

April 28, 1942.

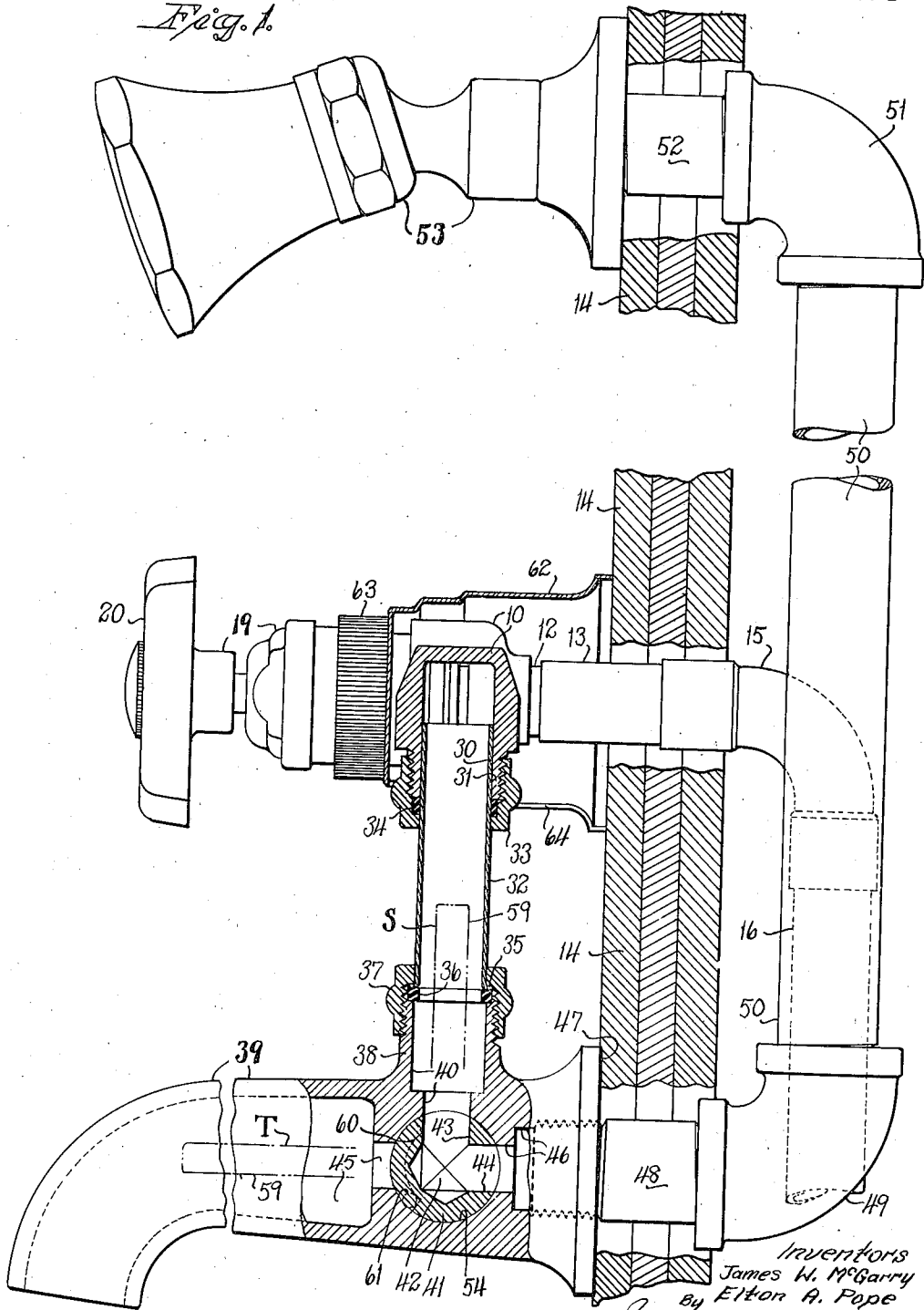
J. W. McGARRY ET AL
COMBINATION PLUMBING FIXTURE

2,281,199

Filed Oct. 9, 1941

6 Sheets-Sheet 1

Fig. 1.



Inventors
James W. McGarry
By Eiton A. Pope

Seymour B. Nichols
Attorneys

April 28, 1942.

J. W. McGARRY ET AL

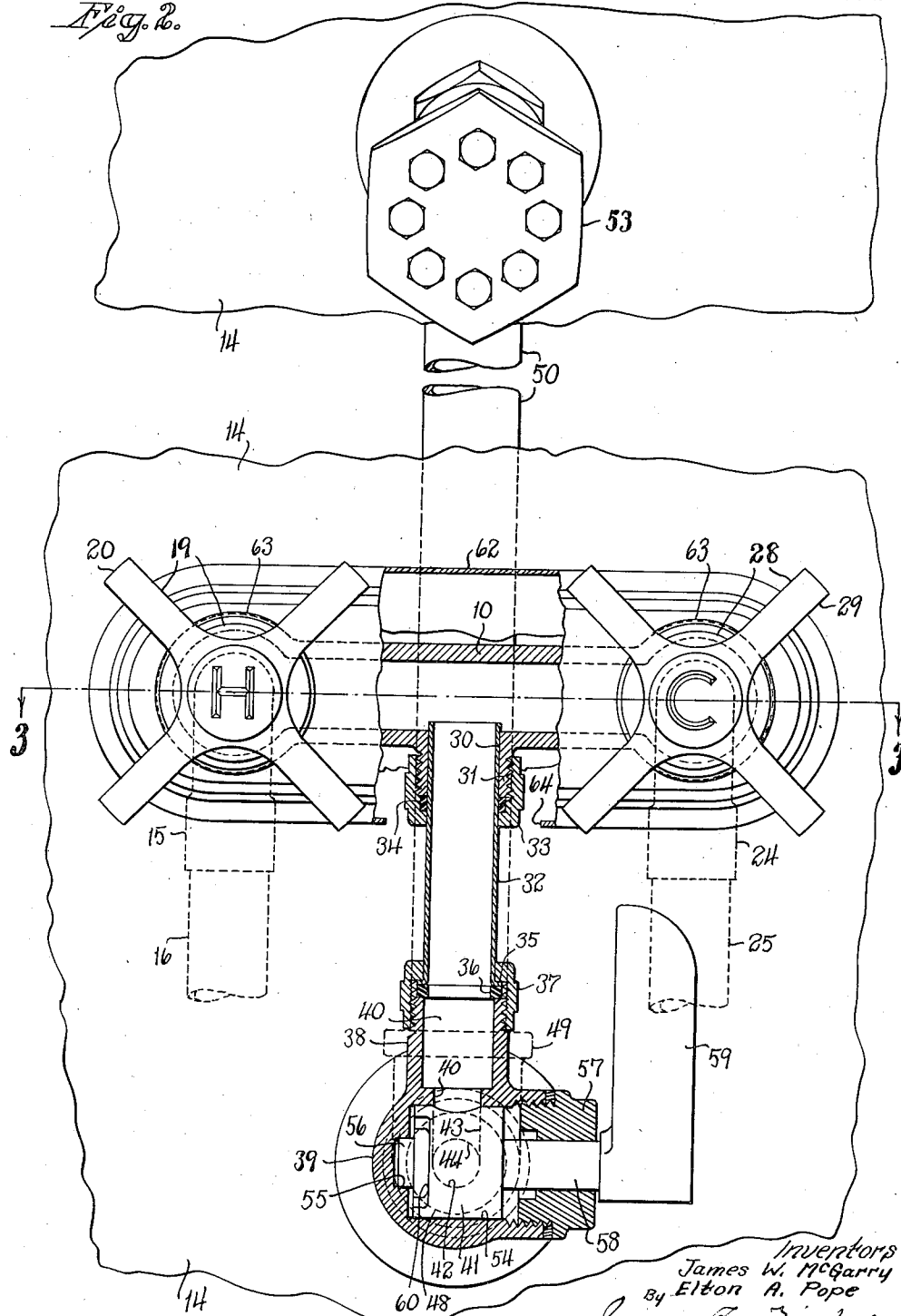
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COMBINATION PLUMBING FIXTURE

