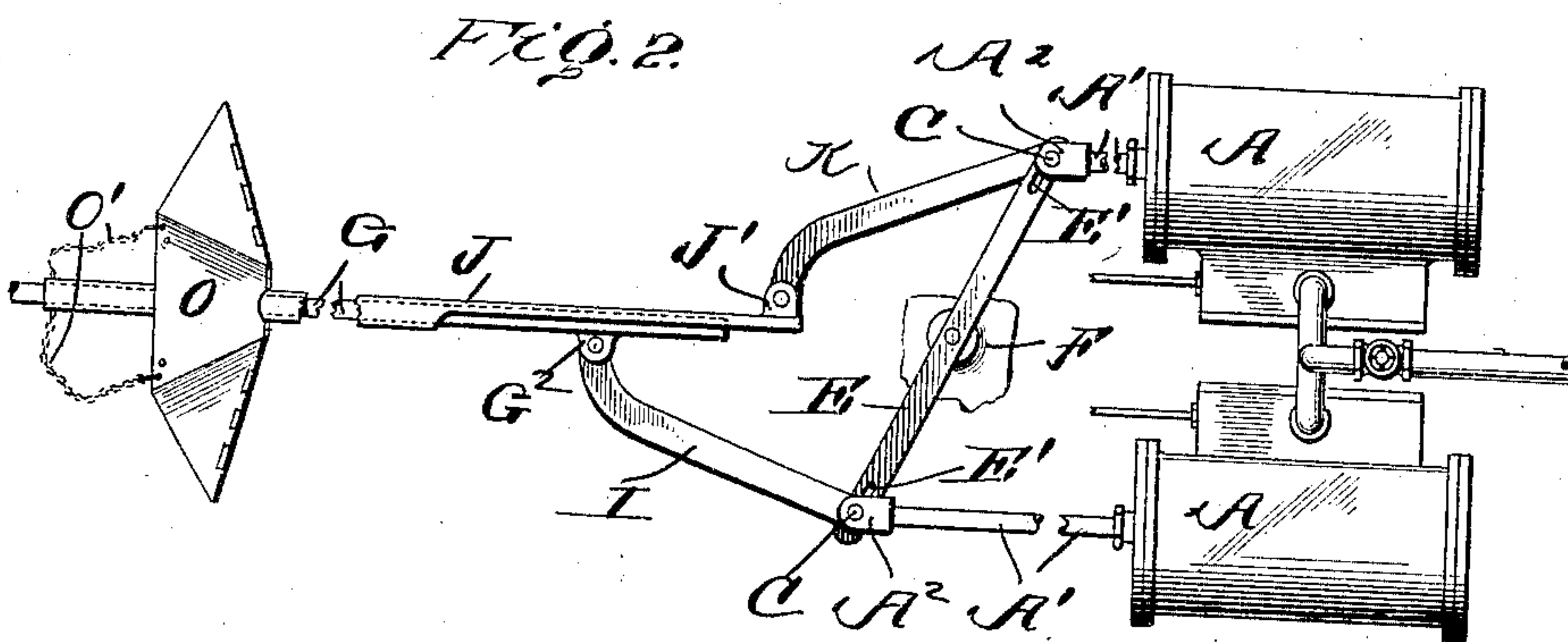
