

(No Model.)

M. GARLAND.
WATER CLOSET.

No. 524,246.

Patented Aug. 7, 1894.

FIG. 1.

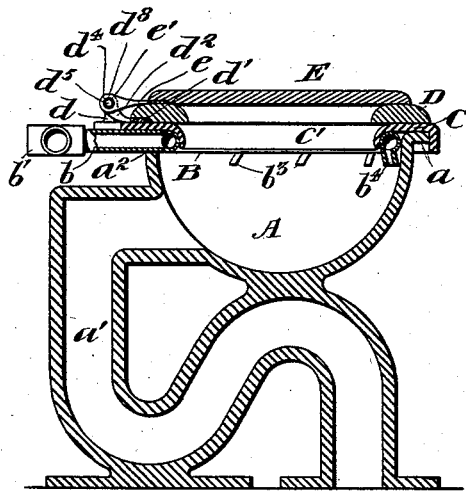


FIG. 2.

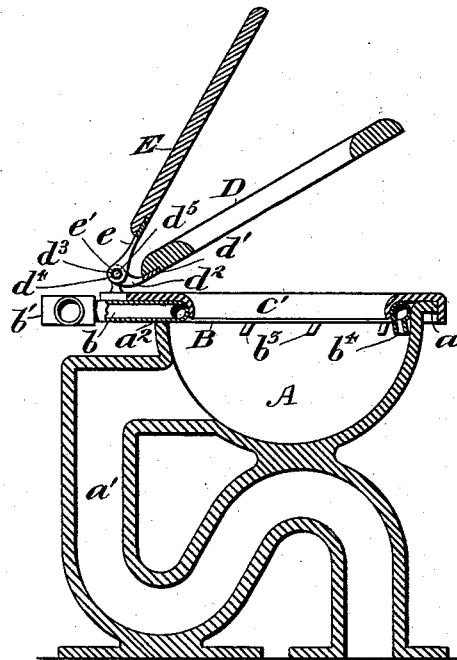
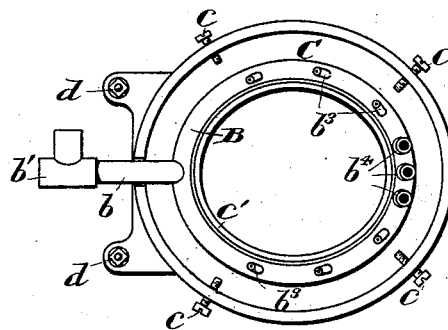


FIG. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

MICHEAL GARLAND, OF SEABRIGHT, NEW JERSEY, ASSIGNOR TO JULIA A. GARLAND, OF SAME PLACE.

WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 524,246, dated August 7, 1894.

Application filed November 7, 1893. Serial No. 490,263. (No model.)

To all whom it may concern:

Be it known that I, MICHEAL GARLAND, of Seabright, in the county of Monmouth and State of New Jersey, have invented a new and useful Improvement in Water-Closets, of which the following is a specification.

My invention relates to an improvement in water closets, either of the "wash out" or "siphon" type and more particularly to the construction and attachment of the flushing rim, seat and cover of the bowl of the closet. Where the flushing rim is formed in the upper portion of the porcelain bowl, as is common, the attachment of the supply pipe for conveying the water to the flushing rim has been a source of considerable annoyance in view of the liability of the porcelain rim to crack under the force of the expansion and contraction of the supply pipe and when once the flushing rim has become seriously cracked or broken the entire closet has become useless, entailing a considerable loss.

The object of my present invention is to provide a flushing rim and means for attaching it and the seat and cover to the bowl in such a manner as to avoid liability of cracking the bowl and at the same time of such structure that they may be readily adapted to and render again useful bowls now in ordinary use in which the rims have become cracked or broken.

A further object is to provide a flushing rim which may be readily removed for repairs or renewal without disturbing the bowl of the closet and which will provide for an effective discharge both in amount and direction of the flushing water as it escapes from the flushing rim into the bowl.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of the closet in vertical section, showing the flushing rim attached as in use, the seat and cover being closed. Fig. 2 is a similar view, showing the seat and cover partially open, and Fig. 3 is a bottom plan view of the flushing and crown rims, showing the arrangement of the water discharge nipples attached to the under side of the flushing rim.

A represents the bowl which, in the in-

stance which I have chosen to illustrate my invention, is a wash out type and is provided at its upper edge with an outwardly extended flange *a*. The discharge neck *a'* of the bowl is trapped, as is usual. The rear of the upper edge of the bowl is provided with a recess *a²* for the passage of the pipe which connects the flush supply pipe with the flushing rim.