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6 Sheets-Sheet 2

Fig. 2.



Inventors
James W. McGarry
By Elton A. Pope
Seymour Earl Nichols
Attorneys

April 28, 1942.

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Fig. 3.

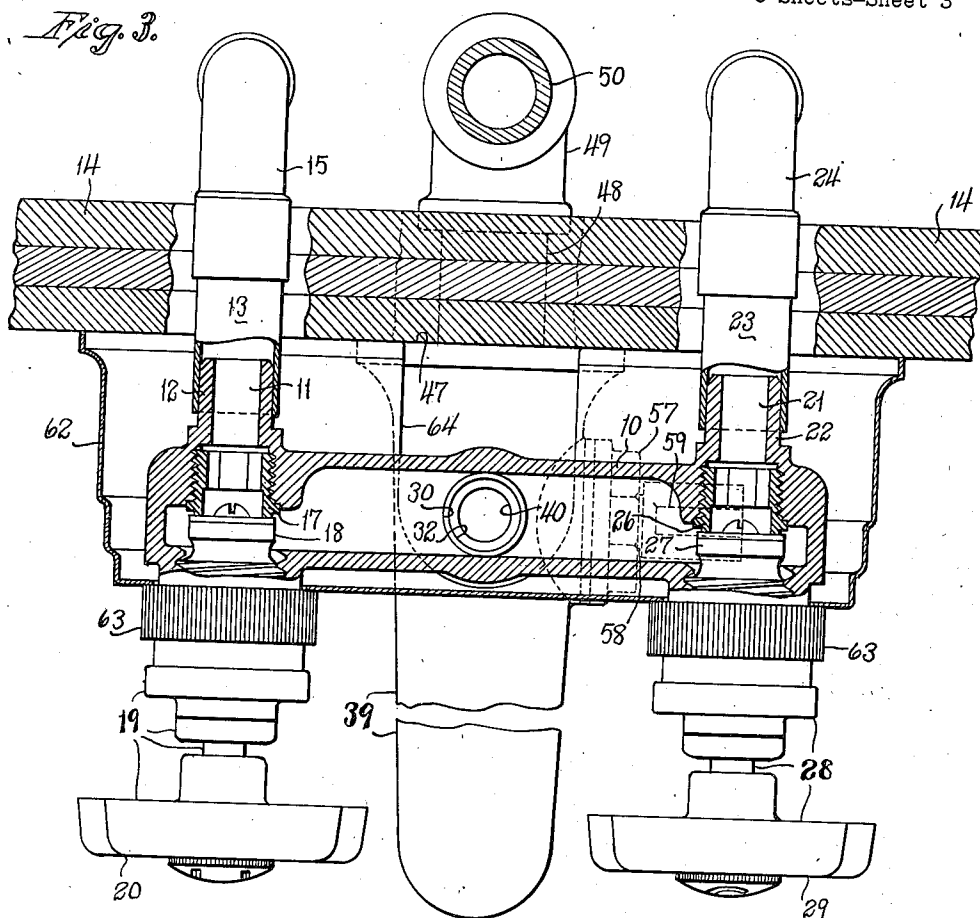


Fig. 4.

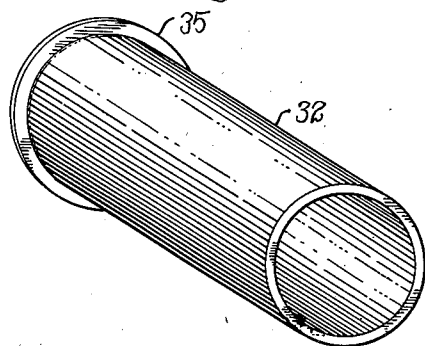
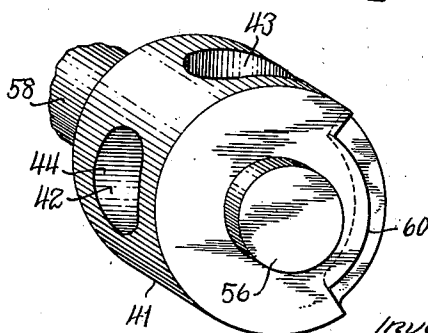


Fig. 5.



Inventors
James W. McGarry
By Elton A. Pope
Seymour Earl & Michel
Attorneys

April 28, 1942.

