

P. MUELLER.
COMPRESSION VALVE FITTING.
APPLICATION FILED APR. 29, 1908.

Patented Apr. 5, 1910.

2 SHEETS—SHEET 1.

953,966.

Fig 1.

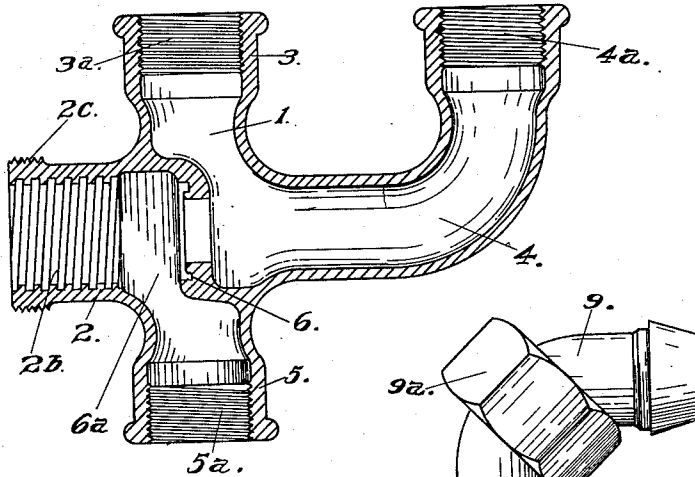
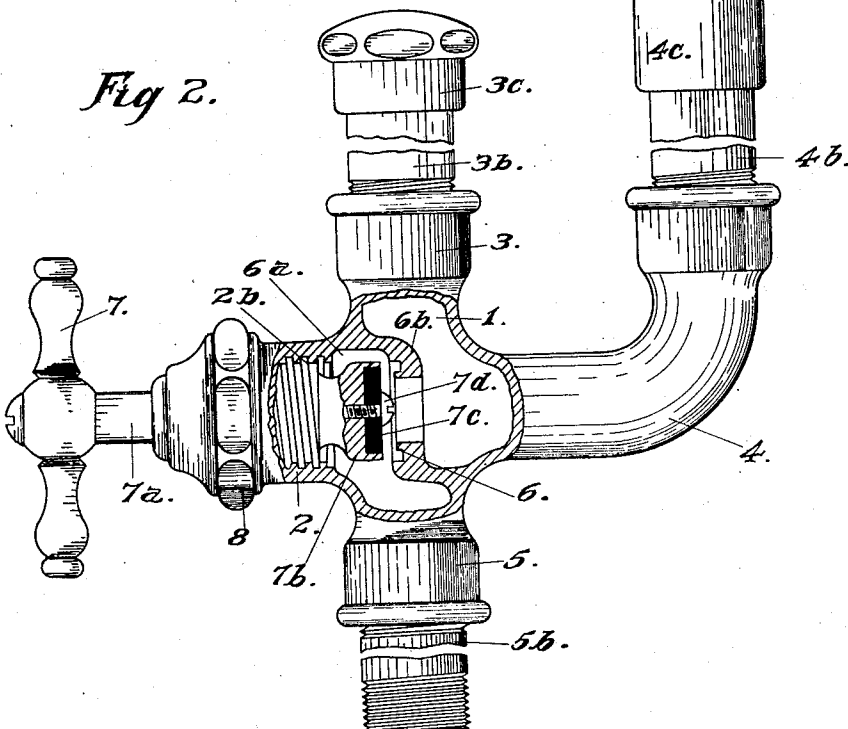


Fig 2.



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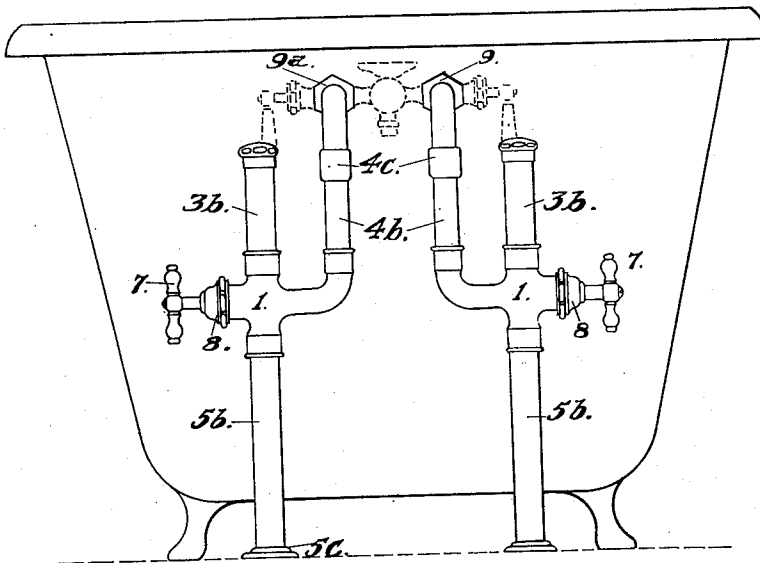
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2 SHEETS—SHEET 2.

