

(No Model.)

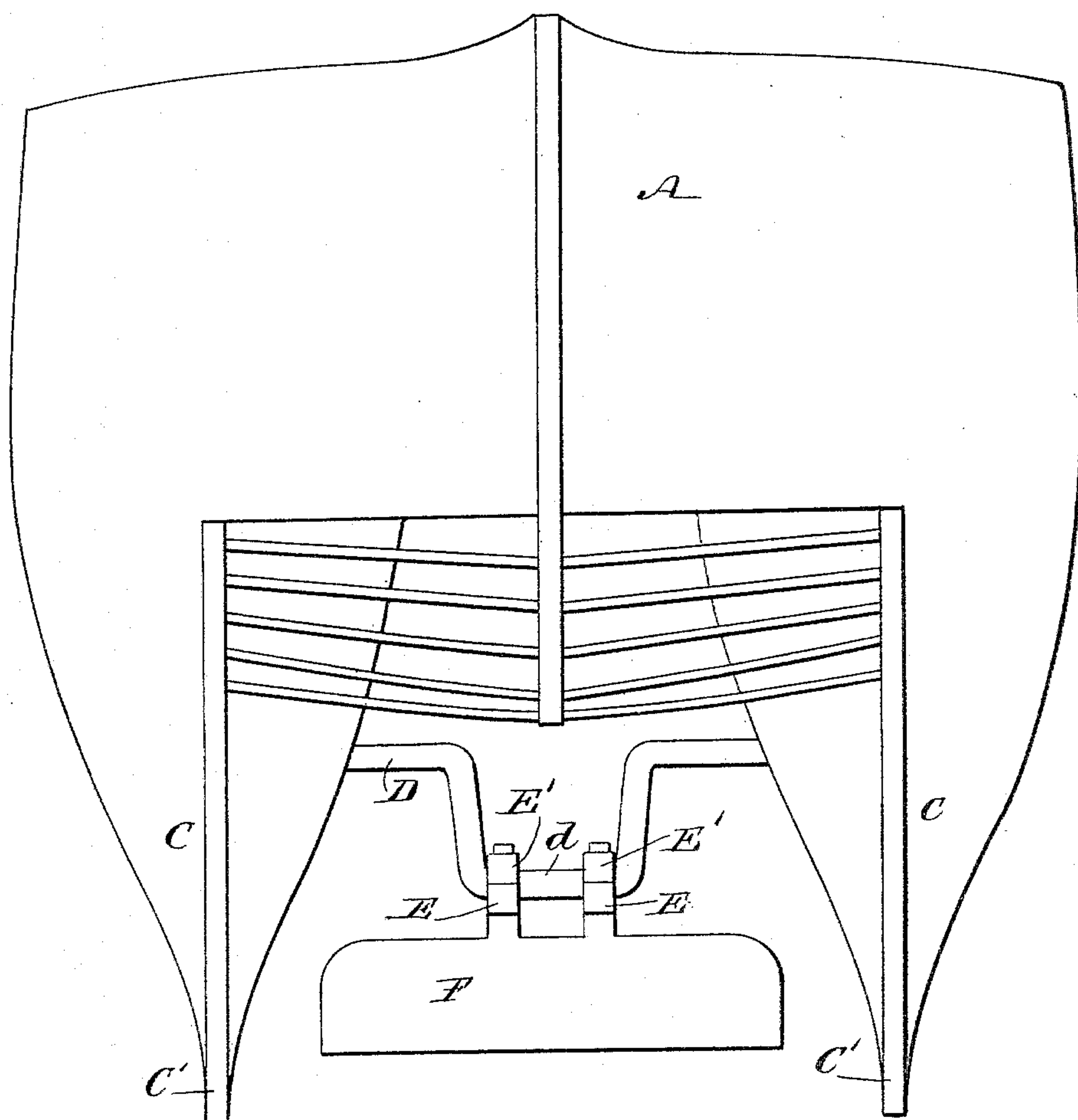
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L. GREGET.
PROPELLER.

No. 387,783.

Patented Aug. 14, 1888.

Fig. 1.



