

(No Model.)

2 Sheets—Sheet 1.

F. A. MERSHON.
CONSTRUCTION OF BOATS.

No. 563,048.

Patented June 30, 1896.

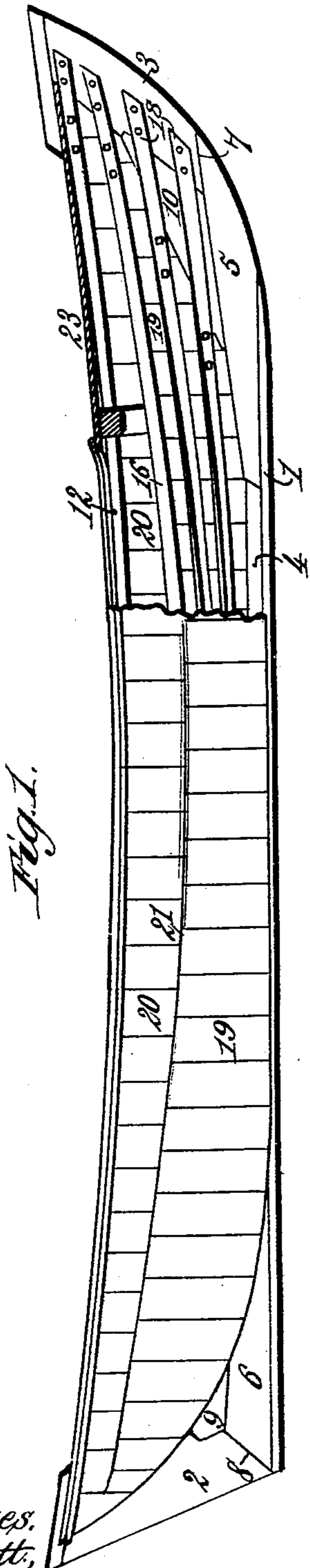


Fig. 1.

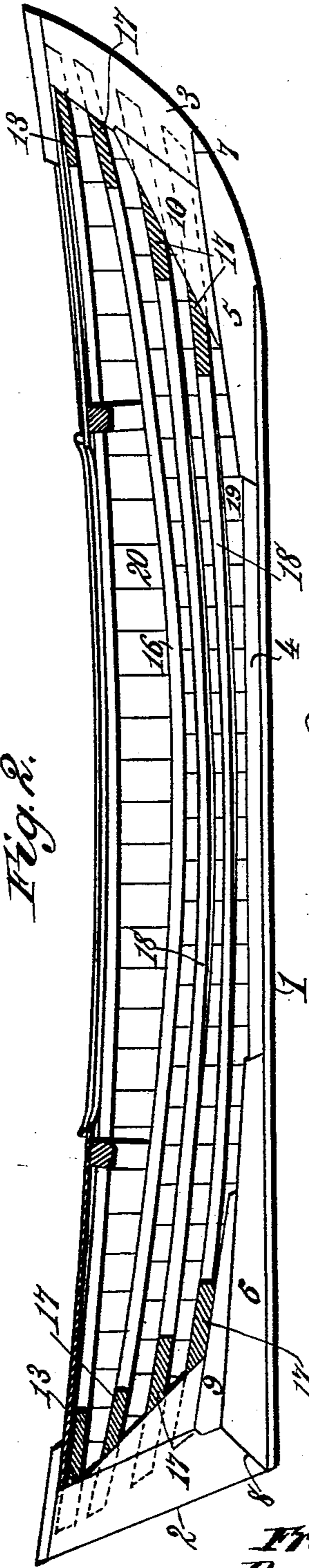


Fig. 2.

