

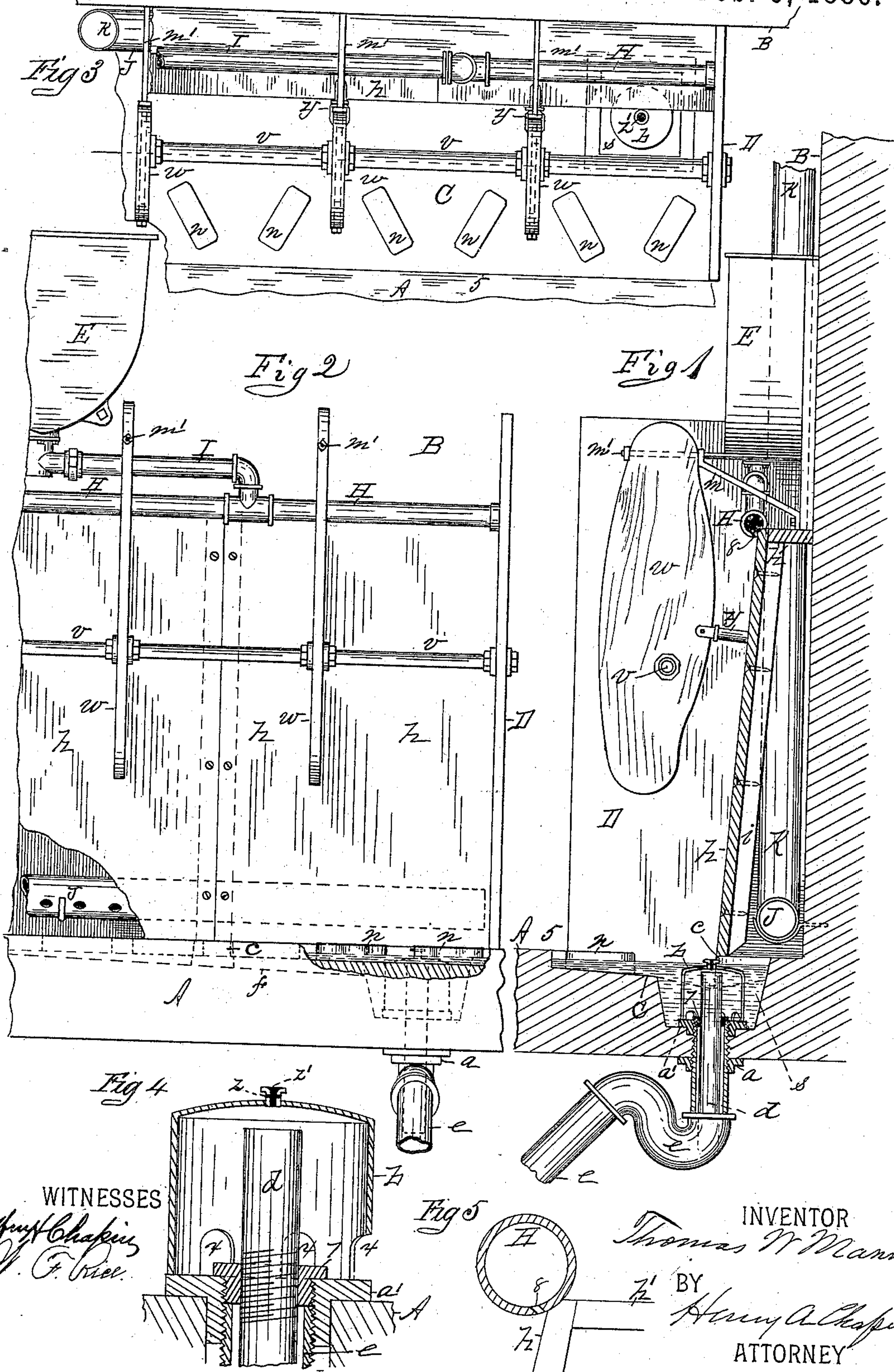
(No Model.)

T. W. MANN.  
URINAL.

2 Sheets—Sheet 1.

No. 335,601.

