Aug. 11, 1942. J. G. BRADBURY ET AL 2,292,604

DRAIN

Filed Dec. 2, 1940

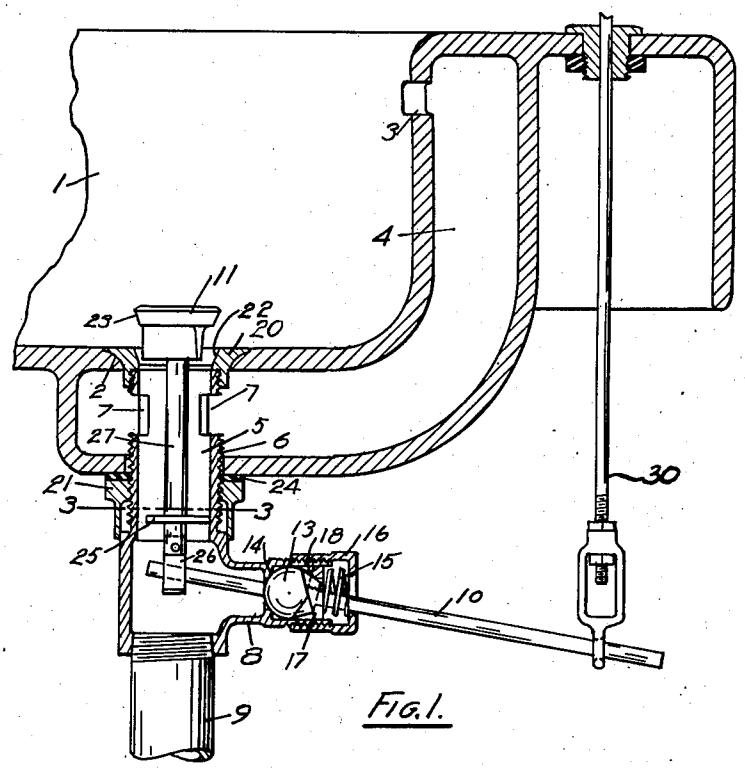


FIG. 1.

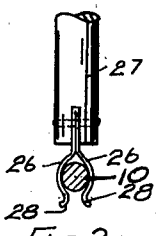


FIG. 2.

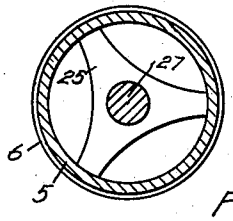


FIG. 3.

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Patented Aug. 11, 1942 2,292,604

UNITED STATES PATENT OFFICE

2,292,604

DRAIN

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Application December 2, 1940, Serial No. 368,168

2 Claims. (Cl. 4—200)

This invention relates generally to drain fittings and more particularly to drain fittings for wash basins and the like.

All drain fittings made according to the teachings of the prior art, with which I am familiar, have been very difficult to assemble and disassemble in the base of a wash basin or the like. There is especial difficulties when the base of the wash basins varies in thickness. The assembly of the valve has provided the greatest difficulty in assembly and disassembly. In prior fittings, it was necessary to remove the entire unit when the seating surface of the valve or its seating surface became worn. It will be evident that the seating surface for the valve and the valve seat itself is the point of greatest wear and when the valve and its seating surface are easily removable and replaceable, the efficiency of the drain fitting is increased many fold.

It is, accordingly, an object of my invention to overcome the above and other defects in drain fittings for wash basins and the like and it is more particularly an object of my invention to provide a drain fitting for a wash basin which is cheap in cost, easy to assemble and disassemble, and efficient in operation.

Another object of my invention is to provide a valve for a drain fitting which is easily removable.

Another object of my invention is to provide a seating surface for a valve in a drain fitting which is removable.

Another object of my invention is to provide a drain fitting for a wash basin which may be assembled and disassembled as a unit.

Other objects of my invention will become evident from the following detailed description, taken in conjunction with the accompanying drawing, in which:

Fig. 1 is a fragmentary side elevational view in cross-section with my novel drain fitting assembled in the base of a wash basin.

