United States Patent [19]

Wilson

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[54] **DUAL SHOWER ATTACHMENT DEVICE**

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[52] **U.S. Cl.** **239/267;** 239/269; 239/283; 239/444; 239/551; 239/600; 4/145; 239/209

[51] **Int. Cl.²** **B05B 15/06;** B05B 1/30

[58] **Field of Search** 239/200, 207–209, 239/266–269, 273, 280–283, 444, 551, 562, 239/536, 600, 390; 4/145, 148, 152

[56] **References Cited**

UNITED STATES PATENTS

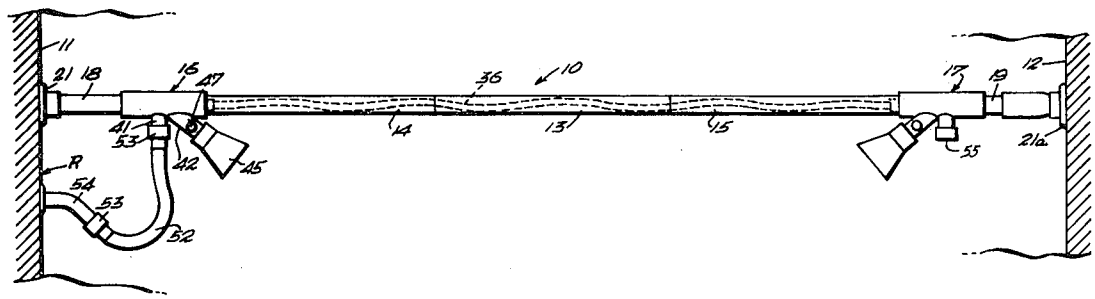
1,207,380	12/1916	Duffy	4/148
1,218,879	3/1917	Luzzi	239/282 X
2,277,562	3/1942	Schu	4/148
2,279,150	4/1942	Thom	239/208
2,336,402	12/1943	Kaiser	4/152
2,697,839	12/1954	Jackson	239/282 UX
2,755,985	7/1956	Finegan	239/269 X
2,985,232	5/1961	Greiner et al	239/282
3,121,235	2/1964	Gellmann	239/283 X
3,822,826	7/1974	Wilson	239/267

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[57] **ABSTRACT**

An attachment device for converting a single shower head personal shower installation to dual, opposed shower head installation to provide for showering at each side of the shower enclosure or recess in which the device is installed, is described. A sectional, tubular support member is provided with adjustable thrust abutment means at one end for frictional engagement between opposite sidewall portions of the shower recess or enclosure in securing the attachment device in place. Shower head fittings installed along the length of the tubular support member near each end thereof communicate for fluid flow therebetween by means of a flexible conduit contained within that portion of the tubular support member between the shower head fittings. Flexible supply conduit means is provided for interconnecting one of the shower head fittings with the shower head supply arm of the shower enclosure or recess in which the attachment device is installed. A control valve in each of the shower head fittings provides for selective control of shower water thereto for independent or dual use in showering.

