

W. S. GRAHAM.
WASTE OPERATING MECHANISM FOR BASINS AND THE LIKE.
APPLICATION FILED JUNE 25, 1909.

1,048,823.

Patented Dec. 31, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

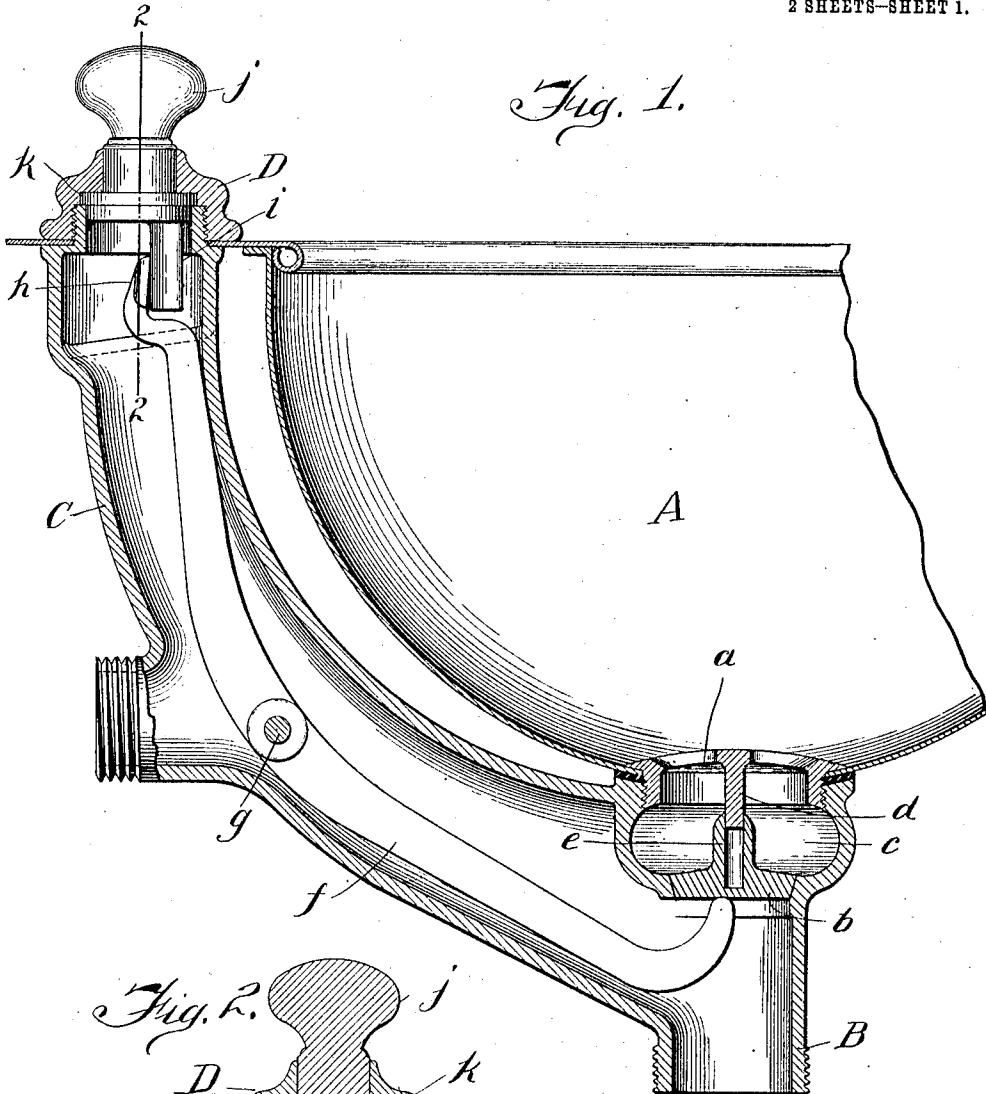
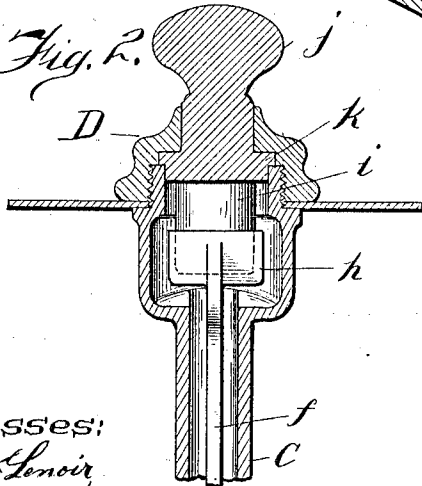


Fig. 2.



