

(No Model.)

J. DEMAREST.

WATER CLOSET.

No. 260,953.

Patented July 11, 1882.

Fig. 1.

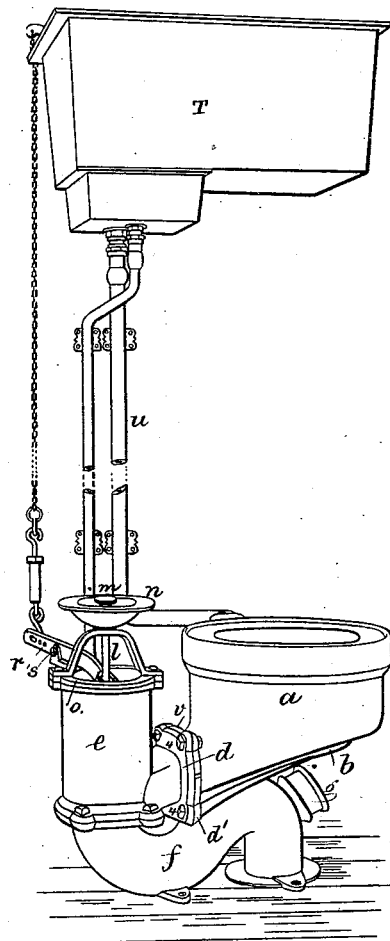


Fig. 3.

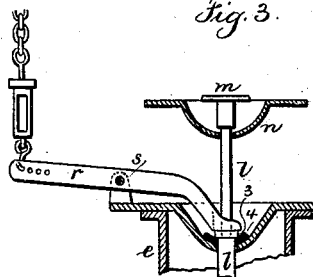
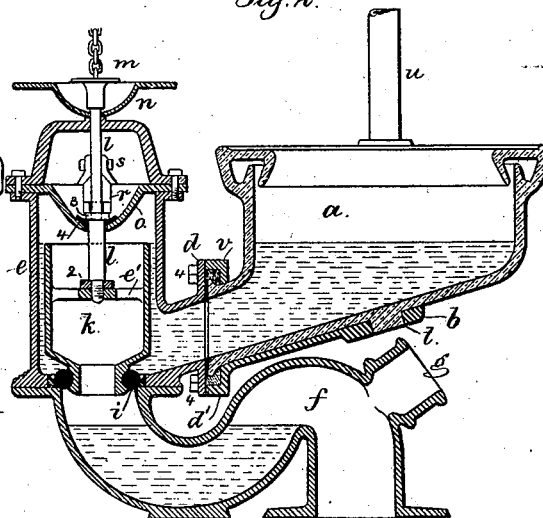


Fig. 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN DEMAREST, OF NEW YORK, N. Y.

## WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 260,953, dated July 11, 1882.

Application filed February 23, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN DEMAREST, of the city and State of New York, have invented an Improvement in Water-Closets, of which the following is a specification.

Water-closets have been made with an inclined bottom to the basin leading to a lateral opening into a stand-pipe at the side of the basin, in which stand-pipe a tubular valve has been used which served as an overflow; but great difficulty has been experienced in fitting up such closets, because the stand-pipe had to pass up through the wood-work of the closet-seat, and there was no opportunity to connect this class of closet with a supply-cistern that furnished to the basin the wash of water when the pull was operated to discharge the contents.

My invention is made for shortening the height of the stand-pipe to allow of its easy introduction beneath the wood-work of the seat, for allowing the necessary space for the introduction of a lever to operate the connection to the cistern, for allowing a free overflow of water from the basin when the maximum height has been obtained, for closing the opening of the stem air and gas tight, and for effectually preventing the accumulation of any foreign substance in the stand-pipe.

In the drawings, Figure 1 is a perspective view of the closet, representing the connection of the same with the cistern. Fig. 2 is a vertical section of the stand-pipe and basin, and Fig. 3 is a detached view of the lever and pull.

The basin *a* is usually of porcelain resting upon the metal saddle *b*, and provided with the attaching-flange *d'*, by which it is united to the side flange, *d*, of the stand-pipe *e*. This stand-pipe may be at the upper end of a soil or sewer pipe; but usually it will be bolted to the trap *f*, so that the sewer-pipe may be directly beneath the basin. There will usually be a socket at *g* for the reception of a ventilating-pipe.

