

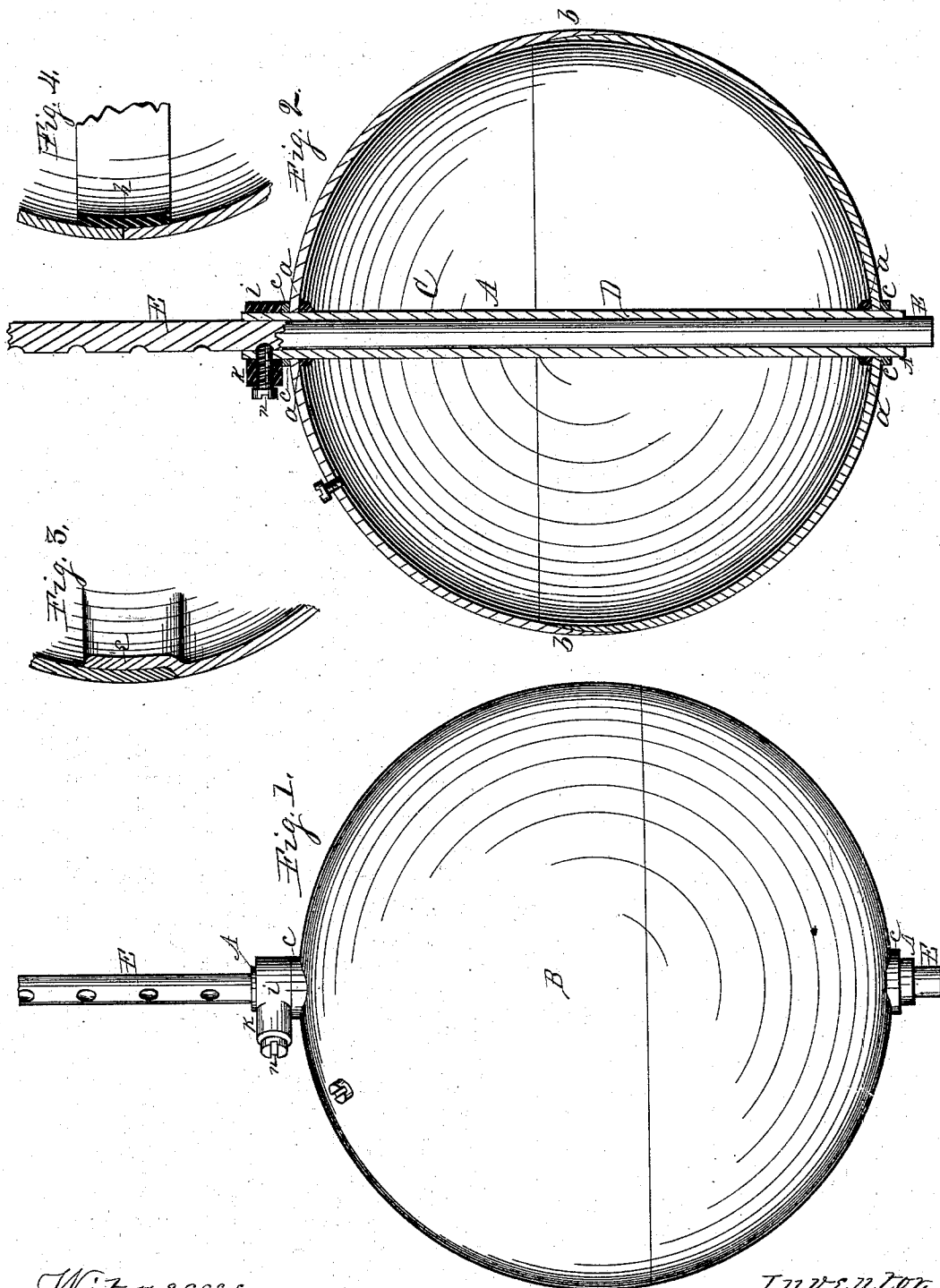
(No Model.)

