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ADJUSTABLE LAVATORY LEG CONSTRUCTION

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Fig. 1

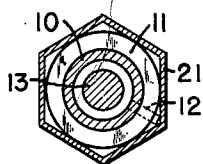
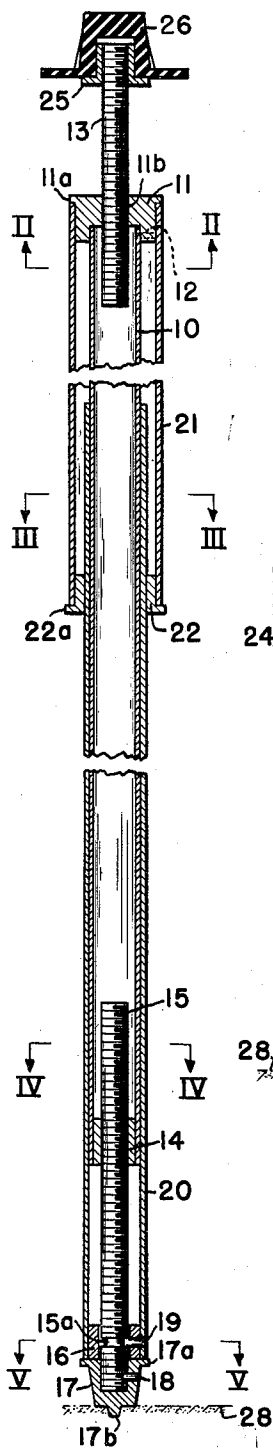


Fig. 2

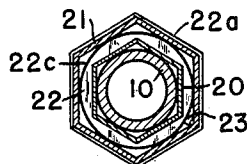


Fig. 3

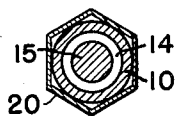


Fig. 4

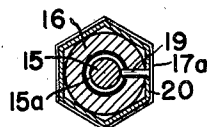


Fig. 5

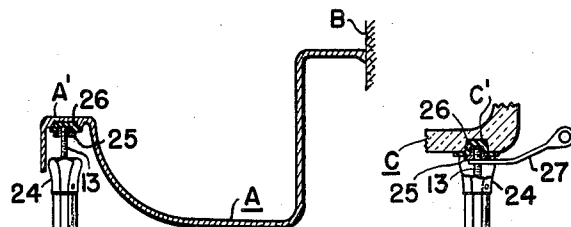


Fig. 6

Fig. 7

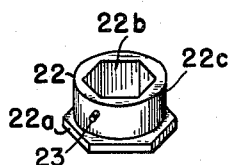
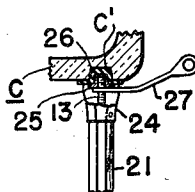


Fig. 9

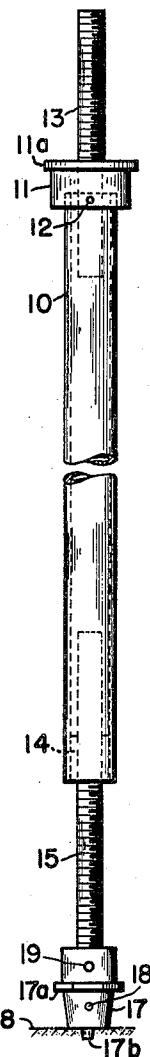


Fig. 8

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ADJUSTABLE LAVATORY LEG CONSTRUCTION

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11 Claims. (Cl. 45—139)

This invention pertains to a leg construction or assembly for lavatories of various plumbing ware types, including wash bowls and sinks of cast iron enameled, vitreous, and sheet metal enameled material.

Previous to my invention, it has been customary for plumbing supply houses to carry various sizes of essentially fixed length legs to, as nearly as possible, meet the need for the three principal types of ware. For example, a 26½ inch leg is generally used for a vitreous china bowl and a 27 or 28 inch leg for an enameled bowl. A threaded upper end stud has also been used to provide a limited amount of extension of about 1½ inches, but from a practical standpoint, such a stud has not met the real need.

I have determined that there is an important need today for an improved leg construction which will inherently provide a wide range of length adjustment, will be fool-proof in operation and can be adjusted in an easy and practical manner, can be used for all types of lavatory ware, will be adaptable to various space limitations and requirements, will comply with immediate and changed requirements of the most eccentric householder, and whose working parts can always be maintained within or hidden by external finish parts. It will appear that such a leg construction will not only eliminate the need for stocking a large number of leg sizes, but will fully suit the requirements of the ultimate user of the lavatory ware. Heretofore, such requirements have not been fully met by available leg assemblies. In this connection, for example, a shorter than 26 inch leg is frequently desired by householders having small children; later, they desire an increased length when the children have become older.

