

953,967.

P. MUELLER.
FULLER VALVE FITTING.
APPLICATION FILED MAY 7, 1908.

Patented Apr. 5, 1910.

2 SHEETS—SHEET 1.

Fig 1.

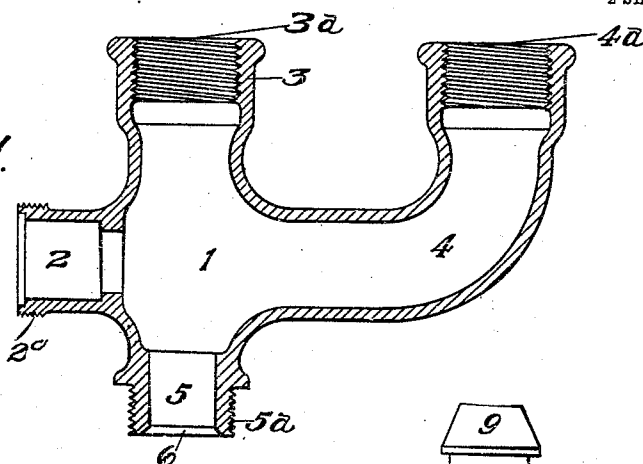
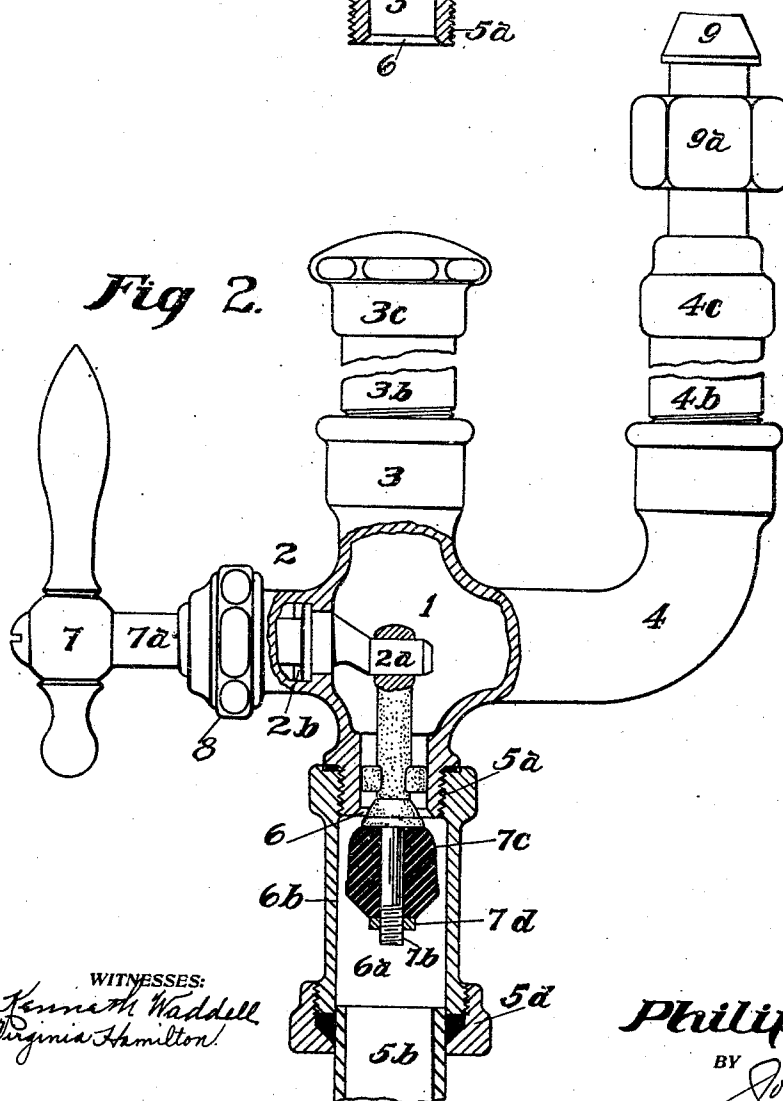


Fig 2.



