

P. A. RILEY.
Water-Closets.

No. 149,339.

Patented April 7, 1874.

Fig. 3.

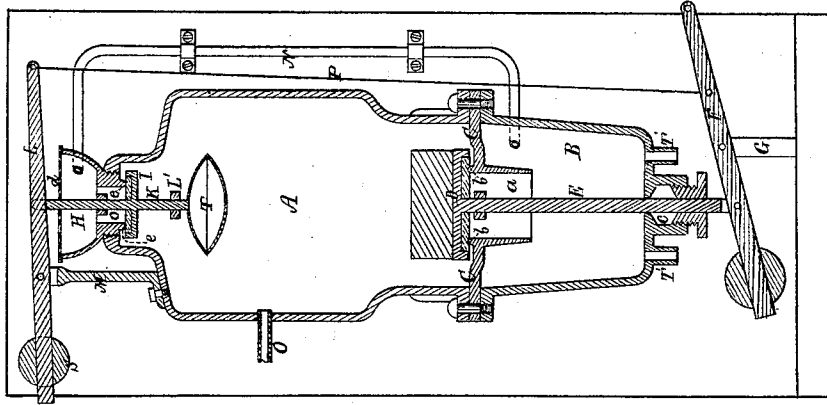


Fig. 2.

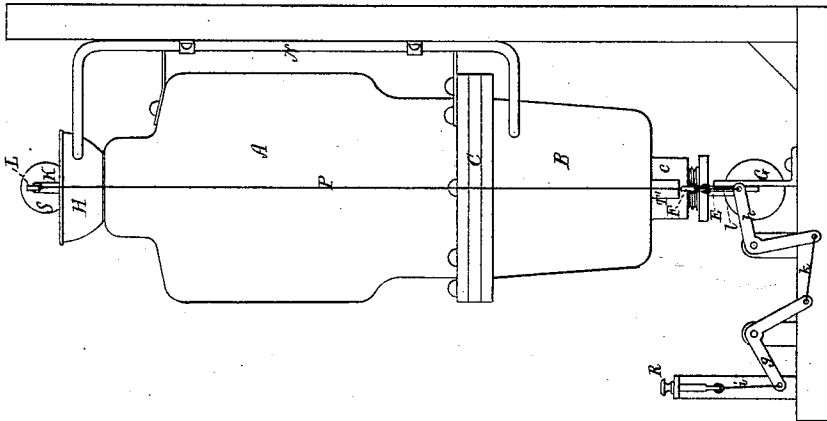
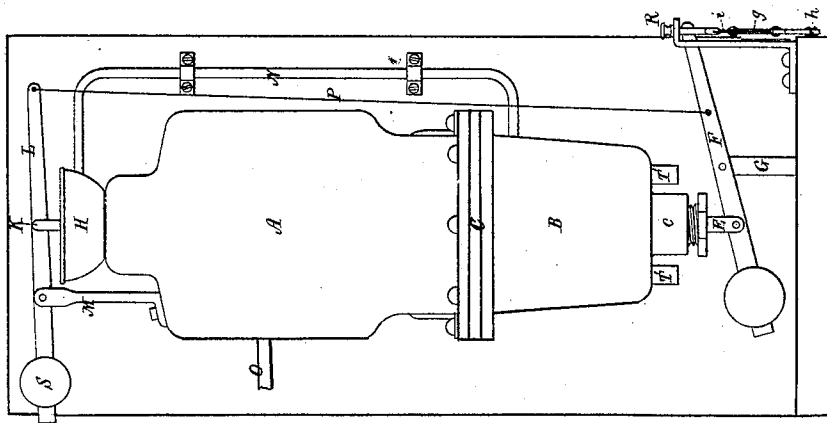


Fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

PETER A. RILEY, OF ROXBURY, MASSACHUSETTS.

IMPROVEMENT IN WATER-CLOSETS.

Specification forming part of Letters Patent No. **149,339**, dated April 7, 1874; application filed March 11, 1874.