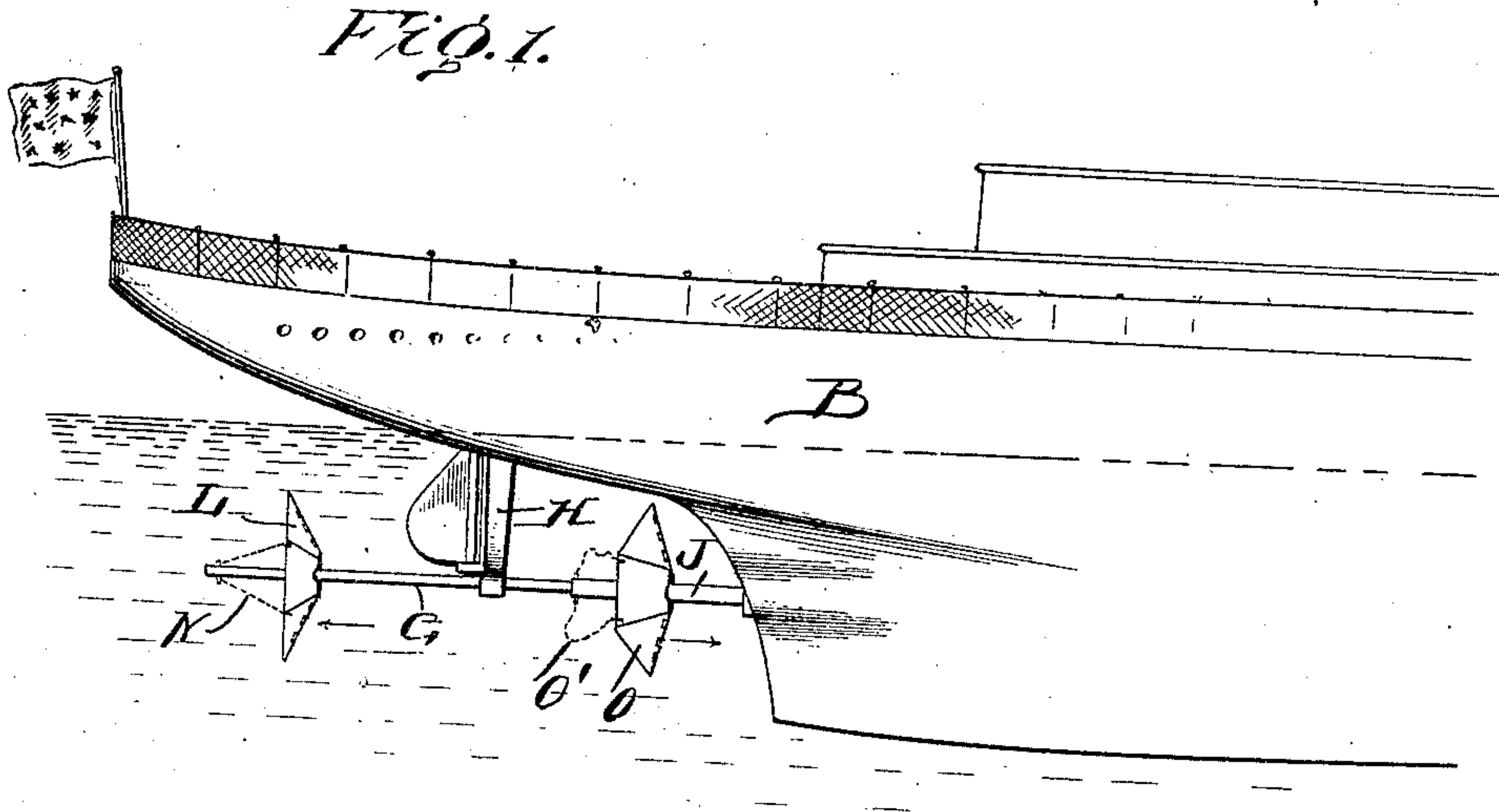


