A. PLANTIER.

WATER CLOSET BOWL.

APPLICATION FILED DEC. 4, 1908.

929,786.

Patented Aug. 3, 1909.

3 SHEETS—SHEET 1.

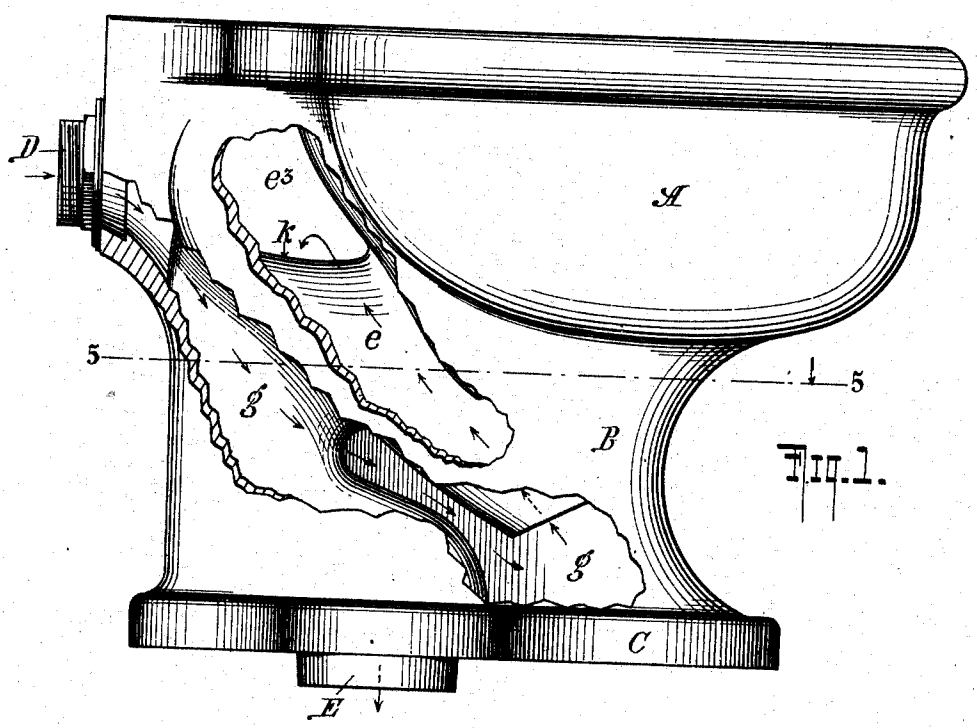


Fig. 1.

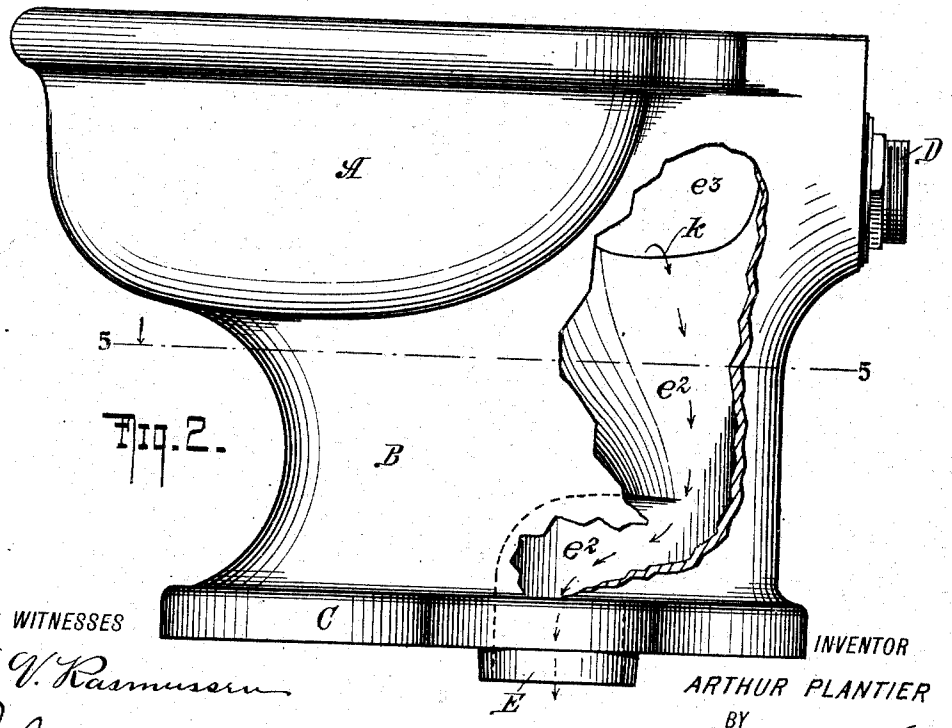


Fig. 2.

