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BONNET, ESCUTCHEON AND SLEEVE CONSTRUCTION

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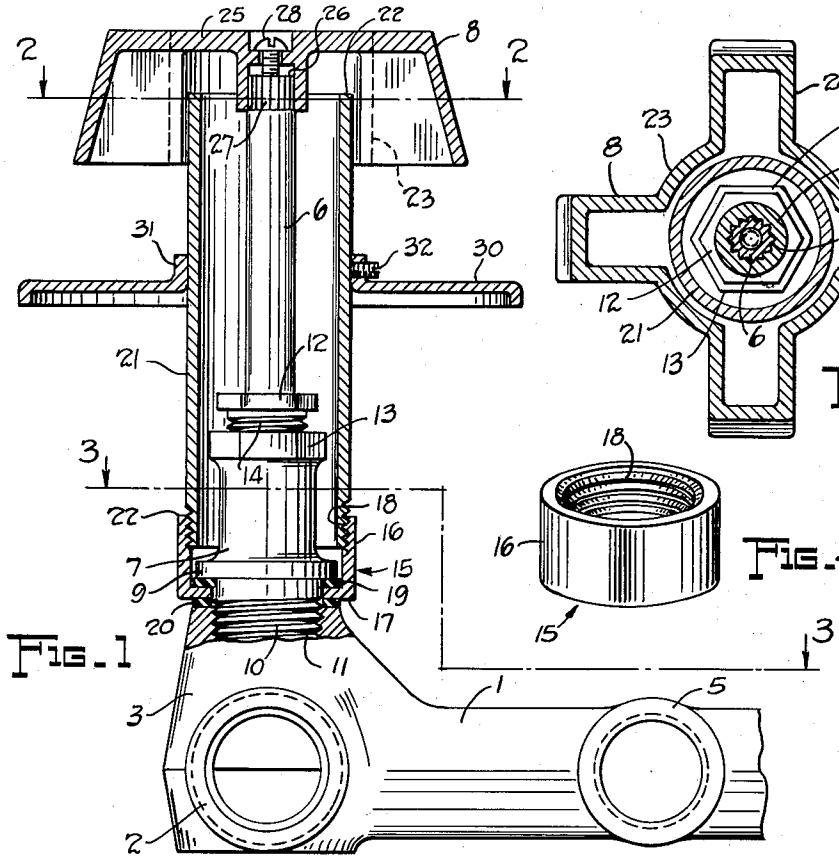

Fig. 1

Fig. 2

Fig. 4

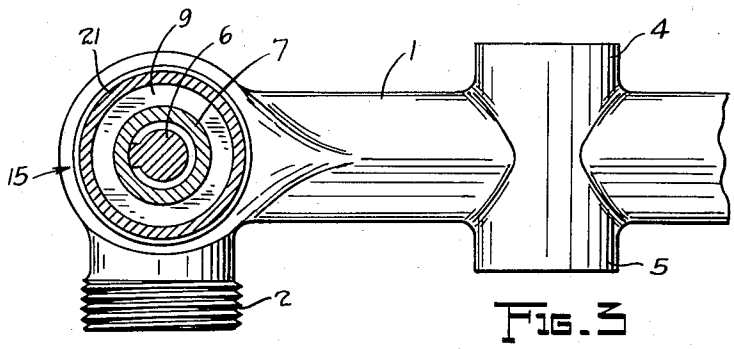

Fig. 3

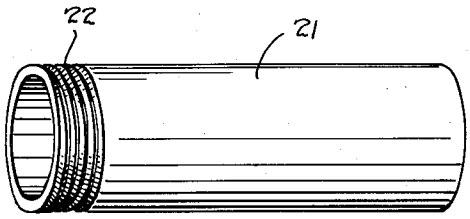

Fig. 5

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BONNET, ESCUTCHEON AND SLEEVE CONSTRUCTION

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This invention relates to plumbing fixtures, and primarily to such fixtures which are more commonly designated concealed or built-in fixtures or fittings.

In the art to which this invention is directed, the usual plumbing fixture which controls the flow of water to a tub or shower as the case may be, as an example of the particular application hereof, is usually built into the wall, and thus largely concealed as to the body thereof, only the operating parts being accessible and normally noticeable under most conditions.

With the necessity and desire on the part of the public to have built in plumbing fixtures, of the class herein described, the plumber of necessity must set the fitting or fixture within the wall at a proper depth so to speak, permitting the operating portions of the fitting or fixture to extend from the wall so that when the wall is finished as by plastering or other covering, the operating parts are accessible to have the necessary handles applied thereto.