No. 839,826.

PATENTED JAN. 1, 1907.

S. N. EDGAR.
BOAT PROPELLER.
APPLICATION FILED JAN. 16, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

Louis H. Schmidt.

Rea Olbright.

INVENTOR

Samuel N. Edgar.

BY

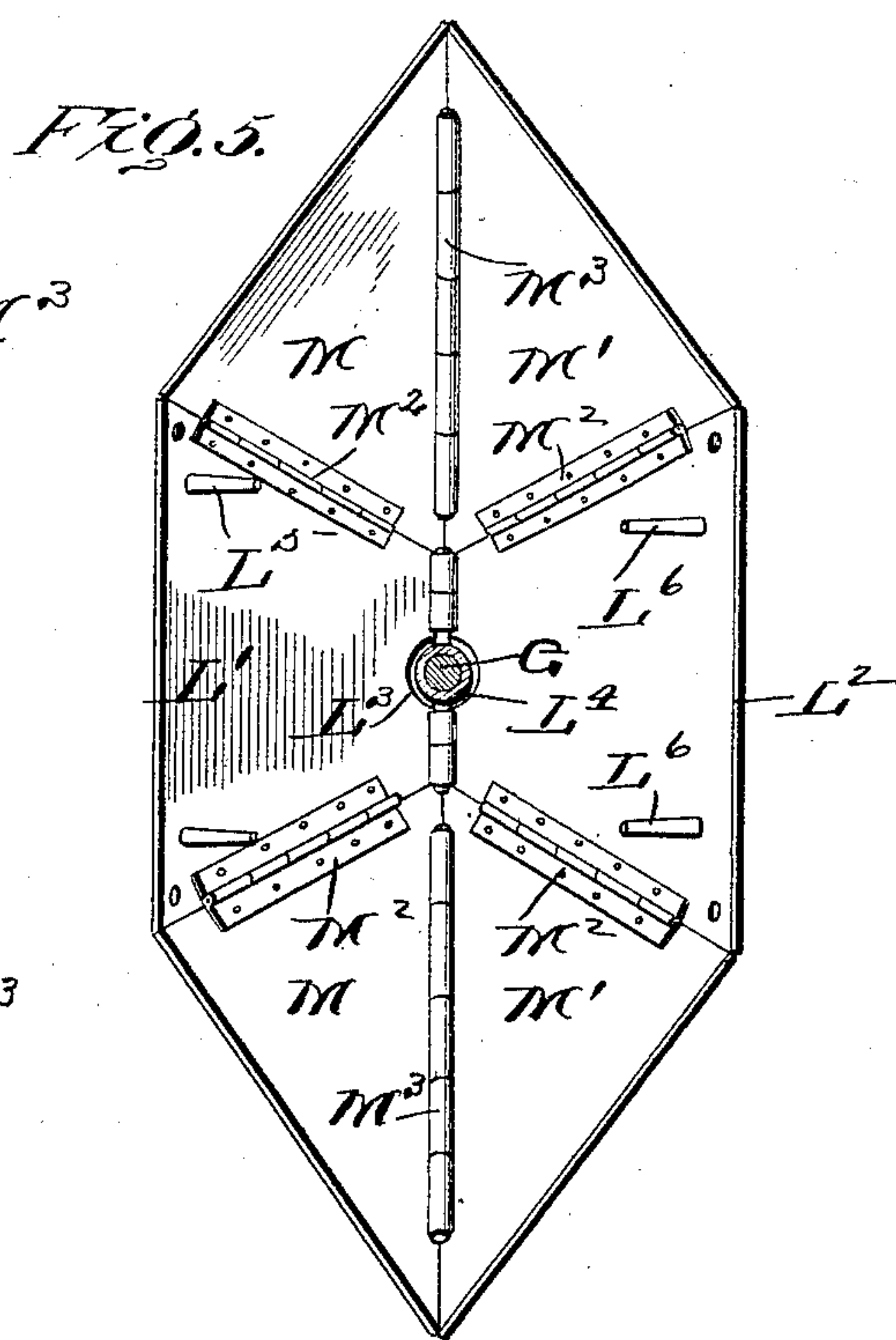