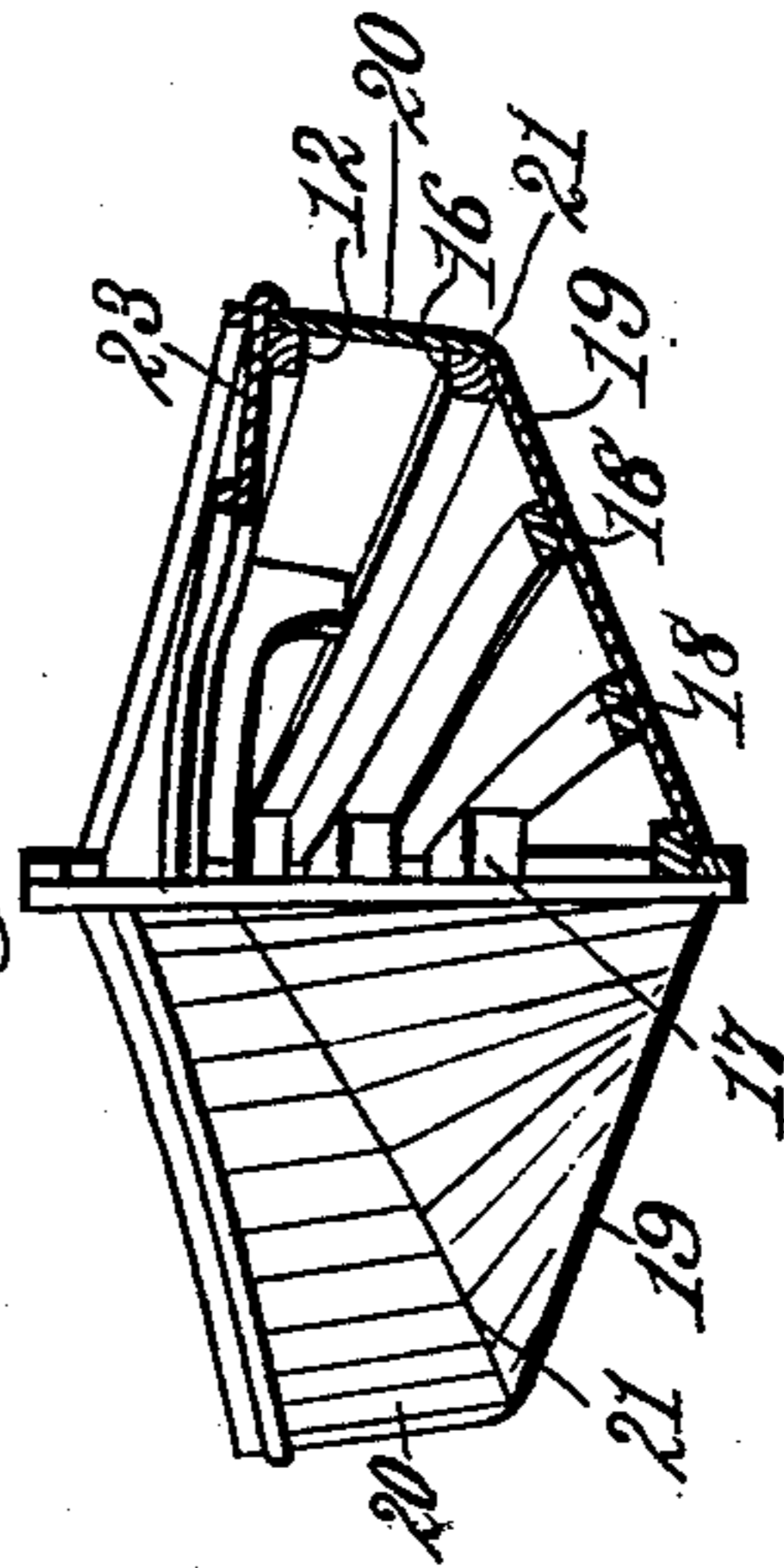


Fig. 3.

Witnesses.
Phil. G. Smith,
Thos. A. Green

Inventor.
Frank A. Mershon.

By *James L. Norris,*
Atty.

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2 Sheets—Sheet 2.

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Fig. 4.

