(No Model.) 2 Sheets—Sheet 1.

E. MODERSITZKI.

SHIP.

No. 587,286. Patented July 27, 1897.

Fig. 1.

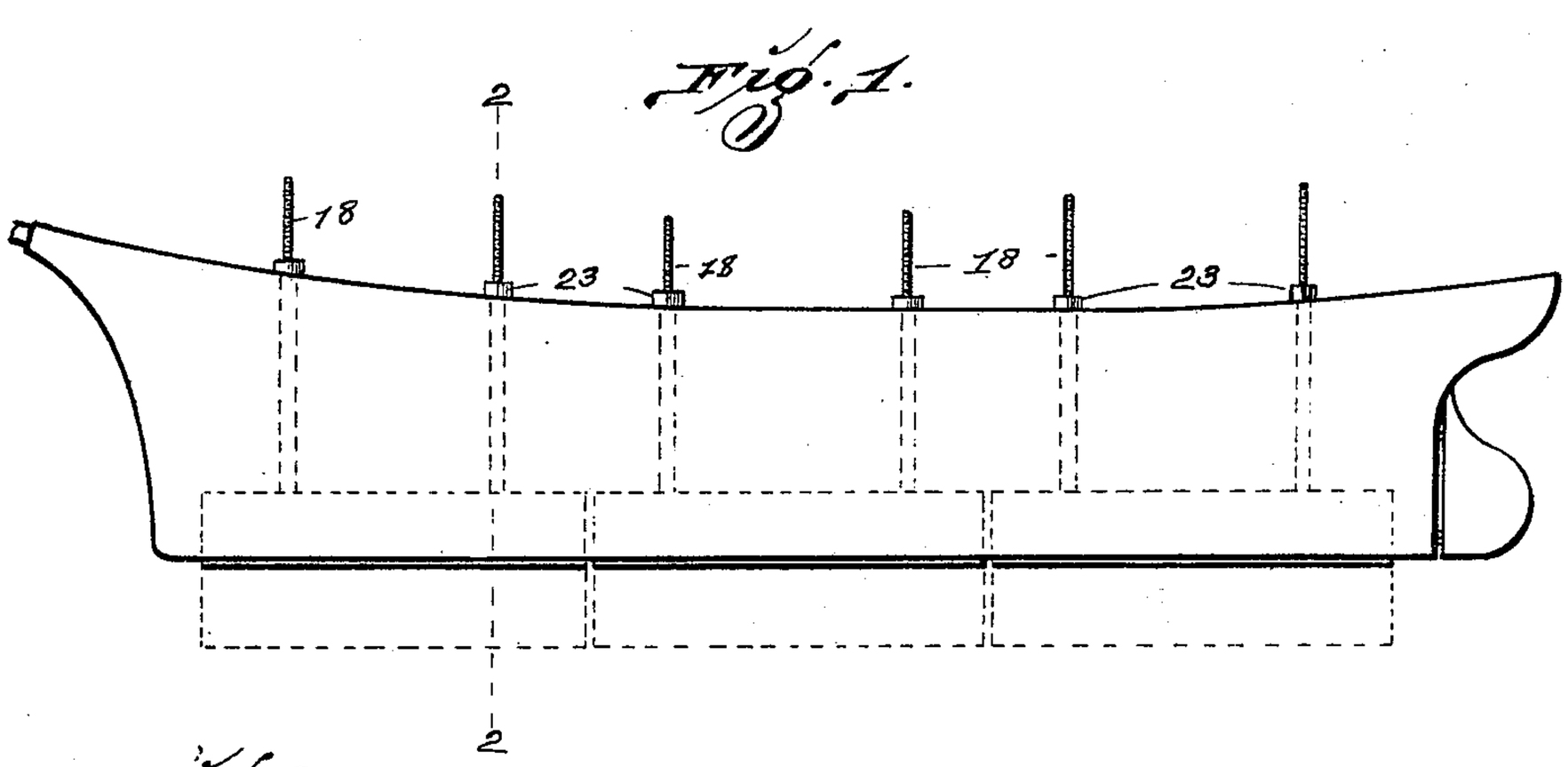


Fig. 2.

