

No 57,359.

R. Montgomery.
Construction of Ships.

Patented Aug. 21, 1866.

Fig. 1.

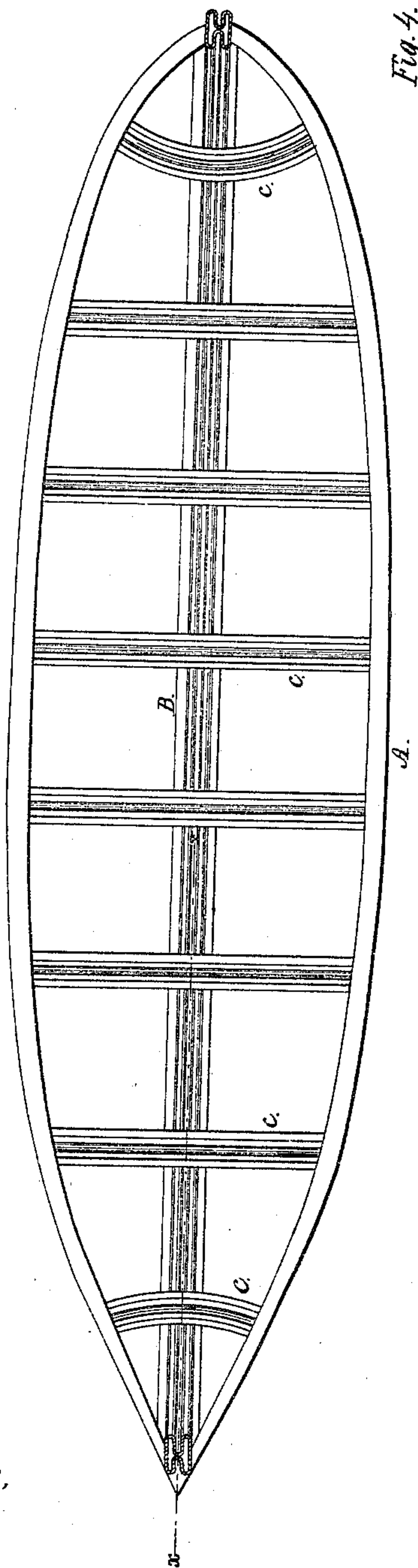


Fig. 4.

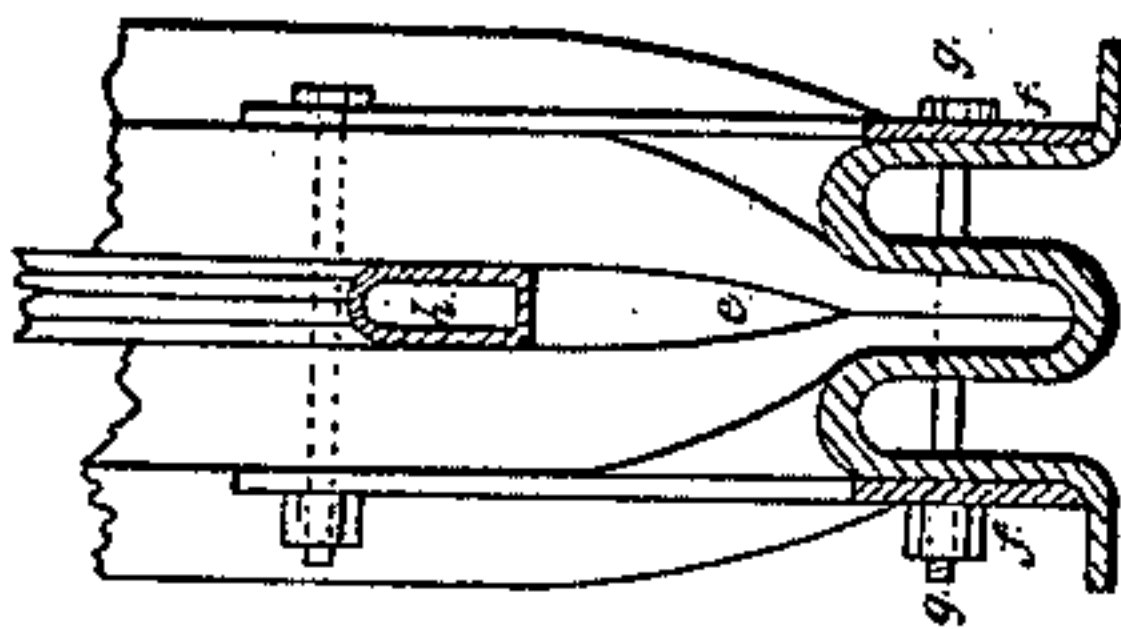


Fig. 3.

