

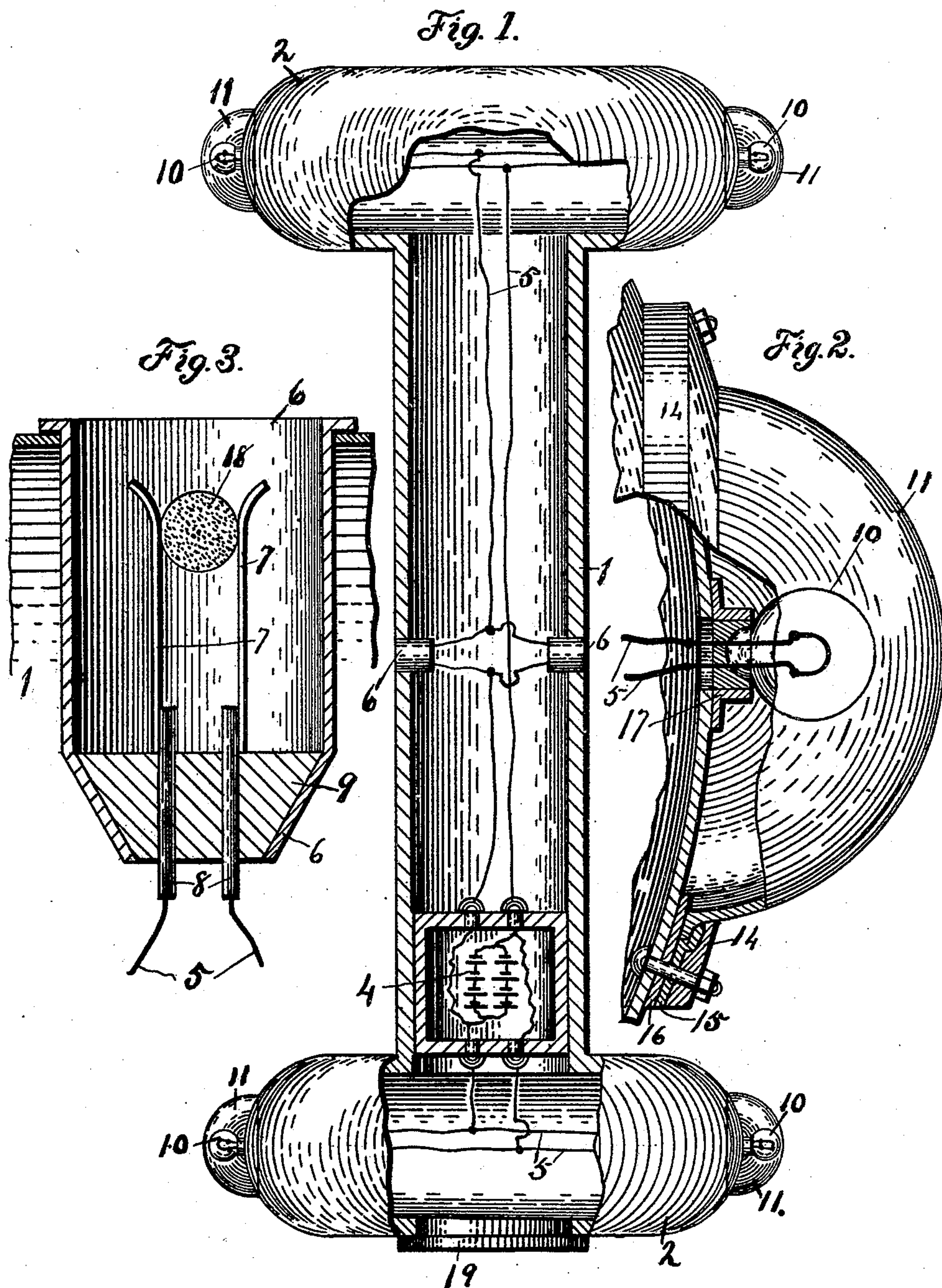
(No Model.)

2 Sheets—Sheet 1.

J. A. GUEST & J. H. BATES.
MARINE LIFE BUOY.

No. 512,957.

Patented Jan. 16, 1894.