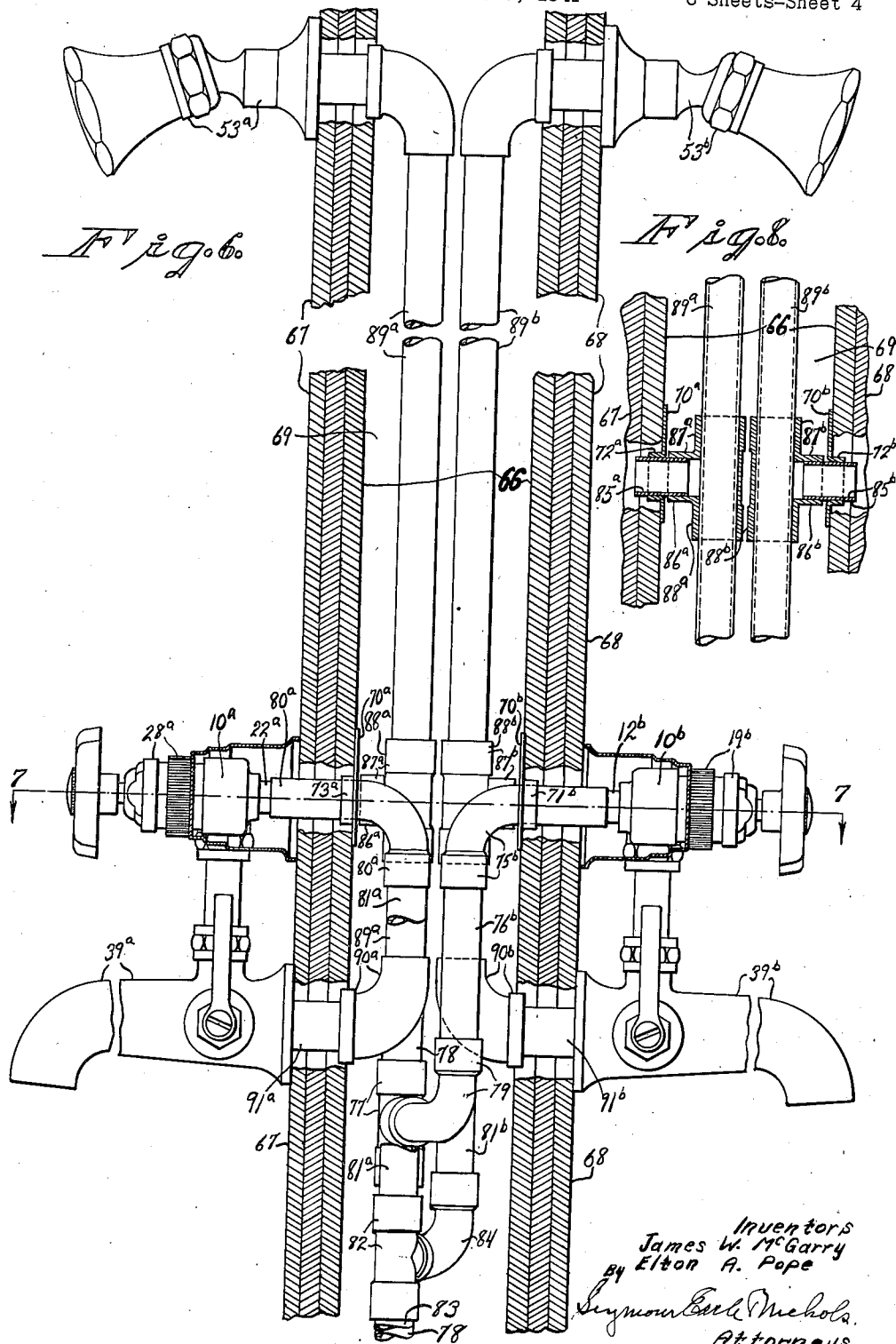
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COMBINATION PLUMBING FIXTURE

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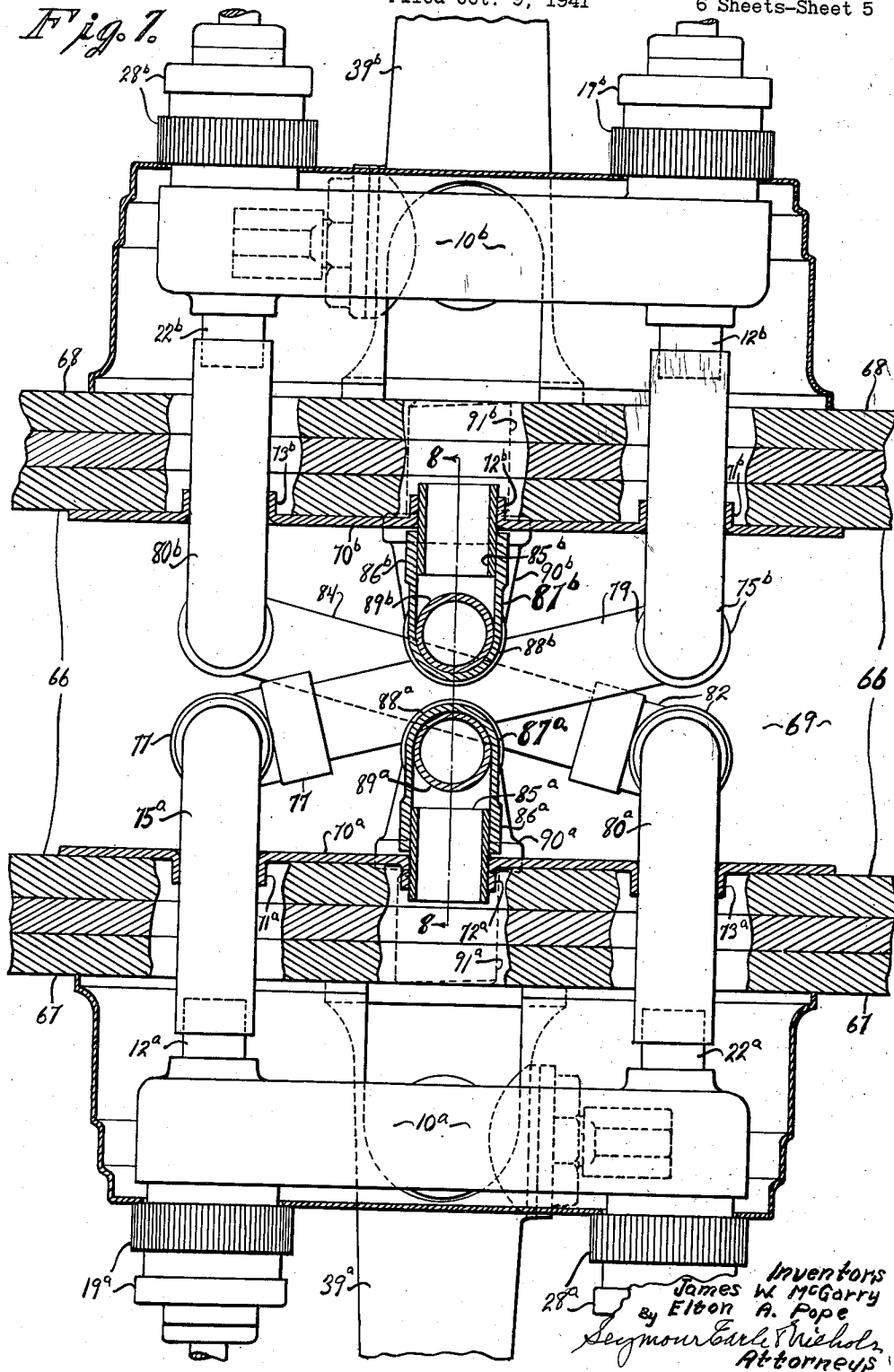


Inventors
James W. McGarry
By Elton A. Pope
Seymour E. Nichols
Attorneys

J. W. McGARRY ET AL
COMBINATION PLUMBING FIXTURE

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Fig. 7.



April 28, 1942.

