

J. F. Reigart.
Screw Propellers.

N^o 39,067

Patented Jun. 30, 1863.

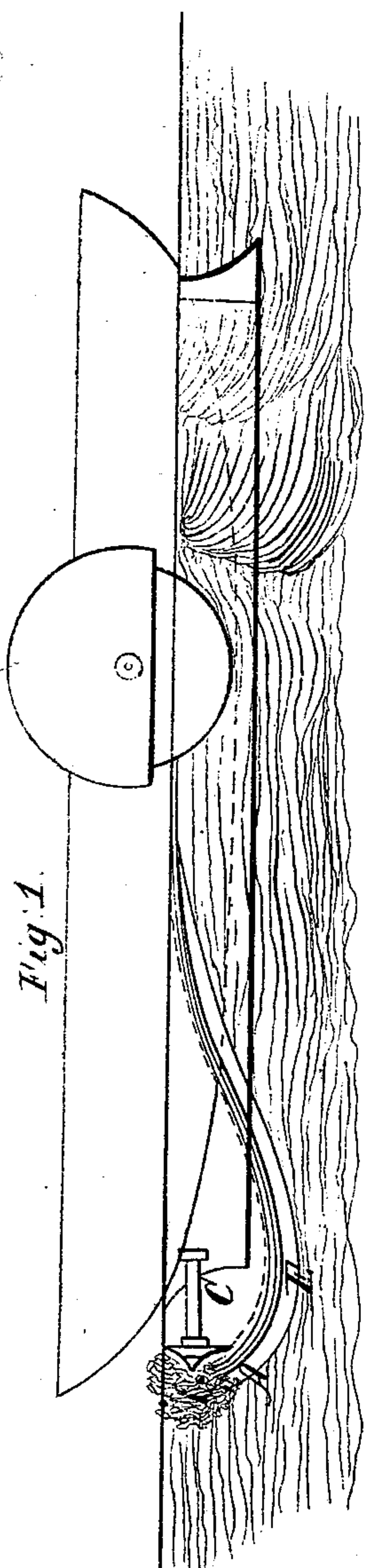


Fig. 1.

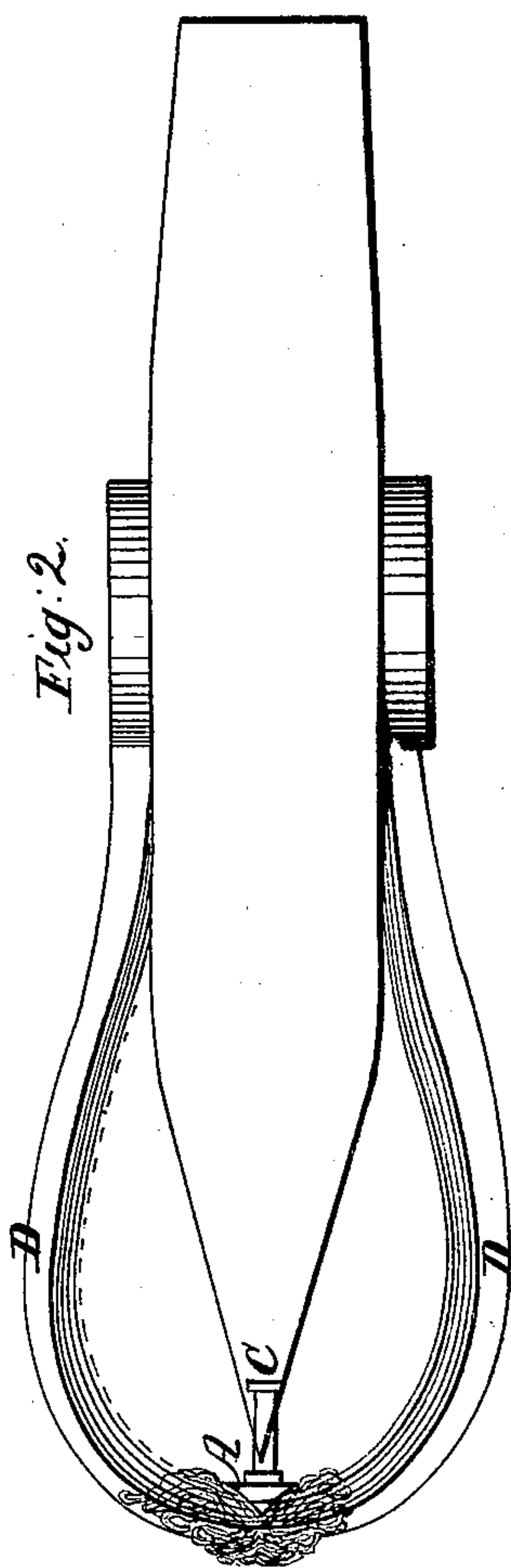


Fig. 2.

