

(No Model.)

A. STOVER.
CENTERBOARD.

No. 535,148.

Patented Mar. 5, 1895.

Fig. 1.

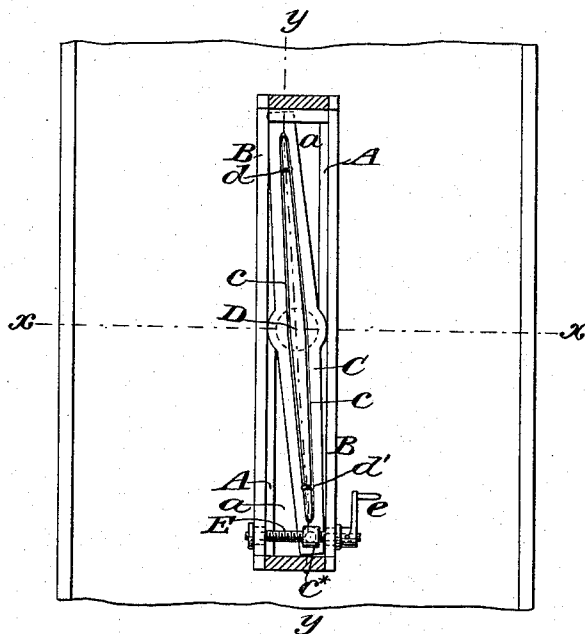


Fig. 2.

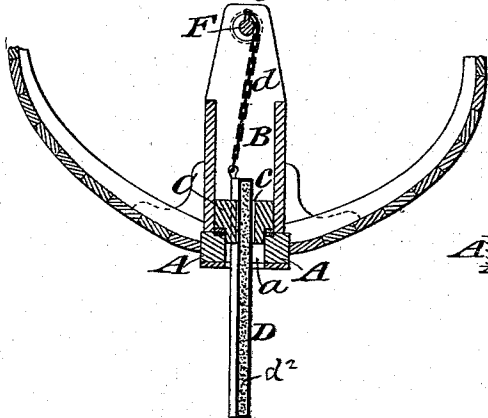
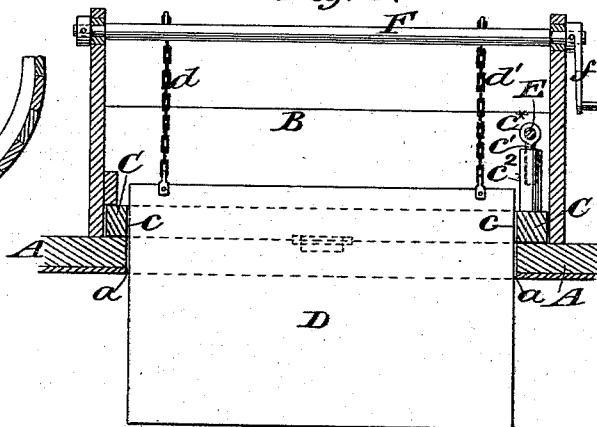


Fig. 3.



Witnesses:

O. Sundgren
Fred Hayes

Inventor:
Athens Stover
by attorneys

Brown & Sheward

UNITED STATES PATENT OFFICE.

ATKINS STOVER, OF BROOKLYN, NEW YORK.

CENTERBOARD.

SPECIFICATION forming part of Letters Patent No. 535,148, dated March 5, 1895.

Application filed June 2, 1894. Serial No. 513,251. (No model.)

To all whom it may concern:

Be it known that I, ATKINS STOVER, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful
5 Improvement in Centerboards, of which the following is a specification.

My invention relates to an improvement in centerboards for sailing craft in which provision is made for raising and lowering the
10 board at pleasure and for adjusting it laterally at an angle oblique to the vertical plane through the longitudinal axis of the keel.

A practical embodiment of my invention is represented in the accompanying drawings,
15 in which—

Figure 1 is a top plan view of the center-board, center board trunk and portions of the bottom of the boat in immediate proximity thereto. Fig. 2 is a transverse vertical section,
20 through line x, x of Fig. 1, and Fig. 3 is a longitudinal vertical section through line y, y of Fig. 1.

