No. 676,132. Patented June 11, 1901.

J. P. HEENEY.

SOIL PIPE FITTING.

(Application filed Jan. 24, 1901.)

(No Model.)

Fig 1

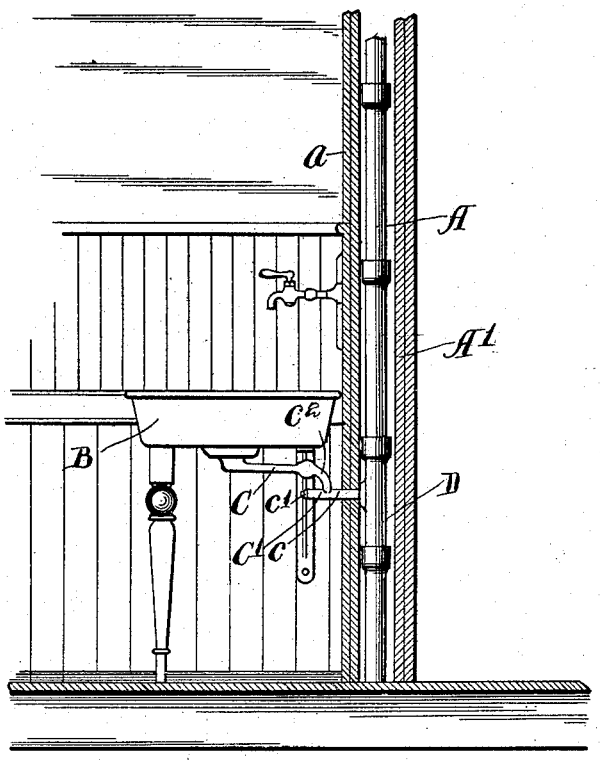


Fig 2

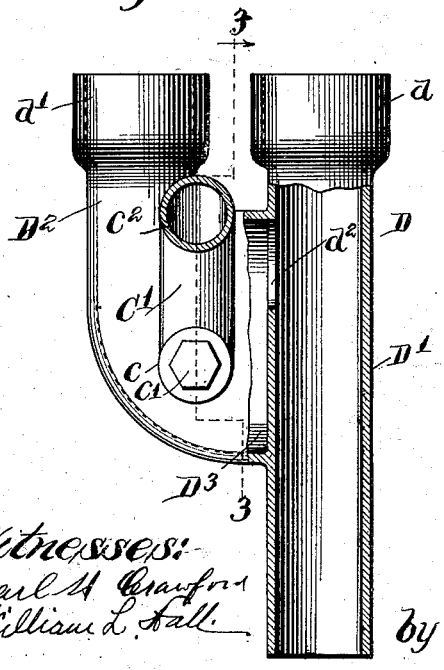
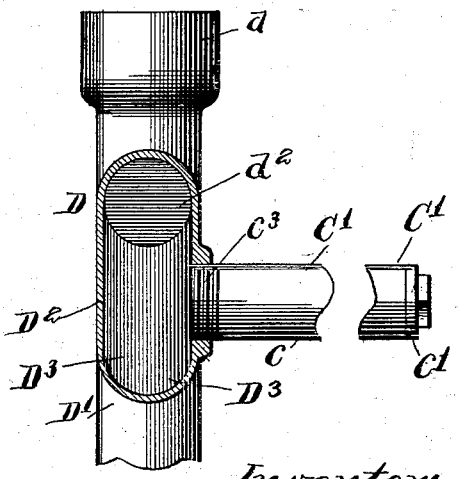


Fig 3



Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH P. HEENEY, OF CHICAGO, ILLINOIS.

SOIL-PIPE FITTING.

SPECIFICATION forming part of Letters Patent No. 676,132, dated June 11, 1901.

Application filed January 24, 1901. Serial No. 44,528. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH P. HEENEY, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Soil-Pipe Fittings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in fittings for soil-pipes, and is designed to simplify and render more compact the connection of the soil-pipes with the drain-pipes of sinks, washbowls, closet-basins, and the like, and to facilitate the setting and the repair of the same.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a section through the wall of a building in which a soil-pipe embodying my novel fitting is positioned, showing the manner of connecting said fitting. Fig. 2 is a view, partly in side elevation and partly in section, of a fitting embodying my invention. Fig. 3 is a fragmentary section of the fitting, taken on the line 3 3 of Fig. 2.

As a matter of convenience I have illustrated my fitting as connected to the drain-pipe of a kitchen-sink; but it is obvious that it may be connected with closet-bowls, bath-tubs, or the like; and now first referring to the general construction shown in Fig. 1 the letter A designates a soil-pipe, which is located in the wall A′ of the building behind the plastering *a;* B, a conventional form of sink, and C a drain-pipe connecting said sink with the soil-pipe, the said drain-pipe embodying a special fitting C′, adapted for detachable connection with the soil-pipe. Said fitting embraces a straight tubular part *c*, closed at its outer end by a removable plug *c*′, and a branch c^2, which is connected with the drain-pipe C proper by means of the usual soldered joint.