To all whom it may concern:

Be it known that I, PETER A. RILEY, of Roxbury, of the county of Suffolk and State of Massachusetts, have invented a new and useful Apparatus for Supplying a Water-Closet with Water; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 denotes a front elevation, Fig. 2 a side view, and Fig. 3 a vertical section, of said apparatus, it being intended to save the necessity of a large reservoir provided with a float and cock, as generally employed in connection with a water-closet.

In the drawings, A and B denote two reservoirs or vessels, arranged one over the other and connected together, with a separating-disk, C, placed between them. There is an opening, *a*, through the said disk concentrically, it being provided with a valve-seat, *b*, to receive a weighted valve, D, supported by or fixed upon a spindle, E. The spindle goes down through a stuffing-box, *c*, at the bottom of the secondary reservoir B, and is hinged to an arm of a lever, F, pivoted to a standard, G. On the top of the primary receiver A is a cup, H, which at bottom opens, as at *o*, into the receiver A, and at top is capped by a foraminous cover, *d*. At the bottom of the cup H is a valve-seat, *e*, against which a valve, I, rests. The valve I, arranged within the receiver A, is fixed concentrically upon a stem or rod, K, which, going through a guide-bar, L', is provided with a float, T, to raise the valve, and is extended up through the cup and its cover, so as to abut against a lever, L, having its fulcrum in a standard, M, erected on the top of the receiver A. From and out of the cup H a pipe, N, leads, and down to and opens into the secondary receiver B. There is also an induction-pipe, O, to the receiver A, to supply it with water under pressure, the pipe O being part of a conduit from a street-main. The lever L is connected with the lever F by a wire, P, arranged as shown. The lower lever F is to be supposed to be connected with the handle or lifter R of a water-closet pan by two bent levers, *g h*, and wires *i k l*, or other proper devices, by which, when the handle or lifter is pulled up, the lever F

shall be so moved upon its fulcrum as to force the valve-stem E upward, the valve-stem K being at the same time forced downward by the lever L, which will be pulled downward by the wire P. The lever L is furnished with an overbalance-weight, S. The receiver B has at bottom one or more educts, T', to connect with one or more pipes leading to the hopper or basin of the water-closet.

If we suppose the receiver A to be filled with water under pressure, such water will close the valves D and I upon their seats. On pulling up the lifter R, both valves simultaneously will be moved off their seats, in which case, as the receiver A will be open to the atmosphere, water will rush freely and in great volume suddenly therefrom into the reservoir B. As the latter reservoir, by means of the pipe N, will also be open to the atmosphere, it will continue to discharge water from its educt after the valve D may have been closed upon its seat, which will take place as soon as the lifter R may be dropped or fall down. The valve I, however, will not rise up to its seat until forced up thereto by the float T, which will be elevated by the water that subsequently may rush into the receiver A. While the float may be rising, air that may have entered the reservoir A will be nearly all, if not all, expelled therefrom through the cup H. Should any water pass upward out of the reservoir A, it will be caught by the cup H, and be discharged therefrom by the pipe N. Were it not for the valve-opening and valve at the upper part of the reservoir A, air would so collect in such reservoir as to prevent it from receiving water to the necessary extent.

The apparatus may be used without the cup H, or such and the pipe N to lead from it; but they are highly useful adjuncts, as they not only serve to catch any water that may accidentally be blown out of the valve-opening in the upper part of the receiver A, and convey such into the auxiliary receiver B, but also to supply the latter with air to enable it to discharge its water after the valve D may be closed upon its seat.

I claim as my invention—

1. The hydraulic apparatus, substantially as described, consisting of the primary and

auxiliary receivers A B, the intervening disk or septum C, the valves D I, valve-openings *a o*, stems E K, float T, levers L F, inducts O N, and educt T', all arranged and combined essentially in manner and to operate as specified.

2. The cup H, either open at top, or provided with a foraminous cover, *d*, as set forth,

in combination with and applied to such apparatus, all being as and for the purposes substantially as specified.

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Witnesses:

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