WITNESSES:

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 7

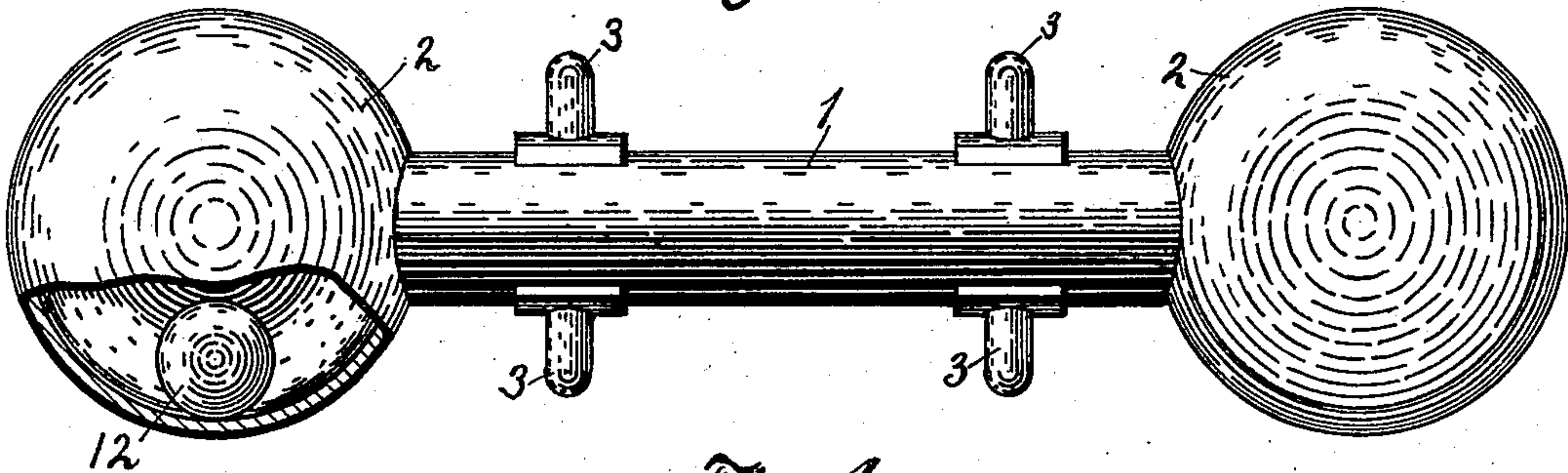


Fig. 4.

