C. C. Bier,

Water Closet,

No. 6,862, Patented Nov. 13, 1849.

Fig: 1.

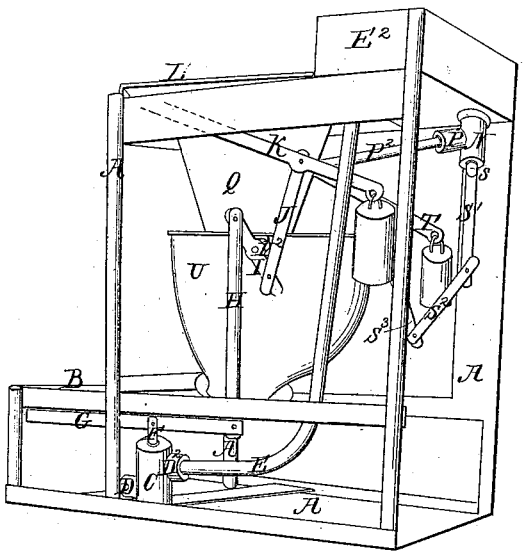


Fig: 2.

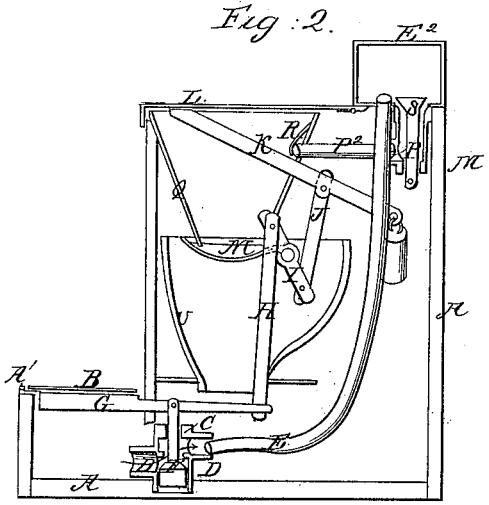


Fig: 3.

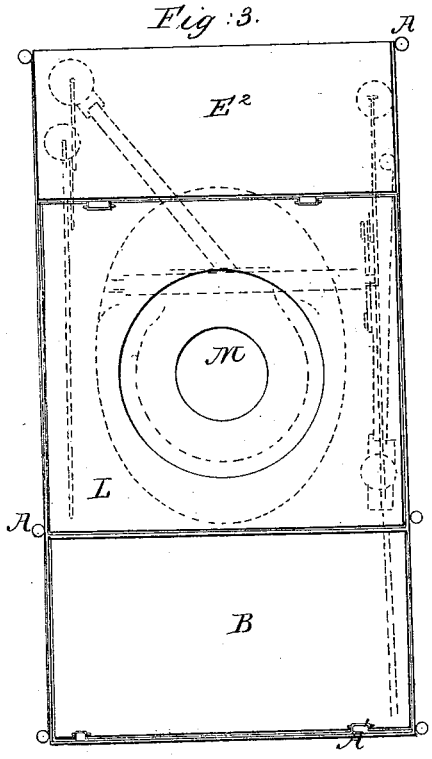


Fig: 5.

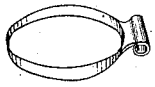
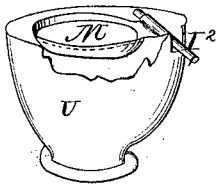


Fig: 4.



UNITED STATES PATENT OFFICE.

CHAS. C. BIER, OF NEW YORK, N. Y.

PORTABLE WATER-CLOSET.

Specification of Letters Patent No. 6,862, dated November 13, 1849.

To all whom it may concern:

Be it known that I, CHARLES C. BIER, of the city, county, and State of New York, have invented a new and useful Improvement in Water-Closets; and I do hereby declare the following to be a full and exact description.

The nature of my invention consists in the construction and use of a pan, working on a hinge, within the lower basin of a water closet, so as to be filled with water, always when the closet is not in use, but emptied when used, by an arrangement of self operating levers underneath the foot and seat boards of the closet; and also in the arrangement of a piston and cylinder under or beside the foot, and another on the under side of the closet reservoir, operated upon by the levers above mentioned, for regulating the supply and cut off of water at such times as is required for cleaning the closet. But to describe my invention more particularly, I will refer to the accompanying drawings, the same letters, wherever they occur referring to the same parts.

