W. W. PALMER.

CENTER-BOARDS FOR VESSELS.

No. 193,829. Patented Aug. 7, 1877.

Fig. 1.

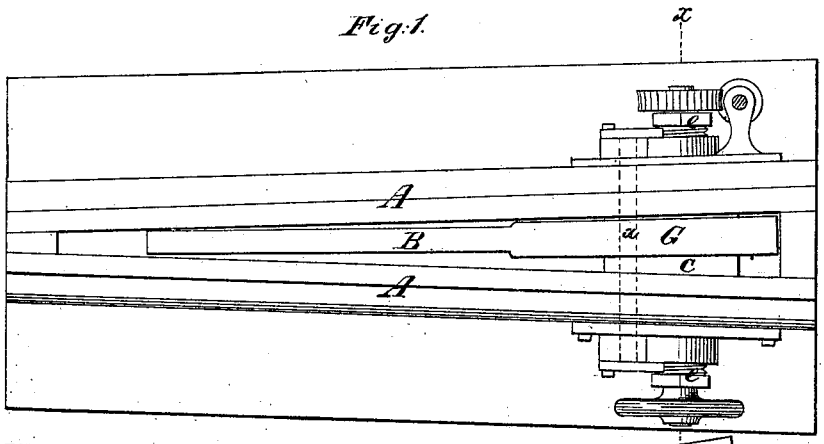


Fig. 2.

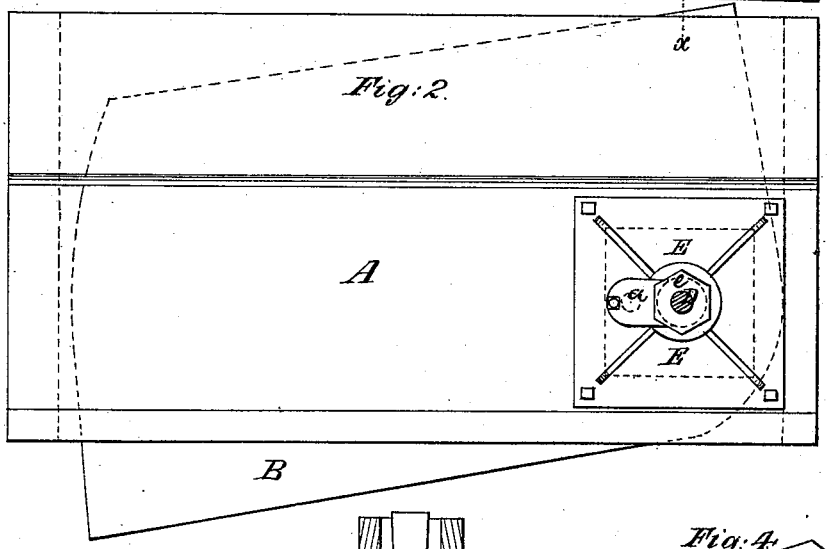


Fig. 3

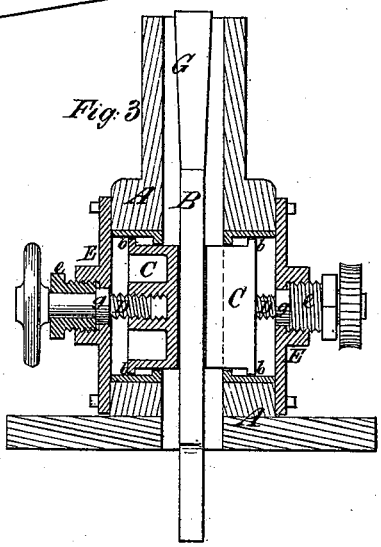
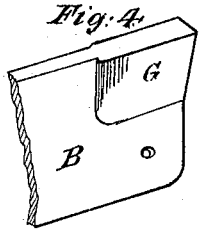


Fig. 4.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN CENTER-BOARDS FOR VESSELS.

Specification forming part of Letters Patent No. **193,829**, dated August 7, 1877; application filed May 17, 1877.

To all whom it may concern:

Be it known that I, WILLIAM W. PALMER, of Jersey City, State of New Jersey, have invented a Center-Board for Vessels, of which the following is a specification:

This invention has relation to center-boards which are generally designed for small vessels.

Prior to my invention center-boards have been constructed with a rear pivot, which allowed them to be self adjustable. They have also been constructed of two self-adjustable parts connected together by links.

The main object of my invention is to so construct a center-board and apply it in its box that the heel or bow portion is laterally adjustable, so that it can be set at will at any desired angle obliquely to the length of the keel, thus enabling me to hold a boat strong against the wind, as will be hereinafter explained.

Believing myself to have been the first who has ever provided means for adjusting a center-board laterally for the purpose above described, I now proceed to describe my invention.

In the annexed drawing, Figure 1 is a top view of my improved mode of adjusting center-boards. Fig. 2 is a side elevation, showing the center-board slightly depressed. Fig. 3 is a section taken in the vertical plane indicated by dotted line *x x* in Fig. 1. Fig. 4 is a perspective view, in section, of the re-enforcement of the front end of the center-board.

A designates the center-board box or case, which is constructed on the keelson in the usual well-known manner, open above and below, or, if desired, provided with a cap or cover on top of this box. A is tapered fore and aft, the widest space being forward, for a purpose hereinafter explained.

B designates a center-board, which is thickest at its front end, and which is pivoted on a rod, *a*, having its bearings in the two vertical sides of the box A.

This pivot-rod allows the center-board to vibrate vertically, and also to be vibrated laterally, so as to change its plane of direction longitudinally.

On opposite sides of the center-board, near its front end, are two follower-heads, C C, which are fitted in frames fixed into the sides of the box A, and suitably packed therein to prevent leakage. These followers may be rectangular, as shown, and they are flanged at *b b*, and tapped to receive screws D D, centrally applied, as shown.

The screws D D coincide with each other, and pass through stuffing-boxes *e e* on ribbed caps E E, bolted to the outside of the box A. Collars *g g* on the screws D D prevent endwise play thereof in the stuffing-boxes *e e*, and also aid in preventing leakage.

In practice the screws D D may be actuated either by hand-wheels on them, or worm screws and wheels may be used, so that the adjustment can be effected by a person on the deck of a vessel.

It will be seen from the above description that I am able to adjust the front end of the center-board laterally and set the board obliquely to the line of the keel at any desired angle with reference thereto; at the same time I do not in any manner interfere with the vertical adjustment of the board.

It will also be seen that I provide against leaking.

The thickness of the center-board is increased at the upper and front end, as indicated at G, Fig. 4, for the purpose of strengthening it against leverage when it is depressed at such end, and also stiffening it and enabling me to make it lighter than would be necessary if the board was of uniform thickness throughout.

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

1. A center-board adjustable laterally at its front end by means of followers C C applied on opposite sides of it, in combination with adjusting-screws D D, substantially as described.

2. In combination with the follower-blocks C C, a laterally-adjustable center-board, as described, and the adjusting-screws D D and packings for preventing leakage, as specified.

3. The tapered re-enforcement G, located at the upper front corner of a center-board, substantially as described.

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Witnesses:

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