

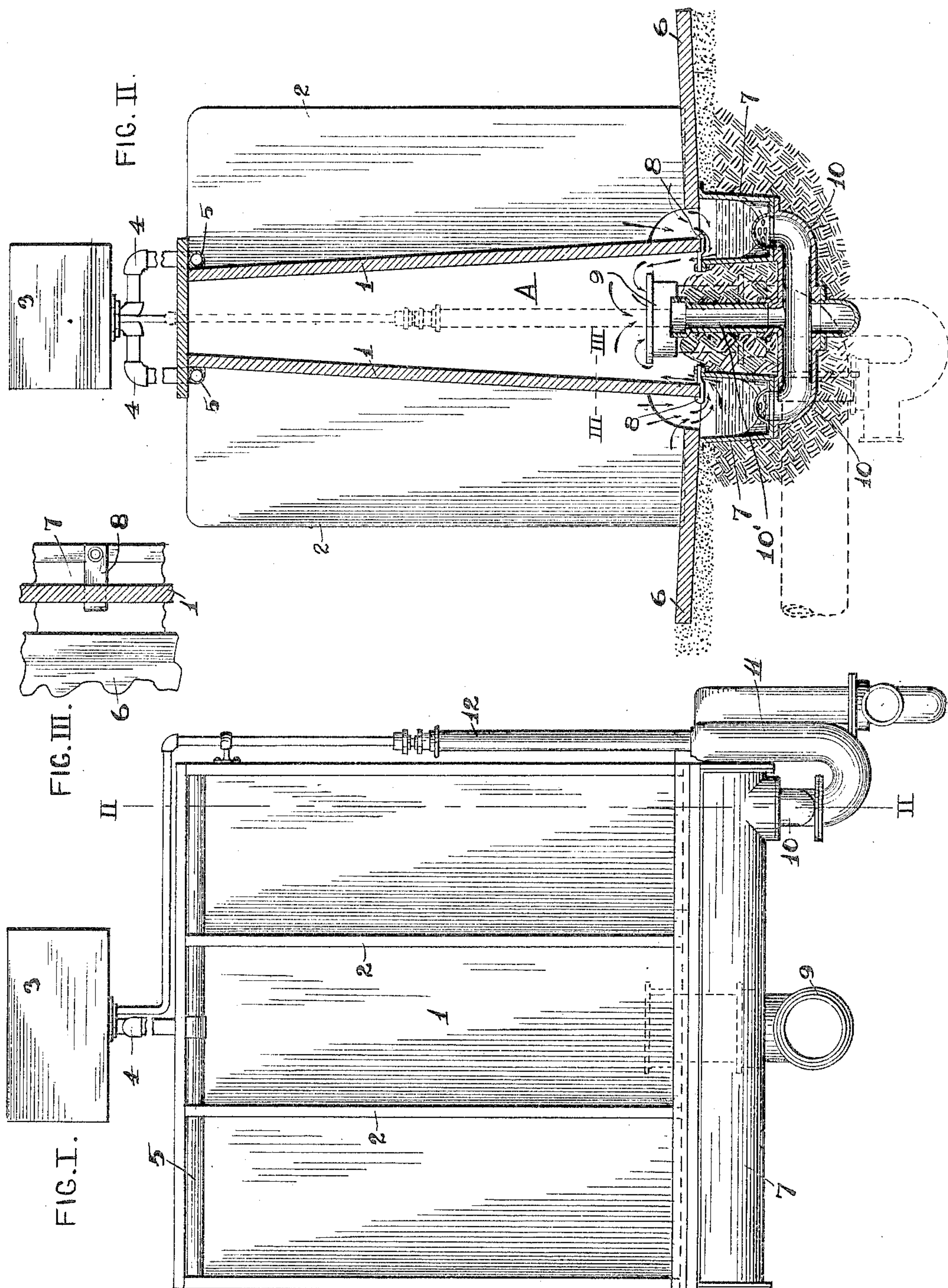
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URINAL.

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ATTEST.

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UNITED STATES PATENT OFFICE.

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URINAL.

No. 804,480.

Specification of Letters Patent.

Patented Nov. 14, 1905.

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To all whom it may concern:

Be it known that I, LOUIS D. LAWNIN, a citizen of the United States, residing at Edwardsville, in the county of Madison and State of Illinois, have invented certain new and useful Improvements in Urinals, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of urinals used in public places and of the character illustrated in United States Letters Patent No. 659,446, issued to the N. O. Nelson Manufacturing Company October 9, 1900.

The object of the present improvement is to provide more perfect ventilation and secure better sanitation of the gutters and apartments of a double-back urinal.

Figure I is a front elevation of my urinal. Fig. II is a vertical cross-section taken on line II II, Fig. I. Fig. III is a horizontal section taken on line III III, Fig. II, with parts beneath said line shown in plan view.

1 designates two urinal back walls spaced apart to furnish an air-space A between them.

2 designates the partition walls or slabs of the urinal, which subdivide the two sides thereof into stalls.

3 is an elevated water-tank having a pair of water-conducting pipes 4 leading therefrom to drip-pipes 5, located adjacent to and extending across the back walls 1 at their upper ends in the usual manner.