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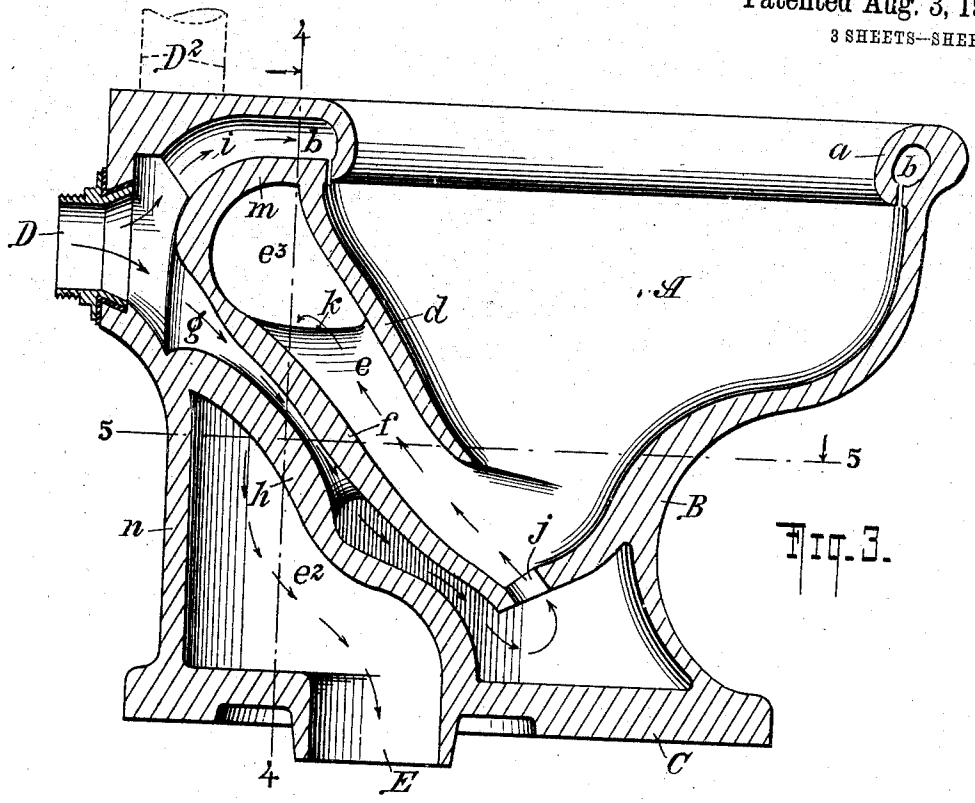


Fig. 3.

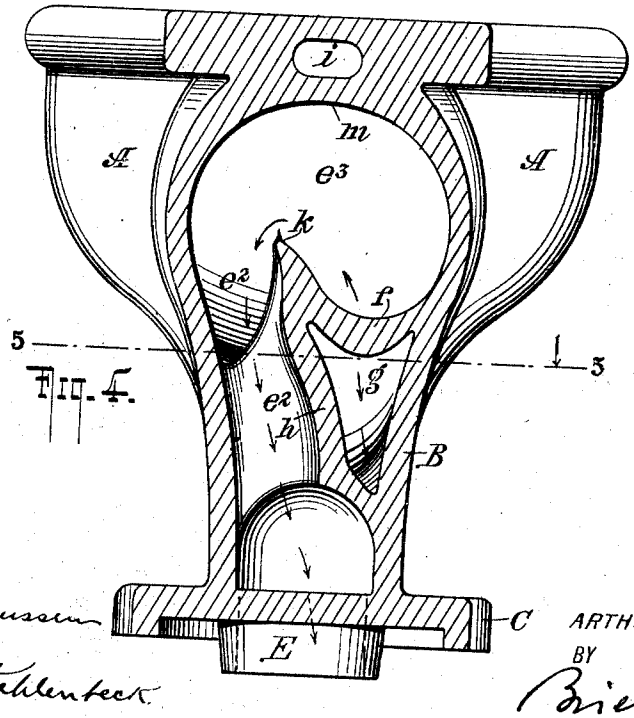


Fig. 4.