Patented Feb. 9, 1886.



WITNESSES

*Harry Chapin*  
*W. F. Rice*

INVENTOR

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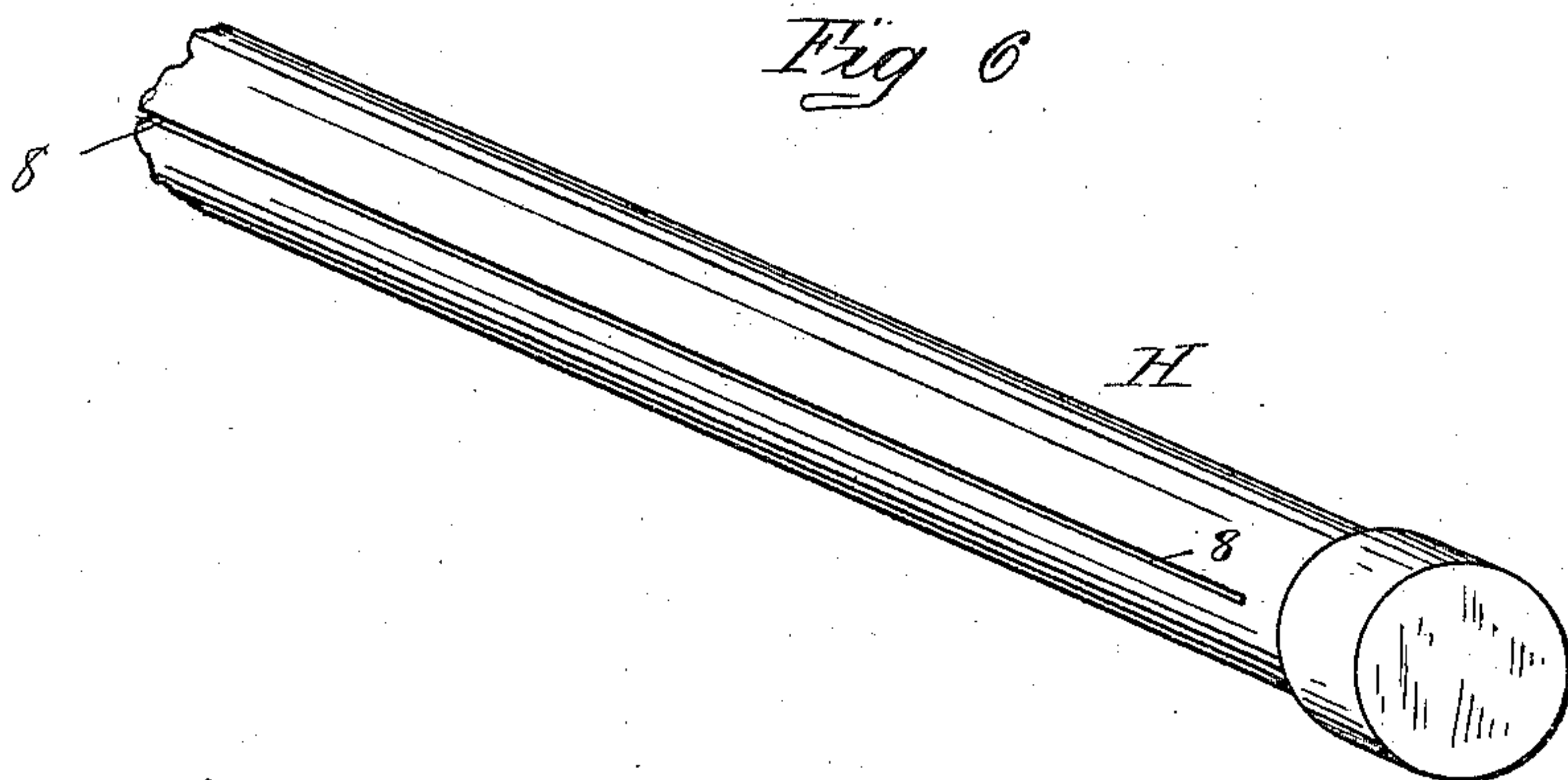
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# UNITED STATES PATENT OFFICE.