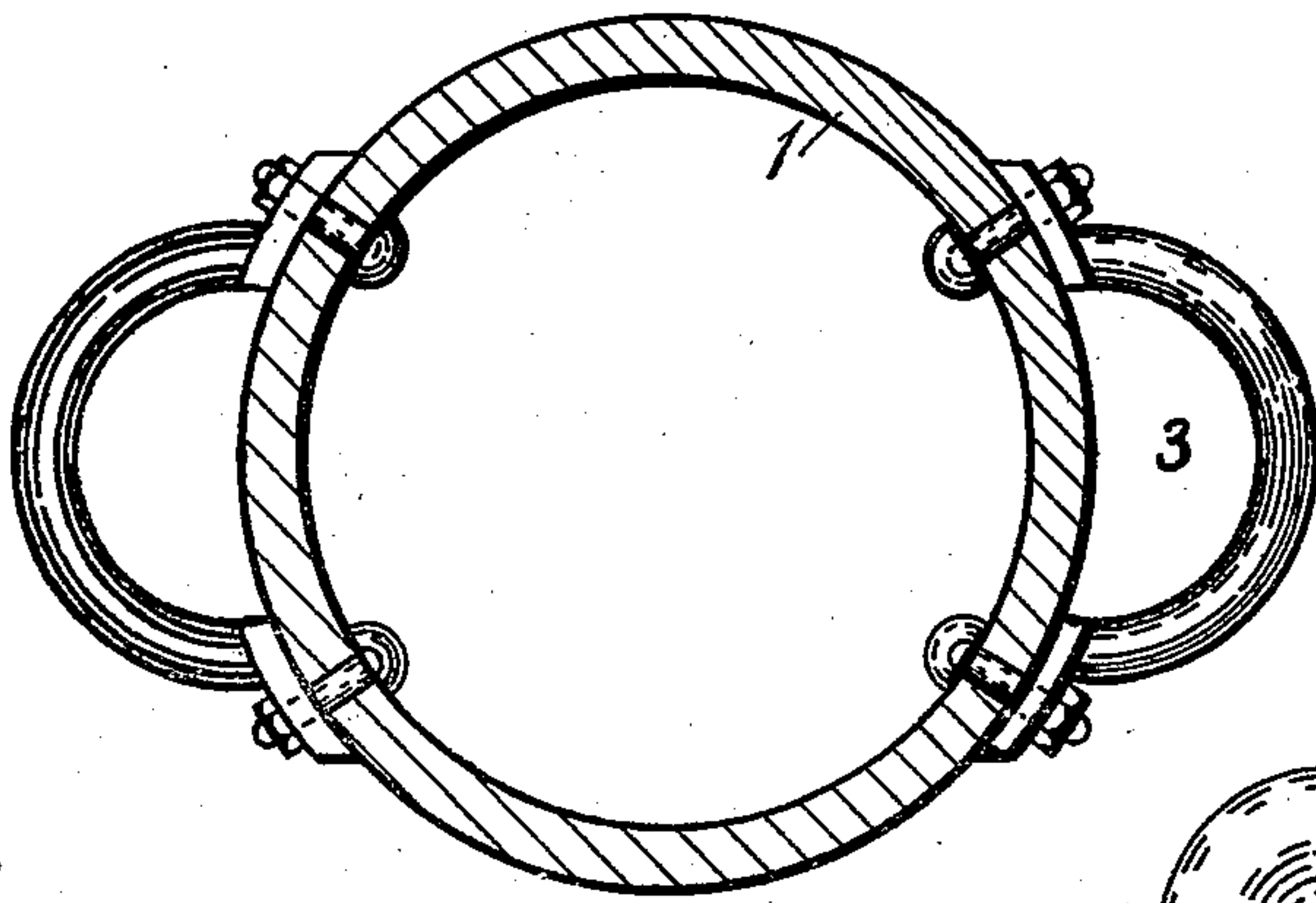


Fig. 6.