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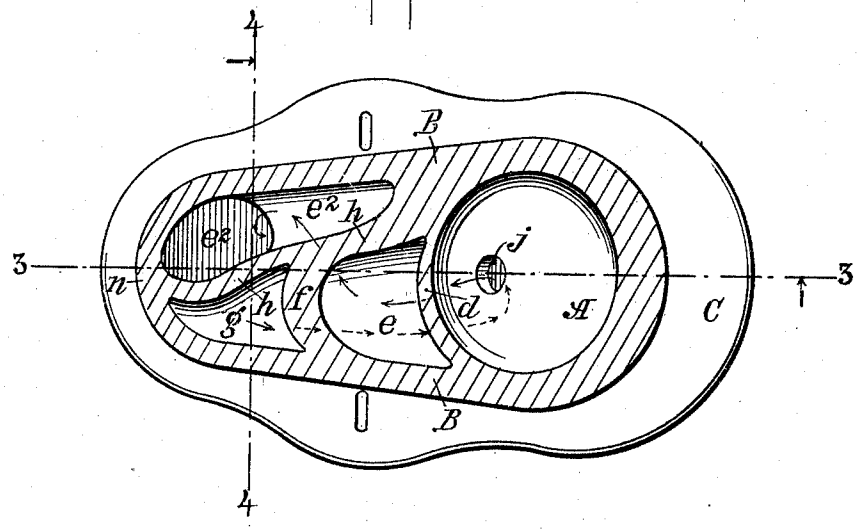
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Fig. 5.



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UNITED STATES PATENT OFFICE.

ARTHUR PLANTIER, OF TRENTON, NEW JERSEY.

WATER-CLOSET BOWL.

No. 929,786. Specification of Letters Patent. Patented Aug. 3, 1909.

Application filed December 4, 1908. Serial No. 465,902.

To all whom it may concern:

Be it known that I, ARTHUR PLANTIER, a citizen of the United States, and a resident of the city of Trenton, Mercer county, State of New Jersey, have invented certain new and useful Improvements in Water-Closet Bowls, of which the following is a specification.

The object of my invention is to produce, in comparatively small size and compact form, a hopper-water-closet, which shall have all the advantages of a siphon-jet water closet, but which shall be wholly without the exterior pipes or conduits used in the siphon closets, having all its parts and passages formed of the earthenware material of the bowl itself.

The invention consists in the construction of an earthenware bowl, having the partitions and passages hereinafter described, formed in the earthenware material, all as hereinafter more fully specified.

In the accompanying drawings, Figure 1 represents a side view of my improved water closet bowl, showing a portion of the side broken away. Fig. 2 is a side view of the opposite side of said bowl, showing a portion of the side also broken away. Fig. 3 is a vertical section longitudinally through the bowl, taken on the line 3—3, Fig. 5. Fig. 4 is a vertical cross-section of the same, taken on lines 4—4, Figs. 3 and 5, and Fig. 5 is a horizontal section taken on the line 5—5, Figs. 1–4.

The letter A in the drawings represents the bowl of the closet which, at its upper part, is provided with an inturned rim *a* forming the hollow passage *b* having perforations for the distribution of flushing water from above in the usual well known manner which I will term the rim-flushing means. The bowl proper A rests upon and springs from (being made in one piece with) the so called web B, which in turn projects from the base C, all these parts A, B and C, being continuous and made of earthenware material. The back of the bowl A is formed by a partition *d*, which separates it from the upwardly extending leg *e* of the main discharge passage. The passage *e* is by another partition, *f*, (see Fig. 3), separated from the water supply passage *g*, and this again by still another partition, *h*, from the downwardly extending leg e^2 of the discharge passage. Water for flushing and siphoning purposes is supplied by a water supply pipe D, which is either secured at the back, as in Fig. 3, or which may, with equal convenience, be attached to the upper portion of the closet bowl, near the back, as indicated by the dotted lines D^2. The pipe D admits water by the passage *i* (see Fig. 3) to the rim passage *b*, for flushing the basin. The pipe D also connects with the upper end or part of the water-passage *g* which leads to a jet-flushing means consisting for instance of an aperture *j* in the partition *f* at the lower part of the bowl, either one at the location shown in Fig. 3, or one above that location, or both. The upwardly extending leg *e* of the discharge passage extends to a bridge *k* (see Figs. 3 and 4). Above this bridge the legs *e* and e^2 come together, as shown in Fig. 4, being united by the transverse or lateral passage e^3, the bottom of which is formed by the said bridge *k*, while its top is formed by the arch *m*, clearly shown in Fig. 4.

