

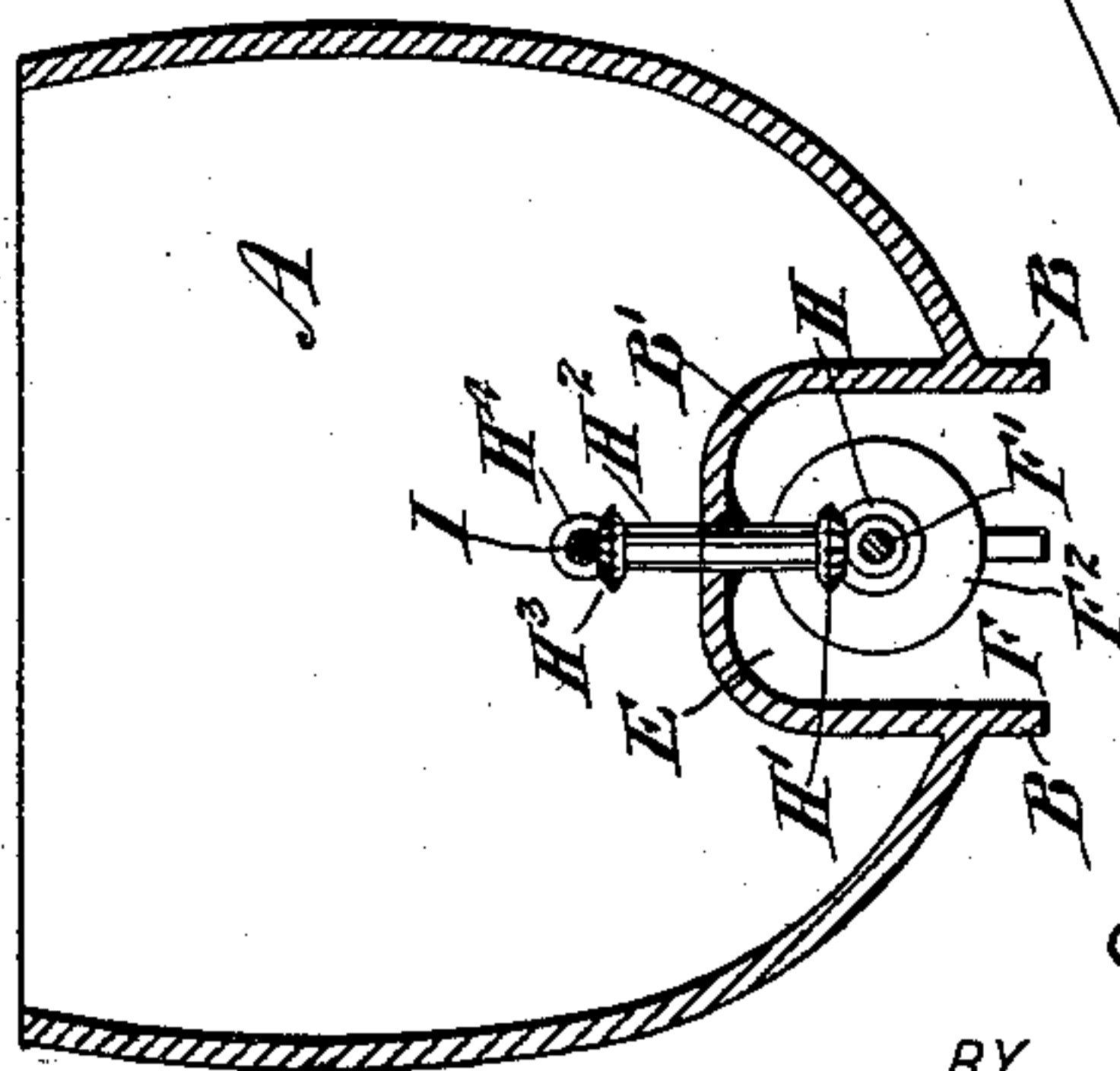
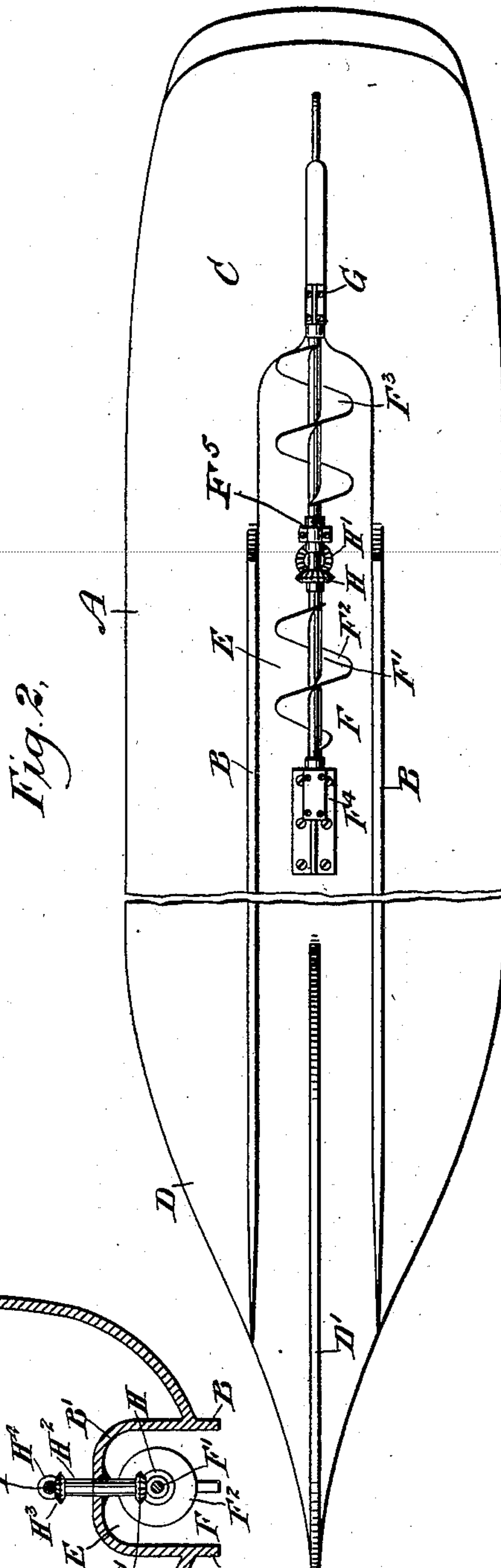
