

No. 743,528.

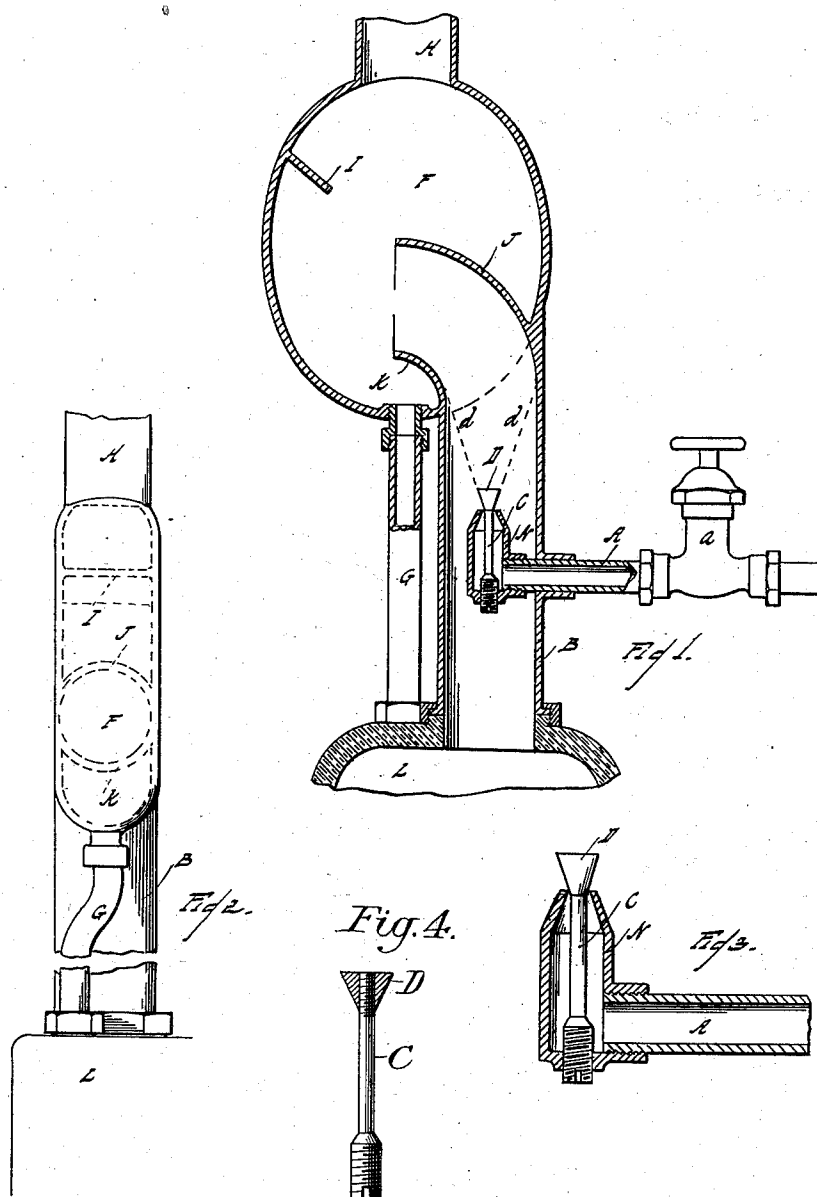
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J. LE REAU, DIT L'HEUREUX.

APPARATUS FOR FLUSHING AND VENTILATING URINALS.

APPLICATION FILED SEPT. 2, 1902.

NO MODEL.



WITNESSES

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JOSEPH LE REAU, DIT L'HEUREUX, OF WINDSOR, CANADA.

APPARATUS FOR FLUSHING AND VENTILATING URINALS.

SPECIFICATION forming part of Letters Patent No. 743,528, dated November 10, 1903.

Application filed September 2, 1902. Serial No. 121,777. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH LE REAU, dit L'HEUREUX, a subject of the King of Great Britain, residing at Windsor, county of Essex, Province of Ontario, Canada, have invented a certain new and useful Improvement in Apparatus for Flushing and Ventilating Urinals; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to apparatus for flushing and ventilating urinals; and to this end it consists in the novel and peculiar construction of the several parts thereof and their combination for accomplishing these results in the manner hereinafter described, and indicated in the claims.

