No. 702,536. Patented June 17, 1902.

# W. BUNTING, Jr.

## WATER CLOSET.

(Application filed Aug. 3, 1901.)

(No Model.)

Fig. 1.

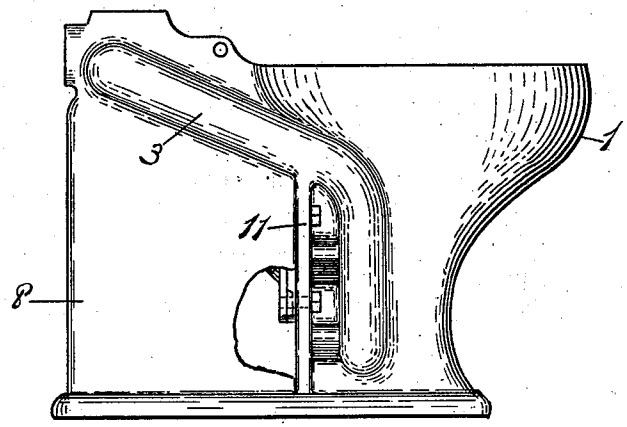



Fig. 2.

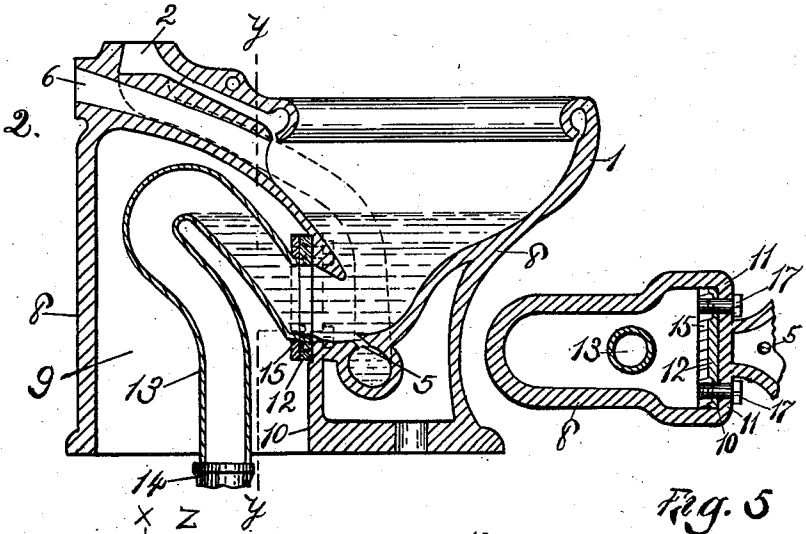



Fig. 5




Fig. 3.

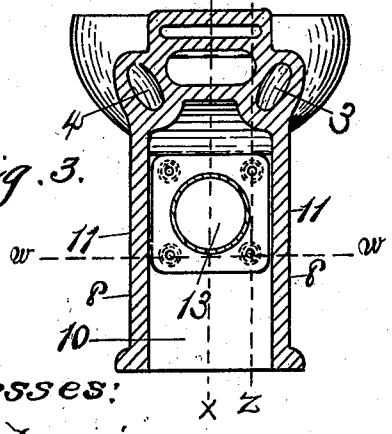
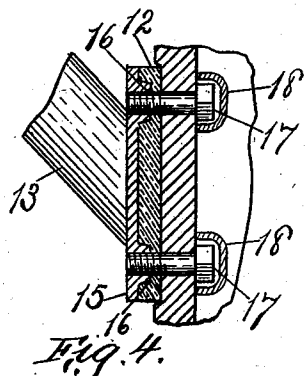



Fig. 4.




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# UNITED STATES PATENT OFFICE.

WILLIAM BUNTING, JR., OF BROOKLINE, MASSACHUSETTS.

## WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 702,536, dated June 17, 1902.

Application filed August 3, 1901. Serial No. 70,703. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM BUNTING, Jr., a citizen of the United States, and a resident of Brookline, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Water-Closets, of which the following is a specification.

