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F. J. CANTRELL

PLUMBING FIXTURE

Filed April 26, 1924

Fig. 2.

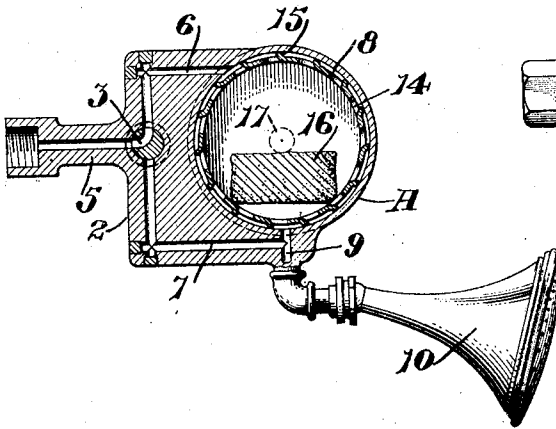


Fig. 1.

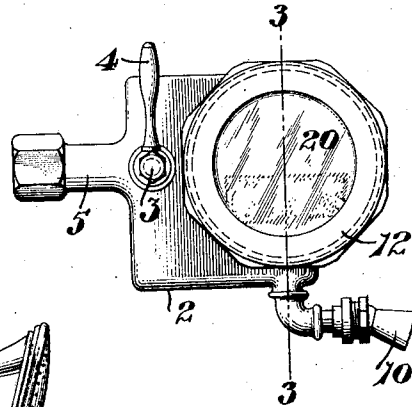


Fig. 3.

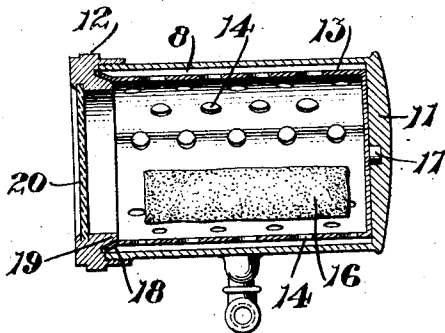
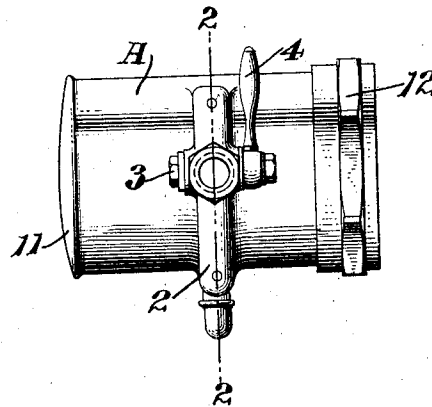


Fig. 4.



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PLUMBING FIXTURE.

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This invention relates to a plumbing fixture and especially to an attachment for bathroom showers and the like, whereby soap suds may be produced.

5 The object of the present invention is to generally improve and simplify the construction and operation of fixtures of the character described; to provide a fixture which may be interposed between the water pipes
10 and the shower in a bathroom in such a position that the water will pass therethrough before discharging from the shower; to provide a fixture of this character in which is formed a chamber, said chamber adapted to
15 receive a soap receptacle; to provide means for rotating the receptacle and to pass water therethrough so as to form soap suds which may be discharged through the shower; and further, to provided means for by-passing
20 the water around the soap receptacle and directly to the shower when rinse water is desired.

One form which my invention may assume is exemplified in the following description and illustrated in the accompanying drawings, in which—

Fig. 1 is an end view of the fixture.

Fig. 2 is a central vertical cross-section taken on line 2—2 of Fig. 4.

30 Fig. 3 is a central vertical longitudinal section taken on line 3—3 of Fig. 1.

Fig. 4 is a rear elevation of the fixture.

Referring to the drawings in detail, and particularly to Figs. 1, 2 and 3, A indicates,
35 in general, a fixture which is adapted to be interposed between the water pipes in a bathroom and a shower. This fixture is substantially cylindrical in shape, as shown in Figs. 2 and 4, and the rear portion thereof
40 is provided with a rectangular shaped extension or rib 2 in which is formed a valve passage. Disposed in the valve passage is a valve 3 and this is provided with a handle 4 whereby it may be operated. The rib 2 is
45 also provided with an extension 5 whereby a connection may be made between the water pipes and the shower. The rib or projection 2 is otherwise provided with a pair of passages such as indicated at 6 and 7, the
50 passage 6 leading to a central chamber 8, while the passage 7 is connected with a discharge passage 9 to which a shower 10 is attached in any suitable manner.

55 The chamber 8 is cylindrical in cross-section and elongated. It is closed at one end by a permanent head member 11, and it is

closed at its opposite end by a removable screw cover 12. Mounted interior of the chamber 8 is a cylindrical shaped soap receptacle generally indicated at 13. This
60 receptacle is journaled to rotate and it is perforated at a plurality of points as shown at 14 to permit water to pass therethrough, as will hereinafter be described.

