

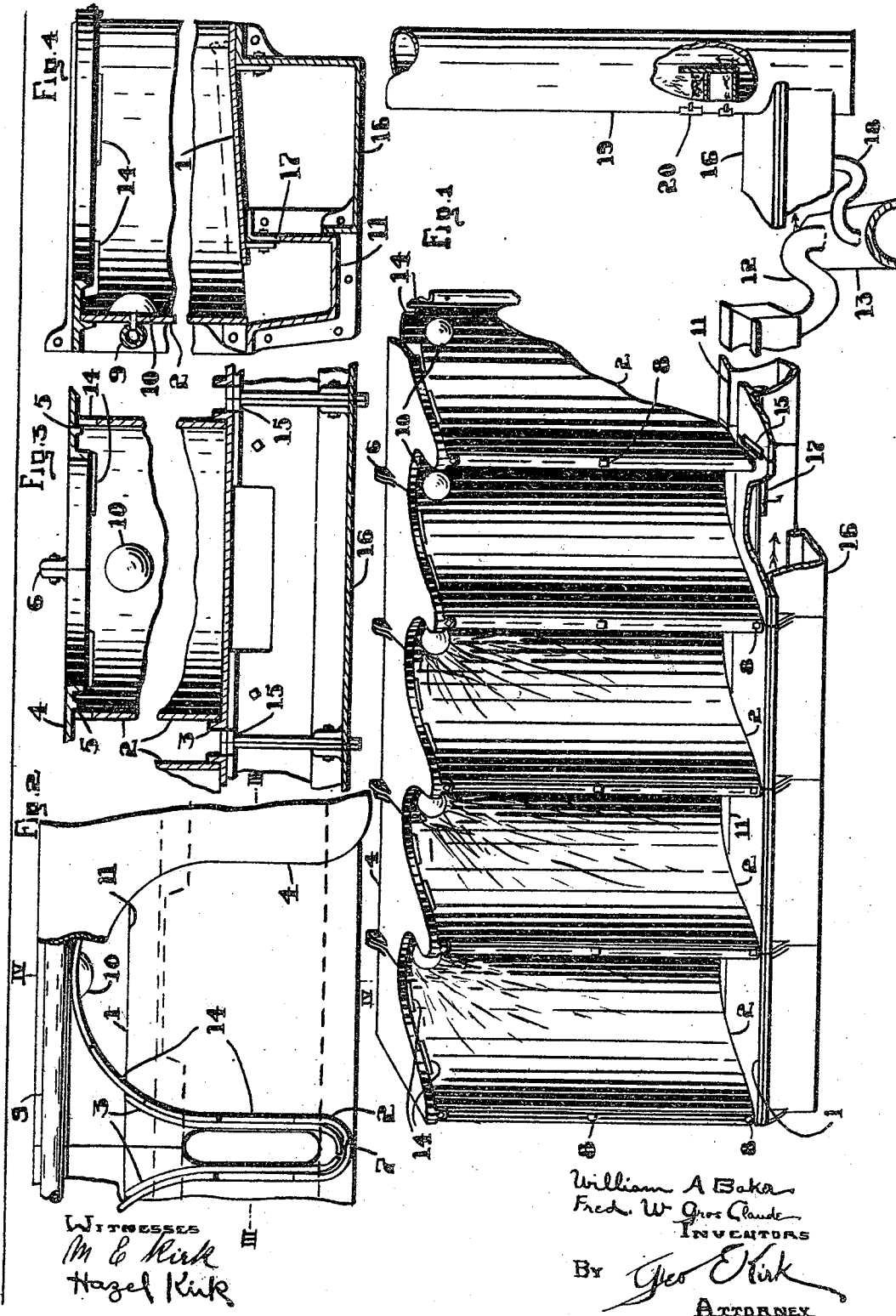
W. A. BAKER & F. W. GROS CLAUDE.

URINAL.

APPLICATION FILED SEPT. 21, 1908.

945,837.

Patented Jan. 11, 1910.



UNITED STATES PATENT OFFICE.

WILLIAM A. BAKER AND FREDERIC W. GROS CLAUDE, OF TOLEDO, OHIO.

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945,837.

Specification of Letters Patent.

Patented Jan. 11, 1910.

Application filed September 21, 1908. Serial No. 453,966.

To all whom it may concern:

Be it known that we, WILLIAM A. BAKER and FREDERIC W. GROS CLAUDE, citizens of the United States, residing at Toledo, Lucas county, Ohio, have invented a new and useful Urinal, of which the following is a specification.

This invention relates to a sanitary flushing device and apparatus for economically and efficiently collecting and disposing of waste liquid and foul gas.

This invention has utility when embodied in a urinal or in groups of urinals.

Referring to the drawings: Figure 1 is a perspective view, with parts broken away, of an embodiment of the invention in a series of urinals; Fig. 2 is a plan view, with parts broken away, of one of the urinal stalls; Fig. 3 is a section on the line III—III, Fig. 2, with intermediate portion broken away; and Fig. 4 is a section on the line IV—IV, Fig. 2, with intermediate portion broken away.