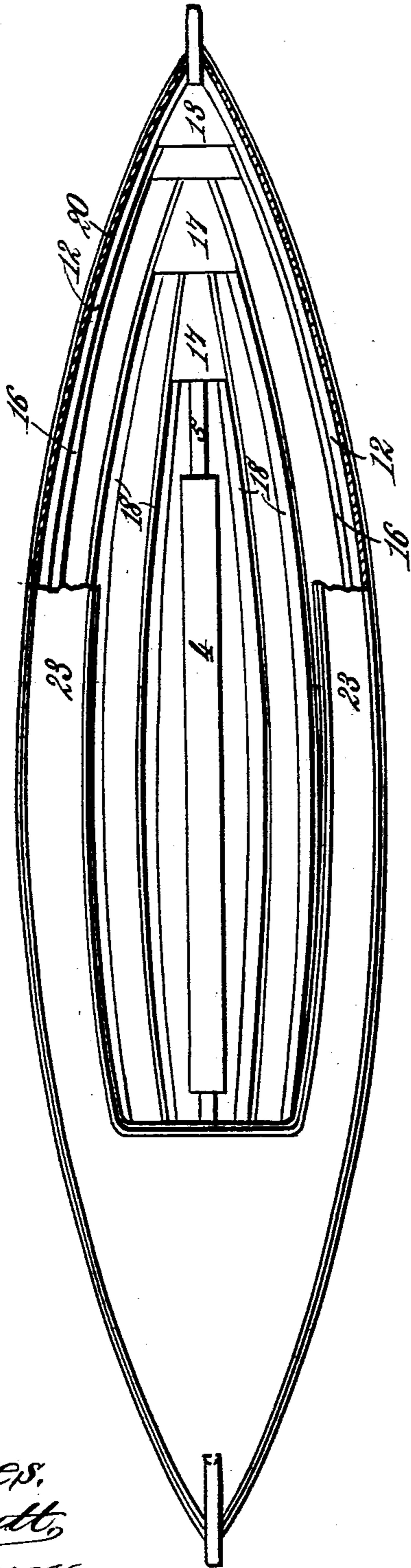
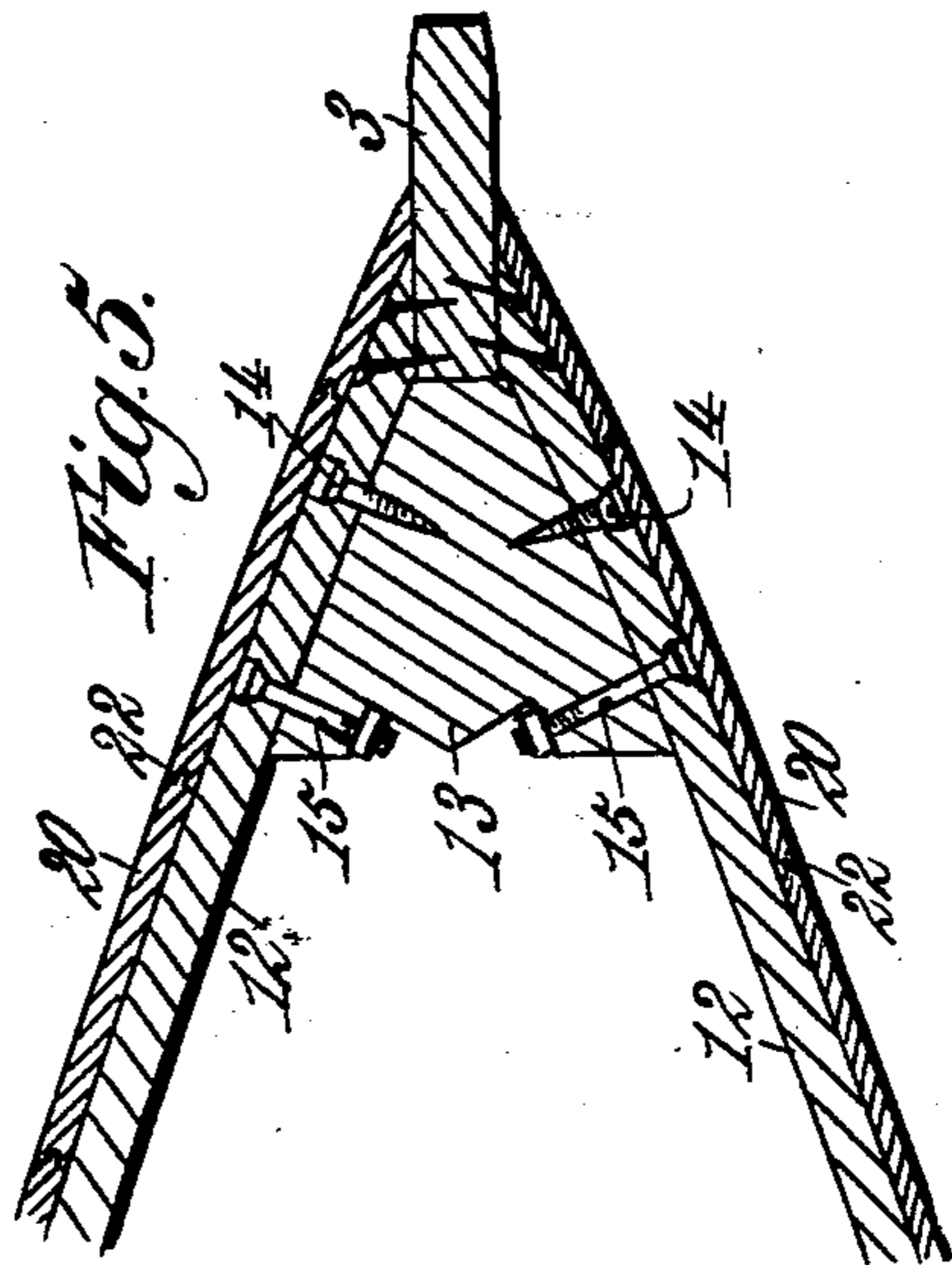