9 Claims, 4 Drawing Figures



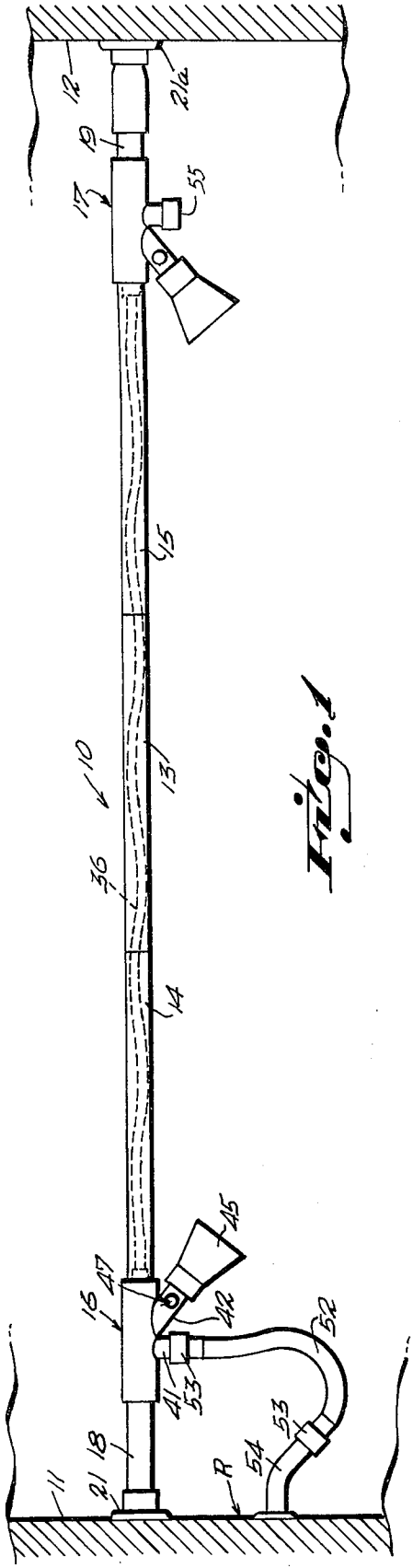


Fig. 1

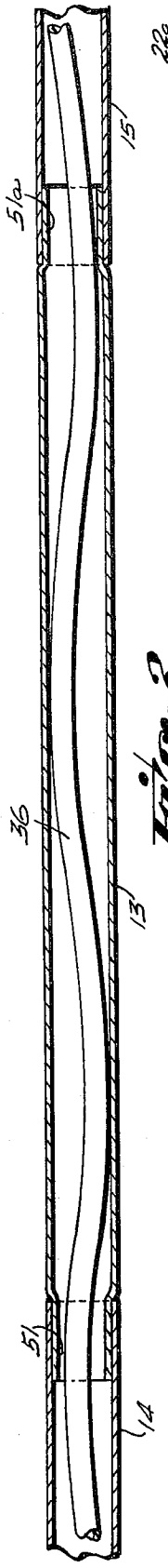


Fig. 2

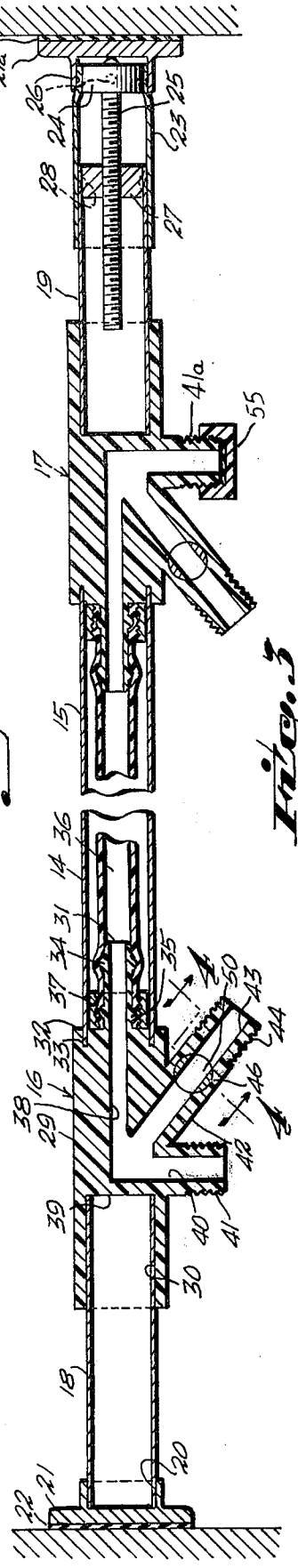


Fig. 3



Fig. 4

DUAL SHOWER ATTACHMENT DEVICE

This invention relates to personal showers and is directed particularly to a dual shower head assembly for use in substitution for the usual single shower head in personal shower enclosures.

A more particular object of the invention is to provide a dual shower head attachment device which, upon installation, provides a pair of elevated shower heads spraying inwardly from each side of a personal shower enclosure, thereby enabling two persons to shower independently at the same time or, alternatively, one person, standing centrally in the shower enclosure, to be showered from each side for more rapid and effective cleansing.

Yet another object is to provide a dual shower head attachment device that is particularly well suited to installation and use in association with a standard bathtub by simple substitution for the usual single shower head installed at one end of the recess in which the tub is enclosed.