WITNESSES:
Kenneth Waddell
Virginia Hamilton

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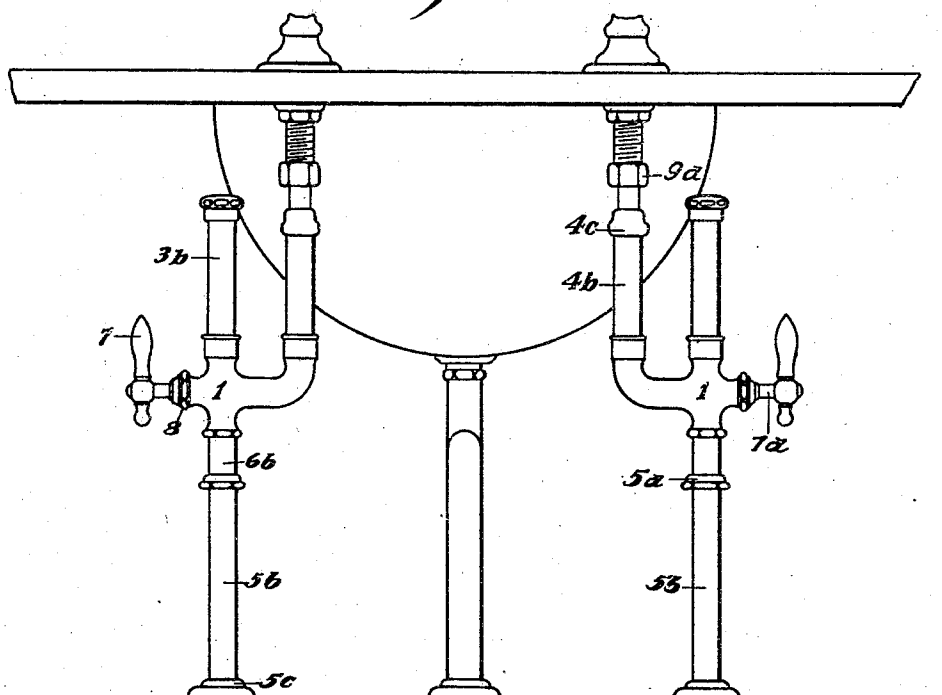
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2 SHEETS—SHEET 2.

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.

FULLER-VALVE FITTING.

953,967.

Specification of Letters Patent.

Patented Apr. 5, 1910.

Application filed May 7, 1908. Serial No. 431,518.

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 Fuller-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 a Fuller valve stands substantially at the juncture between the air chamber, the cock supply, and the main supply, and the fitting therefore avoids the necessity for an elbow and additional joints.

To this end the invention consists in a construction whereof my preferred embodiment is described in the following specification and shown in the drawings forming part thereof, the latter illustrating its application to a wash basin although it will be clear that the invention may be used with a bath tub 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, showing in section the valve body and an extension thereof which by preference is screwed to the valve body as shown, although it could be cast integral therewith. Fig. 3 is an elevation of a basin showing its cocks broken away 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 same on the combination tee and elbow fitting connected with the supply pipe and apart from the valve which latter was 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 with four arms of which that numbered 3 at the top is preferably the outlet to the air chamber, that numbered 5 at the bottom is the water inlet, that numbered 4 at one side is the water outlet here shown in the form of a 90° elbow, and that numbered 2 at the opposite side is the housing for the valve stem. The four arms just referred to may, in their connections, differ somewhat as above pointed out in that arm numbered 4 at one side may connect with the opening into the air chamber forming a 90° elbow, while the arm 3 at the top may become the water outlet. The relative relation of the arms 3 and 4, as shown particularly in Fig. 2, are very readily understood in that the only change necessitated in making the outlet supply to the cock interchangeable with the air chamber, would be the transfer of said connections from one arm to the other. The same is true of the other detail descriptions given of each connection herein, bearing in mind that it can be entirely interchangeable in all its parts and details, but still bear the same general relation as herein spoken of. In other words, the air chamber 3^b and the water outlet pipe 4^b are standard and adaptable to either of the connections 3^a and 4^a in the fitting 1, thus giving considerable latitude and range of adaptability to the fitting.

The valve in the present instance is of the Fuller type, the ball 7^c closing vertically against a seat 6 formed in or at the lower end of the water inlet 5, and below this seat is a valve chamber 6^a. The ball is held in any suitable manner, as by a nut 7^d, to the pitman 7^b which is mounted on a crank or eccentric 2^a at the inner end of the stem 7^a which has a handle 7. The stem 7^a is suitably packed within the housing 2 as at 2^b, and passes through the cap 8 which takes onto exterior threads 2^c on said housing as well understood.

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

The water inlet 5 may be cast integral with an extension 6^b which incloses the valve chamber 6^a, but as best seen in Fig. 1 I provide it with threads 5^a so that the extension

may be detachably connected therewith, in which case the main supply pipe 5^b is connected or coupled to the lower end of the extension as at 5^a in any approved manner.

5 This pipe is shown in Fig. 3 as leading downward through a floor flange 5^c to the service pipe (not shown) although it might be bent and connected with an exposed service pipe or pass into the wall.

10 The water outlet 4 is internally threaded as at 4^a to receive the cock supply pipe 4^b which leads upward to the cock and which may or may not have a coupling or reducer 4^c within its length. As here illustrated the
15 cock supply has a 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 may be headed or flanged at or near their outer extremities, and all parts are nicked or otherwise ornamented for the sake of neatness or to prevent rust or tarnish.

In setting up this improved coupling, the
25 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
30 with the cock. If the fitting be attached to a basin, as shown in Fig. 3, it may be in two parts, right and left, as illustrated; and if it be attached to a tub, the cock supply pipe
35 may be bent below the connecting end 9 so that it will extend straight toward or through the end wall of the tub as well understood. It is not necessary that the valves be right and left owing to the interchangeability of the valve for its adaptation to the place in which it is used, bearing in mind that the same can be turned and set up in
40 any position relative to its inlet and outlet connection, so long as it lies 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
45 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
50 shown in Fig. 2, the water will be admitted from the supply pipe and will pass upward through the valve seat straight toward the air chamber in which a cushion will be formed as well understood in fittings of this character. Finding no exit there, the water
55 will pass out through the elbow of outlet 4, and upward through the cock supply to the cock. On closing the valve, the pressure is shut off simultaneously from both the cock and the air chamber.