WITNESSES:
John H. Keener
C. Sedgwick

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ATTORNEYS.

(No Model.)

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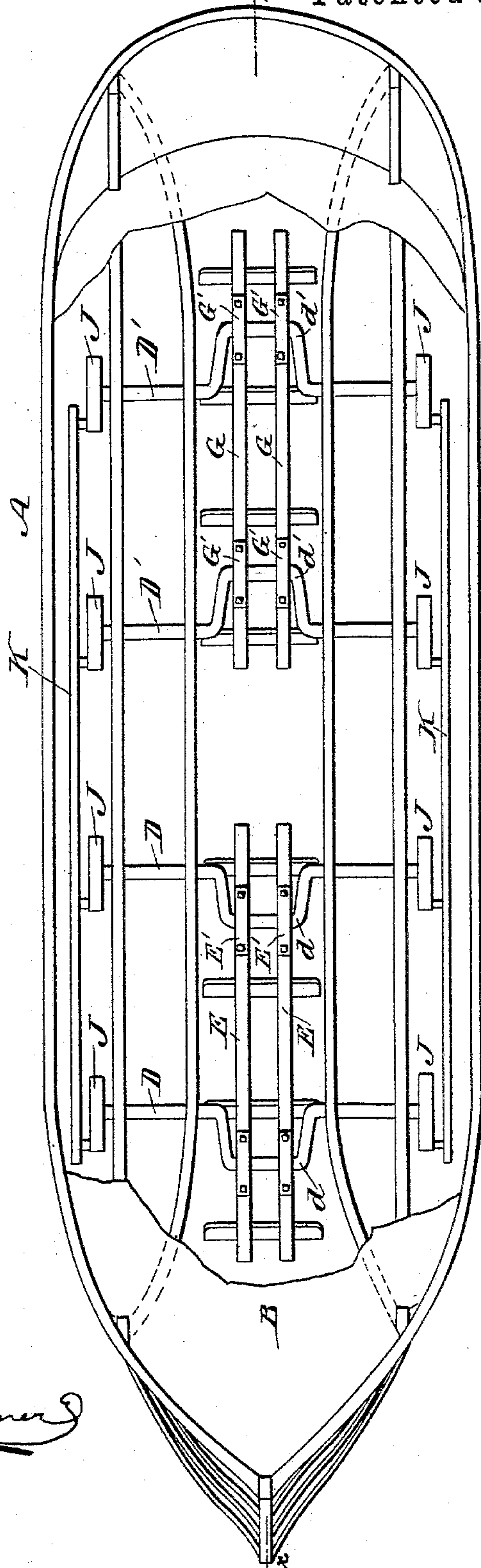
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Fig. 2.



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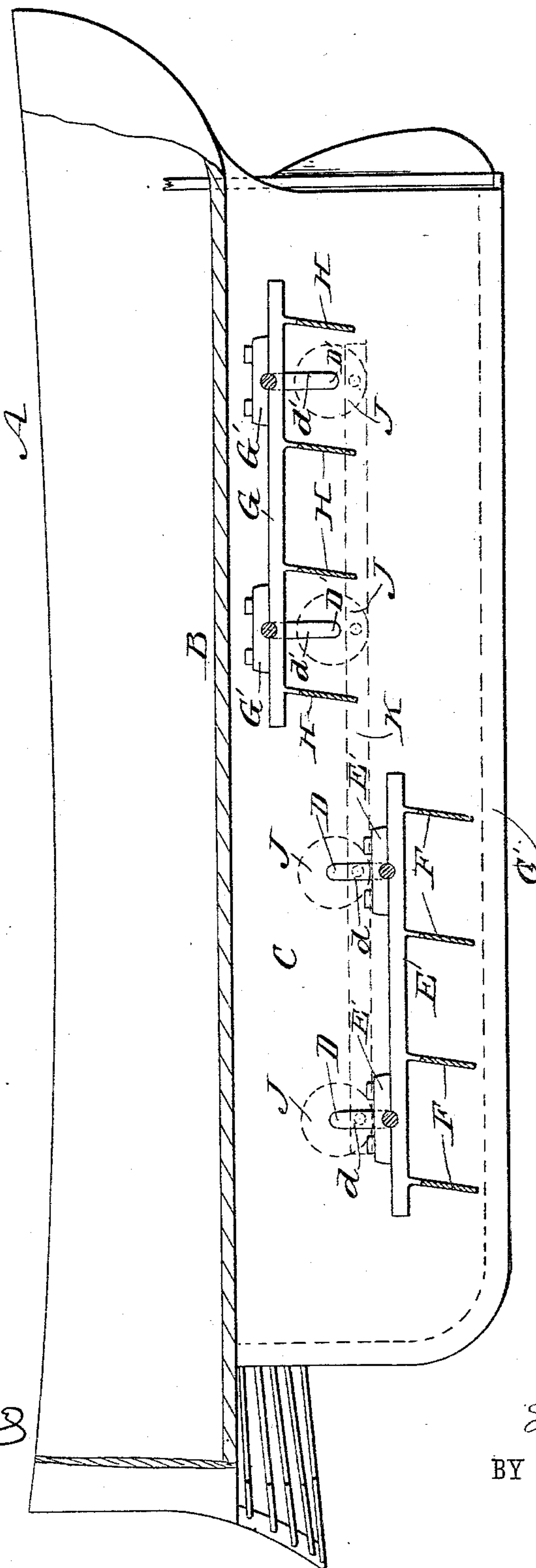
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Fig. 3.



