

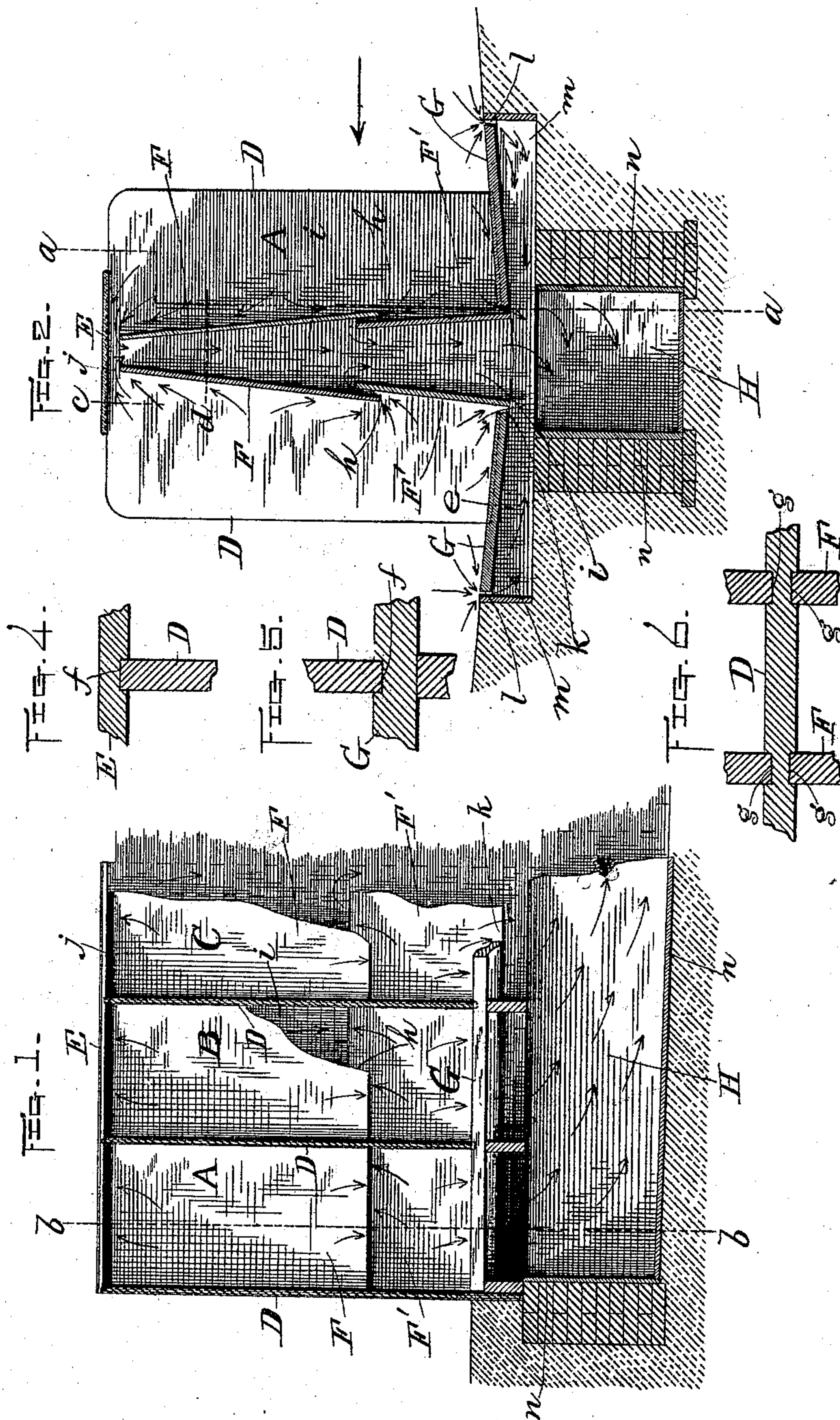
(No Model.)

2 Sheets—Sheet 1.

F. P. SMITH.
VENTILATED URINAL.

No. 519,355.

Patented May 8, 1894.



Witnesses;
Walter B. Nourse,
Fred E. Buss.