In my preferred form, shown herein, the flushing rim consists of a piece of ordinary pipe B bent in circular or any other desired form, in the present instance it is shown in circular form, and provided at its rear with a connecting pipe *b* which passes rearwardly through the recess *a²* in the bowl to connect with the supply pipe. In cases where the closet is of the wash out type, the supply pipe may connect directly with the branch pipe *b* without provision for any additional connection but in general the branch pipe *b* may be provided with a T-head *b'* so that the rim shall be adapted for use in connection with a closet, either of the wash out or siphon type.

In case the rim be used for the wash out alone, one of the openings of the T-head may be plugged and the other connected with the ordinary supply pipe, while, if used with the siphon type, the plugged end of the T-head may be connected with the discharge neck, as is common for the purpose of starting the siphon action.

To provide for the discharge of the water from the flushing rim into the bowl, I puncture the under side of the flushing rim at intervals and fit the holes with nipples *b³*, *b⁴* of various sizes and slanted in different directions so as to regulate the size and direction of the jets to do the most effective work. At the point where it is desirable there should be a very free flush, I locate the nipples *b⁴* having the larger orifices and cluster them closely together. I prefer to make the nipples of some malleable metal which will permit of changing their direction relative to the flushing rim in order to adjust the jets after the rim is in position or from time to time as experience may suggest. It is obvious that the nipples might be omitted and the perforations in the pipe alone relied upon if found desirable in any instance, but I find the nip-

ple structure to be preferable so far as my experience has shown, both because of the readiness with which the direction of the jet may be varied and also because it provides for a ready insertion of a new nipple at slight expense in case of breakage or obstruction.

The flushing rim as hereinabove described as held in position within or over the top of the bowl by means of a crown rim C, constructed to fit over the top flange of the bowl and provided along its outer depending flange with fastenings screws c extending through the depending flange into position to engage the under side of the outwardly turned flange on the bowl. Around its inner edge the crown rim is provided with a depending flange c' adapted to fit within the circular flushing rim B and the latter is preferably secured in position by expanding the lower edge of the depending flange c' so as to cause the said depending flange to partially embrace the flushing rim. It is obvious that when the depending flange is made to fit fairly well the interior wall of the flushing rim, it will require but slight expanding of the lower edge, of said rim to effectually secure the flushing rim in position. This structure also admits of the removal of the flushing rim by a slight contraction of the flange c' either for purposes of repair or for the introduction of a new one, which may be secured in position by again expanding the said rim. For purposes of securing the flushing rim in position by expansion, I find it desirable to construct the crown rim C of malleable metal. It might however be constructed of other material than malleable metal and in such instances the flushing rim might be secured by means of fastenings of any ordinary form, such for example as screws.

For purposes of hinging the seat D, I provide the crown rim C with a pair of upright posts d, located at the rear portion of the rim and placed a short distance apart. The seat D is provided at its rear with a plate d' fixed thereto and terminating rearwardly in a pair of arms d² provided at their rear ends with eyes d³ adapted to register with corresponding eyes d⁴ in the tops of the posts d for the reception of a hinge pintle or pintles d⁵ extending through and locked in the eyes. The same pintles which serve to hinge the seat to the posts d also serve to hinge the cover E, the latter being provided with a pair of rearwardly extending arms e provided at their ends with eyes e' for the reception of the pintle or pintles.

By the above structure and arrangement of parts the flushing rim or pipe, the crown rim, the seat and the cover may be removed bodily from the bowl or placed in position on the bowl by simply loosening or tightening the fastening devices at the edge of the crown rim. One or more of the several parts may be renewed or repaired without disturbing the other parts while the structure as a whole is capable of ornamentation and adaptability to bowls of various sizes and shapes. It is also obvious that the general structure and arrangement of the flushing rim is not confined in its practical use solely to a water closet bowl, but may be used in connection with flushing of sinks or wherever it is desired to cleanse a bowl or receptacle by the introduction along the sides of the receptacle of flushing jets of water or other liquid.

Various slight changes which I have not hereinabove referred to, might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, hence I do not wish to limit myself to the structure herein shown and described, but

What I claim is—

1. The herein described flushing attachment, comprising a rim fitted to the receptacle to be flushed, and provided with a depending flange, and a flushing rim surrounding said depending flange and secured in position by expanding said flange, substantially as set forth.
2. The combination with the crown rim and the seat and cover hinged to the crown rim, of the flushing rim removably secured to the under side of the crown rim, substantially as set forth.
3. The combination with the bowl provided with an outwardly turned flange at its upper edge and with a recess at its rear, of a crown rim provided with an outer downwardly extended flange for receiving fastening devices and with an inner downwardly extended rim, and a flushing rim or pipe extending around the inner downwardly projected flange of the crown rim and through the recess at the rear of the bowl, the inner downwardly projecting flange of the crown rim being expanded at its lower edge to hold the flushing rim in position, substantially as set forth.

MICHAEL GARLAND.

Witnesses:

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