J. E. BOYLE.

VALVE WASH-BASINS.

No. 193,799. Patented Aug. 7, 1877.

Fig: 1.

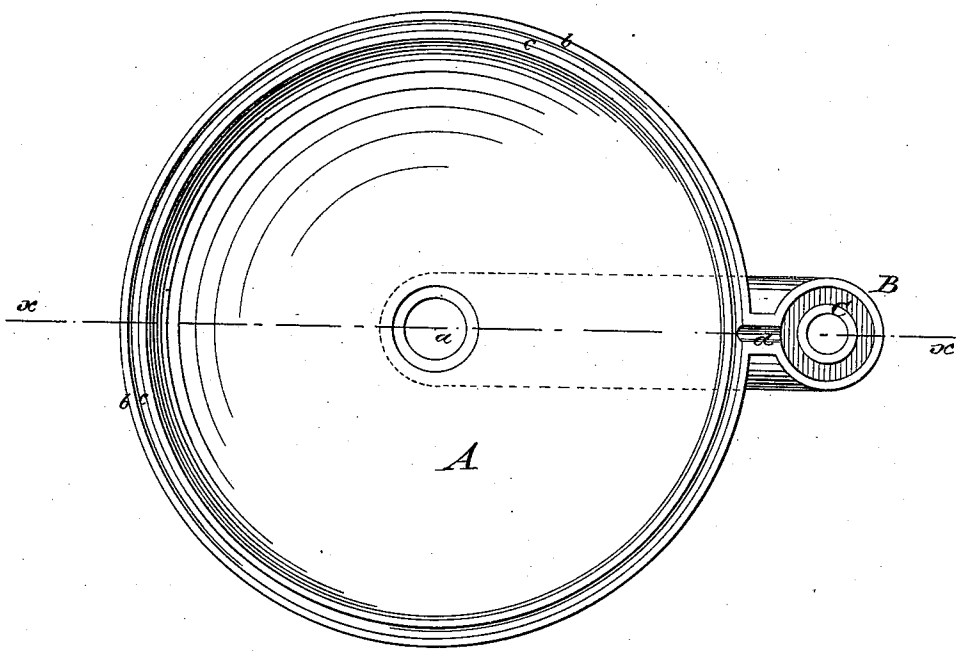

Fig: 2.

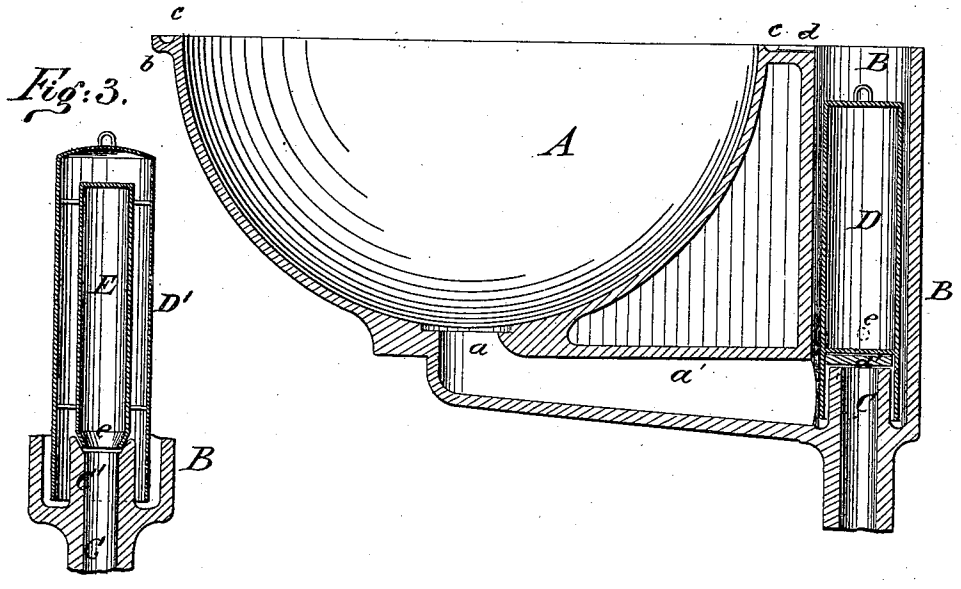

Fig: 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES E. BOYLE, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN VALVE WASH-BASINS.

Specification forming part of Letters Patent No. **193,799**, dated August 7, 1877; application filed March 6, 1877.

