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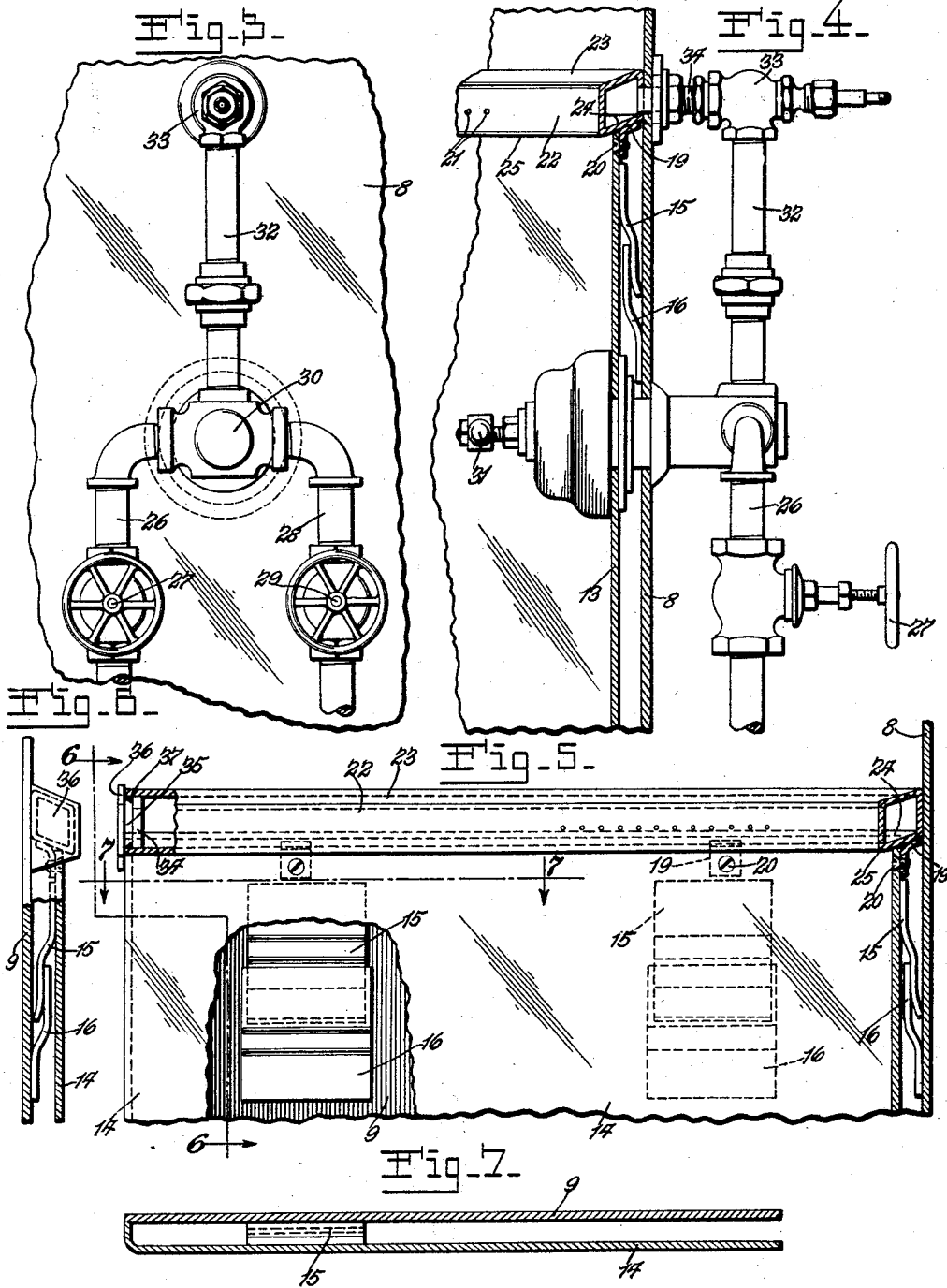
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SHOWER BATH CONSTRUCTION

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UNITED STATES PATENT OFFICE

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SHOWER BATH CONSTRUCTION

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This invention relates to shower bath construction.