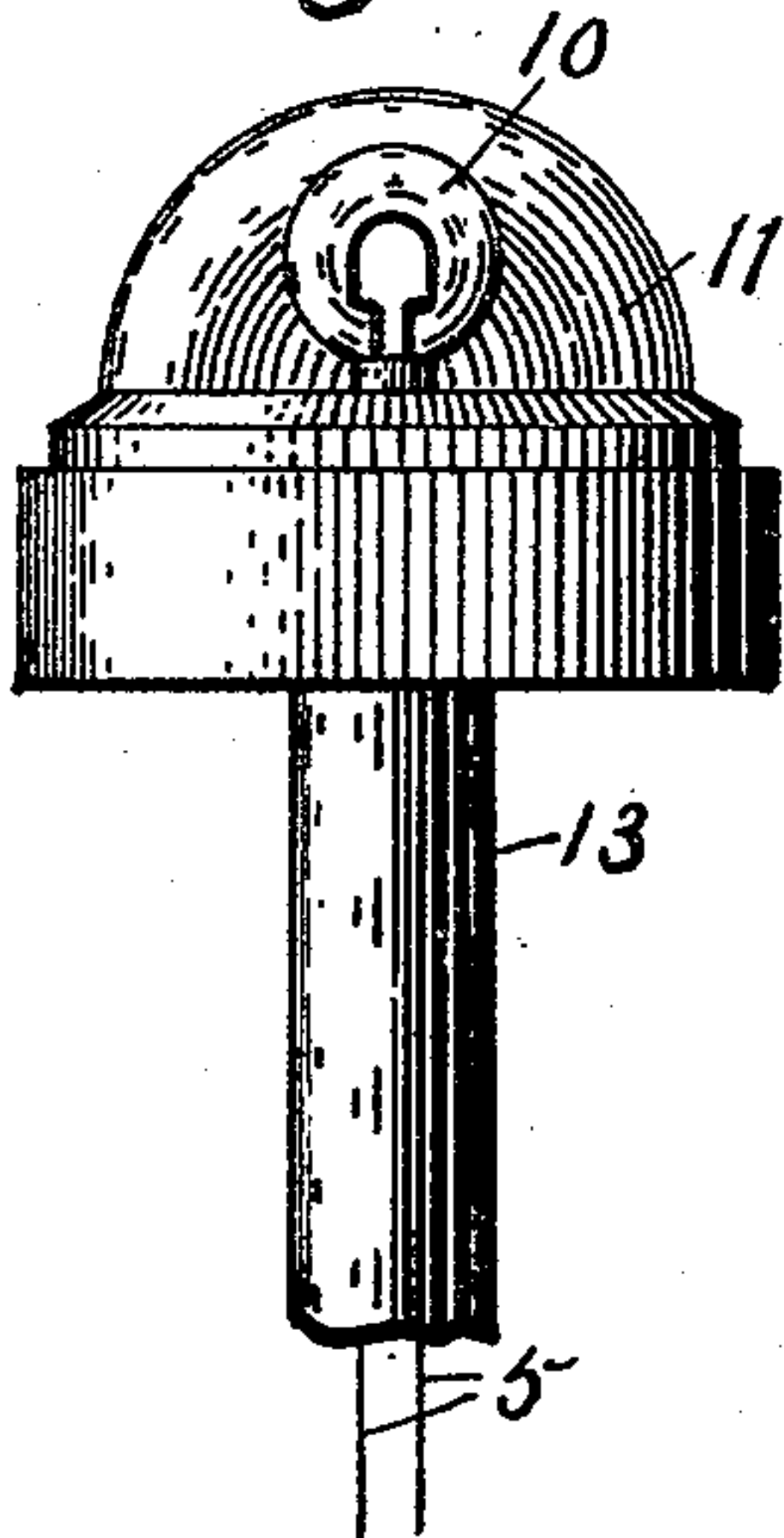
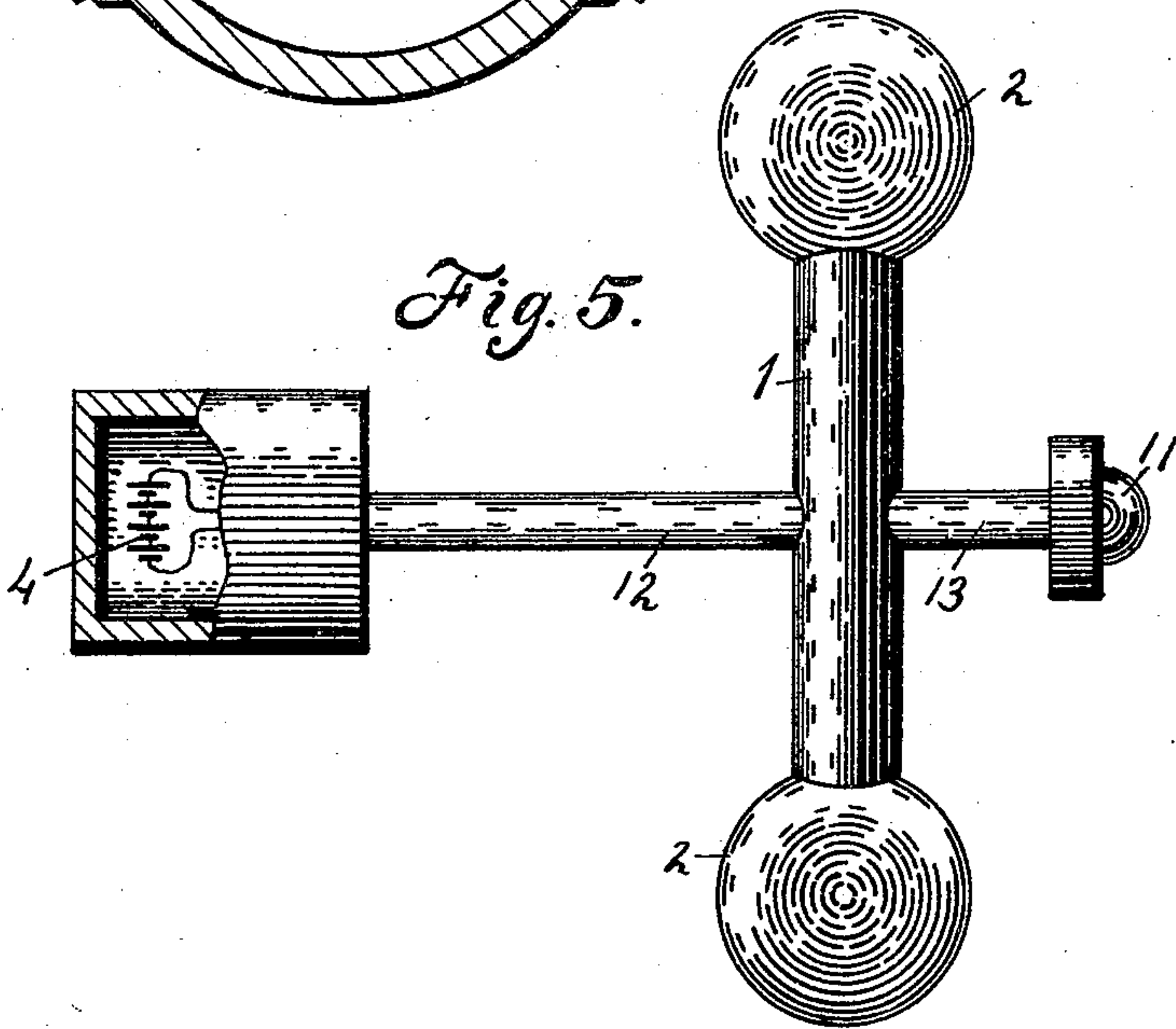


Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES ALDEN GUEST, OF WASHINGTON, DISTRICT OF COLUMBIA, AND
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MARINE LIFE-BUOY.

