

J. ESPALLA.

Center-Boards for Vessels.

No. 144,968.

Patented Nov. 25, 1873.

Fig 1.

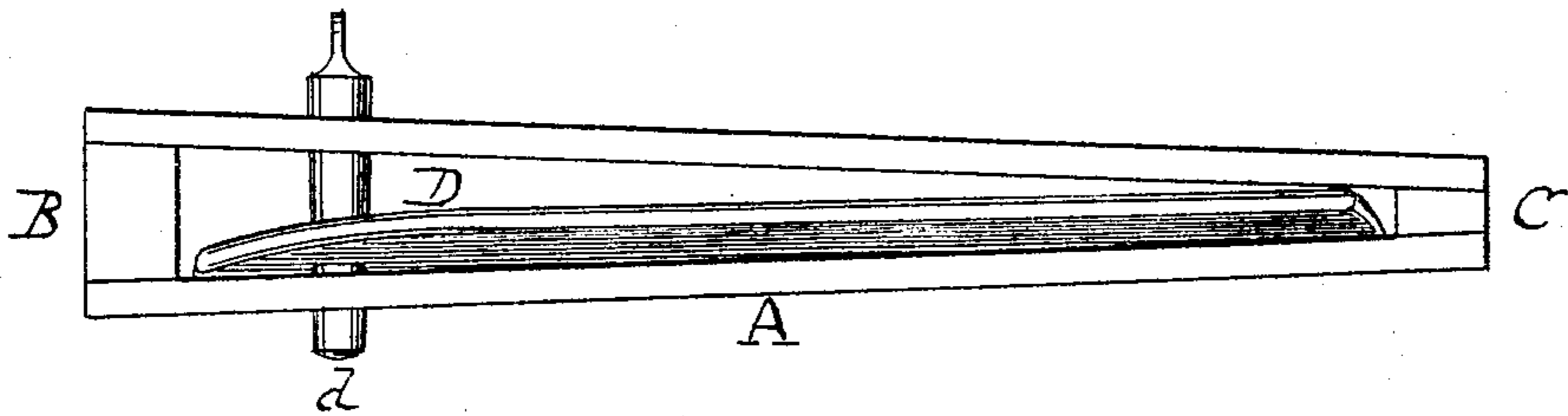


Fig 2.

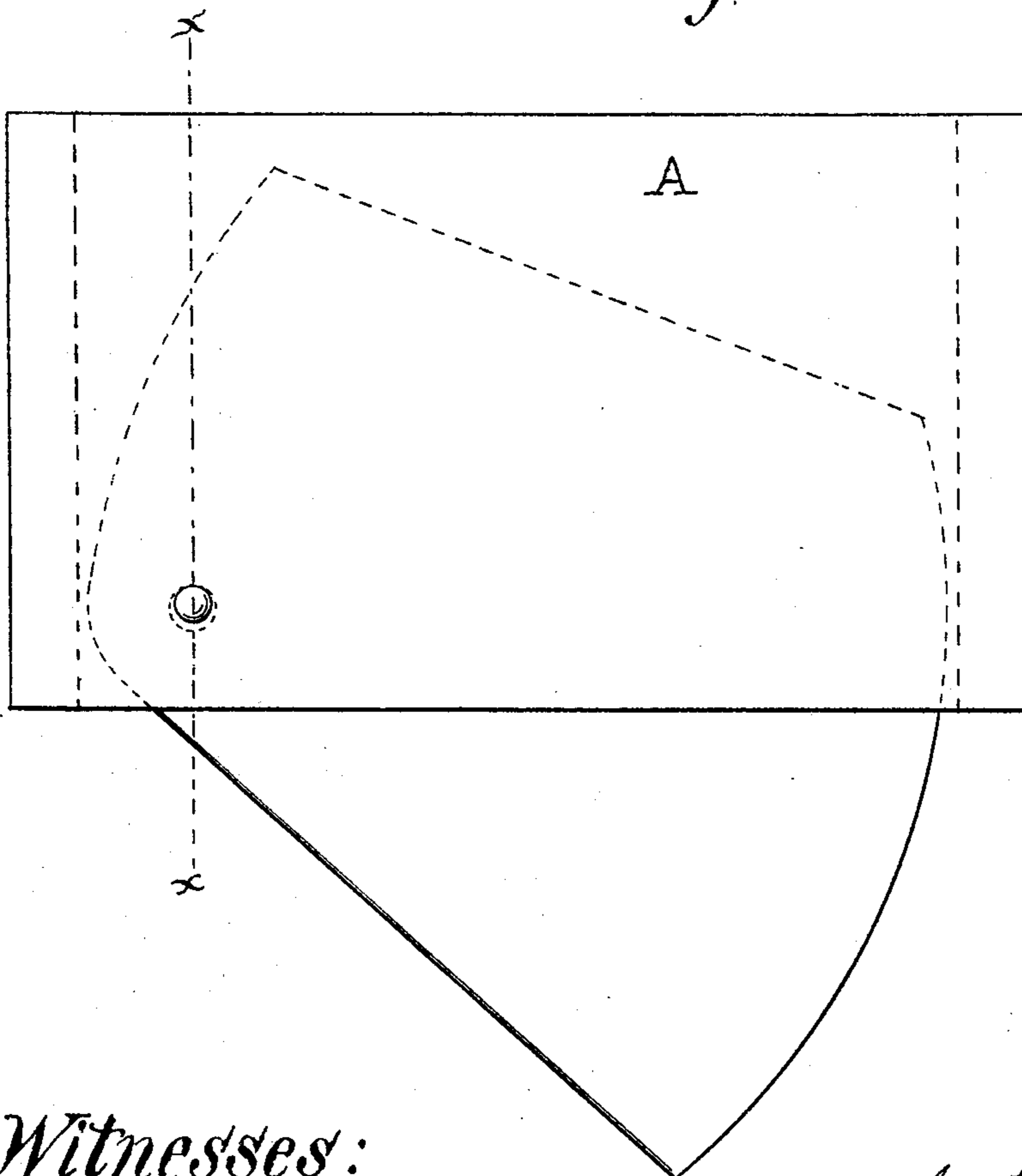
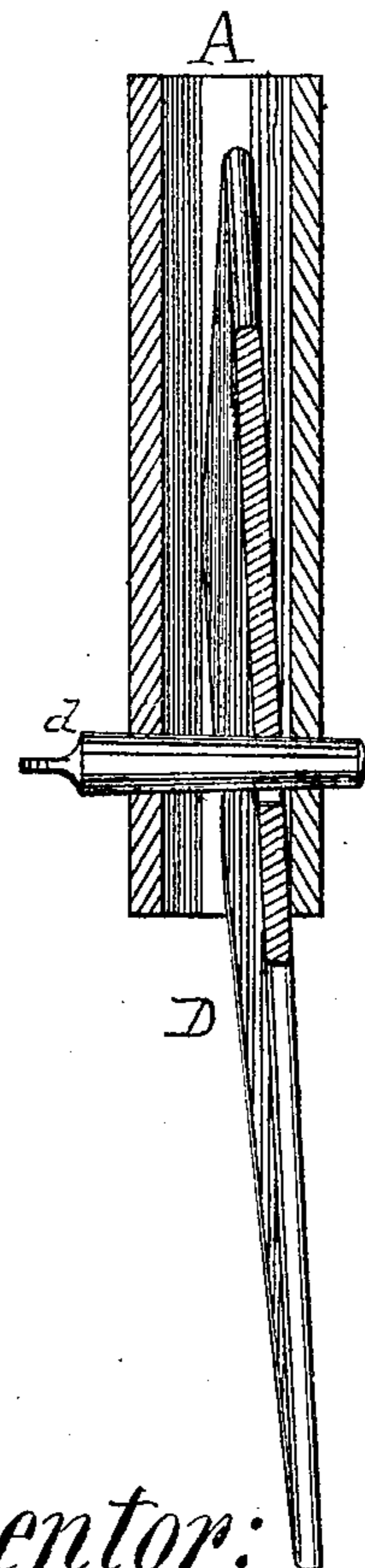


