To all whom it may concern:

Be it known that I, Samuel L. Barnes, a citizen of the United States, residing at New Castle, in the county of Lawrence and State of Pennsylvania, have invented a new and useful Latrine Mold Casting System, of which the following is a specification.

This application discloses a mold of novel form, adapted to be employed for fashioning a water closet, and discloses, also, a novel process for forming the water closet.

One object of the present invention is to provide novel means for forming, by a casting or pouring operation, the bowl and the spoon portion of a water closet, novel means being provided for assembling with the spoon and in the mold, a member which constitutes an outlet.

Another object of the invention is to provide novel means for introducing the plastic material into the mold and to provide novel means for drawing a portion of the plastic material out of the mold, after the surface of the material has set. It is within the scope of the invention to improve generally, and to enhance the utility of, devices of that type to which the present invention appertains.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the drawings:—Figure 1 shows in longitudinal section, a water closet constructed in accordance with the present invention; Fig. 2 is a transverse section of the structure shown in Fig. 1; Fig. 3 is a perspective view, showing the main mold sections separated; Fig. 4 is a perspective view of the spoon forming member; Fig. 5 is a perspective of the L-shaped element whereby the outlet is formed; Fig. 6 is a perspective view of a portion of the ring which is assembled with the edge of the finished water closet; Fig. 7 is a perspective of the bowl forming member, through which pouring of material into the mold is effected; Fig. 8 is a perspective showing the base of the finished product; and Figs. 9 and 10 are sectional views illustrating the successive steps in the process.

In carrying out the invention and referring particularly to Fig. 8, a pair of main mold sections 1 are provided. One 60 of the mold sections 1 is provided upon its inner face with openings 2 and the other of the mold sections 1 is provided upon its inner face with bosses 3, adapted to register in the openings 2 in order to prevent the 65 sections 1 from having relative movement upon each other, when placed in abutment. The mold sections 1 are of similar construction, and each section 1 is provided with an upper recess 4 and a lower recess 5, 70 there being a passage 6 extending between the recesses 4 and 5. Formed at the upper end of the recess 4 is an annular groove 7, from which project radial grooves 8. At the back of the mold sections 1 is a relatively deep groove 9 communicating with a superficial recess 10 which, in its turn, opens into the groove 7.

The invention further includes a spoon forming member 11 shown in Fig. 4, the spoon forming member 11 comprising a pallet 12 and a base 14, there being a pedestal 15 upstanding from the base 14. The upper end of the pedestal 15 is inclined as indicated at 16. Openings 17 and 18 extend 85 downwardly through the pedestal 15 and through the pallet 12 and in these openings 17 and 18 are located closures which may be plugs 19.

The top of the mold, constituting the bowl-defining member, is designated by the reference character 20 and is shown in detail in Fig. 7. The member 20 is provided with ribs 21 which radiate from a cap 22 provided with a lateral extension 23 carrying a rib 24 merging into a rounded body 25 which is superposed upon the cap 22. An inlet opening 26 is formed through the body portion 25.

In practical operation, the main mold sec-
tions 1 are disposed in abutment and are superposed upon the pallet 12 of the spoon forming member 11, the base 14 registering in the lower recess 5 and the pedestal 15 extending upwardly into the passage 3. The bowl forming member 20 is placed on top of the mold sections 1, the ribs 21 registering in the grooves 5, the extension 23 registering in the recess 10, and the rib 24 registering in the groove 9. Plastic material is then poured into the mold, through the inlet opening 26, air finding its way outwardly through an opening 28 in the member 20. After the material has taken a set, the plastic portion of the material is drawn off by removing the closure plugs 19. In Fig. 9, that portion of the material which has taken a set, is indicated at 27, and in this manner, the bowl 28, the bottom 29 of the bowl and the spoon 29 will be formed, reference being had, particularly to Figs. 1 and 2. In practice, the molds are formed of plaster of Paris, to the end that the outer surface of the plastic material may harden readily, after the material has been poured into the mold as shown in Fig. 9. After the foregoing operation has taken place, the spoon forming member 11 is removed from the mold, and recourse is had to another element which is shown in Fig. 5. The member shown in Fig. 5 and designated, for convenience, an outlet forming member, is denoted by the numeral 30 and comprises a pallet 31 upon which is superposed a base 32 carrying an L-shaped element 33 comprising a body 34 and an upstanding stem 35. The structure shown in Fig. 5 is placed at the bottom of the main mold sections 1, the sections 1 being supported upon the pallet 31 and the base 32 registering in the lower recess 5. Prior to the placing of the member 30 at the bottom of the mold, the body 34 and the stem 33 of the L 33 are coated with plastic material, and when the member 30 is positioned as above described, said plastic material will coalesce with the spoon 29 and with one wall of the structure, to form the upper wall 36 and the end wall 37 of the outlet. The member 30 is then detached from the mold sections 1 and the base 32, shown in Fig. 5, is mounted in the lower recess 5.

A ring 39 is provided the same having a lug 40 and an inlet 41, the ring 39 registering in the groove 7 and the hinge lug 40 registering in the recess 10, and the extension 41 registering in the groove 9, the member 20 having first been removed from the top of the mold sections 1. After the several parts hereinbefore described have been assembled, all of these parts severally being fashioned of plastic material, the main mold sections 1 are removed, whereupon the structure will appear in finished condition as shown in Figs. 1 and 2. The device is then permitted to dry, and subsequently is baked.

In applying the plastic material to the outlet mold 30 the same, ordinarily, is immersed in a tub or vat or plastic material, and after this material has hardened sufficiently upon the surface of the mold, the same is removed, the mold 30 being ordinarily fashioned from plaster of Paris. However, any other method of applying the plastic material to the mold 30 may be resorted to.

The water closet hereinbefore described, comes from the mold as a one piece structure from top to bottom. There is, therefore, small chance that the device will crack. A thorough and efficient union between the several portions of plastic material is secured at each step of the process and a strong, homogeneous product is the result.

Having thus described the invention, what is claimed is—

1. The herein described process of forming a water closet body, which consists in placing a bowl-defining member in one end of a mold; placing a spool forming member in the other end of the mold; pouring plastic material into the mold; permitting the material to harden upon its surface to form the bowl and the spoon; drawing off the interior, plastic portion of the material; removing the spool forming member, leaving the spoon exposed; and assembling a plastic outlet with the exposed spoon, in the mold.

2. The herein described process of forming a water closet body, which consists in placing a bowl-defining member in one end of a mold; placing a spool forming member in the other end of the mold; pouring plastic material into the mold; permitting the material to harden upon its surface to form the bowl and the spoon; drawing off the interior, plastic portion of the material; removing the spool forming member, leaving the spoon exposed; and assembling a plastic outlet with the exposed spoon, in the mold.

3. The herein described process of forming a water closet body, which consists in placing a bowl-defining member in one end of a mold; placing a spool forming member in the other end of the mold; pouring plastic material into the mold; permitting the material to harden upon its surface to form the bowl and the spoon; drawing off the interior, plastic portion of the material; removing the spool forming member, immersing an outlet forming member with plastic material; introducing the outlet forming member into the mold to cause a coalescence between the material on the outlet forming member and the contents of the mold; and removing the outlet forming member.
plastic material to set upon the outlet forming member; removing the outlet forming member from the plastic portion of the material; introducing the outlet forming member into the mold to cause a coalescence between the material on the outlet forming member and the contents of the mold; and removing the outlet forming member.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

SAMIUEL L. BARNES.

Witnesses:
C. L. SNYDER,
A. P. GRANT.