SPECIFICATION forming part of Letters Patent No. 512,957, dated January 16, 1894.

Application filed February 28, 1893. Serial No. 464,146. (No model.)

To all whom it may concern:

Be it known that we, JAMES ALDEN GUEST, of Washington, District of Columbia, and JAMES H. BATES, of Hoboken, New Jersey, have invented certain new and useful Improvements in Marine Life-Buoys, whereof the following is a specification.

Our invention relates to life buoys which are thrown into the water for the support of persons in the water.

The invention consists in providing such buoys with electric lamps; especially such as will be automatically lighted by the water, as for example by the use of a battery which is energized by the water, or by the use of a switch which is closed by the water or otherwise; also in the construction of such a switch; also in certain other devices and combinations, all of which are recited in the claims at the end hereof.

The accompanying drawings illustrate a buoy containing our invention.

Figure 1 is a side view partly in section. Fig. 2 is an enlarged view of one of the lamps and its inclosing cover partly in section to show the means of attachment. Fig. 3 is a section of a switch box showing the switch structure. Fig. 4 is a cross section of the body with the handles in elevation. Fig. 5 is a side view of the buoy with ballast arm and elevated lamp. Fig. 6 is an enlarged view of the elevated lamp. Fig. 7 is a side view showing a different method of ballasting.

In the figures,—1 is the body of the buoy, and 2 are floats which, in the form shown, are arranged one at each end of the body. Both body and floats may be made of spun metal or other suitable light material.

3 are handles for convenience in handling the device, and also for persons in the water to hold on by. They may be in the form of loops or straps, preferably of such size that a man's arm may be thrust through up to the shoulder, and they are preferably at such distance apart that a person in the water with his back to the buoy can thrust an arm through each strap.

4 is the battery, which may be placed in the body 1 as shown in Fig. 1, or in the ballast

arm 12 as shown in Fig. 5; in the latter case the weight of the battery is of value as ballast.

5 represents the electric circuit.

6 are chambers or boxes arranged at convenient points on the buoy where the water will enter them, their mouths being open for this purpose. The electric circuit is provided with terminal binding posts 8 set in a plug of insulating material 9, and serving to close the inner end of the boxes. The latter and the plug may both be tapered as shown.

7 are the contact pieces of the switch, held normally apart by a piece 18 of rock salt or other material whose insulating power will be destroyed by the water, either by solution or otherwise.

10 are incandescent lamps, of low voltage so as to be easily glowed by the battery in multiple series. Each lamp is protected by a bell glass 11. This glass is secured by a ring 14 and screws, and is made water tight and secured from breakage by elastic material embracing its flange, such as two washers of rubber 15 and 16. The lamps may be placed on the floats 2 or other part of the buoy. We have found it a good plan, especially in large buoys, to place one lamp on an arm 13 which will hold it up above the water.

17, Fig. 2, is the lamp base, which may be soldered to 2.

In large buoys we find it a good plan to provide the body of the buoy with an arm 12, Fig. 5, carrying the battery or other weight at its end, for ballasting purposes; but in small buoys we prefer to place the ballasting weights in the floats 2, as shown at 12, Fig. 7.

19 is a hand hole.

Obviously many structural variations may be made in the above apparatus without departing from our invention, and we wish it understood that we claim all such.

We claim—

1. In a life buoy, in combination, an electric lamp, a circuit in which the lamp is included, a source of electricity and an electric switch both carried by the buoy, said switch contacts being normally insulated by a material whose insulating power is destroyed by water, substantially as set forth.

2. In a life buoy, the combination, substantially as set forth, of an electric circuit, a lamp included therein, a source of electricity and a switch whose contacts are normally separated by a soluble insulator all carried by the buoy.

3. A life buoy, provided with a ballasting arm, an electric battery carried thereby, an upward projecting arm, an electric lamp thereon, and an electric circuit connecting said battery and said lamp substantially as set forth.

4. The combination, substantially as set

forth, of a life buoy provided with the open mouthed boxes 6, and an electric device contained therein and adapted, when acted on by the water, to shoot a current through the circuit including them.

In testimony whereof we claim the foregoing as our invention and hereunto set our hands this 14th day of February, 1893.

J. ALDEN GUEST.
JAMES H. BATES.

Witnesses:

ANNA JOSEPHINE GUEST,
J. E. STONE.