

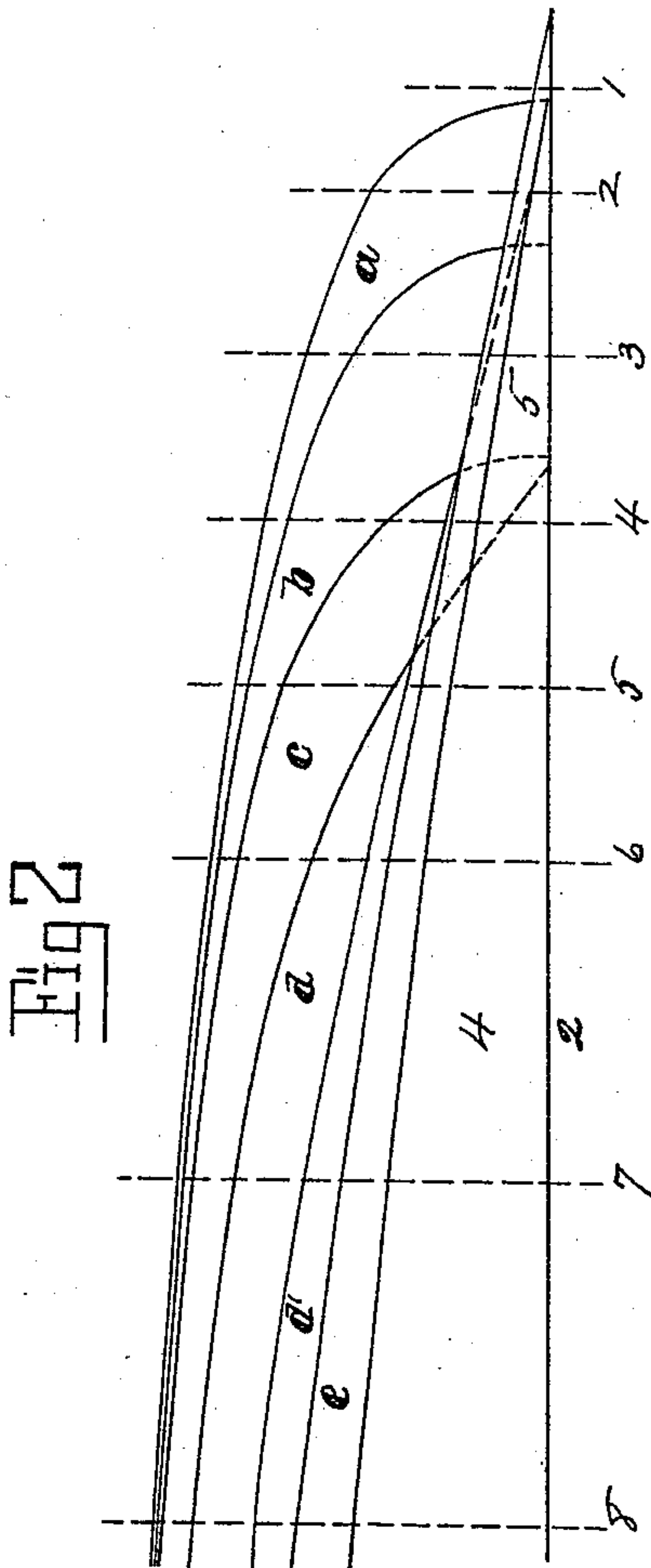
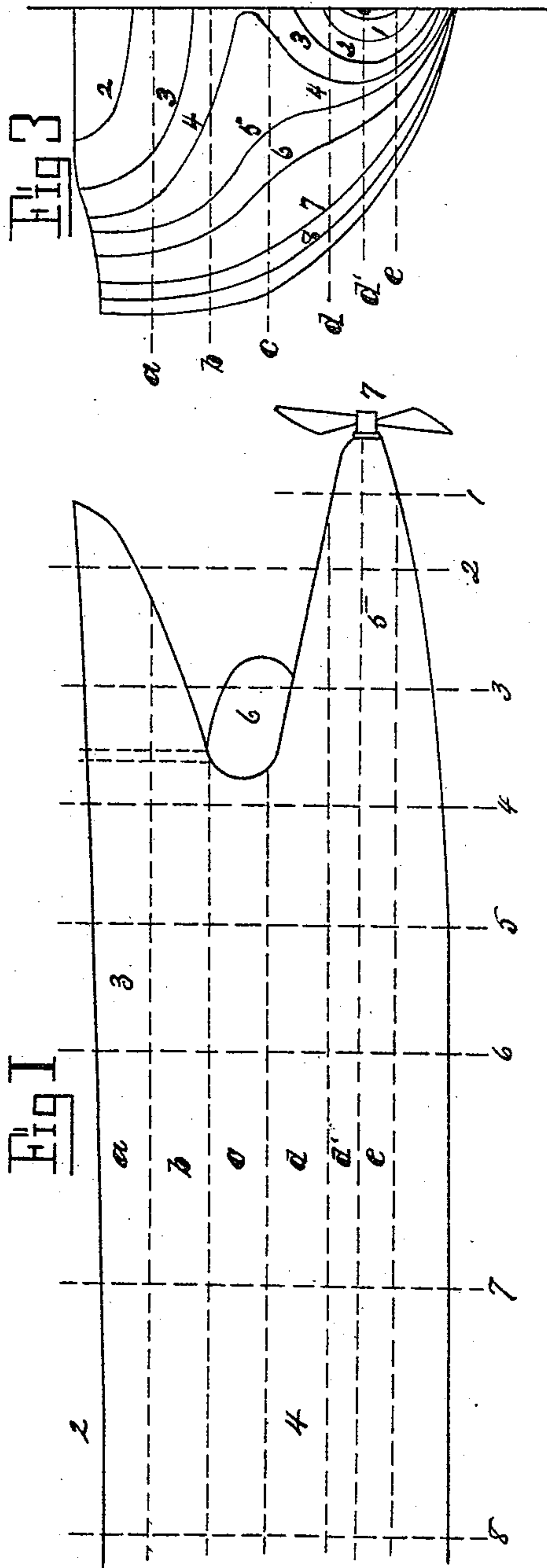
(No Model.)

