I. ANDERSON.

WASTE PIPE STOPPER.

APPLICATION FILED MAR. 19, 1912.

1,067,776.

Patented July 15, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

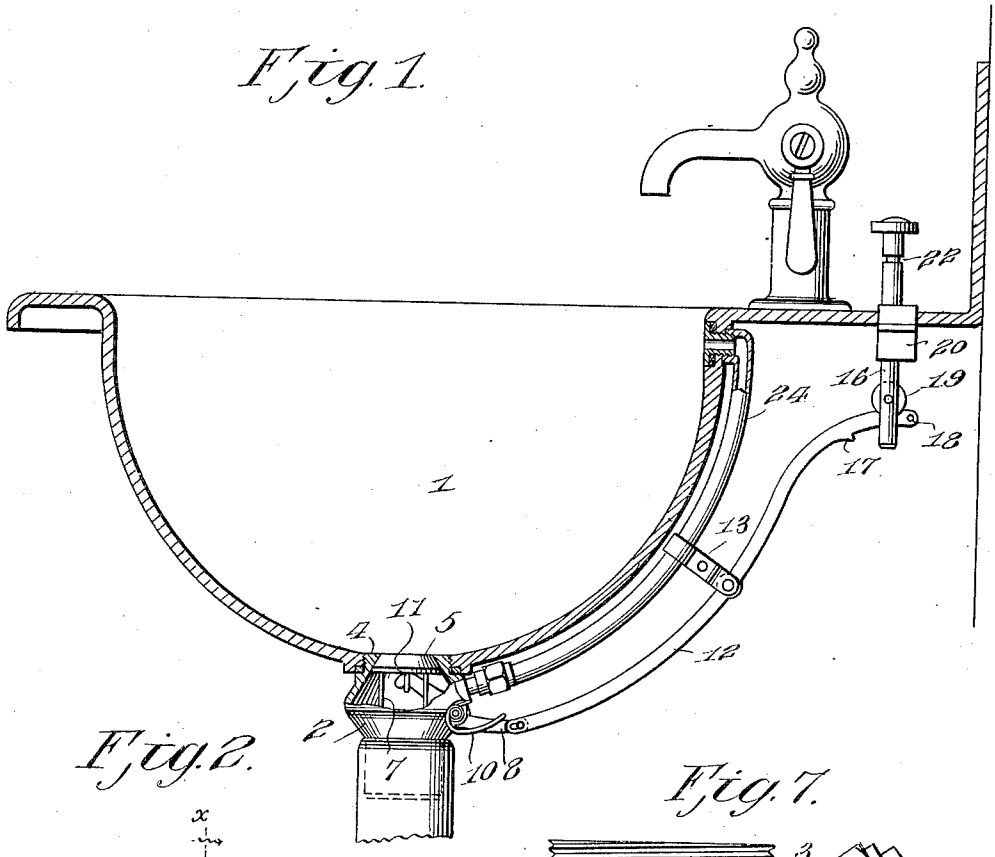


Fig. 2.

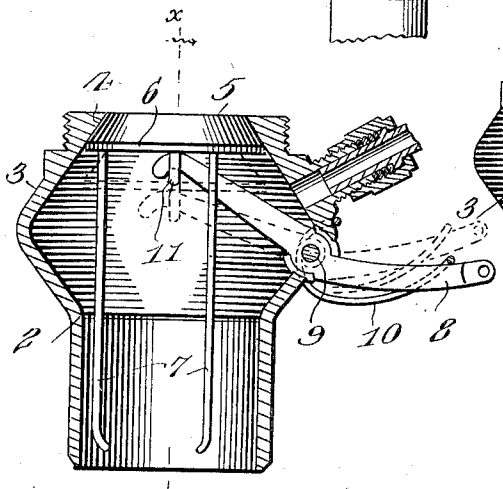
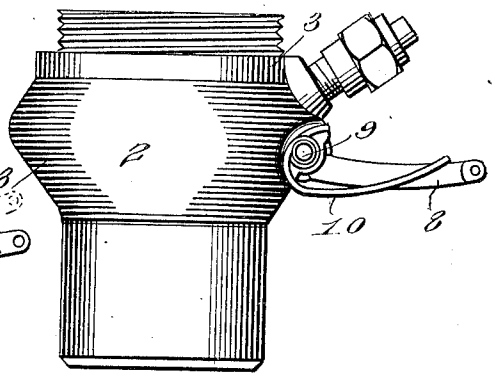


