

J. B. VOGELBACH.
 FLOAT FOR SUPPLY VALVES OF WATER CLOSET TANKS.
 APPLICATION FILED MAY 19, 1906.

984,117.

Patented Feb. 14, 1911.

Fig. 1.

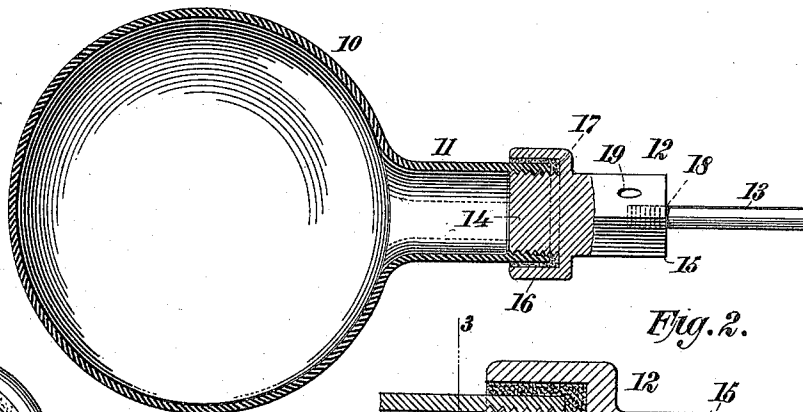


Fig. 3.

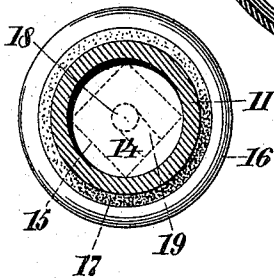
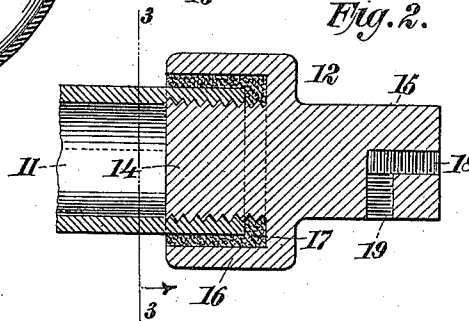


Fig. 2.



WITNESSES:

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FLOAT FOR SUPPLY-VALVES OF WATER-CLOSET TANKS.

984,117.

Specification of Letters Patent.

Patented Feb. 14, 1911.

Application filed May 19, 1906. Serial No. 317,653.

To all whom it may concern:

Be it known that I, JOHN B. VOGELBACH, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Floats for Supply-Valves of Water-Closet Tanks, of which the following is a specification.

The invention relates to improvements in floats of the character usually employed for operating the supply-valves of tanks for water-closets; and it consists in the novel features hereinafter described, and particularly pointed out in the claims.

Many objections have existed to the floats ordinarily made use of and various attempts have been made to correct the defects therein. A great many floats at present in use comprise two hemi-spherical shells soldered together, and these floats are not only not seamless and liable to leakage, but are open to other recognized objections unnecessary to repeat. Other floats heretofore used are in the form of seamless glass balls and these are open to several objections, one being the difficulty of securing in a simple and adequate manner the float rod thereto. Another objection to the glass balls is that they become so easily fractured that they entail a great loss due to their breakage. Other constructions of floats have been provided, and among other objections to these may be mentioned the difficulty of effectually sealing the same and at the same time properly securing the float rod thereto. In the absence of properly sealing the float water will leak into the same. It is also desirable that the means closing the float shall be capable of convenient removal so that any water which may gather therein, either by condensation or leakage may be easily emptied out or removed.

My invention seeks to remedy the objections to existing floats and to provide a float in one integral piece of metal having a neck at one side thereof which may not only be effectually sealed but adapted to receive a closure capable of being secured to the float rod and of being conveniently applied to and removed from said neck, said closure containing no opening through it, but being provided at its outer portion with a socket or sockets to receive the end of the rod and at its inner portion with a screw thread for engaging a thread formed on the end of said neck.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which:

Figure 1 is a central vertical longitudinal section through a float constructed in accordance with and embodying the invention, the closure at the neck of the float being shown partly in side elevation; Fig. 2 is an enlarged central vertical longitudinal section through the neck and closure of the float; and Fig. 3 is a vertical transverse section of same on the dotted line 3—3 of Fig. 2.

In the drawings, 10 designates the spherical body of the float, 11 the neck thereof, 12 the closure therefor and 13 a portion of the float-rod for operating the customary supply-valve, not shown.