An object of the invention is to provide an improved shower bath construction for general use comprising a walled space of appropriate dimensions having an opening at one side for entrance and exit purposes and having spray devices mounted adjacent to the side walls of the space for directing the streams or jets of water toward the opposite side walls respectively, instead of downwardly or toward the opening to the space. By this arrangement, it is impossible for the jets or streams of water to be directed outwardly through the opening to the bath space, so that it is practically impossible for water to be discharged onto the floor outside of said space.

Another object of the invention is to provide improved devices for forming the streams or jets of water in shower baths and comprising a tube of appropriate length having a longitudinal series of openings through one side thereof for discharging jets or streams of water laterally or in any other direction that may be desired.

Another object of the invention is to provide an improved shower bath construction having its exposed wall surface removably mounted in connection with the supporting wall, and means for supporting the shower or sprinkler members, so that the wall surface and said shower or sprinkler members may be removed and replaced, as desired.

Various other objects and advantages of the invention will appear from the following description, reference being made to the accompanying drawings, in which—

Fig. 1 is a view looking toward the rear wall of the bath compartment, the main floor and one of the main supporting walls being in section.

Fig. 2 is a vertical sectional view through the rear wall and the floor of the bath compartment approximately on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged elevation showing the water pipe connections and controlling valves for supplying water to the shower or sprinkler devices.

Fig. 4 is an enlarged sectional view of the construction shown in Fig. 3.

Fig. 5 is an enlarged detail view partly in section showing the devices for supporting the inner wall members in connection with the main supporting wall.

Fig. 6 is a sectional view approximately on the line 6—6 of Fig. 5 showing further details of the invention.

Fig. 7 is a sectional view approximately on the line 7—7 of Fig. 5.

In the construction shown, the main floor 1 encloses or embeds a drain pipe 2. A trap 3 connected with the pipe 2 receives water in the usual manner through an ordinary perforated plate or strainer 4, which permits free passage of water into the trap and prevents the passage of solids or other pieces of waste matter of substantial size. The floor 1 supports a dished or concaved plate 5 having its edges 6 extended upwardly around the marginal edges of the floor surface element 7. The floor surface 7 is concaved or dished so as to discharge substantially all water through the perforated plate 4 into the trap 3 and thence through the waste pipe 2. Thus, the bath compartment is well drained.

The bath compartment shown comprises main supporting walls including a rear supporting wall 8 and side supporting walls 9. An inner wall surface or liner 10 rises from the floor surface 7 and is separated from the wall 8 by an intervening space 11. The lower end of the wall 10 seats against the inner side of the upper marginal portion of the flange 6 (Fig. 2), thus forming an appropriate joint to prevent water from passing between said parts. Along each side wall 9 a similar wall surface or liner 12 is provided and arranged in like manner. The wall surfaces or liners 10 and 12 extend upwardly an appropriate distance beyond the lower ends of the rear removable wall surface or liner 13 and beyond the lower ends of the side wall surfaces or liners 14. Accordingly, the lower ends of the wall members 13 and 14 extend downwardly against the inner surfaces of the upper ends of the wall surfaces or liners 10 and 12, providing an appropriate joint as will be

understood by reference to Fig. 2 of the drawings.

The wall surfaces or liners 13 and 14 are removably mounted, each having rigid with its outer surface a number of downwardly extended angular arms 15 having detachable interlocking engagement with upwardly extended angular arms 16 rigid with the walls 8 and 9, respectively. The operation of mounting the wall surfaces or liners 13 and 14 consists in positioning the angular arms 15 in interlocking engagement with the angular arms 16, as will be understood by reference to Figs. 4, 5 and 6. By detaching the water pipe connections hereinafter described, these wall surfaces or liners 13 and 14 may be removed and replaced, as desired; but so long as the water pipe connections are connected up, it is impossible to remove said wall surfaces or liners.