Inventor;
Fred P. Smith.
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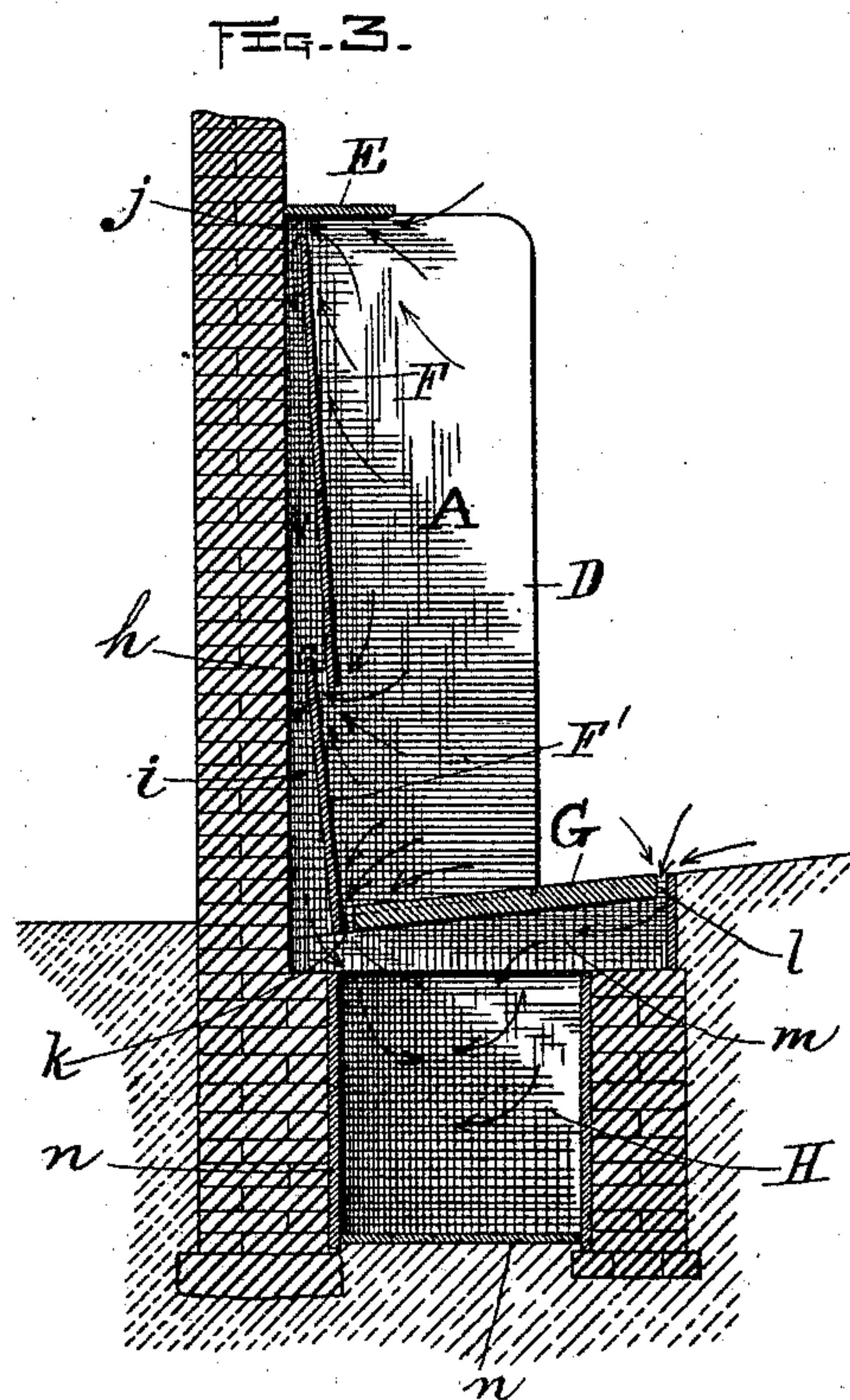
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UNITED STATES PATENT OFFICE.

FRED P. SMITH, OF WORCESTER, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE SMITH HEATING AND VENTILATING COMPANY, OF BOSTON, MASSACHUSETTS.

