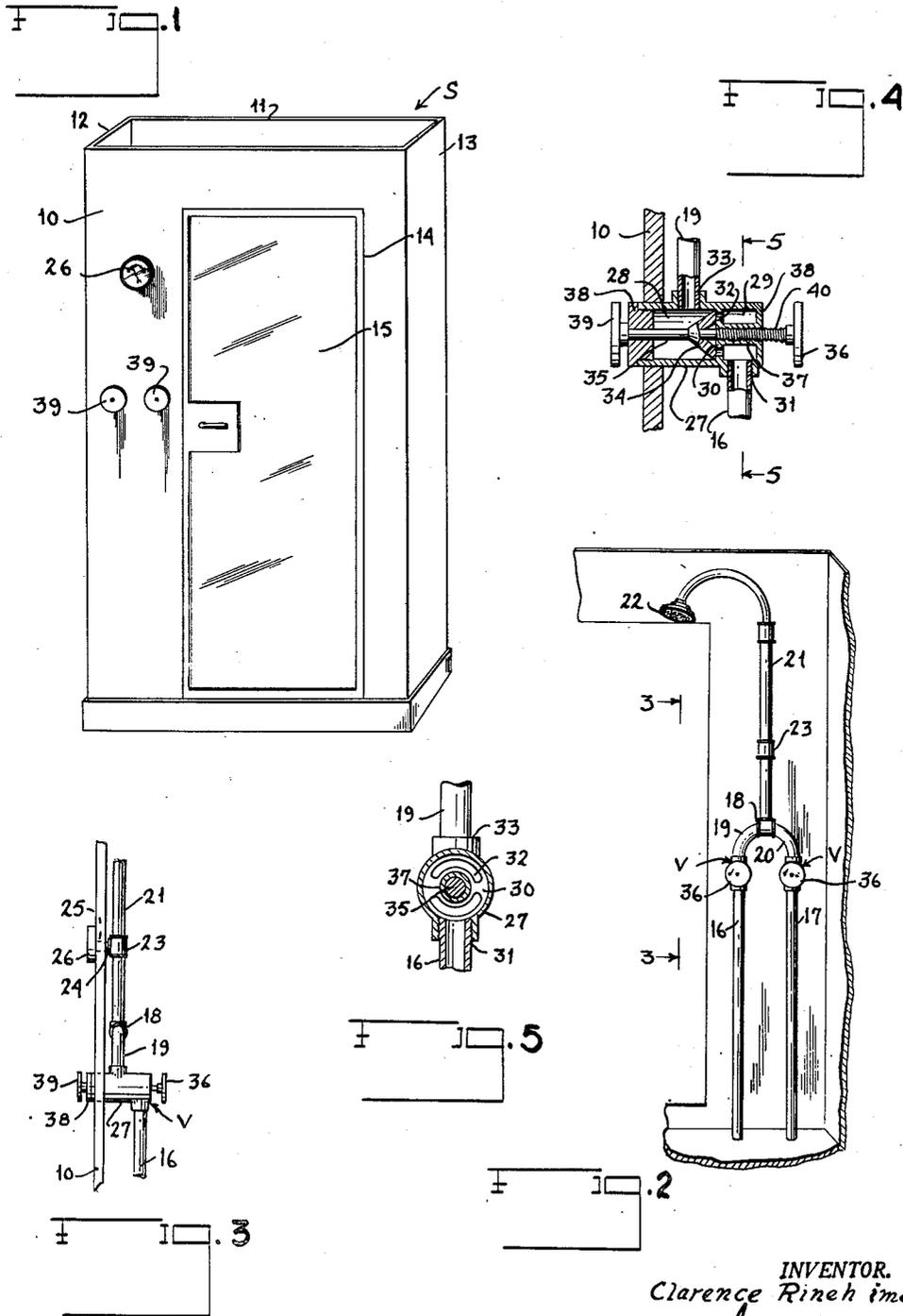


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SHOWER BATH FLOW CONTROL

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SHOWER BATH FLOW CONTROL

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5 Claims. (Cl. 4—146)

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The present invention relates to a shower bath and is concerned primarily with the control of water which flows to the shower head.

A person taking a shower ordinarily likes to have the water which emerges from the shower head at a particular temperature before entering the stall in which the shower head is located. This temperature is usually in the range of hot or warm water. Moreover, at the completion of the shower, most people like to end off with a cold shower.

