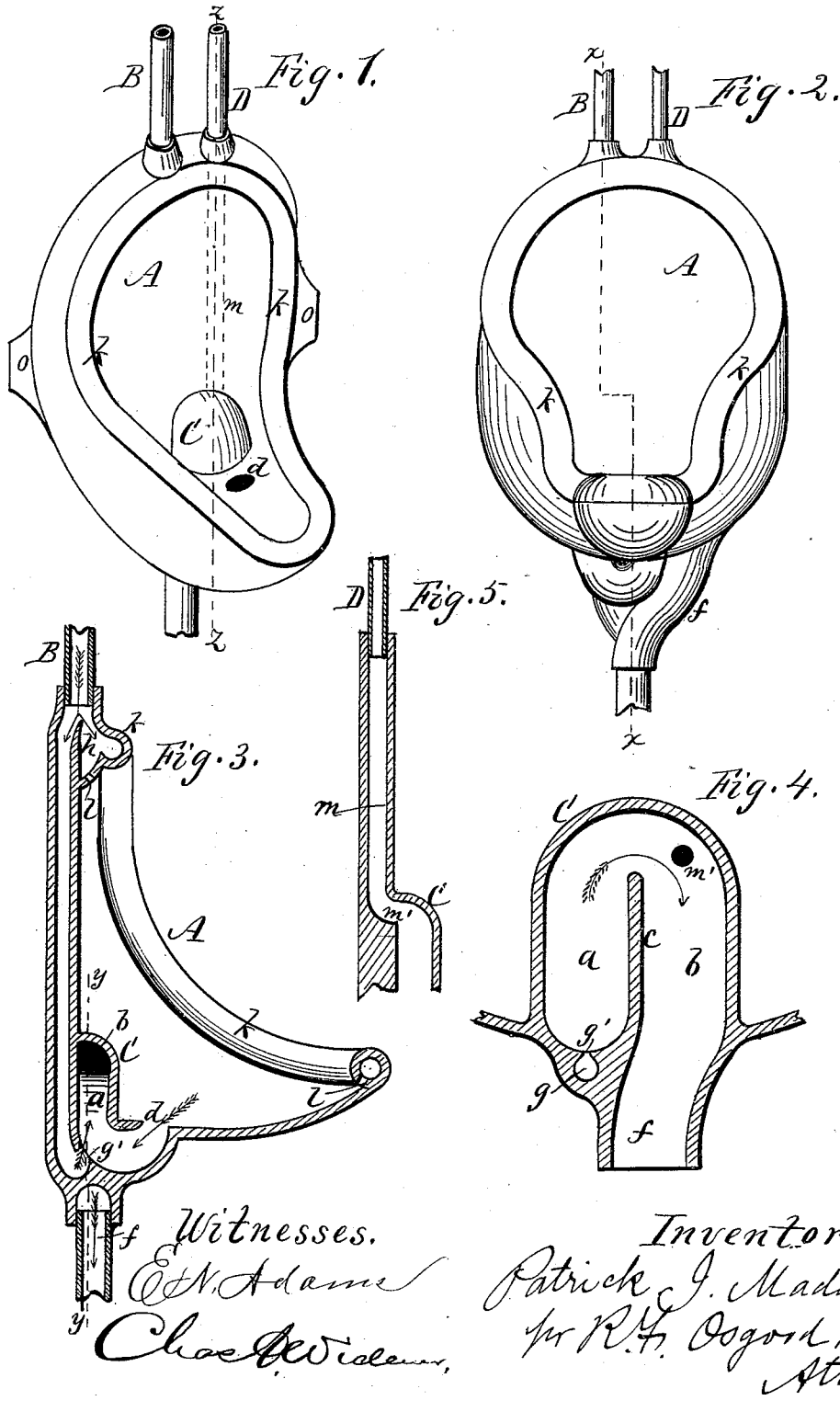


(No Model.)

P. J. MADDEN.
URINAL BOWL.

No. 493,278.

Patented Mar. 14, 1893.



UNITED STATES PATENT OFFICE.

PATRICK J. MADDEN, OF ROCHESTER, NEW YORK.

