

No. 635,619.

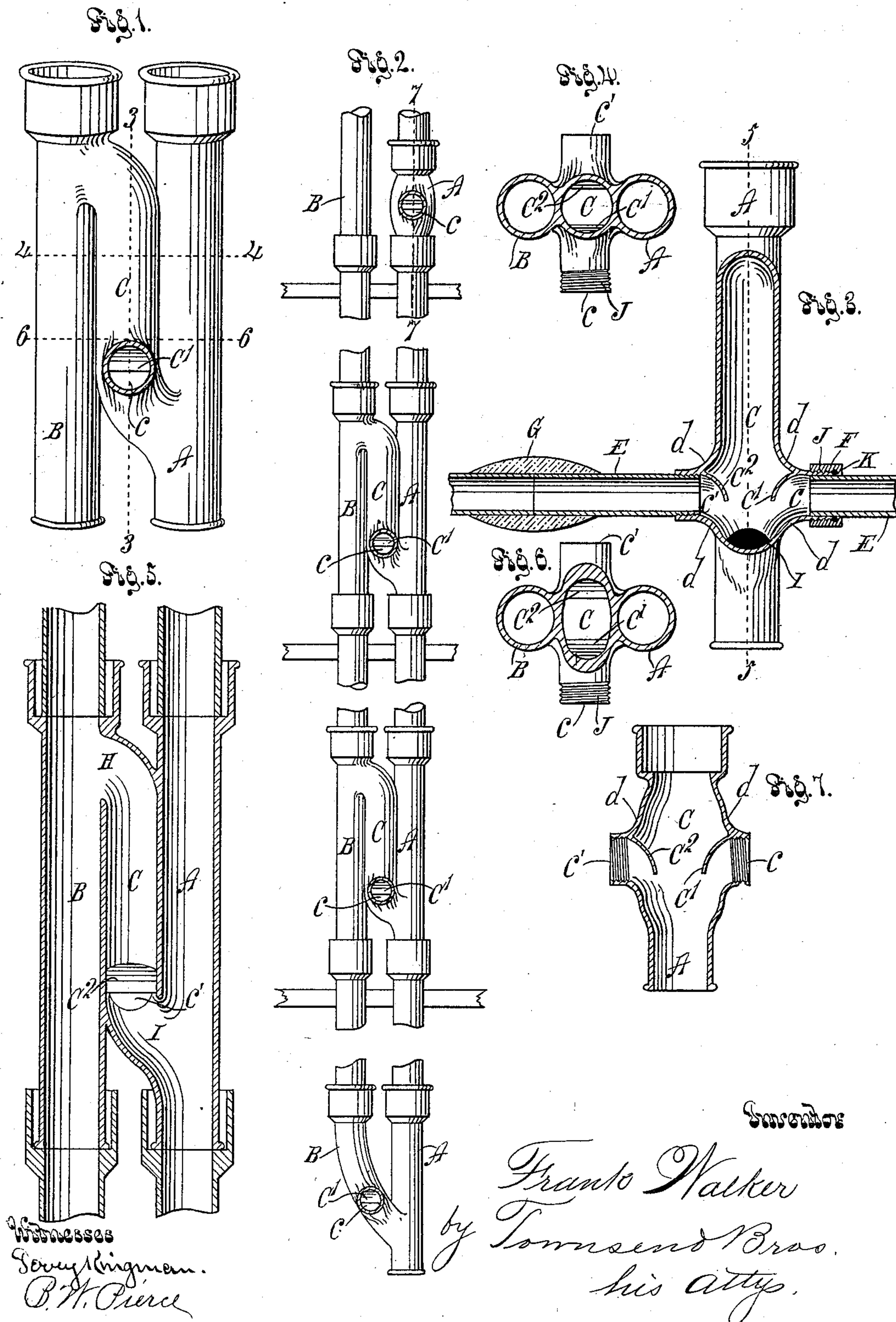
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F. WALKER.

COMBINATION SOIL PIPE DRAINAGE AND VENTING FITTING.

(Application filed Apr. 6, 1899.)

(No Model.)





# UNITED STATES PATENT OFFICE.

FRANK WALKER, OF LOS ANGELES, CALIFORNIA.

## COMBINATION SOIL-PIPE DRAINAGE AND VENTING FITTING.

SPECIFICATION forming part of Letters Patent No. 635,619, dated October 24, 1899.

Application filed April 6, 1899. Serial No. 711,990. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK WALKER, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Combination Soil-Pipe Drainage and Venting Fitting, of which the following is a specification.

One object of my invention is to provide a fitting for use in drainage and venting plumbing of buildings which will combine in one piece means for attaching to the discharge-fitting of the basin, bath, or other fixture to be drained, and means for venting such drainage-pipe into a main venting-line adapted to vent connections at a lower point thereon.

Another object of my invention is to provide a drainage and venting fitting which will discharge the liquids from the basin, bath, or other fixture downwardly into the drainage or soil pipe to prevent such water from splashing or from damming against an opposite incoming stream where two streams enter from opposite sides of the pipe.

Another object of my invention is to provide means whereby two parallel lines of pipe, one of which is used as a soil or drainage pipe and the other one used as a vent-pipe, may be joined in an inexpensive manner, so that the soil-pipe is vented into the vent-pipe without danger of the drainage flowing over the basin or other fixture onto the floor. I accomplish this by having the upper end of my venting-duct terminate and connect with the vent-pipe at a point on a level intermediate the top and bottom of the basin or other fixture. Should there be any backflow of water from a stoppage of the drain-pipe, it will run out into the vent-pipe before rising to the top of basin or other fixture and will show water in the bottom of basin at the same time, which would indicate a stoppage of drain-pipe. While I consider this construction preferable, it is to be understood that I do not limit myself to such proportions, but may make the fitting of any length.

