

W. S. ROSS.
URINAL.

No. 482,754.

Patented Sept. 20, 1892.

Fig. 1.

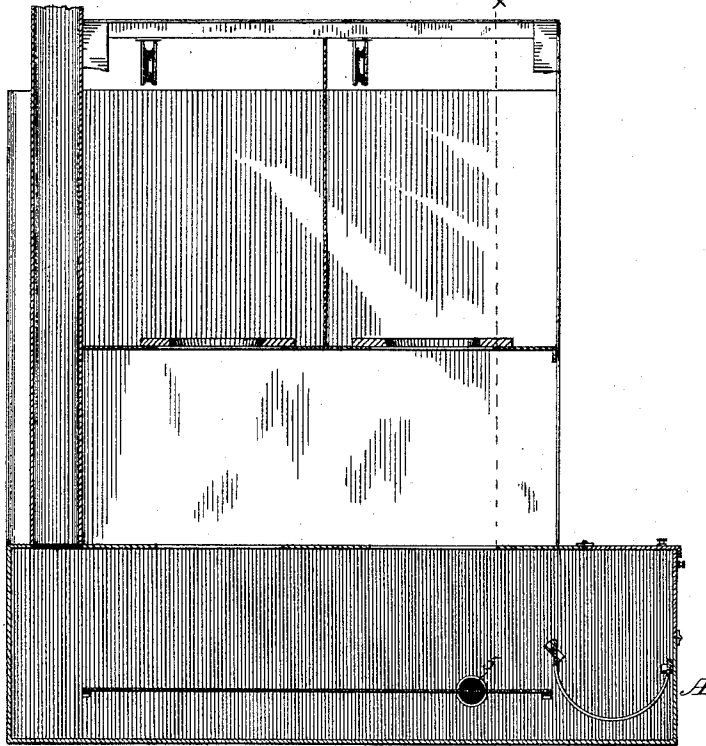
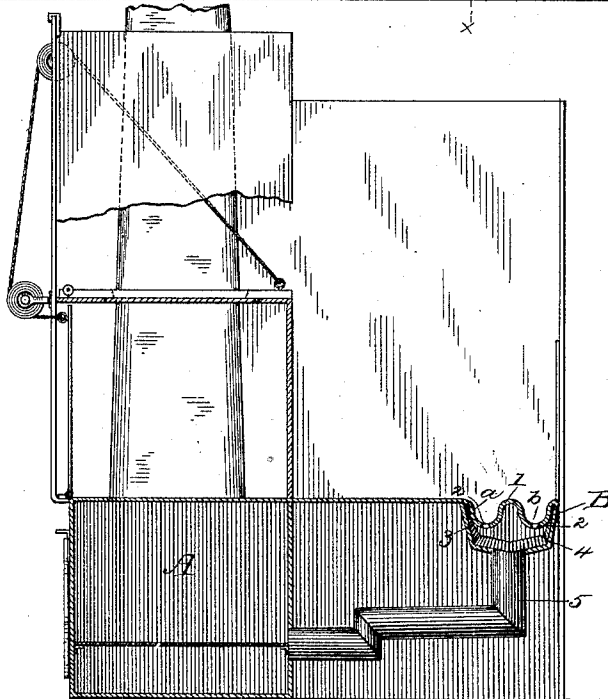


Fig. 2.



Witnesses

Wm. Musser
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Inventor

William S. Ross.

By his Attorney

A. G. Heyburn

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Fig. 3.

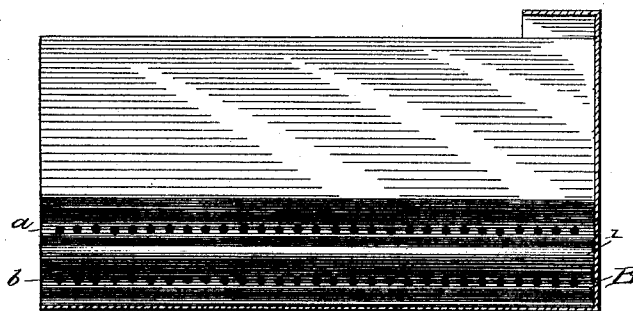
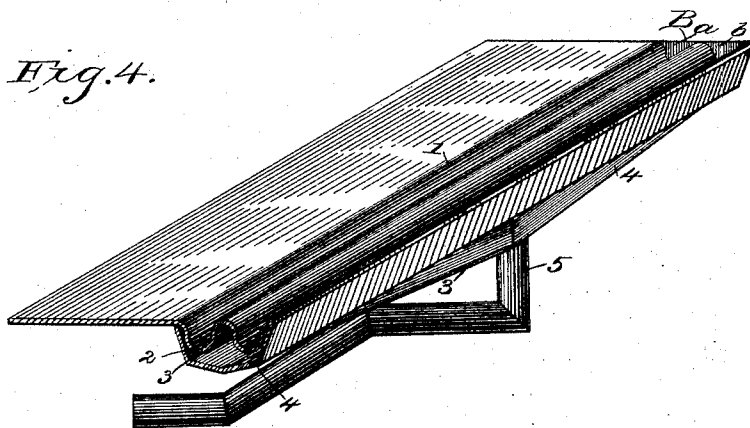


Fig. 4.