Figure 1, is a perspective view of the closet; Fig. 2, a cut section of the same taken lengthwise of it; Fig. 3, a horizontal view of the closet representing by the dotted lines the position of the levers, &c.; Fig. 4, a view of the basin; Fig. 5, a view of the pan.

Letter A, is the frame of the closet; B, the foot board, having a working joint or hinge, and connected to the front foot rail of the frame A′. Underneath the foot board is arranged the induction cylinder C, coupling on the front side at D, to a hydrant pipe, (not shown in the drawing as immaterial), and at the back at D^2, with a pipe E, communicating at its upper end to the closet reservoir E^2, working within the cylinder is a plunger piston F, having a ground tight seat in the cylinder to fit into, on a line with the upper side of the orifice D, and lower side of the back orifice D^2, so as to operate as a cut off to both, and have the force of the water in the hydrant underneath it, to hold it firmly in the seat, when the end of the lever G, under the foot boards has been released. Attached to inner end of G, at right angles, (or nearly so,) to it, is a second lever H, connected by its upper end, to one end of the cross head I, (of the fan) which has attached to its opposite or lower end, and parallel or nearly so to that of, H, but extending upward a third lever J, which connects with, and at about midway of its length to a weighted lever K which is operated upon, at its upper end, by the seat board L, when depressed, for the purpose of throwing back partially the pan M, in the basin (and attached through the sides of it to the crosshead I); and also forcing down the plunger in the cylinder C, to open a communication from the hydrant to the closet reservoir to fill it. On the opposite or left side of it, and on the under side of the reservoir E^2, is a second cylinder N, opening into the reservoir, and having a side orifice P, to which is attached a pipe P^2, entering the back of the upper basin, for discharging water into it, from the reservoir, and over the mouth of which is a cap R, for diffusing the water.

Within the cylinder N, is a plunger S, to the lower end of which is a lever S′, to the lower end of which is attached a second lever S^2, at an obtuse angle to it and having near the angle a pin, through it and into the frame port, to work on. To the lower end of this lever, is a third lever S^3, forming an acute angle with that of S^2, and connecting with, at its upper end, to a weighted lever T, extending lengthways and nearly across the closet, and operated upon by the depression of the seat board L, to cut off the flow of water from the reservoir to the upper basin Q, while the closet is being used. Underneath this basin is a second basin or "trap" U. In this basin or trap is arranged the pan M, which is made large enough to cover the opening in the lower part of the upper basin, and secured at its back to an arm I^2, extending across the interior and upper part of the basin U, which is operated on by the crosshead I, on the outside of the basin.

The operation of these several parts are that, when the closet is to be used, the occupant on placing his feet on the footboard B, depresses the end of the lever underneath it, and forces down the piston F, in the cylinder C, to allow the water to flow into the pipe E, in the direction of the arrows, to the closet reservoir E^2, to fill it. By the time it is filled, the occupant of the closet takes his seat on the board L, which being hinged at its back edge, acts as a lever to depress the ends of the levers K and T, the former of which levers throws entirely back the pan M,

within the bulge or recess of the lower basin V, to allow a free discharge from it, while the latter (that is T) shuts down the piston S, in cylinder N, and shuts off the flow of water to the basin while the occupant is in the possession of his seat, but on rising off the seat again opens the piston valve S, when the water continues to flow into the basin again, until the supply is cut off by releasing the piston F, in the lower cylinder on stepping off from the footboard B. When the foot and seat boards have been relieved, the supply of water is entirely cut off, and except what is in the closet reservoir no more can be wasted than is needed, and as all is exhausted from the closet reservoir, and mode of operating the pan can always free itself from the water contained in it, when left standing, there never can arise any accidents from freezing or bursting of reservoirs or basins as is frequently the case in our northern cities.

Having now described my improvements in the construction of water closets, I will proceed to state what I claim and desire to secure by Letters Patent; what I claim therefore is—

The construction and use of the arrangement of levers G, H, I, J and K, in combination with and operated upon, by the foot and seat boards of a water closet, for the purpose of operating the pan M, in the lower basin or trap of a water closet, and regulating the supply of water to the closet reservoir; also the construction and use of the levers S', S^2, S^3, and weighted lever T, in combination with the foregoing arrangement of levers and operated upon by the seat board for continuing the operation of supplying the water to the basin from the closet reservoir.

CHARLES C. BIER.

Witnesses:
CHARLES S. BARRITT,
JAMES HOPPLE.