

Draftsman.

(No Model.)

J. F. WARD.

RAM.

No. 379,427.

Patented Mar. 13, 1888.

FIG. 1.

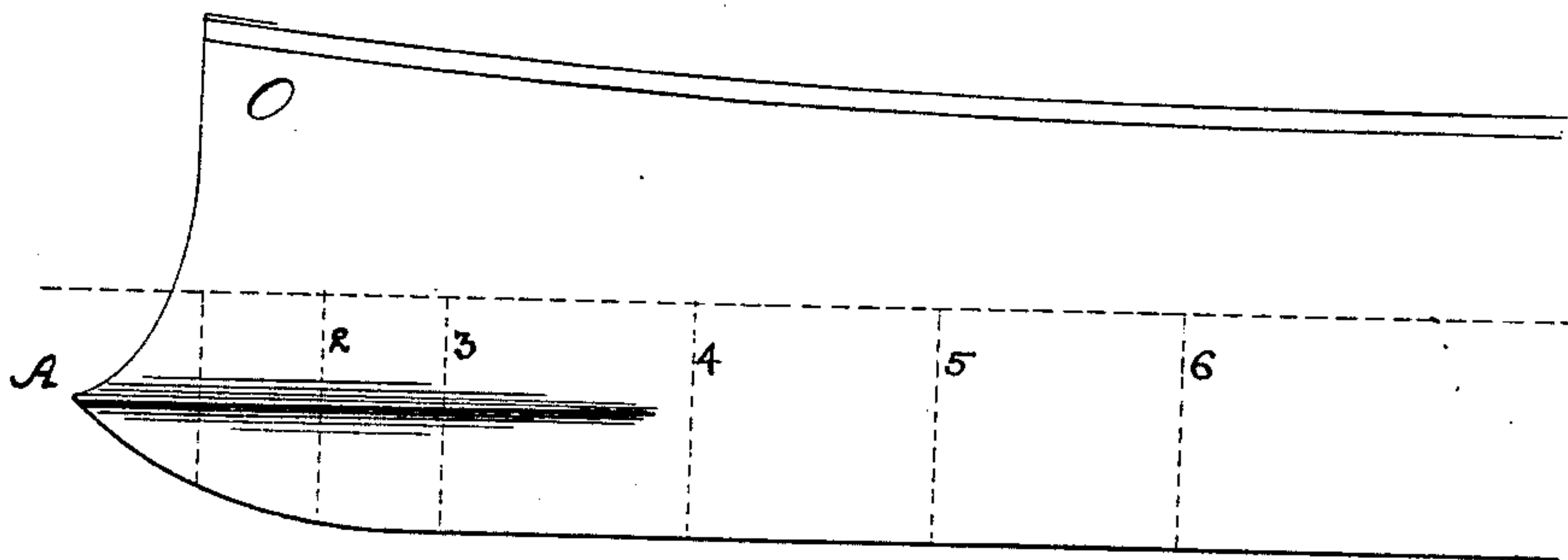


FIG. 2.

