





# UNITED STATES PATENT OFFICE.

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## URINAL.

955,485.

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*To all whom it may concern:*

Be it known that I, DENNIS R. WALSH, a citizen of the United States, residing at Baltimore, in the State of Maryland, have  
5 invented certain new and useful Improvements in Urinals; and I do hereby 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  
10 appertains to make and use the same.

The present invention relates to improvements in urinals, and it has for its primary object the production of an extremely simple and inexpensive device of that nature designed strictly in accordance with the principles of sanitation.

To this end the invention resides, generally, in the provision of a urinal so constructed as to present merely a narrow vertical surface to contact with the urine, in consequence of which the entire area of such surface or urine wall will be flushed at each discharge of water through the nozzle of the supply pipe, the contact surface being in-  
20 closed to some extent by the side walls of the urinal, which project laterally thereacross, and by the overhanging top wall, this formation materially decreasing the possibility of the clothing or person of the  
25 user becoming soiled, and, at the same time, tending to cause all rising odors to pass out through the vent at the top of the channel formed by the above mentioned walls.

The invention further resides in the particular form of the bowl employed. This bowl, which is located at the bottom of the channel, is formed in the block of vitreous or other material of which the urinal is constructed, and is provided at its center  
35 with an opening which communicates with the discharge or drain channel, the latter communicating, in turn, with the underground drain pipe, the side walls of the urinal overhanging the bowl, so as to insure  
40 the discharge of all urine thereinto.

Finally, the invention resides, as mentioned indirectly above, in the formation of the entire device of a single block of any suitable material, so as to present no seams  
50 or interstices in which the urine can collect, the shape of the device being that of a narrow pyramid whose dimensions are such that a man may easily straddle the bowl, the device thus occupying but little floor space.

55 The preferred embodiment of the inven-

tion is illustrated in the accompanying drawings, in which corresponding parts, or features, as the case may be, are designated by the same reference characters throughout the several views.

Of the said drawings—Figure 1 is a perspective view of the preferred form of the complete invention, and Figs. 2 and 3 are, respectively, vertical and horizontal sections taken on the lines 2—2 and 3—3 of Fig. 1. Figs. 4 and 5 are sectional views of modifications.

In Fig. 1 portions of the partitions located at opposite sides of the urinal are indicated in dotted lines.

Referring more particularly to the drawings, A designates, generally, the floor, and B one of the walls of the lavatory wherein the urinal is located.

The urinal itself, which is designated in a general manner by the character C, is formed of a single block of any suitable vitreous material, preferably glazed porcelain, although marble or glass may be substituted therefor, if desired. This block has the shape of a narrow pyramid, rectangular in cross-section, its base being, approximately, 14 x 9 inches, and its top, adjacent its cap, 11 x 7 inches, its total height from apex to base being about 4 feet. In this block is formed a narrow vertical channel which opens through the outer face thereof and is widened at its lower end to provide a bowl 6, which latter is formed in the base portion 7 of the block. The last-mentioned portion 7, which is embedded in the seat formed in the floor A, is formed with a lateral extension 8 provided with a concavity, 9, which communicates with the bowl 6 and serves as an extension thereof. Said extension and its concavity 9 have rounded side walls which taper gradually to a point which lies in the plane of the vertical axis of the block, the general shape of the extension, therefore, being that of a prow.

The channel 5 above referred to extends above the point where the body portion or shaft 10 of the structure terminates, and into the cap 11, the rounded front wall of which latter thus overhangs the channel, as shown. The channel, as stated, opens through the front wall of the shaft, such opening being indicated by the numeral 12. The upper end of the opening, however, terminates short of the upper end of said



front face, and its width is less than that of said face, the side edges 13 of which latter thus project a slight distance across the part of the channel, as shown in Fig. 3. In like manner, the edges of the concavity 9 project laterally a slight distance thereacross, as indicated by the numeral 14. The opening 12 tapers slightly from its lower to its upper ends, having a width of about 7 inches at its upper end and 9 inches at its lower end. By reason of this construction it will be obvious that a relatively narrow contact surface is presented by the rear wall of the channel, in comparison with that of urinals of the ordinary type, in which such surface is circular, and much wider. Therefore, the person or clothes of the user are in no danger of becoming soiled where urinals of the channel type are employed, this effect being furthered by the formation of the projecting edges 13. Furthermore, the dimensions of the base extension 8 are such that the user can easily straddle the extension, thus insuring the discharge of all urine directly into the channel, and the receipt of any drip by the concavity 9, which serves as an extension of the bowl 6.