To all whom it may concern:

Be it known that I, JAMES E. BOYLE, of the city of Brooklyn, county of Kings and State of New York, have invented a new and useful Improvement in Valve Wash-Basins and their attachments; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a vertical view of the wash-basin and its attachments to the waste-pipe. Fig. 2 is a sectional view of the same; and Fig. 3 is a sectional longitudinal view of the stand-pipe and valve that may be used as an equivalent for the float and valve shown in Fig. 2.

My invention relates to an improvement in the form and construction of valve wash-basins, and the connection with the waste or soil pipe, wherein the overflow of the basin is prevented by the automatic action of the valve and the perfect trapping of the waste-pipe.

To enable a person skilled in the art to make and use my invention, I will proceed to describe it.

A A is the bowl of the wash-basin, made of porcelain or other suitable material.

B B is a chamber constructed of the same material as the bowl or basin, and made with or forming part of the bowl or basin.

C is the outlet of the waste-pipe of the wash-basin.

D is a float, made of any suitable material, with a cup-formed continuation of its sides or periphery extending around the outlet of the waste-pipe C, and packed at the valve-seat d'. This float may be made hollow, in which case I leave openings at *e* for the admission of water to its interior. It is also provided with a stopple, to which will be attached a chain, connected with a knob or handle, for lifting the float from the valve-seat *d* by the hand of the operator.

a is the outlet of the wash-basin, and a' is the water way or passage leading from the outlet of the wash-basin to the outlet of the waste-pipe C.

b is the flange of the basin, and *c* is a groove in the flange *b*, around the rim of the basin, forming a water-way, leading to the chamber B through the channel *d*, the said groove *c* being made slightly descending toward the channel *d*.

The operation of the basin and the waste is as follows: It will be observed that the water in the water way or passage a' will at all times remain at a level with the top of the outlet of the waste-pipe C, and that the cup-formed extension of the float D extends below the line of the water in the said water way or passage a', forming a perfect trap. The partial vacuum formed in the waste-pipe by the descent or draft of the descending water will bring the float D to its packed seat d' with such force as to form a perfect joint. When the basin has been filled with water for washing, and the operator desires to discharge the water from the basin, the float D is raised and held from its seat a sufficient time for the purpose of the discharge, when, on being released, the valve is immediately closed by the gravity of the float. The weight of the float D is so adjusted that it will remain firmly on its seat until the water in the basin A A shall reach a point in the basin where the weight of the water in the basin A A will overcome the weight of the float, and raise it from the valve-seat d', thus opening the passage to the waste-pipe automatically, and prevent an overflow of the basin. If a hollow float be used the filling of the float with water will compress the air within it, and thus assist its buoyancy, and insure the opening of the water way or valve for the discharge of the water of the basin.

In lieu of the float D, as shown in Fig. 2, a stand-pipe, E, as shown in Fig. 3, may be used.

In said Fig. 3, D′ represents the outer case of the stand-pipe, and E the inner stand-pipe within the chamber B B, having its valve-seat at C′, upon the top or outlet of the waste-pipe C. The casing D′ is extended below the level of the top or opening of the waste-pipe C and the valve-seat C′, so as to form a trap. As the water fills the basin it also fills the space between the outer case D′ and the stand-pipe E, until it reaches the top of the stand-pipe E, when it is discharged, through the stand-pipe E, to the waste-pipe C, and thus prevents an overflow of the basin.

A discharge of the water in the basin may

be effected by raising the stand-pipe E from its valve-seat C′ in the same manner as described in reference to the float D in Fig. 2.

It will be observed that the basin A A, the chamber B B, the passage or water-way A, and the outlet C of the waste-pipe are constructed or cast in one piece. In all other valve-basins these are made in different parts, and the cost of construction is considerable. The parts require considerable labor in puting up and adjusting, and are liable to get out of order from loosening of the joints and connections, while in my form of the basin and its appendages, in one piece, the whole is ready at once, without any cost of labor, to be attached to the waste-pipe, and there can be no liability of getting out of order, as exists in other forms of valve-basins. The first cost of the wash-basin and its appendages, constructed or cast in one piece, is also much less than any other form of construction.

Having fully described my invention, what I desire to secure by Letters Patent is—

1. The combination of the wash-basin A A, the chambers B B, the water-way *a′* from the outlet *a*, and the waste-pipe C, with the float D or its equivalent, substantially as described.

2. The float D, with its sides or periphery extended around the end of the waste-pipe C of wash-basin, and below the level of the water in the outlet, so as to form a perfect trap, substantially as described.

3. A valve wash-basin wherein the basin A A, the chamber B B, and the passage or water-way *a′*, and the end of the waste-pipe C are constructed in one piece or together, substantially as described.

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Witnesses:
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