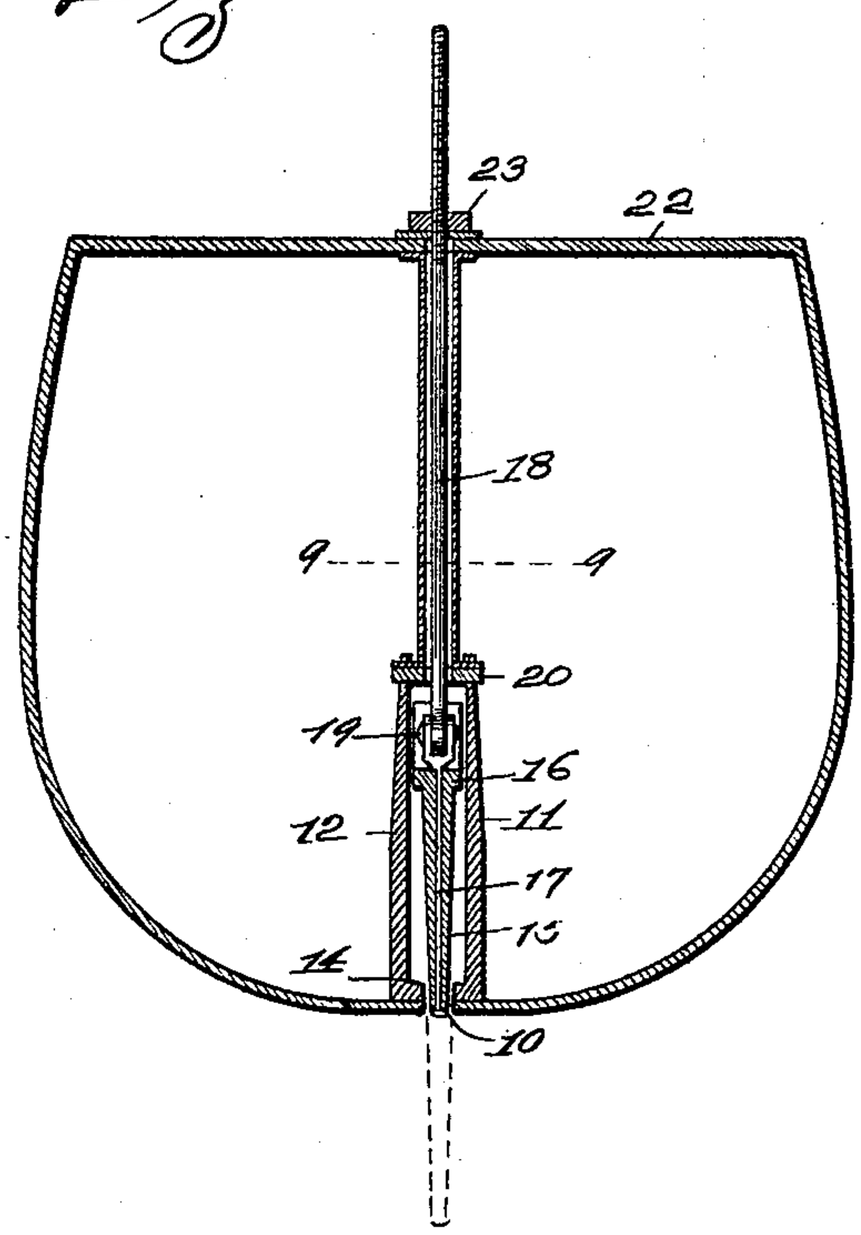