E. D. SHEPARDSON.

FLOAT.

No. 274,833.

Patented Mar. 27, 1883.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDWARD D. SHEPARDSON, OF BELLEVUE, OHIO.

FLOAT.

SPECIFICATION forming part of Letters Patent No. 274,833, dated March 27, 1883.

Application filed August 28, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. SHEPARDSON, a citizen of the United States, residing at Bellevue, in the county of Huron and State of Ohio, have invented a new and useful Improvement in Floats, of which the following is a specification.

This invention relates to floats designed for use mainly in connection with water-regulators for steam-boilers, but capable of use in other situations requiring a float. It is well understood that great difficulty has been experienced in producing floats capable of resisting the pressure of steam when used in connection with water-regulators for steam-boilers, and that floats of spherical form used under steam-pressure tend to flatten at the poles, which tends to produce leakage, and usually terminates in collapse of the float. To obviate these difficulties and to produce a float capable of adjustment in the direction of its polar axis is the object of this invention.

In the accompanying drawings I have represented my improved float, in which Figure 1 is an elevation, and Fig. 2 is a central section cut lengthwise of its axis.

In the figures, A represents an axial tube of suitable dimensions and of proper material, having its end portions in this instance provided with collars *a*.

At B is represented a shell of spherical form, in this instance produced from plate material. This spherical shell is produced in semi-hollow spheres C and D, having their centers perforated to receive the end portions of the axial tube and their equatorial edges at *b* scarfed to overlap each other, substantially in the manner shown. These parts, constructed in this manner, are of such relative dimensions that when placed in the position shown the inner surface of the semi-spheres will rest on the collars *a* and the scarfed equatorial edges will overlap each other.

At *c*, in this instance, are represented collars placed upon the outer end portions of the axial tube, in contact with the outer surface of the semi-spherical shells. With these several parts constructed and arranged as shown

and described the joints in the several parts are brazed, producing a spherical float of great strength.

When greater strength is required on the equatorial line I construct my improved float as represented in Fig. 3, in which instance the overlapping edges of the hollow semi-spheres retain their thickness, but are produced to overlap each other in the manner shown, producing an inward-projecting rib, (represented at *e*), which serves to give additional strength on the equatorial line.

At Fig. 4 I have represented another method of strengthening the float on the equatorial line. In this instance I produce a butt-joint of the equatorial meeting edges of the hollow semi-spherical shells. These butt-joint edges meet centrally on the periphery of an annular equatorial ring, *h*, placed inside of the sphere.

It will be seen that either of the forms represented at Figs. 3 and 4, when properly brazed, will give additional strength to the sphere, and, in connection with the axial tube, will present a sphere capable of great resistance.

At E is represented a rod of proper size to pass freely through the axial tube of the spherical float. This rod is provided with indentations, of countersink form, at proper intervals, adapted to receive the pointed end portion of a set-screw.

At *i* is represented a collar of proper size to receive the projecting end portion of the axial tube snugly. This collar is provided with a tubular hub, *k*, screw-threaded to receive the set-screw *n*, fitted to engage the indentations in the axial rod. By this arrangement it will be seen that the float may be readily adjusted to any point on the rod.

I claim as my invention—

1. The combination, with a spherical shell float, of a tubular polar axis, said tubular axis provided with collars to engage the inner surface of the float-shell, substantially as set forth.

2. The combination, with a spherical shell float, of a tubular polar axis, said tubular

axis provided with collars to engage the inner and outer surface of the float-shell, substantially as set forth.

5 3. The combination, with a spherical shell-float, of a tubular polar axis, said tubular axis provided with collars to engage the inner and outer surface of the float-shell, and a rod on which to adjust the float, substantially as and for the purpose set forth.

4. The combination, with a float having a tubular axis and a rod on which to adjust the float, of a set-screw to fix the float in its adjustable position on the rod, substantially as set forth.

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