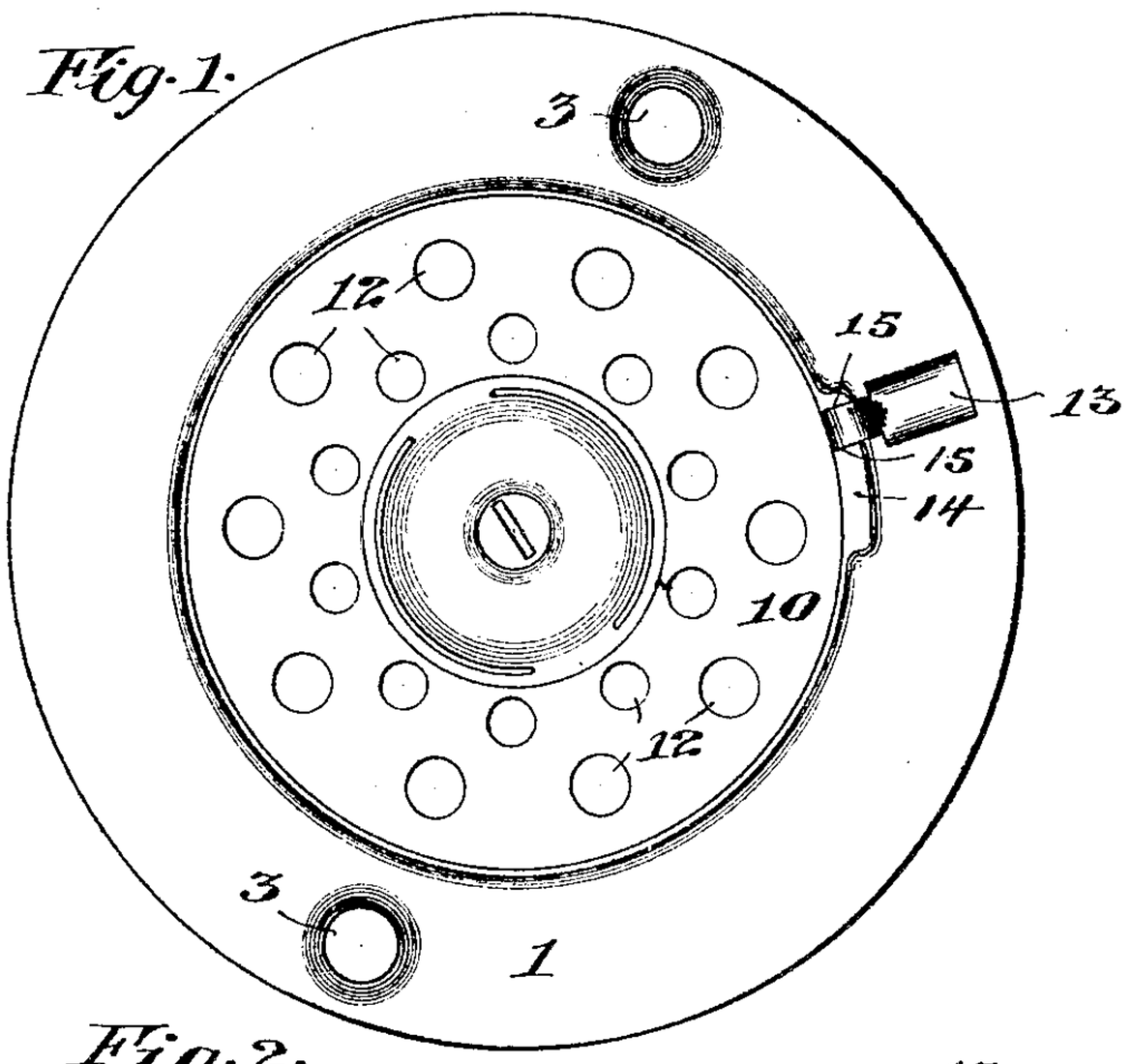


Fig. 2.

