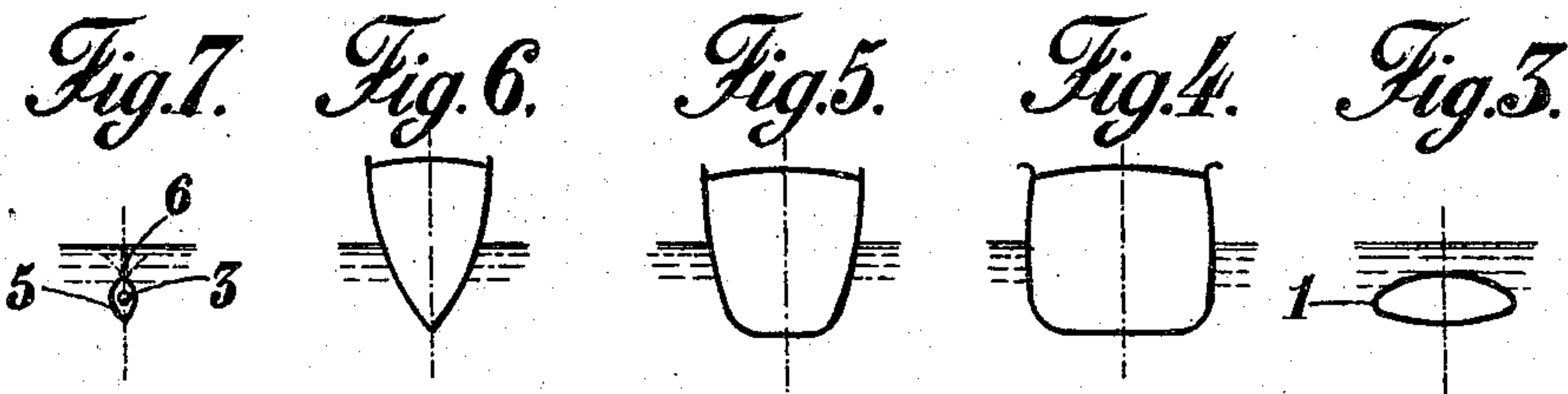
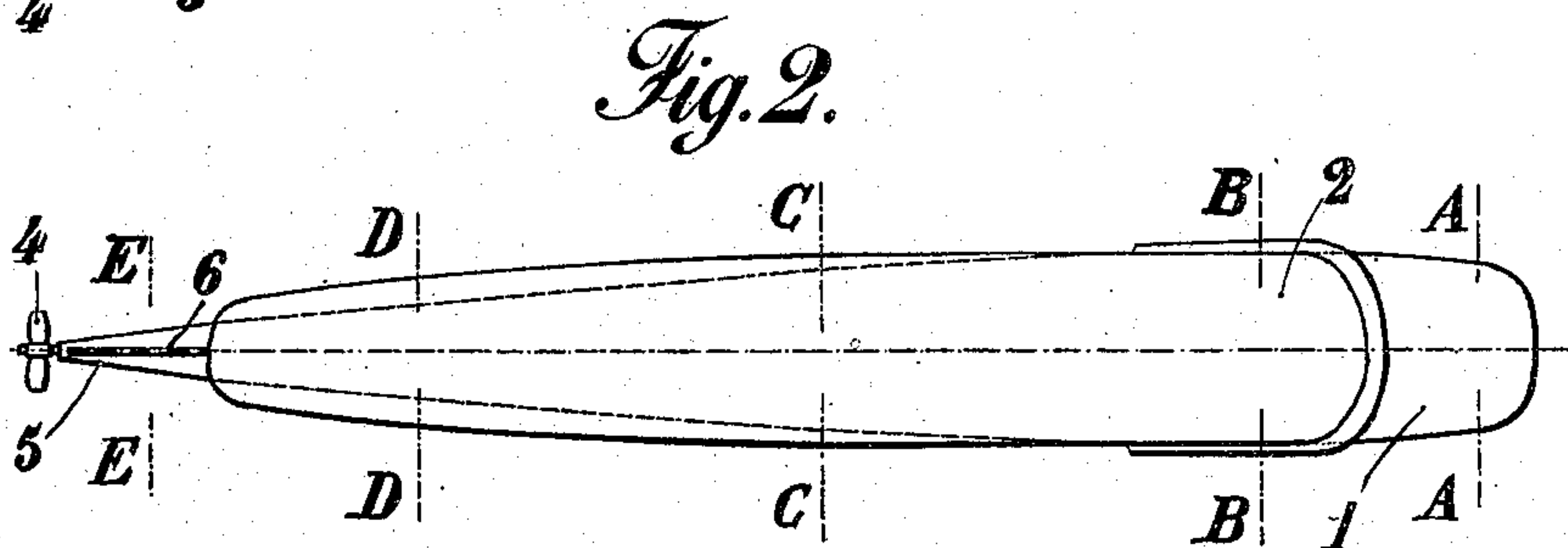
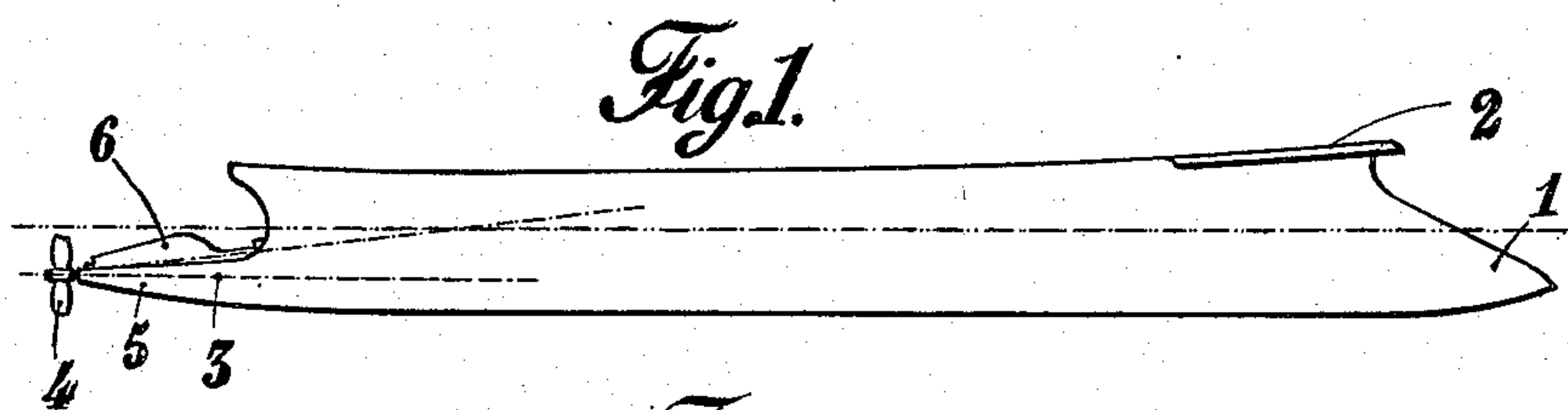