Fig. 5.



Witnesses,
Robert G. Smith,
Thos. A. Smith

Inventor:
Frank A. Mershon.
By James L. Norris,
Atty.

UNITED STATES PATENT OFFICE.

FRANK A. MERSHON, OF SPARROWS POINT, MARYLAND, ASSIGNOR OF ONE-HALF TO RUFUS W. APPLGARTH, OF BALTIMORE, MARYLAND.

CONSTRUCTION OF BOATS.

SPECIFICATION forming part of Letters Patent No. 563,048, dated June 30, 1896.

Application filed August 22, 1895. Serial No. 560,085. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. MERSHON, a citizen of the United States, residing at Sparrows Point, in the county of Baltimore and State of Maryland, have invented new and useful Improvements in Construction of Boats, of which the following is a specification.

My invention relates to certain novel improvements in the construction of boats, the purpose thereof being the provision of a wooden boat or vessel having the curved lines of an ordinary vessel, the hull of which is made up of flat unbent panels as distinguished from bent work.

To this end the invention consists in the novel features of construction and arrangement hereinafter described and claimed.

To enable those skilled in the art to which my invention pertains to fully understand and to practice the same, I will now describe said invention in detail, reference being had for this purpose to the accompanying drawings, in which—

Figure 1 is a side elevation of a boat incorporating my invention, a portion being in central vertical longitudinal section. Fig. 2 is a central vertical section taken from stem to stern of the boat. Fig. 3 is an end elevation, partly in transverse section. Fig. 4 is a plan view, a portion thereof being shown in horizontal section taken from the stem to a point between the stem and the center, the line of section being just beneath the deck. Fig. 5 is a detail section upon slightly-enlarged scale, the section being taken horizontally about half-way between the deck and the keel.

The reference-numeral 1 in said drawings indicates the keel of the boat, which is preferably formed in a single piece extending from stem to stern, uniting at one end with a stern-post 2 and at the other end with the stem 3. Directly over the keel 1 is the main keelson 4, the thickness or transverse measurement of which is greater than that of the keel. It extends over the middle portion of the boat and at its ends abuts against the grips 5 and 6, the former at the stem and the latter at the stern. These grips form, practically speaking, continuations of the

main keelson, the grip 5 being united to the stem 3 by an angular joint 7 and the grip 6 united to the stern-post 2 by a bevel or chamfer joint 8. Between the stern-post and the grip 6 and in substantially the same vertical plane is the dead-wood knee 9, and at the other end of the boat a substantially similar dead-wood knee 10 occupies the same relations to the stem and grip 5.

