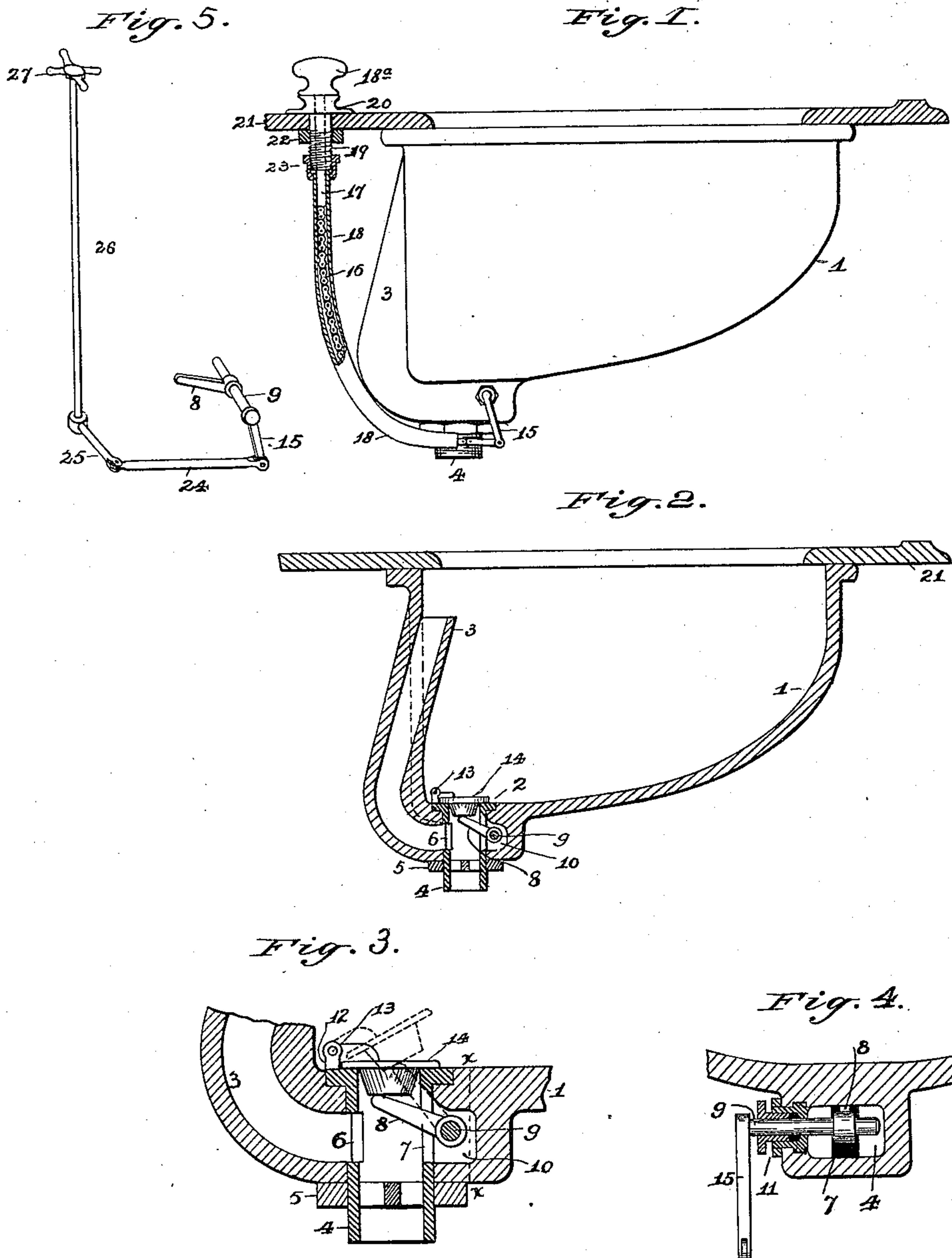


(No Model.)

W. BUNTING, Jr.  
WASH BASIN PLUG AND MECHANISM.

No. 447,863.