Fig. 7.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

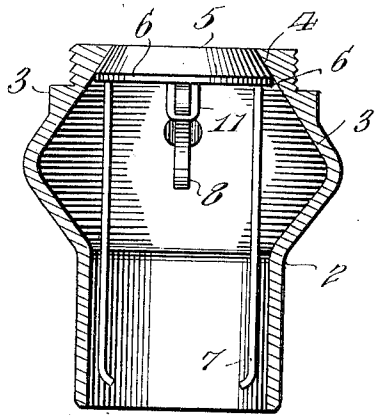


Fig. 5.

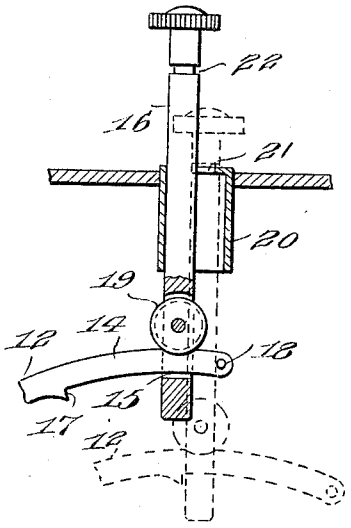


Fig. 3.

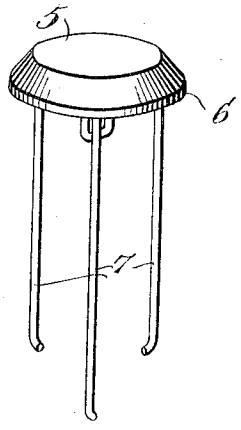
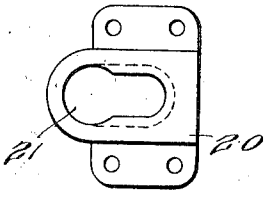


Fig. 6.



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WASTE-PIPE STOPPER.

1,067,776. Specification of Letters Patent. Patented July 15, 1913.

Application filed March 19, 1912. Serial No. 684,737.

To all whom it may concern:

Be it known that I, IRA ANDERSON, a citizen of the United States, residing at Richfield, in the county of Sevier and State of Utah, have invented new and useful Improvements in Waste-Pipe Stoppers, of which the following is a specification.

This invention relates to means for closing the waste pipe of bath tubs, wash basins, sinks and the like and is designed chiefly to do away with the ordinary stopper and chain and to provide novel means for controlling the stopper without requiring the hand to be introduced into the water contained in the tub, basin or like receptacle.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawings, and pointed out in the appended claims.

Referring to the drawings, forming a part of the specification, Figure 1 is a sectional view of a wash basin provided with a stopper and controlling means embodying the invention. Fig. 2 is a detail view of the plug and casing, showing the parts on a larger scale. Fig. 3 is a detail view in perspective of the plug. Fig. 4 is a section on the line x—x of Fig. 2. Fig. 5 is an enlarged view of the operating rod and adjacent parts. Fig. 6 is a top plan view of the guide through which the upper portion of the operating rod passes. Fig. 7 is a side view of the casing, which is fitted to the waste of the basin.

Corresponding and like parts are referred to in the following description, and indicated in all the views of the drawings, by the same reference characters.

The numeral 1 designates a receptacle which is adapted to receive water and to which is connected a waste pipe and said receptacle may consist of a bath tub, wash basin, sink or like device. A casing 2 is fitted to the outlet opening of the receptacle 1 and the waste pipe is adapted to make connection therewith in any manner. The casing 2 has an enlarged portion 3 near its upper end, which inclines in opposite directions from a medial line. A valve seat 4 is had at the upper end of the enlarged portion 3 and a stopper 5 seats upwardly thereon and closes the outlet of the receptacle. The casing 2 may be secured in any manner to the receptacle 1 and as illustrated its upper end is formed with exterior screw-threads to match corresponding screw-threads formed upon the inner walls of the outlet opening of the receptacle. The plug 5 is of conical form and is mounted upon a plate 6 from which extend a number of rods 7 to form guides to direct the stopper in its movements when opening and closing. The stopper 5 may be of any material and preferably consists of rubber.

