(No Model.)

G. S. BELL.

CENTER BOARD FOR VESSELS.

No. 277,406. Patented May 8, 1883.

Fig. 1.

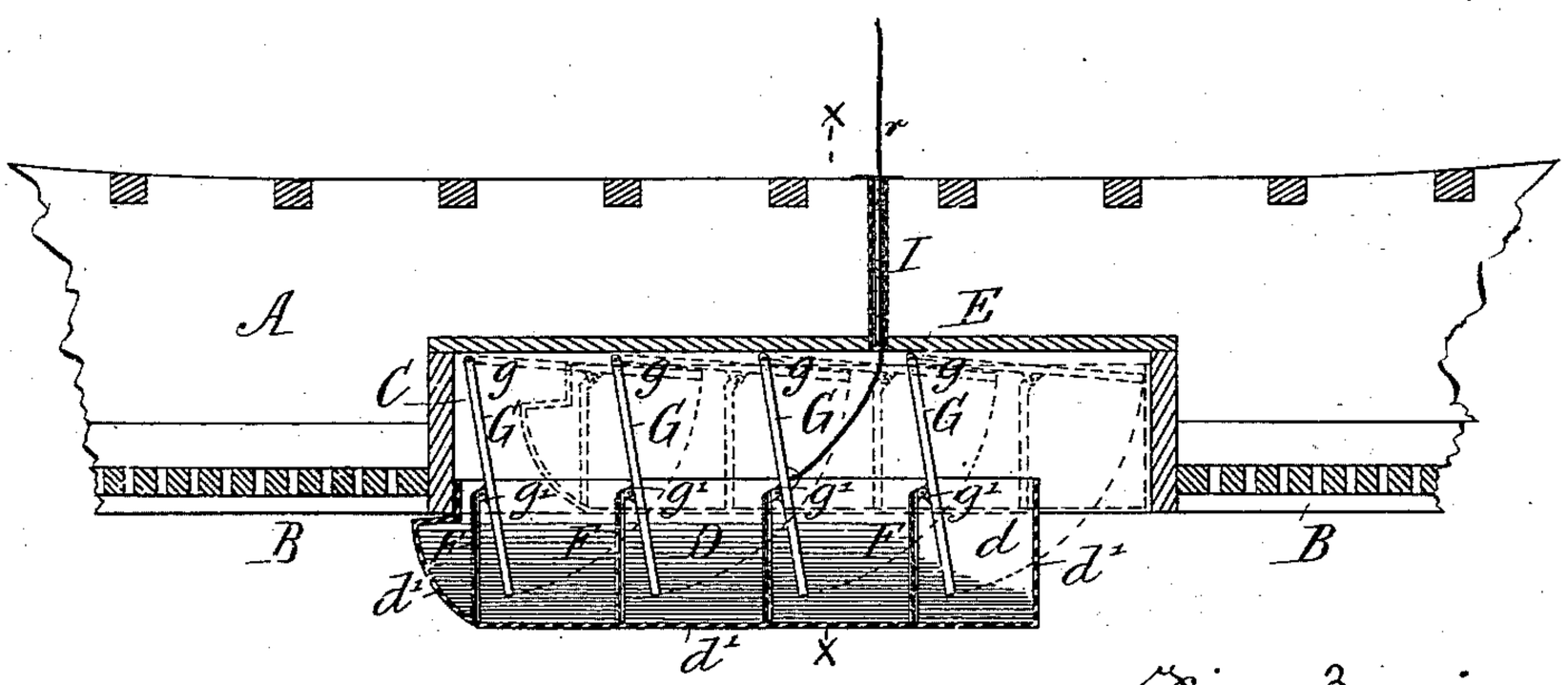


Fig. 2.