With most of the now available shower bath installations, the individual controls for the hot and cold water are located either exteriorly of the stall or on the interior thereof. With the controls located exteriorly of the stall it is necessary for the user to extend his arm into the stall to test the temperature of the water coming from the shower head. This is highly inconvenient and even when this factor is eliminated by operatively associating a thermometer with the conduit which goes to the shower head and which thermometer is arranged exteriorly of the stall so that it may be seen by the person operating the controls, it is still not practical for the user to end off his shower with a cold shower or vary the temperature of the water during the taking of the shower.

When the controls are located interiorly of the stall considerable inconvenience is experienced by the user in obtaining the desired temperature of the water prior to entry into the stall.

With the foregoing conditions in mind, the present invention has in view as its foremost objective the provision of a shower bath installation which consists essentially of a stall in which a shower head is located. Individual hot and cold water conduits are provided which merge into a single conduit that goes to the shower head. A thermometer is operatively associated with the latter conduit and positioned exteriorly of the stall where it may be viewed by a user. Each of the hot and cold conduits is provided with a control valve which may be adjusted to vary the amount of water which is delivered to the common conduit. Each of these control valves is provided with a pair of operating members. One member of each pair is located exteriorly of the stall and the other interiorly of the stall.

With a shower bath designed in accordance with the foregoing arrangement, a person desirous of taking a shower may avail of the hot and cold water controls that are located exteriorly of the stall to achieve a desired temperature in

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the water coming from the spray head, the temperature being indicated on the thermometer that is located exteriorly of the stall. After entry into the stall and during the taking of the shower, the person may vary the temperature of the water coming from the spray head by using the operating members for the control valves that are located interiorly of the stall. Thus, a maximum of convenience and comfort in the taking of a shower is provided.

Various other more detailed objects and advantages of the invention such as arise in connection with carrying out the above noted ideas in a practical embodiment will, in part become apparent, and in part be hereinafter stated as the description of the invention proceeds.

The invention, therefore, comprises a shower bath installation in which a shower head is located. Communicating directly with this shower head is a single conduit that is connected to hot and cold water conduits. A thermometer is operatively associated with the single conduit and located exteriorly of the stall. Each of the individual hot and cold water conduits is provided with a control valve. There is a pair of operating members for each control valve with one operating member of each pair located exteriorly of the stall and the other interiorly thereof.

For a full and more complete understanding of the invention, reference may be had to the following description and accompanying drawing wherein:

Figure 1 is a perspective view of a shower bath installation designed in accordance with the precepts of this invention.

Figure 2 is another perspective with a portion of the stall broken away and looking at the wall which carries the conduits.

Figure 3 is a fragmentary vertical section taken about on the plane represented by the line 3—3 of Figure 2 and showing the conduits in elevation.

Figure 4 is a detail showing mostly in section but partially in elevation of one of the control valves and the operating members associated therewith; and

Figure 5 is another detail sectional view taken about on the plane represented by the line 5—5 of Figure 4.

Referring now to the drawing wherein like reference characters denote corresponding parts and first more particularly to Figure 1, a shower bath stall is therein illustrated and referred to in its entirety by the reference character S. The stall S comprises a front wall 10, a rear wall 11,

and side walls 12 and 13. The front wall 10 is formed with an opening at 14 which accommodates a door 15. Obviously, the door 15 may be opened to provide ingress to or egress from stall S.

At this point it is well to note that the stall S which is depicted in the drawing is purely illustrative of one stall construction which may be used. So far as the present invention is concerned, the only thing that is necessary is that the stall have a front wall 10 and an opening such as indicated at 14 through which a person may pass in entering or leaving the stall. Any one or all of the walls 11, 12 and 13 may be a permanent part of a building construction in which the stall is located.

Referring now more particularly to Figure 2, a pair of conduits 16 and 17 are shown as located on the inner side of the front wall 10. One of these conduits is the hot water conduit and the other the cold water conduit. For the purposes of this specification it will be assumed that the conduit 16 is the hot water conduit and the conduit 17 the cold water conduit.

A T-fitting 18 is connected to the upper end of the hot water conduit 16 by a curved fitting 19 and another curved fitting 20 connects the upper end of the cold water conduit 17 to the T-fitting 18. From this T-fitting 18 a single conduit 21 extends to a shower head that is depicted at 22.

Referring now more particularly to Figure 3, the single conduit 21 is shown as including another T-fitting 23 to which is connected a conduit 24 that passes through an opening 25 formed in the wall 10. The outer free end of the conduit 24 is connected to a thermometer designated 26. Thus, the thermometer 26 indicates the temperature of water flowing through the single conduit 21 to the spray head 22.

Included in each of the hot and cold water conduits 16 and 17 is a control valve which is referred to in its entirety by the reference character V. Inasmuch as each of these control valves is a substantial duplicate of the other only one of them is herein described for the purpose of this specification. Thus, the valve V will be described as included in the hot water conduit 16.