As a consequence of necessity to set the fixtures or fittings as stated, under many conditions the thickness of the wall surface may vary substantially, and even under some conditions the plumber may happen to set the fixture at the wrong depth within the wall so that when the wall is finished, a substantial variation in trim to be applied thereto is required, as to the location of the trim with respect to the body.

Heretofore in the art, no really satisfactory arrangement has been provided, so as to effect adjustment over a very wide range, such adjustment usually being only on the order of one or one and a half inches, whereas the necessity for such adjustment may often arise that will require adjustment of up to three inches.

Another difficulty with current and known construction, is the fact that the stem which extends from a fixture of the class herein under consideration, is exposed, and necessitates that the stem be provided with a suitable finish, involving handling a part of which only a small portion shows and consequently substantially wasteful processing is the result.

In order to overcome all of the objections heretofore known, the present invention makes provision for adjustment of finished trim on a concealed fixture within a very wide range, even of the order of three to four inches if desired, and at the same time fits in with the desirable appearance which is demanded by the public and is pleasing as well as harmonious when taken in conjunction with the balance of the fitting or fixture as the case may be.

With the purpose of providing for these various attributes that are known to be desirable, the present invention contemplates the provision of a sleeve which surrounds and conceals a substantial portion of the fitting or fixture which would extend from the wall or which might even be concealed within a wall, which sleeve likewise assists in concealing the stem, and in cooperation with a suitable handle pleasingly conceals the stem and bonnet usually provided in such concealed fixtures and thereby makes possible the adjustment of trim on such sleeve so as to provide a pleasing completely finished or plated appearance and yet make possible access to operating parts for replacement or repair thereof.

The objects of the invention have been generally suggested heretofore and may be further stated as comprising the provision of a concealed fixture construction which provides a wide range of adjustment of the trim thereon,

and cooperates with the handle and stem so as to conceal the latter at the same time providing a pleasing appearance wherein the various parts are plated or otherwise finished as desired.

A specific object of the invention may be said to reside in the provision of a novel arrangement for enclosing or concealing a bonnet and large portion of the stem, connecting the concealing means with the fixture body and providing for adjustable escutcheon means to be mounted on such concealing means, the concealing means in turn cooperating with a handle so as to completely conceal and cause a stem to remain concealed and thus obviate the necessity to plate the latter.

Other and further objects of the invention will be understood from a consideration of the specification appended hereto and shown in the drawing wherein:

FIGURE 1 is a fragmentary view, partially in section, showing the bonnet, sleeve and escutcheon construction in detail, somewhat enlarged.

FIGURE 2 is a transverse section taken about on the line 2—2 of FIGURE 1 looking in the direction of the arrows and somewhat fragmentary likewise.

FIGURE 3 is a transverse sectional view taken about on the line 3—3 of FIGURE 1 looking in the direction of the arrows, likewise fragmentary.

FIGURE 4 is a perspective view showing a sleeve holder constructed to be used in this invention.

FIGURE 5 is a perspective view of a sleeve for use in conjunction with the sleeve holder.

Referring to the drawing, FIGURE 1 discloses a portion of a typical two-valve body designated **1**, the body including an inlet **2** into a valve section **3**, the body **1** including the outlets such as **4** and **5**, the outlet **4** usually being connected to a shower supply and the outlet **5** to the tub and particularly to spout leading thereto.

The seat and seat washer construction as well as the thread on the stem, which stem is denoted **6**, are not shown in detail since they are common and form no part of this invention, the threaded portion of the stem extending into a bonnet **7** in accordance with desired practice and thus upon manipulation of the stem **6** in rotating the same as by means of a handle **8**, the stem is caused to move inwardly and outwardly with respect to the bonnet and shut off or regulate the flow of water from the supply inlet **2** into the valve section **3** and thus to the body **1**.

In this particular case, a two-valve unit is referred to and it will be understood that at the right hand end of the body **1** of FIGURE 1, a similar valve section **3** is normally provided.

Referring again to the bonnet **7**, it will be seen that the same is a somewhat elongated member extending vertically and having at its lower end portion a flange **9**, below which are suitable threads **10** arranged to engage with corresponding threads **11** formed at the upper end of the valve section **3**. A suitable stuffing box nut **12** is usually provided to prevent leakage of the water around the stem **6** at the upper end of the bonnet adjacent the nut section **13** thereof, the stuffing box nut **12** having the threads **14** thereon for adjustable engagement with the bonnet **7**, all largely conventional.

The bonnet **7** by means of the flange **9**, is caused to engage and position a sleeve holder **15**, shown in perspective in FIGURE 4 as comprising a mounting section **16** and flange portion **17** extending at right angles to the portion **16**, the portion **16** being provided internally with suitable threads **18** for purposes to be described.