Patented Mar. 10, 1891.



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Att'y:



# UNITED STATES PATENT OFFICE

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## WASH-BASIN PLUG AND MECHANISM.

SPECIFICATION forming part of Letters Patent No. 447,863, dated March 10, 1891.

Application filed September 30, 1890. Serial No. 366,647. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM BUNTING, JR., a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Wash-Basins, Bath-Tubs, &c., of which the following is a specification.

My invention relates to improved means for raising the stoppers or plugs of wash-basins, bath-tubs, and the like; and it consists in the features of construction and arrangements and combinations of devices hereinafter more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a sectional side elevation of a wash-basin embodying my improvements. Fig. 2 is a central vertical section of the same. Fig. 3 is a similar detail partial section enlarged. Fig. 4 is a vertical section taken at the line  $x-x$  of Fig. 3. Fig. 5 is a skeleton perspective view illustrating a modification in construction of the means for actuating the rock-shaft and plug-elevating finger.

In the several views the same part will be found designated by the same numeral of reference.

1 designates a wash-basin, which may be of any desired configuration, 2 the outlet thereof, and 3 the overflow pipe or channel communicating with said outlet. Within the outlet is inserted the usual flanged thimble or coupling 4, which projects below the basin and is threaded to receive a clamping-nut 5 and the upper end of a waste-pipe. The thimble 4 is cut away at 6 to afford an open communication between the overflow-pipe and the waste-pipe. It is also cut away or slotted at 7 on its opposite side for the admission of a finger or lifter 8, which is mounted fast upon a horizontal shaft or axis 9, which is supported by a suitable bearing in a housing or chamber 10, formed at the bottom of and integral with the bowl or basin on one side of the thimble or coupling 4. The bearing of the rock-shaft 9 is preferably made in the form of a stuffing-box 11, to provide effectually against any leakage at this locality.

Attached to or formed of a piece with the circular flange of the thimble or coupling 4

and arranged within the basin is a lug or ear 12, to which is pivoted at 13 a plug or stopper 14. At the outer end of the rock-shaft is connected a crank-arm 15, by the movement of which in one direction the rock-shaft is partially turned and the finger or lifter elevated to raise the plug or stopper, so as to permit the water to escape from the basin, as shown by the dotted lines in Fig. 4. The stopper is so pivoted and the throw of the lifter so regulated that when the stopper is raised it rests upon the end of said lifter in a manner such that when the latter is returned to its normal position the stopper may follow by gravity and seat itself or close the opening through the thimble or coupling 4.

The lifter 8 may be vibrated through the rock-shaft 9 and crank-arm 15 either by the means shown at Fig. 1 or those shown at Fig. 5. Referring to Fig. 1, it will be seen that a chain 16 of metal links is connected at one end to the crank-arm 15 and at the other end to a rod or stem 17, provided at its upper end with a handle or knob 18<sup>a</sup>. The chain and the link or stem 17 are inclosed and guided in their movements by a bent or curved tube 18, which is supported at its upper end by a hollow coupling 19, having at its upper end a head or flange 20, which rests upon the slab 21 of the receptacle. The coupling 19 is threaded exteriorly and held in place by a nut 22, and the guide-tube 18 is connected to the coupling 19 by a threaded coupling 23.

In order to raise the stopper, it will be understood that it is simply necessary for the user to pull up the knob 18<sup>a</sup>, by which action the stem 17 and chain 16 are drawn upwardly, the crank-arm vibrated, the rock-shaft oscillated, and the lifter or finger 8 raised to elevate or tip upward the stopper. When it may be desired to plug or close the outlet of the basin, the knob 18 is pushed down, and through the described connections the lifter 8 is depressed and the stopper permitted to fall by its own weight to the position shown in full lines at Figs. 2 and 3. It will thus be seen that in order to raise or lower the stopper or open or close the basin-outlet it is not necessary to touch or handle the stopper or plug.