It has thus been an object of my invention to solve the problem involved in this connection;

Another object has been to devise a new and improved lavatory leg construction that is effectively adjustable and that presents a pleasing appearance in its various adjusted relationships;

A further object has been to provide a relatively inexpensive but highly practical and efficient adjustable leg construction;

These, and many other objects will be apparent to those skilled in the art from the description thereof and the claims.

In the drawings:

Figure 1 is a longitudinal sectional view in elevation of my construction showing that its upper end portion is adaptable for various types of fittings; in this view, operating parts of the construction are in an intermediate adjusted positioning;

Figures 2, 3, 4, and 5 are enlarged transverse sections taken respectively along the lines II—II, III—III, IV—IV, and V—V of Figure 1;

Figure 6 is a greatly reduced view in side elevation showing how the leg construction and the fittings of Figure 1 may be employed in connection with a typical enameled metal bowl;

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Figure 7 is a fragmental view in elevation on the scale of Figure 6 and taken at 180° with respect thereto showing how the leg construction of Figure 1 may be employed in connection with a typical vitreous china bowl; it also discloses how a towel bar may be employed;

Figure 8 is a vertical view of the scale of Figure 1 showing inner operating parts of my construction with outer finish tube members removed; and

Figure 9 is a perspective view in elevation on the scale of Figure 1 showing a detail of the construction of a finish collar element that is employed with finish members of my construction.

In carrying out my invention, I provide upper and lower longitudinally-extending finish members 20 and 21, respectively, which are mounted in a telescopic relationship with each other and which are provided with means for adjusting such telescopic relationship. Such means includes a longitudinally-extending, central positioning member 10 and an adjustable means including a threaded stem or stud 15 which is operatively connected between the positioning member 10 and the lower finish member 20. A floor mounting element 17 is fixedly secured to the stem element 15 for actuating it to move the lower finish member 20 inwardly or outwardly with respect to the upper finish member 21. In this connection, it will be noted that the operating parts of my construction are fully enclosed within or concealed by the finish members and that the full adjustment of the construction is obtained without at any time exposing such operating parts.

In the construction shown in the drawings, I have provided a relationship of parts such that a minimized length of 25½" may be obtained. Although the length of the stem element 15 will govern the amount of adjustment provided, the construction is such that this element is always concealed within the finish parts or members and will provide a maximum of about a 7 inch extension of the leg construction when the stem, itself, is of about 8 inches in length. Another feature of my invention is that the adjustment of the members is easily and simply accomplished externally through the agency of a floor mounting element 17 and without exposing the operating parts.

Further, the construction is such that an upper stud element 13 can be employed to provide a mounting for various types of fittings and adapters for various types of lavatories and to insure a correct positioning of the leg construction with reference to an exposed apron portion of the lavatory and the mounting portion thereof.

A further advantage of the construction is that it can be made with press-fit parts such that it can be easily disassembled, but of such a type that there is no danger of disassembly when the construction is in a mounted position under supporting pressure. The construction is also such that the adjustable parts employed in effecting the telescopic movement of the finish members can have a rather loose interfitted threaded relationship to facilitate adjustment, but without danger of a failure of the construction. It will be apparent that my construction not only gives the plumber more leeway for error in roughing-in a lavatory, but provides him with a large amount of adjustment to fit the particular needs of each installation, to take care of different types of lavatories, and to permit later adjustments when conditions have changed.

Referring to Figures 1 and 8 of the drawings, the central positioning member 10 is shown of cylindrical tubular construction and as secured at its upper end portion within and to a top mounting plug or closure element 11 by a pin 12. It will be noted, as shown in Figures 1, 2 and 8, that the pin 12 projects from the positioning member 10 through a portion of the element 11 into engage-

ment with a corner portion of the upper finish member 21 of tubular construction which is shown as having a hexagonal cross-section. This utilization of the pin 12 positively prevents relative rotative movement between the members 10 and 21 and, at the same time, permits the top mounting element 11 to be withdrawn from within (pushed upwardly out of) the upper end portion of the upper finish member 21. In this connection, the element 11 has a pressure fit with respect to the member 21 and an annular flange 11a that abuts against the upper edges of such member to limit its maximum downward insertion therein.