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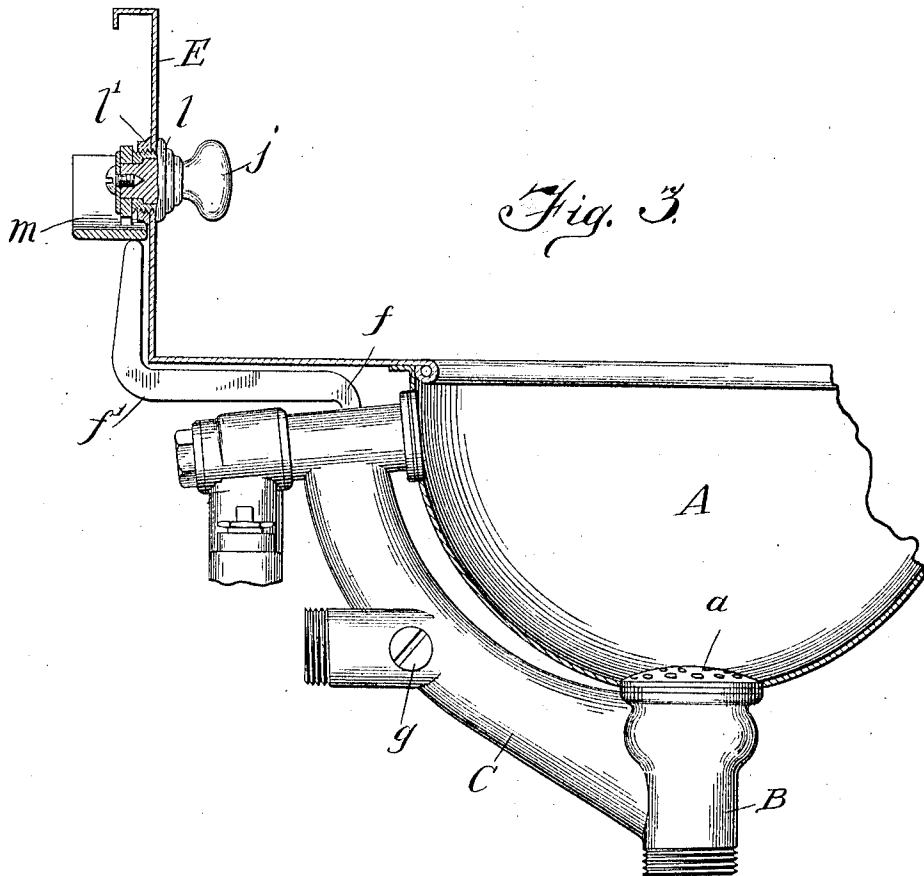


Fig. 3.

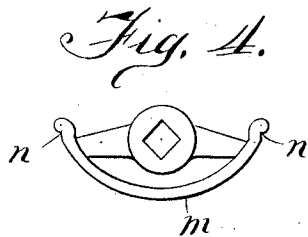


Fig. 4.

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UNITED STATES PATENT OFFICE.

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WASTE-OPERATING MECHANISM FOR BASINS AND THE LIKE.

1,048,823.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed June 25, 1909. Serial No. 504,223.

To all whom it may concern:

Be it known that I, WILLIAM SYDNEY GRAHAM, a citizen of the United States, and resident of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Waste-Operating Mechanism for Basins and the Like, of which the following is a description, reference being had to the accompanying drawings, which form a part of my specification.

My invention relates to the waste valve for basins and the like and also to the mechanism for actuating the same; and has for its object the provision of mechanism adapted to be disposed below the slab or basin top or back of the splash-board, and which permits of the positive operation of the waste-valve; the nature of the mechanism being such as to permit of the parts being readily installed or easily removed and replaced as will more fully hereinafter appear.

In the drawings:—Figure 1 is a vertical sectional view showing the invention applied to a wash-basin with a portion of the basin broken away. Fig. 2 is a detail sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a vertical sectional view, partly in elevation, showing a modified form of my invention disposed on the splash-board. Fig. 4, is a detail view showing the means employed to actuate the operating mechanism for controlling the waste-valve.

I have illustrated a portion of a wash-bowl A, provided with the drain-outlet which communicates with the waste-pipe; the drain-outlet being preferably provided with the perforated cap *a*, beneath which is disposed the waste-valve *b*, which has its seat at the orifice of the waste-pipe B. I have shown the valve operating mechanism as preferably inclosed in the tube or casing C, the lower end of which is shown as terminating in a valve-chamber *c* and the waste-pipe connecting end B. In this construction the lower ends of the wall of chamber *c* provide the seat for waste-valve *b*, as clearly shown in Fig. 1.

With the style of waste-valve illustrated, it is preferable to employ some means whereby the valve will be guided in its movements, and for that purpose I provide the cap *a* with a downwardly extending stem *d*, which takes into the upwardly extending tu-

bular portion *e* on the valve *b*, as clearly shown in Fig. 1. It is evident from this construction that valve *b* will be guided in its movements and insure its proper seating. To facilitate the lifting of valve *b* against the pressure of the water to be drained from basin A, I prefer to construct chamber *c* annularly larger than the valve-seat, as shown in Fig. 1, thus providing a free passage for the water around the valve when it is raised.

