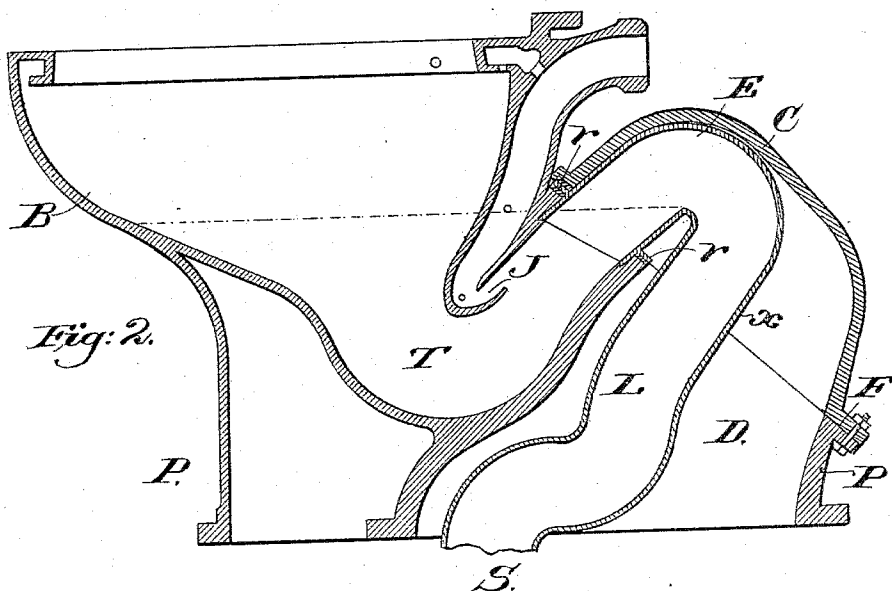
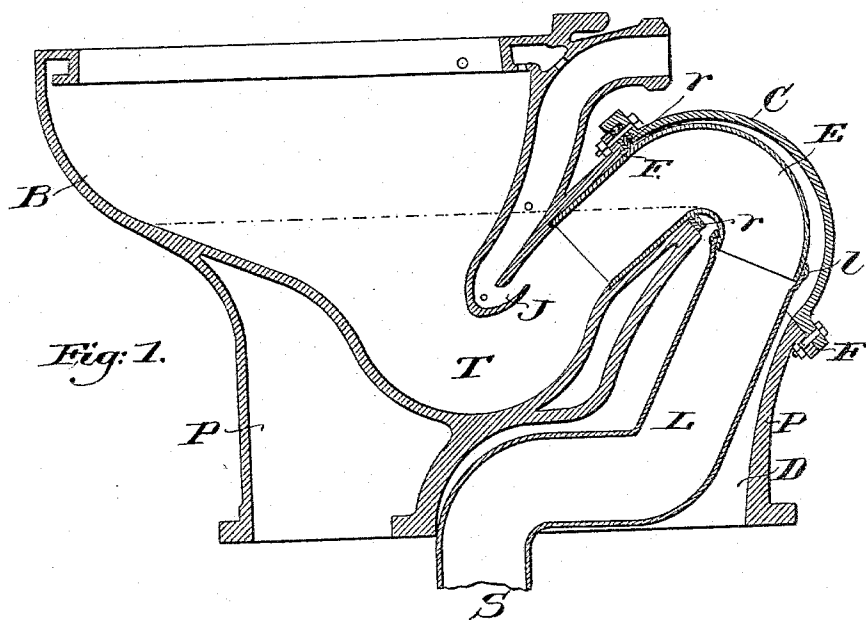


(No Model.)

A. LORING.
PIPE CONNECTION FOR WATER CLOSETS.

No. 569,790.

Patented Oct. 20, 1896.



Witnesses:
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UNITED STATES PATENT OFFICE.

ATHERTON LORING, OF CAMBRIDGE, MASSACHUSETTS.

PIPE CONNECTION FOR WATER-CLOSETS.

SPECIFICATION forming part of Letters Patent No. 569,790, dated October 20, 1896.

Application filed January 20, 1896. Serial No. 576,168. (No model.)

To all whom it may concern:

Be it known that I, ATHERTON LORING, of Cambridge, Middlesex county, and State of Massachusetts, have invented a new and useful Improvement in Pipe Connections for Water-Closets, of which the following is a full and complete specification.

The object of my invention is to provide a perfectly solid and continuous metallic sewer connection adapted to be used with the improved water-closets known as the "siphon" or "siphon-jet" closets, in which one of the chief points of superiority is that the entire structure of the closet is contained within a compact and solid-appearing pedestal.

Heretofore the chief difficulty with water-closets of this class has been that the joint between the porcelain of which the bowl and trap is composed and the metallic sewer connection has of necessity been made on the sewer side of the trap, so that unless extra precautions are taken there exists danger of leakage of sewer-gas into the house where the closet is erected. This defect has proved especially unfortunate for the reason that in other respects the siphon and siphon-jet closets have been regarded as the best and most efficient articles of their class.

By this invention, while retaining all of the advantages of structure of the siphon and siphon-jet closet, and of the compactness, cleanliness, and serviceability of the pedestal type of closet, I provide a metallic connection which can be readily secured to the closet when the latter is set in place, and wherein the terminus of the metallic sewer connection is beneath the water-level of the trap, and consequently involves no liability of leakage of sewer-gas.

Figures 1 and 2 of the drawings annexed to this specification show two forms of structure in which my improvement is developed.

In each of the figures the bowl B, trap-bend T, and pedestal P are in structure and general outline the same as may be seen in the siphon-jet closet as usually constructed.