J. W. McGARRY ET AL

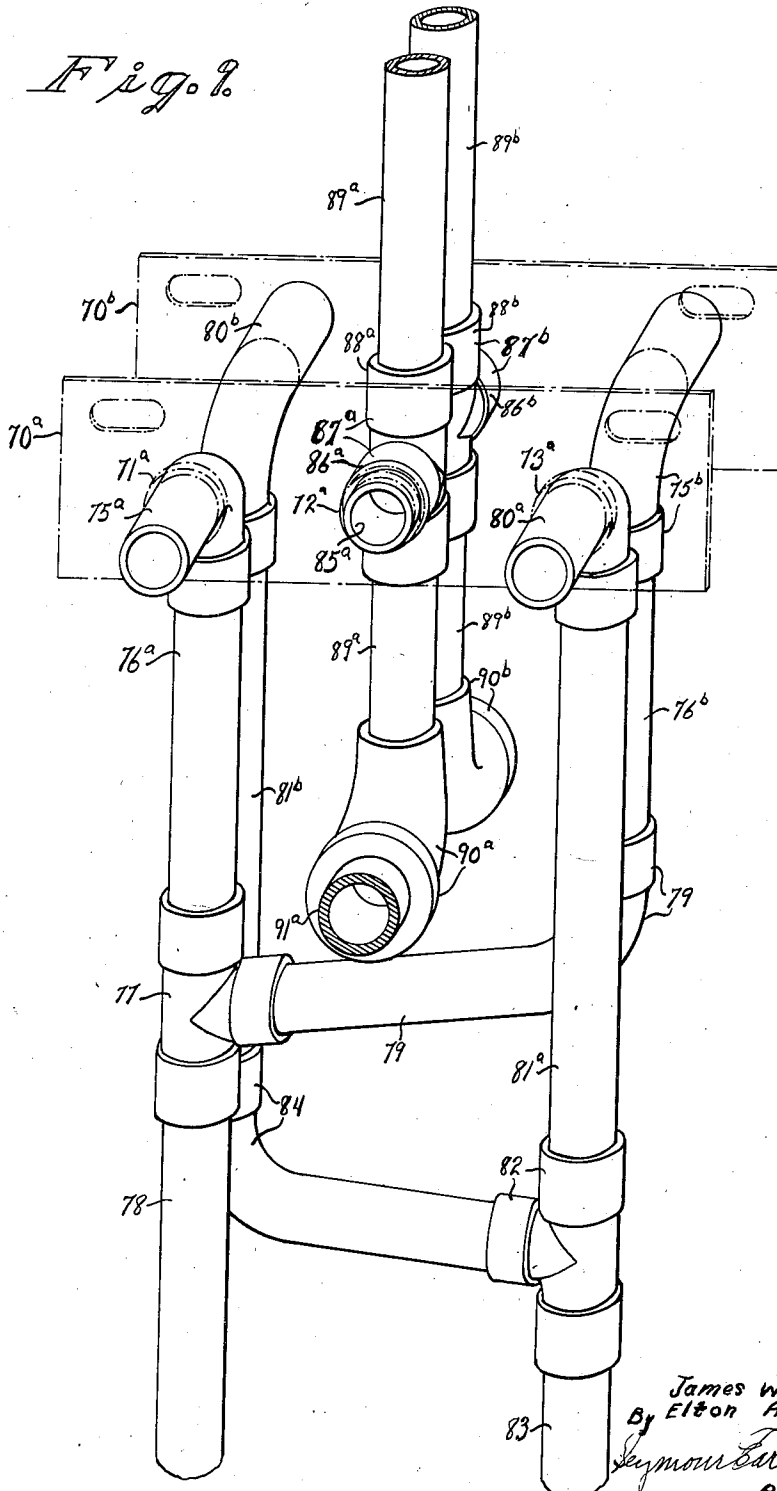
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COMBINATION PLUMBING FIXTURE

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6 Sheets-Sheet 6

Fig. 1.



Inventors
James W. McGarry
By Elton A. Pope
Symon Earl Nichols
Attorneys

UNITED STATES PATENT OFFICE

2,281,199

COMBINATION PLUMBING FIXTURE

James W. McGarry, Waterbury, and Elton A. Pope, Middlebury, Conn., assignors to Chase Brass & Copper Co. Incorporated, Waterbury, Conn., a corporation

Application October 9, 1941, Serial No. 414,262

8 Claims. (Cl. 4—145)

The present invention relates to improvements in combination plumbing fixtures and more particularly to improvements in combination plumbing fixtures for supplying various selected mixtures of hot and cold water either directly to a tub or to a shower-head.

One of the objects of the present invention is to provide a superior combination plumbing fixture of the character referred to which may be produced at a low cost for manufacture.

Another object of the present invention is to provide a superior fixture of the character referred to which may be installed with rapidity and ease.

A further object of the present invention is to provide a superior combination plumbing fixture for supplying mixtures of hot and cold water to a tub or to a shower-head and which requires a minimum number of through-the-wall connections.

Still another object of the present invention is to provide a superior combination plumbing fixture which requires a minimum of in-the-wall space for its accommodation.

A still further object of the present invention is to provide a superior combination plumbing-fixture construction by means of which two oppositely-extending outlets for mixed hot and cold water may be conveniently installed in conjunction with a single wall structure without requiring excess accommodation space in such wall structure.

With the above and other objects in view, as will appear to those skilled in the art from the present disclosure, this invention includes all features in the said disclosure which are novel over the prior art.

In the accompanying drawings, in which certain modes of carrying out the present invention are shown for illustrative purposes:

Fig. 1 is a broken view in vertical-section through a wall-structure and showing a combination plumbing fixture of the present invention in conjunction with the said wall-structure and with the combination plumbing fixture partly in side elevation and partly in central-section;

Fig. 2 is a view partly in front elevation of the structure of Fig. 1 and partly in vertical-section;

Fig. 3 is a view partly in plan and partly in horizontal section taken on the line 3—3 of Fig. 2;

Fig. 4 is a perspective view of the mixed-water tube detached;

Fig. 5 is a broken perspective view of the two-way valve-plug detached;

Fig. 6 is a broken view in vertical section

through a wall-structure and showing two oppositely-facing combination plumbing fixtures in conjunction with the said wall-structure and with some of the parts in vertical section;

Fig. 7 is a transverse sectional view taken on the line 7—7 of Fig. 6 with some of the parts left in plan;

Fig. 8 is a broken vertical-sectional view taken on the line 8—8 of Fig. 7; and

Fig. 9 is a broken schematic perspective view showing the piping associated with the structure of Figs. 7 and 8.

The structure of Figs. 1 to 5 inclusive

The combination plumbing fixture herein chosen in Figs. 1 to 5 inclusive for purposes of illustrating the present invention includes a hollow elongated mixing-head 10 which may be conveniently formed of cast brass and which is formed at the left side of its rear with a horizontal hot-water-inlet passage 11 communicating at its forward end with the hollow interior or mixing-chamber of the mixing-head and opening rearwardly for connection to a hot-water-supply pipe. The said hot-water-inlet passage 11 is formed partly in the rear wall of the mixing-head proper and partly within a tubular extension 12 formed integral with and projecting rearwardly from the rear wall of the mixing-head. In the particular instance shown, the exterior surface of the tubular extension 12 is of smooth cylindrical form and is snugly telescoped within the forward end of a nipple 13 which may be conveniently formed of copper tubing and sweat-soldered to the said extension 12. The tubular extension 12 and the nipple 13 may be viewed as constituting a "hot-water-supply duct" by means of which hot water is supplied to the mixing-chamber within the mixing-head 10.