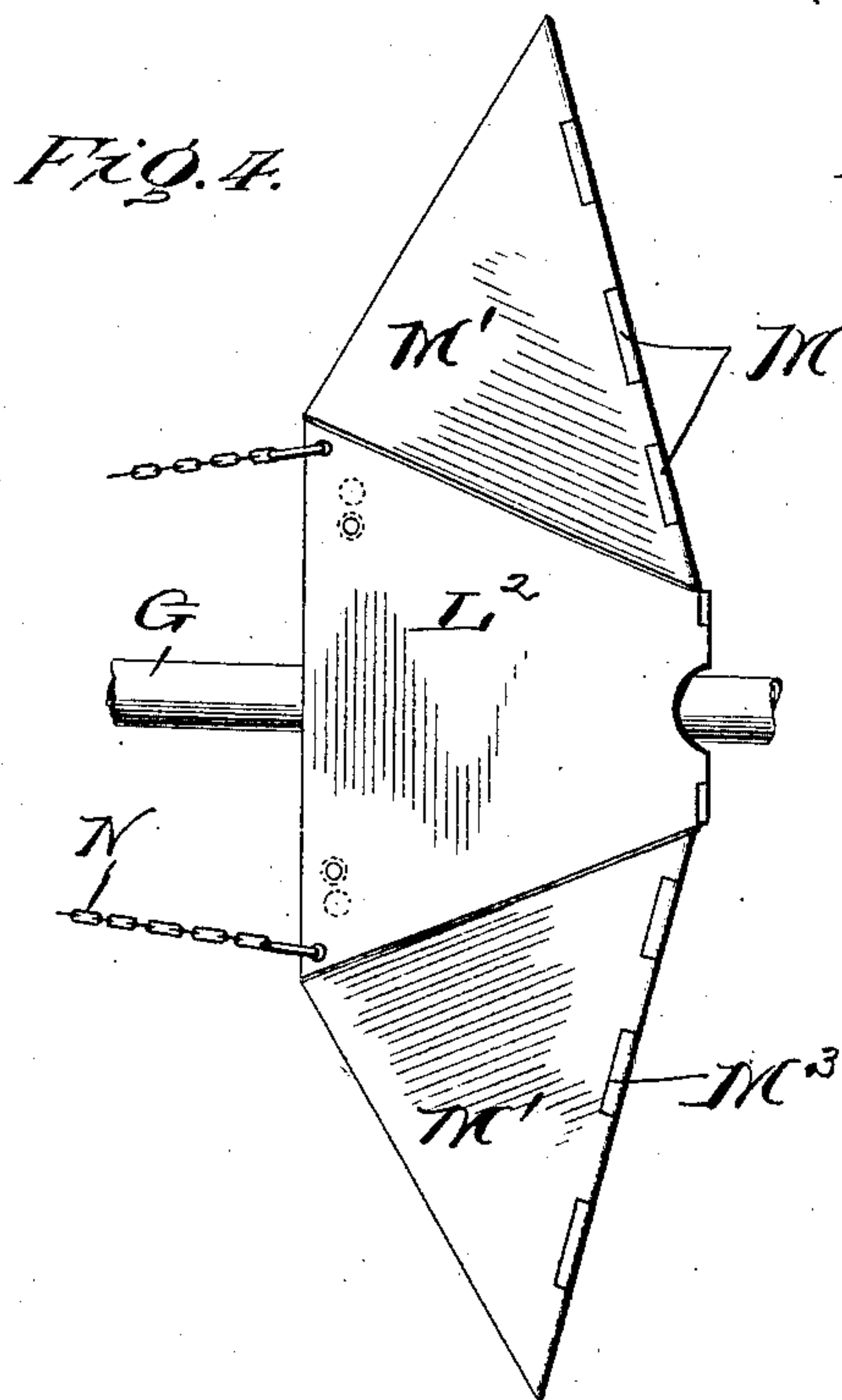
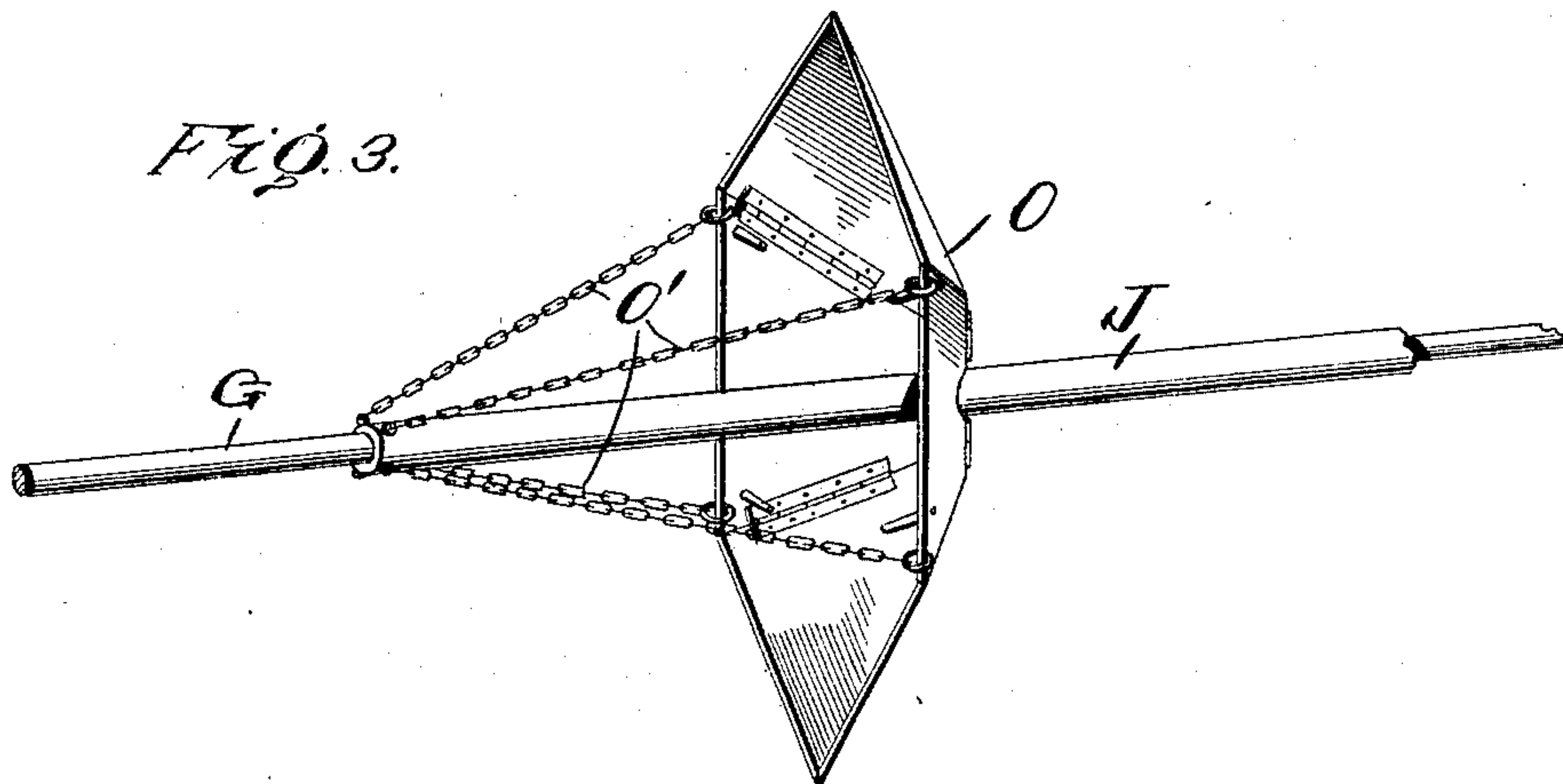
O'Meara & Brock
ATTORNEYS,