65 It will be observed that with this fitting,

in addition to the joints connecting the supply with the service and the cock supply with the cock as usual, only the three joints on the arms 3 and 4 and at the lower end of the extension 6^b are necessary, and only
70 four joints in all if the extension be screwed to the water inlet. By thus limiting the number of joints I further reduce the expense of manufacturing and the likelihood of leakage, besides increasing the efficiency
75 and enhancing the beauty of design. I consider a joint between the extension and the water inlet desirable with the Fuller type of valve, however, in order to permit ready access to the Fuller ball and to provide for
80 the use of an extension having an enlarged valve chamber 6^a so that the ball may work freely therein.

What is claimed as new is:

1. A lavatory fitting comprising a body
85 portion, a supply service branch communicating therewith, a valve stem branch extending from said body portion, a valve controlling the flow through said fitting, valve operating mechanism housed in the
90 valve stem branch, and two outlet branches projecting from said body at a right angle to each other but terminating with the axes of their outlet openings in parallel relation.

2. A lavatory fitting comprising a body
95 portion, a supply service branch communicating therewith, a valve stem branch extending from said body portion, a valve controlling the flow through said fitting, valve operating mechanism housed in the valve
100 stem branch, and two outlet branches projecting from said body at a right angle to each other but terminating with the axes of their outlet openings in parallel relation, said branches being integral with the body
105 portion and axially in a common plane.

3. A lavatory fitting comprising a body-
portion, a supply service branch integral therewith, a cock-supply branch integral
110 with said body-portion, an integral air chamber branch extending from said fitting, a valve controlling the flow from said service supply branch simultaneously to the cock supply and air chamber branches, an integral housing branch for the valve operating
115 mechanism extending from said body-portion, and valve operating mechanism mounted in said housing.

4. A lavatory fitting comprising a body-
portion, a supply service branch integral
120 with said body-portion, a cock supply branch and an air chamber branch integral with said body-portion and having the axes of their discharge openings parallel with each other and with said service branch, a valve
125 controlling the flow from said service branch, an integral housing extending from said body-portion, and valve operating mechanism within said housing.

5. A lavatory fitting comprising a body- 130

portion, a supply service branch having a valve seat formed thereon integral with said body-portion, a valve controlling said service branch, an integral housing extending from said body-portion at right angles to said supply branch, valve operating mechanism mounted in said housing, an air chamber branch, and a cock-supply branch extending from said body-portion at a right angle to the air chamber branch curving thence to bring the axis of its discharge opening parallel to the axis of said air chamber branch and the said supply branch.

6. A lavatory fitting comprising a body-portion having cross passages and integral branch connections extending from said body-portion at right angles to each other, a valve controlling one of said branches, valve operating mechanism housed in another of said branches at right angles to the valved branch, an air chamber communicating with another of said branches, one at least of said branches having its connecting end disposed at an angle to its opposite end and in parallel relation to two of the other branches.

7. A lavatory fitting comprising a body-portion, a supply service branch integral therewith, a valve controlling said branch, an integral housing extending from said body-portion at right angles to said service branch, valve operating mechanism mounted in said housing, an air chamber branch integral with said body-portion and in alignment with said supply branch, and an integral L-shaped cock-supply branch extending from said body-portion at right angles to said service and air chamber branches.

8. A lavatory fitting comprising a body-portion having a supply service branch integral therewith, a valve chamber connected with said branch, a Fuller valve within said chamber and seating against said supply branch, a housing extending from said body-portion at right angles to the supply branch,

valve operating mechanism mounted in said housing, an air chamber branch in alignment with said supply branch communicating with said body-portion, and an off-set cock-supply branch of substantially L-shape communicating with said body-portion, said air chamber branch and cock-supply branch being extended in parallel relation and provided with like connecting means on their ends.

9. A lavatory fitting comprising integrally a body portion, an inlet branch and an outlet branch projecting therefrom in opposite directions and in the same line, a valve stem branch and a second outlet branch projecting from opposite sides of said body portion in the same line perpendicular to the first named branches and in the same plane, said second outlet branch being substantially L-shaped so that the axes of the discharge openings of both of said outlet branches will be parallel.

10. A lavatory fitting comprising integrally a body portion, an inlet branch and an outlet branch projecting therefrom in opposite directions and in the same line, a valve stem branch and a second outlet branch projecting from opposite sides of said body portion in the same line perpendicular to the first named branches and in the same plane, said second outlet branch being substantially L-shaped so that the axes of the discharge openings of both of said outlet branches will be parallel, combined with a valve for simultaneously controlling the flow through the fitting, and valve operating mechanism.

In testimony whereof, I have hereunto subscribed my signature, this the 23rd day of April, A. D. 1908.

PHILIP MUELLER.

Witnesses:

E. BROWN,
JOHN L. WADDELL.