Still another object of the invention is to provide a dual shower head attachment device of the above nature which comprises, in kit form, sectional tubular support structure the sections of which can readily be assembled and opposite end portions of which comprise shower head members interconnectable for fluid flow by the use of a flexible conduit contained within the tubular support structure, further including adjustable abutment means for thrustingly wedging the support structure between opposite end wall portions of a tub or shower enclosure, and flexible conduit means for interconnecting one of the shower head members with the shower head outlet or supply arm of the bathtub or shower enclosure within which the device is to be installed.

Still another object of the invention is to provide a dual shower head attachment device of the character described which will be simple in construction, attractive in appearance, compact when disassembled in kit form, easy to assemble and install, and durable and effective in use.

Other objects, features and advantages of the invention will be apparent from the following description when read with reference to the accompanying drawings. In the drawings, wherein like reference numerals denote corresponding parts throughout the several views:

FIG. 1 illustrates, in side elevation, a dual shower head attachment device embodying the invention assembled in place between opposite end wall portions of an ordinary tub enclosure and connected for water supply to the usual shower arm of such a shower enclosure;

FIG. 2 is a longitudinal cross-sectional view, on an enlarged scale, of a central portion of the tubular support structure, illustrating the inter-fitting connection of the central sectional portions thereof and the passage of the flexible fluid flow conduit therethrough;

FIG. 3 is a longitudinal cross-sectional view, on an enlarged scale as compared with FIG. 1, of opposite end portions of the installed dual shower head attachment device, illustrating constructional details thereof; and

FIG. 4 is a transverse cross-sectional view of one of the shower head fittings, taken along the plane indicated at 4—4 of FIG. 3, in the direction of the arrows, and illustrating details the flow-control valve.

Referring now in detail to the drawings, reference numeral 10 designates, generally, a dual shower head attachment device embodying the invention, assembled for use between the head and foot walls 11, 12, respectively, of a bathroom tub recess R partially surrounding an ordinary built-in tub (not illustrated).

The attachment device 10 comprises a plurality of central tubular support member sections 13, 14 and 15, a pair of cylindrical shower head fittings 16 and 17 interfittingly connected, respectively, in coaxial relation at the outer ends of the tubular support member sections 14 and 15, and comparatively short tubular end sections 18 and 19 interfittingly connected in coaxial outwardly extending relation with respect to said shower head fitting members. The outer end of the short tubular end section 18 if friction fitted within the cylindrical recess 20 of a circular abutment member 21, the outer surface of which has cemented or otherwise secured thereupon a facing pad 22 of hard rubber, neoprene or the like serving as a frictional contact surface.

Means is provided for adjusting the overall length of the shower head attachment device at the end section 19 thereof. To this end, the tubular end section 19 has slidingly fitted thereover, in telescoping fashion, a tubular extension section 23, the outer end of which is inwardly pressed to a somewhat decreased diameter in embracing relation about the cylindrical head 24 of a coaxially inwardly extending threaded rod 25.

The outer end of the tubular extension section 23 will preferably be swedged at a plurality of positions about its periphery, as indicated at 26 in FIG. 3, to provide for secure interconnection between the bolt head 24 and said tubular extension section. As further illustrated in FIG. 3, the outer end of the short tubular end section 19 has fitted therein a cylindrical nut member 27, similarly swedged in place as indicated at 28. The threaded rod 25 is threadingly engaged within the nut member 27, so that as the tubular extension section 23 is turned with respect to the short tubular end section 19, said tubular extension section will be moved inwardly or outwardly depending upon the direction of turning to adjust the overall length of the device. A circular abutment member 21*a*, identical with the abutment member 21 at the opposite end of the device, is press-fitted for friction fit at the outer end of the tubular extension section 23.

Since the shower head fittings 16 and 17 are identical, only the fitting 16 is referred to for description in detail. Fitting 16 will preferably be molded of a tough, substantially rigid synthetic plastic material to define a cylindrical, elongated body portion 29 having a coaxial cylindrical recess 30 at one end for the friction-fit reception of the short tubular end section 18 (see Fig. 3). The opposite end of the cylindrical body portion 29 is integrally formed with an outwardly extending, coaxial nipple portion 31, of reduced external diameter so as to define an annular end wall 32. The end wall 32 is provided with a coaxial, annular recess 33 of such size as to receive, in interfitting frictional engagement, an outer end portion of the tubular support section 14.

