

(No Model.)

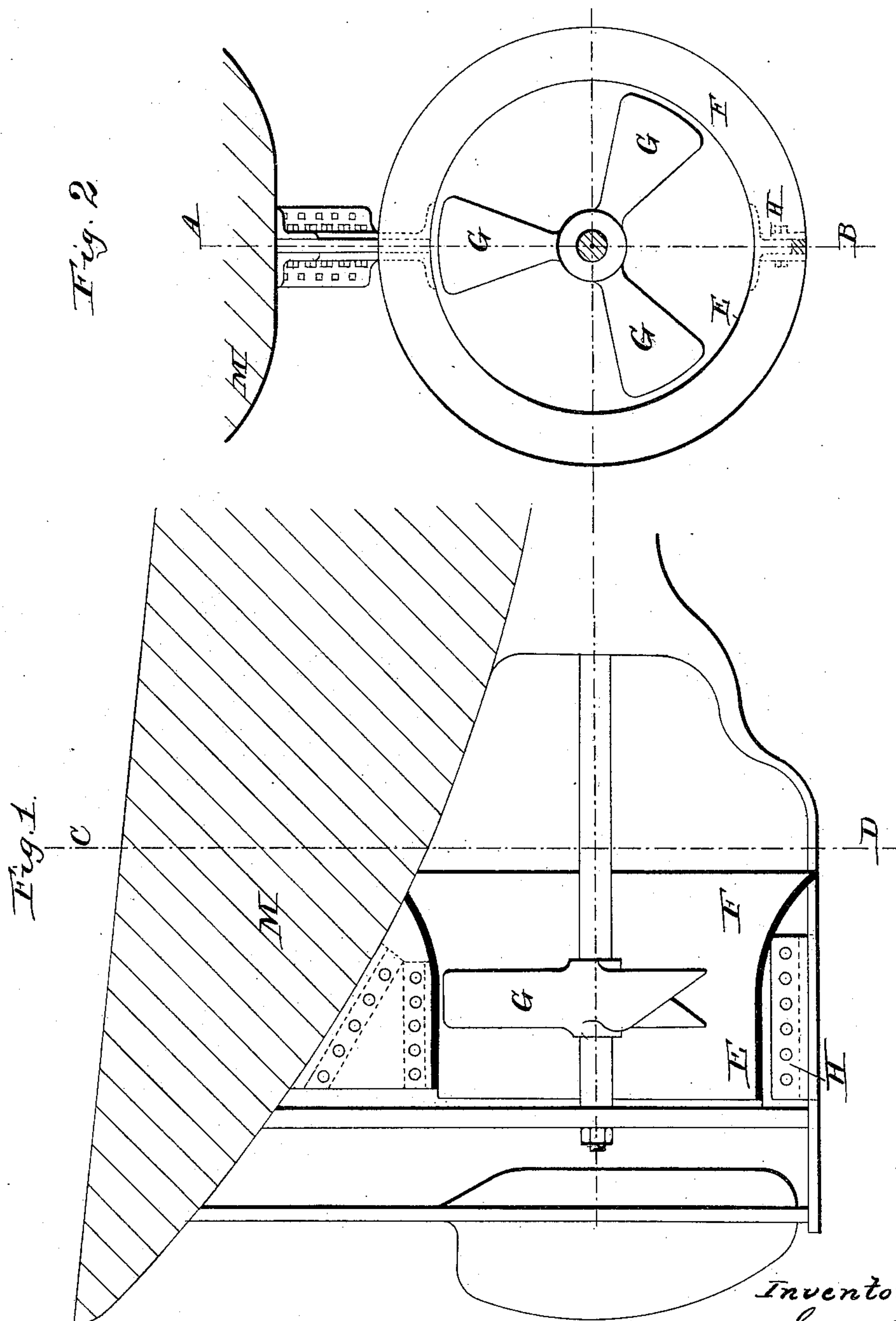
2 Sheets—Sheet 1.