A combined water distributor and spray device is supported by the upper ends of the wall surfaces or liners 13 and 14 and comprises a tube or pipe of novel cross sectional form. This tube or pipe is shaped to provide a rear portion 17 extending transversely along the upper edge of the surface or liner 13 and having its ends 18 extended forwardly along the upper edges of the wall sections 14. This tube or pipe is in rigid connection with an angle bar 19 attached to the upper ends of the wall sections 13 and 14 by detachable fasteners 20. Each lateral portion 18 of the water distributor and sprinkler device has a longitudinal series of inwardly and downwardly directed holes 21 for directing the jets of streams of water inwardly and downwardly. These streams or jets of water are directed inwardly and downwardly of each side all of the bath compartment and preferably only at the rear portion of the compartment, so that there is no possibility of the water being thrown out onto the main floor from the bath compartment. No holes are formed in the rear portion 17 of the distributor pipe, said pipe portion 17 functioning as a conduit to carry water to the sprinkler devices 18.

This pipe 17—18 is of novel construction comprising an approximately vertical inner wall 22 connected at its upper and lower edges with the downwardly and inwardly inclined upper and lower walls 23 and 24, respectively. Thus, the union of the walls 22 and 24 provides a corner 25 from which the wall 24 inclines upwardly to prevent water from flowing or creeping along said walls 24 and thence to the joints between said walls 24 and the wall members 14. The pipe section 17 is similarly formed but without the holes 21.

The cold water pipe 26 is equipped with and controlled by a valve 27 on the outside of the bath compartment and is entirely inaccessible to the occupant. The warm water pipe 28 is similarly equipped with a valve

29 likewise on the outside of the bath compartment and wholly inaccessible to the occupant thereof. These pipes 26 and 28 open through a mixing valve device 30 of familiar construction that may be opened and closed by the occupant of the bath compartment by manipulation of a handle 31. The details of construction of the devices 30 and 31 are not herein shown because they are of familiar and standard construction and their mode of operation is well known. It is a familiar fact that the water may be turned off or on and regulated as a temperature by adjusting the valve device 30 by operation of the handle 31. However, according to the present invention, the flow of water may be entirely discontinued and prevented or regulated as to pressure and otherwise controlled by operation and adjustment of the valves 27 and 29. These valves 27 and 29 are of familiar commercial construction and their mode of operation is well known, so that they are not illustrated in detail.

From the mixing valve 30, a pipe 32 opens through a valve 33 of familiar construction and mode of operation. From the valve 33, a pipe 34 extends through the wall 8 and opens into the pipe section 17 by which the water is conducted into the spray pipes 18 from which is discharged inwardly and downwardly directed streams or jets through the holes 21.

The outer ends of the pipe sections 17 are hermetically closed. The closure for the outer end of each pipe section comprises a plug 34 mounted in each end of the pipe and united with an inwardly extended portion 35 of a plate 36 by a band of solder 37. The solder 37, cooperating with the parts with which it is united, provides hermetic joints for the closures at the ends of the pipe arms 17.

It is now clear that this invention is designed and adapted for use in institutions where it is desirable or necessary to prevent the occupants from having complete control of the water supply and from discharging the water out of the bath compartment onto the main floor of the apartment or room which is served by the bath. The pressure of the water may be regulated and controlled, as desired by adjustment of the valves 27, 29 and 33 and the supply of water may be entirely discontinued by proper adjustment of said valves. Further, the occupant and user of the bath may regulate and control the pressure of the water and its temperature by adjustment of the valve device 30.

The construction and arrangement of the elements comprised within the invention may be varied within the scope of equivalent limits without departure from the nature and principle thereof. I do not restrict myself in any essential particulars, but what I claim and desire to secure by Letters Patent is:

1. In a shower bath, a wall, a liner supported spaced from said wall and a pipe extending approximately horizontally along said wall above said liner and having holes opening in a direction away from said wall and liner and having a downwardly extended corner preventing water from flowing along said pipe to said liner.

2. In a shower bath, a wall, and a polygonal pipe attached to said wall and having a corner extending downwardly and inwardly at a distance from the wall and having holes opening from said pipe in a direction away from said wall and above said corner.