The nipple portion 31 of the shower head fitting 16 is formed near its outer end, with an outer peripheral bead 34 and, near its inner end, with a somewhat smaller outer peripheral bead 35. Means is provided for securing one end of a length of flexible conduit 36, which may be vinyl tubing, for example, to the nipple

portion **31** of the shower head fitting **16.** To this end, there is provided a securement nut **37,** the internal thread of which increases somewhat in cross-sectional diameter from one end of the nut to the other, said nut being disposed circumjacent the nipple portion **31** and outer end portion of the flexible conduit **36** fitted over said nipple, and being operative when screwed firmly in place, to clamp said tubing in water-tight relation about the inner peripheral bead **35.** An axial bore **38** extending through the nipple portion **31** and partially through the elongated cylindrical body portion **29** of the shower head fitting **16,** extends just short of the bottom wall **39** of the coaxial cylindrical recess **30,** whereat it communicates with a perpendicular bore **40** extending through a sidewardly outwardly directed, externally threaded nipple portion **41.** The shower head fitting **16** is also integrally formed with an angularly outwardly extending shower head nipple portion **42,** substantially centrally located between the nipple portions **31** and **41,** said shower head nipple head portion being provided with a central bore **43** communicating at its inner end with the nipple bores **38** and **40.** The outer end of the shower head nipple portion **42** is externally threaded, as indicated at **44,** to threadingly receive thereon an ordinary shower spray head **45** (see FIG. **1**).

Valve means is provided in the shower head nipple portion **42** of the shower head fittng **16** for the control of water flow therethrough and through the attached shower spray head **45.** To this end, the shower head nipple portion **42,** near its inner end, is provided with a transverse bore **46,** somewhat larger diameter than that of the nipple bore **43** and intersecting said nipple bore, said transverse bore having slidingly disposed therein, in close interfitting relation, a cylindrical slide valve member **47** (see FIG. **4**).

The cylindrical slide valve member **47** is provided with cylindrical abutment heads **48, 49** of somewhat increased diameter at each end to limit the sliding movement of said valve member. As illustrated in FIG. **4,** the slide valve member **47** is provided, near one end thereof, with a transverse through opening **50,** having the same diameter as that of the bore **43** of the shower head nipple portion **42.** As best illustrated in FIG. **4,** when the slide valve member **47** is in the limit position whereat the transverse through opening **50** is out of registry with the nipple opening **43,** flow through the nipple is blocked, and the associated shower spray head will be shut off. Adjustable flow control is accomplished by gradually pushing the slide valve member **47** to its opposite limit position from that illustrated in FIG. **4,** to the full flow limit position as illustrated in FIG. **3,** to achieve maximum water pressure at the inlet to the associated shower spray head **45.** It will be understood that as the slide valve member through opening **50** is thus manually moved more and more into registration or coaxial alignment with its associated nipple bore **43,** corresponding control is effected in the intensity or flow volume of water spray through the shower head.