Fig. 2 is a fragmentary view in side elevation showing the connection of the valve stem to a lever arm.

Fig. 3 is a view taken on the line 3—3 of Fig. 1.

Referring to the drawing, Fig. 1 shows a conventional wash basin 1 with a drain opening 2, over-flow opening 3, and overflow passage 4. Disposed in the drain opening 2 is a cylindrical member 5 externally threaded at 6 having lateral drain openings 7 for the fluid passing through the over-flow passage 4 and also having a laterally extending portion 8 in the bottom portion thereof. A drain pipe 9 is theradably engaged to the bottom portion of the member 5. A lever arm 10 for operating a valve 11 passes through the laterally extending portion 8 and it has integral therewith a spherical shaped portion 13 urged against a seat 14 by a coil spring 15. A cap 16 is threadably engaged to the laterally extending portion 8 to house the spring 15. The side of the spherical shaped portion 13 facing the spring 15 is cut away to a substantial V-shape on both sides of the lever arm in order to cooperate with a similarly cut member 17 having a slot 18 which slides over the uncut portion 19 of the spherical portion 13. With the member 17 forced against the V-shaped side of the spherical portion 13 by the spring 15, it will be evident that the movement of the lever arm upwardly or downwardly will cause the valve to snap to an open or a closed position after the center point of the V-shaped portions are passed. The lever arm 10 has a lever 30 extending to the upper side of the wash basin to operate the valve from the upper side of the wash basin.

Two oppositely disposed cylindrical flanged members 20 and 21 are threadably engaged to the threaded portion 6 of the cylindrical member 5 to hold the cylindrical member 5 in place in the drain opening 2. The upper flanged member 20 has a seating surface 22 for the seating surface 23 of the valve 11. A washer 24 is disposed between the base portion of the wash basin and the lower flange 21. The valve stem 27 is provided with guiding flanges 25. Spring members 26 are secured to the bottom portion of the valve stem 27 by any suitable means. By way of illustration, I have shown the lower end of the valve stem 27 bifurcated with the spring members 26 secured therein. The spring members 26 have offset semi-circular portions with outwardly flared lips 28 to permit the spring members 26 to be forced over the lever arm 10 with the least expenditure of effort. The valve can be secured to the lever arm 10 and removed therefrom by forcing the spring members 26 toward or away from the lever arm 10.

In assembly, the lower flange 21 is threadably engaged to the threaded portion 6 of the cylindrical member 5 and the upper threaded portion of the cylindrical member 5 is extended through the drain opening 2 and the upper flange 20 is threadably engaged to the top portion of the threaded portion 6 of the cylindrical member 5. The bottom flange 21 is then rotated until the cylindrical member 5 is firmly secured. The spring members 26 on the valve stem 27 are then forced over the lever arm 10 and the fitting is

ready for operation. When the seating surfaces **22** and **23** wear, the valve **11** and flange **20** are easily removed. This permits easy repair and replacement.

It will be evident that I have provided a drain fitting for a wash basin which is very simple in construction and which permits the valve and the part in which it seats to be assembled or removed with the least expenditure of time and effort.

Various changes may be made in the specific embodiment of the present invention without departing from the spirit thereof or from the scope of the appended claims.

What I claim is:

1. A valve mechanism for a drain fitting comprising, in combination, a valve head, a valve stem having the lower end thereof bifurcated, a lever for operating said valve, and snap-connecting means for connecting said lever to said valve stem, comprising opposed, arcuate-shaped spring members having outwardly flared lips disposed in the bifurcated portion of said stem.

2. A valve mechanism for a drain fitting comprising, in combination, a valve head, a valve stem, a lever for operating said valve, and snap-connecting means for connecting said lever to said valve stem, comprising opposed, semi-circular shaped spring members having outwardly flared lips secured to the lower end of said valve stem.

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