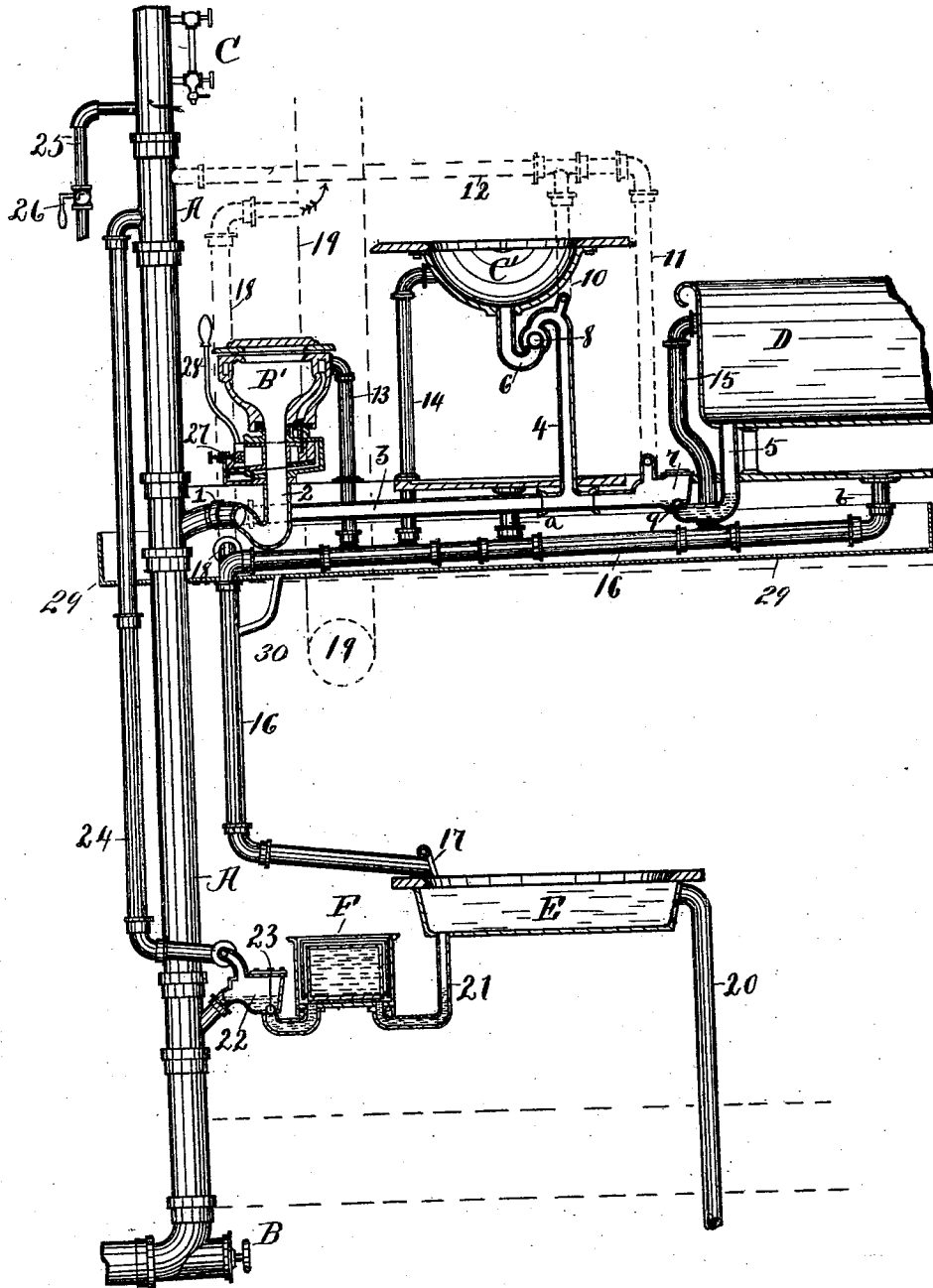


(No Model.)

M. J. GIBBONS.
SANITARY PLUMBING.

No. 544,035.

Patented Aug. 6, 1895.



WITNESSES:

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MICHAEL J. GIBBONS, OF DAYTON, OHIO.

SANITARY PLUMBING.

SPECIFICATION forming part of Letters Patent No. 544,035, dated August 6, 1895.

Application filed February 14, 1895. Serial No. 538,351. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL J. GIBBONS, of Dayton, county of Montgomery, State of Ohio, have invented a new and useful Improvement in Sanitary Plumbing; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in sanitary plumbing, in which are combined means for testing plumbing without disconnecting fixtures, means for local ventilation, overflows from fixtures through safe waste-pipes, showing leakage at kitchen-sink.

The object of the invention is to provide means for ascertaining at any time the condition of the waste-pipes—that is, for detecting any leakage that may occur in or outside of the fixtures.

A further object is to combine in one system of plumbing means for obtaining local ventilation, a safe waste, and overflow from the fixtures.

To these ends the invention consists of a system of plumbing having means conveniently located for testing the same, means for local ventilation consisting of a communication between the warm-air flue and the main safe waste-pipe, and vent and overflow pipes connected with said safe waste-pipe and with the water-closet, wash-bowl, and bath-tub, all of which will be fully described in the following specification, taken in connection with the annexed drawings, which clearly illustrate my improvements.