2 Sheets—Sheet 1.

T. L. STURTEVANT.
NAVIGABLE VESSEL.

No. 441,203.

Patented Nov. 25, 1890.



WITNESSES

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INVENTOR

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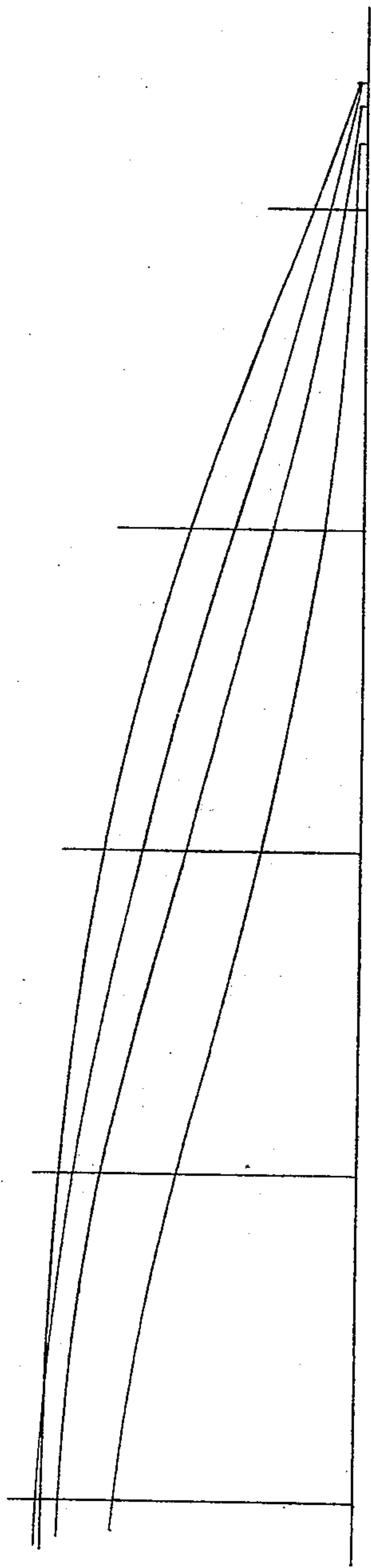


Fig. 4.

