

E. RALPH.

MEANS FOR RAISING AND LOWERING SCREW PROPELLERS.

No. 179,057.

Patented June 20, 1876.

Fig. 1.

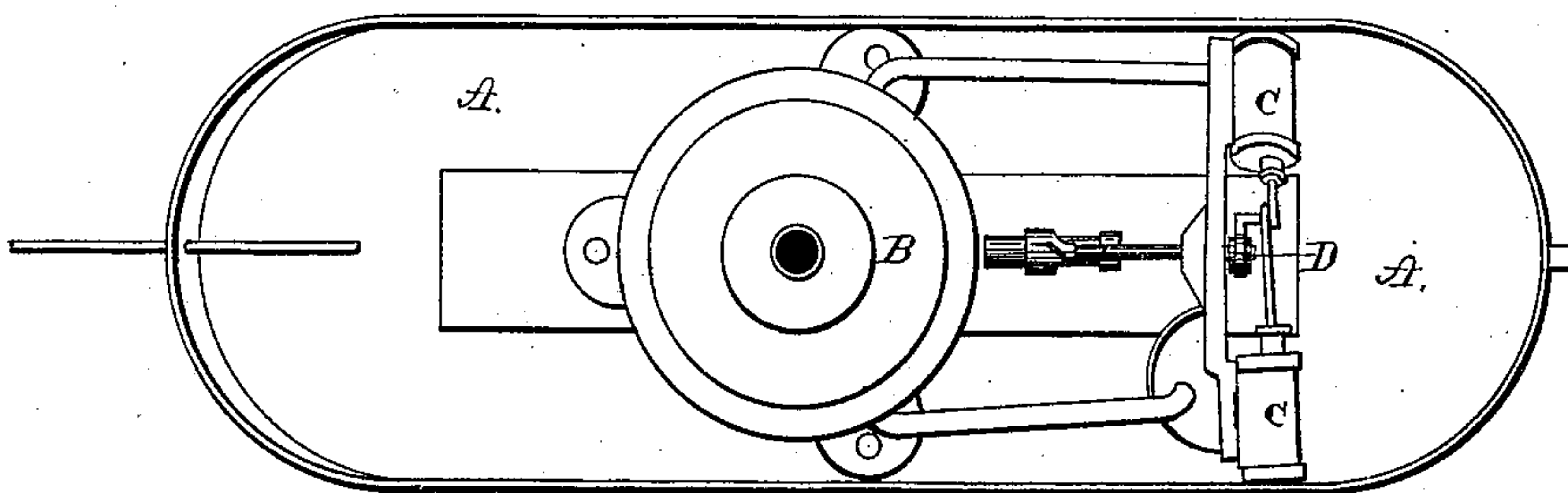
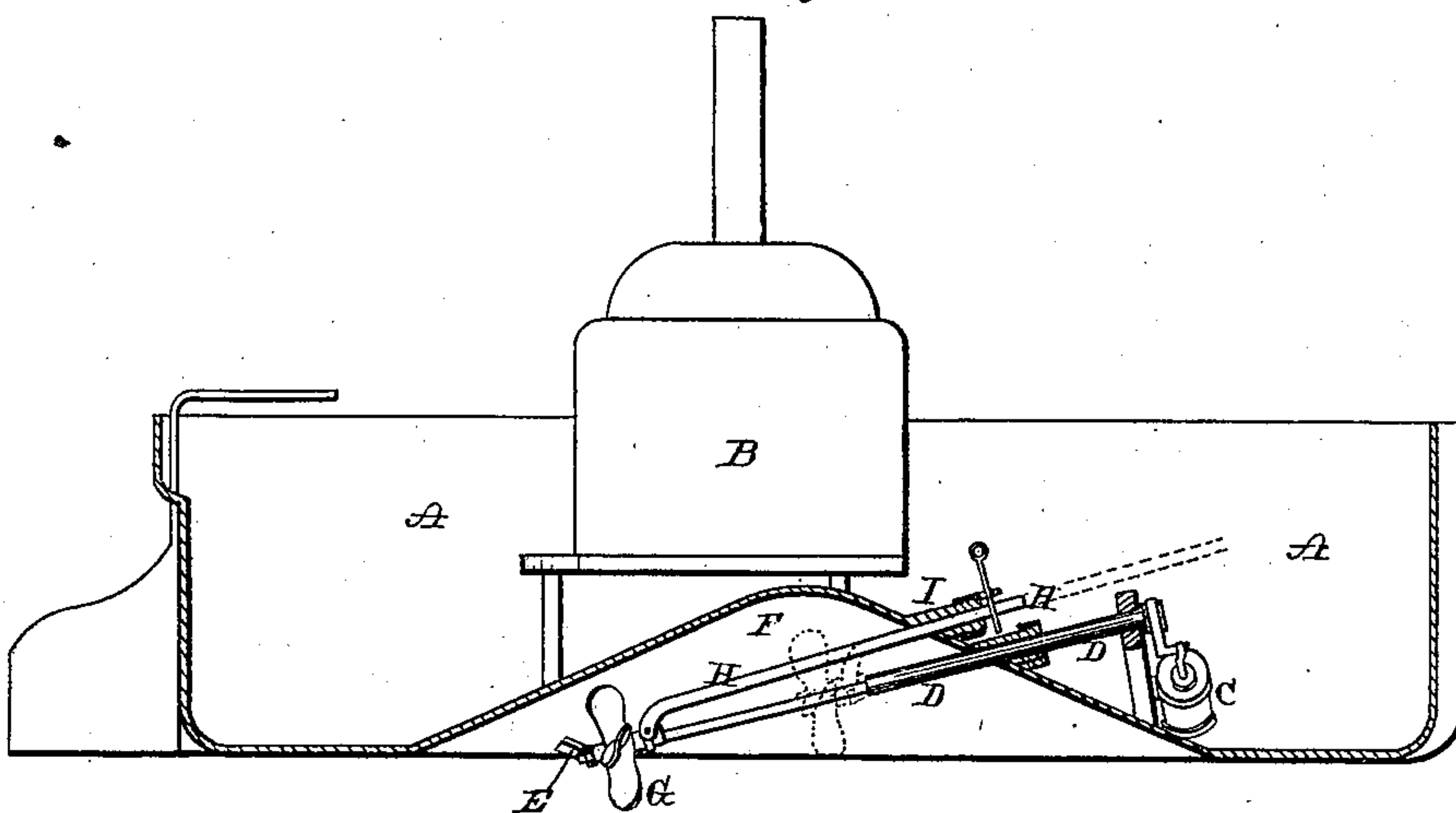


