Dec. 21, 1943. L. KIRSCHNER 2,337,331

CLOSURE FOR WASHBOWLS, SINKS, PLUMBING FIXTURES, AND THE LIKE

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Fig. 1.

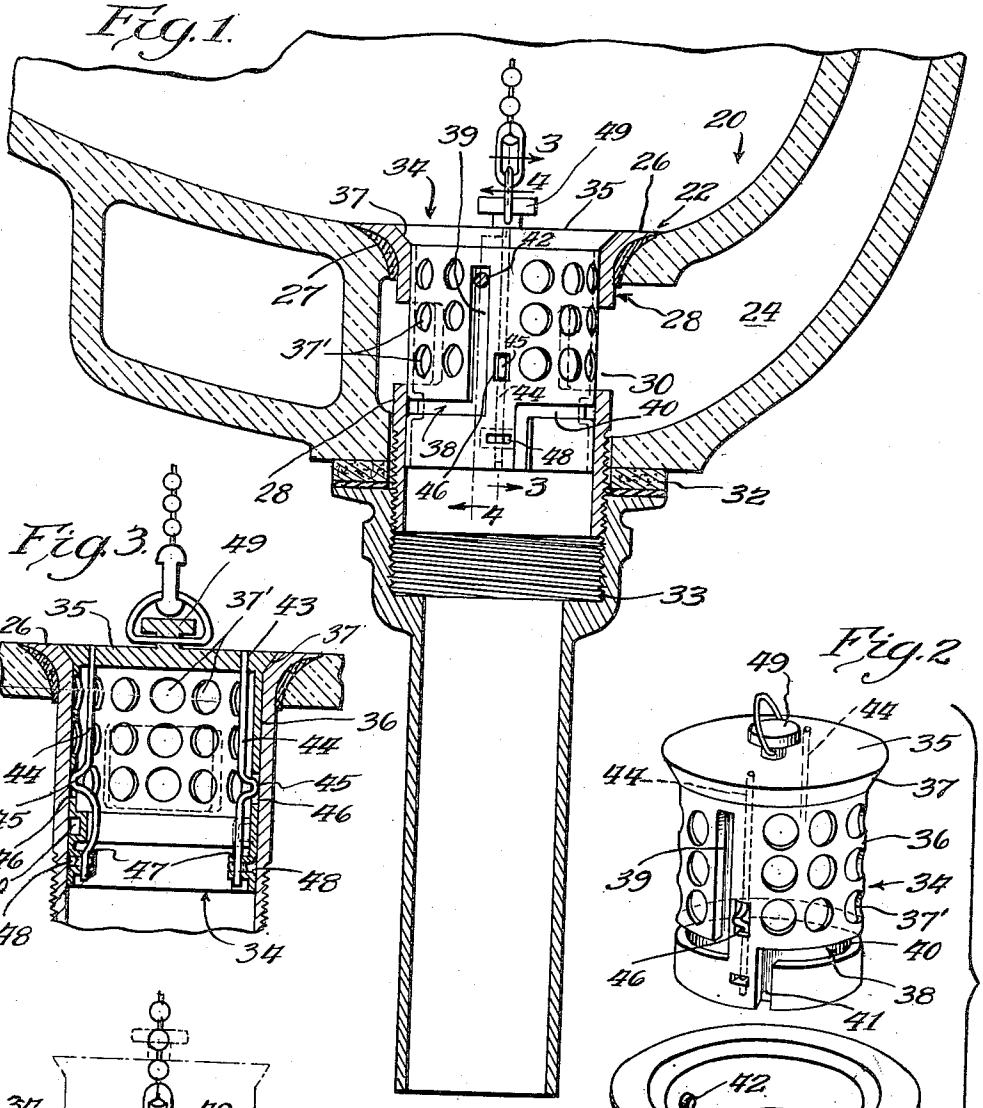
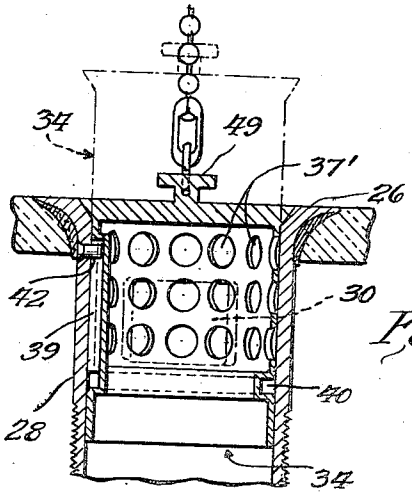


Fig. 3.

Fig. 2

Fig. 4.



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CLOSURE FOR WASHBOWLS, SINKS, PLUMBING FIXTURES, AND THE LIKE

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5 Claims. (Cl. 4—287)

This invention relates to closures for washbowls, sinks, plumbing fixtures and the like and particularly to the plug and sleeve construction used in connection therewith.