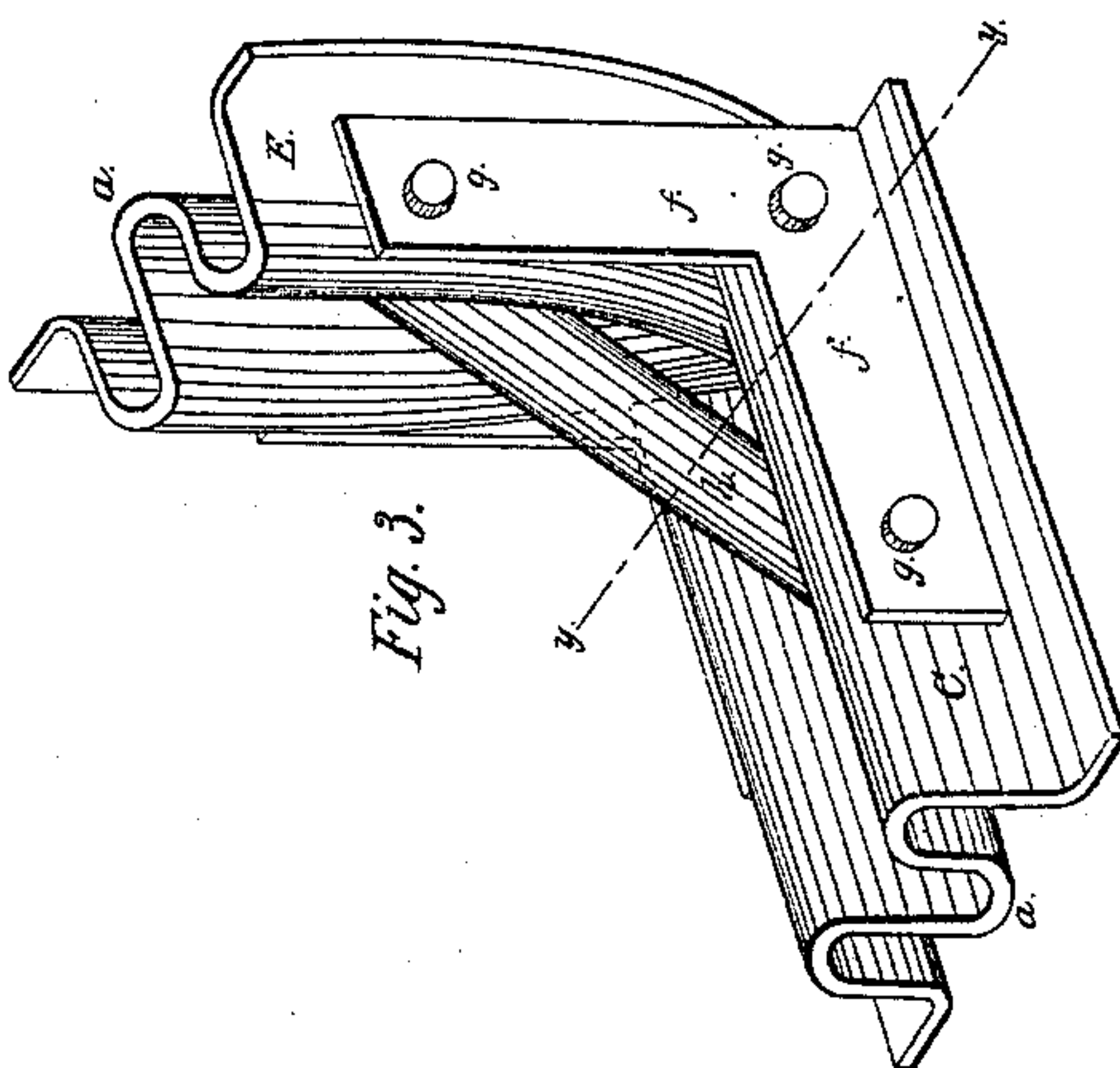
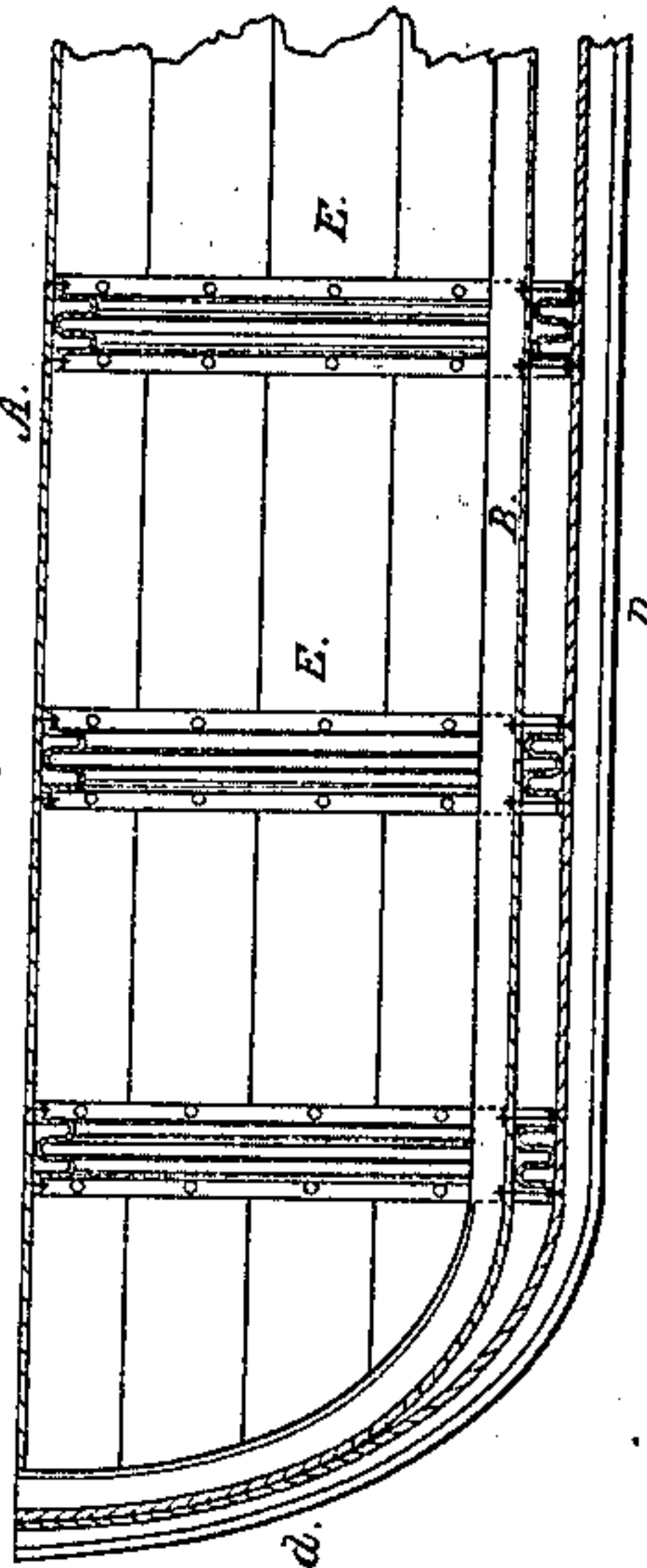