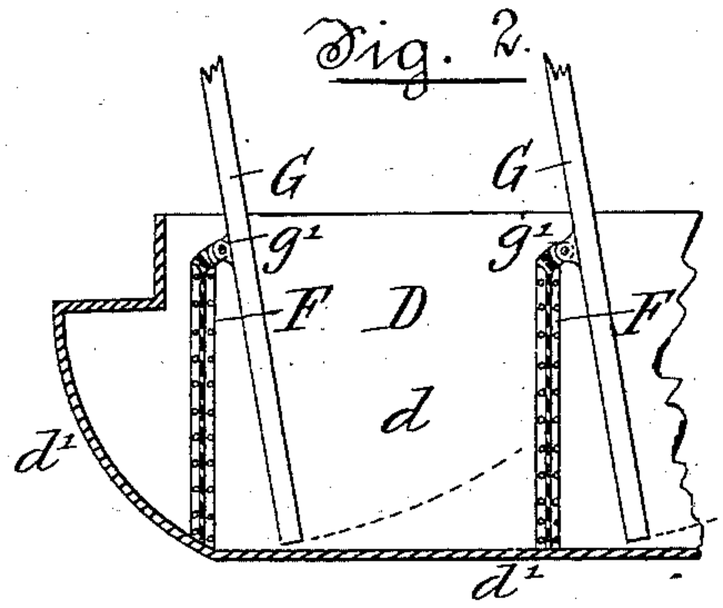
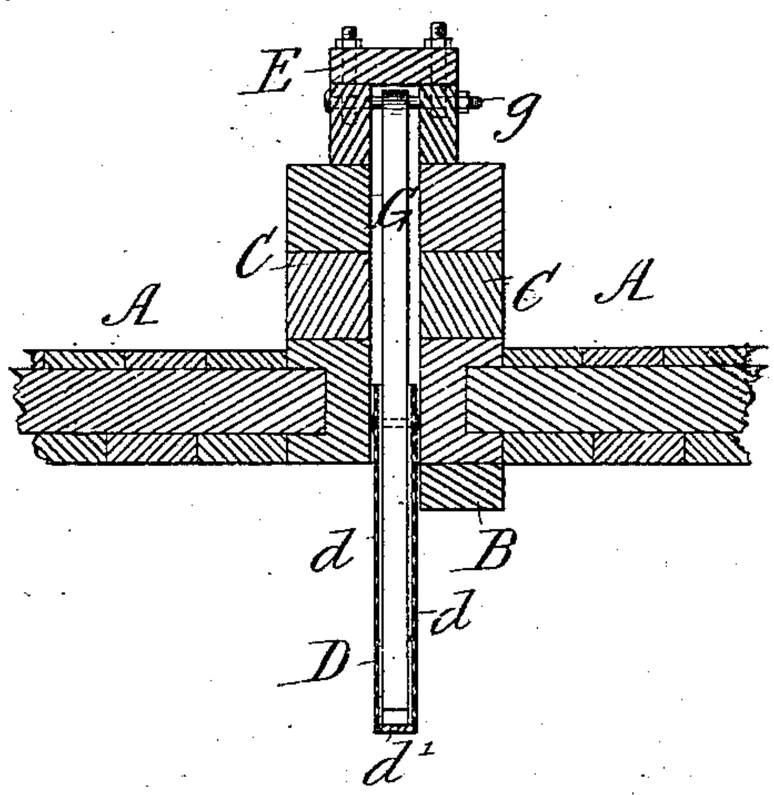


Fig. 3.



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CENTER-BOARD FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 277,406, dated May 8, 1883.

Application filed March 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. BELL, of South Norwalk, in the county of Fairfield and State of Connecticut, have invented a certain new and useful Improvement in Center-Boards for Vessels; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention has reference to that kind of a center-board which works on a series of parallel radius-bars, and which is thereby kept parallel with the keel of the vessel.

The object of my invention is to give greater stability to such a center-board when lowered; and to this end my improvement consists in the prolongation of the said parallel radius-bars beyond and below their connection with the board, which is made double or hollow for the reception within it of the said prolonged portions of the said bars, which are thereby made to brace or stiffen the board. By means of this prolongation of the parallel radius-bars I am enabled to use a center-board of less depth than those heretofore constructed, and one which can be almost wholly exposed to the water, and, owing to the less depth of board, I am enabled to reduce the height of the trunk.

In the drawings hereunto annexed, similar letters of reference indicate like parts; and Figure 1 represents a longitudinal section of part of a vessel, showing the board lowered in the water for use. Fig. 2 is an enlarged longitudinal sectional view of part of my center-board, showing the connections of the parallel radius-bars. Fig. 3 is a transverse section corresponding with Fig. 2, taken through line *x x*, Fig. 1.

A designates part of the hull of a vessel, B its keel, and C the trunk which contains the center-board D, which is furnished with a cap, E. The center-board D is hollow, and is represented as made up of iron plates *d d*, having interposed between them double T-irons F, to which they are riveted.

A series of parallel radius-bars, G, are swung upon bolts *g*, which bolts pass through the sides of the trunk, and are secured therein by means of nuts. These parallel radius-bars extend downward and into the hollow space of the center-board, and are provided at or near their center with lugs or projections *g'*, which fit between and are pivoted to corresponding lugs on the T-irons F. These radius-bars may have their pivotal connection with the center-board formed in any other suitable manner.

The openings between the lower and side edges of the metallic plates *d d* may be closed or covered, if desired, by plates *d' d'*.

It will be seen that the parallel radius-bars G G extend a considerable distance within the hollow center-board D, and are made to fit the same snugly, so that when the board is lowered, as shown in the drawings, these prolonged or extended parts of the parallel radius-bars will hold the center-board firm against the water.

Extending from the deck, and inserted into the cap E, is a pipe or trunk, I, through which the rope *r* or other means for raising the center-board is passed, and is attached to one of the parallel radius-bars, or to the top edge of the center-board, at or near its center, and may be worked by a winch or other ordinary purchase commonly used for center-boards.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is as follows:

The combination, with the hollow center-board, of the parallel radius-bars pivoted to the said board and the housing thereof, and prolonged downward and within the hollow center-board beyond their pivotal connection therewith, substantially as and for the purposes described.

GEORGE S. BELL.

Witnesses:
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