VENTILATED URINAL.

SPECIFICATION forming part of Letters Patent No. 519,355, dated May 8, 1894.

Application filed September 2, 1891. Serial No. 404,488. (No model.)

To all whom it may concern:

Be it known that I, FRED P. SMITH, of the city and county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Ventilated Urinals; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a vertical, longitudinal section taken at the point indicated by line *a a* in Fig. 2, looking in the direction of the arrow same figure, showing, partly in section, and partly in elevation, one end of a series of ventilated, urinal compartments, arranged side by side, as will be hereinafter more fully described. Fig. 2 is a vertical, transverse section, taken at the point indicated by line *b b* in Fig. 1, showing a double set of ventilated urinals, arranged back to back at a short distance apart over the usual ventilating duct. Fig. 3 is a similar view to Fig. 2 showing a vertical, transverse section through a single set of ventilated urinals arranged above the usual ventilating duct, against a wall or partition. Fig. 4 is a vertical section on line *c* Fig. 2. Fig. 5 is a horizontal section on line *d* Fig. 2, and Fig. 6 is a vertical section on line *e*, Fig. 2; all of the last three figures being upon an enlarged scale, to more fully illustrate the construction.

My invention relates to slab urinals for school and other public buildings, and its object is to provide better ventilation at or about the fouling point, and at the floor of said urinals, as well as an improved construction, whereby the various slabs or partitions and flooring composing the urinal stalls or compartments may be fastened together more conveniently, and at less cost than heretofore.

Said invention consists in making the back of each urinal compartment in two pieces, one above the other, with the bottom edge of the upper part overlapping and at a short distance out from the upper edge of the bottom part so as to form a ventilating opening between said two overlapping edges, at or about the level of the fouling point.

It also consists in forming a ventilating opening at the outer edge of the floor-slab in addition to the usual ventilating opening at

the inner edge thereof, and it further consists in forming suitable grooves in the top slab, the vertical, transverse partitions and the floor slab, so that the various parts may be readily fitted together in said grooves, and securely held in position without the use of clamps, angle-irons or other usual fastenings, as hereinafter more fully set forth.

In order that others may better understand the nature and purpose of my said invention, I will now proceed to describe it more in detail.

In practice, as is well known, urinals of the class to which my invention relates, are divided into a series of compartments arranged in a row, side by side, either single or double, as previously stated; but for convenience in illustration I have shown only one complete compartment *A*, and parts of two others, *B*, *C*, in Fig. 1 of the drawings. Said series of compartments consist of the transverse, vertical partitions *D*; the top, horizontal slab *E*; the vertical, longitudinal slabs or back pieces *F*, *F'*, which are preferably inclined slightly, and the floor-slab, or slabs, *G*, the latter, for greater strength being preferably thicker than the others as shown. Said slabs may be made of slate, marble or any other suitable, analogous material, and supported as usual. They are constructed, arranged and fitted together as follows: The top and bottom pieces, *E*, *G*, which are in practice preferably made in one continuous length, are both grooved transversely, on one side, the top piece upon its under side to receive the top edges of the transverse or cross-partitions *D*, and the floor-piece upon its upper side to receive the bottom edges thereof, as is indicated at *f* in Figs. 4 and 5. Said transverse or cross-partitions are also each made in one piece and their sides grooved vertically, to receive the side edges of the back pieces *F*, *F'*, as is shown at *g g* in Fig. 6, and by Figs. 1 and 3. The back pieces *F* are made of the proper lengths to bring their lower ends down to about the level of the fouling point, while the bottom pieces *F'* extend up back of, at a short distance from and just above the bottoms of said top, back pieces *F*, as is shown in the drawings; thus providing a ventilating opening *h* across the back of each urinal compartment into the usual ventilating space *i*, back of the fouling

surface, in addition to the usual top and bottom ventilating openings *j*, *k*. I also provide in addition to said usual openings *j*, *k*, a ventilating opening *l*, at the outer or front edge of the floor-slab *G*, between the same and the edge of the floor, connected by the space *m* under said slab, with the usual ventilating duct *H*. The space back of the urinals also being connected therewith, as shown in Figs. 2 and 3 of the drawings. Said duct *H* not only serves as a vent, but also as a trough to carry off the urine discharged therein from the urinals above, being provided with a cement, metal or other suitable lining *n*. It is connected in practice with a suitable ventilating stack or shaft extending up through and above the building in which the apparatus is placed, whereby a strong draft is maintained downward from the urinals, as is indicated by the arrows, but as said stack or shaft and connection constitutes no part of my present invention, it is deemed unnecessary to illustrate the same.