Fig. 2.



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IMPROVEMENT IN THE CONSTRUCTION OF SHIPS.

Specification forming part of Letters Patent No. 57,359, dated August 21, 1866.

To all whom it may concern:

Be it known that I, RICHARD MONTGOMERY, of the city, county, and State of New York, have invented certain new and useful Improvements in the Construction of Ships and other Vessels; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings and the letters thereon explanatory thereof.

Figure 1 is a plan or top view of the hull of a vessel. Fig. 2 is a central vertical section in the line *x x* of Fig. 1. Fig. 3 is a perspective view of two beams, showing the manner of forming the joint and connecting the same together when they form with each other a right or any other angle. Fig. 4 is a vertical section through the line *y y*, Fig. 3.

This invention consists in a new mode of applying beam-iron in the construction of certain parts of ships and other vessels, one part of which is applicable to all structures when two of said beam-irons are required to conjoin or connect with each other at their extremities in an angular direction.

To enable others skilled in the art to appreciate and apply my invention, the following description is given.

A, Figs. 1 and 2, represents the gunwale of the vessel; B of the same figures, the keelson; C, Fig. 1, the cross or deck beams; D, Fig. 2, the keel; E, the ribs. The last four mentioned—to wit, B, C, D, and E—are all made of beam-iron, a section of which is shown at *a a*, Fig. 3. In the construction and combination of these four parts with each other to form the frame of the ship, the keel is first formed to suit the intended model of the vessel, and the beam-iron continued or curved upward, as shown at *d*, to form the bow and stern post. The ribs are then curved, bent, or shaped as required by the shape of the model, and set up on the keel. The keelson B is then laid on, and bolts passed through the flanges of each of these three parts—the keel, ribs, and keelson; and by means of screws on the head of these bolts, or otherwise, they are all firmly attached to each other. Previous to the application of the keelson in its place it is so curved at its extremities that it will come in

contact with the upward curved extremity of the keel at the bow and stern, as seen at *d*, when the two are riveted or otherwise firmly connected with each other, to form the bow and stern posts.

The deck-beams C and ribs E are connected with each other by crushing the corrugations at the ends of one of them together, as seen at *e*, Fig. 4, and passing them in this condition into the groove formed by the corrugations of the other, as clearly shown in Fig. 4.

To give greater strength to this joint or connection, a two-legged plate or flat knee, *f f*, is applied to its sides and firmly united thereto by the screw-bolts *g g*, Figs. 3 and 4; and, if still more strength and stiffness be deemed necessary, a diagonal brace, *h h*, may be introduced, forming a further connection between the ribs and deck-beams.

To apply the planking to the sides and deck of a vessel-frame thus constructed, beams of wood can be let into and secured in the grooves of the corrugations of the beams and ribs, and the planks or flooring fastened thereto as to ordinary wooden beams; or the vessel may be first covered by thin iron plating or sheathing, and the wooden planking over that.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination of the keel D, ribs E, and keelson B, when arranged and secured together substantially as set forth.
2. The combination and arrangement of the keel D and keelson B in the manner set forth for forming the bow and stern post of vessels.
3. Covering the frame of a vessel thus constructed, first, with a sheathing of iron sheets or plates, over which is placed the planking, the three being united together by bolting or otherwise.
4. Connecting the ends of two beams, when they are required to be united in any other than a right line, with each other, to complete the required structure, substantially as described, and as set forth in Figs. 3 and 4.

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Witnesses:

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