This invention relates to that class of earthenware water-closets in which a portion of the discharge-passage of the closet above the floor-line consists of a metal pipe, which is connected to the closet between the end of the closet-trap which is next the sewer and the bowl, thus enabling a soldered joint to be formed between the closet and soil-pipe on the sewer side of the trap and the joint between the metal pipe and the porcelain closet to be made at such a point that all danger of the escape of sewer-gas therethrough is avoided. In view of the fact that these metal pipes above the floor-line are unsightly, liable to corrosion, and also liable to be strained or moved so as to impair the tightness of the joints, it has been customary to provide the closet with a depending apron or pedestal which extends down to the floor and more or less completely conceals the metal trap.

So far as I am aware a metal trap above the floor-line has been applied only to pedestal-closets, which belong to the class known as "washout-closets," an example being shown in my prior patent, No. 474,985. Owing to the general construction and arrangement of the washout-closet the application of the metal trap thereto was not difficult; but prior to my invention no successful attempt has been made to provide a siphon up-jet closet with a metal discharge-pipe which leads from the bottom of the bowl upwardly and then downwardly to the floor-line, in connection with an apron or pedestal which extends around and completely incloses the discharge-passages of the closet.

My invention therefore consists in and has for its object the above-described application of a metal trap to a siphon-jet water-closet. I accomplish this object by providing a vertical face, which extends from the base of the closet upward around the discharge-passage of the closet at a point slightly beyond the point where the jet-passage leads into the lowest point in the trap, and by providing a metal pipe with a flange which is in position to register with said face and with apertures thereon which lead to the outside of the closet, through which bolts may be passed to clamp the flange of the pipe to the face of the closet.

For a more complete understanding of my invention, reference is made to the accompanying drawings, in which—

Figure 1 is a side elevation of a closet made according to my invention. Fig. 2 is a central cross-section thereof on line $x\,x$ of Fig. 3. Fig. 3 is a cross-section on line $y\,y$ of Fig. 2. Fig. 4 is an enlarged section of a fragment of the device, taken on the line $z\,z$ of Fig. 3. Fig. 5 is a cross-section on line $w\,w$ of Fig. 3.

In the drawings the bowl 1 is provided with the usual water-inlet 2, which leads to the rim, and two jet-passages 3 and 4, which lead from opposite sides of the inlet-passage down on opposite sides of the bowl. A vent-passage 6 is formed in the bowl directly below the inlet-passage and centrally of the bowl. An apron 8 extends downwardly on all sides of the bowl and extends rearwardly, so that a chamber 9 is formed between the apron and the portion of the closet in which the inlet and vent passages are formed.

The front wall of chamber 9 consists of a flat vertical face 10, which extends upward from the base or floor line of the closet, the plane of this face intersecting the discharge-passage of the closet a short distance in the rear of the point where the jet-passage enters it. A laterally-extending wall 11 is formed on each side of the closet, the rear side of each of which is in the same plane as that of face 10 and forms a continuous surface therewith. Said walls extend laterally a sufficient distance to form a wide face on each side of the discharge-passage of the closet. (See Figs. 3 and 5.) A portion of this face about the passage is preferably recessed (see Fig. 4) in order to receive a sheet of rubber packing 12. A metal siphon-pipe 13 is arranged in said chamber 9 and is soldered or otherwise connected to the metal soil-pipe 14 at the floor-line. The intake end of the siphon has a metal flange 15 securely soldered thereto in a vertical position, and the front side of said plate is provided with four symmetrically-ar-

ranged screw-threaded bosses 16, into which four correspondingly-threaded bolts 17 are screwed, said bolts passing through corresponding apertures in the walls 11 and in packing 12. The apertures in the packing are enlarged, so that the bosses 16 set into it, as shown in Fig. 4. In practice the heads of bolts 17 are covered by porcelain caps 18, so that no metal whatever is visible from the outside. All earthenware parts of the closet are formed in one piece, so that the whole outside surface of the closet and pedestal presents a finished and unbroken appearance.

In setting up the closet the siphon 13 is first soldered or otherwise tightly connected to the soil-pipe 14, and as this pipe (being concealed) is preferably made of lead it may be easily bent, so that the screw-threaded bosses on the plate 15 will exactly register with the bolt-holes through the walls 11 of the closet, this plate having been previously soldered to the intake end of the siphon. The packing 12 is then placed against the face of the plate 15, so that the bosses 16 thereon set into the packing and support the same. The closet is then lowered down over the fixed siphon-pipe until it rests on the floor and is then moved rearwardly, so that the packing 12 enters the recess formed about the discharge-passage in the face 10 of the closet. The bolts 17 are then screwed into bosses 16 from the outside of the closet, clamping the packing firmly between the face 10 and the plate 15. It will be noted that the joint thus formed will be below the water seal in the closet, so that it will be impossible for any sewer-gas to escape therethrough in case the joint should not be tight. If, however, the joint should not be tight, it would immediately disclose the fact by leaking water. As a matter of fact if the joint is made tight in the beginning it will remain so practically indefinitely or for a long term of years, provided the joint is not in any way molested. As the joint and the siphon-pipe are completely inclosed, this latter possibility is very remote.