The essential features of my invention are, first:—the means of ventilation at the fouling point; second:—the means of ventilation at the outer edge of the floor-slab, and third:—the mode of construction whereby the different parts may be fitted and fastened together quickly and securely without the use of the fastening devices ordinarily employed.

It will at once be apparent that by thus providing the urinals with a ventilating opening at or about the level of the fouling point, as well as at the outer edge of the foot-slab, in addition to the usual ventilating openings aforesaid, the air in the compartments and about the same may be kept comparatively pure, and free from the usual offensive and injurious properties emanating from this class of urinals. It is also obvious that a series of urinals constructed in the manner herein shown and described, may be fitted and fastened together in a very easy and expeditious manner; and when thus united are held securely from displacement. Then, again, by making the joints as aforesaid, a tighter fit may be obtained, and the whole series of urinals, furthermore, present a neater and more tasty appearance than by the old methods of construction and fastening.

I reserve the right to apply my invention to either a single row or series of urinals arranged against a wall or partition, as shown in Fig. 1; or, a double row arranged back to back, as indicated in Fig. 2.

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

1. In slab urinals, the backs thereof made in two parts *F* *F'* arranged one above the other and the upper part overlapping the lower one with a short space between their overlapping edges to form a ventilating opening, *h* horizontally across said back at or about the level of the fouling point, substantially as and for the purpose set forth.

2. In slab urinals, the combination of the

back, the dividing partitions between the stalls or compartments and the floor, with the bottom or floor slab *G* made of the proper width and arranged to form longitudinal ventilating openings at both its front and back edges communicating with the main ventilating duct *H*, substantially as and for the purpose set forth.

3. In slab urinals, the combination of the top and bottom horizontal, longitudinal slabs *E*, *G*, and the usual division partitions, with the back made in two parts *F* *F'* arranged one above the other and the upper part overlapping the lower one with a short space between their overlapping edges to form a ventilating opening *h* horizontally across said back at or about the level of the fouling point in addition to the usual top and bottom ventilating openings *j*, *k*, substantially as and for the purpose set forth.

4. In slab urinals, the combination of the top slab *E*, the usual transverse division partitions and the floor with the back made in two parts *F* *F'* one above the other and the upper part overlapping the lower one with a short space between their overlapping edges to form a ventilating opening *h* horizontally across said back at or about the level of the fouling point in addition to the usual top and bottom ventilating openings *j*, *k*, and the bottom or floor slab *G* made of the proper width and arranged to form a longitudinal ventilating opening *l* at its outer edge between the same and the floor in addition to the usual ventilating opening *k* at its inner edge, substantially as and for the purpose set forth.

5. In slab-urinals, the combination of the horizontal top piece *E* having transverse grooves therein to receive the upper edges of the vertical, transverse partitions *D*; the bottom, horizontal piece *G*, having transverse grooves therein to receive the bottom edges of the transverse partitions; said transverse partitions having substantially vertical grooves in the sides thereof to receive the side edges of the back pieces *F* *F'* and said back pieces arranged between the transverse partitions with the upper one overlapping the bottom one at a short distance apart, substantially as and for the purpose set forth.

6. In slab urinals, the combination of the back forming the fouling surface, and the floor, with the bottom or floor-slab *G* made somewhat narrower than the space between said back and the edge of the floor in front thereof, and arranged to form a longitudinal, ventilating opening *l* at its outer edge between the same and the floor, in addition to the usual ventilating opening *k* at its inner edge, and communicating with the main ventilating duct *H*, substantially as and for the purpose set forth.

FRED P. SMITH.

Witnesses:

A. A. BARKER,
W. B. NOURSE.