Referring to the accompanying drawings, Figure 1 is a sectional elevation of an apparatus embodying my invention and so much of a urinal-bowl as is necessary to illustrate its connection therewith. Fig. 2 is a side elevation of the same looking from the left of Fig. 1. Fig. 3 is an enlarged sectional detail of the end of the water-pipe and spraying-nozzle. Fig. 4 is a detail showing the construction of the spindle.

L is the bowl of the urinal.

F is a casing located a short distance above the bowl L.

B is a large pipe opening at its lower end to the interior of the bowl L and at its upper end to the interior of the casing F. The pipe B turns from the vertical to the horizontal after it has entered the casing F, and the pipe is of a diameter equal to the distance from the front to the rear wall of the casing F, so that the upper part of the bent portion of said pipe forms a curved partition J and the lower part a curved partition K. The partitions K and J extend to about the center line of the casing F.

I is a partition extending from the wall of the casing F opposite and above the partitions J and K.

G is a small pipe communicating at its lower end with the bowl L and at its upper end with the interior of the casing K at its lowest part.

H is a pipe opening to the outer air from the top of the casing F.

A is a pipe for delivering water under pressure. The pipe A is provided with a regulating-cock *a*, extends into the pipe B, and terminates in a vertically-extending nozzle N.

C is a spindle extending axially through the nozzle N, provided with a screw-thread at its lower end adapted to engage screw-threads in the nozzle N. Said nozzle is provided with a mouth at its upper end.

D is an inverted conical plug whose apex is screwed to the upper end of the spindle C in such a way that it can be detached and removed from the casing N for cleaning, while the spindle can also be withdrawn by unscrewing it from the base of said casing, as will be clearly seen in Fig. 4. After assembling the parts of this nozzle the upward water-discharge may be so adjusted by turning the screw-threaded base of the spindle in the threaded base of the nozzle as to cause the water to issue as a conical sheet of water, entraining and carrying up a large volume of air through the pipe B and into the curved end thereof, issuing from which the air finds an outlet at the top, while the water impinging on the case-walls and partition I drops by gravity through the flush-pipe G into the bowl.

The operation of the above-described device is as follows: The position of the plug D is adjusted so as to afford the required opening from the nozzle N. The water is then turned in by means of the cock *a*. A film, sheet, or spray of water is projected from the mouth of the nozzle approximately as indicated by the dotted lines *d d*, Fig. 1. The water carries with it a large amount of air, which is drawn from the bowl, forced into the casing F, and passes out of the vent-pipe H. The water passes into the casing F, is prevented from passing to the pipe H by the partition I, falls by gravity to the bottom of the casing F, and runs down through the pipe G to flush the bowl L.

What I claim is—

1. A ventilating and flushing apparatus for urinals, consisting of a bowl, a separating-chamber elevated above the bowl, a vertical air-pipe connection between the two, a water-

jet and nozzle adapted to draw a current from the bowl, means in the path of the discharge from the upper end of the vertical air-pipe arranged to break the jet to separate the
5 water from the air in said separating-chamber, and a pipe containing an unimpeded passage through which the waste water returns to the bowl, substantially as described.

2. A ventilating and flushing apparatus for
10 urinals, consisting of a bowl, a separating-chamber elevated above the bowl, an air-pipe connecting the bowl thereto, means for projecting a flaring sheet of water in said pipe, such sheet arranged to actuate a current of
15 air drawn from the bowl and force it through the separating-chamber and out through a vent-pipe in the top thereof, and means in the path of the discharge from the air-pipe arranged to break the jet in said chamber to
20 separate the water from the air, substantially as described.

3. A ventilating and flushing apparatus for urinals, consisting of an elevated chamber, a vertical pipe connecting the bowl with the elevated chamber, a radial abutment in said
25 chamber arranged in the path of the discharge from said vertical connecting-pipe to arrest the upflow of the water projected against it, thereby separating it from the entrained air; a vertical pipe connecting the bowl with the
30 elevated chamber, the upper end of said pipe projecting into it and curved to project the water against the abutment, and a waste-pipe connecting the chamber with the bowl for
35 flushing it with the waste water, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

JOSEPH LE REAU, DIT L'HEUREUX.

Witnesses:

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