(No Model.)

W. HENRY.

MARINE VEHICLE.

No. 396,486. Patented Jan. 22, 1889.

Fig. 1

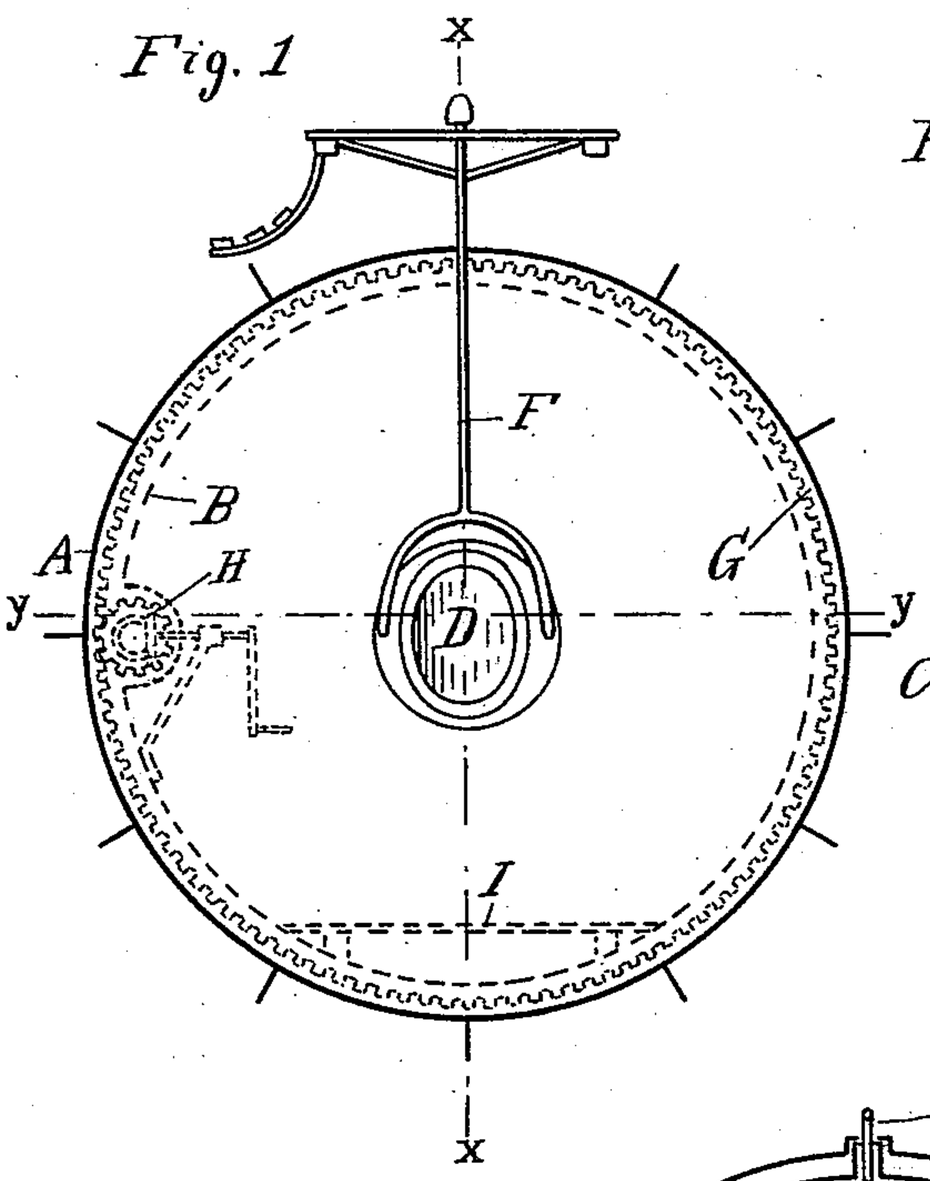


Fig. 2

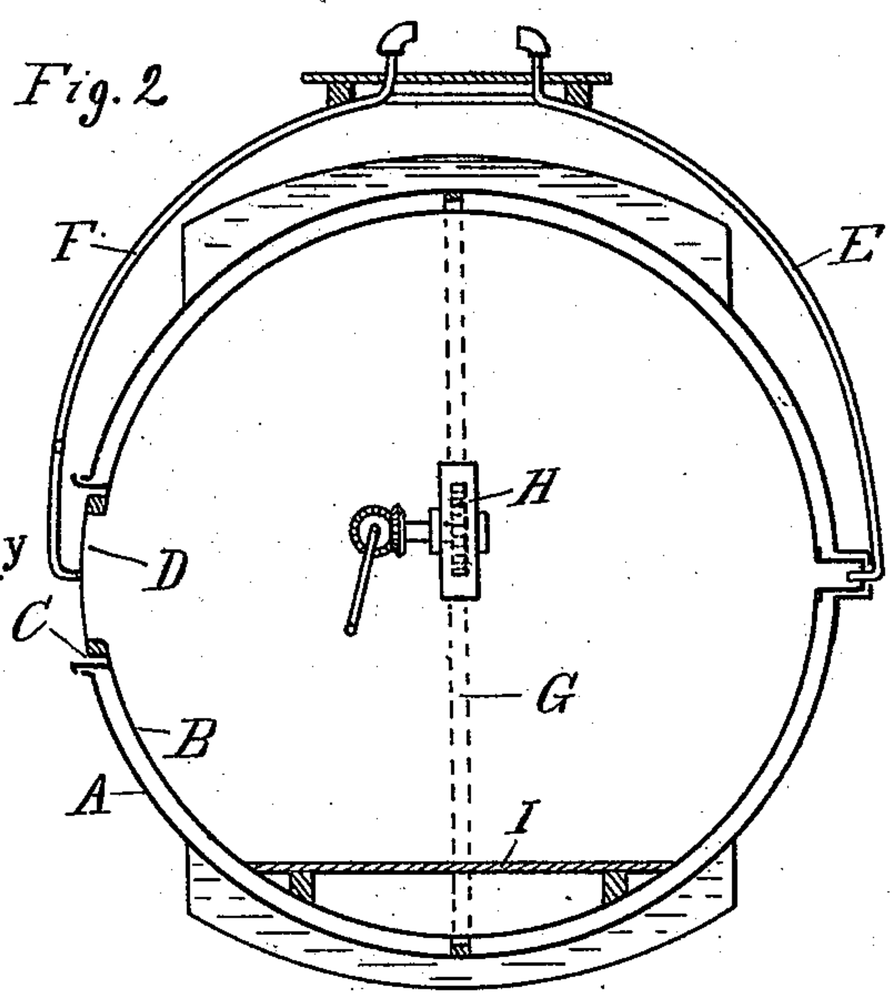
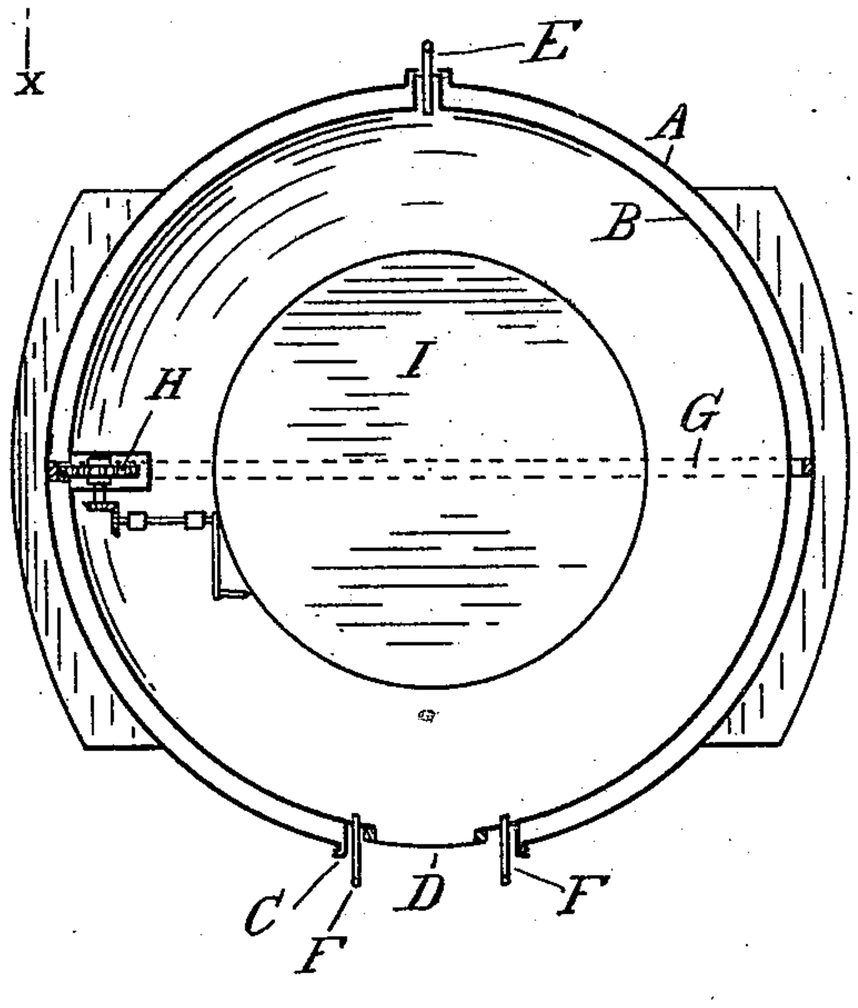


Fig. 3



Witnesses:

P. M. Hulbert
John Schuman

Inventor:

William Henry

By Thos. L. Sprague & Son.
Att'y.

UNITED STATES PATENT OFFICE.

WILLIAM HENRY, OF ALPENA, MICHIGAN.

MARINE VEHICLE.

SPECIFICATION forming part of Letters Patent No. 396,486, dated January 22, 1889.