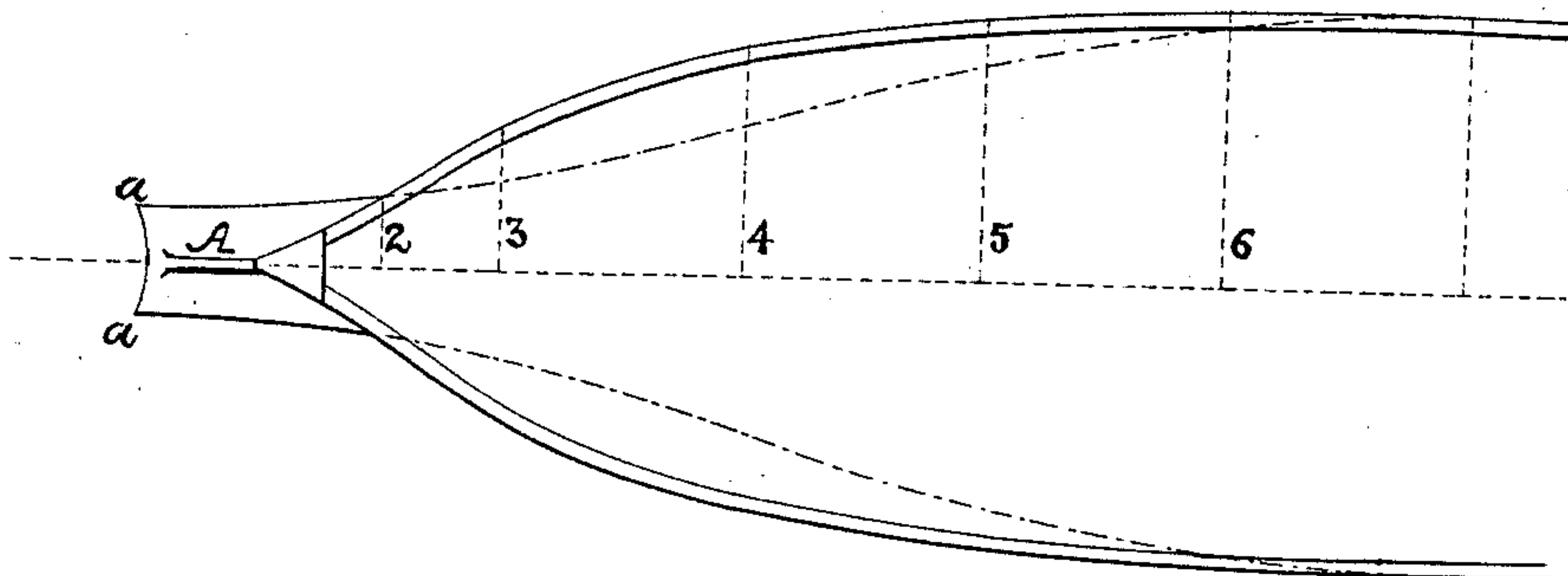
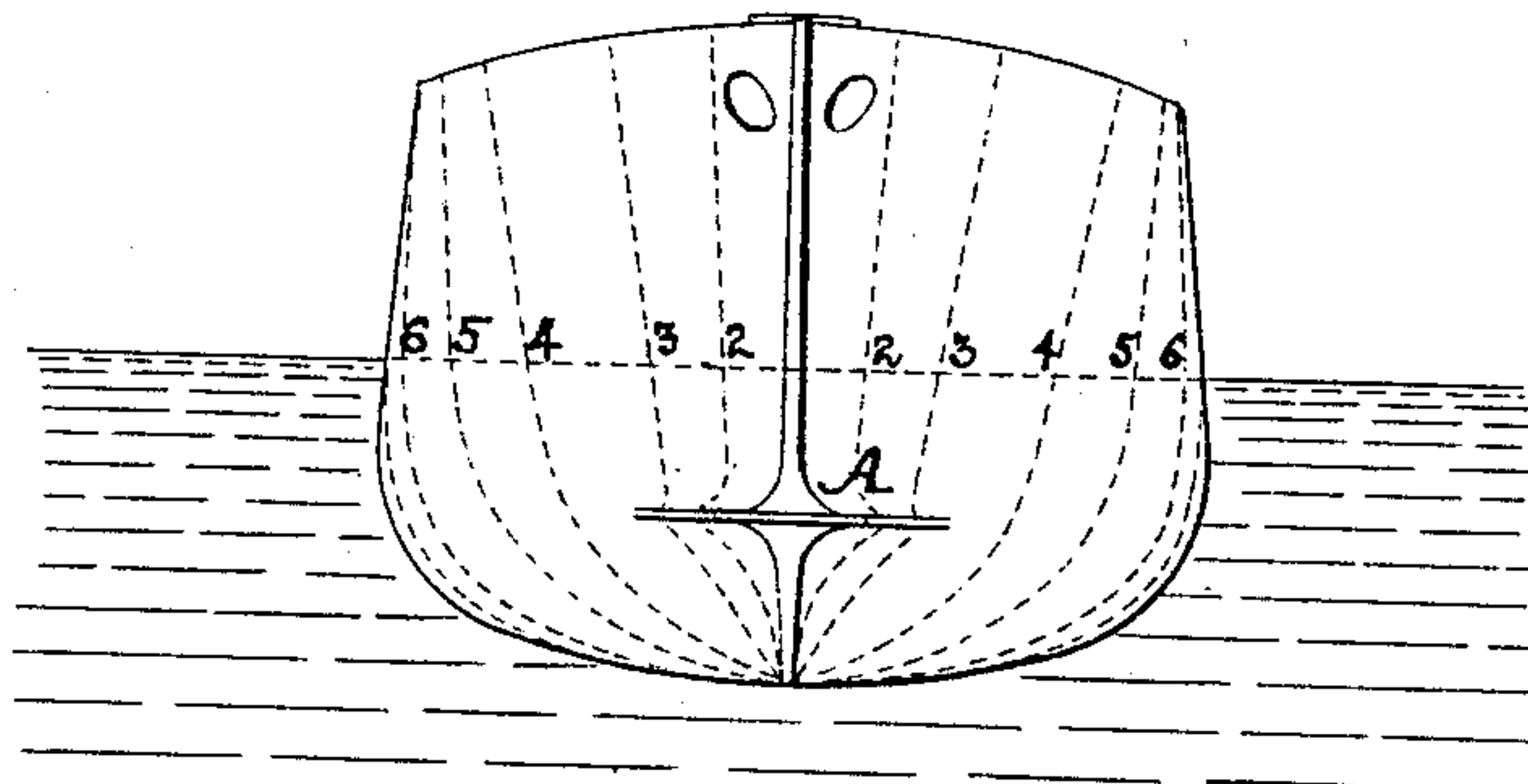


