V. F. BERNESSER & J. J. CROTTY.

VALVE.

APPLICATION FILED JULY 20, 1908.

985,134.

Patented Feb. 28, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

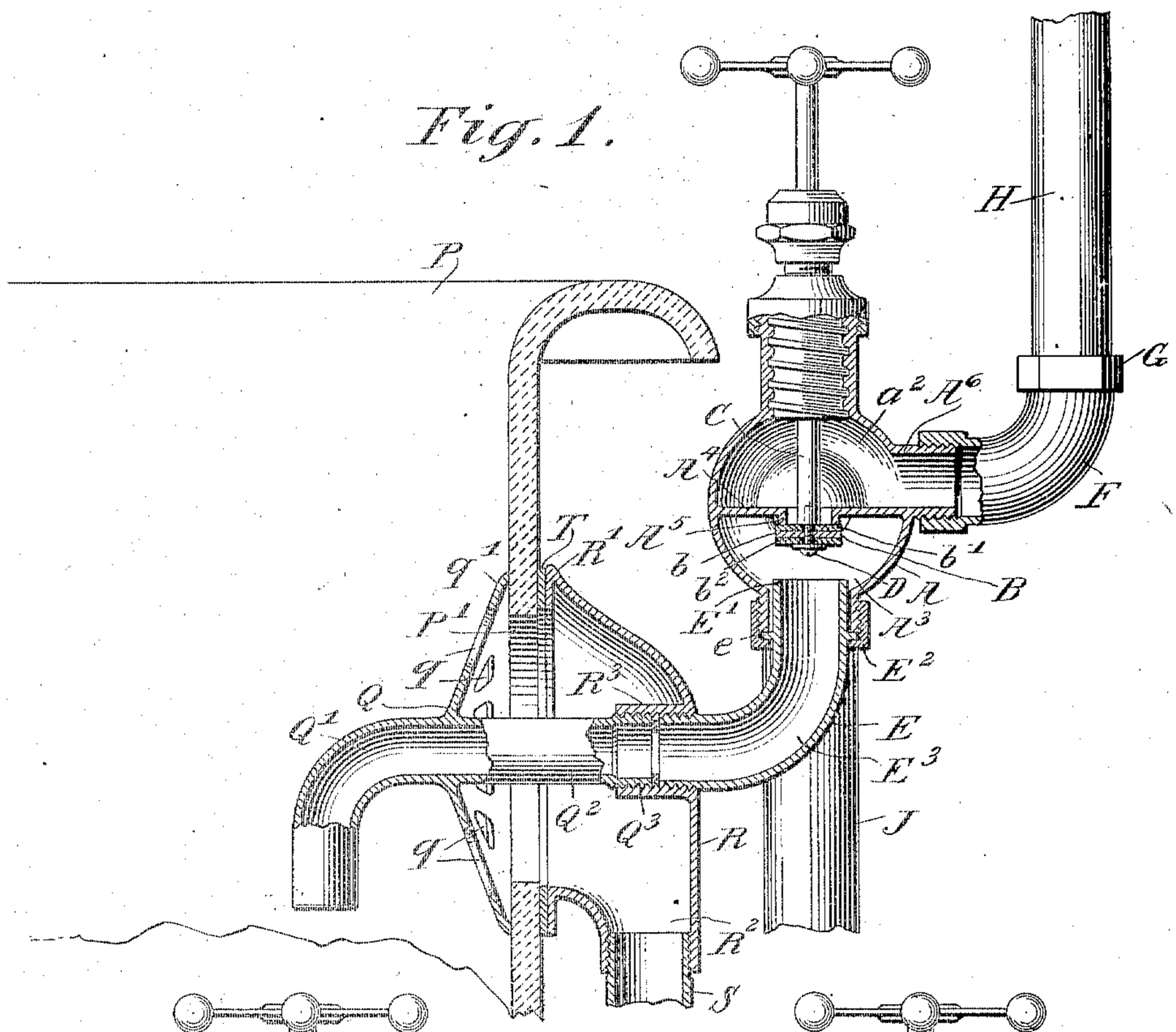
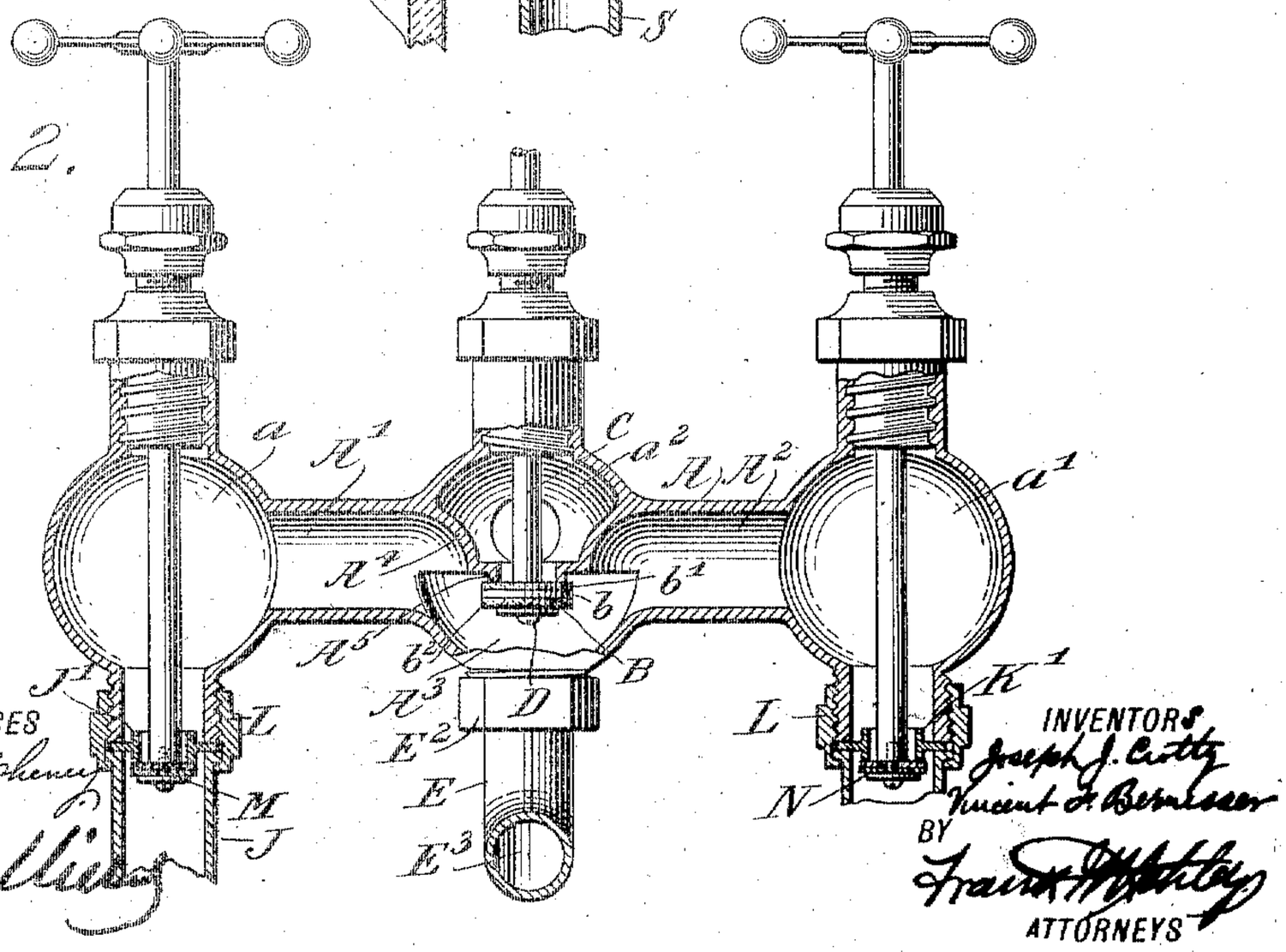


