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H. G. WALLMANN

FLOAT DEVICE

Filed April 20, 1921

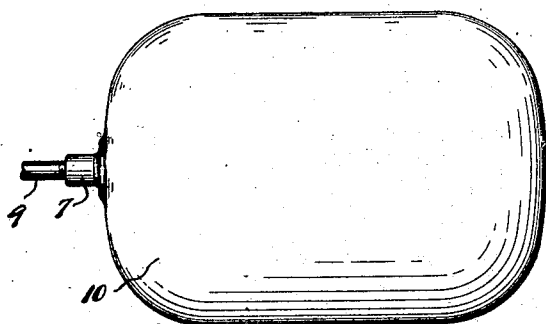


Fig. 1

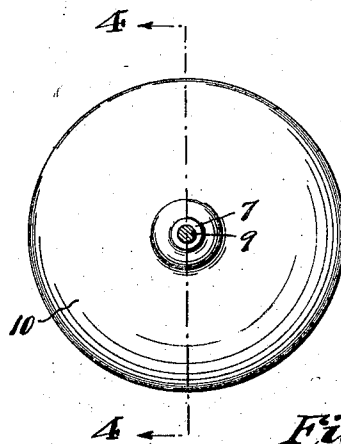


Fig. 2

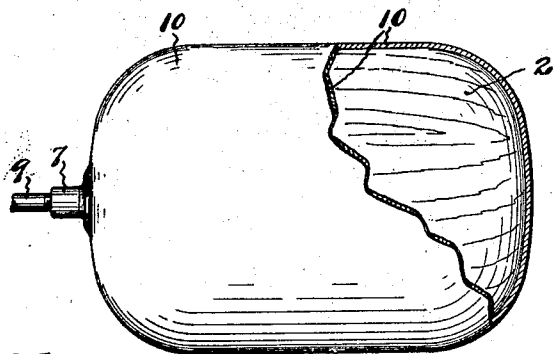


Fig. 3

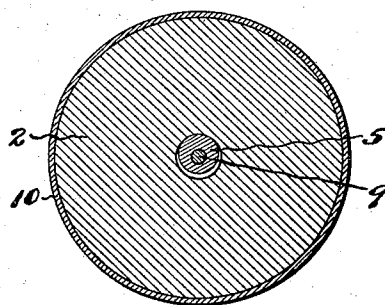


Fig. 5

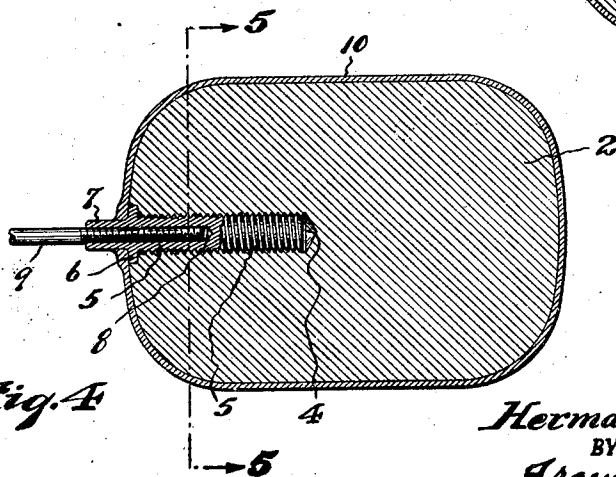


Fig. 4

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UNITED STATES PATENT OFFICE.

HERMAN G. WALLMANN, OF ST. CLOUD, WEST ORANGE, NEW JERSEY.

FLOAT DEVICE.

Application filed April 20, 1921. Serial No. 462,866.

To all whom it may concern:

Be it known that I, HERMAN G. WALLMANN, a citizen of the United States, residing at St. Cloud, West Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Float Devices; 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, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in floats adapted to be used for various purposes, as for example, in connection with any character of mechanism arranged to be actuated by the rise and fall of a float when subjected to the buoyancy of a liquid.

The invention has for its principal object to provide a novel construction of float device which is not subject to loss of buoyancy by reason of leaks or the penetration thereinto of the liquid by which it is sustained, and which is provided with an impervious covering or coating so that its internal structure or core is protected from contact with the liquid by which it is sustained, and thus maintained free from impairment, rotting or other deleterious or destructive effects tending to defeat its operative or normal buoyancy.

Other objects of this invention, not at this time more particularly enumerated will be clearly understood from the following detailed description of the same.