In use, the various sections and parts of the dual shower head attachment device will be assembled as described above and illustrated. In this connection, as illustrated in FIG. **2,** the outer ends of the central tubular support member section **13** are formed with slightly reduced-diameter and portions **51, 51***a* which are slidingly received within opposed inner end portions of respective tubular support sections **14** and **15** whereat they are frictionally retained in place. It is also to be noted that the flexible conduit or length of tubing **36** is long enough to permit attachment of its ends to the respective shower head fitting **16** and **17,** as described above, before the outer ends of the tubular support member sections **14** and **15** are inserted in place over the shower head fitting nipple portions **31.** After the attachment device **10** is thus assembled for placement between the end walls **11, 12** of a tub recess R, for example, as illustrated in FIG. **1,** the tubular extension section **23** will be turned inwardly sufficiently to permit insertion of the device between the walls **11, 12** whereafter it will be screwed in the outward direction to extend the over-all length of the attachment device to such an extent that the friction pads **22, 22***a* at each end of the device abut against the oppossed recess walls, thereby securely wedging the attachment device in its installed position. As further illustrated in FIG. **1,** the installed position of the device will be close enough to the usual shower head supply arm **54** so that after removal, of the originally provided shower spray head, (not illustrated), a short length of flexible coupling hose **52** having female threaded coupling members **53** at each end can be used for a screw-on connection between said shower head supply arm and the shower head nipple portion **42** of the shower head fitting **16.** As illustrated in FIGS. **1** and **4,** the threaded nipple portion **41***a* of the opposite shower head fitting **17** may be closed off by internally threaded closure cap **55.** It is also to be noted that the otherwise unused externally threaded nipple portion **41** of the remote shower head fitting **17** could alternatively be used for the connection of a flexible conduit leading to an auxiliary hand-held shower device or the like.

What I claim as new and desire to secure by Letters Patent is:

1. A dual shower head attachment device comprising, in combination, a sectional tubular support structure, said structure comprising a plurality of central tubular support member sections, means for removably interconnecting said central tubular support member sections in coaxial alignment, a shower head fitting inter-fittingly connectable at each end of said interconnected central tubular support sections, said cylindrical shower head fittings each comprising a cylindrical body portion and means for interconnecting one end each of said cylindrical body portions in coaxial alignment with the opposed outer end portions of said interconnected tubular support member sections, a tubular end member extending coaxially outwardly of each of the other ends of said shower head fitting body portions, means for removably securing said end members to their respective shower head fittings, means for adjustably extending the length of one of said end members for varying the overall length of said tubular support structure, said shower head fittings each comprising a shower head nipple portion and a second nipple portion both of which extend sidewardly outwardly of said cylindrical body portion, said shower head fittings each further comprising a third nipple portion extending coaxially outwardly of said one end of its respective cylindrical body portion, passageway means within each of said shower head fitting members intercommunicating with the ports of said associated shower head nipple portion and said second and third nipple portions, and a flexible conduit removably secured between said third co-

axial nipple portions of each of said shower head fittings and receivable within said interconnected central tubular support member sections for conducting water between said passageway means of said shower head fittings.

2. A dual shower head attachment device as defined in claim **1** including a flexible conduit for interconnecting said second nipple portion of one of said shower head fittings with a shower head supply arm of an ordinary bathroom shower, and closure cap means for sealing off the outlet port of said second nipple member of the other of said shower head fittings.

3. A dual shower head attachment device as defined in claim **1** including valve means in each of said shower head nipple portions for controlling the flow of water therethrough and a shower head fitted at the outer end of each of said shower head nipple portions.

4. A dual shower head attachment device as defined in claim **2** wherein said shower head nipple portions extend angularly outwardly of their respective body portions to define acute angles with respect to their respective third nipple portions.

5. A dual head attachment device as defined in claim **4** wherein said second nipple portions extend perpendicularly outwardly of their respective body portions and lie substantially in a common plane with respect to their respective shower head nipple portions.

6. A dual shower head attachment device as defined in claim **1** wherein said means for removably interconnecting said central tubular support sections in coaxial alignment comprises reduced diameter end portions at each end of one of said plurality of central tubular support member sections, telescoping receivable within one end portion each of two other ones of said plurality of central tubular support central sections.

7. A dual shower head attachment device as defined in claim **6** wherein said means for interconnecting one end each of said shower head cylindrical body portion comprises a coaxial annular recess formed in said one end of each of said cylindrical body portions of such size and diameter as to receive, in sliding fit therein, outer end portions of one each of said two of said plurality of central tubular support member sections.

8. A dual shower head attachment device as defined in claim **1** wherein said means for adjustably extending the length of one of said end members comprises a tubular extension member telescopingly fitted over the outer end of said one end member, a nut coaxially secured within the said one end member, and a threaded bolt coaxially secured with respect to said extension member and threadingly engaged in said nut.

9. A dual shower head attachment device as defined in claim **8** and further including a pair of friction pads secured one each to the outer end of the other of said end members and said extension member.

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