Fig. 2.



WITNESSES

Geo. E. Edney

J. Kelly

INVENTORS

Joseph J. Crotty

Vincent F. Bernesser

BY

Frank P. Whitley

ATTORNEYS

V. F. BERNESSER & J. J. CROTTY.

VALVE.

APPLICATION FILED JULY 20, 1908.

985,134.

Patented Feb. 28, 1911.

2 SHEETS—SHEET 2.

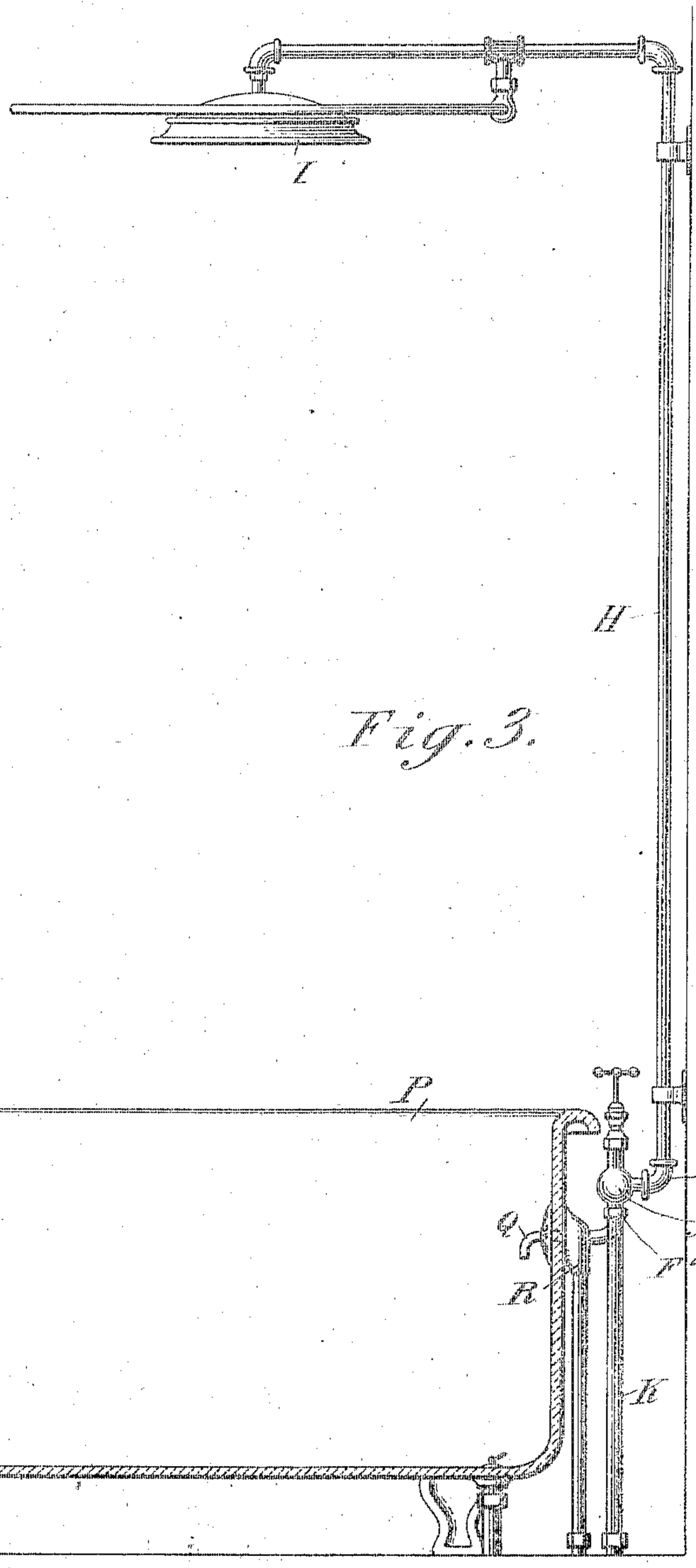


Fig. 3.

WITNESSES

INVENTORS

ATTORNEYS

UNITED STATES PATENT OFFICE.

VINCENT F. BERNESSER AND JOSEPH J. CROTTY, OF NEW YORK, N. Y., ASSIGNORS TO MICHAEL FARRELL, OF NEW YORK, N. Y.

VALVE.

985,134. Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed July 20, 1908. Serial No. 444,328.

To all whom it may concern:

Be it known that we, VINCENT F. BERNESSER and JOSEPH J. CROTTY, citizens of the United States, and both residents of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Valves, of which the following is a specification.

Our invention relates to valves, and particularly to that type used in connection with bath tubs.

The object of our invention is to provide a combination of valves by means of which water may be drawn from two separate sources of supply and distributed to two different outlets, and to combine the fluids from the two separate sources of supply and deliver them mixed in any desired proportion to either of said outlets separately or simultaneously.

A further object is to provide said valve at a low cost and in such form as to permit of its use in connection with a bath tub by using a single opening therein.

