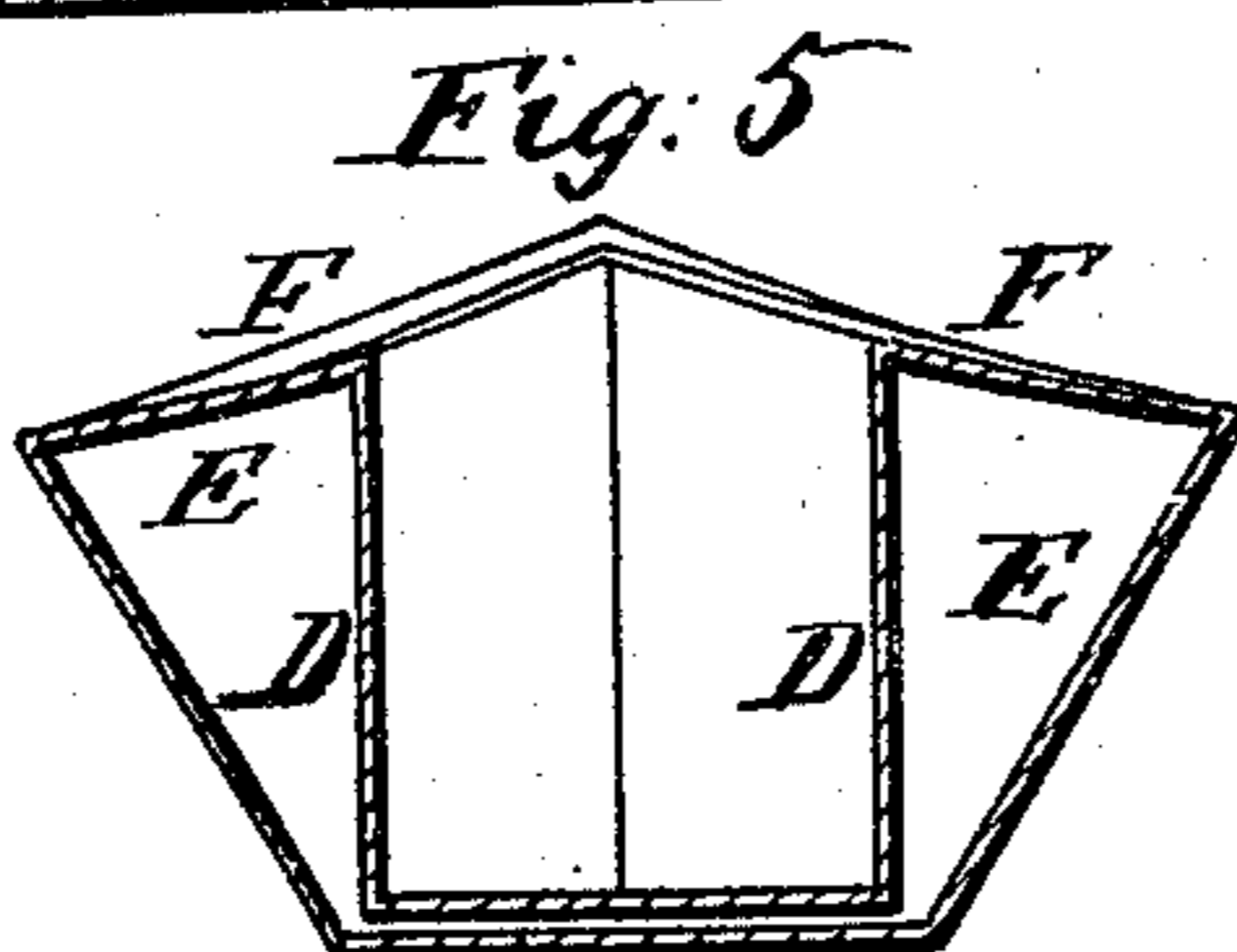
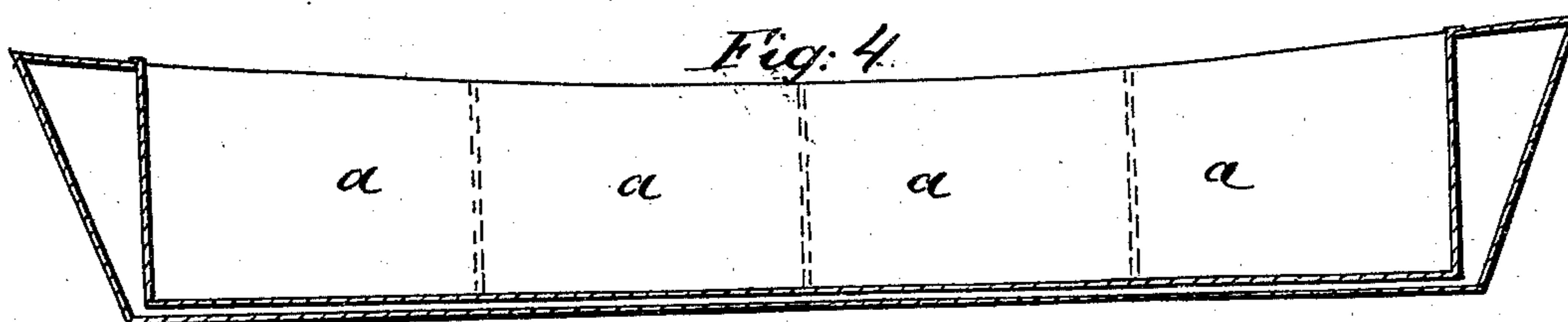