THOMAS W. MANN, OF HOLYOKE, MASSACHUSETTS.

## URINAL.

SPECIFICATION forming part of Letters Patent No. 335,601, dated February 9, 1886.

Application filed September 21, 1885. Serial No. 177,636. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS W. MANN, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Urinals, of which the following is a specification.

This invention relates to improvements in urinals, the object being to provide for hotels and other buildings or places an improved construction of grouped urinals, embodying therein improvements in the manner of arranging and hanging these separating-shields in the flushing and washing-out devices and the floor, and in means for effectual ventilation.

In the drawings forming part of this specification, Figure 1 is an end view partly in section, and Fig. 2 a front elevation, of improved urinals embodying my invention, Fig. 2 showing a part of the rear slab and a part of the floor broken away. Fig. 3 is a plan view, and Figs. 4 and 5 are detail views, which are hereinafter fully described. Fig. 6 is a perspective view of a portion of the flushing-pipe having one end broken off.

In the drawings, A indicates the floor, and B the vertical wall, of the apartment in which the urinal is located. Said floor and wall are, when circumstances will permit of it, constructed of masonry, or of materials impermeable to dampness, and the floor has formed in it at the foot of wall B a trough, C, through the bottom of one end of which passes the siphon-pipe *d*, which discharges water from the trough into the trapped drain-pipe *e*, the latter passing also through the bottom of the trough and being secured thereto by a lock-nut, *a a'*, above and below the latter, screwed thereto, and the siphon-pipe *d* is adjustably attached to the pipe *e* (the latter being screw-threaded internally) by the bushing 7, (see Fig. 4,) which screws into the latter, and into which pipe *d* screws, thereby adapting the latter to be moved vertically in pipe *e* to regulate the height of the water in trough C. A cylindrically-formed siphon-cap, *b*, having openings *x* in its lower border, is placed in said trough over the end of the pipe *d*, as shown in Figs. 1 and 4, the latter and the cap being located in a well or depression, *s*, in the end of the trough, so that the pipe *d*

and said cap may be low enough in the trough to draw off the desired amount of water, and to maintain a proper depth of the latter therein, whereby disagreeable odors are obviated.

The cap *b* is provided with a vertical air-passage, *z'*, through the top thereof, which is intersected by cross-passages *z*, said passages being only sufficiently large to let the air escape from the cap when the water in the well of the trough rises above the openings *x* in the side of the cap, and not large enough to break the siphon after the water begins to discharge, the latter being drawn down about to the top of the openings *x* when the siphon operates. The said air-passages *z z'* are arranged vertically and horizontally, as shown, in order to lessen the possibility of their becoming accidentally stopped, and thereby obstructing the operation of the siphon, and causing the water in the trough C to overflow onto the floor A.

The trough C inclines toward said well at one end, as indicated by the dotted line *f*, Fig. 2, and it extends rearward from the wall B to the line 5, Figs. 1 and 3, and inside of said line and raised above the normal water-level of the trough are fixed in the latter the foot-blocks *n*, in pairs in front of each compartment of the urinal, as clearly shown in Figs. 2 and 3. Thus located and arranged the water in trough C quite surrounds said foot-blocks, the latter, in case the floor is of masonry, being of the same material, or of stone or iron set therein.

The urinal-wall proper, *h*, which is shown in section in Fig. 1, and in front elevation in Fig. 2, is preferably of slate, and when necessary of several slabs or sections united at their joints by suitable joint-backing, *i*, and screws, as shown. The wall *h* is set at an incline to a perpendicular line in front of wall B, and far enough from the latter to leave a ventilating air-space between said two walls, the upper edge of wall *h* resting against a strip, *h'*, of the same material as the latter, which is secured to wall B in any suitable manner, and the lower edge of said wall *h* is supported on a series of stone or other similar rests, *c*, fixed on the bottom of the trough, and projecting above the water therein, as shown in Fig. 1, and as shown in dotted lines in Fig. 2. Said



rests *c* are located at the junction of the sections of wall *h*, and elsewhere, if the proper support of the latter requires it. Thus the base of the urinal-wall is supported directly  
 5 over the water in trough C, and when flushed, as hereinafter described, is washed directly into said trough, and an air-passage is left between the lower edge of said wall and the surface of the water for ventilating purposes, as  
 10 below set forth.