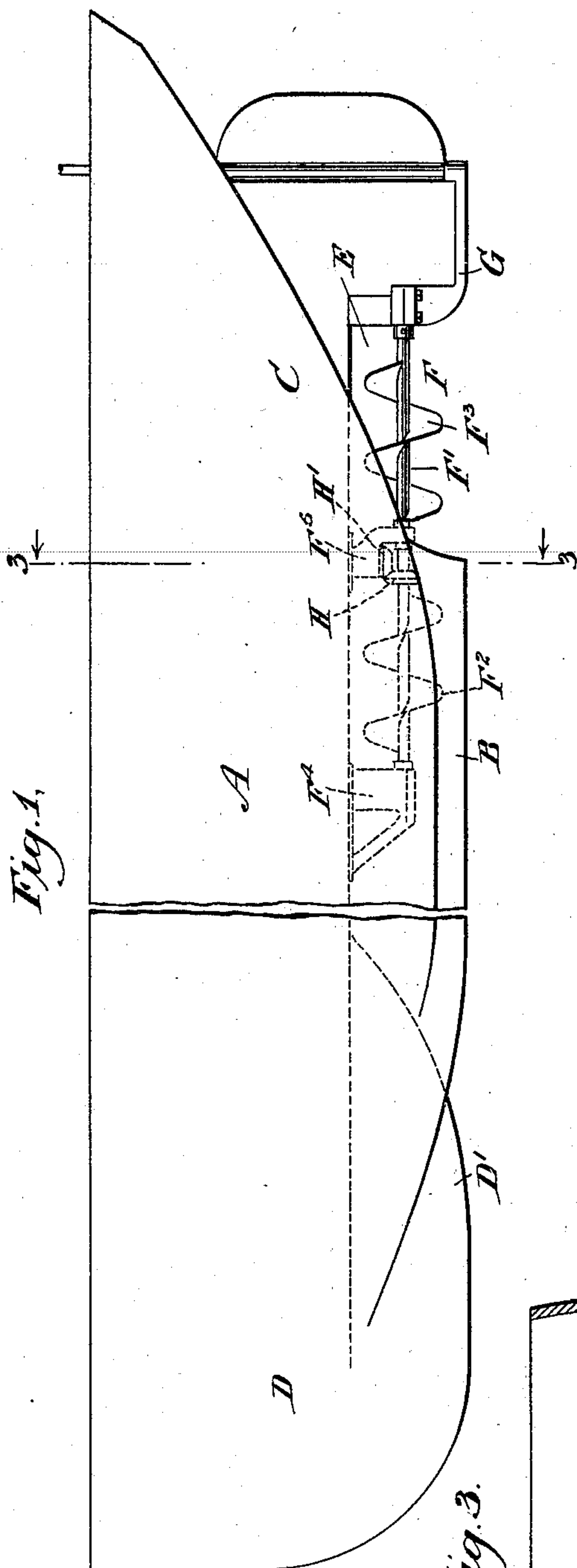
No. 624,366.