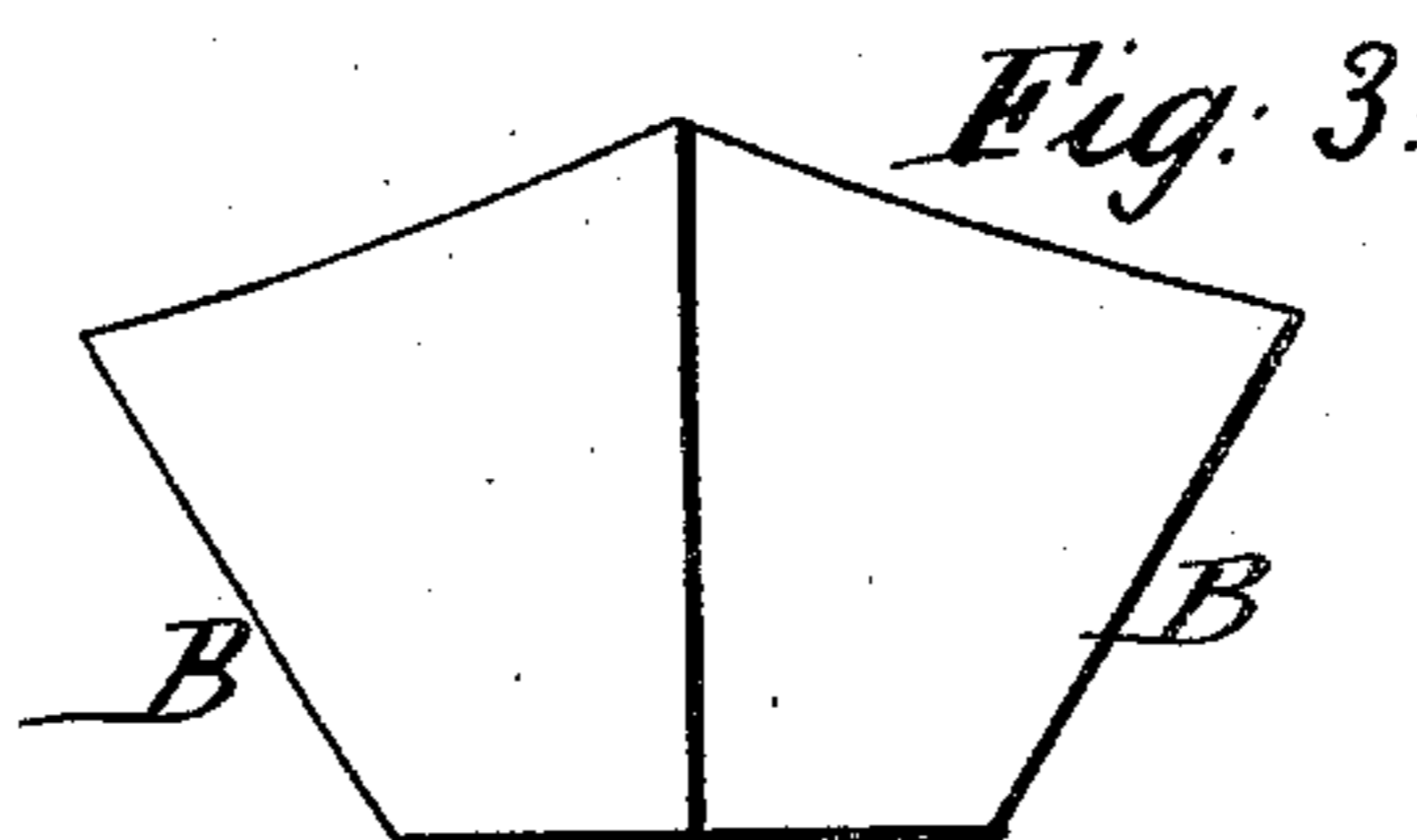