3. In a shower bath, a wall, a polygonal pipe attached to said wall and having a corner extending downwardly and inwardly at a distance from the wall and having holes opening from said pipe in a direction away from said wall and above said corner, and means for regulating the passage of water into said pipe.

4. Construction of the character described comprising a wall, an inner wall section, means for removably supporting said inner wall section in connection with said wall, and a spray device supported by said inner wall section.

5. Construction of the character described comprising a rear wall and side walls forming an enclosure, removable wall sections supported by said side walls, spray devices supported by said removable wall sections respectively, and means for conducting water into said spray devices.

6. Construction of the character described comprising a rear wall and side walls forming an enclosure, removable wall sections supported by said side walls, pipes supported above said removable wall sections and each having openings for discharging water toward the opposite side wall, and means for preventing water from flowing along the under sides of said pipes to said wall sections.

7. A shower bath device comprising a rear wall and side walls forming a cabinet, pipes extending horizontally along the side walls and each having a series of holes for discharging water toward the opposite side wall, removable means for supporting said pipes, and means for controlling the supply of water to said pipes.

8. Construction of the character described comprising a rear wall and two side walls forming an enclosure opening opposite the rear wall, spray devices extending along the side walls respectively and each arranged to discharge water toward the opposite side wall, supports for said spray devices spaced from said side walls, and means preventing water from flowing from said spray devices to the adjacent side walls.

9. Construction of the character described comprising a rear wall and side walls forming an enclosure opening opposite the rear

wall, a pipe extending along each of said side walls and each having holes for discharging water inwardly toward the opposite side wall of the enclosure, supports for said pipes, and longitudinal corners along the front lower portions of said pipes preventing water from flowing along said pipes toward the supports for the respective pipes.

10. Construction of the character described comprising a rear wall and side walls forming an enclosure opening opposite the rear wall, a spray element supported by each of said side walls and each arranged to spray water inwardly toward the opposite side wall, a downwardly extended corner extending along the inner lower portion of each of said spray elements preventing flow of water along the spray element toward the adjacent wall, a pipe for supplying water to said spray elements, a pair of pipes for supplying water to said first named pipe, and a regulator for controlling the passage of water from said pair of pipes to said first named pipe.

11. Construction of the character described comprising a rear wall and two side walls forming an enclosure opening opposite the rear wall, pipes extending along the inner side of each of said side walls beyond the surfaces of said walls and each arranged to discharge water toward the opposite wall and each having a downwardly extended corner spaced from the adjacent wall, means beyond said rear wall and inaccessible to the occupant of the enclosure for controlling the supply of water to said pipes, and means within said enclosure for regulating the flow of water to said pipes.

12. Construction of the character described comprising a horizontal polygonal spray pipe having an upwardly extended wall provided with holes therethrough, a bottom wall inclining upwardly from connection with the lower edge of said first wall and forming a downwardly extended corner below said holes, and means for supporting said pipe in connection with a support in a relationship in which said corner is spaced beyond said support and prevents water from flowing along said second wall to said support.

13. Construction of the character described comprising a rear wall and side walls forming a shower bath cabinet opening opposite the rear wall, horizontal polygonal pipes extending adjacent to each of said walls and each having an upwardly extended inner wall provided with holes therethrough, and an inclined lower wall connected with the lower edge of said inner wall and inclining upwardly from and forming a corner below said holes preventing water from flowing along said inclined wall of said pipe to the adjacent side wall of said cabinet.

14. Construction of the character described comprising a rear wall and side walls forming a shower bath cabinet opening opposite

the rear wall, horizontal polygonal pipes extending adjacent to each of said walls and each having an upwardly extended inner wall provided with holes therethrough, an
5 inclined lower wall connected with the lower edge of said inner wall and inclining upwardly from and forming a corner below said holes preventing water from flowing along said inclined wall of said pipe to the adjacent
10 side wall of said cabinet, a pipe for supplying water to said first named pipes, a pair of pipes for supplying water to said second pipe, means beyond said rear wall and inaccessible from within the cabinet for
15 controlling said pair of pipes, and means within the cabinet controlling the passage of water from said pair of pipes to said second pipe.

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