The sleeve holder **15** by means of the flange portion **17** thereof, is positioned with regard to the valve section **3** and bonnet **7** by engagement of the flange **9** of the bonnet **7** with suitable fiber washer **19** above the flange portion **17** of the sleeve holder **15** and a further fiber

washer 20 below such flange portion 17, these fiber washers being arranged to prevent leakage when the bonnet 7 is drawn into fully thread engaged position upon assembly of the valve hereof in the first place. The sleeve holder 15 will of course thereby be prevented from rotation and fixed relative the body 1 and bonnet 7.

Arranged to engage with the threads 18 of the portion 16 of the sleeve holder 15, is a sleeve 21 having threads 22 at the lower end thereof, FIGURE 1 being referred to here, the sleeve 21 extending upwardly for a substantial distance so as to completely enclose the bonnet 7 and substantially enclose the stem 6, depending upon the length of the said stem 6. The sleeve 21 will usually be chromium plated so as to present a smooth finished, pleasing appearance, the sleeve terminating at 22 within the handle 8.

The handle 8 is provided with a skirt 23 thereon which is integrally formed with the arms 24 of the handle, the arms 24 of the handle extending from a body section 25, the body section 25 being provided with a spline portion 26 to engage a mating spline portion 27 formed on the stem 6, this being of course substantially conventional and the handle being retained in place on the stem by means of a suitable screw 28. The spline portion 26 of the handle extends for some distance downwardly from the body 25 thereof and the skirt and operating arms 24 of the handle are of such a length as to likewise extend downwardly from such body 25 for a substantial distance enclosing the upper end 22 of the sleeve 21 in a telescopic manner so that upon manipulation of the handle 8, which results in an inward and outward movement of the stem 6, the upper end 22 of the sleeve 21 is always concealed and thus the stem 6 is likewise always concealed.

Since the sleeve 21 may be of any preferred length, depending of course upon the length of the stem 6 and other parts of the valve body or valve 1, including the bonnet 7, such parts may of course be made quite long and thus the position of the valve body 1 within the wall is no longer critical but may vary within considerably disparate limits, since an escutcheon 30 may be provided having a sleeve engaging portion 31 in which is positioned a set screw 32 adapted to engage the outer surface of the sleeve 21. Thus the escutcheon 30 may be moved into position against any wall surface over a substantial range and the set screw drawn up against the sleeve 21 to thereby retain the escutcheon 30 in place and completely conceal any reasonable area around the portion of the wall through which the sleeve and thus the operating parts of the valve may extend.

The sleeve 21 may be made as an integral part with the sleeve holder 15 if desired, although this will necessitate providing a socket wrench of some kind for manipulation of the bonnet 7 as to tightening the same or to

permit replacement of seat washers or the like in the body and valve portion 3 specifically.

The shape of the handle 8 may vary within wide limits of course as long as there is some telescopic relationship established between the sleeve, although this need not necessarily be true if the portion 26 of the handle is of sufficient length and as long as the stem 6 is largely within the sleeve 21.

I claim:

1. In valve construction of the class described, in combination, a body, a stem and bonnet therefor, a sleeve surrounding and concealing said bonnet, a sleeve holder, said bonnet engaging and positioning the holder, the sleeve engaging said holder, a handle on said stem, and having a section enclosing a portion of the sleeve.

2. In a valve construction of the class described, in combination, a body, a stem and bonnet therefor, a sleeve surrounding and concealing said bonnet, a sleeve holder, said bonnet engaging and positioning the holder, the sleeve engaging said holder, a handle on said stem having a section enclosing a portion of the sleeve, and an escutcheon adjustably mounted on said sleeve.

3. In a valve construction of the class described, in combination, a body to be concealed in a wall or the like, a stem and bonnet therefor, said stem to extend outwardly of such wall, a sleeve holder having a portion engaged between said body and bonnet for positioning said holder, a sleeve connected to the holder and concealing said bonnet, a handle on the stem, and a skirt on said handle arranged to telescopically cooperate with said sleeve whereby to conceal the stem aforesaid and extending therealong.

4. In a valve construction of the class described, in combination, a body to be concealed in a wall or the like, a stem and bonnet therefor, said stem to extend outwardly of such wall, a sleeve holder having a portion engaged between said body and bonnet for positioning said holder, a sleeve connected to the holder and concealing said bonnet, a handle on the stem, a skirt on said handle arranged to telescopically cooperate with said sleeve whereby to conceal and extend along the stem aforesaid and an escutcheon slidably adjustable on the sleeve.

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