A. GOUILLY.

MEANS FOR INCREASING THE EFFECT OF SCREW PROPELLERS.

No. 427,983.

Patented May 13, 1890.



Witnesses:  
H. de Vos.  
E. L. Richards.

Inventor:  
Alexander Guilly.  
By *Richards & Co.*  
Attorneys.

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Fig. 4.

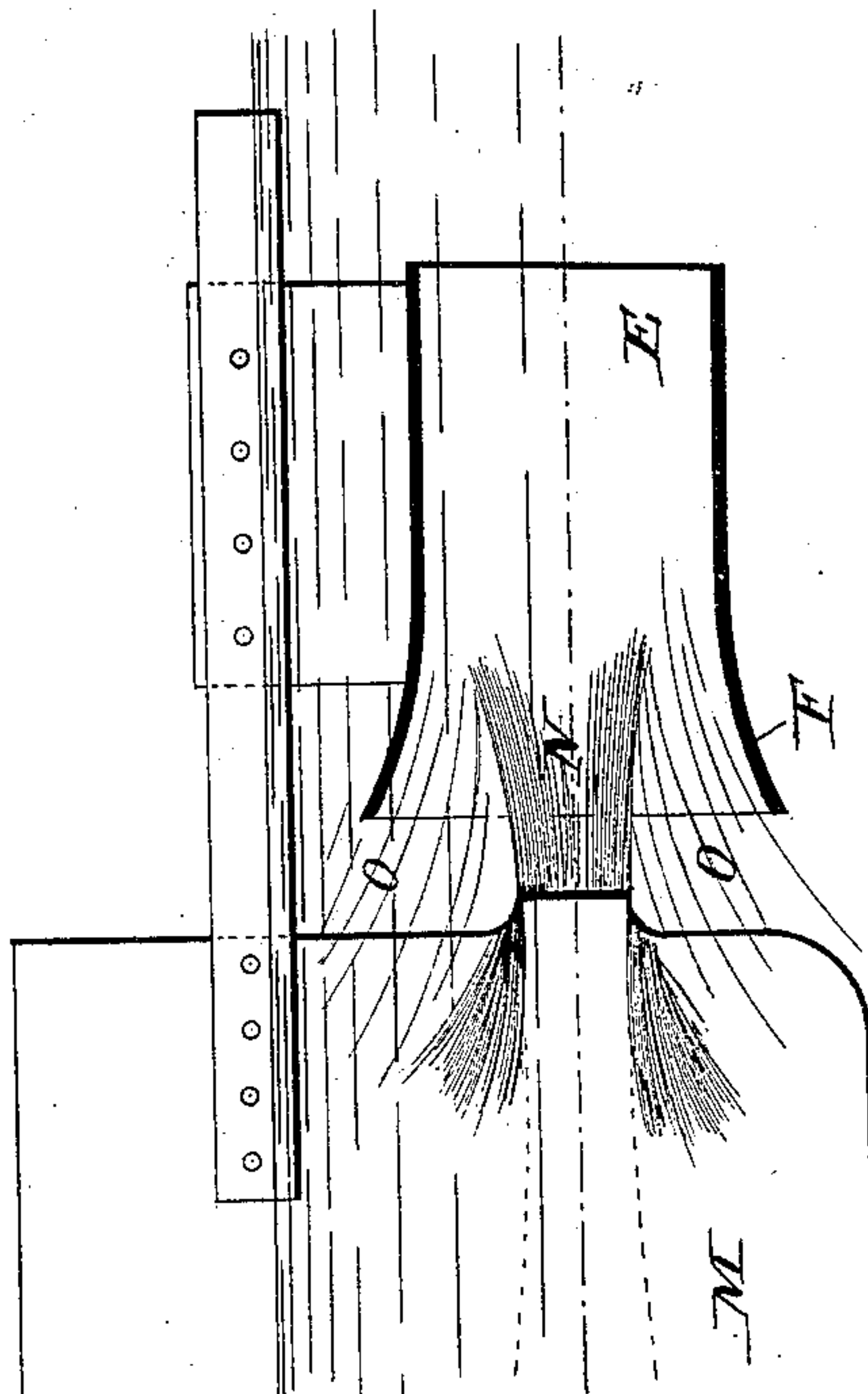
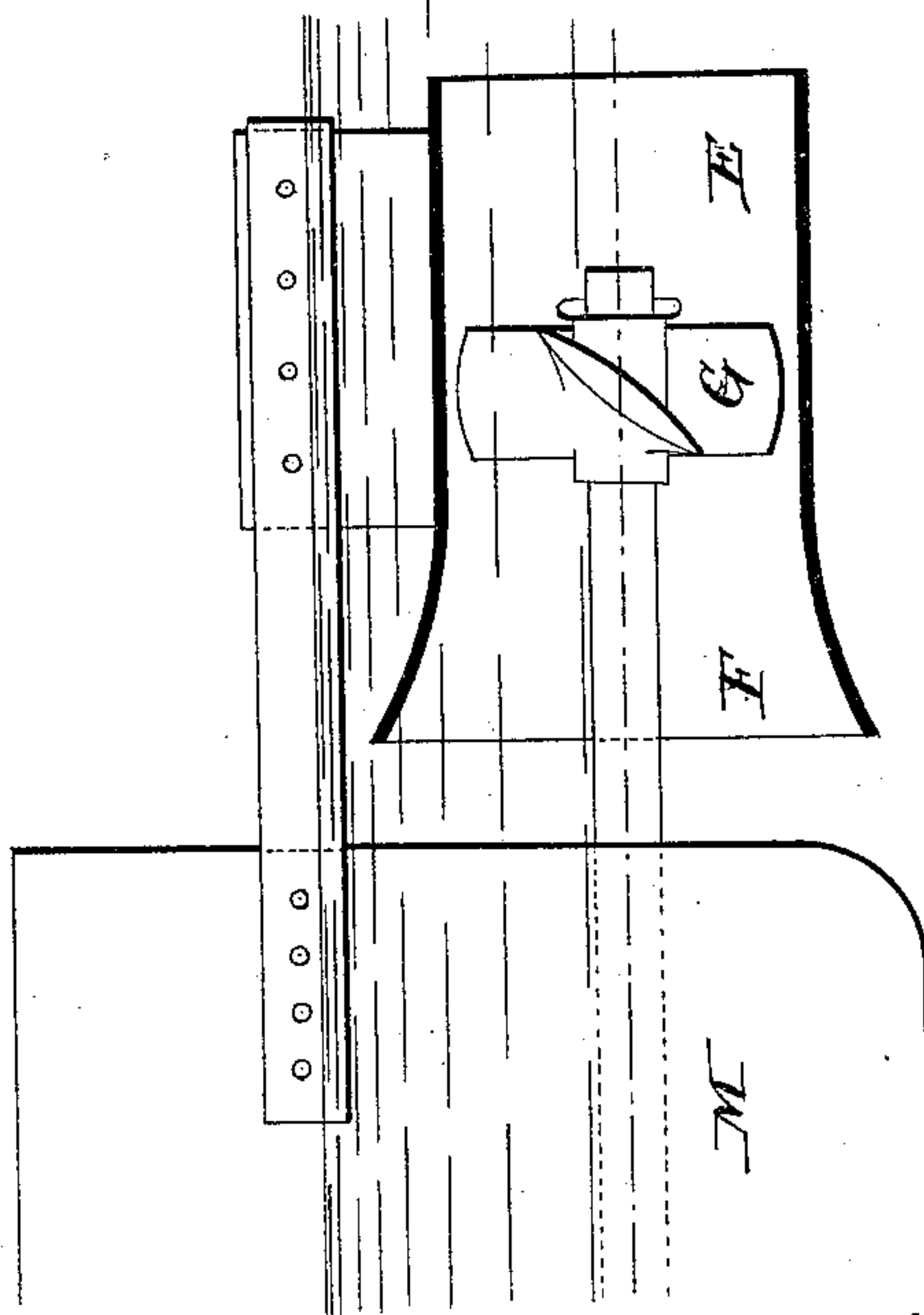


Fig. 3.



