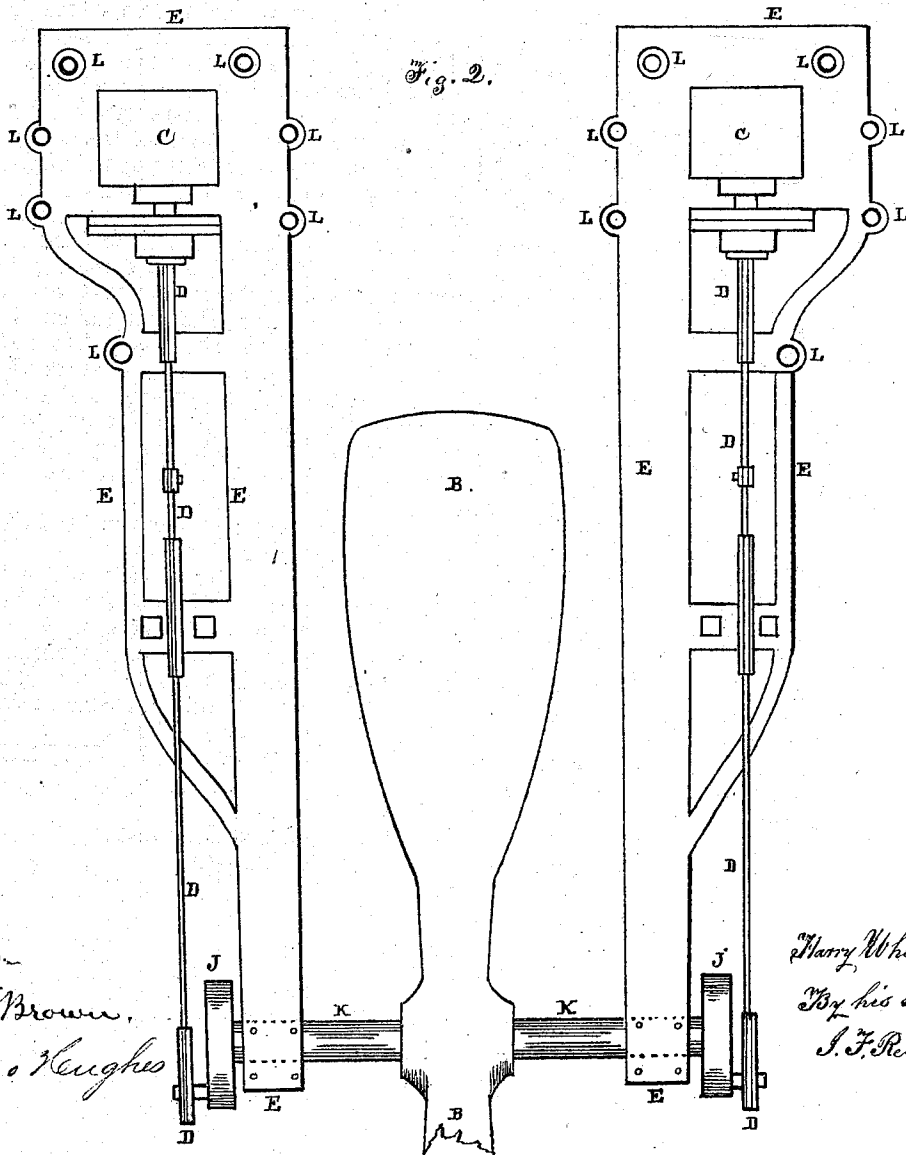
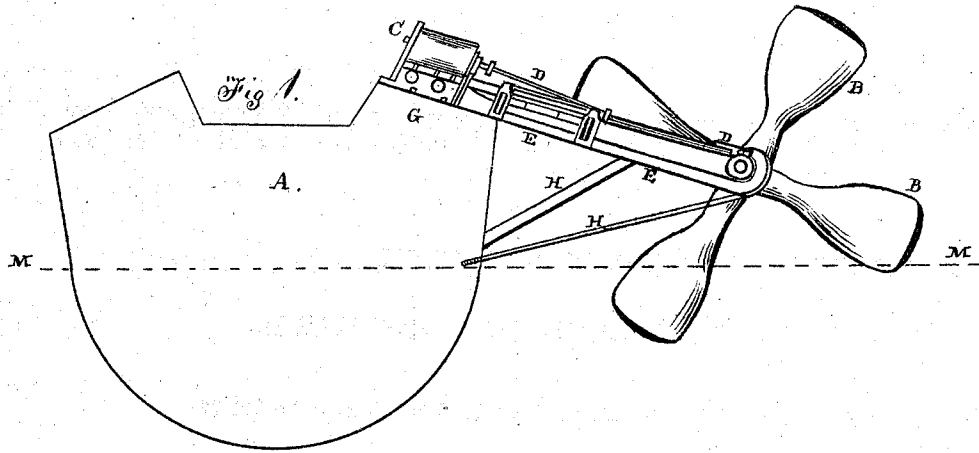