Fig. 2.



WITNESSES.

J. W. Garner
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INVENTOR.

E. Ralph
per
F. A. Lehmann, Atty.

UNITED STATES PATENT OFFICE.

EPHRAIM RALPH, OF TITUSVILLE, PENNSYLVANIA.

IMPROVEMENT IN MEANS FOR RAISING AND LOWERING SCREW-PROPELLERS.

Specification forming part of Letters Patent No. **179,057**, dated June 20, 1876; application filed December 17, 1875.

To all whom it may concern:

Be it known that I, EPHRAIM RALPH, of Titusville, in the county of Crawford and State of Pennsylvania, have invented certain new and useful Improvements in Central Position of Propeller-Wheel for Ships and Boats; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in central position of an inclined propeller-wheel for ships or boats; and it consists in the arrangement and combination of parts that will be more fully described hereinafter.

The accompanying drawings represent my invention.

A represents the frame of the boat; B, the boiler, and C two oscillating cylinders that are connected to the cranked end of the propeller-shaft D. This shaft extends downward through a suitable stuffing-box in the bottom of the boat, and has its lower end journaled in the cross-bar E in the stern end of hollow arch F in the bottom of the boat. Placed upon the squared end of this shaft is an ordinary propeller-wheel, G, that has attached to its hub, by means of a swivel, an auxiliary shaft, H, that runs parallel with the propeller-shaft D, and extends up into the boat through

a suitable stuffing-box, I, as shown. By means of this shaft the propeller-wheel will be changed in position, or held firmly in its required position at either end of the squared propeller-shaft D by suitable keys through the auxiliary shaft H inside the boat, and, by turning ahead or reversing the engines, the propeller-wheel will be moved up or down the shaft D, as desired, after removing the keys inside the boat from shaft H. Where the water is deep enough the wheel will be kept at the lower end of the shaft, where it can be made to revolve without striking the bottom, and where it will have a more direct action on the water. When drawn up into the hollow arch F the bottom of the boat may be touching the bottom, and yet the boat be propelled evenly along.

Having thus described my invention, I claim—

The combination of the inclined shaft D, wheel G, auxiliary shaft H, for holding wheel G firmly in position or changing its position, and hollow arch F in the bottom of the boat, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of November, 1875.

EPHRAIM RALPH.

Witnesses:

JOHN S. TRACY,
WM. WEBBER.