The jet J is shown in the drawings as entering the trap at the top of the bend instead of at the bottom, as often appears. Instead of molding the porcelain of the pedestal so as to form the rear branch of the siphon-pipe, I leave the lower rear portion of the pedestal

open in the form of a chamber or recess D. The pedestal is formed in two parts, namely, that containing the trap-bend T and chamber D, and a suitable cap or cover C, to be affixed after the metallic sewer connection is in place.

The sewer connection consists of a pipe L, made of copper or drawn lead or other suitable material, which pipe is bent to take the preferred shape for a siphon or siphon-jet closet. The pipe L turns in an elbow E and has its upper or trap end adapted to enter the rear branch of the trap, so that the end of the metallic pipe L dips below the water-level of the trap. A flange *r* is shrunk on the pipe L on the trap side of the elbow E, so as to fit over the lip of the open end of the trap-bend. This metallic connection may be made in sundry ways, two of which I here describe.

As in Fig. 1, let the pipe L be originally in two parts, one rising from the sewer-pipe S at the floor within the chamber or recess D and terminating just above the opening of the said chamber adjacent to the opening of the trap-pipe.

The porcelain pedestal and bowl are now set down over this pipe as it projects out of the floor, and then the elbow E is inserted in the trap-bend until its flange *r* rests on the porcelain flange F.

The pipe L, standing in chamber or recess D, will have spring enough to be raised slightly, so that the plumber in charge of the operation can wipe a tight joint at *h*. Then the cup C is placed over the elbow E and set firmly in place by screw-bolts or any suitable and efficient device.

In order to do away with any wiping of metallic joints, the mode illustrated by Fig. 2 may be employed.

The pipe L is shaped, as shown in Fig. 2, rising from the floor and terminating in the bend E with its inner end turned down at an angle in conformity with the angle at which the trap-bend in the porcelain base stands. The porcelain pedestal is molded so that the chamber D extends farther back than in the ordinary pedestal-closet and has a proper opening of sufficient width to admit the passage of the elbow part of pipe L when the earthenware bowl is set down over the upstanding pipe L.

The long axis of the opening of chamber D

must evidently be equal to or greater than the distance from the outside edge of flange r to a point at the opposite side of the elbow, as x .

5 When the pedestal is seated on the floor, it is then moved back and the end of pipe L sprung into the opening of trap-bend T. Then the cap C is placed over the elbow E and secured in any desired manner.

10 Under the flange r packing of a suitable nature should be placed, so that the joint shall be water-tight. Obviously this improvement is adapted to closets wherein the trap and adjacent connections turn to the front of the closet or to the side.

15 The description above is limited to a closet with its connections in the rear merely for convenience of illustration.

I claim—

20 1. A water-closet comprising the combination of a pedestal supporting a bowl, said pedestal being molded to form the trap below the bowl and containing an open chamber or recess in its base, with a continuous metallic
25 connection between the closet and the sewer-pipe, said metallic connection having its inner end beneath the water seal of the trap and its lower portion within the said chamber in the pedestal, and a cap adapted to close
30 the said chamber or recess and cover in the metallic sewer connection, substantially as described.

35 2. A water-closet comprising the following elements in combination, viz: a pedestal surmounted by the bowl and molded to form the trap-bend, a chamber or recess in the base of the pedestal, the trap-bend and chamber or
40 recess terminating in openings adjacent to one another, a continuous metallic connection between the closet and the sewer-pipe, said connection having its lower portion contained within the said pedestal chamber or
45 recess, and its upper portion emerging from the opening thereof and projecting into the trap, the trap end of said connection being immersed in the water seal of the trap.

50 3. A water-closet comprising the following elements in combination, viz: a pedestal surmounted by the bowl and molded to form the trap-bend, a chamber or recess in the base of the pedestal, the trap-bend and chamber or recess terminating in openings adjacent to
55 one another, a continuous metallic connection between the closet and the sewer-pipe, said connection having its lower portion contained within the said pedestal chamber or

recess and its upper portion emerging from the opening thereof and projecting into the trap, the trap end of said connection being immersed in the water seal of the trap, and a
60 cap formed to close the chamber or recess and trap-bend openings and to cover the metallic connection.

4. A water-closet comprising the following elements in combination, viz: a pedestal sur-
65 mounted by the bowl and molded to form the trap-bend, a chamber or recess in the base of the pedestal, the trap-bend and chamber or recess terminating in openings adjacent to one another, a continuous metallic connec-
70 tion between the closet and the sewer-pipe, said connection having its lower portion contained within the said pedestal chamber or recess, and its upper portion emerging from the opening thereof and projecting into the
75 trap, the trap end of said connection being immersed in the water seal of the trap, the opening of the said chamber or recess being large enough to admit the passage of the entire metallic connection when the pedestal
80 and bowl are set in place.

5. A water-closet comprising the following elements in combination, viz: a pedestal sur-
85 mounted by a bowl and molded to form a trap-bend, a chamber or recess in the base of the pedestal, the trap-bend and chamber or recess terminating in openings adjacent to one
90 another, a continuous metallic connection between the closet and the sewer-pipe, said connection having its lower portion contained within the said pedestal chamber or recess
95 and its upper portion emerging from the opening thereof and connecting with the trap-bend.

6. A water-closet comprising the following
100 elements in combination, viz: a bowl and a pedestal, said pedestal comprising two parts, one containing the trap-bend and passages pertaining to the closet, the other consisting of a chambered hood or cap, a continuous
105 metallic connection between the trap and the sewer-pipe; the said hood or cap being conformed and adapted to inclose the parts of the metallic connection which protrude from the trap-containing portion of the pedestal.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ATHERTON LORING.

Witnesses:

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