The upper stem or stud element 13 engages within a threaded bore portion 11b of the element 11 to extend therethrough and upwardly therefrom to receive suitable or conventional lavatory-mounting fittings. A bottom sleeve 14 which is internally threaded and securely mounted within a lower end portion of the positioning tube 10, as by brazing or by pin means, adjustably receives the adjustable stem or stud element 15. In this connection, I provide a relatively loose clearance between the threads of the sleeve 14 and the stud element 15 to facilitate easy adjustment. The stem or stud element 15 projects downwardly within the lower end portion of the lower finish member 20 which, as shown, has a hexagonal section. The stem element 15 is loosely rotatable within the bore of a connecting collar element 16 and at its lower end is secured within a threaded bore of the floor mounting element 17.

The stem element 15, as shown particularly in Figures 1 and 5, has an annular guide groove or valley portion 15a about its lower end portion that serves to receive a radial pin 19 that is secured to the lower finish member 20 and projects through the collar element 16. In this manner, the finish portion of the member 20 is operatively connected to the adjustable stem element 15, so that the latter is free to rotate with respect thereto, but at the same time, has a fixed vertical or longitudinal positioning with respect thereto. On the other hand, the floor mounting element 17 is fixedly secured to the adjustable element 15 by a pin 18.

The floor mounting element 17 of cone-shape has an upper flange 17a of wrench flat construction which rotatably bears against and supports the lower edges of the lower finish member 20. The mounting element 17, as shown, has a projecting bottom lug 17b to facilitate its positioning engagement with a floor member or surface 28, see Figures 1 and 6.

As shown particularly in Figures 1, 3 and 9, to close off the upper and lower finish members 20 and 21 with respect to each other and to strengthen their positioned relationship with respect to each other, I have provided a finish bushing element or collar 22 having a flange 22a which abuts against the lower edges of the upper finish member 21 and whose outer periphery 22c has a pressure fit within the walls of such member. The collar 22 also has a bearing bore 22b, see particularly Figures 3 and 9, corresponding in shape to the shape of the lower finish member 20 and providing a slide bearing therefor. As shown, the finish collar 22 has an alignment pin 23 mounted thereon and projecting radially-outwardly therefrom (see Figures 3 and 9) that may be employed to align the flats of its flange 22a with the flats or faces of the upper finish tube 21 by engagement within an inner angular corner of the latter. The rotation-preventing engagement provided by the pin 23 may be omitted if the finish members or the flange 22a have circular faces.

It will also be noted that, as shown in Figures 1, 3, and 4, for example, the inner diameter of the lower finish member 20 corresponds substantially to the outer diameter of the positioning member 10 and that the sliding relationship between these two members along the major extent of both of them plus the bushing element 22, provides means for effectively holding the upper and lower finish members in a perfectly axially-aligned, longitudinal

or vertical relationship with respect to each other without buckling for their extremes of telescopic adjustment.

As shown particularly in Figures 1 and 6, a threaded fitting 25 and resilient gasket 26 may be employed in mounting the structure of my invention on a mounting portion A' of an enameled metal sink or lavatory A. The fitting 25 is reversible as to its mounting on the stud 13 to provide adaptability. A hexagonally-shaped finish collar or escutcheon 24 (having a set screw for mounting it) may be slidably carried by the upper finish element 21 as shown in Figure 6. For mounting the leg construction of my invention on a vitreous enamel lavatory C (see Figure 7), I position the hat or gasket element 26 within a hole mounting C' in its bottom wall and use the fitting 25 in the same manner as in Figures 1 and 6. If desired, a conventional towel rack element 27, see Figure 7, can be carried by the stud element 13 when the construction of my invention is employed with any type of lavatory. It will be noted that the escutcheon 24 has a side slot to receive the element 27 and that it fits over the bottom flange portion of the fitting 25 to abut the element 26.

What I claim is:

1. An improved lavatory leg construction to be positioned at its upper end on a mounting portion of the lavatory and at its lower end on a floor member which comprises, a longitudinally-extending central positioning member, a top mounting element secured to an upper end portion of said positioning member, an upper longitudinally-extending tubular finish member, a lower longitudinally-extending tubular finish member, an upper end portion of said lower finish member having a telescopic positioning with respect to a lower end portion of said upper finish member, said upper finish member being positioned at its upper end portion on said mounting element and said upper and lower finish members being positioned to enclose said central member, a floor mounting element extending from a lower end portion of said lower finish member, adjustable means positioned within said lower finish member and operatively connected between said positioning member and said lower finish member to adjustably vary the telescopic relationship between said upper and lower finish members, and means securing said floor mounting element in a fixed relationship on a lower end portion of said adjustable means to rotate the latter and adjustably vary the relationship between said upper and lower finish members.