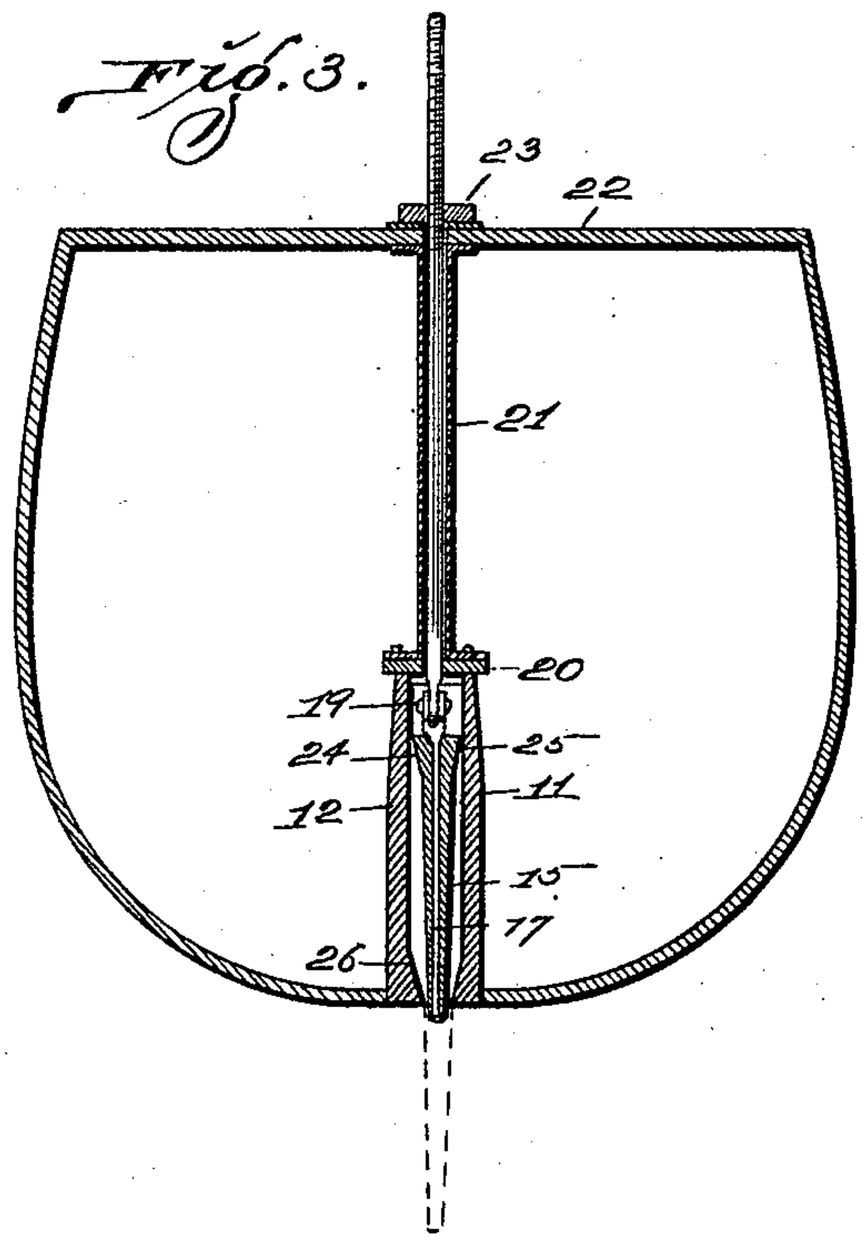


