

(No Model.)

R. SCHAUM.

BALANCING DEVICE FOR VESSELS.

No. 308,435.

Patented Nov. 25, 1884.

Fig: 1.

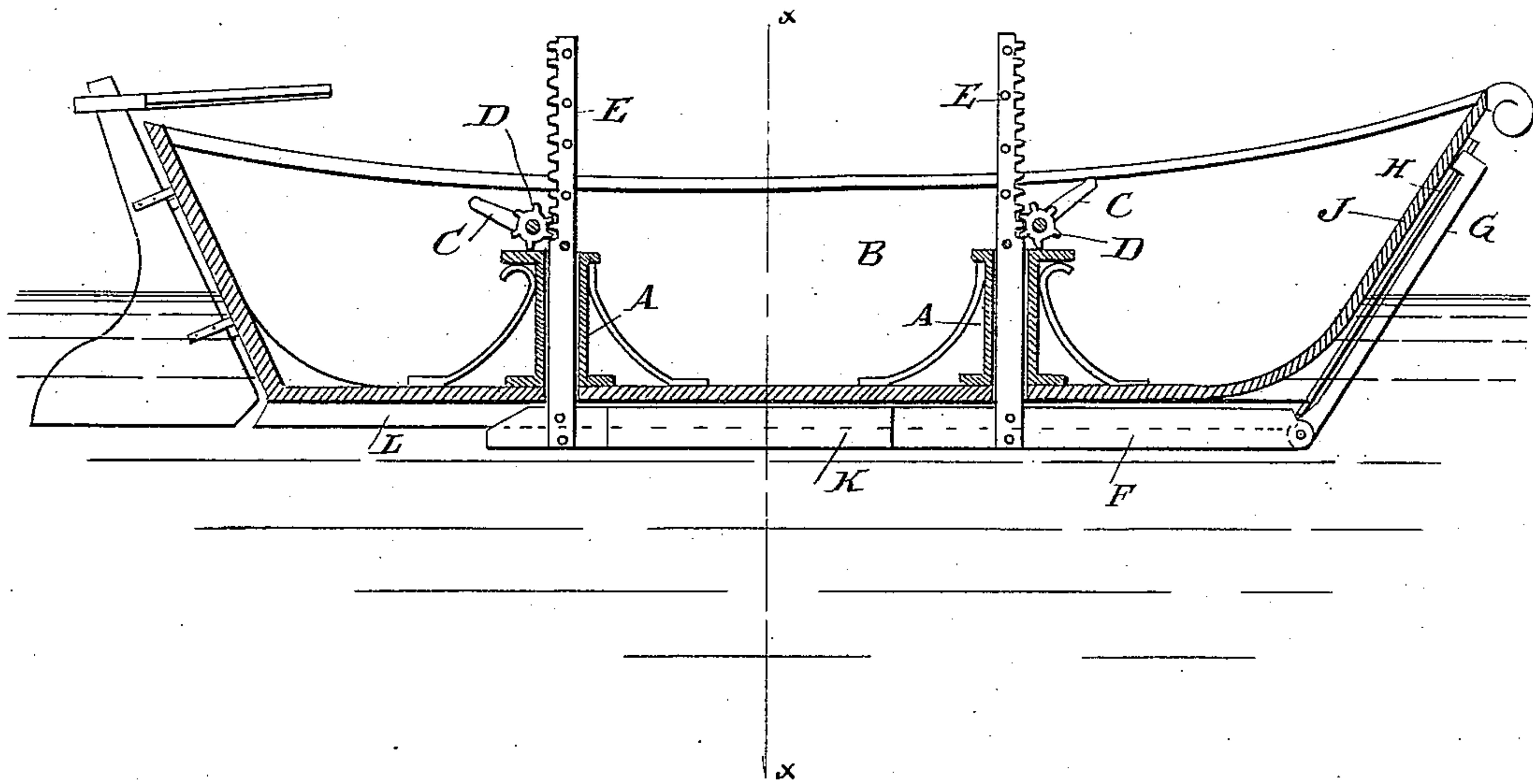


Fig: 2.