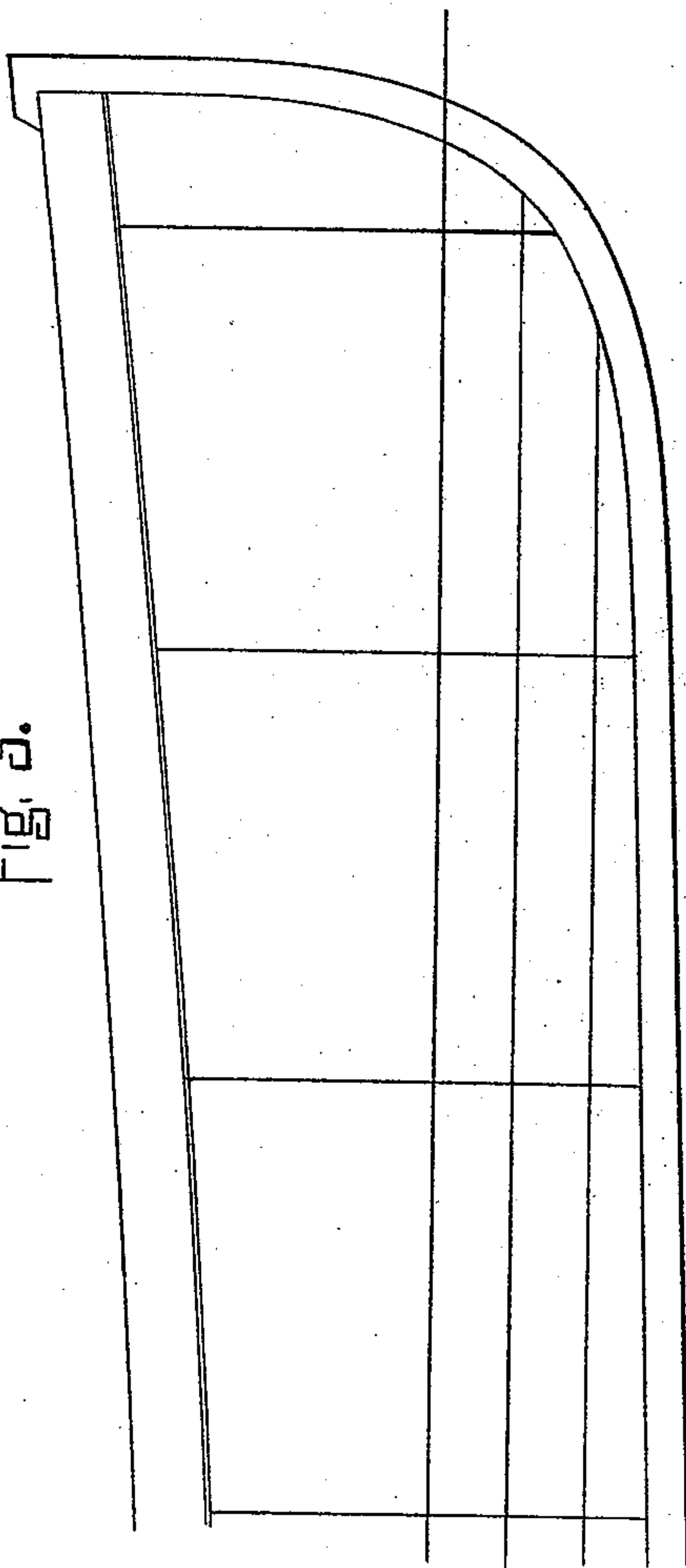


Fig. 5.

