

(No Model.)

D. M. IRELAND.
FLOAT.

No. 521,501.

Patented June 19, 1894.

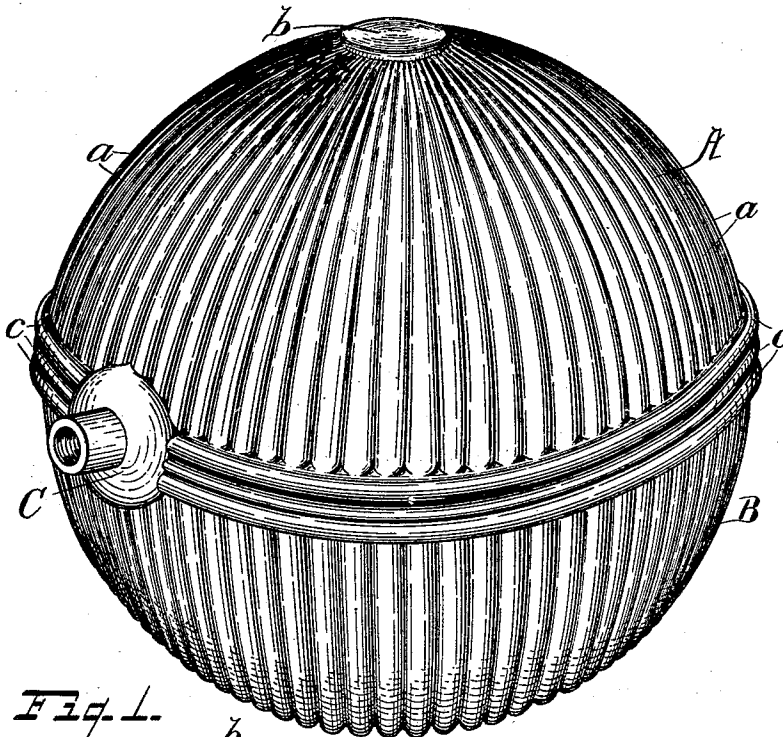


Fig. 1.

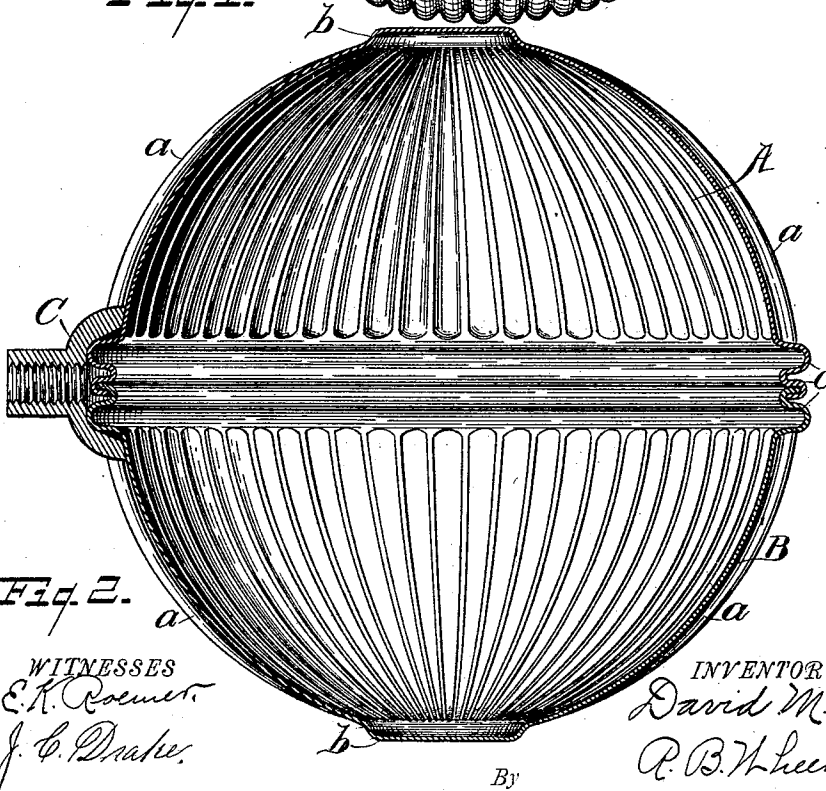


Fig. 2.

WITNESSES
E. A. Roemer
J. C. Drake

INVENTOR
David M. Ireland
R. B. Wheeler & Co.

Attorneys.

UNITED STATES PATENT OFFICE.

DAVID M. IRELAND, OF DETROIT, MICHIGAN.

FLOAT.

SPECIFICATION forming part of Letters Patent No. 521,501, dated June 19, 1894.

Application filed November 23, 1893. Serial No. 491,735. (No model.)

To all whom it may concern:

Be it known that I, DAVID M. IRELAND, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Floats; and I do 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 the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in the construction of hollow metallic floats, designed to actuate a valve or other mechanism by the rise and fall of the water level within a boiler or reservoir wherein the float is subject to concussion or exterior pressure. It is necessary in floats of this class that they shall be made of thin metal to enable them to be cheaply made and to render them sufficiently light to afford the required buoyancy, and the difficulty encountered in their construction is to combine with the necessary lightness in an air tight float, the requisite strength to resist exterior pressure without collapsing or becoming indented. Which difficulty is overcome and the desired result attained by the peculiar formation of parts, illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved float. Fig. 2 is a central vertical section through the same.

Referring to the letters of reference, A and B indicate respectively two hemi-spherical shells which are united to form a hollow air-tight globe. The wall of this globe is provided with a series of meridional corrugations *a* which converge toward the axis of the globe and terminate in a raised apex *b* which strengthens the wall at the point of convergence of said corrugations.

The uniting of the shells A, B, in the formation of this float, breaks the continuity of

the meridional corrugations on the line of the union of said shells. To supply the requisite strength at this point, the globe is provided with a series of circumferential beads *c*, which encircle the center thereof and cross the line of said corrugations at right angles, the central one of which forms the joint between the hemi-spherical shells of the globe.

C designates a tapped boss which is attached to the exterior of the float over said central beads and affords means for securing an arm or lever thereto.

By constructing a shell in this manner, very thin material may be employed and still produce a float of sufficient strength to withstand great exterior pressure, effecting a great saving in the cost of manufacture and adding to the utility of the float because of its increased buoyancy.

I am aware that sheet metal has been corrugated to increase its strength, and that corrugated shells have been employed in ornamental work, and do not therefore, claim such matter broadly, but

What I claim as new, and desire to secure by Letters Patent, is—

1. A float, comprising a hollow air-tight globe of thin sheet metal, consisting of two hemi-spherical corrugated shells united at their base so as to form a hollow sphere having a central circumferential bead and peripheral corrugations.

2. A float, comprising a hollow air-tight globe composed of two hemi-spherical shells of thin metal having radial corrugations and united at their base by interlocking flanges, forming a hollow sphere provided with meridional corrugations crossed at right angles by a circumferential bead substantially as set forth.

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

DAVID M. IRELAND.

Witnesses:

E. S. WHEELER,
E. K. ROEMER.