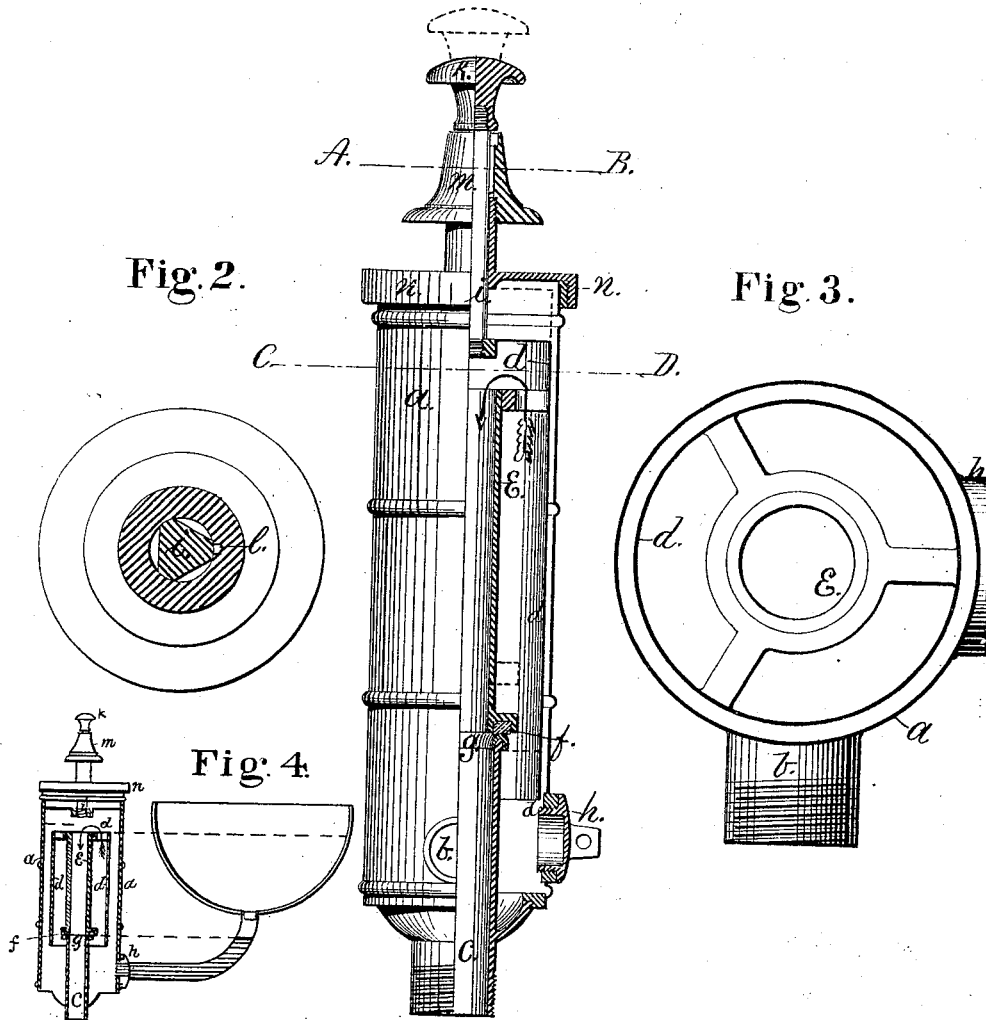


H. OGDEN:
 Overflow and Discharge Valves for Wash-Bowls,
 Tubs, Baths, &c.

No. 196,928.

Patented Nov 6, 1877.

Fig. 1.



WITNESSES.

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IMPROVEMENT IN OVERFLOW AND DISCHARGE VALVES FOR WASH-BOWLS, TUBS, BATHS, &c.

Specification forming part of Letters Patent No. **196,928**, dated November 6, 1877; application filed July 23, 1877.

To all whom it may concern:

Be it known that I, HENRY OGDEN, of the city and county of Providence, and State of Rhode Island, have invented new and useful Improvements in Combined Overflow and Discharge Valves; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to that kind of valves used in stationary wash-bowls, wash-tubs, bath, water-closet, and other basins, in which it is desirable that the water should not reach beyond a certain fixed height, and in which a hermetically-sealed trap shall prevent the entrance of sewer-gas while the contents may be readily discharged; and it consists in the peculiar arrangement of the several parts, as will be more fully set forth hereinafter.