The keel of the boat is denoted by A. It is provided, as is usual, in connection with center-board craft, with an elongated opening a therethrough but, in the present instance, instead of making the opening a of sufficient width to permit the center-board to loosely rise and fall through it; it is made wider for
30 the purpose of permitting the board to swing laterally to adjust itself at different angles to the keel. On the keel the center-board trunk B is built and the lower portion of the trunk is made sufficiently wide to receive thereon a
35 swinging piece C provided with an opening c therethrough, adapted to loosely fit the center-board D. The piece C is preferably formed of some heavy material, such for example as lead or composition metal, and is sufficiently
40 deep to afford a firm bearing for the center-board to hold it in the desired lateral adjustment against any liability of its wrenching itself out of position. The piece C when made of such heavy material, performs at the same
45 time the double function of forming a strong and sufficient holder for the center-board and serves as effective ballast because of its location low down and resting on the keel. The piece C also keeps the slot a partially closed
50 to prevent the water from rushing into the trunk and impeding the speed of the boat. The piece C gradually tapers from its broader

central portion toward its ends, so that it may rock or swing laterally upon its central portion as a pivot within the broadened lower
55 portion of the center-board trunk to carry with it the center-board D into such lateral adjustment as is desired. For the purpose of rocking or swinging the said piece laterally to adjust the center-board either in line with
60 the longitudinal axis of the keel, or obliquely thereto, I provide in the present instance, as one feasible means of accomplishing it, the said piece C with a nut c^* loosely engaged therewith, in the present instance by means
65 of inserting the stem c' on the end of the up-rising arm c^2 fixed to the end of the piece C and mount a screw E transversely in the center-board trunk to engage with the said nut and provided with an operating crank e so
70 that when the screw is turned in one direction, it will cause the nut to travel thereon to swing the piece C in one direction and when the screw is turned in the opposite direction, it will cause the nut to travel thereon and
75 swing the piece C in the opposite direction.

The center-board D is here shown as slightly oval in horizontal section for the purpose of making it stiff and it is elevated by means of a pair of flexible connections d, d' which extend up and wind about the shaft F journaled
80 at the top of the center-board trunk and provided with an operating crank f . The weight of the center-board is sufficient to cause it to drop under the influence of gravity when the
85 connections d, d' are slackened.

The center-board itself consists of a hollow casing provided with a filling d^2 of lead or other suitable heavy material.

In operation, when the boat is running free,
90 the center-board may be lowered to the desired extent in a plane corresponding to the longitudinal axis of the keel; but, when the boat is sailing close-hauled and working to the windward, the center-board may be turned
95 obliquely to the longitudinal axis of the keel so as to cause its forward edge to point more or less to the windward of the longitudinal axis of the keel. As the boat comes about to stand on another tack, the center-board may
100 be swung laterally, causing its forward end to point on the opposite side of the longitudinal axis of the keel and to the windward thereof.

The amount of obliquity which it may be found feasible to give the center-board will be a matter of judgment, but in any event, the tendency will be to cause the boat to creep to the windward, effectually overcoming such loss as it may tend to make to the leeward.

It is obvious that slight changes might be resorted to in the form and arrangement of the several parts without departing from the spirit and scope of my invention. Hence I do not wish to limit myself strictly to the structure herein set forth, but

What I claim is—

The combination with the elongated center-board trunk, of a center-board supporting

piece mounted within the trunk and consisting of a central broadened portion forming a pivot and narrower portions extending in opposite directions from the broadened portion, the centerboard mounted in vertical adjustment in the said supporting piece, means for swinging the said supporting piece laterally on its central portion as a pivot and means for vertically adjusting the centerboard, substantially as set forth.

ATKINS STOVER.

Witnesses:

IRENE B. DECKER,
FREDK. HAYNES.