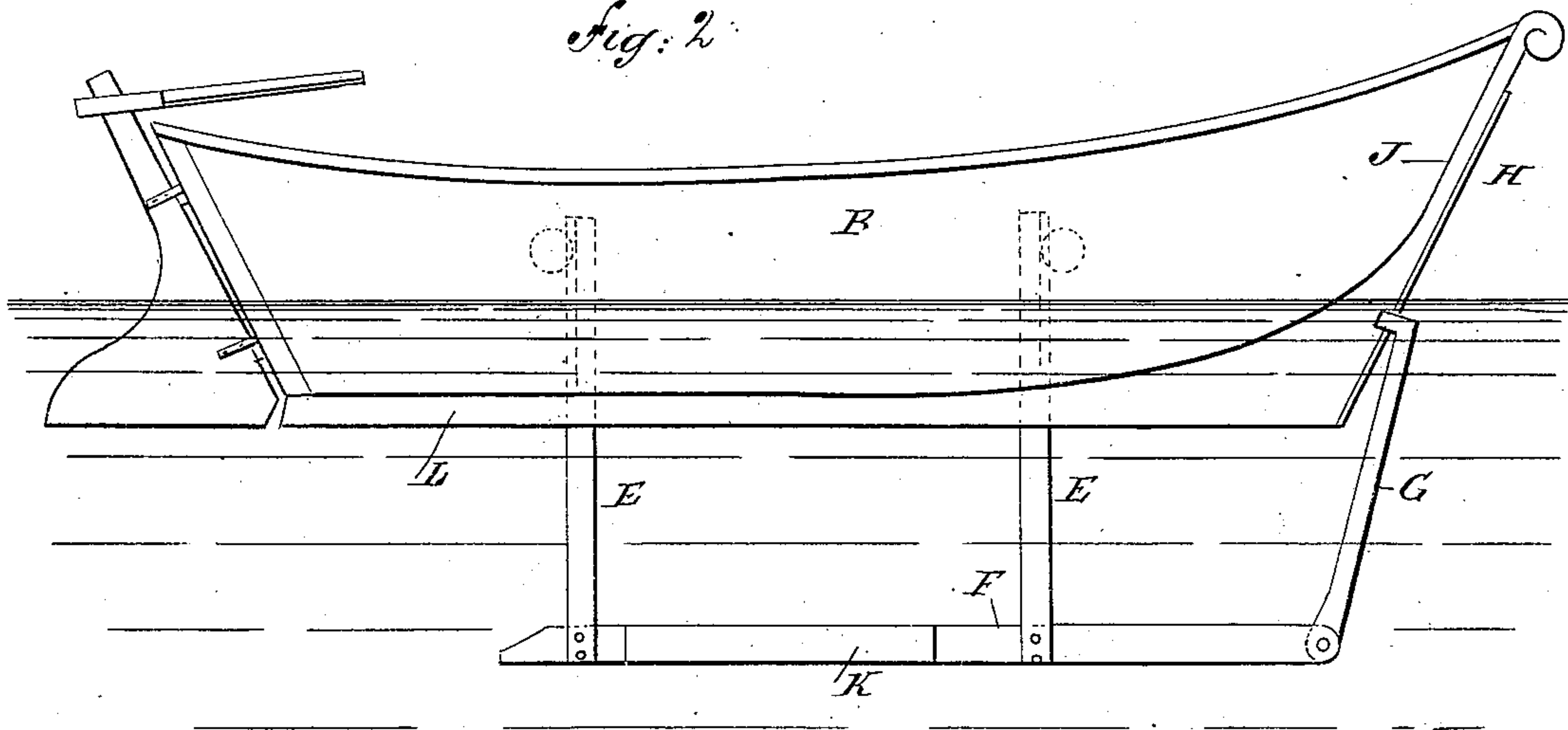
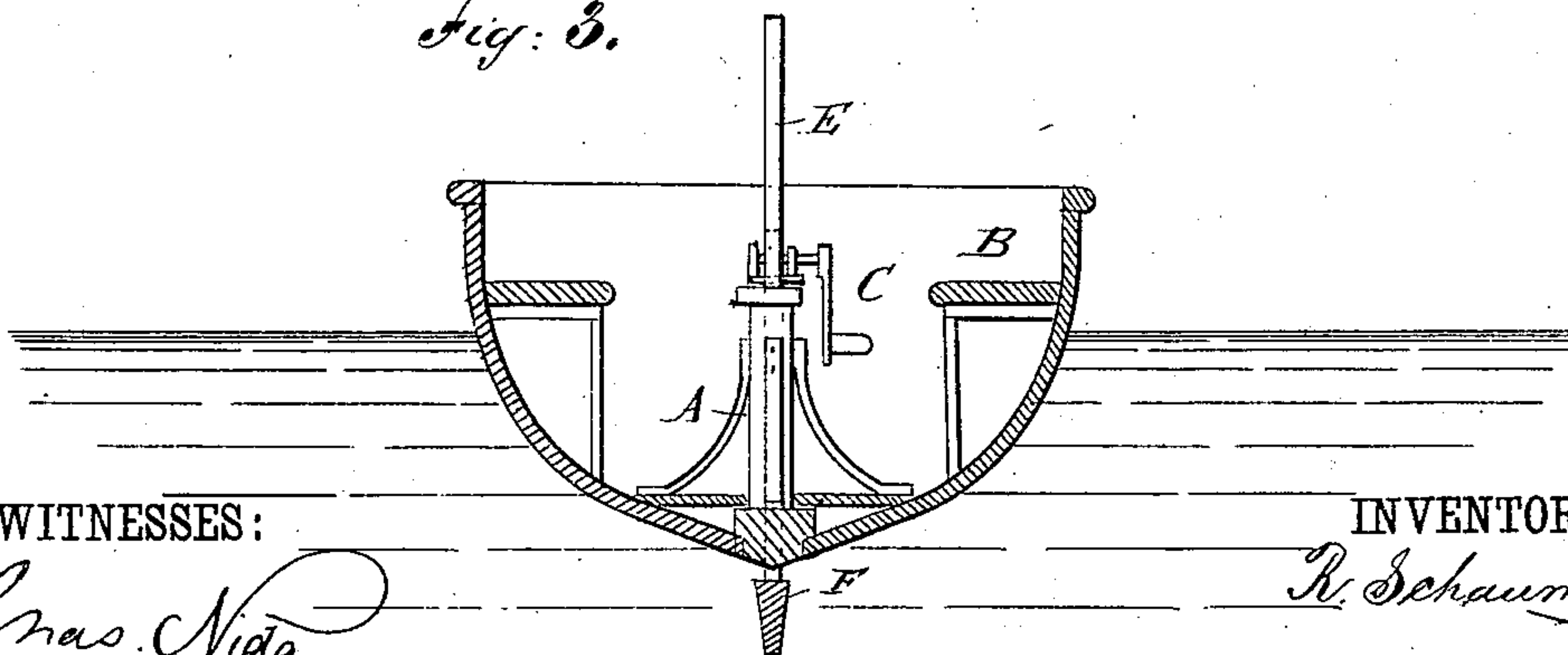


