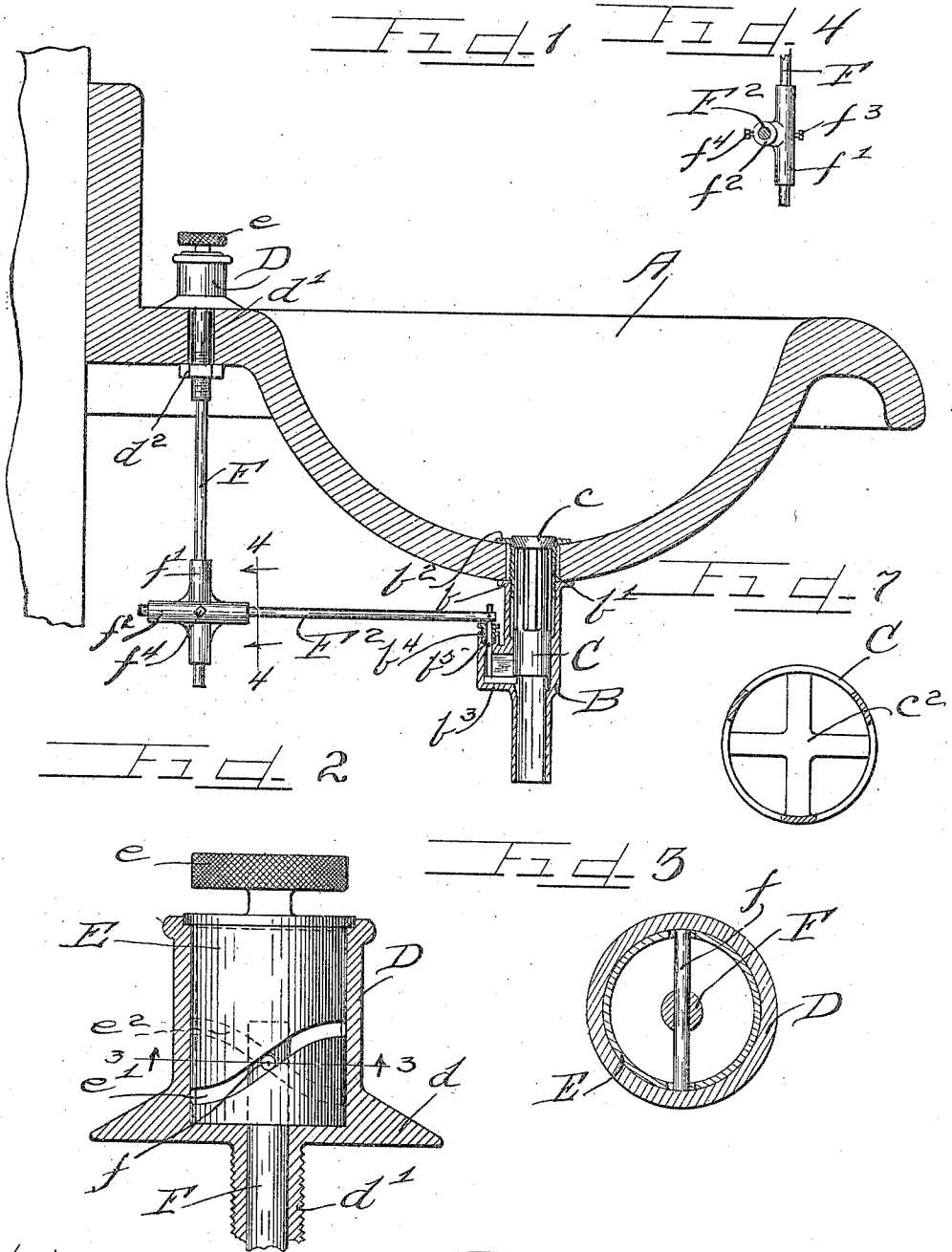


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 2 SHEETS—SHEET 1.



