W. A. BUTLER.

PLUMBERS' PLUGS.

No. 183,447. Patented Oct. 17, 1876

Fig. 1.

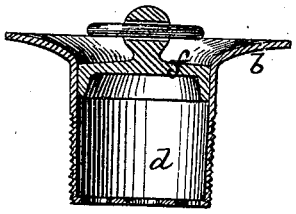
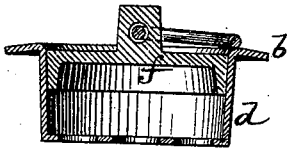


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIAM A. BUTLER, OF NEW YORK, N. Y.

IMPROVEMENT IN PLUMBERS' PLUGS.

Specification forming part of Letters Patent No. **183,447**, dated October 17, 1876; application filed August 12, 1876.

To all whom it may concern:

Be it known that I, WILLIAM A. BUTLER, of the city, county, and State of New York, have invented a new and useful Improvement in Plumbers' Plugs; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

This invention relates to plumbers' plugs for wash-basins, baths, sinks, and other purposes, and in which a removable stopper or plug proper is combined with a metallic plug-seat. Heretofore said plug-seat or socket has been made of cast metal, and, in order to provide for a good fit of the plug or stopper within it, has required to be turned or ground, thereby involving much labor and no inconsiderable expense, besides necessitating the use of more metal than is requisite to resist pressure when in use, owing to the fact that to make a sound casting the metal requires to be of a given thickness.

This invention consists in a seat for plumbers' plugs, struck up from sheet metal, as hereinafter described, the same forming a new article of manufacture heretofore unknown to the trade, and largely economizing labor by dispensing with all turning or grinding for reception of the plug or stopper, besides saving metal and possessing other advantages over a cast-metal plug-seat.

Figure 1 represents a vertical section of a plumber's plug, applicable, for example, to earthenware wash-basins, and constructed in accordance with my invention. Fig. 2 is a like section of a like device, applicable, for instance, to baths or sinks.

In both forms of the plug-seat, as illustrated in the drawing, the flange or flanged head *b* is formed of one piece with the body *a*, being struck up from the same piece of sheet metal.

The stopper or plug proper *f* may also be struck up from sheet metal, or be of any other suitable material. The body *d*, in Fig. 1, has a screw-thread upon it for securing the plug-seat to its place by a nut—as, for instance, when the joint under the flange *b* is a putty one; but when said joint is a soldered one, then the screw-thread on the body is dispensed with, as shown in Fig. 2. These differences are well understood by the trade.

In both forms of plug-seat, however, I pursue the same mode of construction. Thus, I first cup up a piece of sheet metal into the form of a pipe; then anneal the latter to enable me to turn over, from one end of said pipe, the flange *b*, of a sufficient width to form a good joint, and so as to present a wide and easy tapering mouth for reception of the stopper or plug proper *f*. To do this with facility it is desirable to anneal the metal after the body *d* has been struck up. The flange *b* is turned over, and the interior of the plug-seat finished, as required, for a close and easy fit of the plug *f*, without grinding or turning of the seat, by one and the same operation, which is a stamping one, using a simple die and punch for the purpose.

The outlet-apertures in the bottom of the body *d* may be made by drilling or otherwise.

The plug-seat thus constructed of sheet metal requires much less metal than when cast, and can be made with much less labor, as it requires no turning or grinding to form a proper seat for the plug; and its outside is also in a condition to be readily soldered in place, whereas, in the cast-metal seats, the outside has to be cleaned or turned off in order to be fitted in place in the basin or other vessel, and soldered thereto. Moreover, the screw-threads, when necessary, may be stamped at the same operation by which the seat is formed, while in the cast-metal seats the screw-thread has to be cut, which is an expensive operation.

The plug employed may be cast and constructed in the ordinary manner, but is, preferably, stamped up similarly to the plug-seat.

The above-mentioned advantages all combine to render the plug-seat much cheaper in construction than the ordinary cast-metal plug-seat, and, on account of its lightness and thorough finish, is much superior thereto.

What I claim as my invention, and desire to secure by Letters Patent, as a new article of manufacture, is—

1. As an improved article of manufacture, a plumber's plug-seat constructed of sheet metal stamped into shape, with a flange, *b*, and body *d*, as and for the purposes described.

2. In combination with a sheet-metal plug-seat, stamped into shape as described, the sheet-metal plug similarly stamped, and adapted to fit into said plug-seat, substantially as and for the purposes described.

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