

(No Model.)

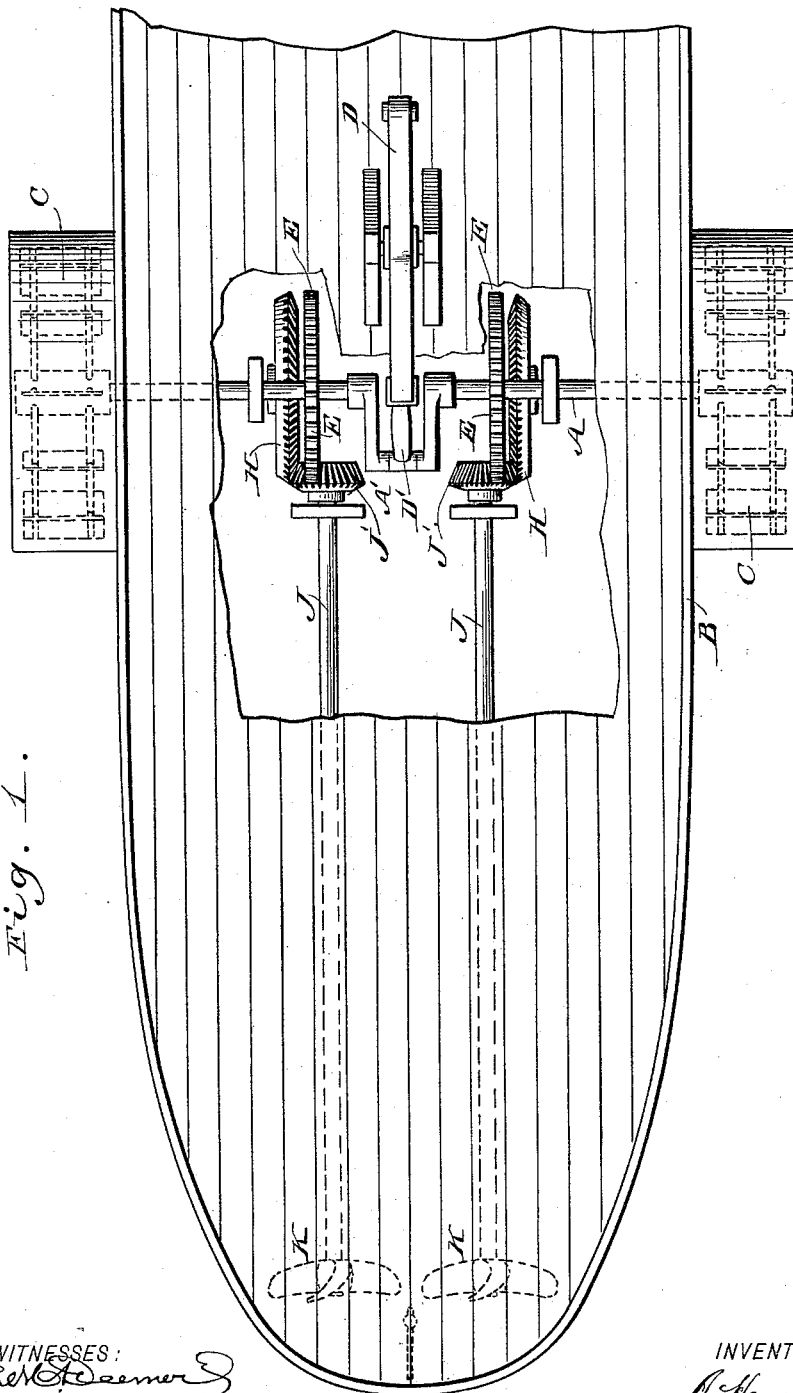
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A. HEUMAN.

MEANS FOR PROPELLING VESSELS.

No. 422,129.

Patented Feb. 25, 1890.



WITNESSES:

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John H. Keener
C. Sedgwick

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INVENTOR:

A. Heuman

BY

Munn. Co.

ATTORNEYS.

