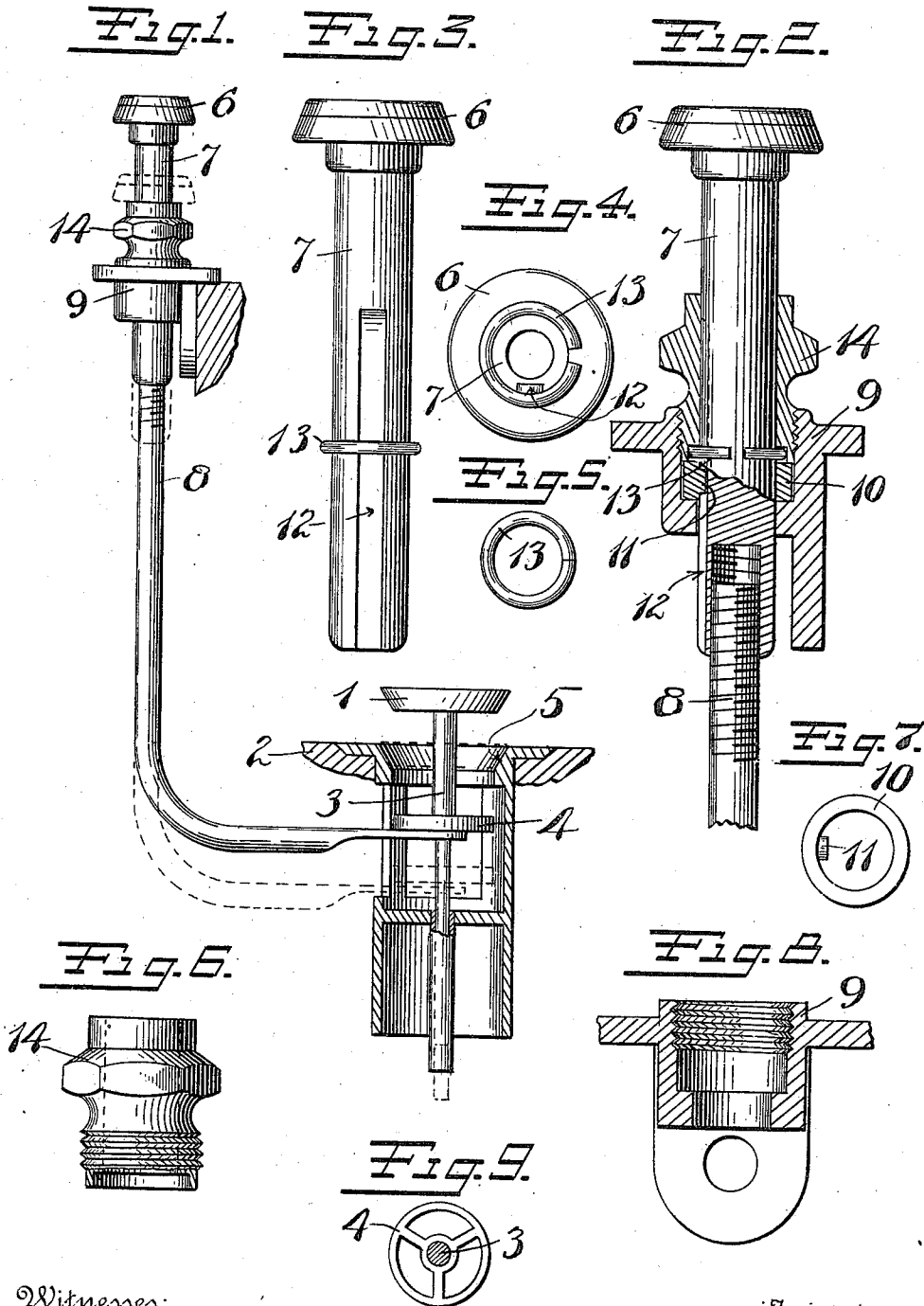


W. H. SCHULTE.
CONTROLLING DEVICE FOR WASTE PLUGS.
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Witnesses:
Chas. A. Reard
Ida M. Hunziker

W. H. SCHULTE Inventor
By his Attorneys
Carroll Dunne & Co.

UNITED STATES PATENT OFFICE.

WILLIAM H. SCHULTE, OF TRENTON, NEW JERSEY.

CONTROLLING DEVICE FOR WASTE-PLUGS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM H. SCHULTE, a citizen of the United States, residing at Trenton, county of Mercer, State of New Jersey, have invented certain new and useful Improvements in Controlling Devices for Waste-Plugs, of which the following is a full, clear, and exact description.

My invention relates to operating devices for waste plugs for lavatories, sinks, bathtubs and the like.

The object of the invention is to provide a simple and effective mechanism capable of easy operation whereby the waste plug of a lavatory, sink, bath-tub or like device may be easily operated.

As is well known, the ordinary operating device for waste plugs comprises a handle which to be operated is grasped by the fingers, elevated and turned to lock in said elevated position. When the operator's hand is wet or soapy, this operation is exceedingly difficult. Having in mind this fact, my invention aims at providing a device, which, irrespective of the condition of the hands, may be manipulated with the greatest ease. Incidentally, there are other features of construction which involve substantial and material improvements in devices of this character, as will later be seen.