In securing the porcelain bowl to the iron stand-pipe difficulty has been experienced in making the joint tight, so that it will not become injured in handling. To avoid these difficulties I make use of a cast-iron saddle, *b*, that is adapted to the reception of the bowl. This saddle has at its lower end a half-ring, into which the flange of the bowl is received

and secured by plaster. There is also a hole through the saddle at *t*, into which a projection on the basin passes, and is plastered in firmly. The other half, *v*, of the ring is also made hollow to set over the lower end of the basin-outlet and be secured thereto by plaster. The bolts at 4 serve to secure the basin and saddle to the flange of the lateral opening into the stand-pipe. Red lead, cement, or similar material is to be used between the porcelain and the iron flange of the stand-pipe, so as to prevent the water coming into contact with the plaster. The bottom of the basin being at an inclination and opening directly into the side pipe, *e*, insures the rapid discharge of the contents of the basin so soon as the valve in the stand-pipe is opened.

The tube *k*, within the stand-pipe, is contracted at its lower end sufficiently to enter freely the delivery-opening at the bottom of the stand-pipe, and around this contraction there is an india-rubber ring, *i*. This india-rubber ring forms the valve of the stand-pipe, and the tube *k* forms the overflow-dam, its upper end being at the maximum level of the water in the basin. The distance between the exterior of the dam and the interior of the stand-pipe is but small, so that any offensive material cannot float up over the dam; but the space is ample for the discharge of surplus water running into the basin, because there is considerable length around the tubular dam *k*, forming a long thin passage. The rubber ring forming the valve is also a cushion between the valve-seat and the tubular dam, so that there will be no concussion, and the flange metal portion of the tube above the rubber forms a bearing for the rubber ring to prevent its being driven upwardly, and the extreme lower end of the tube *k* has a rim around to prevent the rubber ring being drawn off. By stretching the rubber ring into its place it will contract and hold itself firmly in place; but it can be removed if injured and another substituted. This character of ring-valve may be used in other kinds of water apparatus. There is a cross-bar, *e'*, some distance below the top of the tubular dam *k*, and to this cross-bar the stem *l* is connected that passes up the pull or handle *m* in the cup *n*, and the cover *o* of the stand-pipe *e* is dishing, so that it passes

down into the dam when the same and the valve are raised to discharge the contents of the closet. There is a washer, 2, of rubber or other elastic material, around the stem *l* and above the cross-bar *e'*. When the dam is raised this washer comes into contact with the central part of the dishing cover and prevents the concussion which would result from metal against metal. This dishing or inverted conical cover *o* to the stand-pipe allows for the introduction of the lever *r* between the said cover and the handle or pull-cup. This lever *r* is preferably pivoted, at *s*, at one edge of the cover *o*, and the end is forked to go at both sides of the stem *l*. The pull-cup *s'* is supported at its center by the arch-piece *s*<sup>2</sup>, which is bolted at its lower ends to the edge of the cover *o*. The stem *l* passes through this arch and through the pull-cup, and is guided by them, so that the dam and valve are kept in proper position as they are moved up and down by the pull. The stem *l* is made of larger size below the fork of the lever than it is at and above said fork. This forms a shoulder for the washer 3, which insures the proper movement of the lever when the handle is raised. I place a disk of rubber, 4, either under or over this washer 3, and of a size for its edges to rest against the conical surface of the cover *o*, so that it will form a stopper or valve that excludes smell from passing through the cap at the hole for the pull. The back end of this lever is connected with the flushing-valve in the cistern *T*; but as the cistern may be of any known character and acts to supply water by the pipe *u* to the basin in the ordinary manner, it is not necessary to further describe the said cistern.

I claim as my invention—

1. In combination with the stand-pipe and its dishing cover, an open cylindrical dam having a valve at its lower end and a cross-bar below its top edge, a stem extending up from the cross-bar, and a pull-cup, and an arch-piece supporting the pull-cup and guiding the stem, substantially as set forth.

2. In a water-closet, the stand-pipe and its dishing cover, in combination with a lever above the dishing cover, the pull, and a connection from the lever to the supply-cistern, substantially as set forth.

3. In combination with the stand-pipe, the cover, and the dam, a pull connected with the dam, and an elastic washer around the pull and resting against the upper surface of the cover, substantially as set forth.

4. The combination, with the stand-pipe and overflow-dam, of a dishing cover bolted to the stand-pipe, a pull passing through the cover, a cross-bar within the dam, at a distance below its top edge, and a washer of elastic material around the stem and above the cross-bar, for the purposes set forth.

5. The combination, with the stand-pipe having a lateral inlet, of a porcelain basin, a metallic saddle for receiving the same, and to which the basin is secured by plaster, a hollow metallic ring-flange around the flange of the basin-outlet, and bolts for securing the parts together, substantially as set forth.

Signed by me this 14th day of February, A. D. 1882.

JOHN DEMAREST.

Witnesses:

GEO. T. PINCKNEY,  
WILLIAM G. MOTT.