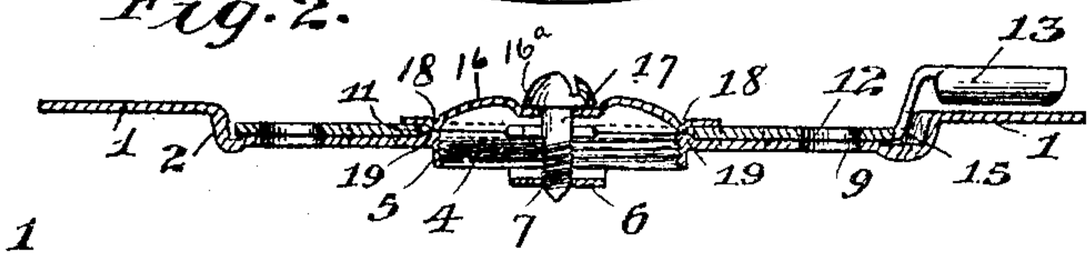


Fig. 4.

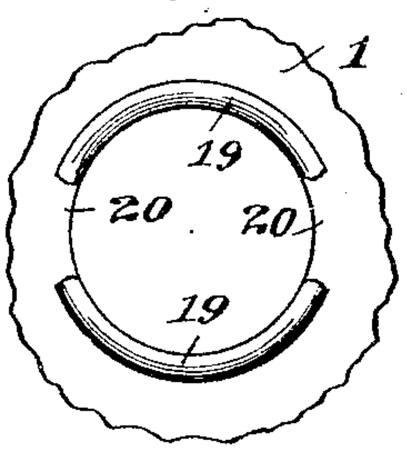


Fig. 5.

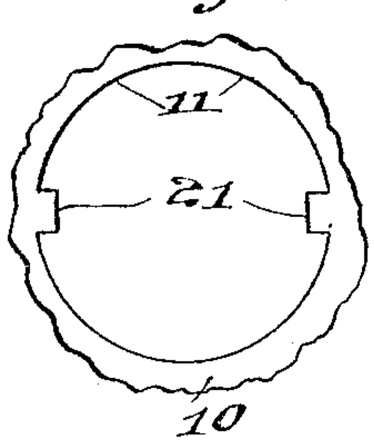
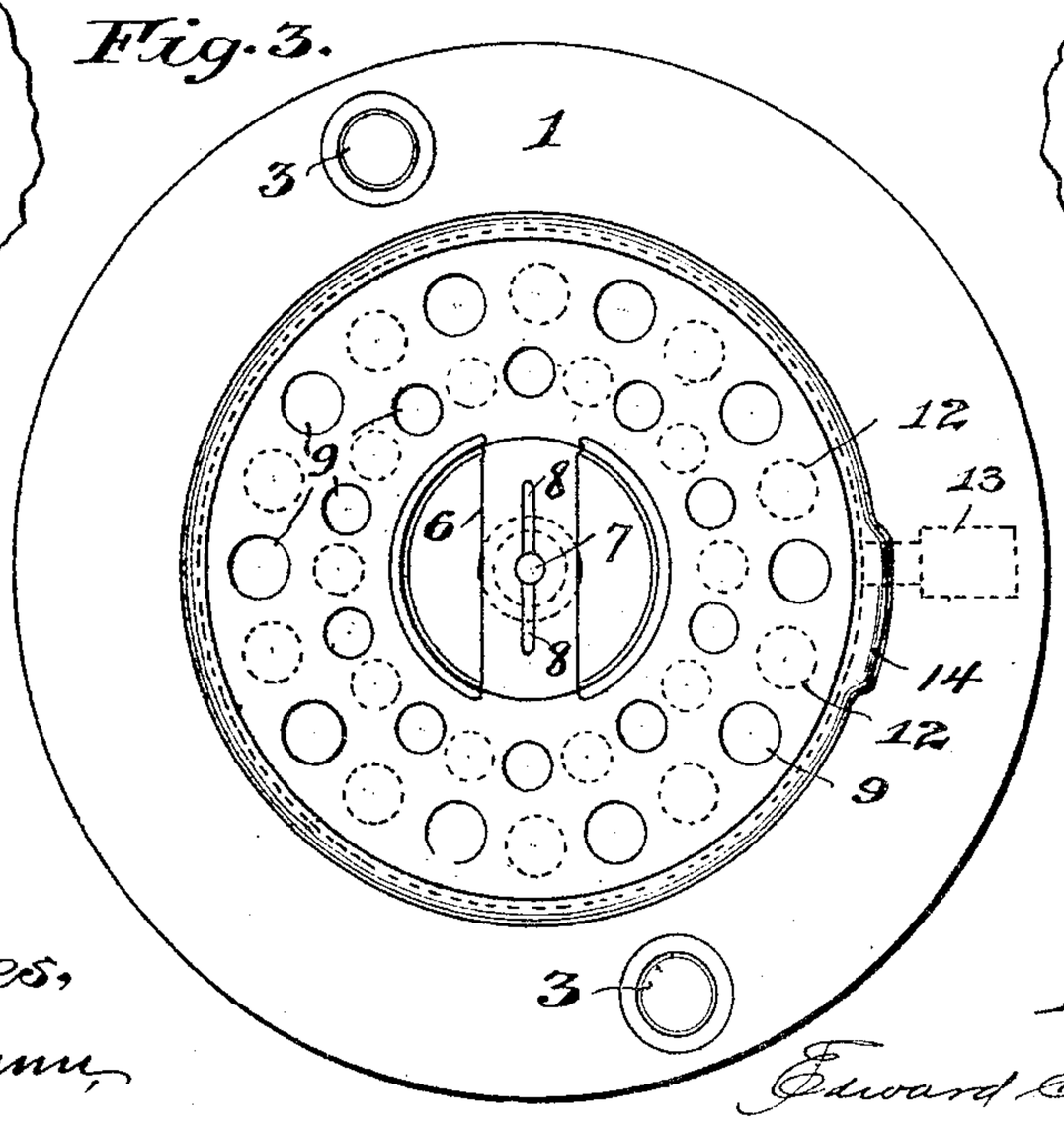