Fig 3.



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UNITED STATES PATENT OFFICE.

PHILIP MUELLER, OF DECATUR, ILLINOIS, ASSIGNOR TO H. MUELLER MANUFACTURING COMPANY, OF DECATUR, ILLINOIS, A CORPORATION OF ILLINOIS.

COMPRESSION-VALVE FITTING.

953,966.

Specification of Letters Patent.

Patented Apr. 5, 1910.

Application filed April 29, 1908. Serial No. 429,934.

To all whom it may concern:

Be it known that I, PHILIP MUELLER, a citizen of the United States, and a resident of Decatur, in the county of Macon and State of Illinois, have invented a certain new and useful Improvement in Compression-Valve Fittings; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty of the same.

This invention relates to baths and closets, and more especially to bath and basin fittings; and the object of the same is to produce a fitting having a lesser number of joints than heretofore and wherein the compression valve stands at the juncture between the air chamber, the cock supply, and the main supply, and therefore avoids the necessity for an elbow and additional joints in the supply.

To this end the invention consists in a construction of which one embodiment is described in the following specification and shown in the drawings forming a part thereof, which illustrate its application to a bath tub although it will be clear that the invention may be used with a basin or other lavatory member.

In said drawings, Figure 1 is a central vertical section through the valve body. Fig. 2 is an elevation of the entire fitting with the valve body in section. Fig. 3 is an end view of a bath tub showing a compound cock in dotted lines and illustrating the application of two of these fittings thereto as for hot and cold water.

Heretofore, when it was desired to construct a fitting of this character having an air chamber, it was customary to mount the latter on a combination tee and elbow fitting connected with a supply pipe and apart from the valve, the latter being let into the supply at a lower point and with joints above and below it. Broadly speaking, the present invention avoids the necessity of such a combination tee and elbow fitting by making it a part of the valve body, and avoids the necessity for said joints by utilizing for the same purpose the joints which connect the body with the various parts.

Referring to the drawings, the numeral 1 designates as a whole the valve body herein shown, as a single casting having four arms, of which that numbered 3, at the top, com-

municates preferably with an air chamber, that numbered 5 in alinement with it, at the bottom, is the water inlet, that numbered 4 at one side is a water outlet here shown projecting at right angles with the body and formed into a 90° elbow, and that numbered 2 at the opposite side is a housing for the valve stem.

A part or all of the arms just referred to may in their connections differ somewhat from what is above pointed out, as for instance, the arm 4 may carry the air chamber and the water outlet pipe be attached to the arm 3. The same is true of the further detail description given herein, bearing in mind that the arms may serve different purposes by an interchange of connections in various parts and detail, but still bear the same general relation as herein referred to.

The valve in the present instance is of the compression type, the valve disk closing horizontally against a seat 6 formed in an upright partition 6^b across the body, at one side of which is the valve chamber 6^a. It will be seen that this valve seat web 6^b divides the valve casing diagonally, so as to bring on the inlet side of the casing two branches, namely, the main service supply branch 5 and the valve housing branch 2, and on the outlet side of the casing, the air chamber branch 3 and the cock-supply branch 4. The disk is held in any suitable manner, as by a screw 7^a, to the valve 7^b at the inner end of the stem 7^a which passes through the cap 8 and carries a handle 7. The cap engages exterior threads 2^c on the housing, and the latter is interiorly threaded as at 2^b to engage threads on the valve stem as will be well understood.

The air chamber connection 3 is provided with internal threads 3^a to receive an up-standing air chamber 3^b which has a cap 3^c; further details of the construction of this chamber are unimportant.

The water inlet 5 is internally threaded at 5^a to receive the main supply pipe 5^b which is here shown as leading downward through a floor flange 5^c to the service pipe not shown, although this supply pipe might be bent and connected with an exposed service pipe or pass into the wall.

The water outlet 4 is internally threaded as at 4^a to receive the cock supply pipe 4^b which leads upward parallel but out of alinement with the main supply, to the cock (not

shown) and which may or may not have a coupling or joint 4^c within its length. As here illustrated the cock supply has a bent connecting end 9 and a union coupling nut 9^a is provided for connecting this end with the cock as well understood. The various arms of the valve body are preferably beaded at their outer extremities, and all parts may be nicked or otherwise ornamented for the sake of neatness, or to prevent rust or tarnish.

It will be observed that branches 3 and 4 have their terminals parallel and on a level with each other, and furthermore, that the said terminals are threaded at 3^a and 4^a respectively, with standard threads and of the same bore or internal dimensions so that they are standardized and adapted to be interchanged, whereby the air chamber 3^b and the cock-supply connection 4^b may be as readily connected with the one as with the other; thus giving a range of adaptability to the fitting which would not otherwise be the case.