Fig. 3.



Witnesses:
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S. G. Wells.

Inventor:—
Ernst Modersitzki.
By Higdon, Longan & Higdon
Att'ys.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

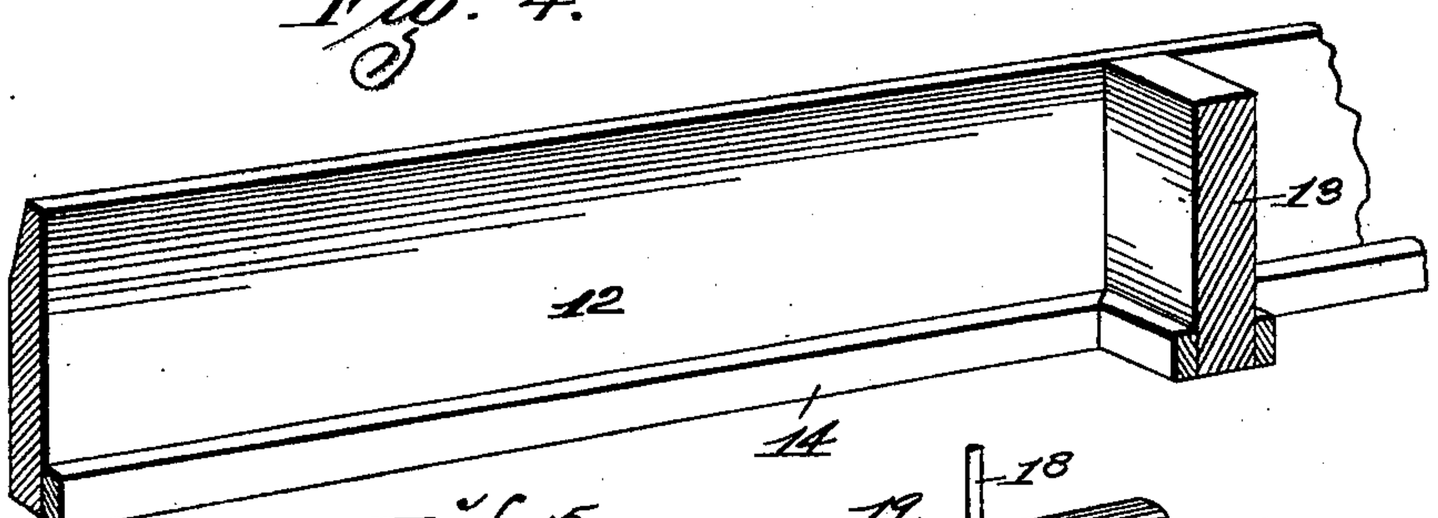


Fig. 5

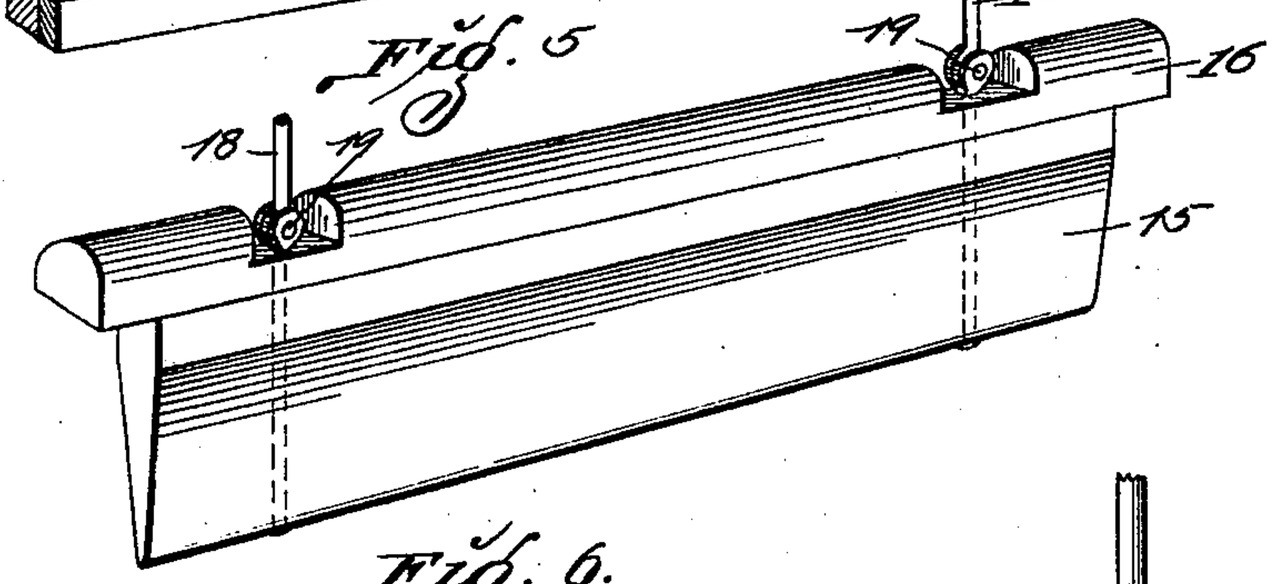


Fig. 6.

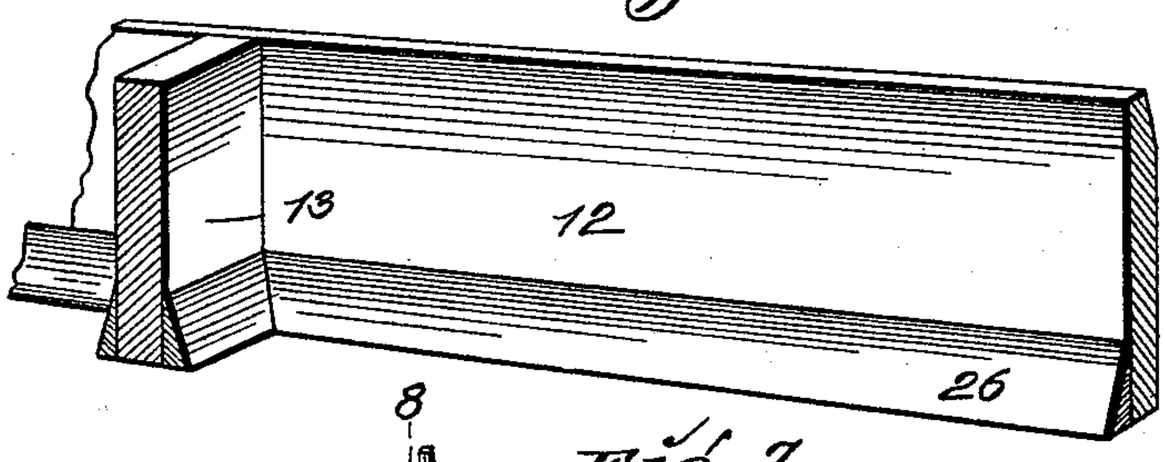


Fig. 7.

