No. 641,185. Patented Jan. 9, 1900.

C. A. BOREIN.

VALVE FOR VESSELS.

(Application filed Feb. 10, 1899.)

(No Model.)

Fig. 1.

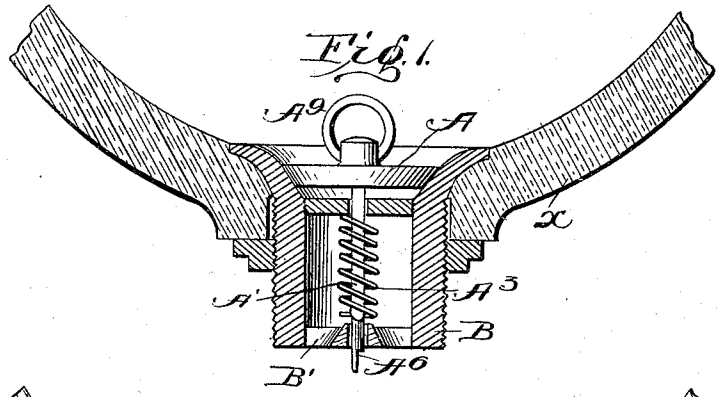


Fig. 2

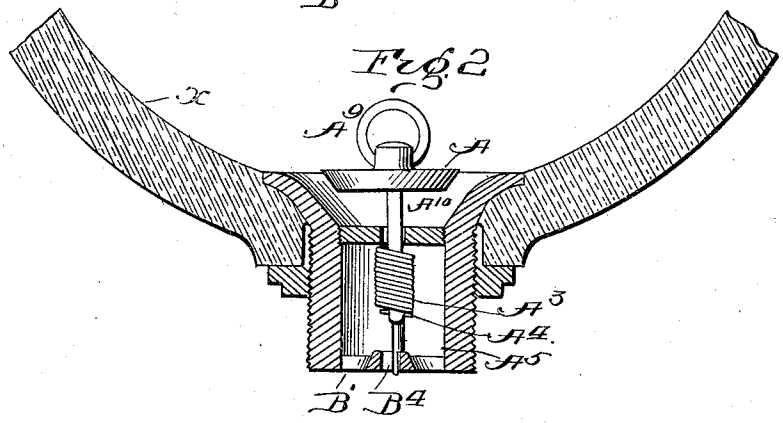
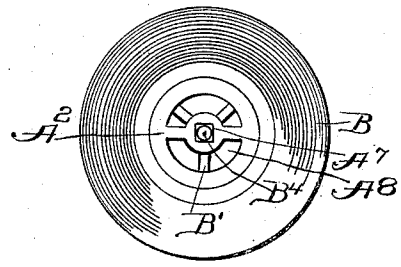


Fig. 3



Witnesses:
J. M. Fowler Jr.
Henry B. Jackson.

Inventor:
Charles A. Borein
by Ex. F. Mudock & Co.
his Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES A. BOREIN, OF OAKLAND, CALIFORNIA.

VALVE FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 641,185, dated January 9, 1900.

Application filed February 10, 1899. Serial No. 705,215. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. BOREIN, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Valves for Vessels; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

This invention relates to improvements in valves for vessels for containing liquids, and more particularly to plugs for washstands, bath-tubs, &c.; and it consists in the novel construction and arrangement of the parts hereinafter more fully set forth.

It has for its objects the preventing of loss of the plug and to provide a stopper always in the outlet of the basin capable of being opened and closed by means of a chain, doing away with the objection of reaching into the water when it is desired to permit it to flow out.

In the drawings, Figure 1 is a cross-section of the device, the valve and stem being shown in full lines, showing the valve in its closed position. Fig. 2 is a similar view showing the position of the parts when open. Fig. 3 is a plan view from above looking into the valve-socket, the plug and stem being removed.

To facilitate the description with reference to the drawings, distinguishing letters of reference will be given to the various parts—thus to the valve, plug, and stem the distinguishing letter A and to the shell having the valve-seat therein and connecting the bowl with the plumbing the letter B. To these common letters numerals will be added to distinguish the minor parts of the group.