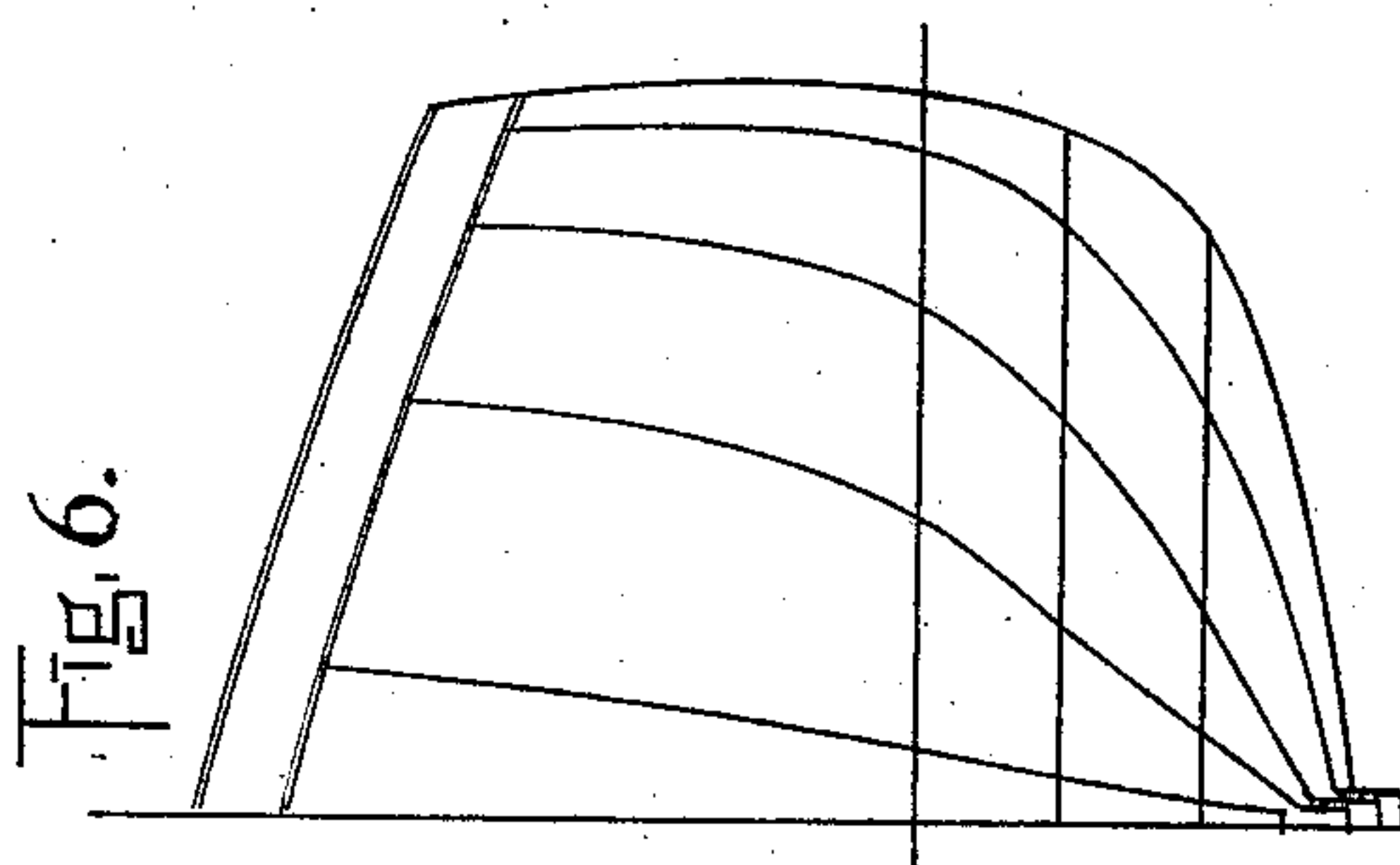


Fig. 6.

Witnesses.
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Inventor.
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by H. E. Lodge Atty.

UNITED STATES PATENT OFFICE.

THOMAS L. STURTEVANT, OF FRAMINGHAM, MASSACHUSETTS.

NAVIGABLE VESSEL.

SPECIFICATION forming part of Letters Patent No. 441,203, dated November 25, 1890.

Application filed May 9, 1890. Serial No. 351,209. (No model.)

To all whom it may concern:

Be it known that I, THOMAS L. STURTEVANT, a citizen of the United States, residing at Framingham, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Navigable Vessels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to the construction of vessels, particularly those adapted to be propelled by revoluble screws, and may be considered as relating directly to and as an improvement upon an invention described by me under application Serial No. 331,679.