A further object is to provide means whereby the portion carrying the valves may be removed from the tub by unscrewing three unions to permit of valve seats being renewed, etc.

A further object is to provide a novel means for joining the valve to the tub.

Referring to the drawings which form a part of this specification, Figure 1 is a view partly in section, taken on a line through the center of the chamber which is in communication with the spray device, and also disclosing a portion of the tub, and the outlet of the valve thereto. Fig. 2 is a front elevational view, partly in section, of our improved valve; Fig. 3 is a side view of the valve and connections as they appear when connected to a bath tub and also discloses the shower bath connected in its relative position to the tub.

A, indicates the body portion of the valve which is usually cast from brass, and which is provided with three chambers indicated by a—a' and a^2. The chambers a and a' are connected in open communication with each other by passages A′ and A², and with an outlet chamber A³. Formed integral with the body portion A is a partition A⁴ having a valve seat A⁵ at its lower end. A duplex valve B comprising a metal disk b, having a leather or other suitable washer b' on one side and a similar washer b^2 on the other side is held to a stem C by a screw D, and thus forms a valve to seat on the seat A⁵ and a valve to seat on the seat E′ which is formed on the upper end of the casting E. The casting E is provided with a laterally extending flange e which abuts the body portion, and a coupling nut E² serves to hold the parts together as shown. The body portion A is provided with a longitudinally extending nipple A⁶ having a threaded end, and an elbow F is screwed thereon and is provided with a coupling nut G which holds pipe H to said elbow. The pipe H leads to and supports the shower device I.

J and K indicate pipes through which respectively hot and cold water flows to the chambers of the body portion or casing A and held between the upper end of each of said pipes, and the casing is a reversible valve seat element J′ and K′ respectively, and each is secured to the casing A by a coupling nut L, as indicated. The elements J′ and K′ are duplicates of each other and are provided with a valve seat on their upper and lower ends, so that they may be reversed and thus increase the life of the elements, and also by this construction the valves M and N may seat on the upper or lower valve seat. We prefer to seat the said valves on the lower valve seats as indicated, so that they close with the fluid pressure. The valves B, M and N are each carried by the usual form of valve stems and said stems are provided with the usual threads, caps, stuffing boxes and hand wheels.

P indicates a portion of a bath tub, provided with a hole P′, and Q indicates a casting formed to serve as the outlet from the casing A by way of conduit Q′, and having openings q—q, etc., formed in its flange q' to serve as overflow outlets.

R indicates a casting having a flange R′ which extends around the hole P′ and is provided with an overflow outlet R² which is in communication with a drain pipe S. Formed integral with the wall of the casting R is an inwardly projecting nipple R³ which is threaded on its inner side to connect with one end of the elbow E as shown, and the casting Q is provided with a tubular extension Q² having a threaded end Q³ which also screws in said nipple R³. A gasket T is used to effect a tight joint between the surface of the tub and the flange R′ and

by screwing the extension Q^2 into the nipple R^3, the castings Q and R are drawn tightly together and the conduit Q′ is established in communication with the conduit E^3, and thus with the chambers *a*, *a′* and a^3 of the casing.

The device may be operated as follows: Assuming that hot water is in pipe J and cold water in pipe K under pressure from a source of supply, and the valves are all closed as indicated in the drawings, by opening valve J hot water would flow to the tub and by opening valve K cold water would flow, or by opening both at the same time, the hot and cold water would flow together and the temperature of the same flowing into the tub would be varied as desired.

By opening valve B relative to its seat A^5 and causing same to seat at E, the water would flow to the shower device I instead of into the tub, as will be readily understood.

By simply unscrewing the coupling nuts G, L and E^2, the valve casing may be removed without disturbing the water pipes or tub castings R and Q and the valves B, M and N may be examined or renewed with ease.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A plumbing fixture for bath tubs comprising a valve-controlled distribution chamber having two inlet openings and two outlet openings, said outlet openings being oppositely disposed; suitable independent valves to control the said inlet openings; a single, double-acting valve arranged to close alternately each of the said outlet ports; a delivery pipe leading from one of said outlet openings through the side wall of the tub and having a perforated flange adapted to cover the overflow opening of a bath tub; an enlarged terminal of the overflow-pipe adapted to cover the said overflow opening in said tub and having a screw-threaded perforation to receive said delivery pipe to form a clamp therewith to support the said fixture.