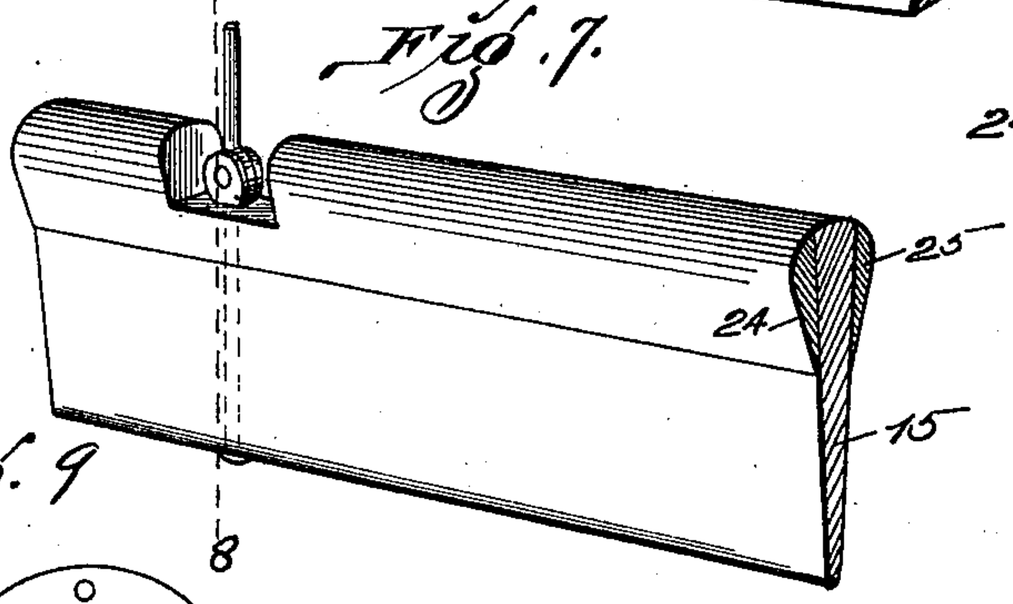
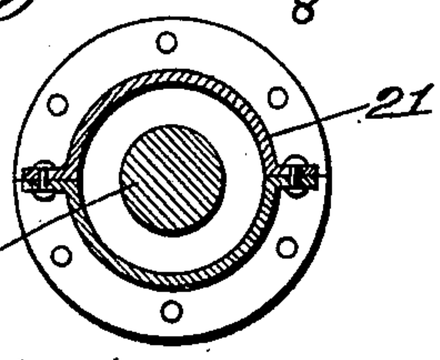


Fig. 9



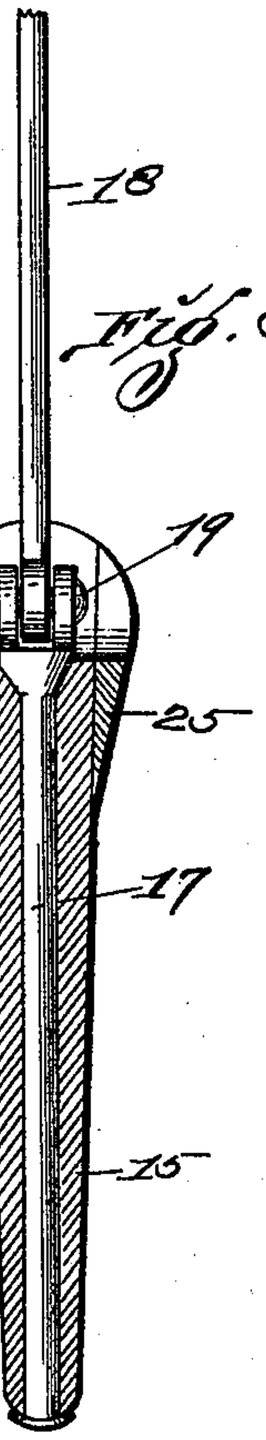


Fig. 8.

Attest
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Inventor:-
Ernst Modersitzki:-
By Higdon, Longan & Higdon
Attys.

UNITED STATES PATENT OFFICE.

ERNST MODERSITZKI, OF ST. LOUIS, MISSOURI.

SHIP.

SPECIFICATION forming part of Letters Patent No. 587,286, dated July 27, 1897.