The urinal stalls are, as shown, each provided with a tread 1, forwardly inclined (Fig. 4). The inclosing or side walls 2 of the urinal stall are of U-shape or compound curve form, being in one piece to form three sides of the stall. The tread 1, (Fig. 3) is provided with flanges 3 interlocking with the side wall 2, while the top section 4 is provided with flanges 5 interlocking with the side wall 2. The top sections 4 are mounted in staggered relation as to the treads 1—the treads 1 terminating between the lateral partition walls of the stalls, while the top sections are joined at lugs 6 near the mid portions of stall walls 2. At the stall entrance the side walls 2 have interlocking flanges 7 united by bolts 8 to hold the several stalls in assembled relation.

Near the top of the stalls and along the back thereof, extends the flushing main or water pipe 9, having connection with a bell spreader or sheet sprayer 10 in each stall. Between this back portion of the urinal wall 2 bearing the sprayer 10, and the tread, there is the liquid waste duct into which the flushing from the urinal walls directly falls or is conducted by the treads 1 inclined there-toward. This duct discharges through trap 12 into sewer 13.

Near the top of the urinal walls 2, are openings 14 therethrough. Each stall being a unit with the lateral partitions spaced, there is provided between the stalls a venti-

lating passage, receiving the warm foul gas arising from the urine, through the openings 14 spaced from the tread 1, and discharging this gas cooled by the walls of the passage, through the opening 15 between adjacent treads 1, into foul gas duct 16, parallel and adjacent to waste duct 11. This duct 16, contiguous to duct 11 is in communication therewith by openings 17 at each stall, thus insuring most ready removal of foul gas. To provide for such emergency as overflow of the waste duct, as through clogging, or to take care of liquid which might otherwise collect in duct 16, there is connection through trap 18 with sewer 13. This duct proper 16 conducts the foul gas for sanitary disposal, herein shown as uptake 19, having furnace 20 not only affording a means for inducing a draft to more readily draw off the foul gas, but to destroy the noxious odors and thereby eliminate any possible danger to health or any liability of a nuisance.

As shown in Fig. 1, the three urinal stalls to the left have the flushing device in operation, the flush being received by the central or back portion of the stall walls, and deflected to be delivered to and wash down the side walls, thus through one spray opening efficiently flushing down with a minimum of water the entire surface of the stall which might become bespattered. This provision of a continuous surface, while easy to cleanse, has the additional advantage of entire absence of joints or seams exposed for collection of noxious matter, which means not only attaining of maximum sanitary efficiency, but the production of a urinal stall of greatest permanency, for it is nowhere open to attack by liquids for corrosion or weathering. Furthermore, the general curved lines followed throughout, produce a structure strong against the most rough usage, for there are no sharp corners to be knocked off or chipped. In its form, the stall is most desirable from both sanitary and mechanical standpoints. Incidental to these features of the stall, and still further enhancing its sanitary value, are the disposal connections. The warm urine striking the spray may have a portion of the foul gas therefrom cooled, while other portions may be warm. The warm gas rising, is drawn in through openings 14, where the cool surrounding walls cause it to chill, become heavier and follow its natural tendency in dropping to duct 16. The foul gas cooled

by the spray, is heavy and is readily drawn into the duct 11 from the stalls and at once discharged through openings 17 into duct 16 to be removed. In the system of passages and ducts, the foul gas as soon as entering, is permitted to flow downwardly and laterally, and this gas being heavy in the cool passages, it may be so removed effectively without forming any traps for accumulation of the gas in quantity, for in this natural course the gas of its own tendency tends to leave the urinals. In disposing of the foul gas, no trap for gas accumulation is formed, as ventilating duct 16 provides a horizontal travel way and uptake 19 provides an ascending travel way for the gas.

What is claimed and it is desired to secure by Letters Patent is:

1. A pair of laterally adjoining urinal stalls having an intermediate separating partition, said partition having therein a ventilating passage.

2. A pair of laterally adjoining urinal stalls provided with an intermediate partition having a ventilating passage therein, there being an opening communicating from the passage to a stall.

3. A pair of laterally adjoining urinal stalls provided with an intermediate partition having a ventilating passage therein, there being an opening near the top of one

of the stalls to the passage, and an outlet from the passage near the bottom of said stall.

4. A pair of urinal stalls having an intervening partition of single continuous bow curve form, the outward curve of one side of the bow forming the flushing face of the partition for one stall, while the inward curve thereof on the other side of the bow forms the flushing face of the partition for adjoining stall, the curve of said partition being continuous from flushing face of one stall to the flushing face of the adjoining stall, to eliminate filth harboring portions.

5. A urinal stall provided with a tread having a flange near opposite sides of the stall and a stall wall engaging between said flanges to interlock therewith.

6. The combination in a plurality of urinal stalls laterally adjoining and having treads, of a flange upstanding from the tread, and an intermediate partition seating to a locking position on the stall side of the flange to conceal the flange.

In testimony whereof we affix our signatures in the presence of two witnesses.

WILLIAM A. BAKER.

FREDERIC W. GROS CLAUDE.

Witnesses:

C. H. RAUCH,

GEO. E. KIRK.