G. A. SAAL.

REVERSIBLE BALL FLUSH VALVE.

APPLICATION FILED MAY 25, 1918.

1,286,791. Patented Dec. 3, 1918.

Fig. 1

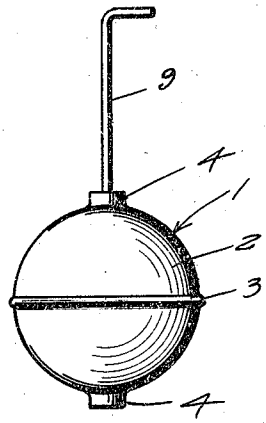


Fig. 2

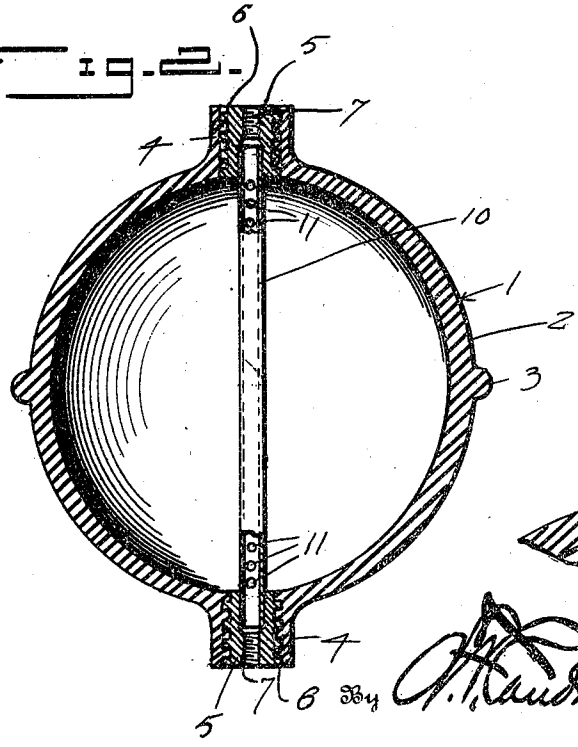
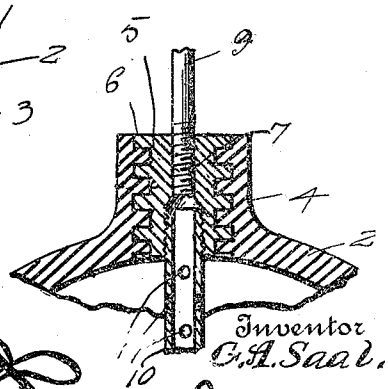


Fig. 3



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REVERSIBLE BALL FLUSH-VALVE.

1,286,791. Specification of Letters Patent. Patented Dec. 3, 1918.

Application filed May 25, 1918. Serial No. 236,569.

To all whom it may concern:

Be it known that I, GEORGE A. SAAL, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Reversible Ball Flush-Valves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in ball flush valves, and has for one of its objects the provision of a device of this character which can be readily reversed upon the valve stem when one portion thereof has become worn.

Another object of this invention is the provision of a perforated tube having means at each end for securing it in the ball and either of said means adapted to have the valve stem secured thereto, while the unused means will permit air to enter the tube and thence into the ball.

A further object of this invention is the provision of a ball flush valve of the above stated character, which will be simple, durable and efficient, and which may be manufactured and sold at a comparatively low cost.

With these and other objects in view, as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference will be had to the following description and accompanying drawing, in which:

Figure 1 is a side elevation of a ball flush valve constructed in accordance with my invention,

Fig. 2 is a vertical sectional view of the same,

Fig. 3 is an enlarged fragmentary vertical sectional view, illustrating the modified manner of securing the tube in the collars.

Referring in detail to the drawing, the numeral 1 indicates as an entirety a ball flush valve consisting of a spherical body 2 of hollow formation, preferably constructed of rubber, by an ordinary molding process.

The body may be molded with a circumferential bead 3, or may be made without the same, if so desired. When molding the body 2, oppositely disposed enlarged portions 4 are formed thereon and about anchoring collars 5, which are provided with ribs 6 for retaining them in said enlarged portions. The collars 5 are provided with bores 7, the outer ends of which are internally screw threaded for connection with the screw threaded end of a valve stem 9 of the ordinary construction. A tube 10, having openings 11, is shrunk in the inner ends of the bores 7 before the collars 5 are inserted in the enlarged portions 4, so that when the body 2 is formed, the tube 10 extends centrally therethrough, so that air may enter the interior of the body from the bottom thereof. Instead of shrinking the tube in the collars, the tube may be screw threaded for coöperation with screw threads, as shown in Fig. 3, if desired.

From the foregoing description, taken in connection with the accompanying drawing, it will be noted that the valve stem 9 can be applied to either of the collars, so that the body can be reversed when one portion thereof becomes worn from use on a valve seat. By having the tube 10, carried by the collars and disposed in the body, air will be admitted to and evenly distributed in said body from the bottom thereof, while the valve stem is connected to the upper collar.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention as claimed.

Having thus described my invention, what I claim is:

1. A ball flush valve comprising a body, hollow enlarged portions formed upon said body, a perforated tube extending through the body and secured in said enlarged portions, and means for securing the valve stem to either of the enlarged portions.

2. A ball flush valve comprising a body,

oppositely disposed hollow enlarged portions formed on said body, a perforated tube disposed in said body, collars embedded in the enlarged portions and secured to the ends of the tube, and screw threads formed in each of the collars to permit a valve stem to be connected to either end of the body and to permit air to enter the body from the bottom thereof and to be distributed therein by the tube.

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

GEORGE A. SAAL.

Witnesses:
PERRY ROBISON,
HENRY C. CHURCH, Jr.