Referring now more particularly to Figures 4 and 5, the control valve V is shown as comprising a cylindrical valve casing 27 divided internally into two chambers 28 and 29 by a partition 30. An inlet 31, which is formed in the lower side and inner end of the casing 27, gives entrance from the supply source to the chamber 29. The chamber 29, then, communicates with chamber 28 through ports 32 formed in the partition 30. An outlet 33 from chamber 28 is provided in the upper side and approximately in the middle of the casing 27. A conical valve cap 34, which is located in chamber 28 and operatively fixed to a rod 35, controls the water supply by moving its end of greatest diameter back and forth against the partition 30, thereby, opening or blocking the ports 32. The rod 35 is moved longitudinally in the casing by threads 40 formed on one end of the rod 35. The threads 40 are screwed into a sleeve 37 which is formed axially between the partition 30 and the end wall 38 of the casing 27. At the opposite end of the casing 27 a screw cap 38 closes one end of the chamber 28 and has through its center a bearing to support the outer end of rod 35. The casing 27 is mounted with the inlet 31 and outlet 33 on the inner side of wall 10 and with the cap 38 end of the casing extended through the wall 10 to protrude on the exterior side of the shower stall. An operating member

36 is fixed to the screw end of rod 35, thus on the inner side of the shower stall, and an operating member 39 is fixed to the opposite end of the rod 35, thus on the exterior side of the shower stall S.

Operation

While the manner of using the shower bath installation above described is believed to be obvious from the description of the parts given, it may be briefly outlined as follows:

A person desirous of taking a shower first avails of the operating members 39 which are located exteriorly of the stall S to adjust the flow of hot and cold water through the conduits 16 and 17 so that the mixture of the two which flows through the single conduit 21 to the shower head 22 has a desired temperature which is indicated on the thermometer 26.

When this temperature has been achieved the person enters the stall and takes the shower in the usual way. If at any time during the taking of the shower it is desired to vary the temperature of the water coming from the spray head 22, the operating members 36 are available for this purpose. At the end of the shower the valve V for the hot water conduit 16 may be completely closed to provide for ending off with a cold shower.

While a preferred specific embodiment of the invention is hereinbefore set forth, it is to be clearly understood that the invention is not to be limited to the exact constructions, mechanisms, and devices illustrated and described because various modifications of these details may be provided in putting the invention into practice within the purview of the appended claims.

What is claimed is:

1. In a shower bath installation including a stall with a spray head therein, a single conduit leading to said spray head, and hot and cold water conduits in communication with said single conduit, the improvement consisting of: a thermometer operatively associated with said single conduit and arranged exteriorly of said stall, a control valve in each of said hot and cold water conduits, and a pair of operating members for each of said control valves, one operating member of each pair being located interiorly of said stall and the other exteriorly thereof.

2. In a shower bath installation including a stall having a front wall, a shower head on the interior of said stall, a single conduit leading to said shower head, and hot and cold water conduits communicating with said single conduit, the improvement consisting of: a thermometer mounted on the outer face of said wall, a conduit passing through an opening in said wall and operatively connecting said thermometer to said single conduit, a control valve in each of said hot and cold water conduits, and a pair of operating members for each of said control valves, one operating member of each pair being located on the inner side of said wall and the other operating member being located on the outer side of said wall.

3. In a shower bath installation including a stall having a front wall, a shower head on the interior of said stall, a single conduit leading to said shower head, and hot and cold water conduits communicating with said single conduit, the improvement consisting of: a thermometer mounted on the outer face of said wall, a conduit passing through an opening in said wall and operatively connecting said thermometer to said single conduit, a control valve in each of

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said hot and cold water conduits, and a pair of operating members for each of said control valves, one operating member of each pair being positioned on the inner side of said wall, the other operating member of each pair being positioned on the outer side of said wall, and rods journalled in each of said valves, each of said rods establishing an operating connection between each pair of said last-mentioned operating members and one of said valves.

4. In a shower bath installation including a wall and a water conduit on one face thereof, a control valve in said conduit and a pair of operating members for said control valve, one being located on one side of said wall and the other on the other side of said wall.

5. In a shower bath installation including a wall and a water conduit on one face thereof,

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a control valve in said conduit, a pair of operating members for said control valve, one being located on one side of said wall and the other on the other side of said wall, and a rod journalled in said valve and operatively connecting each pair of said operating members to said valve.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
511,008	Blunt -----	Dec. 19, 1893
1,860,968	Tracy -----	May 31, 1932
2,501,194	Shumaker -----	Mar. 21, 1950