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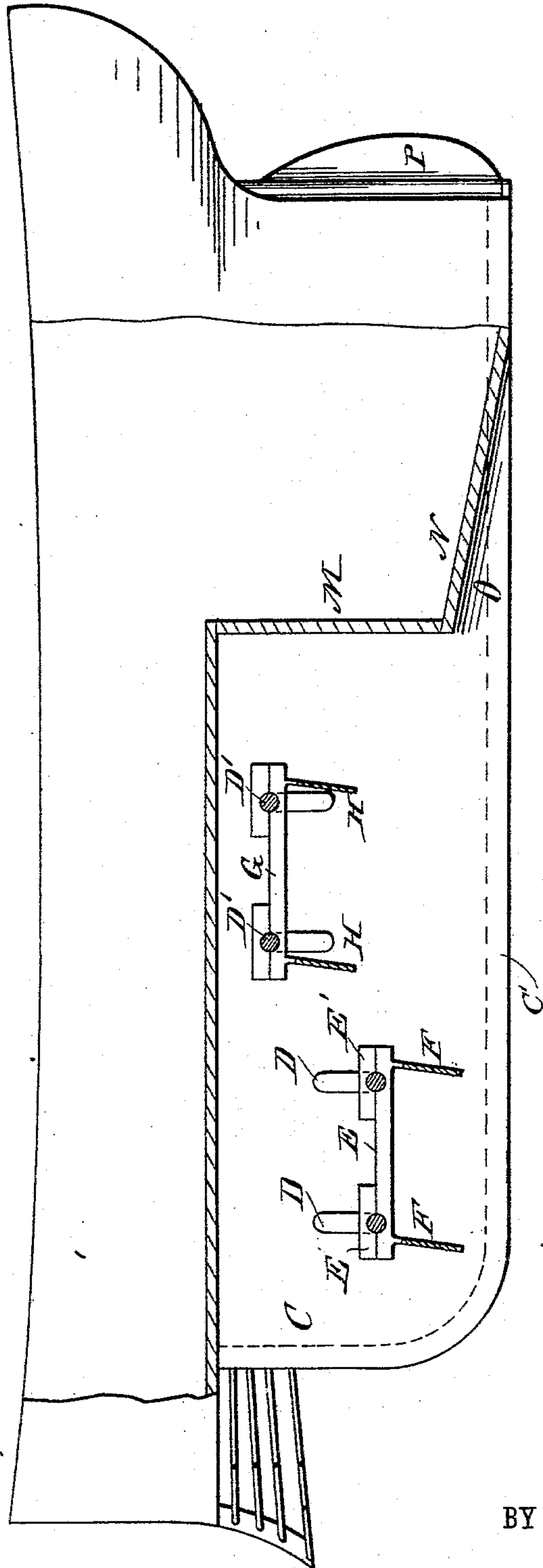
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Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LOUIS GREGET, OF NEW YORK, N. Y.