The sides of the perforations are bent outwardly, as shown at 15, to form buckets or
65 impellers against which the water strikes when entering through the passage 6. The impulse thus obtained directs the water into the soap receptacle and it, at the same time,
70 rotates the same at a fairly high speed. A cake of soap or the like such as indicated at 16 when placed within the receptacle will thus be churned about to such an extent that soap suds will be formed and these will discharge through the passage 9 and through
75 the shower 10.

The soap receptacle is provided with a pin 17 at one end. This pin extends into the permanent head 11 and is journaled therein.
80 The opposite end of the soap receptacle is flanged as shown at 18. This flange is supported by an annular inner flange 19 formed on the screw cap 12 and this flange serves as a bearing for the opposite end of the
85 soap receptacle. The bearings or journals thus formed permit free rotation of the soap receptacle and the soap suds produced serve as a sufficient lubricant to prevent binding or material resistance as far as the bearings
90 are concerned. The screw cover is otherwise provided with a window or opening 20 and it is therefore easy to determine whether it is necessary to insert a new cake of soap or not, as the case may be.
95

The valve 3 is a two-way valve. By turning it to the position shown in Fig. 2, water will enter through the passage 6. The force of the discharging jet is more than sufficient to impel and rotate the soap receptacle and
100 as the impellers 15 direct the water inwardly soap suds are formed by the direct action of the water against the soap cake and by the continuous rotation of the same. The water after passing through the chamber 8 and the
105 soap receptacle discharges through the passage 9 and finally through the shower 10. Thus, when a person is taking a bath it is not necessary to handle the soap as sufficient suds for a wash or bath are obtained by
110 merely directing the water through the upper passage 6. When it is desired to rinse

off the soap, it is only necessary to turn the valve so that the water will be directed through the passage 7. It is thus by-passed around the soap receptacle and is passed directly to the shower and as such may be used as rinse water. If it is desired to shut off the water entirely, the position of valve 3 is completely reversed. It is accomplished by completely reversing the position of the valve 3 or by shutting off the valves with which the pipes are usually equipped; that is, most shower installations are provided with two valves, one for hot water and one for cold water. These valves direct the water to a common pipe which is connected with the shower and this pipe would in this instance be connected with the extension 5; thus, it is possible to pass either cold or warm water through the shower or a mixture of the same, and it is not necessary to depend entirely upon the action of the valve 3 to regulate the flow.

The device is particularly handy when shower baths are considered as it entirely eliminates the usual form of soap receptacles and avoids the necessity of stooping down to the floor to recover the soap, as is usually the case.

The device may be attached to a vertical overhead shower or to a horizontal shower and as such may be installed wherever convenient. It might furthermore be stated that its use is not limited to bathrooms, as it may also be used in connection with a kitchen sink for washing dishes; that is, the shower is placed in a vertical position when so used and the water is turned on with just sufficient force to produce a fountain like effect. The dishes may then be washed directly in this fountain and a dish-pan or the like is entirely obviated.

While certain features of the present invention are more or less specifically illustrated, I wish it understood that various changes in form and proportion may be resorted to within the scope of the appended claims. I similarly wish it understood that the materials and finish of the several parts employed may be such as the experience and judgment of the manufacturer may dictate or various uses may demand.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. In a fixture of the character described, having a cylindrical chamber formed

therein, a head member forming a permanent closure for one end of the cylindrical chamber, a removable head member forming a closure for the opposite end of said cylindrical chamber, a cylindrical shaped soap receptacle insertible in said cylindrical chamber, a head member on one end of the soap receptacle, a pin thereon extending into the fixed head of the cylindrical chamber and forming a journal or support therefor, an annular flange on the opposite end of the soap receptacle, and an annular flange on the removable head member forming a support and journal for the soap receptacle flange, impeller members formed on the exterior surface of the soap receptacle and water inlet and outlet connections formed on the casing in communication with the interior casing and the soap receptacle, said inlet connection having an inlet passage communicating with the soap receptacle, said inlet passage being disposed on a tangent with relation to the impeller members so as to rotate the receptacle when water is passing through the casing.

2. In a fixture of the character described, having a cylindrical chamber formed therein and a tangentially disposed inlet passage, a head member forming a permanent closure for one end of the cylindrical chamber, a removable head member forming a closure for the opposite end of said cylindrical chamber, a cylindrical shaped soap receptacle insertible in said cylindrical chamber, a head member on one end of the soap receptacle, a pin thereon extending into the fixed head of the cylindrical chamber and forming a journal or support therefor, an annular flange on the opposite end of the soap receptacle, and an annular flange on the removable head member forming a support and journal for the soap receptacle flange.

3. In a fixture of the character described, a soap receptacle comprising a cylindrical shaped member closed at one end with a fixed head, a pin on said head about which the soap receptacle is adapted to rotate, said soap receptacle being open at its opposite end and having an outwardly turned annular flange, a cone shaped bearing member telescoping with said annular flange and forming a support therefor, said soap receptacle being perforated, and impelling members projecting from the exterior surface of the soap receptacle.

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