In setting up this improved coupling, the air chamber is first attached to the valve body, the latter is then connected by the supply pipe with the service, and finally the cock supply is attached at one end to the valve body (perhaps adjusted in its length as at 4^c if necessary) and then connected with the cock. If the fitting be attached to a tub as shown in Fig. 3, two will usually be required, preferably a right and a left, as illustrated; and if it be attached to a basin, the cock supply pipe may not have the bent connecting end 9 but might extend straight upward toward or through the basin slab as well understood.

It is not necessary that the valves be right and left, owing to the interchangeability of the valve for its adoption to the place in which it is used, bearing in mind that the same can be turned and set up in any position relative to the inlet and outlet connection, so long as it is within a circle of which the radius is from the center of the valve body to the outside of its longest arm. This adaptability in doing away with the necessity of right and left valves reduces cost of manufacture and assists in efficiently setting up and applying the device, and avoids the carrying in stock of two kinds of valves by the plumber.

After the fitting has been set up on opening the valve as shown in Fig. 2, the water will be admitted from the supply pipe and will pass through the valve seat, to and through the outlet 4, and upward through the cock supply to the cock, the air chamber forming a cushion as well understood in fittings of this character. On closing the valve, the pressure is shut off simultaneously both from the cock and the air chamber. It will be observed that this fitting necessitates only

three joints (those at the outer extremities of the arms 3, 4, and 5) in addition to the joints connecting the supply with the service and the cock supply with the cock as usual, and by limiting the joints to three in number I further reduce the expense of manufacture and the likelihood of leakage, besides increasing the efficiency and enhancing the beauty of the design.

What is claimed as new is:

1. A lavatory fitting comprising a valve-casing having a valve-seat extending across the same, a service supply branch leading to said casing perpendicular to the valve-seat, a valve-housing extending from said casing, valve mechanism mounted therein, an air chamber branch leading from said valve-casing, and a cock-supply branch leading from said valve casing.

2. A lavatory fitting comprising a valve casing having four branch connections in the same axial plane, and a valve seat dividing said casing so as to segregate two branches on the inlet side and two branches on the outlet side of the casing, one of the branches on the inlet side being a housing for the valve stem.

3. A lavatory fitting comprising a valve casing, substantially cross-shape, and a valve seat dividing said casing quartering so as to segregate two branches at right angles to each other on both the inlet and the outlet side of said casing, one of the branches on the inlet side being a housing for the valve stem, and one on the outlet side adapted to receive an air chamber.

4. A lavatory fitting comprising a valve casing having four integral branches, a valve seat in said casing segregating branches in right angularly-disposed pairs on both the inlet and the outlet side of the casing, and an L-shaped terminal on one of the said branches, one of the branches on the inlet side being a housing for the valve stem, and one on the outlet side adapted to receive an air chamber.

5. A lavatory fitting comprising a valve-casing, a valve-seat dividing said casing diagonally, a service supply branch on the inlet side of said seat, a valve-housing on the inlet side of said seat, a valve mounted in said housing, an air-chamber branch on the outlet side of said seat, and a cock-supply on the outlet side of said seat.

6. A lavatory fitting comprising a valve-casing, having four integral branches aligned in pairs in crossed relation, a valve-seat dividing said casing so as to segregate said branches in right angularly-disposed pairs, one of said pairs comprising the service supply inlet and valve-housing branches, and the other of said pairs comprising the air chamber branch and cock-supply branch.

7. A lavatory fitting comprising a valve-casing, a valve-seat dividing said casing

diagonally, a service supply branch and a valve-housing branch at right angles to each other on the inlet side of said casing, and an air-chamber branch and a cock-supply branch having parallel terminals on the outlet side of said casing.

8. A lavatory fitting comprising a valve-casing, a valve-seat dividing said casing diagonally, a service supply branch and a valve-housing branch at right angles to each other on the inlet side of said casing, an air-chamber branch and a substantially L-shaped cock-supply branch connecting with said valve casing at right angles to each other on the outlet side thereof.

9. A lavatory fitting comprising a valve-casing, a valve-seat dividing said casing diagonally, a service supply branch and a valve-housing branch at right angles to each other on the inlet side of said casing, an air-chamber branch in alinement with said service supply branch on the outlet side of

said casing, and a cock-supply branch in alinement with said valve-housing branch on the outlet side of said casing.

10. A lavatory fitting comprising a valve-casing, a valve-seat dividing the said casing diagonally, a service supply branch and a valve-housing branch on the inlet side of said casing, an air-chamber branch and a substantially L-shaped cock-supply branch extending from said casing on the outlet side thereof, the terminals of said air-chamber branch and said cock-supply branch being parallel and standard, whereby they may be interchanged.

In testimony whereof, I have hereunto subscribed my signature, this the 20th day of April A. D. 1908.

PHILIP MUELLER.

Witnesses:

E. BROWN,

JOHN L. WADDELL.