Application filed March 1, 1897. Serial No. 625,547. (No model.)

To all whom it may concern:

Be it known that I, ERNST MODERSITZKI, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Ships, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to adjustable keels or centerboards; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

Figure 1 is a side elevation of a ship employing my adjustable keel or centerboard, the keel or centerboard being shown in dotted lines. Fig. 2 is a transverse sectional view taken approximately on the line 2 2 of Fig. 1. Fig. 3 is a modified form of the construction shown in Fig. 2. Fig. 4 is a view in perspective of one wall of the housing for the keel or centerboard, parts being broken away and parts being shown in section. Fig. 5 is a view in perspective of a section of the keel or centerboard. Fig. 6 is a view in perspective, showing a modification of the construction shown in Fig. 4. Fig. 7 is a view in perspective, showing a modified form of the keel. Fig. 8 is a transverse sectional view of a modified form of keel or centerboard and taken approximately on the line 8 8 of Fig. 7. Fig. 9 is a horizontal sectional view taken approximately on the line 9 9 of Fig. 2.

My improved keel or centerboard is preferably constructed in sections when it is to be used in large boats. Openings or slots 10 are formed in the bottom of the hull, as shown in Figs. 2 and 3, said openings extending in a line longitudinally of the hull. The housing-wall 11 is attached to and extends upwardly from the bottom of the hull and upon one side of the slots 10, and the housing-wall 12 is mounted upon the opposite side of said slots 10. The transverse walls 13 are placed between and attached to the walls 11 and 12. The flanges or ribs 14 project toward each other from the lower edges of the walls 11 and 12 and also from the lower edges of the transverse walls 13, the upper surfaces of said ribs 14 being substantially horizontal.

Each section of the keel or centerboard consists of the vertical portion 15, which is of a suitable length to operate between the walls 11 and 12 and between the transverse walls 13. The portion 15 of the keel is wedge-shaped in cross-section, and the portion 16 is attached to the upper or thick edge of the portion 15, said portion 16 being slightly longer than the portion 15 and wide enough to form projections upon each side of the portion 15, and said projections engage the upper surfaces of the ribs 14 when the keel is in its lowered position.

The rods 17 are inserted through the portions 16 and the portions 15, and the upper ends of said rods are bifurcated and horizontally perforated to receive the lower ends of the rods 18, and the pins 19 are inserted through said rods 17 and through the rods 18, as required, to form a hinge-joint. The plates 20 are placed in horizontal positions upon the upper edges of the walls 11 and 12, as required, to connect said walls, and the tubes 21 are mounted in vertical positions between the plates 20 and the deck 22. The rods 18 are inserted through the plates 20, then upwardly through the tubes 21, then through the deck 22, and the nuts 23 are screw-seated upon the upper ends of said rods above the deck.

In the modification shown in Figs. 3, 6, 7, and 8 the wedge-shaped ribs 24 and 25 are placed upon opposite sides and at the upper ends of the portions 15, and the portions 16 are omitted. The flanges 26 are attached to the inner faces and lower edges of the walls 11 and 12, the upper inner faces of said flanges being inclined to receive the inclined outer surfaces of the ribs 24 and 25.

When the boat is in shallow water, the nuts 23 are operated to raise the keel or centerboard to positions within the housing-walls 11 and 12, as shown in Figs. 2 and 3. When the boat returns to deep water, the nuts 23 are operated to lower the keel or centerboard to the positions indicated in dotted lines in Figs. 1, 2, and 3.

I claim—

In a ship, the combination with a hull having the longitudinally-extending slots 10 formed in its bottom, the housing-wall 11 extending upwardly from said bottom and upon one side of said slots, the housing-wall 12 extending upwardly from said bottom and upon the opposite side of said slots, the transverse walls

13 connecting the housing-walls 11 and 12 a suitable distance apart, the centerboard operating through the slots and between the housing-walls 11 and 12 and between the transverse walls 13, the plates 20 placed in horizontal positions and connecting the upper edges of the walls 11 and 12, the tubes 21 mounted in vertical positions between the plates 20 and the deck of the hull, the rods 18 operating through the plates 20, through the tubes 21 and through the deck and having a hinge connection with the centerboard, the upper ends of said rods 18 being screw-threaded for a considerable distance, and nuts upon the screw-threaded ends of said rods and above the deck as required to raise and lower the centerboards, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

ERNST MODERSITZKI.

Witnesses:
EDWARD E. LONGAN,
MAUD GRIFFIN.