PROPELLER.

SPECIFICATION forming part of Letters Patent No. 387,783, dated August 14, 1888.

Application filed March 3, 1888. Serial No. 266,041. (No model.)

To all whom it may concern:

Be it known that I, LOUIS GREGET, of the city, county, and State of New York, have invented a new and useful Improvement in Propellers, of which the following is a full, clear, and exact description.

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 all the figures.

Figure 1 is a front elevation of my new and improved propeller. Fig. 2 is a plan view of the same with the deck broken away. Fig. 3 is a longitudinal sectional elevation taken on the line *x x* of Fig. 2, and Fig. 4 is a sectional elevation of a canal-boat constructed in accordance with my invention.

The object of my invention is to attain high speed in the propulsion of vessels; and to this end my invention consists, principally, in constructing the vessel with twin hulls suitably spaced, combined with two series of paddles operated alternately, each series by two crank-shafts.

The invention also consists in attaching the blades of the propellers at a slight angle to the main bars thereof, so that said blades will pitch slightly forward, so that they will leave the water without back-pressure.

The invention finally consists in forming the cranks of the stern series of propellers of greater length than the forward cranks, so that the stern propellers will dip below the agitation of the water caused by the bow propellers, and thus act upon still water.

The body A of the vessel is constructed in this instance with only one deck, B. From this deck at each side of the vessel is constructed a hull, C, each with a keel, C', of equal dimensions, so that the vessel is formed with two complete hulls, as shown clearly in Fig. 1. Journaled in the adjacent sides of the hulls C C are four bent crank-shafts, D D and D' D', the cranks *d d* and *d' d'* of which stand in the center of the space between the said hulls C C. To the forward cranks, *d d*, are connected by journal-blocks E' E' the two parallel bars, E E, to which are connected

the propeller-blades F, four in number in this instance, and these blades project slightly forward and downward, as shown clearly in Fig. 3.

To the rear cranks, *d' d'*, are connected by journal-blocks G' G' the two parallel bars G G, to which are connected the rear propeller-blades, H, also four in number, and these blades also project slightly forward, as shown in Fig. 3, and the rear cranks, *d' d'*, are somewhat longer than the bow cranks *d d*, so that the rear propeller-blades, H, will dip lower than the front blades, F, and have a somewhat faster speed, so that the said blades will act upon still water below the agitation and "run" of the water caused by the blades F.

The shafts D D' are provided at each end with a crank-wheel, J, the crank-pin of which is connected to the long connecting-bars K K, which will be reciprocated by steam-engines (not shown) for turning the said crank-shafts for operating the propeller-blades and propelling the vessel.

The rear shafts, D' D', have the opposite arrangement to the shafts D—that is to say, they are arranged so that the cranks *d'* therefor stand above the journal at the time the cranks *d* of the shafts D stand below their journals—so that the propeller-blades will have alternate movement, only one set performing work at a time. In this manner there is a constant propelling action exerted upon the vessel, so that the motion is continuous.

In Fig. 4, which shows the canal-boat construction, the spaced or twin hulls C reach only from the bow to about midships, where a partition, M, is formed extending the hold at the stern nearly to the keels C'. Attached to the bottom of the partition M is the bottom N, which is inclined downward and rearward nearly to the rudder P. This inclined bottom is fitted at its side edges between the hulls C C, and with said hulls forms a tapering bottom passage, O, which confines the current produced by the paddles H H and directs said current directly astern, and this prevents side washing of the canal.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

5 The body A of the vessel, constructed with the two hulls C C, the two shafts D D, cranks *d d* thereof, bars E, and blades F, attached to the said cranks, in combination with the two stern-shafts D' D', cranks *d' d'*, of greater

length than the cranks *d d* of the front shafts, D D, the bars G, connected to the cranks *d'*, 10 and the blades H, attached to the bars, substantially as described.

LOUIS GREGET.

Witnesses:

MICHAEL DONNELLON.

PETER E. DONNELLON.