The nipple 13, above referred to, extends rearwardly into a wall-structure 14 and has its rear end soldered or otherwise secured to the upper forward end of an elbow 15 which curves downwardly and has its lower end in turn sweat-soldered or otherwise secured to the upper end of a hot-water-supply pipe 16 (Fig. 2) leading from any suitable source of hot-water supply.

Axially in line with the hot-water-inlet passage 11 and threaded into the forward end thereof is a tubular valve-seat 17, the forward edge of which is adapted to be engaged by the rear face of the valve-head 18 of a hot-water-control valve generally designated by the reference character 19. The hot-water-control valve 19 may be of any approved construction and requires no de-

tailed description herein save to state that its valve-head 18 is threaded into the mixing-head 10 and is rotated for advancing or retiring the said valve-head 18 toward or away from the valve-seat 17, by means of an operating-handle 20 located at the forward end of the valve-structure, as is further shown in Fig. 3.

At its right-hand end the mixing-head 10 above described is provided with a horizontal cold-water-inlet passage 21 formed partly in the rear wall of the said mixing-head and partly in a tubular extension 22 formed integral with and extending horizontally rearwardly from the said mixing-head, as is shown especially well in Fig. 3. The rear portion of the tubular extension 22 fits snugly within and is sweat-soldered to the forward end of a nipple 23 corresponding to the nipple 13 before described and extending into the wall-structure 14. The tubular-extension 22 and the nipple 23 may be viewed as constituting a "cold-water-supply duct" by means of which cold water is supplied to the mixing-chamber within the mixing-head 10.

The nipple 23 above referred to is sweat-soldered or otherwise secured at its rear end to the upper forward end of an elbow 24 having its lower end in turn secured in a watertight manner to the upper end of a cold-water-supply pipe 25 leading upwardly from any suitable source of cold-water supply.

Coaxially with and threaded into the forward end of the horizontal cold-water-inlet passage 21 of the mixing-head 10 is a tubular valve-seat 26 positioned to have its forward edge engaged by the rear face of a valve-head 27 forming a feature of a cold-water-control valve generally designated by the reference character 28. The said cold-water-control valve 28, like the valve 19 before described, requires no detailed description herein other than to note that its valve-head 27 is threadedly mounted in the mixing-head 10 and is adapted to be rotated for advancing and retiring the said head with respect to the valve-seat 26, by means of an operating-handle 29 mounted at the extreme forward end of the said valve 28.

As will be seen from the foregoing and by reference to the accompanying drawings, both the hot-water-inlet passage 11 and the cold-water-inlet passage 21 extend horizontally from front to rear with respect to the mixing-head 10. Intermediate its respective opposite ends the mixing-head 10 is formed with a vertical mixed-water passage 30 communicating at its upper end with the hollow interior of the mixing-head and extending downwardly through an externally-threaded tubular extension 31 formed integral with the bottom wall of the said mixing-head, as shown especially well in Fig. 2. Telescopically fitting within the mixed-water passage 30 is the upper end of a mixed-water tube 32 extending vertically forwardly of the wall-structure 14. The said tube 32 is secured in a watertight manner to the tubular extension 31 of the mixing-head 10 by means of a compression-nut 33 threaded onto the said extension and serving in conjunction with the outer end of the latter to compress a resilient packing-ring 34 against the periphery of the said tube 32.

The lower end of the mixed-water tube 32 is provided with an outwardly-extending annular flange 35 which is clamped against the upper face of a resilient packing-ring 36 by means of an inverted cup-shaped clamping-nut 37. The

said clamping-nut 37 is threadedly connected to the upper end of a tubular extension 38 formed integral with and upwardly projecting from a spout generally designated by the reference character 39. The packing-ring 36 rests upon the upper face of the tubular extension 38 axially in line with the tube 32 and the vertical mixed-water passage 40 formed mainly in the tubular extension 38 and partly in the upper wall of the spout 39 proper as is clearly shown in Figs. 1 and 2, so that the interior of the mixing-head 10 is connected for the passage of mixed water to the interior of the spout 39.

The tubular-extension 31 of the mixing-head 10 together with the tube 32 and tubular extension 38 of the spout 39, may be viewed as constituting a "mixed-water-duct" by means of which mixed hot water and cold water may flow from the interior of the said mixing-head to the spout 39 for selective diversion therein, as will hereinafter appear.

The spout 39 may be conveniently formed of cast brass or other suitable material and has mounted in it intermediate its front and rear ends a rotary two-way-valve plug 41 as is shown in Figs. 1 and 2. The plug 41 is formed with an L-shaped passage 42 comprising two radial arms 43 and 44.

The radial arm 43 of the passage 42 in the plug 41 is adapted to be selectively registered with either the mixed-water passage 40 of the spout 39 or with a tub-supply channel 45 formed in the spout 39 and leading forwardly from the two-way-valve plug 41, as is especially well shown in Fig. 1. Preferably and as shown, the forward end of the spout 39 is turned downwardly to direct mixed water into a bathtub (not shown). The complementary radial arm 44 of the two-way-valve plug 41 is adapted to be selectively registered with either the mixed-water passage 40 in the upper portion of the spout 39 or with a horizontal shower-supply channel 46 formed in the said spout and extending rearwardly from the plug 41 therein. The rear portion of the channel 46 just referred to is enlarged in diameter and internally threaded and intersects the rear face of the spout 39 which constitutes a rearwardly-facing stop-shoulder or wall-seat 47 for engagement with the forward face of the wall-structure 14 before referred to.

Threaded into the internally-threaded and enlarged rear portion of the shower-supply channel 46 in the rear portion of the spout 39, is a nipple 48 extending rearwardly through the wall-structure 14 and having its rear end connected to the lower forward end of an elbow 49. The upper end of the said elbow 49 has connected to it a vertical shower-supply pipe 50 extending upwardly in the wall-structure 14 to the rear of the front sheath thereof. The said pipe 50 is connected in turn at its upper end to the lower end of an elbow 51, as is shown particularly well in Fig. 1. The upper forward portion of the said elbow 51 receives the rear end of a horizontal nipple 52 extending forwardly through the wall-structure 14 and coupled at its forward end to the rear end of a shower-head generally designated by the reference character 53.

The two-way-valve plug 41 before referred to is generally of cylindrically contoured form and snugly fits with freedom for turning, the interior of a cylindrically-contoured recess 54 extending transversely in the spout 39 intermediate the respective opposite ends thereof. At its inner end

the recess 54 is intersected by a shallow guide-pocket 55 formed in the wall of the spout 39 adjacent the inner end of the plug 41, as is shown in Fig. 2. The said guide-pocket 55 receives with a turning fit a short cylindrically-contoured tenon 56 formed integral with and projecting from the inner face of the plug 41. The end of the recess 54 opposite the guide-pocket 55 is internally threaded for threaded engagement with a retaining-nut 57 which serves to limit the axial displacement of the plug 41. The said plug 41 is provided with an axial stem 53 extending outwardly through the retaining-nut 57 and provided at its outer end with a lever-like handle 59. For the purpose of limiting the turning movement of the two-way-valve plug 41, to a substantially 90° movement, the said plug is provided in its periphery with an arcuate notch 60, the respective opposite end-walls of which are adapted to engage with a stop-pin 61 mounted in the spout 39.

