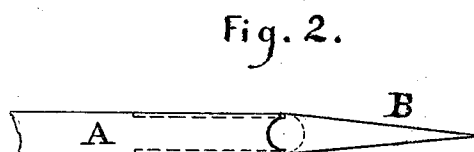
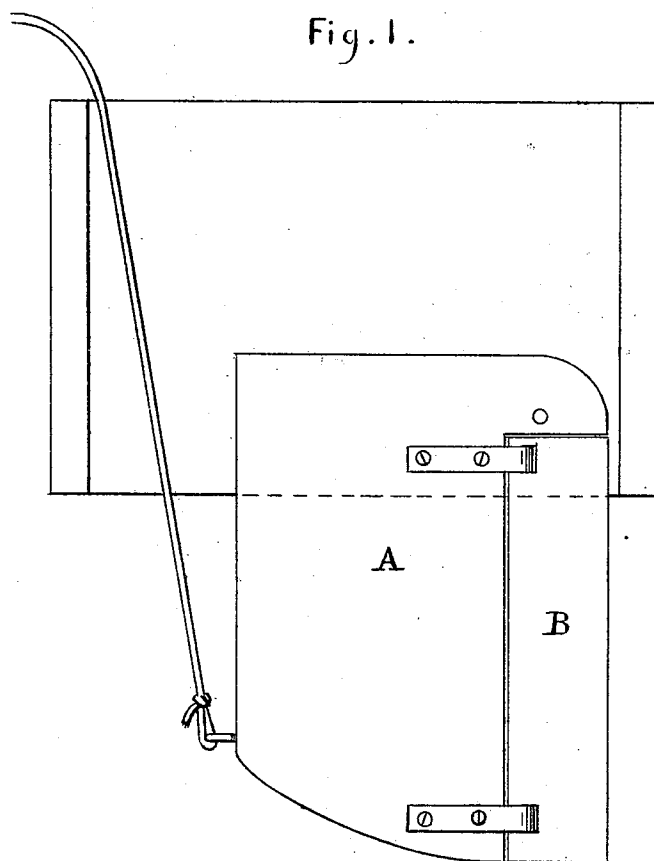


J. RAND.
Center-Boards for Vessels.

No. 151,431.

Patented May 26, 1874.



Witnesses.

H. A. Daniels
A. H. Parris

Jacob Rand, Inventor,
by Chas. S. Whitman
Attorney

UNITED STATES PATENT OFFICE.

JACOB RAND, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CENTER-BOARDS FOR VESSELS.

Specification forming part of Letters Patent No. 151,431, dated May 26, 1874; application filed November 18, 1873.

To all whom it may concern:

Be it known that I, JACOB RAND, of Boston, county of Suffolk and State of Massachusetts, have invented a Center-Board for Boats.

The following description, taken in connection with the accompanying plate of drawings, hereinafter referred to, forms a full and exact specification, wherein are set forth the nature and principles of the invention, by which the same may be distinguished from others of a similar class, together with such parts thereof as are claimed as new, and are desired to be secured by Letters Patent of the United States.

My invention relates to that class of appliances made use of in sailing-vessels for the purpose of preventing them from drifting to the leeward, known as center-boards; and the nature thereof consists in certain improvements in the construction of the same, hereinafter shown and described.

In the accompanying plate of drawings, in which corresponding parts are illustrated by similar letters, Figure 1 is a side elevation of a center-board with my invention applied thereto. Fig. 2 is a detached end view showing the method of combining the supplemental piece with the center-board.

The center-board A may be of the ordinary construction, and operated in any of the usual methods. It is provided with a supplemental piece, B, which has the form of an acute-angled prism. The said supplemental piece is hinged to the perpendicular edge of the center-board in such a manner that when the vessel is sailing on the wind the pressure of the water will force the supplemental part toward the windward, and cause the same to cut the water at an angle with the direction of the boat, thereby hauling the boat to the windward.

Having thus described the construction of my invention, I claim and desire to secure by Letters Patent of the United States—

In combination with the center-board, the supplemental piece, as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of November, 1873.

JACOB RAND.

Witnesses:

JOHN A. NICKERSON,
JOSEPH NICKERSON.