The valve operating lever *f* is pivoted at *g*; in the method illustrated, the lever *f* is mounted within the tube or casing C. The lower end of lever *f* is preferably bent upward as shown to remain in engagement with or in close proximity to the bottom of valve *b*. The upper end of lever *f* is preferably formed with the flat surface or cross-head *h*, in order to provide a bearing-surface to be engaged by the cam *i* which is eccentrically disposed on the lower surface of the shank of member or knob *j*, which latter is adapted to be turned within its casing D. Where the lever is intended to be inclosed in the casing C as illustrated, the casing D may be in the nature of a union nut taking onto the end of the tube or casing C as shown; and in order to prevent the lifting out of knob *j*, it may be provided with a projection or an annular flange *k*, which is larger in diameter than the diameter of the opening in the casing C through which the shank of member or knob *j* takes, as clearly shown. It is apparent, that as knob *j* is turned, the eccentrically mounted projection *i* bearing against the cross-head *h* will press the upper end of lever *f* toward the left in Fig. 1, swinging lever *f* on its pivot, thereby pressing the lower end of lever *f* against valve *b* and raising it from its seat, permitting the water to drain from the receptacle or basin A. The nature of the operating mechanism, that is the frictional contact between the eccentrically mounted cam *i* and cross-head *h*, will hold the valve in its raised position until the knob *j* is turned back to the position shown in Fig. 1, when lever *f* and valve *b* will fall back to the normal or closed position by gravity, as will be readily understood.

Where it is desired to have the operating member or knob mounted on the splash-board above the slab or basin-top, I revolu-

bly mount knob *j* on the splash-board *E* in any convenient manner, as for example by having the shank take through nut *l*, which is held in place by nut *l'*. Secured to the inner end of the shank of knob *j* is a cam *m* which is substantially semi-elliptical in shape as clearly shown in Fig. 4. In this construction lever *f* is provided at its upper end with the angular extension *f'*, the upper end of which engages with the cam *m*. When knob or button *j* is turned, cam *m*, by reason of its semi-elliptical shape will depress the lever and rock it on its pivotal point thereby lifting the waste-valve. As the upper end of the lever *f* will swing in a direction away from the splash-board, the cam is made of a width to correspond with the degree of movement, so that the cam will be constantly in engagement with the lever. Near the ends of the cam, it is provided with notches or depressions *n* into which the end of the lever takes when the cam is rotated, thereby holding the cam against automatically turning, holding lever *f* in its tilted position until it is desired to close waste-valve *b*, when knob *j* is turned in the reverse direction and with it cam *m*, thereby permitting the lever and valve to drop to normal or closed position. In this construction the cam will prevent button or knob *j* from being withdrawn.

I have shown and described specific forms of my invention, but it is apparent that other modifications may be employed without departing from the spirit of my invention.

Having thus described my invention, what I wish to secure by Letters Patent, is:—

1. In a device of the class described, the combination of a bowl, a casing separate from said bowl and secured to the bottom thereof by means of a perforated cap, said cap having a downwardly extending stem, said casing having an enlargement below said perforated cap, the bottom of said enlargement being shaped to form a valve seat, a valve held on said seat by gravity, and movable upward to release water in said bowl, said valve having a guide-way for the downwardly extending stem of said perforated cap, said casing having a tubular opening at its lower end for connection with a waste pipe, and a lever within said casing and pivoted thereto, said lever having a curved lower end engaging with the bottom of said valve and being movable upward to

lift the valve against the pressure of water in the bowl.

2. In a device of the class described, the combination of a channel arranged at the side of a bowl, a perforated cap affording communication between said channel and the bottom of said bowl, said cap having a downwardly extending stem, said channel having an enlargement below said perforated cap, the bottom of said enlargement being shaped to form a seat, a valve held on said seat by gravity and movable upward to release water in said bowl, said valve having a guideway for the downwardly extending stem of said perforated cap, said channel having communication with a waste-pipe, and a lever within said channel and pivoted thereto at a place removed from the upper end, said lever having a curved lower end engaging with the bottom of said valve and being movable upward to lift the valve against the pressure of water in the bowl.

3. In a device of the class described, the combination of a bowl, a casing separate from said bowl and secured to the bottom thereof by means of a perforated cap, said cap having a downwardly extending stem, said casing having an enlargement below said perforated cap, the bottom of said enlargement being shaped to form a valve seat, a valve held on said seat by gravity, and movable upward to release water in said bowl, said valve having a guideway for the downwardly extending stem of said perforated cap, said casing having communication with a waste-pipe, and a lever within said casing for operating said valve.

4. In a device of the class described, the combination of a channel arranged at the side of a bowl, a perforated cap affording communication between said channel and the bottom of said bowl, said cap having a downwardly extending stem, said channel having an enlargement below said perforated cap, the bottom of said enlargement being shaped to form a seat, a valve held on said seat by gravity and movable upward to release water in said bowl, said valve having a guideway for the downwardly extending stem of said perforated cap, said channel having communication with a waste-pipe, and a lever within said channel for operating said valve.

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