Fig 3.



Witnesses:

A. Gebner
H. W. von Hoffmann

Inventor:

Joseph Espalla
by his attys.

Cox and Cox

UNITED STATES PATENT OFFICE.

JOSEPH ESPALLA, OF MOBILE, ALABAMA.

IMPROVEMENT IN CENTER-BOARDS FOR VESSELS.

Specification forming part of Letters Patent No. **144,968**, dated November 25, 1873; application filed October 4, 1873.

To all whom it may concern:

Be it known that I, JOSEPH ESPALLA, of Mobile, Mobile county, Alabama, have made and invented a new and useful Improvement in Center-Cases for Sailing-Vessels, of which the following is a specification:

The invention relates to center-cases for sailing-vessels. It consists in providing a case the forward end of which is wider than the after, and in pivoting the board therein in such a manner that the board will assume a position diagonal to the keel, and at the same time swerve to the leeward when the vessel is being made to seek the wind, as will more specifically appear hereinafter.

By so arranging a center-case a vessel may be brought considerably closer to windward than by means of the ordinary case now generally in use. This is to be attributed to the fact that as the vessel falls off to the leeward the forward end of the center-board is pressed in an opposite direction, whereby the vessel is held in position several points nearer the wind than she would be if both ends of the case were of the same width, and both ends of the board consequently remained in the same vertical plane in line with the keel, while the swerving of the board out of the perpendicular increases the planes of resistance, which will also appear more definitely hereinafter.

In the accompanying drawings, Figure 1 is a bottom view of a center-case embodying my invention; and Figs. 2 and 3 are views showing the position of the center-board when the vessel is being made to seek the wind, the latter being a section upon the line *x x*.

A in the drawings is the case, which is constructed with the forward end B from one and a half to perhaps three or more times as wide as the after end C. D is the center-board, which is of usual construction, turning on the pin *d*, and raised or lowered by means of a rope, in the usual manner. There is no peculiarity in the construction of the case other

than that above described; but it is essential to the successful operation of the invention that the board D be so pivoted that it will turn freely on the pivot *d*, and swing or swerve laterally, so that the board will readily assume the position shown in Fig. 3 when the ship is tacking. It being desired to bring the ship nearer the wind, the board D is lowered, its forward end assuming a position that holds the ship toward the wind, while the weight of the ship swerves the board out of the perpendicular to leeward, thus preventing the ship from drifting out of her course.

The action of the board, when arranged as above mentioned, is purely automatic. It will adjust itself naturally and readily when the ship is brought about, and will hold her to her course with great certainty. The weight of the vessel and her tendency to shun the wind will keep the board in position, which, while effecting the above results, will prevent the water from splashing up into the case, as shown in the figure last above mentioned.

I am aware that center-cases having their forward end wider than their after have long been known, and I do not claim such a case as my invention; but

What I do claim as new, and desire to secure by Letters Patent, is—

A center-case the forward end of which is wider than the after, provided with a center-board so constructed and pivoted that it will swing and swerve automatically, in the manner shown and described.

In testimony that I claim the foregoing improvement in center-cases for sailing-vessels, as above described, I have hereunto set my hand and seal this 15th day of September, 1873.

JOSEPH ESPALLA. [L. S.]

Witnesses:

ARCHIE CAMPBELL,
JOHN MCGUIRE.