

J. R. Gibson & J. Powell

Assignors to

JAMES POWELL.

WASHBASIN & PLUG.

117402

PATENTED JUL 25 1871

Fig. 1.

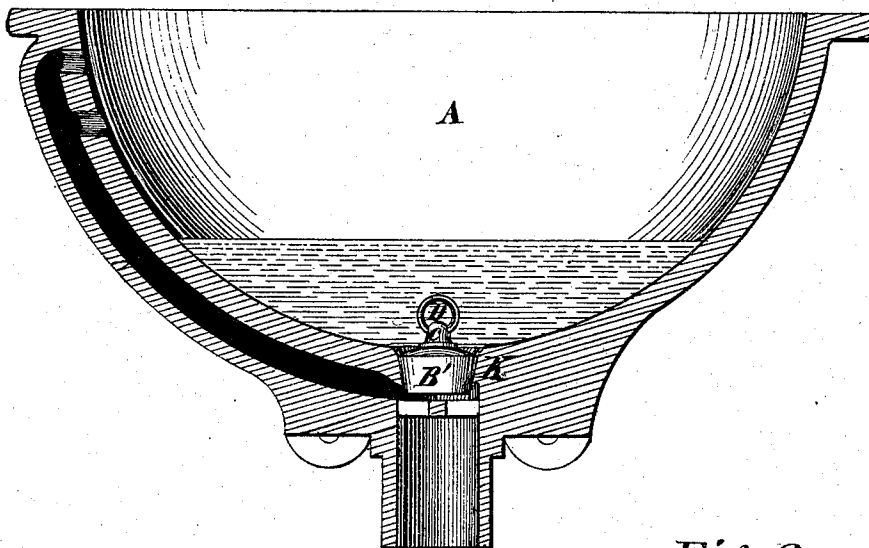


Fig. 2.

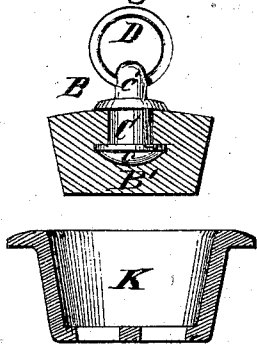
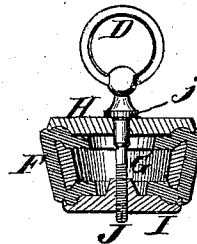


Fig. 3.



Witnesses.

*Jas. H. Layman,
 Frank Millward*

Inventors.

*J. R. Gibson
 J. Powell
 B. Knight Bros
 Atty.*

UNITED STATES PATENT OFFICE.

JOSHUA R. GIBSON AND JAMES POWELL, OF CINCINNATI, OHIO, ASSIGNORS TO
JAMES POWELL.

IMPROVEMENT IN WASTE-WAY STOPPERS.

Specification forming part of Letters Patent No. 117,402, dated July 25, 1871.

To all whom it may concern:

Be it known that we, JOSHUA R. GIBSON and JAMES POWELL, both of Cincinnati, Hamilton county, Ohio, have invented a new and useful Improvement in Waste-Way Stoppers for Wash-Basins, Baths, Sinks, &c.; and we hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification.

Our invention relates to that class of wash-basins, bath-tubs, wash-trays, &c., in which an opening is provided in the bottom of the vessel for the ready discharge of the waste water, which opening is closed, when desired, by a plug or stopper. In the ordinary construction of such vessels it has been customary to provide a plug or stopper to the waste-passage, of metal, porcelain, or other hard material, and when made in this form it has been necessary to bestow considerable labor upon such stoppers, in order to fit them accurately to their seats or bearings in the waste-way, and then to grind them so as to insure the retention of the water while being used. The necessity of grinding applies equally, whether the stopper be made of metal, or porcelain, or earthen-ware, and owing to the fragile nature of the latter material composing the stopper, or basin, or both, the liability to damage or fracture in consequence of the stopper being suddenly dropped into the empty basin by careless operators is such as to cause great annoyance and loss from its use. The usual manner of constructing the waste-ways of bath-tubs, wash-trays, &c., is to solder a socket into the bottom of the copper or other sheet-metal lining of the vessel, into which socket the common brass or other metal stopper is fitted and ground. Owing to the thickness of the copper lining and the weight and hardness of the stopper any carelessness in handling soon indents and defaces the copper to an extent such as, in some instances, is sufficient to cause leakage.

The object of our invention is to provide a light and highly-elastic form of stopper, which shall preclude any possibility of breakage by its use with any porcelain basin, or indentation or defacement of a metallic lining of a bath-tub, &c., but, at the same time, to insure great economy and expedition of manufacture, and quite

obviate the necessity of having to grind the stopper to a bearing to render the same water-tight.

Figure 1 is an axial section of a basin of common construction, with the waste-way or socket made in one piece with said basin, and of the same material, and showing our improved waste-way plug in elevation. Fig. 2 is an axial section of one form of our plug, and of a metallic socket. Fig. 3 is an axial section of a modification of our plug.

A is a porcelain wash-basin, of the usual form, and K its plug-socket. B is the stopper or plug, made of vulcanized India rubber, B', or other analogous material. C is the shank or stem, terminating below in a swell, *c*, by which it is anchored within the plug, and above in a perforated head, *c'*, through which passes a ring, D, by which the plug is lifted out of its place. The plug B is formed with tapering or conical sides, and is intended to fit a corresponding taper hole or socket in the basin A. It may be formed of solid rubber, molded while in the plastic state in an iron mold, and then vulcanized in the usual manner. E, Fig. 3, is a stopper, constructed by confining a tube-ring or disk of rubber packing, F, around a core or mole, G, between two washers, H and I. The stem J passing through the upper washer H is screwed into the lower washer I, so as to firmly clamp the rubber packing F upon the mole G. The stem J has a collar, *j*, which bears against the upper washer H, and a ring, D, the same as the form previously described. A plug, made as shown in Fig. 3, may be adapted to a larger or smaller socket by causing the washers to approach to or recede from one another, so as to bring a greater or lesser compression upon the packing. K, Fig. 2, represents a metallic socket for soldering to the sheet-metal lining of a bath-tub, &c.

We do not confine ourselves to the precise form here shown, as several modifications may be made without departing from the principle of our invention. For instance, the solid-rubber plug may be so formed as to have a raised extension through which, instead of through a metallic shank or stem, the ring D may be passed; or the rubber packing of the style shown in Fig. 3 may take the form of a simple disk having a central orifice in the stem.

We claim herein as new and of our invention—

1. A waste-way plug, composed wholly or in part of rubber, in combination with the seat or socket K, substantially as and for the purpose explained.

2. The elastic packing F, mole G, washers H I, and stem J, combined and arranged substantially as and for the purposes set forth.

In testimony of which invention we hereunto set our hands.

JOSHUA R. GIBSON.
JAMES POWELL.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.