Fig. 3.



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SINK-STRAINER.

No. 803,814. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed February 6, 1905. Serial No. 244,466.

To all whom it may concern:

Be it known that I, EDWARD S. DUFFY, of Chicago, county of Cook, and State of 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 more particularly to a device constructed to serve either as a sink-strainer or as a valve for controlling the sink-outlet, as may be desired, and has among its salient objects to provide certain improvements in the construction shown in my former United States Patent No. 659,514, dated October 9, 1900.

The invention will be readily understood from the following description, reference being had to the accompanying sheet of drawings, in which—

Figure 1 is a top plan view of the device. Fig. 2 is a sectional view of the same. Fig. 3 is a bottom plan view thereof. Fig. 4 is a fragmentary detail view from the main plate. Fig. 5 is a similar view from the valve-plate.

In the drawings, 1 designates a main strainer-plate constructed to occupy the annular seat usually formed around the drain-aperture in the bottom of the sink, said plate having its central portion slightly depressed, as indicated at 2, and being provided around its rim with a plurality of apertures 3, by means of which it is secured to the sink-bottom. 4 designates a central opening through said main plate which is surrounded with a downwardly-depending flange 5, across which from one side to the other extends a strap-like member 6, said flange and said strap-like member being formed, preferably, integrally with said main strainer-plate, as by being struck out of the material in formation. The strap-like member 6 is provided with a threaded aperture 7 and is slotted longitudinally on either side from said aperture, as indicated at 8, for a purpose hereinafter referred to. The depressed portion of said main strainer-plate around said central opening 4 is provided with a series of strainer-openings 9.

10 designates a valve-plate of such size and thickness as to fit snugly into the depressed portion of the main strainer-plate and rest approximately flush at its upper surface with the upper surface of the rim of the main strainer-plate. Said valve-plate is provided with a central opening 11, registering with the opening 4 in the main strainer-plate, and is also provided with a series of strainer-openings 12, corresponding and registering with the strainer-openings 9 in the main strainer-plate when in one position of adjustment, as in Fig. 1, and so positioned that when said valve-plate is turned to another position the strainer-openings through each plate are closed by the other plate, as indicated by the full and dotted lines in Fig. 3. Said valve-plate 10 is provided at one side with a thumb-piece 13, projecting radially therefrom and overlying the rim portion of the main strainer-plate 1, which at this point is provided with a circumferentially-extending indent 14, engaged at its ends by the shoulders 15 15 of the thumb-piece 13 to limit the oscillatory movement of the valve-plate.

16 designates a spring washer-like member provided with a central opening 16ª and mounted over the registering openings 4 and 11 in the main strainer and valve plates and held in place by a screw 17, which passes through said opening 16ª, through said central openings 4 and 11, and into threaded engagement with the threaded aperture 7 in the strap member 6. The washer-like member exerts a longitudinal tension upon said screw by an upward pressure against the under side of its head. In order to center said spring washer-like member, it is provided with a circumferentially-extending bead-like formation which fits the central opening 11 in the valve-plate, as indicated at 18. The threaded aperture 7 in the strap-like member 6 is smaller than the end of the screw; but owing to the slots 8 it is expanded sufficiently to receive the threaded end of the screw and to hold it tightly against turning or working loose by reason of the resiliency of the metal. The resiliency of this strap-like member 6 also exerts a downward tension upon the screw 17, as said screw tends to draw the washer-like member and strap-like member toward each other. This tension is transmitted through said washer member to the valve-plate, which is held closely in contact with the depressed portion of the main strainer-plate to prevent leakage therebetween.