Fitting over the mixing-head 10 is a cup-shaped escutcheon 62 which may be conveniently drawn up from sheet metal and which has the rearwardly-directed edge of its lateral-boundary wall seated against the front face of the wall-structure 14. The front or end wall of the said escutcheon 62 is pierced for the passage of the valves 19 and 28 therethrough and is retained in place by nuts 63—63 mounted on the said valves. The lower wall of the said escutcheon is formed with an aperture 64 for the clearance of the tube 32 and the compression-nut 33.

When both hot and cold water are admitted into the interior of the mixing-head 10 by opening the valves 19 and 28 to the desired degree, the said hot water and cold water will mix in the interior of the said mixing-head and in this mixed condition flow downwardly through the mixed-water tube 32 into the mixed-water passage 40 in the spout 39. Now should the handle 59 of the two-way valve plug 41 be swung upwardly into a vertical position as indicated by the broken lines S in Fig. 1, then the said mixed water will pass downwardly into the radial arm 43 of the L-shaped passage 42 in the said plug 41. The mixed water will now flow rearwardly through the radial arm 44 of the L-shaped passage 42, thence through the shower-supply channel 46 in the rear of the spout 39, and thence upwardly through the parts 48, 49, 50, 51 and 52 to the shower-head 53 for emergence therethrough.

On the other hand, should the handle 59 be swung downwardly and forwardly into a horizontal position, as indicated by the broken lines T in Fig. 1, then the radial arm 44 of the L-shaped passage 42 in the plug 41 will be brought into registry with the mixed-water passage 40 in the spout 39 and the radial arm 43 will simultaneously be brought into registry with the forwardly extending tub-supply channel 45 in the spout 39. Under these conditions, water flowing downwardly from the mixing-head 10 in through the mixed-water passage 40 in the spout 39 will be directed forwardly through the tub-supply channel 45 of the spout 39 for emergence therefrom into a tub. Under these conditions, the mixed water referred to will be shut off from the shower-head 53.

By connecting the mixing-head 10 at a point forwardly of the wall-structure 14 with the spout 39 or its equivalent, at least one connection through the wall may be eliminated with a corresponding ease of installation and with at least

one less joint to the rear of the wall which might develop a leak.

Thus, by means of the present invention, it is necessary to have but two through-the-wall connections to the mixing-head 10 or its equivalent, i. e., a hot-water-supply pipe and a cold-water-supply pipe. By means of this invention, instead of the mixed water being conducted back through the wall and thence downwardly to a valve-structure for diversion either to a tub or a shower-head, the said mixed-water connection is made forwardly of the wall and hence forwardly of the stop-shoulder or wall-seat 47 of the spout 39.

The structure of Figs. 6 to 9 inclusive

In the embodiment now to be described, a wall-structure generally designated by the reference character 66 is employed, which has two laterally-spaced-apart skin- or surface-portions respectively designated 67 and 68 providing a vertical channel 69 between them, in accordance with the usual practice in wall-structures. The wall-structure 66 in the instance shown constitutes a partition wall between two bathrooms respectively located on its opposite sides.

Associated with its left side (Fig. 6), the wall-structure 66 has a shower-head 53a, a mixing-head 10a, a hot-water control-valve 19a, a cold-water control-valve 28a, and a spout 39a. The parts just referred to correspond to the parts 53, 10, 19, 28 and 39 of the structure of Figs. 1 to 5 inclusive, and have associated with them similar parts and features not requiring detailed designation.

Like the mixing-head 10 before described, the mixing-head 10a has two tubular-extensions projecting from its rear, namely, a tubular-extension 12a for the admission of hot water into the mixing-head 10a, and a tubular-extension 22a provided for the admission of cold water into the mixing-head 10a.

Associated with the right side (Fig. 6) of the wall-structure 66 are elements which are substantial duplicates of the elements associated with the opposite side of the said wall-structure, namely, a shower-head 53b, a mixing-head 10b, a hot-water control-valve 19b, a cold-water control-valve 28b, and a spout 39b. The said parts correspond to the similarly-numbered parts at the left of the wall-structure.

Like the mixing-head 10 and the mixing-head 10a before described, the mixing-head 10b is formed with two tubular-extensions projecting from its rear, namely, a tubular-extension 12b providing for the admission of hot water to the mixing-head 10b, and a tubular-extension 22b providing for the admission of cold water into the mixing-head 10b.

Secured against the inner face of the left skin-portion 67 of the wall-structure 66 is a template 70a which may be conveniently formed of sheet metal and which is formed with three horizontally-spaced-apart apertures respectively surrounded by forwardly-extending integral cuffs 71a, 72a and 73a. The said template may be secured to the wall-structure in any approved manner.

Similarly, the right (Fig. 6) skin-portion 68 of the wall-structure 66 has located against its inner face a template 70b corresponding to the template 70a and, like the same, having three laterally-spaced-apart apertures respectively surrounded by integral cuffs 71b, 72b and 73b, as is especially well shown in Fig. 7. The said template is also rigidly secured to the wall-structure in any approved manner.

Returning now to the mixing-head 10a, it will be noted that the tubular-extension 12a has fitted thereover the upwardly-and-outwardly-extending arm of an elbow 75a located mainly in the vertical channel 69 in the wall-structure 66 and extending through the cuff 71a of the template 70a. Preferably, in order to stabilize the piping to a maximum degree, the portion of the elbow 75a extending through the template 70a will be sweat-soldered thereto and also sweat-soldered to the tubular-extension 12a.

The lower end of the elbow 75a is telescopically interfitted with the upper end of a tube 76a leading downwardly from the said elbow in the vertical channel 69. The lower end of the tube 76a is telescopically interfitted with the upper end of the line-portion of a T 77 which has the lower end of its line- or run-portion telescopically connected to a hot-water-supply tube 78 leading upwardly through the channel 69 from any convenient source of hot-water supply. The side-outlet or branch of the T 77 telescopically receives the adjacent end of an elbow 79 which extends from the T 77 adjacent the inner face of the left skin-portion 67 diagonally toward the inner face of the right skin-portion 68 and thence upwardly. The upturned portion of the elbow 79 is telescopically interfitted with a vertical tube 76b, which, in turn, is connected at its upper end to the lower end of an upwardly-and-outwardly-extending elbow 75b corresponding to the elbow 75a previously described, but extending in a direction opposite thereto.

The horizontal portion of the elbow 75b above referred to extends through the cuff 71b of the template 70b, and is preferably sweat-soldered or otherwise secured thereto. The outer end of the elbow 75b in a position outwardly from the template 70b is connected to the tubular-extension 12b of the mixing-head 10b so as to supply hot water thereto.

From the foregoing it will be seen that the hot-water-supply tube 78 is connected to both of the mixing-heads 10a and 10b so as to supply hot water to both thereof.