It will be observed that the arch *m* is formed of material through which the passage *i* leading to the flushing channel *b* extends. It will also be observed, by reference to Fig. 4, that the arch *m* extends entirely across the back part of the structure, so as to form a liberally proportioned transverse passage e^3 connecting the upwardly extending leg *e* with the downwardly extending leg e^2 of the discharge passage, and that the bridge *k* extends into this lateral passage to control by its height the height at which water normally stands in the bowl. It will also be observed from Fig. 5, that the partition *h*, which separates the downwardly extending leg e^2 of the discharge passage from the water supply passage *g*, really forms the support for the bridge *k*, thereby making the internal construction of these portions of the device strong and reliable in transportation and in use. The rear wall of the downwardly extending discharge passage e^2 is shown at *n*, in Fig. 3, to extend from the base C upwardly, and that it is braced by the partition *h*.

An inspection of the drawings will show that the unique construction described, which is made of continuous earthenware, has its interior parts so thoroughly braced and arranged, that all the needful passages are formed by these parts, and that nevertheless either in transportation or in use, great strength is secured. Thus the partition *h* which helps form the passages *g* and e^2 constitutes a brace for the back wall *n*, and is

in turn braced by said back wall. But it is further braced, as shown in Fig. 4, by the partition *f* which separates the passage *g* from the passage *e*, and at the point where the partitions *f* and *h* meet, as in Fig. 4, they join in forming the well supported bridge *k*. An inspection of Fig. 5 will show that the partition *f* is in turn braced by the partition *h*, and that the partition *d* which separates the interior of the bowl from the passages *e* and e^3, is braced by the side wall of the web B and by the partition *h*. Thus there is complete interaction and interlocking between these different structural portions of my improved hopper basin, which will enable it to perform all the functions of a siphon-basin and yet retain simplicity of form, in that it requires no exterior piping. By combining with the full sized bowl A the siphon trapped outlets e^3 and e^3, which at the upper part are turned laterally instead of longitudinally, this construction saves considerable space in the length of the closet. The strong web B contains and protects the parts constituting the jet discharge, which parts are wholly below the bridge *k*, which controls the depth of the siphon trap.

The construction illustrated and described is compact and simple and eliminates much of the cost of the siphon jet water closet, being made of one continuous piece and without external pipes, requiring merely the needful couplings for the water supply at D and for the sewer discharge pipe at E. By this construction, moreover, much loss due to shrinkage, when drying, and fire cracking, when burning, is avoided, and less clay is required to make the structure than would be needed in any known closet of similar proportions as to a bowl which has a siphon arrangement. In burning it occupies less room in the furnace than such a closet, weighs less in shipment, and will occupy less room in use.

Claims:

1. A water closet comprising a bowl provided with a laterally turned trap outlet and with two flushing devices, one at the bowl's rim, and the other discharging a jet upwardly into the upleg of the trap, a chamber adapted for connection with a water supply and provided with a passage leading to the rim-flushing device and with another passage leading to the jet-flushing device, said last-named passage being located within the walls of the structure, partly between the upward and the downward legs of the trap and partly back of said trap's lateral turn.

2. A water closet comprising a bowl provided with an outlet forming a siphon or trap provided with a lateral bend at its highest point, a jet-flushing device located at the lower portion of the bowl and arranged to discharge water into the upward leg of the siphon, and a water supply passage leading to said flushing device, said passage being located partly below the upward leg of the siphon, and above the downward leg and partly back of said lateral bend.

3. In a water closet, the combination of the bowl having a flushing rim, the trap having an upward leg into which the bowl discharges, said trap being bent laterally, a retaining web supporting the bowl and trap and forming in part the sides of the upward and the downward legs of the trap, a supply conduit leading downwardly and back of the lateral bend of the trap, a jet discharging device to direct water from said conduit into the upward leg of the trap, and a branch leading from the upper portion of said conduit to the flushing rim.

4. A siphon jet water closet bowl having its entire jet supply passage immediately back of and extending substantially throughout the length of the up leg of the siphon passage.

5. A siphon jet water closet bowl having its jet supply passage entering immediately back of the siphon bend and passing under the up leg of the siphon to the jet discharge.

6. A siphon jet water closet bowl discharging through a siphon trap which is turned laterally at its upper portion and having a supply passage entering immediately back of the lateral turn, one branch of which passage leads up to the flushing rim and another branch of which passes down immediately back of and under the up leg of the siphon to the jet-flushing means.

7. A siphon jet water closet bowl discharging into a siphon trap the upper part of which is bent laterally and having a jet supply passage immediately back of the lateral turn and leading down under the up leg of the siphon.

8. A siphon jet water closet bowl discharging into a siphon trap, the upper part of which is bent laterally and having a jet supply passage immediately back of the lateral turn and leading down under the up leg of the siphon and a branch from said passage also immediately back of the lateral turn and passing up to the flushing rim.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses, this first day of December, 1908.

ARTHUR PLANTIER.

Witnesses:

SAMUEL W. LEWIS,

JOHN A. KEHLENBECK.