A lever 8 is fulcrumed intermediate of its ends to the casing 2, as indicated at 9, and its inner end is adapted to engage the under side of the plate 6. A close joint is formed between the lever 8 and the casing 2 so as to prevent any leak. A spring 10 mounted upon the pivot fastening 9 is adapted to have its outer end press downwardly upon the outer end of the lever 8, thereby forcing the inner end of the lever 8 upwardly to hold the stopper 5 in closed position. A staple or like part 11 is attached to the plate 6 and engages the inner end of the lever 8, thereby enabling the stopper to be positively unseated when the outer end of the lever 8 is moved upwardly. A second lever 12 is pivotally supported between its ends and has its lower end pivotally connected to the outer end of the lever 8. A link 13 is connected at one end to the overflow 24 of the receptacle or other convenient part of the fixture and has the lever 12 pivotally connected to its opposite end. This construction admits of the lever 12 having both a pivotal movement and a limited longitudinal adjustment so as not to interfere with the free operation of the lever 8. The upper end of the lever 12 is curved, as indicated at 14, and passes through a slot 15 formed in the lower end of an operating rod or bar 16. Stops 17 and 18 are located at opposite ends of the curved portion 14 to limit the relative longitudinal movement of the lever 12 when operating the rod 16. A grooved wheel 19 is located in the upper portion of the slot 15 and engages the upper side of the curved portion 14 of the lever 12. The operating rod or bar 16 passes through a guide 20, which is secured to the fixture or other convenient part. The guide 20 embodies a sleeve and a plate, the latter having a keyhole slot 21 through which the upper portion of the rod or bar 16 passes. An annular groove 22 is formed in the upper portion of the operating rod 16 adjacent the head thereof and is adapted to enter the

contracted portion of the keyhole slot 21 so as to hold the rod 16 when depressed, thereby holding the stopper 5 unseated so that the receptacle or like fixture may completely drain without requiring the person to hold the rod 16 depressed during the escape of the waste water.

It is to be understood that the invention is of such a nature as to admit of its ready adaptation to bath tubs, wash basins, sinks and like fixtures, since the casing 2 may be readily fitted to the outlet opening of the fixture and the guide 20 and link connection 13 easily arranged to meet existing conditions, the details being such as to readily suggest themselves to the skilled mechanic. It is further noted that the device may be provided as an attachment to be fitted to any device requiring the use of a stopper for controlling the waste or outlet.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described the invention what is claimed as new, is:—

1. In combination with a receptacle adapted to receive water and provided with an outlet, a casing fitted to the outlet and having the inclosed space made flaring from its ends toward a medial plane, a conical valve adapted to close upwardly and provided with pendent guides adapted to engage the lower contracted portion of the casing, a lever fulcrumed to a side of the casing in line with the enlarged portion, one end of said lever extending into the casing and engaging the valve, a spring mounted upon the pivot connection of the lever and normally exerting a pressure upon the latter to hold the valve seated, and an overflow connecting the upper portion of the receptacle with the casing at a point below the valve when the latter is seated.

2. In combination with a receptacle having an outlet, a valve for closing said outlet, a lever having connection with said valve, a second lever having connection with the first mentioned lever and having its free end curved and provided with spaced stops, and an operating rod for engaging the curved portion of the second lever between the stops thereof.

3. In combination a receptacle having an outlet, a valve for closing said outlet, a lever for operating said valve and having one end curved and provided with spaced stops, an operating rod having a slotted portion to receive the curved end of the lever, a wheel located in the upper end of the slot of the operating rod and adapted to engage the upper side of the before mentioned lever, and means for securing the operating rod in the required position.

4. In combination a receptacle having an outlet, a valve for closing said outlet, an overflow, a lever having connection with the valve, a second lever connected at one end with the first mentioned lever and having its opposite end curved and provided with spaced stops, a link secured to the overflow and pivotally supporting the second lever, an operating rod having a slot for receiving the curved end of the second lever, and means for securing the operating rod in the desired position.

In testimony whereof I affix my signature in presence of two witnesses.

IRA ANDERSON.

Witnesses:
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R. H. Sainsbury.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."