The tubular-extension 22a of the mixing-head 10a fits within and is rigidly secured to the outer end of the horizontal reach of an elbow 89a extending also downwardly into the channel 69 in the wall-structure 66. The horizontal reach of the elbow 89a extends through the cuff 73a of the template 70a and is preferably sweat-soldered thereto. Rigidly connected to the lower inner portion of the elbow 89a is a vertical tube 81a leading downwardly in the channel 69 from the said elbow and connected at its lower end to the upper end of the run- or line-portion of a T 82 located in a plane beneath the T 77 before referred to. The lower end of the line- or run-portion of the T 82 is connected to the upper end of a cold-water-supply tube 83 leading upwardly in the channel 69 of the wall-structure 66 from any convenient source of cold-water supply.

The branch-portion of the T 82 above referred to is connected to the adjacent end of an elbow 84 leading diagonally away from the said T 82 beneath the elbow 79 and into a position adjacent the inner face of the right skin-portion 68 of the wall-structure 66. The upper terminal of the elbow 84 is connected to the lower end of a vertical tube 81b substantially corresponding to the tube 81a before referred to, and connected at its upper end to the lower vertical portion of an elbow 80b. The said elbow 80b corresponds to the elbow 89a before described, and extends out-

wardly from the channel 69 through the cuff 73b in the template 70b thence over and into fluid-tight connection with the tubular-extension 22b of the mixing-head 10b.

From the foregoing it will be seen that cold water is supplied to both the mixing-heads 10a and 10b from the cold-water-supply tube 83.

Extending into the cuff 72a of the template 70a at the inner face of the left skin-portion 67 of the wall-structure 66, is a tubular coupling 85a fitting at its rear end within the branch-portion 86a of a T-like brace or stabilizer generally designated by the reference character 87a. The vertical run- or line-portion 88a has passing uninterruptedly therethrough an intermediate portion of a vertical shower-supply tube 89a extending vertically in the channel 69 of the wall-structure 66 adjacent the inner face of the left skin-portion 67 thereof. Preferably, the tube 89a is sweat-soldered in the T-like brace or bracket 87a and the tubular coupling 85a is also preferably sweat-soldered both to the branch-portion 86a and to the cuff 72a of the template 70a.

The shower-supply tube 89a leads upwardly to the shower-head 53a and in general corresponds to the shower-supply tube 50 of the structure of Figs. 1 to 5 inclusive.

At its lower end the shower-supply tube 89a is connected to the upper end of an elbow 90a which sweeps downwardly and outwardly from the said tube 89a and is connected by means of a nipple 91a to the spout 39a before described.

Sweat-soldered or otherwise secured into the cuff 72b of the template 70b is the outer end of a tubular coupling 85b having its inner end sweat-soldered within the branch-portion 86b of a T-like brace or support 87b.

The T-like brace or bracket 87b has extending uninterruptedly through its run- or line-portion 88b, the intermediate portion of a shower-supply tube 89b extending parallel with the tube 89a but on the opposite side of the channel 69 therefrom. The upper end of the shower-supply tube 89b is connected to the shower-head 53b in a manner similar to that described in connection with the structure of Figs. 1 to 5 inclusive. The lower end of the shower-supply tube 89b is connected to the upper inner end of an elbow 90b sweeping downwardly and outwardly from the said tube 89b and is connected at its lower portion to the spout 39b by means of a nipple 91b.

It will be seen by reference to the foregoing and the drawings that by means of the present invention, two abutting bathrooms may be supplied with both tub and shower water (hot, cold and mixed) without requiring that the channel in the intervening wall space be of undue depth from front to rear.

The construction of the present invention provides for the ready diversion of mixed water to either a tub or to a shower-head without requiring excessively complex and elaborate fittings and with a low cost for manufacture and marked ease of installation.

The invention may be carried out in other specific ways than those herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive, and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

We claim:

1. A combination plumbing fixture, comprising: a spout having a mixed-water-inlet passage therein, a forwardly-extending tub-feeding passage therein communicating with the said mixed-water-inlet passage and a rearwardly-extending shower-feeding passage therein also communicating with the said mixed-water-inlet passage; a two-way valve mounted on the said spout and constructed and arranged to selectively divert mixed water from the mixed-water-inlet passage of the said spout either forwardly through the tub-supply passage thereof or rearwardly through the shower-supply passage of the said spout; a mixing-head located above the said spout and having a mixing-chamber therein, a hot-water-supply duct projecting rearwardly from the said mixing-chamber for extension into a wall-structure, a cold-water-supply duct projecting rearwardly from the said mixing-chamber for extension also into a wall-structure, and a mixed-water duct leading downwardly from the said mixing-chamber to the mixed-water-inlet passage of the said spout; and valve-means controlling the flow of both hot water and cold water entering the said mixing-head from the respective rearwardly-extending hot-water-supply duct and the rearwardly-extending cold-water-supply duct thereof.

2. A combination plumbing fixture, comprising: a spout having a mixed-water-inlet passage therein, a forwardly-extending tub-feeding passage therein communicating with the said mixed-water-inlet passage and a rearwardly-extending shower-feeding passage therein also communicating with the said mixed-water-inlet passage; a two-way valve mounted on the said spout and constructed and arranged to selectively divert mixed water from the mixed-water-inlet passage of the said spout either forwardly through the tub-supply passage thereof or rearwardly through the shower-supply passage of the said spout; a mixing-head located above the said spout and having a mixing-chamber therein, a hot-water-supply duct projecting rearwardly from the said mixing-chamber for extension into a wall-structure, a cold-water-supply duct projecting rearwardly from the said mixing-chamber for extension also into a wall-structure, and a mixed-water duct leading downwardly from the said mixing-chamber to the mixed-water-inlet passage of the said spout; a cup-shaped escutcheon fitting over the said mixing-head and having its open end facing rearwardly and having its lower portion provided with a clearance-opening for the mixed-water duct leading from the said mixing-head to the said spout; and valve-means projecting forwardly through the said escutcheon and controlling the flow of both hot water and cold water entering the said mixing-head from the respective rearwardly-projecting hot-water-supply duct and the rearwardly-extending cold-water-supply duct thereof.

3. A combination plumbing fixture, comprising: a spout having a rearwardly-facing stop-abutment for positioning the spout with respect to the outer face of a wall-structure, the said spout also having a mixed-water-inlet passage therein located forwardly of the said stop-abutment, a forwardly-extending tub-feeding passage therein communicating with the said mixed-water-inlet passage and a rearwardly-extending shower-feeding passage in the said spout; a two-way valve mounted on the said spout and constructed and arranged to selectively divert mixed

water from the mixed-water-inlet passage of the said spout either forwardly through the tub-supply passage thereof or rearwardly through the shower-supply passage of the said spout; a mixing-head located above the said spout in a position mainly forwardly of the stop-abutment of the latter and having a mixing-chamber therein, a hot-water-supply duct projecting rearwardly from the said mixing-chamber for extension into a wall-structure, a cold-water-supply duct projecting rearwardly from the said mixing-chamber for extension also into a wall-structure, and a mixed-water duct leading downwardly from the said mixing-chamber to the mixed-water-inlet passage of the said spout; and valve-means controlling the flow of both hot water and cold water entering the said mixing-head from the respective rearwardly-extending hot-water-supply duct and the rearwardly-extending cold-water-supply duct thereof.