WITNESSES

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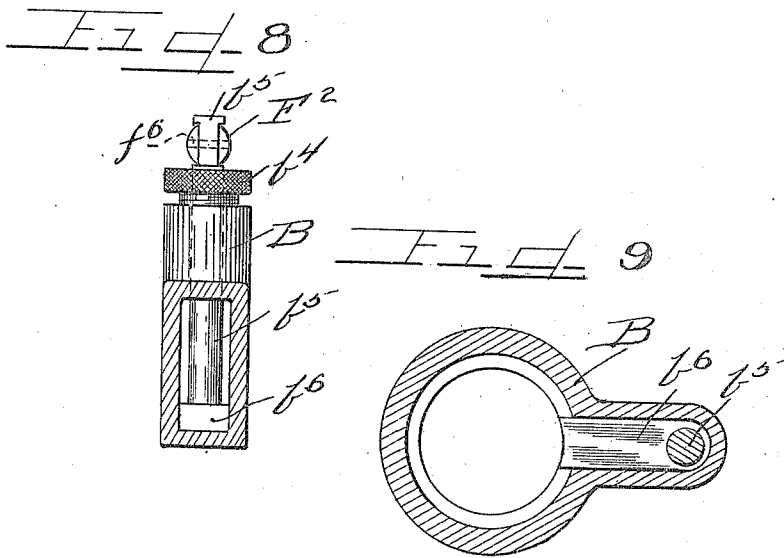
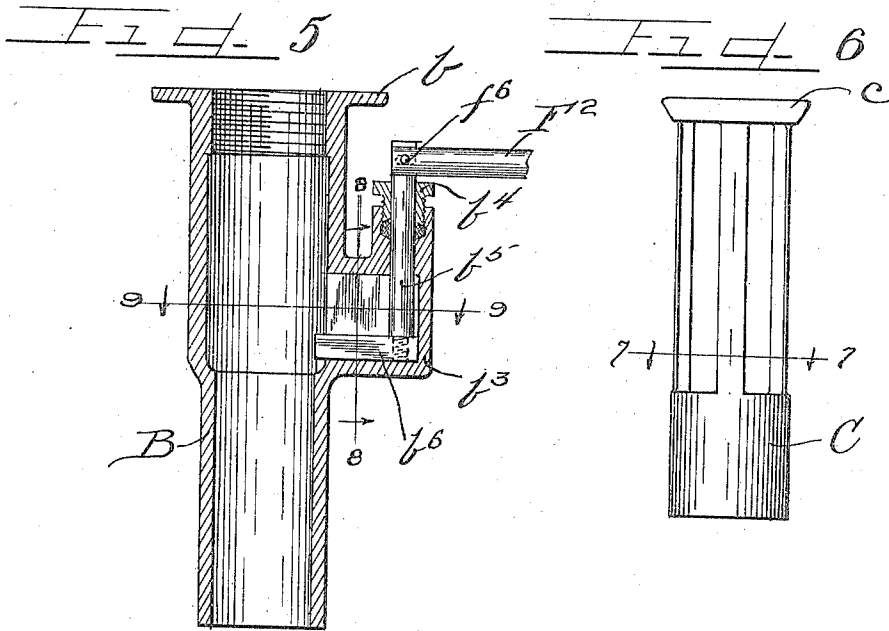
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Witnesses

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# UNITED STATES PATENT OFFICE.

JAMES ALLINGHAM, OF CHICAGO, ILLINOIS.

WASTE-PLUG MECHANISM FOR LAVATORIES AND THE LIKE.

948,033.

Specification of Letters Patent.

Patented Feb. 1, 1910.

Application filed January 13, 1908. Serial No. 410,573.

*To all whom it may concern:*

Be it known that I, JAMES ALLINGHAM, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Waste-Plug Mechanisms for Lavatories and the Like; 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, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates more particularly to a waste pipe plug and means for actuating the same to open or close the waste vent or pipe.