2. An improved lavatory leg construction as defined in claim 1 wherein a mounting stud adjustably engages said top mounting element and extends upwardly therefrom to co-operate with the mounting portion of the lavatory.

3. An improved lavatory leg construction as defined in claim 1 wherein a finish bushing sleeve is mounted on the lower end portion of said upper finish member in sliding engagement with the upper end portion of said lower finish member.

4. An improved lavatory leg construction as defined in claim 3 wherein an alignment pin projects outwardly from said bushing sleeve into rotation-preventing engagement with respect to said upper finish member.

5. An improved lavatory leg construction to be positioned at its upper end on a mounting portion of a lavatory and at its lower end on a floor member which comprises, a longitudinally-extending central positioning member, a top mounting element, a longitudinally-extending tubular upper finish member, an upper end portion of said upper finish member having a press fit mounting on such top mounting element, means rigidly securing an upper end portion of said positioning member to said mounting element to extend downwardly therefrom along and within said upper finish member, longitudinally-extending tubular lower finish member slidably positioned on said positioning member and having its upper end portion projecting within said upper finish member, a floor mounting element extending downwardly from a lower end portion of said lower finish member and being rotatably

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mounted with respect thereto, adjustable means extending vertically-upwardly within said lower finish member from said floor mounting element and operatively secured between said positioning member and said lower finish member to slide said lower finish member along said positioning member and advance it upwardly and downwardly with respect to said upper finish member when said floor mounting element is rotated.

6. An improved lavatory leg construction as defined in claim 5, wherein said top mounting element adjustably carries a mounting stud to co-operate with the mounting portion of the lavatory, and means rotatably connects said adjustable means in a vertically fixed position with said lower finish member.

7. An improved refractory leg construction to be positioned at its upper end on a mounting portion of a lavatory and at its lower end on a floor member which comprises, a longitudinally-extending central positioning member, a top mounting element, an upper longitudinally-extending tubular finish member mounted to extend longitudinally-downwardly from said top mounting element in a spaced relationship along said positioning member, a lower longitudinally-extending tubular finish member slidably positioned on said positioning member to extend from within a lower portion of said upper finish member longitudinally-downwardly along and beyond a lower end portion of said positioning member, a threaded sleeve secured to a lower end portion of said positioning member, a floor mounting element extending downwardly from the lower end portion of said lower finish member, a threaded stem element adjustably carried by the threaded portion of said sleeve member to extend downwardly therefrom within and along the lower end portion of said lower finish member into engagement with said floor mounting element, means securing a lower end portion of said stem element to said floor mounting element for rotative actuation thereby, a positioning collar secured within a lower end portion of said lower finish member and secured thereto, a guide groove about the lower end portion of said stem element, and a pin projecting from said collar into engagement with said groove to secure said stem element in a rotatably secured relationship to said lower finish member.

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8. An improved lavatory leg construction as defined in claim 7, wherein a finish bushing element is provided and has an inner bore defining a slide bearing surface with respect to said lower finish member and has an outer peripheral surface in a pressure-fitted relationship within the lower end portion of said upper finish member to guide said lower finish member during its telescopic movement with respect to said upper finish member during an actuation of said stem element by said floor mounting element.

9. An improved lavatory leg construction as defined in claim 7 wherein a pin projects from an upper end portion of said positioning member through said top mounting element into locking engagement with said upper finish member to prevent relative rotative movement between said members.

10. An improved lavatory leg construction as defined in claim 7, wherein said floor mounting element has a wrench flat flange portion thereabout in rotative engagement with the lower end portion of said lower finish member, said floor mounting element has an internal bore to receive a lower end portion of said stem element, and pin means projects from said floor mounting element into said stud element to secure them together.

11. An improved lavatory leg construction as defined in claim 10, wherein a finish bushing is provided having a pressure fit within the lower end portion of said upper finish member and having a bore slidably bearing on and about said lower finish member, and said top mounting element has a threaded bore to receive a threaded stud for lavatory mounting fittings.

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