6 designates the floor-slabs of the two portions of my double urinal, on which the stall-partitions 2 rest for support.

7 designates a pair of gutters located beneath the back walls 1 and extending under the floor-slabs 6. The back of each section of the urinal extends downwardly to a position immediately above the compartment in a corresponding gutter 7, but forward of the rear wall of the gutter, thereby providing a space between the lower ends of said back walls and the rear wall of the gutter through which air may constantly circulate from the front sides of the urinal-backs to the rear sides thereof to enter the air-space A. The back walls of the urinal-sections are supported in the described positions by brackets 8, which are secured to the rear walls of the gutters 7.

9 designates a vent-pipe that has open communication with the space A between the uri-

nal back walls. This vent-pipe serves to receive the odor-laden air that enters into said space by circulating through the gutters 7 from the fronts of the urinal-sections and beneath the urinal-backs to the rear sides thereof into the space A, as indicated by the arrows.

The vent-pipe 9 extends horizontally beneath the level of the floor surrounding the urinal, and it projects upwardly in the form of an L into the space between the back walls 1, where it terminates above the level of the surrounding floor. By this arrangement the main portion of the pipe is placed beneath the floor, while the upwardly-extending L or foul-air-receiving end terminates above the floor-level at a point which obviates all possibility of entrance of water into the pipe in the event of the urinal-gutters overflowing due to the outlets therefrom becoming clogged.

For the purpose of avoiding a flow of water from one of the gutters 7 to the other gutter in the event of either of them becoming clogged I provide a ridge or mound, preferably of concrete, extending longitudinally between the gutters, as seen in Fig. II, and through which the upturned end of the vent-pipe 9 extends. It will be readily understood that either gutter is of insufficient capacity to carry off overflow of water from the other gutter, and in the absence of this ridge or mound the water from either clogged gutter might overflow to the other gutter, and as a consequence overflow from the second onto the surrounding floor, due to the incapacity of the clogged gutter.

In the use of a urinal constructed as described a complete and adequate ventilation is secured with respect to the two urinal-sections placed back to back, and all odor-laden air is constantly carried into the space between the sections to pass into the vent-pipe through which it is conducted to any desirable point of discharge exterior of the building in which the urinal is located. A body of water is maintained in the gutters 7 and flushed therefrom from time to time through branch pipes 10, leading from the gutters to a double trap 11, such as described in Letters Patent hereinbefore mentioned, the trap being connected to the water-tank 3 by an air-pipe 12.

10' is a clean-out extension projecting upwardly from the center of the branch pipes

10 to a point above the floor-level of the urinal. This extension-piece serves as means for gaining access to the branch pipes for cleaning-out purposes, as will be readily understood.

I claim as my invention—

1. In a urinal, the combination of a pair of gutters adapted to hold bodies of water, a pair of stall-backs spaced apart from each other to furnish an air-space between them and free of contact with said gutters to provide air passage-ways leading from the front sides of the stall-backs to said air-space, and a vent-pipe leading from said air-space and terminating in an open upturned L extending to a point above the level of the surrounding floor, substantially as set forth.

2. In a urinal, the combination of a pair of gutters adapted to hold bodies of water, a pair of stall-backs spaced apart from each other to furnish an air-space between them and free of contact with said gutters to provide air passage-ways leading from the front sides of the stall-backs to said air-space, a vent-pipe leading from said air-space and terminating in an open upturned L extending to a point above the level of the surrounding floor, and a trap having communication in common with both of said gutters, substantially as set forth.

3. In a urinal, the combination of a pair of gutters adapted to hold bodies of water, a pair of stall-backs spaced apart from each other to furnish an air-space between them and free of contact with said gutters to provide air passage-ways leading from the front sides of the stall-backs to said air-space, a vent-pipe leading from said air-space, a trap having communication in common with both of said gutters, a pair of branch pipes forming part of the communication between said trap and gutters, and an extension-piece projecting up-

wardly from said branch pipes, substantially as set forth.

4. In a urinal, the combination of a pair of gutters, a trap having communication in common with both of said gutters, and a ridge extending longitudinally between said gutters, substantially as set forth.

5. In a urinal, the combination of a pair of gutters spaced apart, a pair of stall-backs spaced apart from each other to furnish an air-space between them and having their lower ends spaced from the walls of the gutters to provide air passage-ways, and a trap having communication in common with both of said gutters, substantially as set forth.

6. In a urinal, the combination of a pair of gutters spaced apart, a pair of stall-backs spaced apart from each other to furnish an air-space between them and having their lower ends spaced from the walls of the gutters to provide air passage-ways, and a vent-pipe having a part extending upwardly between said gutters and terminating above the level of the surrounding floor and in the air-space between the stall-backs, substantially as set forth.

7. In a urinal, the combination of a pair of gutters, a ridge extending longitudinally between said gutters, a pair of stall-backs spaced apart from each other and spaced from the gutters and the ridges, a trap located below said ridge and having a communication in common with both of said gutters, and a vent-pipe having an upturned end extending through said ridge and terminating above the level of the surrounding floor and between the stall-backs, substantially as set forth.

LOUIS D. LAWNIN.

In presence of—

GEO. J. LEWIS,
JOSEPHINE C. SMITH.