It is an object of this invention to afford mechanism actuated conveniently from a position between the hot and cold water faucets and by means of which the waste plug closing the orifice in the bottom of the basin or the like may be adjusted either to open the waste pipe permitting ready discharge from the bowl or to close the same effectively.

It is also an object of the invention to afford a construction in which the adjustment may be effected by such slight movement of the adjusting means as not to affect the symmetry of the external visible portion of said means on the lavatory bowl.

It is also an object of the invention to afford mechanism which may be readily adjusted to suit different depths and diameters of bowls and which may be readily applied to the bowl without the assistance of skilled labor.

The invention consists in the matters hereinafter described and more fully pointed out and defined in the appended claims.

In the drawings: Figure 1 is a transverse vertical section of a lavatory provided with mechanism embodying my invention. Fig. 2 is an enlarged vertical section showing a portion of the adjusting means in elevation. Fig. 3 is a section taken on line 3—3 of Fig. 2 with the transverse adjusting pin in elevation. Fig. 4 is a section on line 4—4 of Fig. 1. Fig. 5 is an enlarged detail of the connection for the upper end of the waste pipe and on which the bowl is secured. Fig. 6 is an enlarged side elevation of the waste plug. Fig. 7 is a section on line 7—7 of Fig. 6. Fig. 8 is a section on line 8—8 of Fig. 5. Fig. 9 is a section on line 9—9 of Fig. 5.

In said drawings: A indicates the lavatory bowl and B indicates as a whole the fitting adapted to connect with the upper end of the waste pipe and which, as shown, is provided with an enlarged internally threaded bore at its upper end adapted to register with the waste aperture in the bowl. As shown, said fitting is provided at its upper end with a peripheral flange  $b$ , which engages against the bottom of the bowl and an externally threaded nipple  $b'$  provided with a flange  $b^2$  at its upper end which engages in the bottom of the bowl is inserted through the waste aperture and threaded into the upper end of the fitting B, as shown in Fig. 1, to rigidly connect the bowl with said waste fittings. An integral, hollow arm or bracket  $b^3$  projects from the enlarged portion of said fitting B near the bottom thereof and as shown, at its outer extremity is provided with a vertical bore extending therethrough provided with a stuffing box or gland  $b^4$  and through which extends a rod  $b^5$  on the inner end of which is threaded a horizontal, inwardly directed finger  $b^6$ , upon which the lower end of the waste plug C rests, as shown in Fig. 1.

Secured upon the top of the lavatory at the back thereof is a cylindric casing D, provided with a peripheral flange  $d$ , at its bottom adapted to fit to, and engage on the slab of the lavatory and integrally connected with said casing is a central, downwardly directed, tubular stem  $d'$ , which is externally threaded to afford engagement with the binding nut  $d^2$  whereby said casing is rigidly secured in place on the lavatory slab. Rotatably secured in the casing is a cylinder E, provided at its upper end with an external knob or button  $e$  for manual engagement and provided peripherally on opposite sides thereof with inclined grooves  $e^1$ — $e^2$ , the latter of which is shown in dotted lines in Fig. 2. Extending upwardly through the stem  $d'$  of the casing and into the bore in said cylinder is an adjusting rod F, in the upper end of which is provided a horizontal pin  $f$ , the ends of which extend oppositely into said grooves so that rotation of the cylinder in one direction tends to lift the rod while rotation thereof in the opposite direction tends to force the rod downwardly.

Secured on the lower end of the rod F, as shown in Figs. 1 and 4, are two integrally connected sleeves  $f'$ — $f^2$  as shown, cast

or constructed of a single piece of metal and through the sleeve  $f^1$  of which said rod F extends and is adapted to adjustably engage therein by means of a set screw  $f^3$ .

5 Extending through the sleeve  $f^2$  is a rod  $F^2$  which is also engaged in its sleeve by means of a set screw  $f^4$ , thereby affording a very rigid connection between the rods F and  $F^2$ , but permitting either rod to be adjusted relatively to the other to maintain a suitable angular relation with each other.