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2 SHEETS—SHEET 2.



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Elbright.

INVENTOR

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BY

O'Meara & Brock
ATTORNEYS

UNITED STATES PATENT OFFICE.

SAMUEL NOOLEY EDGAR, OF GREENVILLE, TEXAS.

BOAT-PROPELLER.

No. 839,826.

Specification of Letters Patent.

Patented Jan. 1, 1907.

Application filed January 16, 1906. Serial No. 296,340.

To all whom it may concern:

Be it known that I, SAMUEL NOOLEY EDGAR, a citizen of the United States, residing at Greenville, in the county of Hunt and State of Texas, have invented a new and useful Improvement in a Boat-Propeller, of which the following is a specification.

My invention relates to certain new and useful improvements in boat-propellers, and more particularly to reciprocating propellers.

The object of my invention is to provide a propeller which is capable of propelling a boat at a very high rate of speed and at a very low cost.

Another object of my invention is to improve on the general propellers, so that the difficulties now existing will be overcome and a very efficient propeller will be obtained.

Another object of my invention is to provide a very simple driving mechanism in connection with the propellers which is very effective in use.

With these and various other objects in view the invention consists of the novel features of construction, combination, and arrangement of parts hereinafter fully described, and pointed out in the claims.

In the drawings, forming a part of this specification, Figure 1 is a side view of the stern of the vessel, showing the propeller in place. Fig. 2 is a top plan view of the driving mechanism and propeller, one of the propellers being broken away. Fig. 3 is a perspective view of one of the propellers. Fig. 4 is a side view of the propeller. Fig. 5 is an end view of one of the propellers.

Referring to the drawings, A indicates a pair of cylinders, provided with the usual valves and feed-pipe, adapted to be arranged in the stern of the vessel B. Piston-rods A' extend out the rear ends of the cylinders, having bifurcated enlarged ends A², connected by pins C, which are adapted to pass through the slots E', formed in the ends of the bar E, pivoted centrally on a stud-post F, arranged in the rear of the cylinder.

A shaft G, slidably mounted in a bracket H supporting the rudder, extends through the stuffing-box into the vessel and is provided with a bifurcated lug G² adjacent its end in which the end of the link I is pivoted. The other end of the link I is connected to the end of one of the piston-rods. A sleeve J is mounted on the shaft G, provided with a cut-away portion adjacent its ends and a bifurcated lug J', in which a link K is pivoted,

having its other end connected to the end of the other piston-rod.

A propeller L is mounted on the end of the shaft adjacent its other end and consists of two wings L' L², hinged together, having cut-out portions L³ L⁴, through which the shaft is adapted to pass. The wings are hinged to the shaft, so that they can open and close. Pins L⁵ L⁶ project out from each wing for the purpose of preventing the wings from closing tightly together. Triangular sections M M' are connected to the upper and lower edges of the wings by hinges M², and the meeting edges of the triangular sections are hinged together at M³. Openings are formed in the outer corners of the wings carrying chains N, which are connected to the end of the shaft G, releasing the hinges of the greatest amount of the strain. A duplicate propeller O is arranged on the sleeve adjacent the outer end, the ends of the chain O' being connected to the ends of the sleeve I.

From the foregoing description it will be seen that I have provided a reciprocating propeller so constructed and connected to the driving mechanism that the propellers will work in opposite directions to each other, so that one of the propellers will be forcing the vessel forward as the other is returning after it has reached the end of the stroke.

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

1. In a boat-propeller, the combination with a pair of cylinders provided with piston-rods, of a shaft provided with a propeller at its end connected to one of said piston-rods, a sleeve arranged on said shaft provided with a propeller at its end connected to the other piston-rod, and a bar connecting said piston-rods for the purpose described.

2. In a boat-propeller, the combination with a pair of cylinders provided with piston-rods, of a shaft provided with a folding propeller adjacent one end, slidably mounted in a bracket, a link connecting the other end of said shaft to one of the piston-rods, a sleeve arranged on said shaft provided with a folding propeller, adjacent one end, a link connecting the other end of said sleeve to the other piston-rod, and a bar pivoted on a stud-post connecting said piston-rods, for the purpose described.

3. In a boat-propeller, the combination with a pair of cylinders provided with piston-rods, of a shaft slidably mounted in a bracket

and connected to one of said piston-rods, a sleeve slidably mounted on said shaft connected to the other piston-rod, wings hinged to the shaft and sleeve, chains connecting
5 said wings to the shaft and sleeve, and a bar connecting said piston-rods, for the purpose described.

4. In a boat-propeller, the combination
10 with a pair of cylinders provided with piston-rods, of a shaft slidably mounted in the bracket carrying the rudder, a link connecting the end of the shaft, to one of the piston-

rods, a sleeve mounted on said shaft connected to the other rod, wings hinged to the shaft and sleeve, triangular sections hinged 15 together and to the upper and lower edges of the wings, pins extending inwardly from said wings and chains connecting said wings to the shaft and sleeve, for the purpose described.

SAMUEL NOOLEY EDGAR.

Witnesses:

L. L. BOWMAN,
R. E. HAWKINS.