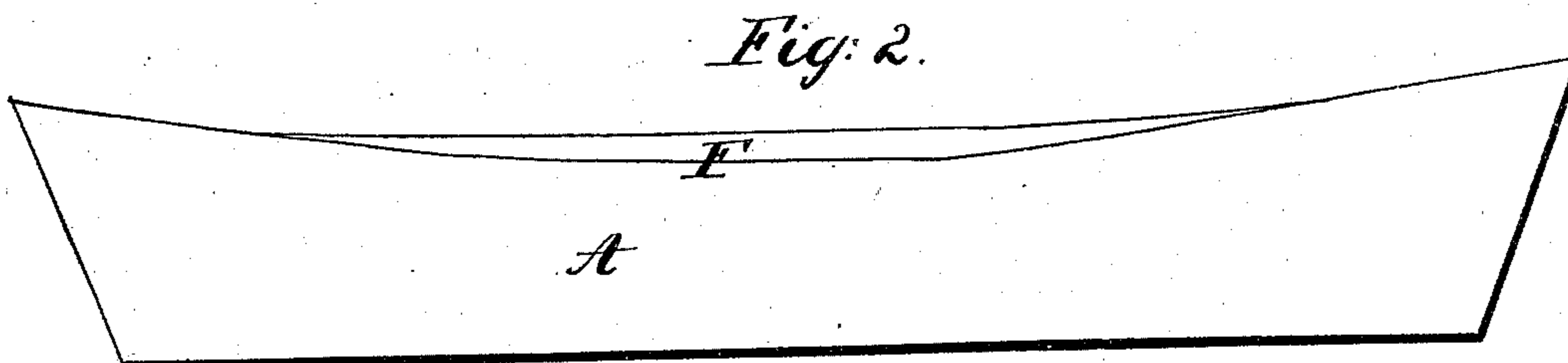
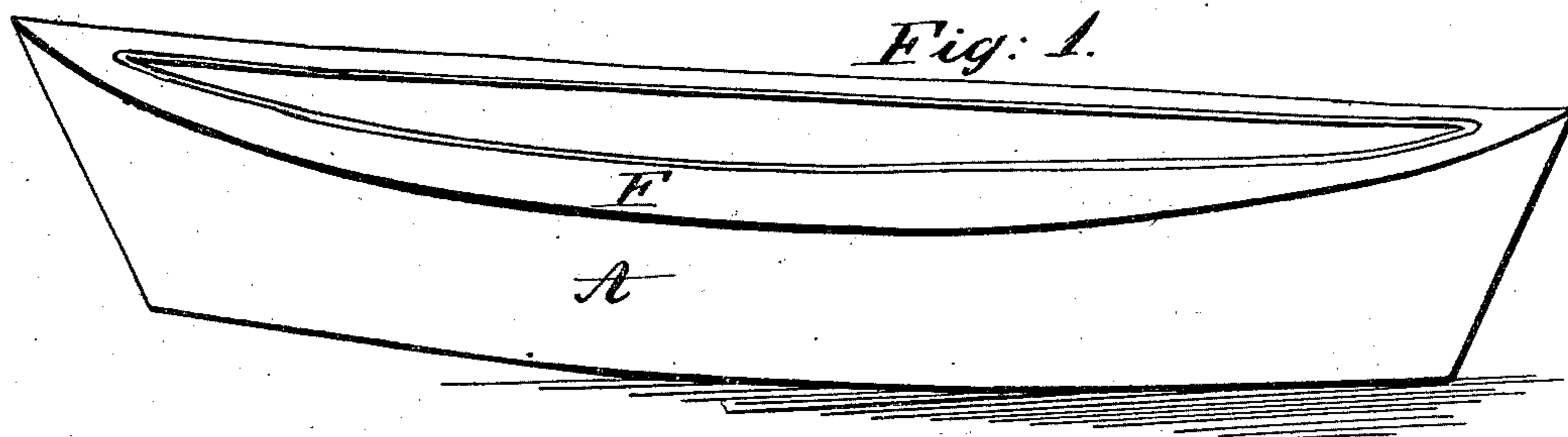