A ventilating-pipe, J, having perforations therein, as shown in Fig. 2, is supported on suitable brackets in a horizontal position in the above-named air-space back of the urinal-  
 15 wall *h*, from one end of which the vertical draft-pipe K runs, connecting pipe J with any suitable air-flue, whereby the latter-named pipe is caused to receive and carry off the foul air and disagreeable odors from the surface  
 20 of the water in trough C and from behind wall *h*.

The aforesaid grouped urinals are arranged to provide the usual individual compartments, each more or less separated from the other by  
 25 setting up the end partitions, D, and between the latter hanging to the wall B and to the wall *h*, the vertical shields *w*, of slate preferably, the front edges of the latter extending, as shown in Fig. 3, about midway of the foot-  
 30 blocks *n*, or, in other words, to a point midway between the ends of the latter. Said shields *w* are hung on the metallic rod *m'*, connecting the upper end thereof with wall B, the bracket *m* lending additional support there-  
 35 to, and on the metallic bar *y*, one end of which is secured to the wall *h* and the other made bifurcated and bolted to the rear edge of the shield, as shown. A metal rod, *v*, whose ends are suitably secured to the said end partitions,  
 40 D, passes in a horizontal line through the intermediate shields, *w*, suitable nuts on said rod each side of each shield serving to rigidly hold each of the latter in a proper position. Thus it is seen that each of said shields, while  
 45 serving to suitably separate the said compartments one from the other, is so hung on the walls behind it that it has no direct contact with the latter; but provision is made for keeping the wall *h* back of the shield entirely  
 50 clean, no corners between said two parts existing, as is ordinarily the case, for the accumulation of disagreeable deposits. Said rod *v* serves also as a guard to prevent a person  
 55 from being pushed against the wall *h*.

The urinal-wall *h* and the trough C are flushed or washed preferably by an intermittent sup-

ply of water from the tank E, which is a well-known device, usually called a "tumble-tank;" but a continuous stream of water may be employed, if desired.

A flushing-pipe, H, is properly supported in a horizontal position at the upper end of the urinal-wall *h*, and has in one side thereof a continuous slot, 8, so cut or formed as to direct a sheet of water directly against the said  
 60 wall from one end to the other, thus thoroughly washing down the entire surface of said wall, the water being discharged into the trough C, and carried off from the latter with the urinary discharges, as hereinbefore described. The  
 65 pipe H is connected with the tumble-tank E by the pipe I.

What I claim as my invention is—

1. The within-described urinal, consisting of the inclined wall *h*, the shields *w*, hung on  
 75 bracket-supports in front of the latter and not in contact therewith, the trough C, located under said wall and having the foot-blocks *n* therein, with a water-passage entirely around the latter, the perforated ventilating-pipe J,  
 80 located behind the wall *h*, and means, substantially as described, for conveying water onto the latter and to said trough, and for drawing the water and the urinary discharges from the latter, combined and operating substantially  
 85 as set forth.

2. In a urinal construction substantially as described, the trough C, the inclined wall *h*, having its lower edge supported over the lat-  
 90 ter and above the normal water-line thereof, the perforated ventilating-pipe J, the flushing-pipe H, to discharge water against said wall, a suitable water-supply for said pipe, the drain-pipe *e*, connected to the bottom of said trough, the siphon-pipe *d*, adjustably secured to the  
 95 interior of said drain-pipe, and the siphon-cap *b*, having air-passages and side openings there-through, combined and operating substantially as set forth.

3. In a urinal construction substantially as  
 100 described, the urinary wall *h*, the shields *w*, hung on bracket-supports, substantially as described, in front of the latter and not in contact therewith, and the rod *v*, passing trans-  
 105 versely through said shields and suitably secured thereto, all combined and arranged substantially as set forth.

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Witnesses:

H. A. CHAPIN,  
 W. F. RICE.