Patented May 2, 1899.

T. MURPHY.  
PROPELLING MECHANISM FOR VESSELS.

(Application filed June 6, 1898.)

(No Model.)



WITNESSES:

Edward Thorpe  
Geo. F. Foster

INVENTOR  
T. Murphy.  
BY  
Murray  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

THADDEUS MURPHY, OF NEW YORK, N. Y.

## PROPELLING MECHANISM FOR VESSELS.

SPECIFICATION forming part of Letters Patent No. 624,366, dated May 2, 1899.

Application filed June 6, 1898. Serial No. 682,707. (No model.)

*To all whom it may concern:*

Be it known that I, THADDEUS MURPHY, of the city of New York, borough of Manhattan, in the county and State of New York, have  
5 invented certain new and useful Improvements in Marine Vessels, of which the following is a full, clear, and exact description.

The object of the invention is to provide  
10 certain new and useful improvements in marine vessels with a view of insuring proper propulsion and of utilizing the motive power to the fullest advantage, so that the propeller is capable of acting with great force on the water to propel the vessel at a very high rate  
15 of speed.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claim.

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

Figure 1 is a side elevation of the improvement. Fig. 2 is an inverted plan view of the same, and Fig. 3 is a transverse section of the same on the line 3 3 of Fig. 1.

The hull A of the marine vessel is formed with two parallel keels B, extending longitudinally from the overhanging stern C to the sides of the bow D, as is plainly indicated in the drawings. The two keels B are extended up into the interior of the hull A and connect with each other at the middle portion B' of the hull A, as is plainly indicated in Fig. 3, to produce a U-shaped longitudinal channel E, reaching from the bow of the vessel to the stern. The keel D' of the bow extends to and terminates at its rear end between the forward ends of the parallel keels B, so that the water can pass from both sides of the bow into the channel E to fill the latter at all times with water for the propeller F to act upon the body of water contained in the channel.

45 This propeller F consists of a longitudinal shaft F', carrying two propeller-blades F<sup>2</sup> F<sup>3</sup>, each extending for a full revolution around the shaft, as is plainly indicated in the drawings, the forward blade F<sup>2</sup> being within the  
50 rear portion of the parallel keels B, while the

rear blade F<sup>3</sup> is under the overhanging stern C and terminates near the rudder-frame G, in which the rear end of the shaft F' is journaled, as indicated in Figs. 1 and 2. The channel E is of such a depth that the lower  
55 ends of the blades F<sup>2</sup> are within the keels, and consequently the propeller-blade is not liable to be injured on the keels passing over sandy bottoms, obstructions, or the like. The forward end of the shaft F' is journaled in a  
60 suitable bearing F<sup>4</sup>, and on the shaft, between the ends of the blades F<sup>2</sup> F<sup>3</sup>, is secured a bevel gear-wheel H, in mesh with a bevel gear-wheel H', attached to the lower end of a shaft H<sup>2</sup>, extending vertically and journaled in a suitable  
65 bearing F<sup>5</sup>, attached to the middle or connecting portion B' between the keels B, said bearing F<sup>5</sup> also forming a bearing for the middle portion of the shaft F'.

On the upper end of the shaft H<sup>2</sup> is secured  
70 a bevel gear-wheel H<sup>3</sup>, in mesh with a bevel gear-wheel H<sup>4</sup> on the main or driving shaft I, arranged within the hull A and driven from a suitable engine or other motor. When the shaft I is set in motion, a rotary motion  
75 is given to the shaft F' of the propeller F, so that the blades F<sup>2</sup> F<sup>3</sup> work in the water, passing through the channel E in auger fashion, and as the propeller-blade F<sup>2</sup> works in the body of water, completely filling said chan-  
80 nel, it is evident that a very high rate of speed is obtained without waste of power by a large amount of slip or the like, as is the case with marine vessels heretofore constructed. By  
85 connecting the driving-shaft I with the propeller-shaft, near the middle of the latter, by gearing it is evident that less power is required to drive the propeller, as the friction or resistance is reduced to a minimum.

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

A marine vessel, having two keels located parallel with each other and one on each side of the longitudinal center of the vessel, the  
95 keels being extended upward into the hull of the vessel and being converged to connect with each other so as to form a cavity in the bottom of the hull, a rotary shaft located longitudinally in said cavity, a bearing for each  
100

end of the shaft, propeller-blades attached to  
the shaft, a gear-wheel attached to the shaft  
intermediate of the ends thereof, and between  
the propeller-blades, a third bearing holding  
5 the intermediate portion of the shaft and at-  
tached to the hull of the vessel, a shaft mount-  
ed in said third bearing, and a gear-wheel at-

tached to the third bearing and meshing with  
the gear-wheel of the shaft.

THADDEUS MURPHY.

Witnesses:

THEO. G. HOSTER,

EVERARD BOLTON MARSHALL.