G. W. Hamilton.

Life Boat.

No. 19,632. Patented Mar. 16, 1858.

Fig. 1.

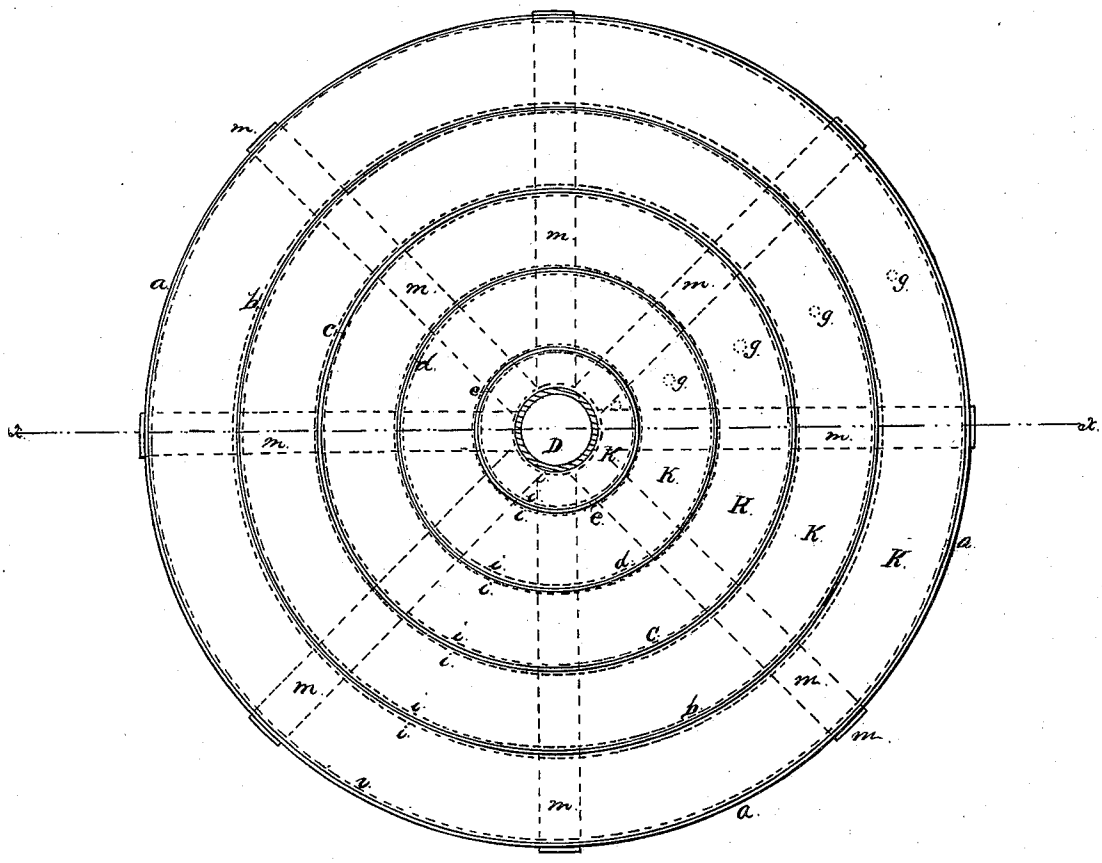
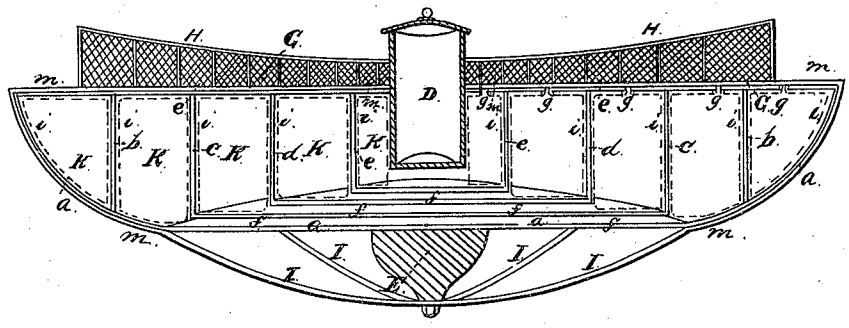


Fig. 2.



UNITED STATES PATENT OFFICE.