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# UNITED STATES PATENT OFFICE.

ALEXANDRE GOUILLY, OF PARIS, FRANCE.

## MEANS FOR INCREASING THE EFFECT OF SCREW-PROPELLERS.

SPECIFICATION forming part of Letters Patent No. 427,983, dated May 13, 1890.

Application filed November 30, 1888. Serial No. 292,321. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDRE GOUILLY, a citizen of the French Republic, and a resident of Paris, in the Republic of France, have invented a new and useful System of Propulsion; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention has for its object an increase of the propulsion actually produced by screws. This increase is obtained by the application of an apparatus which I call a "collector," designed to co-operate with the screw or with liquid jets. It increases in a rather strong proportion the dynamic effect of the screws, protects them against the eddy, and does away with the centrifugal movements of the water which exercise an unfavorable influence on the resistance of the screws.

The apparatus consists of a funnel placed abaft the boat. The mouth of this funnel is turned forward, and on its neck is placed or formed a cylinder of a diameter a little greater than that of the screw and in which said screw works. Its purpose is to regulate the movements of the water around the screw and to limit the disturbance to the mass necessary to the propulsion. The apparatus even promotes the propulsion by utilizing the difference of the pressures on its inside and outside.

The exact proportions and the inside and outside forms of this collector vary according to the particular cases, and it would be impossible to give a single rule adapted for all circumstances. In order, however, to make my invention clearly understood, I have shown in the accompanying drawings means for carrying the same into effect.

In said drawings, Figure 1 is a vertical longitudinal section taken on line A B of Fig. 2 of so much of the propelling apparatus of a vessel as is necessary to an understanding of my invention. Fig. 2 is a sectional view of the same on line C D of Fig. 1. Figs. 3 and 4 are side views, partly in section, of other constructions embodying my invention.

Referring to the drawings, F indicates the funnel or conical portion, and E the cylinder, of the collector.

G is the screw-propeller.

I give in Figs. 1 and 2 a section and a front view in one-tenth of natural size of a collector which is adapted for a boat of eight meters' length. The length of the cylinder E is 0.132 meters. The height (or length) of the conical part F is 0.155 meters and the great diameter is 0.84 meters. The screw G has a diameter of 0.62 meters, while the cylinder E has a diameter of 0.64 meters.

The apparatus is attached to the vessel by means of angle-irons, H.

Fig. 4 shows the arrangement of the collector used, with a means for the injection of water. The water of the jets N issues from the boat M, where it has been set in motion in any suitable manner and is directed through the center of the collector E F. Those jets, carrying along streamlets O, working on the surface of the collector, originate the various pressures which I utilize for the propulsion.

In the drawings herein referred to accompanying this specification the collector is located abaft.

The collector may be made solid with or independent of the bottom of the vessel. It may be made according to the form of the vessel.

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

1. In a propelling apparatus, the combination, with the propelling means or body, of the herein-described collector surrounding the propelling-body, having the circular curved funnel F and cylinder E and adapted to govern the inside and outside movements of the fluid and increase the propelling-pressure, the opening of the funnel being abaft of the keel and submerged portion of the vessel, substantially as set forth.

2. In a propelling apparatus, the combination, with means for producing a propelling-jet, of the collector secured to the hull of a vessel below the water-line and having the circular curved funnel F and cylinder E, said collector being situated to surround said jet and adapted to govern the inside and outside movements of the fluid, substantially as set forth.

3. In a propelling apparatus, the combination, with means for producing a propelling-jet, of a collector secured to the hull of a vessel below the water-line in line with the jet-orifice and adapted to govern the inside and  
5 outside movements of the fluid, substantially as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ALEXANDRE GOUILLY.

Witnesses:

JULES FAYÖLLETY,  
AUG. VINCK.