H. WHITAKER.

Improvement in Engines for Propellers.

No. 129,700.

Patented July 23, 1872.



Witnesses
Edw. F. Brown,
Alonzo Hughes

Harry Whitaker,
By his Atty-
J. F. Reigan

UNITED STATES PATENT OFFICE.

HARRY WHITAKER, OF NEW YORK, N. Y.

IMPROVEMENT IN ENGINES FOR PROPELLERS.

Specification forming part of Letters Patent No. 129,700, dated July 23, 1872.

To all whom it may concern:

Be it known that I, HARRY WHITAKER, of the city of New York, State of New York, have invented new and useful "Improvements in the Application of High-Pressure Engines to Screw-Propellers;" and I do hereby declare the following to be an exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification, in which—

Figure 1 represents the hull of a vessel with a side view of the bed-plates, showing the position of the bed-plates resting upon the gunwales, with the engine and screw-propeller attached, as projecting from the side of the vessel. Fig. 2 is a top view of the bed-plates as they rest upon the gunwales at both sides of the vessel, showing the screw-propeller between the plates and the engines or cranks at each side as geared to the shaft of the propeller.

The nature of my invention consists in the construction of the cast-iron bed-plates resting upon the gunwales of the vessel so as to attach the engines in pairs, and yoked to right-angle cranks, with the propellers between the engines, the operation being similar in principle to the engine of a locomotive; and the object being to strengthen the support of the side-screw propeller by attaching the engines to a firm cast-iron bed-plate, and securing a reliable connection between the shaft of the propeller and engine-cylinder and increasing the power of the engine.

A represents a cross-section of the hull of a

vessel, so as to show the manner of applying my side propellers B, and showing the location of the engines C C in pairs, yoked to right-angle cranks D D, similar to the manner of arranging the cranks on a locomotive-engine; and this manner of applying the power by the arrangement of laying the engines and shafts, with all the working parts of the engines, upon the bed-plates E, resting upon and fastened to the gunwales G of the vessel, constitute my improvement on my original patent dated October 18, 1853, and extended from the 18th of October, 1867. H H are strong rods or braces extending from the vessel to the bed-plates E to support the bed-plates. J J are the crank or fly wheels attached to each end of the propeller-shaft K to operate the propeller. L L are the apertures in the cast-iron bed-plates E E, through which strong screw-bolts are screwed into the gunwales G to fasten firmly the bed-plates to the gunwales. M represents the water-line.

What I claim as my invention, and desire to secure by Letters Patent, is—

The cast-iron bed-plates E, to which the engines are attached, and resting upon the gunwales G of a vessel, A, having the screw-propeller B between the engines, in combination with the right-angle cranks D D, constructed and arranged substantially as herein described, and for the purposes set forth.

HARRY WHITAKER.

Witnesses:

J. FRANKLIN REIGART,

EDM. F. BROWN.