Witnesses

Thos Musser.
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UNITED STATES PATENT OFFICE.

WILLIAM S. ROSS, OF MADISONVILLE, KENTUCKY.

URINAL.

SPECIFICATION forming part of Letters Patent No. 482,754, dated September 20, 1892.

Application filed July 5, 1889. Serial No. 316,491. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. ROSS, a citizen of the United States of America, residing at Madisonville, in the county of Hopkins and State of Kentucky, have invented certain new and useful Improvements in Urinals, of which the following is a specification.

My invention has relation to improvements in urinals of that class associated with means for consuming or vaporizing the deposits and conducting the fumes and gases thereof from the depository to an altitude.

The object of my invention is to provide an improved urinal having a single drip-conduit pipe directly leading to the combustion-chamber of the dry-closet furnace, and this I accomplish by means of the constructions and apparatus illustrated in the accompanying drawings, wherein—

Figure 1 is a vertical longitudinal section of the furnace and closets, showing the ports of the conduit-pipe. Fig. 2 is a transverse section on the line $x x$ of Fig. 1. Fig. 3 is a detail plan view of the urinal. Fig. 4 is a perspective of the urinal-trough and conduit-pipe detached from its bed.

A designates the furnace of the dry closet, the construction of which is substantially that shown and described in my Letters Patent of the United States of America No. 264,568, dated September 19, 1882, and it consists, generally, of a proper casing provided with a draft-stack, a grate in the fire-box, a perforated intermediately-arranged bottom, and doors to close the end of the furnace, and on the top of the furnace are openings covered by doors which automatically close the openings and are raised or opened when the seats of the closets are drawn down to a horizontal position. As these constructions and elements form no part of my present invention, except as they may be claimed in combination therewith, a more specific description is not deemed essential to a clear, full, and statutory perception of the present invention.

B designates the urinal-trough, which is composed of an upper trough-piece 1 of any suitable construction to serve the purpose; but I prefer to make it with two parallel gutters $a b$ running through it, as shown, and having in the middle line of each gutter a series of perforations or apertures 2,

through which the fluids escape when impinged in the trough. The perforated piece 1 is arranged and secured in an imperforated trough with a space between the under face of the former and the surface of the latter. The imperforate bottom trough is composed of two sections 3 4 of angular shape in cross-section and inclined downward from the outer ends toward their junction at the center or to the point of union with the conduit-pipe, substantially as shown in the drawings. This construction causes the fluids to be speedily delivered to the conduit-pipe from any part of the trough and prevents the accumulation of sediment in the lower trough. Both ends of the trough are closed and sealed by solder or other proper cementation, so that the downward draft may not be made indirect by conflicting currents.

At the junctions of the sections forming the bottom of the trough is secured one end of the conduit-pipe 5. This conduit-pipe from its connection with the urinal-trough is carried forward and downward at an incline, as shown, and opens into the combustion-chamber of the dry closet at the front part thereof, preferably below the perforated bottom, as shown in Figs. 1 and 2 of the drawings. This arrangement brings the deposits directly in contact with the heat or flames, so as to speedily cause evaporation or consumption, and should the deposits not be directly and at once converted into fumes the steam and gases are carried back the whole length of the combustion-chamber and thus thoroughly vaporized by the time they reach the draft-stack, through which they are carried up and discharged in a condition beyond atmospheric perception.

The process of operation is readily understood by reference to the description; but it may be stated as follows: The effect of combustion in the furnace creates a strong draft, which is supplied in a great measure through the apertures in the trough. This draws the liquid deposits through the conduit-pipe into the furnace, the progress being facilitated by the inclined arrangement of the conduit-pipe. When the fluid reaches the furnace it is subjected to the heat and is reduced to vapor, and in this condition is carried out of the stack.

No special deodorizer or disinfectant is required, as the purifying agencies of the furnace heat destroys all the odors, and serves, by means of the suction induced through the perforations of the trough, to keep the room in which the urinal is located well ventilated or deprived of impurities.

Having thus described my invention, I proceed to particularly point out and distinctly claim the constructions and combinations as follows:

1. A urinal consisting of a perforated top trough having a bottom formed with two parallel gutters therein, an imperforate angular trough in cross-section, consisting of two sections secured under the perforated trough with their ends sealed thereto and arranged to incline downward from the ends of the trough to their point of union, and a conduit-pipe secured to the said sections at their lowest point, substantially as shown and described.

2. In combination with the dry-closet furnace provided with a perforated plate arranged above the floor of the combustion-chamber, a conduit-pipe opening into the combustion-chamber under the perforated plate and arranged at an upward incline, and the urinal-trough, consisting of the imperforate-bottom trough composed of sections secured to the upper end of the conduit-pipe and inclined upward from their connection therewith, and a perforated trough secured to the imperforate trough, said perforated trough being formed with parallel gutters, substantially as described, and for the purpose specified.

In witness whereof I have hereunto set my hand in the presence of two attesting witnesses.

WILLIAM S. ROSS.

Attest:

W. P. ROSS,
NATHAN KAHN.