Another feature of the invention is a concentric circumferentially-extending bead-like formation struck up in the main strainer-plate and designated 19, Figs. 2 and 4, and having interruptions 20, forming shoulders. The valve-plate, which fits over the bead-like formation, is provided with projecting lugs 21, Fig. 5, which occupy the interruptions 20 and also serve as limit-stops to limit the oscillatory movement of the valve-plate. The

bead-like formation in the washer-like member and that of the main strainer-plate meet when the parts are assembled, as indicated at 18 in Fig. 2.

The central opening 4 in the main strainer-plate and the downwardly-depending flange 5 constitute a means for attachment for a hose-coupling and to this end are threaded. The valve-plate is turned to the closed position, the washer-like member removed, and the hose-coupling screwed into the opening 4, said hose-coupling being of sufficient diameter to engage the lugs 21 on the valve-plate when the said hose-coupling is sufficiently screwed down, thus holding it tightly engaged with the main strainer-plate to prevent leakage. The water is then turned on, and under the city pressure the pipes are flushed out and the parts returned to normal position.

While I have herein shown and described a preferred form of the invention, it is obvious that modifications can be made in the details of construction and arrangement without departing from the spirit of the invention, and I do not, therefore, limit the invention to these details except in so far as they are made the subject-matter of specific claims.

I claim—

1. A combination sink-strainer and valve comprising a main strainer-plate provided with strainer-openings, a valve-plate provided with strainer-openings arranged to be moved into and out of register with the openings in said main plate, a convexed spring member arranged concentrically with said plates and engaging the same around a concentrically-disposed line removed from the center thereof, and a screw securing said parts together in operative position.

2. A combination sink-strainer and valve comprising a main strainer-plate provided with strainer-openings, a valve-plate provided with strainer-openings arranged to be moved into and out of register with the openings in said main plate, a convexed, cup-like member of spring material mounted concentrically upon said plates and engaging the same around its periphery with a sealing effect, and a screw securing said parts together in operative relation to each other.

3. A combination sink-strainer and valve comprising a main strainer-plate provided with strainer-openings, a valve-plate provided with strainer-openings adapted to be moved into and out of register with the openings in said main plate, one of said plates being provided with an integrally-formed, centrally-disposed, struck-out portion offset from the plane of the plate-body, and a screw member connecting said parts and concentrically disposed relative to said offset portion, whereby the latter exerts a holding tension upon said screw member.

4. A combination sink-strainer and valve comprising a main strainer-plate having strainer-openings therein, a valve-plate with strainer-openings adapted to be moved into and out of register with the openings in said main plate, one of said plates being provided with a central offset portion, said offset portion being provided with a central aperture with slots extending therefrom, whereby said aperture can be expanded and a connecting member passing through said plates and into gripped engagement with said expandible aperture.

5. In a sink-strainer, a main strainer-plate provided with a concentric circumferentially-extending bead-like formation having interruptions forming shoulders, a valve-plate with a central opening fitting over said bead-like formation and having projecting lugs working in said interruptions and serving to limit the oscillatory movement of said valve-plate, and means for securing said main plate and said valve-plate operatively together.

6. In a sink-strainer, a main strainer-plate provided with a concentric opening having a downwardly-depending flange member threaded interiorly to receive a hose-coupling, a valve-plate provided with a central opening registering with said main plate-opening and having a portion arranged to be engaged by said hose-coupling, said plates provided with strainer-openings adapted to be moved into and out of register with each other, a cap or cover for said central openings when in normal working order, and means for securing said parts together in operative relation.

7. A combination sink-strainer and valve comprising a main strainer-plate provided with a central depressed portion with strainer-openings and a circumferentially-extending indent, a valve-plate seated in said depressed portion and having strainer-openings therethrough adapted to be moved into and out of register with the openings in said main plate and also having a thumb-piece engaging said indent, a cup-like spring member mounted upon said plates, one of said plates being provided with a centrally-disposed member offset from the plane of the plate-body and provided with an aperture, and a connecting member through said parts, substantially as and for the purpose described.

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