My fitting comprises a soil-pipe member straight throughout, a vent-pipe member straight throughout parallel with the soil-pipe member, and a drainage receiving and vent-

ing duct connecting the lower portion of the soil-pipe member and the upper portion of the vent-pipe member.

My invention also includes a drainage and venting fitting comprising a soil-pipe member, a vent-pipe member connected therewith, and a deflector arranged to discharge the drainage downwardly into the soil-pipe member.

The accompanying drawings illustrate my invention.

Figure 1 is a view of my combination soil-pipe drainage and venting fitting. Fig. 2 shows my invention as it is arranged in the pipe-lines to take drainage from four floors of a building. Fig. 3 is a vertical section taken through the drainage and vent duct which connects the lower end of the soil-pipe member and the upper part of the vent-pipe member. This view is taken on line 3 3, Fig. 1. Fig. 4 is a horizontal cross-section on line 4 4, Fig. 1. Fig. 5 is a vertical section of the fitting on line 5 5, Fig. 3. Pieces of soil and vent pipes are shown in place in this view. Fig. 6 is a horizontal cross-section on line 6 6, Fig. 1. Fig. 7 is a vertical section of the top fitting, as shown on line 7 7, Fig. 2. This view shows inlet-ports and the deflectors arranged over such ports to direct the flow of water downwardly.

A is a soil-pipe.

B is the vent-pipe.

C is the drainage and vent duct.

c and c' are lateral openings into the drainage and vent duct.

C' C<sup>2</sup> are deflectors arranged above the mouth of the laterals c and c'.

E are drainage-laterals from the basin or other fixture.

F is a union coupling, which is formed by cutting a thread J on the laterally-projecting nipple on the enlarged portion of the drainage and venting duct.

K is a packing-nut.

G is a wiped joint, which is wiped onto a nipple that is screwed into the lateral opening of the duct.

H is the vent-opening into the vent-pipe, and I is the opening from the drainage and vent duct C into the soil-pipe A.

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In the manufacture of my fitting it is cast in one piece, the openings for venting and drainage being formed by means of cores. The drainage-laterals are arranged to discharge in the lower portion of the drainage-receiving and venting duct and are provided with the curved deflecting-plates  $C'$  and  $C''$  above their mouths. Such deflectors extend forward and downwardly from the wall of the duct slightly into the channel of the pipe. These curved deflecting-plates prevent the incoming stream from the laterals from crossing the channel of the pipe and direct it downward along the wall of the channel upon the side on which the opening is located. This prevents any splashing upward of water or the damming which accompanies an inflowing stream of water when striking against another inflowing stream of water or when striking against an opposing wall.

It is well known that water carrying soap and grease will deposit the same when allowed to splatter upward and then drain down slowly. This has a tendency, together with the scales that drop off the iron pipe, to stop the vent and in some cases stops the pipe solidly. This does not occur where a body of swiftly-moving water strikes, and by my construction I prevent any drops of water from getting outside of the track of the flow of the full stream.

The drainage receiving and venting duct is swelled outwardly at the point of entrance of the laterals, as shown at  $d d$ . This allows the deflecting-plates to be placed within the body of the drainage and venting duct and allows free egress for the venting of gases, &c.

By the use of my fitting in plumbing the soil-pipe is made in one continuous line from its lower portion to its top, and the vent-pipe is one continuous straight line from its bottom to its top parallel with the soil-pipe.

By the use of my fittings I am enabled to drain and vent a building with but very little cutting away of the partitions, as I do not require several branches or pipes for venting. Nor do I require as wide a space to run the pipes as in any former construction.

By the use of my improved fitting I am enabled to drain and vent the drainage of a building with a less number of joints and fittings than with any other fitting or fittings with which I am acquainted, and I use less pipe and require less labor to install the same.

Now, having described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. An integral drainage and venting fitting comprising two substantially parallel members open throughout and each adapted at each end to connect with upper and lower pipes, and a connecting member substantially parallel with the said first-named members and opening from the one member at one end of the fitting and into the other member at the other end of the fitting.

2. A drainage and venting fitting comprising a soil-pipe member straight throughout; a vent-pipe member straight throughout and parallel with the soil-pipe member; a drainage receiving and venting duct connecting at its lower end with the lower part of the soil-pipe member and at its upper end with the upper part of the vent-pipe member and also provided near its lower end with lateral openings to receive the drainage.

3. A drainage and venting fitting comprising a soil-pipe member; a vent-pipe member connected therewith; a lateral drainage-discharge arranged to discharge into the drainage and vent pipe member, and an inclined deflector arranged inside of the drainage and vent pipe member above and over the lateral drainage-discharge to direct the water downwardly.

4. A drainage and venting fitting comprising a soil-pipe member straight throughout; a vent-pipe member straight throughout parallel with the soil-pipe member; a vent and drainage duct connecting the soil-pipe member and the vent-pipe; a lateral drainage-discharge arranged to discharge into the vent and drainage duct; and an inclined deflector arranged inside of the drainage and vent duct above and over the lateral drainage-discharge to direct the water downwardly.

5. A drainage and venting pipe provided in its length with an enlargement; a lateral drainage-receiving opening or openings in the enlargement; and inclined deflectors projecting out from the wall of the enlargement over such openings, the lower ends of said deflectors extending out beyond the inner wall of the pipe, whereby the incoming stream has a free outlet and is directed downwardly into the pipe, substantially as described.

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Witnesses:

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