(Model.)

J. BUDDE.

WATER CLOSET.

No. 253,677. Patented Feb. 14, 1882.

Fig. 3.

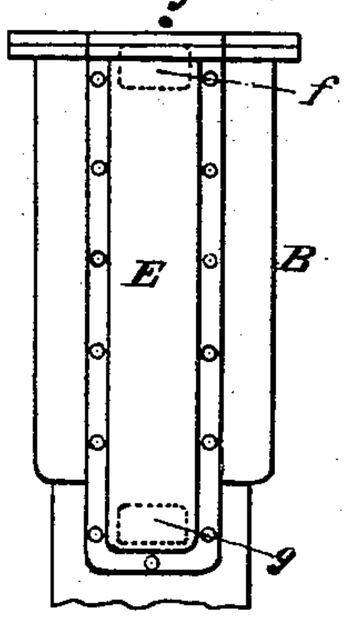


Fig. 1.

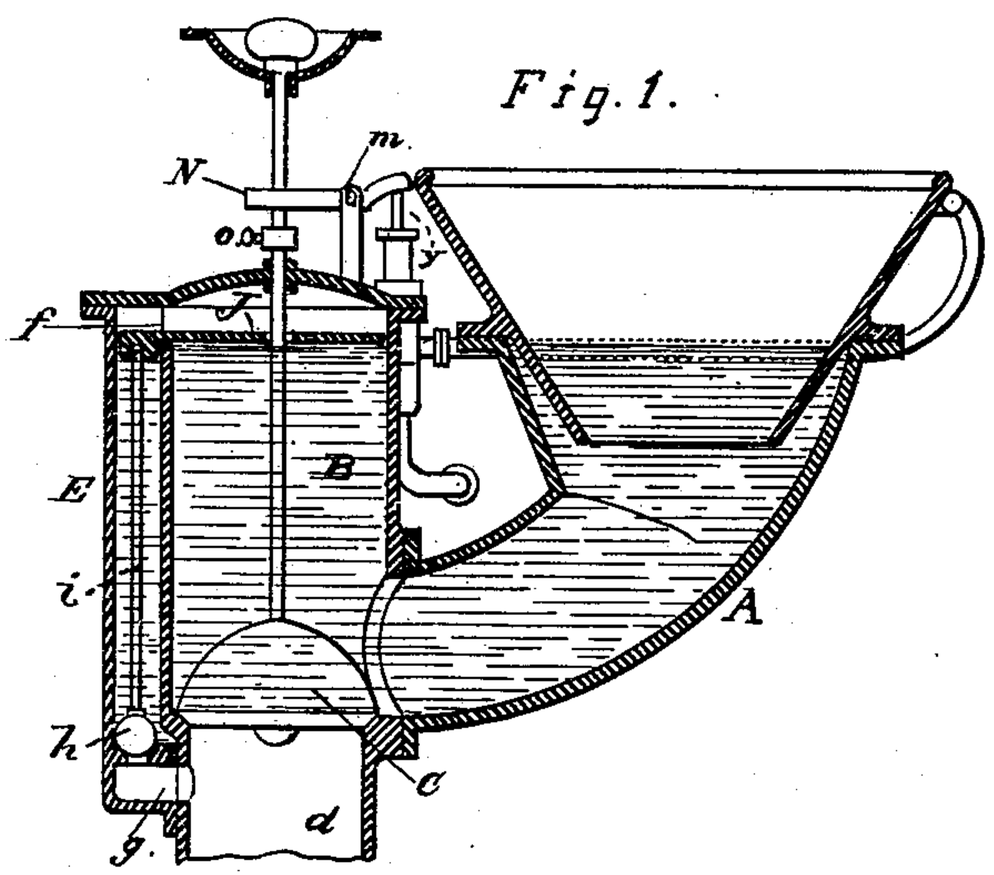
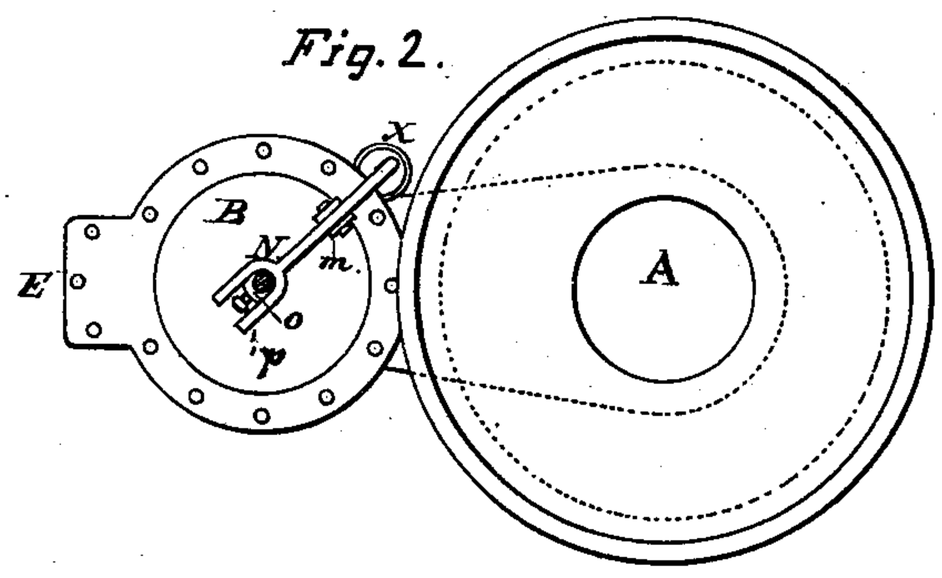


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOSEPH BUDDE, OF SAN FRANCISCO, CALIFORNIA.

WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 253,677, dated February 14, 1882.

Application filed February 14, 1881. (Model.)

To all whom it may concern:

Be it known that I, JOSEPH BUDDE, of the city and county of San Francisco, in the State of California, have made and invented certain new and useful Improvements in Water-Closets; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings.

My invention relates to an improvement in water-closets of the class known as "hopper-closets," wherein the outlet leading into the soil-pipe is closed by a valve of some kind and a quantity of water is retained above this valve for receiving and assisting in the discharge of the matter deposited in the closet.

The object of the invention is to simplify the construction of the several parts of the closet and render it effective in its operation in thoroughly cleaning the closet each time after use. These objects I attain by the construction substantially as shown in the drawings and hereinafter described.

In the drawings herein referred to, Figure 1 is a vertical section taken through the center of my improved closet. Fig. 2 is a plan view of Fig. 1. Fig. 3 is a view of the water-chamber, taken from the left-hand side of Fig. 2.

A represents the receiving pipe or chamber of the closet, having the basin set into its upper end, and having attached to its lower end the water-chamber B. This chamber is placed directly over the soil or waste pipe communicating with the sewer, and it has an outlet in its bottom, which is closed by a valve or plunger, C. It will be seen that this chamber B consists of a cylinder somewhat larger in diameter than the curved pipe A, and that this latter pipe has a regular inclination and descent from the basin down to the point where it connects with the chamber B, just above the outlet *d*. By this construction a large quantity and body of water is confined in the cylinder B and held above the plunger C, so that when the outlet *d* is uncovered by the rise of the plunger the descent of this water will act to rapidly and thoroughly wash down and discharge through the lower end of the chamber B all the matter deposited in the connection below the basin. This quantity of water provided in the cylinder B and the connection-pipe A is sufficient to clean out and entirely remove and carry off all particles of matter and substances, while no chance is afforded for any particles to lodge in the apertures and clog the outlets.

The valve C is actuated in the usual manner by a rod working through a packing in the top of the chamber and having a pull-handle on its end. It is also of sufficient weight to return rapidly to its seat at the bottom of the cylinder when the handle is released, so as to close the outlet and retain the clean water flowing into the basin from the supply-valve X.

To maintain the water at the proper level and prevent the overflow of the closet, I provide an outlet and discharge for the surplus water by a side passage, E; but instead of relying on the water to seal and prevent the back flow of gases from the soil-pipe, with which this overflow-outlet must necessarily be in direct connection, I employ a positively-closing valve or plunger at the lower end of this overflow-passage, which I operate automatically to open and close of itself, as required. This overflow-passage E consists of the lateral extension secured to the side of, or formed as a part of, the chamber B, having an opening, *f*, at the top into the space within the chamber B, and another opening, *g*, at the bottom, leading into the pipe or connection below the valve or plunger C. Above this outlet *g*, I provide a valve-seat to receive a valve, *h*. The rod *i* of this valve is attached at the upper end in an adjustable manner to a float, J, placed within the cylinder-chamber B, as clearly shown in Fig. 1. This float is arranged to rest upon the surface of the water, and by rising and falling with the change of level to raise or drop the valve *h*, according to the direction of movement, and by having it adjustably connected to the rod *i*, so as to be set up and down, the distance between the valve and the float J can be regulated and the time of discharge adjusted as required. The level at which the water shall stand in the basin and chamber is thus under complete control. The use of this valve *h* at the bottom of the water-outlet effectively prevents and shuts off the back flow of gases from the sewer-pipe in a more certain manner than can be done with water-traps alone.

I also provide a simple means for operating

the water-supply valve from the plunger-rod. Upon the top of the cylinder B, I fix a post, *m*, in which I pivot a horizontal lever, N, in such position that one end of the lever may rest on the end of the valve-spindle *y*, while the other end, on which there is a yoke, *p*, shall embrace the plunger-rod above the collar *o*. This end of the lever N is arranged to be struck by the collar as the plunger is lifted, and the collar *o* is held on the rod by a set-screw, so as to be movable and adjustable up and down. Thus when the handle is raised to lift the plunger C from its seat the collar *o* strikes against the end *p* of the lever N and acts to force down the spindle *y* and open the valve. The position given to this collar *o* on the rod of the plunger determines the time at which the spindle *y* is depressed by the lever during the upward movement of the rod.

The chamber B and the curved pipe A can be simply and cheaply constructed by casting them in two halves or sections together, so that a single joint and seam will be formed, and the outer overflow chamber or passage, E, can be cast separately and bolted to the side of the chamber B over the openings *f g*, thus providing a closet of cheap construction and without complicated mechanism.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The chamber B, having connected thereto the curved pipe A above the upper end of the soil-pipe, said chamber having the overflow-passage E, in combination with the valve *h*, rod *i*, and float J, and the valve or plunger C, connected with mechanism, substantially as described and shown, for operating the water-supply valve, substantially as and for the purpose set forth.

JOSEPH BUDDE.

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