4. A combination plumbing fixture, comprising: a spout having a rearwardly-facing stop-abutment for positioning the spout with respect to the front face of a wall-structure, the said spout also having a mixed-water-inlet passage therein located forwardly of the said stop-abutment, a forwardly-extending tub-feeding passage therein communicating with the said mixed-water-inlet passage and a rearwardly-extending shower-feeding passage in the said spout; a two-way valve mounted on the said spout and constructed and arranged to selectively divert mixed water from the mixed-water-inlet passage of the said spout either forwardly through the tub-supply passage thereof or rearwardly through the shower-supply passage of the said spout; a mixing-head located above the said spout in a position mainly forwardly of the stop-abutment of the latter and having a mixing-chamber therein, a hot-water-supply duct projecting rearwardly from the said mixing-chamber for extension into a wall-structure, a cold-water-supply duct projecting rearwardly from the said mixing-chamber for extension also into a wall-structure, and a mixed-water duct leading downwardly from the said mixing-chamber to the mixed-water-inlet passage of the said spout; a cup-shaped escutcheon fitting over the said mixing-head and having its open end facing rearwardly and having its lower portion provided with a clearance-opening for the mixed-water duct leading from the said mixing-head to the said spout; and valve-means projecting forwardly through the said escutcheon and controlling the flow of both hot water and cold water entering the said mixing-head from the respective rearwardly-projecting hot-water-supply duct and rearwardly-extending cold-water supply duct thereof.

5. A combination plumbing fixture, comprising: a spout having a mixed-water-inlet passage therein, a forwardly-extending tub-feeding passage therein communicating with the said mixed-water-inlet passage and a rearwardly-extending shower-feeding passage therein also communicating with the said mixed-water-inlet passage; a two-way valve mounted on the said spout and constructed and arranged to selectively divert mixed water from the mixed-water-inlet passage of the said spout either forwardly through the tub-supply passage thereof or rearwardly through the shower-supply passage of the said spout; a mixing-head located above the said spout and having a mixing-chamber therein, an integral tubular hot-water-supply extension projecting rearwardly from the said mixing-

head, an integral tubular cold-water-supply extension also projecting rearwardly from the said mixing-head and communicating with the mixing-chamber therein, and an integral tubular mixed-water extension leading downwardly from the said mixing-head and in communication at its upper end with the mixing chamber of the said mixing-head; a vertical tubular member removably connecting the tubular mixed-water extension of the said mixing-head with the mixed-water-inlet passage of the said spout; and valve-means controlling the flow of both hot water and cold water entering the said mixing-head from the respective rearwardly-extending hot-water-supply extension and the rearwardly-extending cold-water-supply extension thereof.

6. A combination plumbing fixture, comprising: a spout having a mixed-water-inlet passage therein, a forwardly-extending tub-feeding passage therein communicating with the said mixed-water-inlet passage and a rearwardly-extending shower-feeding passage therein also communicating with the said mixed-water-inlet passage; a two-way valve mounted on the said spout and constructed and arranged to selectively divert mixed water from the mixed-water-inlet passage of the said spout either forwardly through the tub-supply passage thereof or rearwardly through the shower-supply passage of the said spout; a mixing-head located above the said spout and having a mixing-chamber therein, an integral tubular hot-water-supply extension projecting rearwardly from the said mixing-head, an integral tubular cold-water-supply extension also projecting rearwardly from the said mixing-head and communicating with the mixing-chamber therein, and an integral tubular mixed-water extension leading downwardly from the said mixing-head and in communication at its upper end with the mixing-chamber of the said mixing-head; a vertical tubular member removably connecting the tubular mixed-water extension of the said mixing-head with the mixed-water-inlet passage of the said spout; a cup-shaped escutcheon fitting over the said mixing-head and having its open end facing rearwardly and having its lower portion provided with a clearance-opening for the said vertical tubular member leading from the said mixing-head to the said spout; and valve-means projecting forwardly through the said escutcheon and controlling the flow of both hot and cold water entering the said mixing-head from the respective rearwardly-extending hot-water extension and the rearwardly-extending cold-water extension thereof.

7. A combination plumbing fixture, comprising: a spout having a rearwardly-facing stop-abutment for positioning the spout with respect to the outer face of a wall-structure, the said spout also having a mixed-water-inlet passage therein located forwardly of the said stop-abutment, a forwardly-extending tub-feeding passage therein communicating with the said mixed-water-inlet passage and a rearwardly-extending shower-feeding passage in the said spout; a two-way valve mounted on the said spout and constructed and arranged to selectively divert mixed water from the mixed-water-

inlet passage of the said spout either forwardly through the tub-supply passage thereof or rearwardly through the shower-supply passage of the said spout; a mixing-head located above the said spout and having a mixing-chamber therein, an integral tubular hot-water-supply extension projecting rearwardly from the said mixing-head, an integral tubular cold-water-supply extension also projecting rearwardly from the said mixing-head and communicating with the mixing-chamber therein, an integral tubular mixed-water extension leading downwardly from the said mixing-head and in communication at its upper end with the mixing-chamber of the said mixing-head; a vertical tubular member removably connecting the said tubular mixed-water extension of the said mixing-head with the mixed-water-inlet passage of the said spout; and valve-means controlling the flow of both hot water and cold water entering the said mixing-head from the respective rearwardly-extending hot-water-supply extension and the rearwardly-extending cold-water-supply extension thereof.

8. A combination plumbing fixture, comprising: a spout having a rearwardly-facing stop-abutment for positioning the spout with respect to the outer face of a wall-structure, the said spout also having a mixed-water-inlet passage therein located forwardly of the said stop-abutment, a forwardly-extending tub-feeding passage therein communicating with the said mixed-water-inlet passage and a rearwardly-extending shower-feeding passage in the said spout; a two-way valve mounted on the said spout and constructed and arranged to selectively divert mixed water from the mixed-water-inlet passage of the said spout either forwardly through the tub-supply passage thereof or rearwardly through the shower-supply passage of the said spout; a mixing-head located above the said spout and having a mixing-chamber therein, an integral tubular hot-water supply extension projecting rearwardly from the said mixing-head, an integral tubular cold-water-supply extension also projecting rearwardly from the said mixing-head and communicating with the mixing-chamber therein, an integral tubular mixed-water extension leading downwardly from the said mixing-head and in communication at its upper end with the mixing-chamber of the said mixing-head; a vertical tubular member removably connecting the said tubular mixed-water extension of the said mixing-head with the mixed-water-inlet passage of the said spout; a cup-shaped escutcheon fitting over the said mixing-head and having its open end facing rearwardly and having its lower portion provided with a clearance-opening for the said vertical tubular member connecting the said mixing-head to the said spout; and valve-means projecting forwardly through the said escutcheon and controlling the flow of both hot and cold water entering the said mixing-head from the respective rearwardly-extending hot-water-supply extension and the rearwardly-extending cold-water-supply extension thereof.

JAMES W. McGARRY.
ELTON A. POPE.