The stem and stern-post are connected by carlines 12, which are arched or bent laterally, as shown in Fig. 4, their ends being chamfered and lapped upon the stem and stern-post, to which they are fastened by nails or other suitable means, as seen in Fig. 5. They are also braced and stiffened at their ends by triangular blocks 13, which are inserted between them and caused to abut upon the stem and stern-post. Screws and bolts 14 and 15 secure the carlines to these blocks, though I may use any suitable fastening.

At a suitable distance below the carlines I arrange bilge-carlines 16, which are arched or bent laterally substantially in the same way as the carlines 12, their ends being lapped upon and secured to the stern-post and stem in the same manner as said carlines, blocks 17 being inserted between their ends and fastened in the same way as the blocks 13.

In constructing the frame of the boat the carlines 12 are given a slight downward curvature, in addition to their lateral bend, so that their central portions will be depressed somewhat below their ends. The bilge-carline 16 also has a similar but somewhat greater curvature downward, as shown in Fig. 2.

The parts thus far described compose the frame of the boat, though I may, and in many cases do, provide one or more intermediate keelsons 18 between the bilge-carline on each side and the main keelson 4. In the drawings I have shown two intermediate carlines on each side of the main keelson, as seen in Fig. 3. By this construction I obtain a frame which is very light but which has great strength and stiffness, and will endure any strain or shock to which such structures are ordinarily exposed. By giving each bilge and intermediate carlines a successively-increased downward curvature, as in Fig. 3, they are in a position to offer the maximum

resistance to strain or shock and to divide the same in such manner that it shall not be sustained by one only.

5 The skin of the boat is formed by two series of flat panels arranged in vertical transverse planes, the members of one series being arranged to break joints with those of the other series. The two lower series 19 have chamfered edges which rest against the sides of the
10 keel 1, and lie directly beneath and against the lower marginal surfaces of the main keelson, through or into which the fastenings pass which secure the panels. The panels 19 at their upper and outer ends are lapped upon
15 the lower faces of the bilge-carlines. The two upper series of panels 20 lap against the outer faces of the bilge-carlines and the carlines and the abutting edges of the two series are chamfered, so that they may make a close
20 joint 21. I prefer also to connect the panels in each series by tongue-and-groove joints 22, as shown in Fig. 5, said joints in one series being arranged to alternate with those in the other series.

25 As shown in the drawings, the boat is half-decked, the deck-transoms 23 being placed upon the bilge-carlines 12. I have shown the boat with a stem and stern which are practically alike, but in this respect, as well as in
30 regard to the decking, considerable variation may be made without departing from my invention. The panels in both series are perfectly flat, no bending or shaping being re-

quired, except as to the relative length and the formation of their edge. Their outer
35 faces are flush throughout, giving a perfectly smooth surface, to which the water offers but little resistance.

My invention may be applied to boats and vessels having a square stern without any ma-
40 terial change.

What I claim is—

The herein-described boat or vessel comprising a keel and keelson, an upper carline curved outwardly and downwardly, a bilge-
45 carline also curved outwardly and curved downwardly to a greater degree than the upper carline, an upper series of flat, unbent, transverse panels lapped upon and secured to the upper carline and the bilge-carline, and a
50 lower series of flat, unbent, transverse panels lapping and secured to the bilge-carline and the keelson, the panels of the lower series breaking joints with those of the upper series, whereby a hull or body is provided having the
55 curved line of an ordinary vessel without the necessity of the employment of bent work, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing wit-
60 nesses.

FRANK A. MERSHON.

Witnesses:

WM. V. HEAPHY,
T. B. C. YEARLEY.