In the drawings, Figure 1 is a side elevation of my improvement in one of its preferred forms; Fig. 2 is a relatively enlarged view, partly in section, and partly in elevation, of the handle portion and guide support therefor; Fig. 3 illustrates the handle detached; Fig. 4 is a bottom plan view of Fig. 3; Fig. 5 is a plan view of a friction ring; Fig. 6 is a side elevation, partly in section, of another detail which I will term the clamping collar; Fig. 7 is a plan view of a locking washer; Fig. 8 is a vertical section of the guide support; Fig. 9 is a plan view of the strainer.

1 represents the waste plug or valve of a wash basin, sink or bath-tub, the portion of said sink or tub being indicated at 2. 3 is the stem of said plug or valve. 4 is a strainer mounted on said stem and customarily employed.

5 is the seat for the valve or plug.

As shown in Fig. 1, the solid lines illustrate the plug, as open, while in dotted lines said plug is shown as closed.

The operating mechanism for the plug 3 comprises a handle 6 having in its preferred

form a tubular internally threaded extension or shank 7. This extension screws on to a lift rod 8, the same being adjustable thereon by screwing the extension up or down on said rod to the desired degree, the lower end of said lift rod being suitably connected with the stem of the plug or valve 1.

9 is a guide support or bearing for the extension 7.

10 is a washer surrounding the extension 7 and preferably having an inwardly directed lug 11.

12 is a groove in the side of the extension 7 arranged to receive the lug 11.

13 is a spring ring snugly embracing the extension 7, so as to offer frictional resistance thereto.

14 is a sleeve, the lower end of which is threaded so as to take into a correspondingly internally threaded portion of the bearing 9, the upper end of said sleeve being preferably arranged to receive a wrench or other suitable tool, whereby said sleeve may be screwed up and down for the purpose hereinafter described.

The washer 10 is preferably located in a cavity in the upper end of the guide support 9 and below the screw-threads arranged to receive the sleeve 14. In one of the aforesaid parts, preferably the lower end of the sleeve 14, there is an annular recess sufficiently large to admit the spring ring 13 and to permit the same to freely act at all times, which spring ring constitutes the preferred means for frictionally holding the valve controlling means at various positions, as hereafter described. When the parts are assembled, as shown in Fig. 2, the washer 10 is seen to rest in the bottom of the recess in the upper end of the bearing 9. The sleeve 14 is shown as screwed down tightly against the washer to clamp the same to its seat and the spring ring 13 is shown in place and frictionally embracing the shank 7. The washer 10 being clamped in place, prevents the shank 7 from rotating (by the keying action of lug 11) and hence the latter will maintain its adjusted position upon the stem 8. To adjust the device to bowls of various depths, it is merely necessary to unscrew sleeve 14 sufficiently to release washer 10, whereupon the shank 7 may be turned up or down on the stem 8, the washer 10 turning with the shank. When the desired adjustment has been attained, the sleeve 14 is

turned down, again clamping the washer 10 tightly in place. The apparatus is thus adjustable to bowls of different depths and at all positions of adjustment the construction is such that the shank 7 will be frictionally held at any desired elevation, and since the elevation of the shank 7 determines the elevation of the rod 8, it follows that the plug or valve 1 may be likewise held at any desired elevation since the lower end of the rod 8 is engaged with the stem 3 of the valve in any desired manner, as above indicated.

From the foregoing it will be seen that the operator has simply to engage the head 6 of the operating device and raise or lower it for the purpose of raising or lowering the plug 1, and since it requires no turning movement of the handle 6 to cause it to remain open or lifted, it is clear that this act may be easily accomplished without regard to the condition of the hands.

It matters not how the rod 8 is connected to the plug 1 but in ordinary well known constructions the obvious and most convenient location would be to cause the stem 8 to be located in the so-called overflow passage, the location and purpose of which is too well understood to require separate illustration, particularly as no novelty exists or claim is made in the mere location of the said rod 8. It should also be understood that I have shown herein only a preferred form and arrangement of the parts, it being possible to modify and rearrange said parts without avoiding the spirit and scope of the invention and the following claims.

What I claim is:

1. In a device of the character described, a valve to be operated, a reciprocating handle, a rod adjustably connecting said valve with said handle, the means of adjustment including a screw threaded con-

nection between said parts, a guide support for said handle in which said handle is capable of longitudinal and rotary movement, means for locking said handle against rotary movement therein, and means for frictionally resisting longitudinal movement therein.

2. In a device of the character described, a valve to be operated, a handle, a rod adjustably connecting said valve with said handle, a guide support for said handle in which said handle is capable of longitudinal and rotary movement, means for locking said handle against rotary movement therein, and means for frictionally resisting longitudinal movement therein.

3. In a device of the character described, a valve to be operated, a handle, a rod adjustably connecting said valve with said handle, a guide support for said handle in which said handle is capable of longitudinal and rotary movement, means for locking said handle against rotary movement therein, and means for frictionally resisting longitudinal movement therein, said means comprising a split ring.

4. In a device of the character described, a valve to be operated, a handle, a rod adjustably connecting said valve with said handle, a guide support for said handle in which said handle is capable of longitudinal and rotary movement, means for locking said handle against rotary movement therein, and means for frictionally resisting longitudinal movement therein, all of said parts excepting said valve and rod being insertible in and removable from said support from above.

WILLIAM H. SCHULTE.

Witnesses:

ELWOOD L. FINE,

RICHARD N. BURKERT.