FIG. 3.



WITNESSES

W. E. Carlile.

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INVENTOR.

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By his Attorneys.

Horsman and Horsman.

# UNITED STATES PATENT OFFICE.

JOHN F. WARD, OF JERSEY CITY, NEW JERSEY.

## RAM.

SPECIFICATION forming part of Letters Patent No. 379,427, dated March 13, 1888.

Application filed November 15, 1887. Serial No. 255,197. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. WARD, a resident of Jersey City, New Jersey, and a citizen of the United States, have invented a certain Improved Ram, of which the following is a specification.

The object of my invention is to so construct a ship's ram that it will be more effective in action and less liable to be injured itself than are rams of the ordinary construction.

A ship's ram as usually made has a single sharp vertical nose or edge projecting from the bow of the vessel, with a curved outline in elevation, or coming to a sharp point. Such a ram in striking a vessel a glancing blow will be apt to do little or no damage to the vessel attacked, and on the other hand will be liable to be injured itself by the breakage or bending of its nose or edge, for it is not sufficiently strong laterally to withstand the strain.

In my improved ram the projecting end extends transversely of the bow, so that it will be effective in its action upon a vessel whether approached at right angles or at any other angle, and will resist lateral strains.

In the accompanying drawings, Figure 1 is a side elevation of the forward part of the vessel provided with my improvements. Fig. 2 is a deck plan view of the same, and Fig. 3 is an elevation looking toward the bow of the vessel.

In the views, the dotted lines 2 3 4 5 6, &c., indicate the lines of the vessel at the corre-

sponding points in the different figures. As will be seen on reference to these figures, the ram A on the bow of the vessel extends transversely like the end of a chisel held horizontally. Owing to the consequent presence of the two attacking edges or corners *a a*, Fig. 2, of the ram, the latter in approaching the attacked vessel at an angle other than a right angle will not glance off, but will strike a blow which will prove effective to do more or less damage to the vessel attacked, and this without danger of injury to itself from lateral strains, for the great horizontal width of the nose of the ram will resist any such strains.

In approaching a vessel at right angles my improved form of ram will be as effective as the ordinary form of ram under similar conditions.

I claim as my invention—

1. A vessel having a ram extending transversely of the bow, substantially as described.
2. A vessel having a ram extending transversely of the bow and provided with two oppositely-located attacking edges or corners, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN F. WARD.

Witnesses:

WM. CHESTER WELLS,  
HUBERT HOWSON.