Referring to Fig. 5, it will be observed that I have provided rotatory means for actuating the crank-arm 15, rock-shaft 9, and lifter 8, instead of the reciprocatory devices shown at Fig. 1. To the outer end of the crank-arm 15 is pivoted a link 24, which at its opposite end is jointed to a crank-arm 25, fast on the lower end of a vertical shaft 26, having a handle 27. The shaft 26 may be mounted in a bearing similar to that marked 19 at Fig. 1, or may be otherwise supported in a manner to permit of its being easily turned or partially rotated. When said shaft is turned in one direction, it will be seen that by means of the arm 25 and link 24 the crank-arm 15 is vibrated to rock the shaft 9 and raise the lifter 8 to elevate the stopper, and that when said shaft is turned in the opposite direction the lifter will be depressed to permit the plug to return by gravity and automatically close the outlet of the basin.

In the skeleton view, Fig. 5, I have omitted the basin for the sake of clearness; but in practice it will be understood that the rock-shaft is mounted in the housing or chamber 10 of the basin in precisely or substantially the manner shown at Figs. 1, 2, 3, and 4.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a basin or the like, the combination of a plug or stopper pivoted within the basin and extending down into the outlet thereof, a rock-shaft, a finger on said rock-shaft adapted to vibrate in said outlet to lift said plug or stopper, and means, substantially as described, for rocking said shaft.

2. In a basin or the like, the combination of a plug or stopper pivoted within the basin and extending down into the outlet thereof, a rock-shaft having a finger arranged within said outlet to lift said plug or stopper, a crank-arm on said rock-shaft, and means, substantially as described, attached to said crank-arm and extending to or in the vicinity of the top of the basin.

3. In a basin or analogous structure, the combination, with a plug or stopper, of a rock-shaft provided with a lifting-finger and a crank-arm, a chain attached to the crank-arm at its lower end and connected at its upper end to a knob or handle, and a tubular guide for said chain.

4. In a basin or analogous structure, the combination, with a plug or stopper, of a rock-shaft, a lifting-finger, a crank-arm, a chain, a knob or handle, a tubular coupling

19, attached to the slab, and a guide-tube for the chain attached to the coupling.

5. The combination, in a basin or the like, the outlet of which is provided with a lateral housing 10, of a plug or stopper fitted to said outlet from within the basin and opening upwardly, a rock-shaft mounted in said housing 10, a finger on said rock-shaft extending into said outlet and adapted to lift said plug or stopper, a crank-arm, and means, substantially as described, attached to the crank-arm for rocking said shaft and elevating and depressing the lifting-finger.

6. The combination, in a basin or the like having an overflow-pipe extending to the outlet of the basin on one side and formed at the outlet opposite the overflow-pipe with a lateral housing, of a plug or stopper fitted to said outlet and opening upwardly, a rock-shaft mounted in said housing, a lifting-finger extending from said rock-shaft into the outlet beneath the plug or stopper, and means, substantially as described, for rocking said shaft and elevating and depressing said finger.

7. The combination, in a basin or analogous structure formed with a lateral chamber 10 at the outlet thereof and having a pivoted plug or stopper within the basin, of a rock-shaft mounted in said chamber, a thimble 4 in the outlet of the basin, having an opening 7, a lifting-finger extending from said rock-shaft through the opening 7 to the bottom of the plug or stopper, and means, substantially as described, for rocking said shaft.

8. The combination, in a basin or analogous structure formed with a lateral chamber 10 and having a pivoted plug or stopper, of a rock-shaft mounted in said chamber, a thimble 4 in the outlet of the basin, having an opening 7, a lifting-finger extending from the rock-shaft through the opening 7 to the under side of the stopper, a crank-arm on the rock-shaft exteriorly of the chamber, a flexible connection attached to the crank-arm and extending to or above the top of the basin, and a tubular guide for said flexible connection.

Signed at New York, in the county of New York and State of New York, this 26th day of September, A. D. 1890.

WILLIAM BUNTING, JR.

Witnesses:

W. S. HOLBROOK,  
AMASA T. DAY.