With the various objects of the invention in view, the same consists, primarily, in the novel structure of float device hereinafter set forth; and the invention consists, furthermore, in the novel arrangements and combinations of the various devices and parts, as well as in the details of the construction thereof, all of which will be hereinafter more fully described, and then finally embodied in the appended claim.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a side elevation of the novel construction of float device, made according to and embodying the principles of my present invention; Figure 2 is an end view of the same; Figure 3 is a side view similar to that

shown in Figure 1, but showing the outer enveloping covering or coating thereof in part broken away to disclose in elevation the interior core; Figure 4 is a longitudinal section of the same, taken on line 4—4 in said Figure 2; and Figure 5 is a transverse section, taken on line 5—5 in said Figure 4.

Similar characters of reference are employed in all of the hereinabove described views, to indicate corresponding parts.

Referring now to said drawings, the reference character 1 indicates the complete novel float device, made according to and embodying the principles of this invention, the same comprising a central core 2 of desired shape or exterior contour. The said core 2 may be made of any desirable and suitable material, but is preferably made of some material of less specific gravity than the liquid with which it is to be employed. As examples of materials which may be very satisfactorily employed for said core may be named wood, cork, pith and similar substances.

Usually floats of the character involved in this invention are adapted to be connected with the mechanism they are desired to actuate by means of a connecting rod or stem. It is, therefore, a part of this invention to provide in combination with the novel float structure a means for receiving the attachment of such a rod or stem to the core 2 of the float device. To this end I provide in a suitable location, preferably so as to enter and extend into one end of the core 2, an internally screw-threaded opening 4. Arranged to screw into said opening 4 is a metallic bushing or ferrule 5, which is provided adjacent to its outer end with an annular shoulder 6, the latter being preferably countersunk in the surface or end of the core 2. Said bushing or ferrule 5 possesses an outwardly extending or projecting neck-portion 7 forward of said shoulder 6. Said bushing or ferrule 5 is further provided with an internally threaded longitudinally or axially disposed receiving socket 8, which penetrates the body thereof from the outer end, and which is adapted to receive the end of a rod or stem 9 to be attached to the float, said rod or stem 9 being threaded into said receiving socket.

The reference character 10 indicates an enveloping covering or coating of moisture-proof material which is applied upon the

exterior surface of said core 2 so as to entirely cover the same. This covering or coating 10 must be of such character that it is impervious to the liquid by which the float
 5 is to be sustained. Said covering or coating provides an integral one-piece protective means which prevents the core from becoming saturated with liquid, whereby either the bouyancy of the same is reduced, or the
 10 core itself is subjected to deteriorating effects, such as rotting, etc. Preferably the material employed for said coating or covering 10 is of a plastic nature, light in weight, and adapted, when dry or in hardened state,
 15 to provide a durable liquid resistant material. I have found that for general use, and particularly for floats employed with water, that the most satisfactory material for said covering or coating 10 is celluloid
 20 and similar substances, which may be applied to the surface of the core 2 by any of the well-known methods of producing and working such materials.

The said covering or coating 10 adheres
 25 firmly to the surface of the core 2, and also bonds to or forms an impervious juncture with the outwardly projecting neck-portion 7 of the bushing or ferrule 5, whereby access of liquid to or into the body of the
 30 core is entirely shut off at all points.

It will be apparent that the novel construction involved in this invention will provide a long-lived float-device of a character adapted to retain its normal initial
 35 buoyancy, and readily adapted to resist any impairment, deterioration or other dele-

terious effects which would interfere with the desired functioning of the same.

The invention therefore provides a float device well adapted and highly efficient for
 40 use in connection with toilet-stool flushing tank mechanisms, various kinds of float controlled valve mechanisms, float actuated indicating mechanisms, and all similar mechanisms wherein a bouyant float device
 45 is required.

I claim:

A float device comprising a core of bouyant material, a metallic bushing exteriorly threaded to screw into one end of said core,
 50 an annular shoulder at the outer end of said bushing and countersunk in the body of said core, a projecting neck portion extending outwardly from said shoulder, said bushing having an axially disposed receiving
 55 socket entering through said neck-portion for the attachment of a carrying rod, and a coating of celluloid or the like applied upon the exterior surface of said core, said coating extending over the annular shoulder
 60 of said bushing and bonding to said neck-portion of the latter, all whereby the liquid by which the float device is sustained is prevented from contacting with or penetrating
 65 the material of said core.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 19th day of April, 1921.

HERMAN G. WALLMANN.

Witnesses:

GEORGE D. RICHARDS,
 EVA E. DESCH.