With the above-described construction I am enabled to provide a siphon-jet water-closet with a metal siphon-pipe in such a manner that the metal pipe is completely concealed and the closet presents a finished appearance. I moreover produce a construction in which the connections between the closet and metal pipe may be conveniently and effectively made in such a manner as to in no way impair the appearance and usefulness of the closet. The fact that by this construction I am also enabled to form all the earthenware parts of the closet in one integral piece and to avoid the necessity of making the apron portion in two sections is a feature of great importance, for the flanges and bolts necessary to connect two such sections would be unsightly. Moreover, it is practically impossible to fit two porcelain parts together in a manner which is at all satisfactory, for the reason that the parts become distorted in firing and will leave open joints when they are connected.

Having described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is as follows:

1. A water-closet of the character described, comprising a bowl having a discharge-passage which leads rearwardly from the bottom thereof, said bowl being provided with a substantially vertical face on its rear side which completely surrounds the end of said passage, laterally-extending walls on each side of the bowl, the rear surfaces of which are continuous with said face, rearwardly-extending walls which extend from said laterally-extending walls beyond said face and from the rear side of the bowl above said face to the floor-line and which unite into a continuous wall to form a chamber which is completely closed except at the bottom, said laterally-extending walls being provided with apertures which pass through to said chamber from the outside, all of said parts being formed of one integral piece of earthenware, for the purpose set forth.

2. A water-closet of the character described, comprising a bowl having a discharge-passage which leads rearwardly from the bottom thereof, said bowl being provided with a substantially vertical face on its rear side which completely surrounds the end of said passage, laterally-extending walls on each side of the bowl, the rear surfaces of which are continuous with said face, rearwardly-extending walls which extend from said laterally-extending walls beyond said face and from the rear side of the bowl above said face to the floor-line and which unite into a continuous wall to form a chamber which is completely closed except at the bottom, said laterally-extending walls being provided with apertures which pass through to said chamber from the outside, all of said parts being formed in one integral piece of earthenware, a metal siphon-pipe which is located in said chamber and is adapted to be connected to a soil-pipe at its outlet end, a vertically-arranged flange which is securely connected to the opposite end of said pipe and is provided with apertures which register with the apertures of said laterally-extending walls when the inlet end of said pipe registers with the end of said discharge-passage, a packing which is interposed between said flange and face, and bolts which pass through said apertures and are adapted to clamp said packing between said face and flange, said bolts being adapted to be tightened from the outside, for the purpose set forth.

3. A water-closet of the character described, comprising a bowl having a discharge-passage which leads rearwardly from the bottom thereof, said bowl being provided with a substantially vertical face on its rear side which completely surrounds the end of said passage, laterally-extending walls on each side of the

bowl, the rear surfaces of which are continuous with said face, rearwardly-extending walls which extend from said laterally-extending walls beyond said face and from the rear side of the bowl above said face to the floor-line and which unite into a continuous wall to form a chamber which is completely closed except at the bottom, said laterally-extending walls being provided with apertures which pass through to said chamber from the outside, all of said parts being formed in one integral piece of earthenware, a sheet-metal siphon-pipe which is located in said chamber and is adapted to be connected to a soil-pipe at its outlet end, a vertically-arranged flange which is securely connected to the opposite end of said pipe and is provided with a series of projecting bosses on its front face, said bosses being provided with screw-threaded apertures which register with the apertures of said laterally-extending walls when the inlet end of said pipe registers with said outlet-passage, a sheet packing of rubber, or other suitable material, which is provided with apertures and recesses in which said bosses are located, and bolts which are adapted to be screwed into said bosses from the outside and clamp the packing between said plate and face, for the purpose set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM BUNTING, JR.

Witnesses:
LOUIS H. HARRIMAN,
G. E. UCKER.