Fig: 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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BALANCING DEVICE FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 308,435, dated November 25, 1884.

Application filed July 22, 1884. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH SCHAUM, of Tell City, in the county of Perry and State of Indiana, have invented a new and Improved
5 Balancing Device for Vessels, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved balancing device for vessels, for the purpose of preventing their being
10 capsized in storms or during heavy gales.

The invention consists in the combination, with the vessel, of a weighted bar held under the keel, and in combination with devices for raising and lowering it, which bar has a link
15 pivoted to its front end, the upper end of the link being held to slide on a guide-bar on the prow of the vessel.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate
20 corresponding parts in all the figures.

Figure 1 is a longitudinal sectional elevation of a vessel provided with my improved balancing device, the same being raised. Fig.
25 2 is a side view of the vessel, the balancing device being lowered. Fig. 3 is a cross-sectional elevation of the same on the line *xx*, Fig. 1.

Two or more hollow or tubular standards,
30 A, are erected on the keel or keelson of the vessel B, and are suitably braced. On each standard a shaft is journaled, each shaft being provided with a crank-handle, C, and a pinion, D. Each pinion D engages with a
35 rack, E, passed loosely through the corresponding hollow standard, the lower ends of the rack-bars being connected by a longitudinal bar, F, parallel with the keel of the vessel, and the top edge of the said bar being
40 adapted to rest in a groove in the bottom of the keel L.

To the front end of the bar F a link, G, is pivoted, the upper end of which is held to slide on a guide-bar, H, secured to the front
45 of the prow J. A heavy bar, K, is riveted or otherwise secured to the bar F between the racks E. The racks E must project several feet above the tops of the tubular standards A, so as to permit lowering the bar F the distance the racks project from the tops of the

standards A. During a storm or very strong wind, when there is danger of the vessel being capsized, the crank-handles C are turned in such a manner as to cause the pinions D to move the racks E downward, whereby the
55 bars F and K are moved down and the link G slides down on its bar H. The bars F K can be lowered more or less, as circumstances may require. By moving the bars F K downward the center of gravity of the vessel is
60 lowered, the meta center is raised and the stability of the vessel increased materially. The standards A, the link G, and the bar H guide the bars F and K. The length and weight of the bars F and K and the distance
65 they are to be lowered are to be varied more or less, according to the size and shape of the vessel.

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

1. The combination, with a vessel, of the bar F below the keel, devices for raising and lowering the same, and the link G, pivoted to the front end of the bar F, and sliding on the
75 prow of the vessel, substantially as herein shown and described.

2. The combination, with the vessel B, of the bar H on the prow or stem, the bar F, means for moving it up and down, the link
80 G, pivoted to the front end of the bar F, and having its upper end arranged to slide on the bar H, substantially as herein shown and described.

3. A balancing device for vessels, consisting of the hollow standards A, secured to the bottom of the vessel, pinions D, journaled on a shaft at the upper end of said standards, racks E, extending from the under side of the vessel through said standards, bar K, secured
85 to the lower ends of said rack, guide-bar H on the bow, and the link G, connected at one end to the bar K, its opposite end being held to slide on said guide-bar H, substantially as set forth.
90

RUDOLPH SCHAUM.

Witnesses:

DAVID R. HUBBS,
JACOB HERRMANN.