

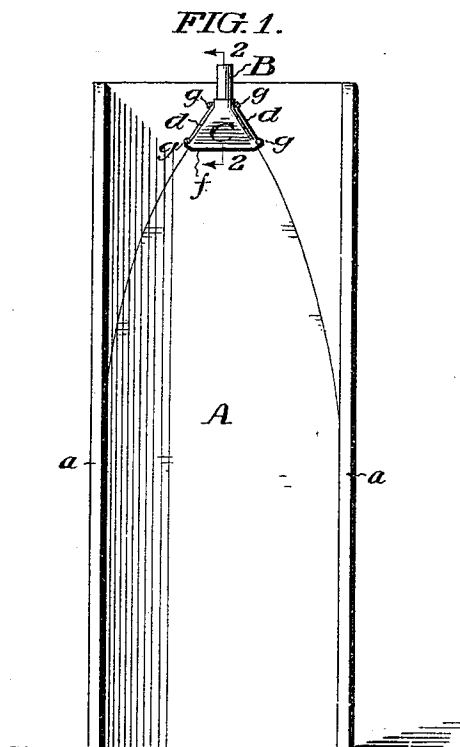
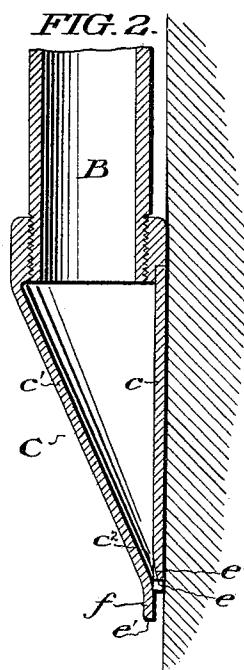
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Patented Dec. 26, 1899.

W. U. GRIFFITHS.
SPRAY NOZZLE FOR URINALS.

(Application filed Aug. 31, 1899.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM U. GRIFFITHS, OF PHILADELPHIA, PENNSYLVANIA.

SPRAY-NOZZLE FOR URINALS.

SPECIFICATION forming part of Letters Patent No. 639,971, dated December 26, 1899.

Application filed August 31, 1899. Serial No. 729,082. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM U. GRIFFITHS, a citizen of the United States, residing at Philadelphia, in the State of Pennsylvania, have
5 invented certain new and useful Improvements in Spray-Nozzles for Urinals, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to a form of pipe-nozzle
10 which when attached to the water-supply pipe of a stall-urinal creates a broadly-spreading solid spray, covering the face of the stall.

In the accompanying drawings, Figure 1 is a front elevation of a stall-urinal to the water-supply pipe of which my invention is attached. Fig. 2 is a central vertical section
15 of my pipe-nozzle through the line 2 2, Fig. 1.

A, Fig. 1, is the facing-slab of a stall-urinal, of which *a a* are the side slabs.

20 B is the water-supply pipe for the same.

C is the spray-nozzle, which is screwed onto the lower end of the pipe B.

c is the inner side of the nozzle. It is flat and vertical and lies against the facing-slab.

25 *c'* is the outer side of the nozzle. It is also flat, but it slopes back until its lower edge is almost in contact with the lower edge of the inner side.

As the two sides approach each other vertically they flare laterally in straight lines on
30 either side *d d*. The lower edge *e* of the inner side *c* is horizontal and straight. It has a beveled outward corner *e²*. The lower edge *e'* of the outer side *c'* is also horizontal and straight. It approaches the edge *e* until separated only by the extent of the bevel *e²*, forming a narrow slot *c²*. From this point the
35 outer side projects straight down a short distance in the shape of an overhanging flange *f*, which when the nozzle is in place is parallel to the facing-slab A and separated from it by a narrow space, which, however, is wider than the slot *c²*. From the sides *d d* project
40 lugs *g g g g*, with screw-holes by which the nozzle may be affixed to the facing-slab. The angle at which the side *c'* slopes inwardly is such that the horizontal cross-section of the aperture of the nozzle constantly decreases downwardly, notwithstanding the lateral flare
45 of the sides *d d*. This enables a single pipe

with an ordinary head of water to project a solid fan-shaped spray of sufficient width to flood the entire facing-slab of a urinal of ordinary width. In the ordinary form of my invention which I have illustrated a slot
55 about five inches long creates a solid spray twenty-four inches wide, which is wider than the ordinary stall.

Owing to the corroding effect upon metal of urinary vapors a very small pipe-nozzle is desirable. This is obtained in my invention, which, by means of its shape and size, exposes a minimum of metallic surface to this action. The same corrosion tends to clog any exposed exit-hole of such a pipe-nozzle. This
60 frequently has the disagreeable effect of directing a part of the spray outwardly, disabling the entire urinal. Such an accident is effectually prevented in my invention by the flange *f* overhanging the slot *c²*, whereby
65 the rear half of the ultimate exit is formed by the stone of the facing-slab. A similar result of a distorted spray is sometimes occasioned by particles of dirt in the water caught at the exit-hole. The slot *c²* being narrower
70 than the space between the flange and the facing-slab, any such particles are caught in the slot, and distortion of the spray is prevented by the flange.

Having thus described my invention, I 80 claim—

1. A spray pipe-nozzle having a flat vertical inner side *c*; a flat backwardly-sloping outer side *c'*; two laterally-flaring straight sides *d, d*; and a straight slot *c²*, formed by
85 the lower edges of the sides *c* and *c'*, substantially as described.

2. A spray pipe-nozzle having a flat vertical inner side *c*; a flat backwardly-sloping outer side *c'*; two laterally-flaring straight
90 sides *d, d*, and a straight slot *c²*, formed by the lower edges of the sides *c* and *c'*, which approach each other so that the horizontal cross-section of the aperture constantly diminishes toward the slot, substantially as de-
95 scribed.

3. A spray pipe-nozzle having a vertical inner side *c*; a sloping outer side *c'*; the lower edges of the two sides forming a slot *c²*; and the side *c'* projecting down below the slot in 100

the form of an overhanging flange f substantially as described.

4. A spray pipe-nozzle for urinals having a vertical inner side c , with means for affixing
5 the same to the facing-slab; a sloping outer side c' ; the lower edges of the two sides forming a slot c^2 ; and an overhanging flange f , projecting down from the edge of the outer

side c' parallel to the facing-slab, and at a slightly greater distance from it than the 10 width of the slot c^2 , substantially as described.

WILLIAM U. GRIFFITHS.

Witnesses:

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