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CONSTRUCTION OF HULLS FOR VESSELS.
APPLICATION FILED MAY 7, 1908.

932,733.

Patented Aug. 31, 1909.



Witnesses:
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CHARLES WEYHER, OF PARIS, FRANCE.

CONSTRUCTION OF HULLS FOR VESSELS.

932,733.

Specification of Letters Patent.

Patented Aug. 31, 1909.

Application filed May 7, 1908. Serial No. 431,486.

To all whom it may concern:

Be it known that I, CHARLES WEYHER, citizen of the French Republic, residing at Paris, Department of the Seine, in France, have invented certain new and useful Improvements in the Construction of Hulls for Vessels, of which the following is a specification.

Ships as hitherto constructed are provided at the bows with a sharp portion called the cutwater, which acts more particularly in a vertical plane. This cutwater forces the water to separate laterally, thus producing eddies which propagate themselves in a direction perpendicular to the symmetrical plane of the ship. The result is a frictional effort which retards the ship's progress.

The present invention has for its object a novel form of hull which reduces to the minimum the eddies produced during the progress of the ship.

In the accompanying drawings: Figure 1 is a side elevation of a hull embodying the invention. Fig. 2 is a plan view. Fig. 3 is a cross section taken on line A—A of Fig. 2. Fig. 4 is a cross section taken on line B—B of Fig. 2. Fig. 5 is a cross section taken on line C—C of Fig. 2. Fig. 6 is a cross section taken on line D—D of Fig. 2. Fig. 7 is a cross section taken on line E—E of Fig. 2.

In accordance with the present invention the bows of the ship are provided with a cutwater 1 presenting a horizontal ridge; in this manner the waves produced by the cutwater become propagated vertically, the result being that the resistant effort is much smaller than that existing with ships with a vertical cutwater. In such ships, the mass of water displaced is considerable. In the case of river navigation, the waves formed strike against the banks and give rise to reflex waves which are propagated in the opposite direction. The friction thus introduced entails a very considerable loss of power. With the novel form of cutwater under this invention, the mass of water displaced is much smaller; it extends only from the cutwater to the free surface.

In order to reduce the mass of water displaced to a still greater extent, the greatest beam shown at 2 of the ship is brought as close as possible to the cutwater 1. In this manner the formation of eddies such as form at the bows of ships as hitherto

constructed is avoided. These eddies not only cause alterations in the level of the surface of the water, but also the return of liquid streams in the direction of the travel of the ship. The result is the displacement of a considerable quantity of water in the direction of the movement of the ship. The work required for the displacement of this mass has to be furnished quite uselessly by the ship's engines. The arrangement of the greatest beam close to the cutwater, also permits of giving a more tapering form to the stern of the vessel than in ships as hitherto constructed.

In screw-propelled ships it is advantageous to construct the stern by surrounding the main shaft 3 carrying the propeller 4 by a tapering sleeve 5 the point of which is directed rearward. This sleeve permits of locating the propeller at a considerable distance from the stern post, thereby withdrawing the ship from the disturbance produced by the propeller. The rudder 6 is arranged at the upper part of this tapering sleeve.

The above described construction is not only suitable for ships but also to any moving body intended for traversing a fluid rapidly.

Having thus described and ascertained the nature of my invention and in what manner the same may be performed, I declare that what I claim is:

1. A vessel provided with a cut-water disposed substantially horizontal, the said cut-water being convex above and convex below and in cross-section having its horizontal axis the major axis as compared with the vertical axis, the greatest beam of the vessel merging with said cut-water and being adjacent thereto.

2. A vessel having a tapering sleeve extending longitudinally of the vessel, a propeller whose shaft is inclosed by said sleeve, and a rudder mounted upon said sleeve, said rudder having an axis of rotation substantially parallel with the upper side of said sleeve.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES WEYHER.

Witnesses:

H. C. COXE,
EMILE KLOTZ.