To indicate the proper position to be assumed by the user, the floor A has set thereinto a pair of marble blocks or bricks 15, shown in Fig. 1. These bricks, however, may be replaced by marks painted or otherwise indicated upon the floor.

The wall B has formed therethrough, one above the other, a pair of openings which register with similar openings in the cap and upper end of the shaft of the structure, the latter openings communicating with the channel 5. The upper pair of openings receives the laterally-bent lower end of a vent pipe 16, while the lower pair receives that of the water pipe 17, the last mentioned pipe terminating in a perforated spreader 18 which directs the water against the urine wall. The type of cap shown in Figs. 1 and 2, may, moreover, be omitted, if desired, and the shaft formed with a flat top or cap 11' having an opening arranged to receive the lower end of the vent pipe 16', (see Fig. 4). The bowl 6, in like manner, is provided with an axial opening in which is fitted a strainer 19, said opening being formed by the inner end of a discharge channel 20, in whose outer end is fitted a short length of pipe 21 connected by a joint 22 with the upper end of a discharge pipe 23. This discharge pipe communicates, in turn, with the underground sewer pipe (not shown). The channel 20, which is formed interiorly of the base extension 8, is first directed downwardly through the bowl and then upwardly, so as to open through the side of the base, and in its course provides a trap. This construction may, however, be modified as shown in Fig. 5, by forming a short straight channel which

opens directly through the lower face of the base and is arranged to have fitted therein the upper end of the discharge pipe 23'.

The particular disposition of the spreader 18 results in the flushing of the entire urine wall by the water from the pipe 17, as will be apparent, owing to the narrow width of such wall, the discharge of water through the spreader being either continuous or intermittent, or effected at will by the user, according as desired. The formation of the vent opening, and the disposition of the same within the cap 11 tends to cause all rising odors to pass therethrough and be carried away through the pipe 16.

The urinals are preferably arranged in rows along one of the walls of the lavatory, and are separated by vertical partition plates 24 disposed at opposite sides thereof, as shown in Fig. 1. These partitions need not be of the same material as the urinals, and may be supported in any desired manner. Also they may or may not touch the floor line, according as preferred.

The formation of each urinal from a single block of material prevents the existence of any seams or crevices in which the urine can accumulate, while the use of vitreous material, or of material having a vitreous or glazed surface prevents the formation of incrustations, since the entire urine wall as well as the bowl is flushed and cleaned by the water discharged through the spread of the supply pipe.

What is claimed is—

1. An article of the class described including a base portion, a shaft, and a cap, and a lateral extension formed integral with the base portion, said extension and base having a bowl formed in the upper faces thereof, the front face of the shaft being formed with a vertical channel extending at its upper end into the cap and having its lower end opening into the bowl, said extension being formed with an interiorly-located downwardly-curved discharge channel having one branch opening outwardly through one of the sides, and the other branch opening upwardly through the bowl, the central portion of the channel forming a trap.

2. An article of the class described including a base portion, a shaft, and a cap, and a lateral extension formed integral with the base portion, said extension and base having a bowl formed in the upper faces thereof, the front face of the shaft being formed with a vertical channel extending at its upper end into the cap and having its lower end opening into the bowl, said extension being formed with an interiorly-located downwardly-curved discharge channel having one branch opening outwardly through one of the sides, and the other branch opening upwardly through the bowl, the central portion of the channel



forming a trap, a water pipe having one end thereof opening into the upper end of the channel in position to permit the water discharged therethrough to flush the entire  
5 channel and a vent pipe having one end thereof opening into the upper end of the channel in position to carry off the odors rising in the channel.

10 3. An article of the class described, comprising a vertically channeled body portion, and a base portion provided with a forwardly projecting extension, said base and extension having a bowl formed in their upper face into which the channel in the

body portion opens; said extension being 15 formed with an interiorly located downwardly-curved discharge channel having one branch opening outwardly through one of the sides, and the other branch opening upwardly through the bowl, the central portion of the channel forming a trap. 20

In testimony whereof, I affix my signature, in presence of two witnesses.

DENNIS R. WALSH.

Witnesses:

M. A. LONG,

GEO. W. HAULENBEEK.