2. A plumbing fixture for bath tubs comprising a distributing chamber formed in one piece having two inlet openings and an outlet opening and a partition dividing the said chamber, said partition provided with a valve opening in line with the said outlet opening; suitable independent valves to control the said inlet openings; a single, double-acting valve arranged to close the said outlet opening and said opening in the said partition; a delivery pipe leading from said outlet opening through the side wall of the tub and having a perforated flange adapted to cover the overflow opening of said tub; an enlarged terminal of the overflow pipe adapted to cover the said overflow opening in said tub and having a screw-threaded perforation to receive said delivery pipe to form a clamp therewith to support the said fixture.

3. A plumbing fixture for bath tubs comprising a distributing chamber formed in one piece having two inlet openings and two outlet openings and each of said openings having a screw-threaded projection; suitable independent valves to control the said inlet openings; a single, double-acting valve arranged to close each and one at a time only of the said outlet ports; a delivery pipe leading from one of said outlet openings through the side wall of the tub; two supply pipes outside said tub and adapted to be connected with said inlet openings; three unions to connect the said supply pipes and the delivery pipe with said distributing chamber, said unions being outside the tub; and a supporting clamp to secure the said fixture to the tub consisting in screw coupled clamps through one of which and in screw thread engagement therewith is passed the said delivery pipe.

4. A plumbing fixture for bath tubs comprising a distributing chamber formed in one piece, having two inlet openings and an outlet opening and each said opening having a screw-threaded projection; two supply pipes; suitable connecting unions to connect the said pipes and outlets; one delivery pipe adapted to pass through the wall of the tub and having a perforated flange adapted to cover the overflow opening of a bath tub; an enlarged terminal of the overflow pipe adapted to cover the said overflow opening in said tub and having a screw-threaded perforation to receive said delivery pipe to form a clamp therewith to support the said fixture.

5. A plumbing fixture for bath tubs comprising a distributing chamber formed in one piece having two inlet openings and two outlet openings and a partition dividing one of said outlet openings from the said chamber and provided with a valve-controlled opening in line with one of the said outlet openings; a single, double-acting valve arranged to close each and one at a time only of the said outlet ports; reciprocating valves beyond the said inlet openings; removable disks adapted to rest over the end of the said inlet openings and between the said openings and said reciprocating valves, and having a central opening and a valve seat for the valve; a delivery pipe leading from one of said openings through the side wall of the tub and having a perforated flange adapted to cover the overflow opening of bath tub; an enlarged terminal of the overflow pipe adapted to cover the said overflow opening in said tub and having a screw threaded perforation to receive said delivery pipe to form a clamp therewith to support the said fixture.

6. A plumbing fixture for bath tubs comprising a distributing chamber formed in one piece having two inlet openings and an outlet opening and a partition dividing the said chamber and provided with a valve-controlled opening in line with the said outlet opening; a single, double-acting valve arranged to close the said outlet opening, and said opening in said partition; reciprocating valves having stems to carry the valves beyond the said inlet openings; removable disks adapted to rest over the end of the said inlet openings and between the said openings and said valves and each having a central opening and a valve seat for said valve; and a delivery pipe leading from one of said outlet openings through the said wall of the tub.

7. A plumbing fixture for bath tubs comprising a distributing chamber formed in one piece having two inlet openings and an outlet opening and a partition dividing the said chamber and provided with a valve controlled opening in line with the said outlet opening; a single, double-acting valve arranged to close the said outlet opening, and the opening in said partition; reciprocating valves having stems to carry the valves beyond the said inlet openings; removable disks adapted to rest over the end of the said inlet openings and between the said openings and said valves and each having a central opening and a valve seat for said valve; and a delivery pipe provided with a flange adapted to rest against the side of the tub and close the opening therein and screw threaded to receive a second flange to draw the same against the opposite side of the tub.

8. A plumbing fixture for bath tubs comprising a distributing chamber formed in one piece, having two inlet openings and an outlet opening and a partition dividing the said chamber and provided with a valve-controlled opening in line with the said outlet openings; a single, double-acting valve arranged to close the said outlet opening and the opening in said partition; reciprocating valves having a stem to carry the valve beyond the said inlet openings; removable disks adapted to rest over the end of the said inlet openings and between the said openings and said valves, and each having a central opening and a valve seat for said valve; a delivery pipe extended inside the tub and having a perforated flange; and a waste pipe connection to cover the opening in the tub in line with the said perforated flange and having a perforation to pass the said delivery pipe.