Figure 1 is a view of the improved valve, partly in view and partly in section. Fig. 2 is a horizontal section through the line A B, showing the arrangement of the spline by which the valve can be kept suspended during the time required to discharge the contents. Fig. 3 is a horizontal section through the line C D. Fig. 4 is a transverse section, showing, on reduced scale, the connection of the overflow-pipe with a wash-bowl and the line of water-overflow therein.

In the drawings, *a* is the cylindrical case, connected with the tub or basin by the inlet *b*, and provided with the outlet *c*, which outlet-pipe extends upward to the valve-seat *g*. *d* is a cylindrical case, closed at top and open at the bottom. This case extends below the upper end of the discharge-pipe *c* and below the valve-seat. The outer case is therefore at all times partially filled with liquid up to a level with the valve-seat *g*, and the cylindrical case *d* extends into this liquid, and thus forms a trap to prevent the entrance of sewer-gas.

E is an extension of the discharge-pipe, open at both ends, and provided with the elastic ring *f*, which forms, with the valve-seat *g*, the valve.

The discharge-pipe *E* is supported concentric within the closed cylinder *d*, and, when the valve is closed, forms the overflow, the

same being made of such length as will place the inlet *b* at the lowest level, so as to discharge all the liquid and the upper end of the overflow *E* at the highest desired level.

The liquid will enter the case *a* and flow up the annular space between the closed cylinder *d* and discharge-pipe *E* until it overflows, when all the liquid will be discharged through *E*, and still prevent the entrance of sewer-gas by the closed cylinder *d* extending considerably below the liquid.

h is a screw-plug placed into the side of the case *a*, near the bottom, by which impurities may be removed from the bottom of the case *a* without disconnecting the valve.

To the upper end of the closed cylinder *d* the stem *i* is secured, and to the upper end of this the handle *k*. The stem *i* is provided with a spline, *l*, and the bush *m*, through which the stem *i* extends, with a groove. When, therefore, a large tub, or any kind of tub or bowl, is to be emptied, the knob or handle is raised, thus raising the valve *f*, discharge or overflow *E*, and the cylinder *d*, allowing the liquid to flow over the valve-seat *g*. By turning the knob or handle *k* the spline will rest on the bush *m*, and the discharge-valve will remain open, and as the cylinder *d*, closed on top, still extends below the valve-seat, the valve may remain open and still prevent the entrance of sewer-gas.

The upper end of the case *a* is provided with a screw-cap, *n*, which can be unscrewed, and the overflow *E* and cylinder *d* removed for repairs or inspection.

When this valve is connected with any tub or basin the length of the overflow-pipe *E* will regulate the amount of water that can be placed in the same, provided the valve-seat is just below the bottom of the vessel. The valve must, therefore, be made of such length as will place the upper end of the overflow-pipe *E* on a level with the water-line desired, and the valve-seat *g* below the bottom of the vessel.

The construction and operation of this valve are very simple. It can be examined and cleaned readily and without detaching the same; it prevents the possibility of the liquid rising above the desired level; and in all positions

forms an efficient trap for the entrance of gas, it being always closed by the most efficient hydraulic seal.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the case *a*, provided with the inlet *b* and outlet *c*, of the cylinder *d*, closed on top, the overflow *E*, valve-seat *g*, and elastic valve *f*, all arranged with reference to each other, substantially as and for the purpose described.

2. In combination with the outlet-pipe *c*, extending upward to the valve *g f*, the over-

flow *E* and closed cylinder *d* of the case *a*, provided with the inlet *b*, outlet *c*, screw-cap *n*, and the plug *h*, substantially as and for the purpose specified.

3. The combination, with the cylinder *d*, overflow *E*, and valve *f g*, of the stem *i*, provided with the spline *l*, arranged to support the valve and cylinder *d*, substantially as and for the purpose set forth.

HENRY OGDEN.

Witnesses:

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