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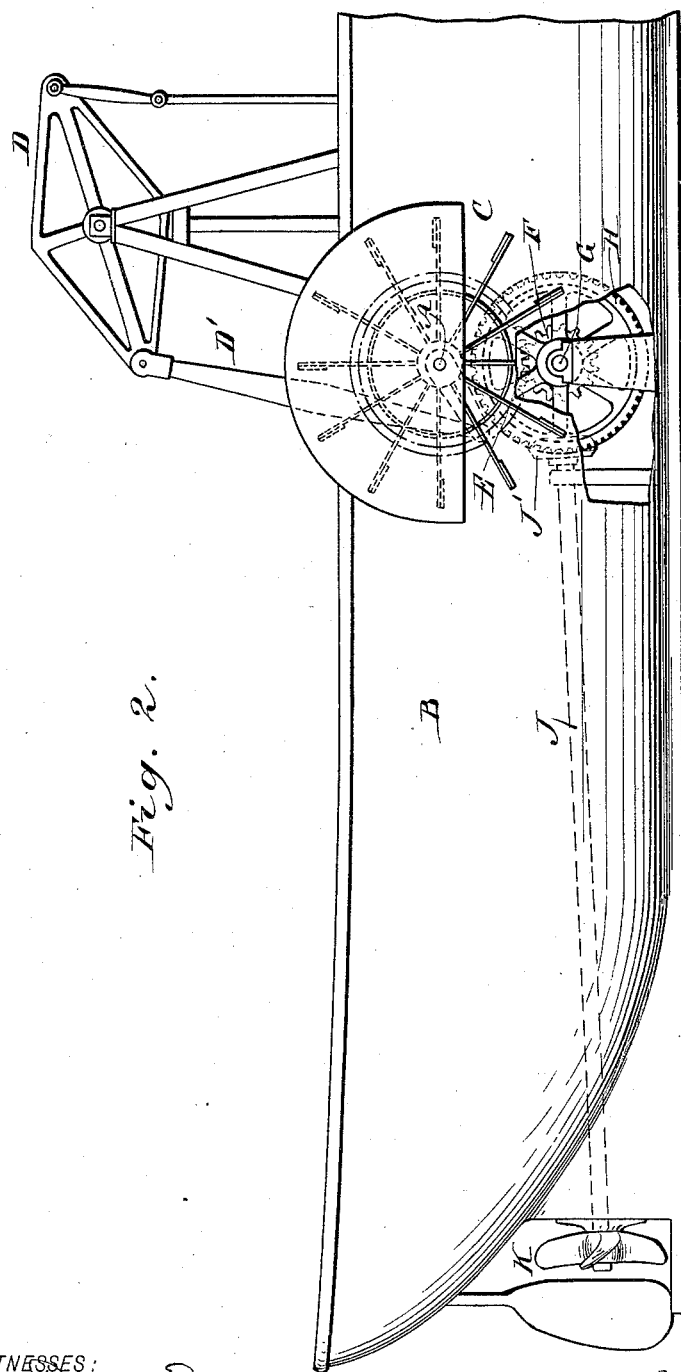
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UNITED STATES PATENT OFFICE.

ABRAHAM HEUMAN, OF NEW YORK, N. Y.

MEANS FOR PROPELLING VESSELS.

SPECIFICATION forming part of Letters Patent No. 422,129, dated February 25, 1890.

Application filed October 25, 1889. Serial No. 328,147. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM HEUMAN, of the city, county, and State of New York, have invented a new and useful Improvement in
5 Means for Propelling Vessels, of which the following is a full, clear, and exact description.

The invention consists of the construction, arrangement, and combination of parts, all as hereinafter described and claimed.

10 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a plan view of a portion of a
15 vessel astern of midships having my invention applied thereto, the deck being broken away to show the machinery; and Fig. 2 is a side elevation of the same, a part of the hull being broken away.

20 A represents a crank-shaft journaled in the sides of the hull B. To the ends of this shaft are secured the side-wheel propellers C C. This shaft A is operated by the walking-beam D, one end of which is connected to the piston of an engine, the other connected to the
25 crank A' of the shaft A by the connecting-rod D'. To the shaft A are secured cog-wheels E, (one each side of the crank A'), which mesh each with a pinion F on shaft G.

On shaft G are secured, also, two beveled
30 gear-wheels H, which mesh with beveled pinions J' on the shafts J. These shafts reach to the stern of the vessel and are provided at their outer ends each with a screw-propeller K, so that the same vessel is provided with
35 both systems of propulsion, each assisting the other, so that a very high speed may be attained.

Having thus described my invention, what I claim as new, and desire to secure by Let-
40 ters Patent, is—

The main crank-shaft, to which the walking-beam is attached, journaled athwart midships and provided with two gear-wheels E—one each side of the crank—and a parallel shaft
45 journaled below the main crank-shaft, provided with two pinions meshing with gear-wheels E, and provided also with two large beveled gear-wheels, in combination with the screw-propeller shafts journaled at right
50 angles to the main crank-shaft and provided with beveled gear-pinions J', which mesh with the beveled gear-wheels E, substantially as described.

ABRAHAM HEUMAN.

Witnesses:

ED. J. CONNELL,
WM. S. WHITE.