10 Said rod  $F^2$ , as shown in Fig. 5, is pivotally connected with the rod  $b^5$  extending through the stuffing box  $b^4$  connected with the fitting B, by means of a pin  $f^5$ , which extends through the end of rod  $F^2$  and into a transverse slot in the upper end of said rod  $b^5$ , thus enabling the rod  $b^5$  and finger  $b^6$  to be lifted by means of the rod  $F^2$ , the slotted connection enabling the rod  $b^5$  to be moved through its stuffing box without possibility of jamming. The waste plug indicated by C, is provided with a closed top  $c$  beneath which the sides of the tubular, downwardly extended sleeve integral therewith are cut away to afford an open cage and as shown, in the lower end of said cage is provided a grating or strainer  $c^2$  adapted to retain any small articles that might otherwise pass into the waste pipe to clog the trap.

30 The operation is as follows: In closing the waste pipe rotation of the cylinder E in one direction obviously acts to depress the rod F, carrying the rod  $F^2$  and finger  $b^6$  downwardly therewith and permitting the plug to seat by gravity, thereby holding the plug of the lavatory closed. When it is desired to raise the plug to permit the escape of the water the cylinder is rotated elevating the rod F by the pin  $f$  sliding upwardly in the cam grooves  $e^1$ — $e^2$  in said cylinder and inasmuch as the rods F and  $F^2$  are rigidly connected a corresponding upward movement of the rod  $b^5$  is effected thereby elevating the finger  $b^6$  and the waste plug therewith, said finger supporting the waste plug in its elevated position and permitting the ready escape of the water therethrough. Of course, it is quite immaterial whether the stuffing box  $b^4$  is provided at the top or the bottom of the lateral extension  $b^3$ , inasmuch as there is no tendency to leakage through said extension owing to the fact that the water flows unobstructedly through the waste pipe and can never exert pressure therein.

55 While I have described the invention as applicable for lavatories, it is obvious it is applicable to many other purposes and I do not purpose limiting this application to the exact details of construction shown, as obvi-

ously the various connections and operative parts may be varied through a wide range without departing from the principles of my invention.

I claim as my invention:

65 1. In a device of the class described a lavatory provided with a waste aperture, a fitting secured thereto, a plug for closing the waste aperture extending into the fitting, a finger loosely supporting the plug and non-connected thereto, a short vertical rod secured to, and extending upwardly from the finger and adapted to lift the same, rigidly connected sleeves, a rod extending from each and rigidly secured in its sleeve and one of said rods connected with said vertical rod, a pin secured to the rod extending from the other sleeve with its ends directed outwardly and oppositely, a rotatable cylinder adapted to engage the ends of the pin and to elevate the rods by its rotation, and means for manual engagement for rotating the cylinder.

2. In a waste plug operating mechanism the combination with a suitable fixture having a waste aperture in its bottom of a waste plug adapted to close said aperture, a rotatable cylinder seated upon the slab of the lavatory, and provided with spiral slots, a rod extending downwardly therefrom, means rigidly engaged to the rod extending into the spiral slots and adapted to vertically adjust the rod by rotation of the cylinder, a horizontal rod, means rigidly connecting the rods preventing relative movement thereof, a short vertical rod loosely connected with the horizontal rod and vertically movable means rigidly connected to the short vertical rod adapted to support the waste plug and to elevate the same.

3. In a device of the class described a fitting provided with a lateral chamber, a waste plug extending into the fitting, a horizontal support in the chamber projecting into the fitting adapted to support the waste plug, and unconnected therewith, a vertical rod removably secured to the support and projecting vertically through a wall of the chamber, a packing gland in the wall of the chamber around the vertical rod, and actuating means for vertically adjusting the horizontal support having a loose connection with the vertical rod.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

JAMES ALLINGHAM.

Witnesses:

C. W. HUES,  
K. E. HANNAH.