(No Model.)

T. CLAPHAM.

LEE BOARD FOR SMALL VESSELS.

No. 346,642. Patented Aug. 3, 1886.

Fig: 1.

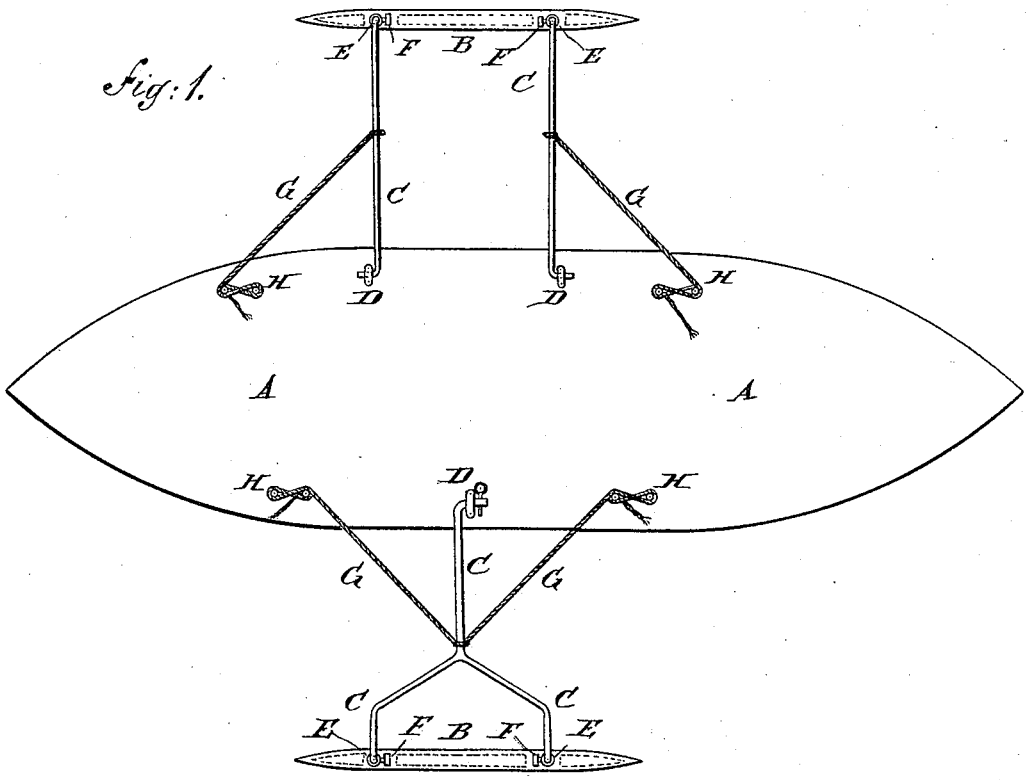


Fig: 2.

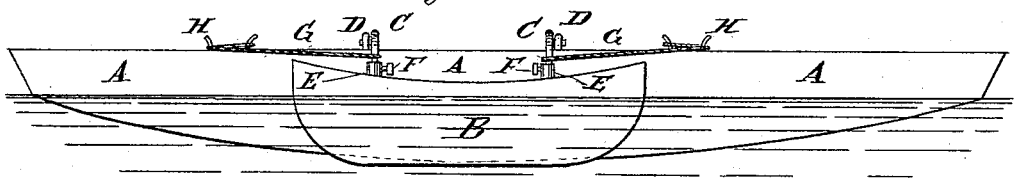
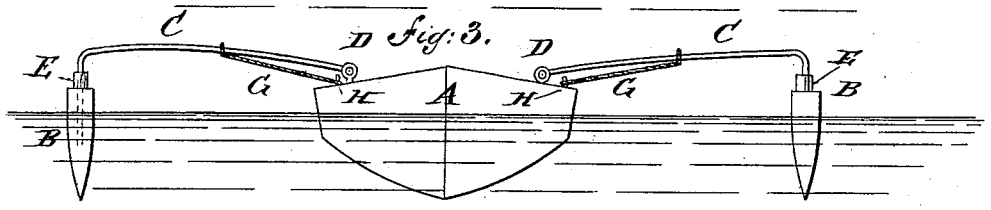


Fig: 3.



WITNESSES:

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THOMAS CLAPHAM, OF ROSLYN, NEW YORK.

LEE-BOARD FOR SMALL VESSELS.

SPECIFICATION forming part of Letters Patent No. 346,642, dated August 3, 1886.

Application filed March 30, 1886. Serial No. 197,132. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CLAPHAM, of Roslyn, in the county of Queens and State of New York, have invented a new and useful Improvement in Lee-Boards for Small Boats, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a boat to which my improvement has been applied. Fig. 2 is a side elevation of the same. Fig. 3 is a front elevation of the same.

The object of this invention is to provide a substitute for the center-boards, lee-boards, and movable keels heretofore used, and which shall be so constructed that no center-board box will be required, that the hull of the boat will have no opening through its bottom, that it can be readily and quickly attached and detached, that the boat will require no greater depth of water when the improvement is attached thereto, and that will allow the boat to be built lighter than boats with the ordinary attachments, while being stronger and less liable to leak.

The invention consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

A represents an ordinary boat.

B is a board of suitable length and breadth, and which can be placed at the weather side of the boat, at the lee side, or one at each side, as may be desired. The lower corners of the board B are rounded off, and the said board is tapered toward its lower edge and ends. The board B can be made of wood or other suitable material.

C are two arms, the inner ends of which are bent to one side, and are hooked into eyes D, attached to the boat A, or are hinged to the said boat by other suitable means. The arms C can be made of any desired length, and their outer ends are bent downward at right angles, and are inserted in tubes E, secured in the upper edge of the board B. The outer ends of the arms C are secured to the tubes E by set-screws F or other suitable means, or the outer ends of the arms C can be bolted or otherwise secured to the board B; but I prefer the construction first described, as it allows the arms C to be readily detached from the board B, for convenience in storage and transportation. If desired, a single arm C can be used; but in this case the outer end of the said arm should be forked, so that the board B will always be held parallel with the keel of the boat.

To the arms C are attached the outer ends of guys G, the inner ends of which are secured to the boat A by means of belaying-cleats H or other suitable means, so that the said arms C will always be held at right angles with the keel of the boat. With this construction the board B will have a free up-and-down movement, will be unaffected by the rocking of the boat, and will remain vertical, whether the boat A be heeling to the force of the wind or be standing plumb on an even keel, so that the said board will always be in the best position to secure a lateral grip or hold on the water to prevent leeway.

Openings may be formed in the top edge of the board B, as indicated by dotted lines in Fig. 1, to receive movable weights, to regulate the depth to which the said board sinks in the water.

I am aware that floats have been secured to the outer ends of horizontal arms that were rigidly connected to the vessel at their inner ends when extended out to their operative positions. Spiral springs were interposed between the arms and their securing-bolts to prevent sudden shocks by the waves from breaking the arms. In said prior construction the floats would not always be perpendicular, but would assume the same incline as the vessel, by reason of the arms being rigidly connected to the vessel, whereas the floats in my construction will always be in a vertical position, no matter how the boat may incline from side to side, because the inner ends of the rods are pivotally connected to the boat.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with a boat, of the rod or rods C, pivotally connected to the boat to swing in a vertical plane, the outer ends of the rod or rods being bent down at right angles, the board B, placed edgewise parallel with the boat, the tubes E on the upper edge of the board and receiving the downward-bent ends of the rod or rods, and the set-screws F, substantially as set forth.

THOMAS CLAPHAM.

Witnesses:
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