The float 10 with its neck 11 is in one integral piece of copper spun into the shape illustrated, the neck 11 being integral with the body of the float and extending from one side thereof in line with the center of said body.

The preferred form of closure 12 is that illustrated in Fig. 1, in which it may be observed that said closure is formed with an inwardly extending screw-threaded plug 14, an outwardly extending polygonal stem 15 and an integral annular flange 16 forming a cap which passes upon the exterior of the outer end of the neck 11. The inner surface of the neck 11 is formed with a screw thread, as shown in Fig. 2, to receive the male thread on the plug 14, the outer end of the neck 11 passing between the plug 14 and flange 16. The closure 12 is applied to the neck 11 by means of a wrench which will engage the polygonal sides of the exposed stem 15, and the plug 14 should very closely fit within the neck 11 so that no opportunity may be given for water to leak into the float. In order to effectually seal the joint between the plug 14 and neck 11, white lead should be applied upon the thread of the plug 14, and this lead may serve as a packing as shown in Figs. 1 and 2, about the outer end of the neck 11 and within the flange 16.

The rod 13 has a threaded end and is secured to the stem 15 by screwing the same into a threaded socket 18 formed in the end of said stem in line with the neck 11. The socket 18 does not extend through the closure 12 and hence there is no opportunity for any leakage around the rod 13 to the

interior of the float, and this is a special feature of advantage. I also provide the stem 15 of the closure with a transverse threaded socket 19 to receive the end of the rod 13 when the float is to stand vertically, as would be the case when the float is employed in tanks having a top-supply. When the float is to be employed in tanks having a bottom-supply the rod 13 will be secured in the socket 18 and the float will be arranged horizontally or substantially so, as shown in Fig. 1. The sockets 18, 19 correspond with each other, one extending in line with the neck of the float and the other transversely thereto, and these sockets enable the employment of the float in either a horizontal or vertical position.

The float of my invention is employed in the same manner that floats in tanks for water-closets are usually made use of, my invention having to do more particularly with providing a more efficient and convenient float than those heretofore known to me. The float of my invention is in one integral piece of copper spun into shape with the neck 11 extending from one side thereof and hence the float is not only seamless but not liable to fracture, as is the case with glass floats. The neck 11 affords very convenient means for applying thereto a closure which will effectually seal the float and also receives the rod by which the float is connected to the valve mechanism, there being no opening through the closure and the closure being adapted to tightly fit and seal the end of the neck 11. It is highly important that the float should be effectually sealed so that no water may leak into the same, and it is sometimes also desirable that the float be capable of being readily opened so that any water which may gather therein due to condensation or otherwise may be removed, and in accordance with my invention it is obvious that the closure may be removed by means of a wrench without injury to the float and with convenience.

The float of my invention is especially durable and efficient due to the fact that the neck 11 is integral with the body of the float and that the closure is applied to said neck, which is of contracted form and cylindrical in cross-section and capable of receiving at

its outer end a screw thread adapted to snugly receive the closure, the application of the closure to the neck in no way affecting the body of the float, and the neck being capable of being conveniently and effectually sealed by means wholly exterior to the body of the float. The cylindrical neck 11 presents in itself a stiff strong structure and hence the float may be suspended from the float-rod with the latter simply entering, without extending through, the means closing said neck.

What I claim as my invention and desire to secure by Letters-Patent, is:

1. A seamless float comprising a hollow body and integral neck extending therefrom and the whole being formed of a sheet of metal, and a closure applied upon the end of said neck and having a polygonal portion to receive the applying and removing tool and a socket formed directly therein to receive the float rod, the inner portion of said closure being screw-threaded to engage said neck, which is screw-threaded to receive said closure; substantially as set forth.

2. A seamless float comprising a hollow body and integral neck extending therefrom and the whole being formed of a sheet of metal, and a closure applied upon the end of said neck and having a polygonal portion to receive the applying and removing tool, a socket to receive the float rod and a threaded inner end which is in the form of a solid plug to enter said neck, which is threaded in its interior to receive said plug end; substantially as set forth.

3. A seamless float comprising the hollow body and integral neck extending from the side thereof, and a closure applied upon the end of said neck and having a threaded solid plug to enter said neck, an outer portion containing a socket to receive the float rod and a flange to pass upon the outer side of the end of said neck; substantially as set forth.

Signed at New York city, in the county of New York and State of New York this 17th day of May A. D. 1906.

JOHN B. VOGELBACH.

Witnesses:

CHAS. C. GILL,
ARTHUR MARION.