G. H. Tier Life Boat.

N^o 57,012.

Patented Aug 7, 1866.



Witnesses

W. H. Burridge
J. Holmes

Inventor.

George H. Tier

UNITED STATES PATENT OFFICE.

GEORGE H. TIER, OF FREMONT, OHIO.

IMPROVED LIFE-BOAT.

Specification forming part of Letters Patent No. 57,012, dated August 7, 1866.

To all whom it may concern:

Be it known that I, GEO. H. TIER, of Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Life-Boats; and I do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the boat. Fig. 2 is a side view of the same. Fig. 3 is an end view. Fig. 4 is a longitudinal section. Fig. 5 is a transverse section.

Like letters of reference refer to like parts in the several views.

Fig. 1 is a view of the boat, which is constructed of iron or other suitable material. The bottom is plain or flat, and may be made single or double, but is not made air-tight.

The sides of the boat at midships is an angle of about forty degrees with the bottom, and gradually lessens to a vertical line toward each end. The sides and their relative angle to the bottom are shown in Fig. 3, in which B is the sides, and C the bottom.

The inner sides of the boat D, Fig. 5, unlike the outer sides, are at right angles with the bottom. By this it will be observed that the sides form a triangular chamber, E, on each side of the boat, and which are subdivided into four compartments, *a a*, and made air-tight.

The deck or top F of the chamber is curved downward and outward, as shown in Fig. 5, also the deck-line from stem to stern curves downward, thereby making the extreme ends higher than the boat is at midships, as shown in Fig. 2.

The principle on which the buoyancy of the boat is based is the peculiar shape of the air-tight chamber, which gives a much larger amount of air in the upper part of the chamber than the lower in proportion to the amount of weight to be buoyed up. By this it will be seen that the greater weight is, by necessity, thrown below the water-line, which causes the boat at all times to float deck upward; hence the greater the weight below the water-line the greater is the force required to turn the keel upward, so that when the boat is filled with persons or with water the greater is the difficulty of capsizing, and consequently a greater safety to life is insured.

The outward and downward curving of the chamber-deck, as above described, serves as a protection against the shipping of water. So, also, the curving upward of the stem and stern in the manner as described serves a similar purpose.

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

1. The air-chambers E E, with the compartments *a a a*, as constructed and arranged with the sides B B, for the purpose and in the manner set forth.

2. The curving deck F, the bottom C, as arranged in combination with the curving sides B B, the sides D D, chambers E, in the manner and for the purpose substantially as described.

GEO. H. TIER.

Witnesses:

W. H. BURRIDGE,
E. E. WAITE.