URINAL-BOWL.

SPECIFICATION forming part of Letters Patent No. 493,278, dated March 14, 1893.

Application filed July 21, 1890. Serial No. 359,373. (No model.)

To all whom it may concern:

Be it known that I, PATRICK J. MADDEN, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Urinal-Bowls; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

My improvement relates to urinal bowls, and the design is to so construct them that they occupy less space than ordinary bowls of the kind.

To this end the invention consists in the construction and arrangement of the bowl as hereinafter described and claimed.

In the drawings—Figure 1 is a perspective view of the bowl. Fig. 2 is a front elevation of the same. Fig. 3 is a vertical cross section in line *xx* of Fig. 2. Fig. 4 is an enlarged cross section of the interior bulb of the bowl in line *xx* of Fig. 3. Fig. 5 is a section in line *zz* of Fig. 1.

A indicates the bowl, which may be of any desired form, such as are used in urinal closets.

B is the feed pipe that leads from the bowl to the flushing tank, said tank preferably being so arranged as to flush the bowl automatically by an intermittent action.

C is a bulb formed on the inside of the bowl, at the back, and provided with two curved passages *a b*, which extend crosswise of the bowl and are separated by a center partition *c*, leaving the passages open and connected at the top. The passage *a* communicates with the interior of the bowl by a discharge opening *d*, while the reverse passage *b* communicates with the discharge pipe *f*. The water drawn from the bowl through opening *d* is carried up passage *h*, and over the partition into passage *b*, and thence is carried off through the discharge pipe *f*.

g is a jet passage communicating at the top with the feed pipe B, and opening at the bottom by an orifice *g'* into the bottom of the passage *a*. This orifice points directly upward into passage *a* and when the water is let on with force it draws the standing water in the bowl through opening *d*; and drives it up through

passage *a*, and discharges it as before described. It has sufficient force to draw in paper and all extraneous matter that is small enough to pass the pipes, and therefore keeps the bowl clean at all times. At the top of the bowl, where the flushing pipe B enters, is a dividing plate *h*, which divides the current of water—a part passing down the jet passage *g*, as before described, and a part down through the hollow rim *k* of the bowl, where it is discharged into the sides of the bowl through jet passages *l l*.

D is an air pipe attached to the top of the bowl, by the side of the flushing pipe B, said air pipe communicating with a passage *m*, also passing down through the back of the bowl and opening into the top of the water passage *b* as shown at *m'*. This pipe and passage admit air to the water way, and prevent the siphoning of water from the bowl after the flushing action has taken place, leaving the afterwash filling the bowl to a point above the discharge opening *d*.

I am aware that in water closet bowls it is common to use a jet passage to force the contents of the bowl upward and discharge the same. In such case the curved discharge passages usually stand outside the bowl. Urinal bowls are usually attached against a wall and require a flat back, and are usually made thin at the back, and with considerable forward projection. Hence I have disposed the discharge passages *a b* on the inner side of the bowl in the projecting bulb C, leaving the back entirely flat and adapted to be fitted in place the same as any ordinary urinal bowl. There is plenty of room on the inside for such a bulb. By forming the water and air passages directly in the back of the bowl, and the curved passages in the bulb, they leave the back of the bowl entirely flat and produce but little projection on the inside.

Having described my invention I do not claim broadly a jet passage for driving the contained water of the bowl over into the discharge pipe. Neither do I claim broadly a siphon passage standing crosswise of the bowl and parallel with its back.

What I claim as new, and desire to secure by Letters Patent, is—

In a urinal bowl, the combination of the two vertical passages *g* and *m* in the back of the bowl, one for the supply of water the other for air, the orifice *g'* connecting the bottom 5 of the water passage with the interior of the bowl, the bulb *C*, formed wholly within the bowl and provided with the curved passages *a b* standing crosswise of the bowl parallel with its back the air passage *m* communicating 10 with the top of said curved passages, and

the discharge pipe *f* with which said curved passages connect, as shown and described and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing 15 witnesses.

PATRICK J. MADDEN.

Witnesses:

R. F. OSGOOD,

P. A. COSTICH.