GEO. W. HAMILTON, OF WATKINS, NEW YORK, ASSIGNOR TO HIMSELF AND OLIVER P. BOWER, OF SAME PLACE.

LIFE-PRESERVING FLOAT.

Specification of Letters Patent No. 19,632, dated March 16, 1858.

To all whom it may concern:

Be it known that I, GEORGE W. HAMILTON, of Watkins, in the county of Schuyler and State of New York, have invented a new and useful Improvement for Saving Life at Sea; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon.

Figure 1, is a horizontal section of my life preserving float, showing the deck removed. Fig. 2, is a vertical section at the line *x x*, Fig. 1.

The same letters refer to like parts in each of the figures.

My invention is designed to combine the elements of a raft and life-boat, and is intended for use on steam and other passage vessels exposed to the danger of foundering at sea. Its construction is such as to render it portable, and capable of sustaining extraordinary burdens without sinking or capsizing.

It consists of an exterior metallic case, or vessel of circular form and shallow depth, represented in the drawing at *a a*. This may be formed of plates of iron or copper riveted together in the usual manner for similar purposes. I prefer copper as combining the requisite strength with lightness and freedom from oxidation. The interior space within the vessel is filled with similar circular vessels having upright sides which constitute a series of concentric partitions as *b c d e*, and divide the space into a number of annular compartments, K, K. Each vessel is more shallow as its diameter is diminished, thus leaving a space between the bottom of each at *f f*. This forms a provision against the bottom being stove, as the breaking through one bottom only admits water to one of the spaces *f*. There are several of these annular chambers, each one of which is provided with an interior air tight lining or sack of india-rubber, gutta percha, or other elastic material. These are indicated in the sections by the red lines, *i*. These communicate with the external air by means of a small neck on each, which extends through an aperture *g*, in the deck, (indicated by dotted lines in Fig. 1.) By means of an air-pump these are filled with condensed air, and the opening securely closed by a valve. In the center, a cell or chamber, D, is provided for the reception of the mails or treasure, around which a strong deck, G, covers the whole. A ballast, E, Fig. 2, is attached to the bottom of sufficient weight to counterbalance any burden which may come upon the sides. From its peculiar shape it is free from any liability to swamp and should that occur its great buoyancy, flatness and extent of bottom, with the influence of the center-ballast, would cause it to right at once. It cannot, from its shape, become water-logged, and is as safe in the trough of the sea as elsewhere. It is not constructed for sailing qualities, its object being to sustain a large number of human beings when wrecked at sea, with provisions for their sustenance until relief from other vessels can be obtained. A railing, H, is provided near the edge and ropes should be hung from the sides for the assistance of those who may be struggling in the water. Oar-locks are provided and oars may be attached so that progress may be made in calm water, if near land. Any provision for shelter and comfort may be made on deck that is desired, the space being ample. The diameter may be varied to adapt it to the size of the vessel and number of passengers conveyed. Two or more should be provided for each vessel, and they may be made from 18 to 30 feet in diameter. To prevent occupying the deck room, they may be suspended edgewise by the side of the ship by davits, and will then at all times be in readiness for lowering and immediate use. Strong iron braces I, extend from one side to another of the bottom, dividing it diametrically at equal distances, and sustaining the weight, E, at their intersection in the center. From each of these braces and connected with it, extend straps around the sides and across the deck *m m* (in dotted lines) converging to the center. These provisions for strength render it exceedingly stable and reliable, while its buoyancy and capacity to float a large number for its size, render it a valuable means of saving human life.

The air-receivers in the annular chambers are so protected from violence that it is hardly possible for a sufficient number to receive injury to materially damage the operation of the float.

The compartments being annular and con-

centric, should one or two fill with water the equilibrium of the float would be in no wise disturbed, as they fill equally all around. But the utmost provision against their filling has been made. The elastic nature of the air-receiver may protect it from rupture, even should the material itself be broken, and only the outer compartments are at all liable to injury, the inner ones being secured by them, and have the protection of two or more partitions and the spaces *f f*, below them as well as being guarded at the bottom by the strong network of braces.

What I claim as my invention and desire to secure by Letters Patent is:—

A life-preserving-float constructed substantially as described, with annular concentric chambers and air receivers, combined with the central-ballast E, and radial braces and binding straps, I, and *m* as and for the purpose set forth.

GEORGE W. HAMILTON.

Witnesses:
S. J. ALLIS,
J. FRASER.