Application filed February 14, 1888. Serial No. 263,992. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY, a citizen of the United States, residing at Alpena, in the county of Alpena and State of Michigan, have invented certain new and useful Improvements in Marine Vehicles, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in marine vehicle; and the invention consists in the peculiar construction, all as more fully hereinafter described, and shown in the drawings, of which—

Figure 1 is a diagram elevation. Fig. 2 is a vertical central section on line *x x* in Fig. 1, and Fig. 3 is a horizontal plan on line *y y* in Fig. 1.

A and B are two hollow globes, one within the other, both made preferably of sheet metal. The inner globe, B, is suspended on trunnions within the outer globe and concentric thereto. One of these trunnions, C, is hollow and of a suitable size to permit the ingress to the interior of the inner globe, which revolves in a water-tight joint formed by a suitable bearing on the outer globe, and is provided with the oval window or door D, which is seated from the outside and can be opened and closed from the inside. The other trunnion may be of similar size, and is also preferably hollow, for the purpose of admitting air through a pipe, E, which, in conjunction with a similar pipe, F, secured to the other trunnion, provides for the air circulation into the inner globe, and at the same time forms an arch or skeleton frame to support a platform or seat above the device.

G is an equatorial gear upon the inside of the outer globe, and this meshes with the pinion H, carried by the inner globe, and which is connected with suitable drive-gearing for applying hand or other power from the inside of the inner globe.

Upon the bottom of the inner globe is supported a platform, I, for the operator, and at the same time to carry any suitable ballast to impart to the device, when floating, the necessary stability.

The outer globe is provided upon its periphery with paddles, either fixedly secured thereto or constructed in any of the usual ways of feathering-blades, or operated in any other desired manner. These paddles are at right angles and centrally to the plane of the equatorial gear on the inner side of the outer globe.

In practice the displacement of the device fully equipped is calculated to be below the center of the globe when floated in the water. The operator mounts to the inside through the window or port-hole D, which he closes tightly after him, there being suitable means provided therefor. Through this window he is afforded light, and by means of a mirror (not shown) conveniently placed on the outside he receives a view from the front. The necessary air is provided through the tubes E and F, one of which may be connected inside with an air-pump to renew the air at will. Now it will be seen that the device can be propelled by the operator by means of the drive-gear, provided his weight and ballast serve to resist the reaction of the outer wheel when power is applied. The steering is simply accomplished by the operator shifting himself or the ballast more to one side or the other, so as to cause the device to tip in the direction in which he intents to steer. If the outer globe is water-tight and the trunnions also are water-tight, there is no necessity of having the inner globe water-tight also; but I prefer to have it so for the sake of additional safety. By means of the air-tubes, which are made of pipe, a convenient seat is made on the top of the device for a second person, who may readily communicate with the person inside through the air-tubes, which serve then as speaking-tubes.

The advantage of my device is that great speed may be obtained with absolute safety in any amount of sea, as the capsizing of the vehicle is out of the question.

I preferably secure the paddles removably, to enable me to take them off and store them inside, which permits of readily transporting the device on shore. The great buoyancy of my device, combined with its non-capsizing qualities, eminently adapt it for a life-boat, suitable life-lines being secured to the outside.

What I claim as my invention is—

1. In a marine vehicle, the combination of an outer globe and an inner water-tight globe concentrically supported within the outer

globe and the two made relatively rotatable to each other, substantially as described.

2. In a marine vehicle, the combination of an outer globe and an inner globe concentrically within the outer globe on trunnions, and the two made relatively rotatable to each other, and paddles secured to the outer globe, substantially as described.

3. In a marine vehicle, the combination of an outer globe, an inner globe concentrically secured within the outer globe by means of trunnions, a hollow trunnion projecting through the outer globe, and air-circulating devices connecting with said trunnions and projecting to the top of the vehicle, substantially as described.

4. In a marine vehicle, the combination of an outer globe, an inner globe concentrically secured within the outer globe by means of trunnions, a hollow trunnion projecting through the outer globe, and air-circulating devices connected with the hollow trunnion, made of hollow tubing and forming a skeleton frame for a seat above the device, substantially as described.

5. In a marine vehicle, the combination of concentric inner and outer globes rotatably secured in relation to each other and provided with the means for propelling the outer globe from the inner globe, and a platform within the inner globe, substantially as described.

6. In a marine vehicle, the combination of an outer globe, the inner globe concentrically supported on trunnions, the equatorial gear upon the inside of the outer globe, the drive-pinion carried by the inner globe, and a crank-shaft and connecting-gear for conveying power thereto, substantially as described.

7. In a marine vehicle, the combination of an outer globe, the inner globe concentrically supported on trunnions, the equatorial gear upon the inside of the outer globe, the drive-pinion carried by the inner globe, a crank-shaft and connecting-gear for conveying power thereto, and a platform in said inner globe, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 31st day of January, 1888.

WILLIAM HENRY.

Witnesses:
P. M. HULBERT,
JOHN SCHUMAN.