D designates a fitting, which forms a part of the soil-pipe and into which the contents of the sink B are directly discharged. Said fitting D consists of a straight tubular body portion D′, made of the same diameter as the soil-pipe, and a branch D^2, which communicates with the interior of the part D′ through an opening d^2. Said branch D^2 is adapted for connection with the usual revent-pipe, which latter leads to the atmosphere and through which the noxious gases and fumes from the soil-pipe may be discharged into the open air. The main body D′ of the fitting is provided with an annular flange *d* at one end, adapted to surround one end of the adjacent section of the soil-pipe when assembled, and of which the fitting forms a part when so assembled. It is plain at its other end to fit into a similarly-shaped flange in the next adjacent section of the soil-pipe. The upper end of the branch D^2 is similarly provided with a flange *d*′ to form a proper joint between the fitting and the next adjacent section of the revent-pipe. Said fitting D, comprising the part D′ and the branch D^2, is made from a single integral casting. The branch D^2 is so formed at its junction with the main body D′ as to provide at the lower end of said branch a relatively wide deep pocket D^3, the greater part of which is located below the level of the communicating opening d^2 between said branch and the body of the fitting. The drain-pipe fitting C′ enters a screw-threaded opening in the lower part of the branch D^2, as shown at C^3, and communicates with said pocket D^3. Said opening, through which the fitting C′ enters the pocket, is located below the level of the lower margin of the opening d^2 between the branch and the body-fitting. Desirably said fitting C′ has screw-threaded connection with the branch D^2 of the soil-pipe fitting, but may be otherwise connected thereto, as found most convenient or desirable. The lower margin surrounding the opening d^2 constitutes a weir over which the water discharged into the pocket D^3 from the sink flows into the body D′ of the soil-pipe fitting, and said lower margin of the opening d^2 being located above the discharge-opening of the fitting C′ into the branch D^2 a seal is formed in said pocket, which prevents the escape of air or noxious vapor from the soil-pipe through the drain-pipe C into the room in which the sink B is located, while permitting their escape into the atmosphere through the branch D^2 and the revent-pipe attached to the flange *d*′.

The removal of the plug c' from the straight tubular part of the drain-pipe fitting C′ permits the insertion into the soil-pipe fitting of a wire or other suitable instrument to remove from the pocket D^3 any solid or semisolid matter which may have accumulated therein and affords a convenient means of access to the fitting to cleanse or repair same without tearing out plaster or removing the fitting.

One of the main or principal advantages of my construction is that the seal for preventing the escape of noxious vapors and gases from the soil-pipe is located entirely within the soil-pipe fitting and is made at the time of casting said fitting. This construction simplifies the work of installing the connections between the drain-pipe of the sink or the like and the soil-pipe and diminishes the number of joints required in installing such parts. Such diminishing of the number of joints not only simplifies the work of installing the parts, but also greatly reduces the chances of leakage from broken joints. It also dispenses with the usual S-trap or other forms of water seal, which must be connected to the basin or closet and to the soil-pipe and which must of course be revented.

Another important advantage of my invention lies in the fact that the fitting is placed in the wall of the building during the early stages of its construction when the soil-pipe is positioned and the other interior work—such as plastering, hard-finish, and trim—need not be delayed for the plumber, since the closet-bowl, sink, or other part may now be connected by simply soldering its proper pipe to the pipe C′ or directly into the threaded opening at c^3 in the branch D^2, as the case may be.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is as follows:

1. As a new article of manufacture, a drainage and vent fitting and a trap in one integral structure adapted to be inserted into and form part of a line of soil-pipe, said fitting embracing two separate chambers, one of which is adapted to communicate with the soil-pipe and the other with the revent-pipe.

2. A soil-pipe fitting comprising a tubular body forming part of a line of soil-pipe, and an integral branch adapted for connection with a revent-pipe and formed at its lower end to provide a closed pocket or trap, the wall between said tubular body and branch being provided with a communicating opening and the branch member being provided below said communicating opening with an inlet-opening.

3. The combination with a drain-pipe leading from a sink or the like and a soil-pipe into which said drain-pipe discharges, of a soil-pipe fitting comprising a tubular body portion or member forming part of the line of the soil-pipe and a branch pipe or member adapted for connection at its upper end with a revent-pipe, and formed at its lower end to provide a closed pocket or trap, an opening above said trap providing communication between the body and the branch members, the branch member being also provided below the said communicating opening with an aperture opening into said pocket and with which a drain-pipe may be connected.

4. A soil-pipe fitting comprising a main member which forms part of the soil-pipe, and a revent member communicating therewith through an opening in combination with a fitting comprising a straight tubular part adapted for engagement at one end with said revent member and provided at its outer end with a removable plug, and having intermediate its ends a branch adapted for connection with a drain-pipe of a sink, or the like.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 15th day of December, A. D. 1900.

JOSEPH P. HEENEY.

Witnesses:
TAYLOR E. BROWN,
JOHN B. VAN KEUREN.