July 3, 1928. 1,676,035

H. W. A. LEHNERT

NOZZLE

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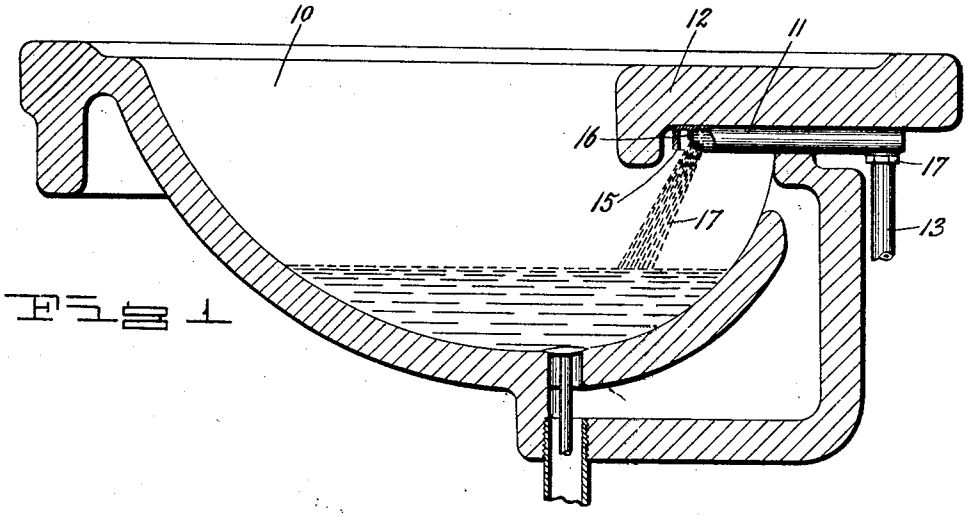


Fig 1

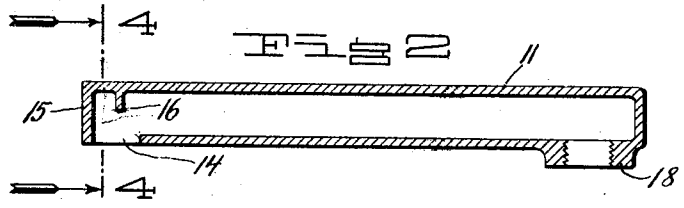


Fig 2

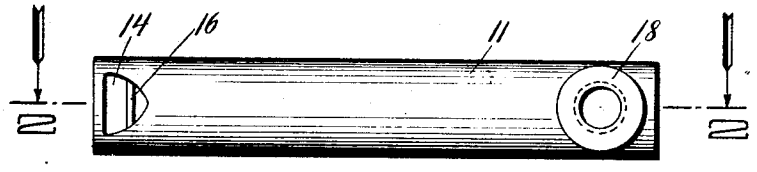


Fig 3

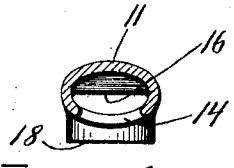


Fig 4

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UNITED STATES PATENT OFFICE.

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NOZZLE.

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This invention relates generally to plumbing fixtures and more particularly to a delivery nozzle for wash bowls or other apparatus in which it is desired to break or dissipate the force of density of a discharge jet of liquid.

The invention includes a delivery nozzle member arranged to lie in a substantially horizontal position and having a discharge opening in the lower wall thereof adjacent a closed end of the member. Within the delivery member and spaced from the closed delivery end is located a baffle member which overlies the discharge opening and extends directly from the upper wall of the member to substantially half the depth of the bore of the delivery member.

In operation a liquid flowing under pressure through the delivery member described engages the baffle member and is deflected downwardly and forwardly to produce an expanding jet with a corresponding diminution in the force and density of the discharging column of liquid.

Other features of the invention will be hereinafter described.

In the drawings in which a preferred embodiment of the invention has been selected for illustration,

Figure 1 is a vertical section of a wash bowl equipped with a water delivery nozzle embodying the invention.

Figure 2 is a longitudinal sectional view of the delivery nozzle shown in Figure 1 on an enlarged scale taken on line 2—2 of Figure 3.

Figure 3 is a view from underneath of the spray tube device shown in Figure 1 on an enlarged scale.

Figure 4 is a view in cross-section of the device taken on the line 4—4 of Figure 2.

Referring to the drawings for a more detailed description of the invention, in Figure 1 is shown a common form of wash bowl 10 equipped with a water-delivery nozzle 11 which leads into the bowl underneath the shelf or flange 12 at the rear portion thereof and is connected to a water supply pipe 13 leading into the rearmost end of the nozzle at the lower side thereof as at 18.

In order to prevent the splashing of the water that is ordinarily encountered when a jet of water is discharged downwardly against the curved inner surface of the bowl, the forward end of the delivery nozzle 11 is equipped with a discharge opening 14 in the lower wall thereof adjacent the closed end 15. Within the member above the discharge opening 14 and spaced from the end wall 15 is a downwardly projecting baffle member 16 which is carried by the upper wall of the member 11 and projects downwardly for a portion of the depth of the tube as is clearly indicated in Figures 1 and 2 of the drawing.

The result of this arrangement of parts is to cause an issuing jet of water 17 to be deflected at an angle in a forward and downward direction as is indicated in Figure 1 of the drawing. If the baffle member 16 were not present the issuing stream of water would engage the end wall member 15 and be discharged directly downwardly so that the full force of the solid and dense stream would engage the curved surface of the bowl and produce the objectionable splashing referred to.

It will be seen, therefore, that the issuing spray of water 17 is not only deflected at a favorable angle for the best results but the stream is also broken or shattered so that it takes the form of a diverging or expanding jet which correspondingly loses its force as it moves away from the issuing orifice 14. The spray is also given a relatively wide formation as compared with its depth from front to rear and this result is achieved by the general formation of the delivery tube 11 which, as will be seen in Figure 4 of the drawing, has an elliptical section with the long axis of the ellipse extending horizontally.

The delivery nozzle described while being shown in the particular situation illustrated for the purpose of this application, is capable of use in other situations where similar results are sought to be secured.

What is claimed is:—

1. A fluid delivery nozzle comprising an elongated tubular member having one end closed by a stationary end wall, a discharge outlet in a side wall adjacent the closed end, a baffle spaced from the end wall and projecting from the side wall opposite the outlet and extending part way across the tubular member, the plane of the baffle intersecting the plane of the outlet on a line substantially removed from the inner edge of the outlet.

2. A fluid delivery nozzle comprising an elongated tubular member adapted to be supported in a horizontal position and hav-

ing its opposite ends closed, a fluid receiving orifice in the lowermost wall adjacent one end of the tubular member, a fluid discharge orifice in the lowermost wall adjacent the other end of the tubular member, and a baffle member formed on the inner surface of the upper wall opposite the delivery orifice, said baffle member being spaced from the adjacent end wall and extending less than one-half the distance across the bore of the tubular member.

3. A fluid delivery nozzle comprising an elongated tubular member closed at both ends by stationary end walls, an inlet located in the side wall of the tubular member adjacent one end, an acorn-shaped discharge outlet located in the same side wall as the inlet but adjacent the opposite end of the tubular member, the straight side of the discharge orifice being toward the adjacent end wall, a baffle spaced from the end wall and projecting from the side wall opposite the outlet and extending part-way across the tubular member, the plane of the baffle intersecting the plane of the outlet on a line substantially removed from the inner edge of the outlet.

In testimony whereof I affix my signature.

HENRY W. A. LEHNERT.