The drawing presents a partly-sectional elevation of a system of plumbing in accordance with my invention.

Referring in detail thereto, A designates the sewer or soil pipe, at the lower end of which, and at a point where said pipe enters the building, I locate a cut-off or valve B at any suitable point, and at the highest point of said soil-pipe a water-gage C is located, substantially as shown in the drawing, where

it will be noted said water-gage is placed at a point above the vent and waste pipes.

I designate a Y-fitting connected with the soil-pipe A, and to which is connected a waste-pipe 2 from the water-closet B' and a waste-pipe 3 with which waste-pipes 4 and 5 from the wash-bowl C' and the bath-tub D are connected. The waste-pipes 4 and 5 have traps 6 and 7, in which are placed ball-valves 8 and 9. 10 and 11 are vent-pipes for the waste-traps 6 and 7, and connect with a vent-pipe 12, which in turn connects with the upper part of the sewer or soil pipe A.

14 and 15 designate overflow and local vent pipes from the water-closet, wash-bowl, and bath-tub, respectively, to a main safe waste and local vent pipe 16, which has safe waste-inlets *a* and *b* below the wash-bowl and bath-tub.

29 designates a receptacle or "safing" which is placed under the entire system of plumbing and piping with which and the pipe 16 a pipe 30 connects. This pipe 16 discharges into the kitchen-sink E and is provided at its lower end with a valve 17, that normally closes said end.

18 designates a local ventilation-pipe which is connected with the safe waste-pipe 16 and enters the upper portion of the warm-air flue 19, preferably the kitchen-flue. (Shown in broken lines.)

20 is an overflow-pipe from the kitchen-sink to a sink in the cellar (not shown) or elsewhere.

21 is a waste-pipe from the kitchen-sink E to a grease-trap F, between which and the soil-pipe A a waste-trap 22 is placed. 23 is a ball-valve having a seat in said trap, and 24 is a pipe from the upper portion of the soil-pipe A, venting said trap 22.

25 designates an inlet-pipe connected to the upper part of the pipe A at any convenient point and through which water from a tank or city supply may be turned into said pipe A. The pipe 25 has a regulating-cock 26.

From the foregoing description it will be understood that the sub-system consisting of the safe waste and local vent pipe 16, and the auxiliary waste and vent pipes connected therewith constitute a system of themselves of safe waste and local ventilation pipes, which

is one feature of my invention. The other feature resides in the means for testing the waste and vent pipes, as hereinbefore described, without being put to the necessity of
 5 disconnecting any of the fixtures. This test may be conveniently made at any time by closing the valve B in the soil-pipe A and turning on the water in the inlet-pipe 25 until it registers at the gage C. This will indi-
 10 cate that the entire system of waste-fixtures to the points where the ball-valves 8, 9, and 23 are seated, and the trap vent-pipes connecting with said fixtures are filled with water.

The outlets to the waste-pipes for testing
 15 purposes are closed by the pressure of the water upon the upper part of the ball-valves. The water-closet is provided with a stop-cock 27, which is operated by a hand-lever 28 to close the waste-pipe 2. The waste and trap-
 20 vent pipes having thus been filled with water through the inlet-pipe 25 and the soil-pipe A, any leakage in the fixtures will be manifested by the appearance of water at the kitchen-sink through the main safe waste-pipe 16.

25 It will be noted that the ball-valves 8, 9, and 23 drop into their seats by gravity. Any back-pressure exerted upon them will cause said valves to fit more closely into their seats; therefore the possibility of sewer-gas escap-
 30 ing into the premises by backing through the waste-traps is avoided.

Another useful feature of my improved system of sanitary plumbing is in the means afforded for preventing the entry of sewer-gas
 35 into the fixtures during such time as the house may be unoccupied. In such event the cut-off valve B may be closed, all the fixtures having previously been drained of water.

40 Having fully described my invention, I claim and desire to secure by Letters Patent—

1. In sanitary plumbing, the combination of the overflow and local ventilation pipe—16—, safety connections between said pipe and the bath tub and wash-stand, separate overflow and local ventilation pipes —13—, 14— and
 45 —15 between the closet, wash-stand and bath tub, respectively, and said pipe—16—, and a pipe communicating with the latter pipe and with a warm air flue, whereby means are provided for obtaining local ventilation, and an
 50 outlet for the overflow and leakage from the fixtures through said pipe—16—substantially as shown and described.

2. In sanitary plumbing, the combination of the safety waste and local vent pipe (16); over-
 55 flow and local vent pipes (13) (14) and (15) communicating with the water closet, wash bowl, and bath tub; a waste pipe having traps provided with ball valves; vent pipes communicating with said traps and with the soil
 60 pipe, substantially as described.

3. In sanitary plumbing, a soil or sewer pipe, provided with a valve or cut off at a point where said pipe enters the premises; a
 65 water gage on said soil or sewer pipe at a point above the fixtures, in combination with trapped waste pipes; vent pipes for said traps communicating with said soil or sewer pipe; ball valves in said traps; safety waste and
 70 local vent pipes communicating with the water closet, wash bowl, bath tub, and kitchen sink; a vent pipe communicating with said safety waste pipe, and with said warm air flue, substantially as described.

In testimony whereof I have hereunto set
 75 my hand this 11th day of February, 1895.

MICHAEL J. GIBBONS.

Witnesses:

CHARLES W. DALE,
 R. J. MCCARTY.