One of the objects is to provide a construction in which the plug when raised will maintain its position without requiring any further manipulation of the plug.

Another object is to provide a plug construction having means engaging the sleeve which will permit the plug to be readily raised and maintained in such raised position without any further manipulation of the plug or parts.

Another object is to provide improved trackways for plug and sleeve constructions for drains and which will prevent the unauthorized removal of the plug.

Another object is to provide an auxiliary sleeve construction for lift drains.

Another object is to provide a construction which is simple and inexpensive to manufacture and easy to operate.

Other objects will become apparent as this description progresses.

Figure 1 is a cross sectional view of one form of my invention showing the plug in closed position.

Figure 2 is an exploded perspective view of the plug and sleeve shown in Figure 1.

Figure 3 is a cross sectional view taken on lines 3—3 of Figure 1.

Figure 4 is a cross sectional view taken on lines 4—4 of Figure 1.

The usual washbasin 20 has a water discharge orifice 22 and an overflow passage 24. The upper end of the orifice is beveled to form a seat for the flange portion 26 of the metal sleeve 28. Interposed between the flange portion and the basin is a gasket 27. The sleeve 28 has a pair of oppositely positioned openings 30 which communicate with the overflow passage 24. The lower portion of the sleeve is threaded and extends through the bottom of the basin. Threadedly engaged with the lower portion of the sleeve is a discharge pipe 33 which leads to a sewer fixture not shown. The discharge pipe locks said sleeve in fluid tight engagement with the wash basin.

My invention deals more particularly with a valve stopper or plug and sleeve more presently to be described.

The plug indicated generally at 34 consists of a circular disk or head 35 and a body portion 36. The head has a beveled edge 37 which seats on the complementary shaped portion of the sleeve. The body 36 has a plurality of apertures 37' which form the discharge openings and which also communicate with the overflow passage. The body also has formed thereon, a grooved trackway generally indicated at 38 which is formed of a vertical groove 39 which communicates with a horizontally circular groove 40 and an outlet groove 41 which leads outwardly of the body portion. The trackway is engaged by a short pin 42 which is mounted on the inner wall of the sleeve.

Imbedded in the head 35 as at 43 are a pair of spring or wire members 44 which have V shaped portions 45 extending through suitable openings 46 in the body portion of the sleeve. The lower ends of the spring members are anchored in openings 47 provided in the embossed portions 48 adjacent the lower end. The V shaped portion engages the interior wall of the sleeve with sufficient pressure, due to the tension of the spring, that the plug will maintain itself in any raised position and will also provide a more fluid tight seal when in closed position. Likewise as the body of the plug wears the springs will tend to maintain a tight fit against rattling.

When the plug is in closed position the pin 42 will be in registry with the upper portion of the vertical groove 39. To raise or unseat the plug it is pulled upwardly by means of the knob 49 and the pressure of the springs will cause the plug to remain in any of its raised positions. Depressing the plug will close the valve. Heretofore, in prior constructions it has been necessary to rotate the plug after it is raised to maintain same in raised position. However, with my invention this is eliminated.

To remove the plug, same is raised until the pin registers with the horizontal groove 40 at which point the plug is turned counter-clockwise until the pin registers with the groove 41 and then it is lifted upwardly and then outwardly.

Various modifications can be made without departing from the spirit and scope of my invention.

I claim:

1. A closure comprising a sleeve, a plug movable in said sleeve, said plug having an opening, a spring member comprising a vertically extending wire anchored on the inside of said plug adjacent the top and bottom thereof, said wire member having a bent V shaped portion extending through said opening and engaging said sleeve to provide sufficient friction between said plug and said sleeve to maintain said plug in any of its moved positions.

2. A closure comprising a sleeve having an inwardly directed pin member, a plug movable in

said sleeve and having a trackway, the movement of said plug being limited by said pin, spring means for maintaining said plug in any of its moved positions.

3. A closure comprising a sleeve, a plug, means on said sleeve and plug for limiting the movement of said plug, said means comprising a rigid pin member and a trackway, said trackway having a vertical section permitting said plug to be raised, a horizontal section and an outwardly communicating section permitting said plug to be removed and spring means for maintaining said plug in any of its raised positions.

4. A closure comprising a sleeve having a pin member, a plug movable in said sleeve having a trackway which is engaged by said pin, said trackway having a vertical section permitting said plug to be raised, a complete annular horizontal section permitting said plug to be rotated without stoppage and a section communicating with said horizontal section through which said plug can be withdrawn and spring members on said plug engaging said sleeve to frictionally hold said plug in any of its moved positions.

5. A closure comprising a sleeve, a plug movable in said sleeve, said plug having an opening, a spring member comprising a vertically extending wire anchored on the inside of said plug adjacent the top thereof, said wire member having a bent V shaped portion extending through said opening and engaging said sleeve to provide sufficient friction between said plug and said sleeve to maintin said plug in any of its moved positions.

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