9. A plumbing fixture for bath tubs comprising a distributing chamber formed in one piece having two inlet openings and an outlet opening and a partition dividing the said chamber and provided with a valve-controlled opening in line with the said outlet opening; a single double-acting valve arranged to close the said outlet opening, and the opening in said partition; reciprocating valves having a stem to carry the valve outside the said inlet openings; removable disks adapted to rest over the end of the said inlet openings and said valves, and each having a central opening and a valve seat for said valve; a delivery pipe extended inside the tub through an opening therein and having a perforated flange to cover the said opening; said pipe being screw threaded on the outside of the said tub; a waste pipe connection to cover the opening in the tub in line with the said perforated flange and having a screw threaded perforation to engage the screw thread on the said delivery pipe to draw the said flange and connection toward each other and against the tub.

10. A plumbing fixture for bath tubs comprising a valve-controlled distributing chamber having two inlet openings and two outlet openings, said outlet openings being oppositely disposed; a double acting valve arranged to close the said outlet openings alternately; reciprocating valves having a screw threaded stem to suspend the valves outside the said inlet openings; removable and reversible disks adapted to cover the said inlet openings, said disks each having a central opening and valve seats on both sides of said disks; a delivery pipe leading from one of said outlet openings through the side wall of the tub and having a perforated flange adapted to cover the overflow opening of a bath tub; an enlarged terminal of the overflow pipe adapted to cover the said overflow opening in said tub and having a screw threaded perforation to receive said delivery pipe to form a clamp therewith to support the said fixture.

11. A plumbing fixture for bath tubs comprising a valve-controlled distributing chamber having two inlet openings and two outlet openings, said outlet openings being oppositely disposed; a double-acting valve arranged to close the said outlet openings successively; reciprocating valves having screw threaded stems to support the valves outside the said inlet openings; removable and reversible disks adapted to cover the end of the said inlet openings, said disks having each a central opening and valve seats on both sides of said disk; and a delivery pipe adapted to pass through the wall of the tub to form a support for the said fixture.

12. A plumbing fixture for bath tubs comprising a valve-controlled distributing chamber having two inlet openings and two outlet openings, said outlet openings being oppositely disposed; a double-acting valve arranged to close the said outlet openings successively; reciprocating valves having screw threaded stems extended to support the valve

outside the said inlet openings; removable and reversible disks adapted to cover the end of the said inlet openings and having valve seats on both sides of said disk; and a delivery pipe provided with a flange adapted to rest against the side of the tub to cover the opening therein; and a second flange to draw said flange on the delivery pipe against the side of the tub.

13. A plumbing fixture for bath tubs comprising a valve-controlled distributing chamber having two inlet openings and two outlet openings, said outlet openings being oppositely disposed; a double-acting valve arranged to close the said outlet openings alternately; reciprocating valves having screw threaded stems extended to support the valves beyond the said inlet opening; removable and reversible disks adapted to cover the end of the said inlet openings, said disks having each a central opening and a valve seat on both sides thereof; a delivery pipe extended inside the tub and having a perforated flange; and an overflow pipe connection to cover the opening in the tub in line with the said perforated flange and having a perforation to pass the said delivery pipe.

14. A plumbing fixture for bath tubs comprising a valve-controlled distributing chamber having two inlet openings and two outlet openings, said outlet openings being oppositely disposed; a double-acting valve arranged to close the said outlet ports alternately; reciprocating valves having screw threaded stems extended to support the valves beyond the said inlet openings; removable and reversible disks adapted to rest over the ends of the said inlet openings, said disks having each a central opening and valve seats on both sides of said disks; a delivery pipe extended inside the tub and through an opening therein, and having a perforated flange to cover the said opening, said pipe being screw-threaded on the outside of the said tub; and a waste pipe connection to cover the opening in the tub in line with the said perforated flange and having a screw-threaded perforation to engage the screw thread on the said delivery pipe to draw the said flange and connection toward each other and against the tub.

In testimony whereof, we have hereunto set our hands this 20th day of June, 1910.

V. F. BERNESSER.
JOSEPH J. CROTTY.

Witnesses:
W. A. CROTTY,
WM. MCCREERY.