The valve above referred to consists of the plug A, having the square stem A′, the screw-threaded disk A^2, and spiral spring A^3 between said disk and the pin A^4 through the valve-stem near its lower extremity, the rounded extension A^5 having the shoulder A^6 thereon, the rounded portion fitting within the perforation central in the shell B through the spider B′, which acts as a strainer for the liquids passing out of the bowl X.

The square portion of the valve-stem A′ fitting within the square perforation A^7 in the disk A^2 acts as a means for screwing the said disk into the internal threads provided therefor in the shell B, the said disk A^2 having the semicircular perforations A^8 therein to permit the flow of water outward. This valve is operated by pulling on the usual chain connected to the ring A^9 upward and laterally to seat the shoulder A^6 on the valve-stem A′ over the edge of the perforation B^4 in the spider B′. The valve is now unseated and locked against the pressure of the spiral spring A^3. When it is desired to close the valve, a simple upward pull and release permits the parts to assume the normal position, as shown in Fig. 1.

In the event of the passage of the bowl becoming clogged it is easily cleared by unscrewing the disk A^2 and removing the plug and all parts connected thereto, when the obstruction may be easily removed in the usual manner and the parts restored to their proper positions. This plug has many advantages over the one commonly in use, which consists of the simple stopper. First, the loss of these stoppers is a source of considerable annoyance, as well as expense. It is also necessary to lift the stopper entirely out of the bowl and place it to one side, where the water adhering to the stopper and the chain connected thereto is the source of considerable untidiness about the washstand. It is also necessary in replacing the stopper in the bowl to pick it up, whether it be dry or wet and soapy, and place it in position, whereas with my device the plug remains in the washstand, the chain always presenting sufficient dry and clean length to permit of either seating or releasing the valve conveniently. Where a large number of washstands are used—for instance, in hotels and large houses—the inconvenience incident to the loss and misplacement of plugs is considerable, whereas with my device all parts are secured against this objection and being simple in construction are not liable to get out of order, which also reduces their cost to a very little above that of the common stopper. It also occurs that bowls are often broken by dropping the plugs into them.

Where it is desired to apply this invention in bowls where the old form of plug has been

used, the only variation in construction which is necessary is to form the perforation B^4 in the spider B′, cutting an internal thread in the body of the shell B to accommodate a bushing similar to the disk A^2, having a valve-seat therein, or instead of the tapered seat, as shown in the drawings, the lower surface A^{10} of the plug may be so regulated as to cover the perforations A^8 in the disk A^2. Thus it is evident with very little change the old forms are converted to the new.

Having thus described my invention, I claim—

1. In a valve the combination of a cylindrical shell having a valve-seat in its one end, and a perforated spider in its other end; a disk secured within said cylindrical shell between the valve-seat, and spider, a valve having a stem extending through coincident perforations in the said disk, and spider, to aline said valve with said valve-seat; said valve and valve-seat adapted to be thrown into, and out of alinement, a spring, one end of which is in engagement with the valve-stem, the other end acting against the aforesaid disk; the valve being locked in its eccentric position by means of a shoulder on the valve-stem engaging the edge of the perforation in the spider, substantially as described.

2. In a valve the combination of a cylindrical shell having a valve-seat in its one end, and the perforated spider in the other end, said shell having interior threads; a disk provided with threads whereby it is secured within said cylindrical shell between the valve-seat and the spider; a valve having a square stem extending through a square opening in said disk and having its lower extremity rounded to fit within the rounded perforation in the said spider; a spring secured to said stem and acting against the disk; a shoulder formed on the end of said rounded portion of the valve-stem to engage the edge of the perforation in the spider when said stem and valve are raised and thrown off center to lock the valve in its open position, substantially as described.

In testimony whereof I have hereunto set my hand this 16th day of December, 1898.

CHARLES A. BOREIN.

Witnesses:
BALDWIN VALE,
C. C. HAMILTON.