The particular purpose of my present invention will be fully hereinafter explained.

The drawings accompanying this specification represent, in—

Figure 1, the stern portion in sheer plan of a vessel embodying my invention. Fig. 2 is a half-breadth plan of the stern, and Fig. 3 is a body plan of the after body. Fig. 4 shows in half-breadth plan the bow portion of a vessel containing my invention. Fig. 5 shows the same in sheer elevation, and Fig. 6 is a body plan of said bow portion.

In my previous application the stern portion of a navigable vessel was shown provided with an extension of the "dead-wood," so called, and the especial purpose of such extension was to enable the screw to revolve in clear water.

My present improvements relate to the peculiar construction of this extension, whereby the after body-lines longitudinally are rendered more easy, while the transverse body-lines can be made much more full. In this way a much greater displacement can be secured in the after submerged body or stern portion of the vessel, while the wetted surface is diminished.

To carry out my invention, I have shown the stern of a navigable vessel at 2, in which I propose to construct the free-board 3, or that portion above the load water-line, of the

usual form. The after submerged or wetted portion 4 contains my improvements. Usually when navigable steam-vessels—particularly small launches and yachts—are proceeding at high speed, there is a great tendency for them to settle at the stern, owing to the form of the boat in this particular portion, that termed the "dead-wood." At this point the displacement is very small, in order to prevent the vessel from dragging water. In my improvements I endeavor to obviate this difficulty, and accordingly have added an extension, designated at 5—that is, the boat is built out beyond much farther than is customary. This affords an increased submerged length. Moreover, this extension in general shape is cone-shaped, with the side surfaces merging into the after body in long easy lines. In this manner the breadth of the body is very much increased and a large displacement is afforded. Besides this advantage a second one is obtained from the fact that the machinery can be placed farther aft, while the shape of this extension is such that the water is displaced horizontally and can readily pass astern as the vessel advances. In the half-breadth plan the sections show gradually and easy the lines, all of them converging from the point where they merge with the body portion of the vessel clear to the end of said extension.

I do not desire to be limited to the exact shape or curvature of this extension taken in section transversely, since said contours may be varied in fullness—in some instances perhaps circular, in other cases to conform to some one of the conic section-curves, as elliptical or parabolic; but I desire it to be understood that the longer diameter of said sections are generally vertical, in order that the extension shall part the water in horizontal planes.

The rudder is shown at 6, the propeller at 7.

In my application Serial No. 331,679 I have described and claimed, in combination with a vessel for steam propulsion, an extension aligned with the keelson and projecting some distance behind the stern-post, the rudder secured to the latter, and a propeller located at the outer end of said extension and rotated by a shaft longitudinally within it and operated by some prime motor. Therefore I do

not claim the above construction and combination in the present case.

I am aware that it is not broadly new to provide a vessel with a submerged tapering 5 prow and with a submerged extension of the stern, this extension containing the shaft of the propeller, and therefore I do not broadly claim the same.

What I claim is—

- 10 1. A navigable vessel formed with the free-board of the usual construction and provided with a submerged wedge-shaped prow and a reversed cone-shaped stern extension, the transverse sections of said extension approximating 15 in general contour to the lines of the vessel, increasing in area from the end toward the submerged after-body portion of said vessel, with which they merge in long easy lines, substantially as herein described.
- 20 2. A navigable vessel of the usual construction above the load water-line, combined with

a submerged surface composed of a wedge-shaped bow, an ordinary midship-section, and an after body which terminates in a cone-shaped extension, the latter to contain the 25 shaft by which the propeller is revolved at the end of said extension, substantially as stated.

3. In combination with a navigable vessel, a rearwardly-projecting extension having transverse contour of oval or curved shape, the cross- 30 sections enlarging as they approach the body of the vessel, where they merge in easy lines therewith and with the long diameter of said sections generally vertical to displace the water horizontally during progress of the ves- 35 sel, substantially as and for purposes specified.

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

THOMAS L. STURTEVANT.

Witnesses:

H. E. LODGE,

FRANCIS C. STANWOOD.