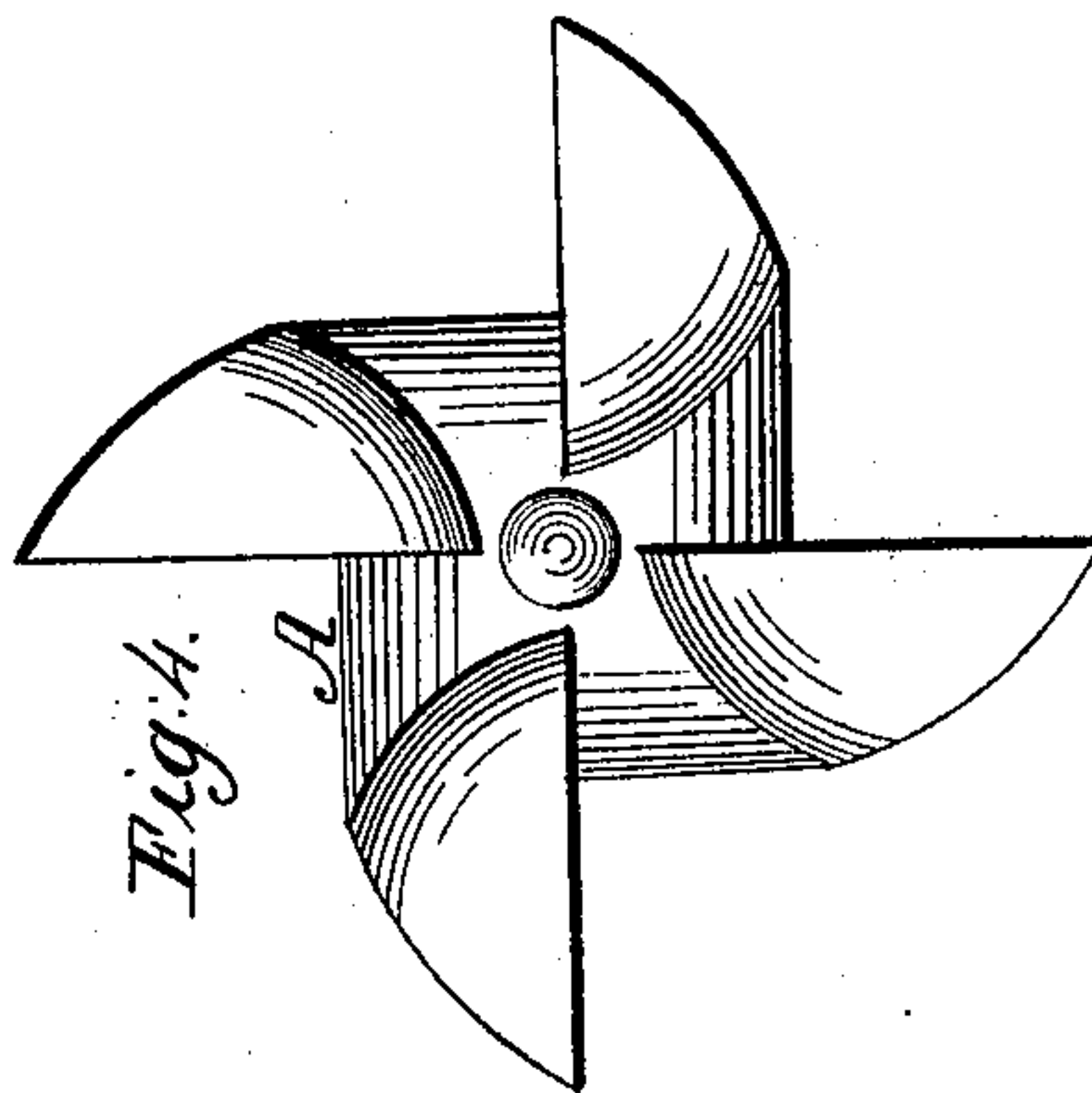


Fig. 4.

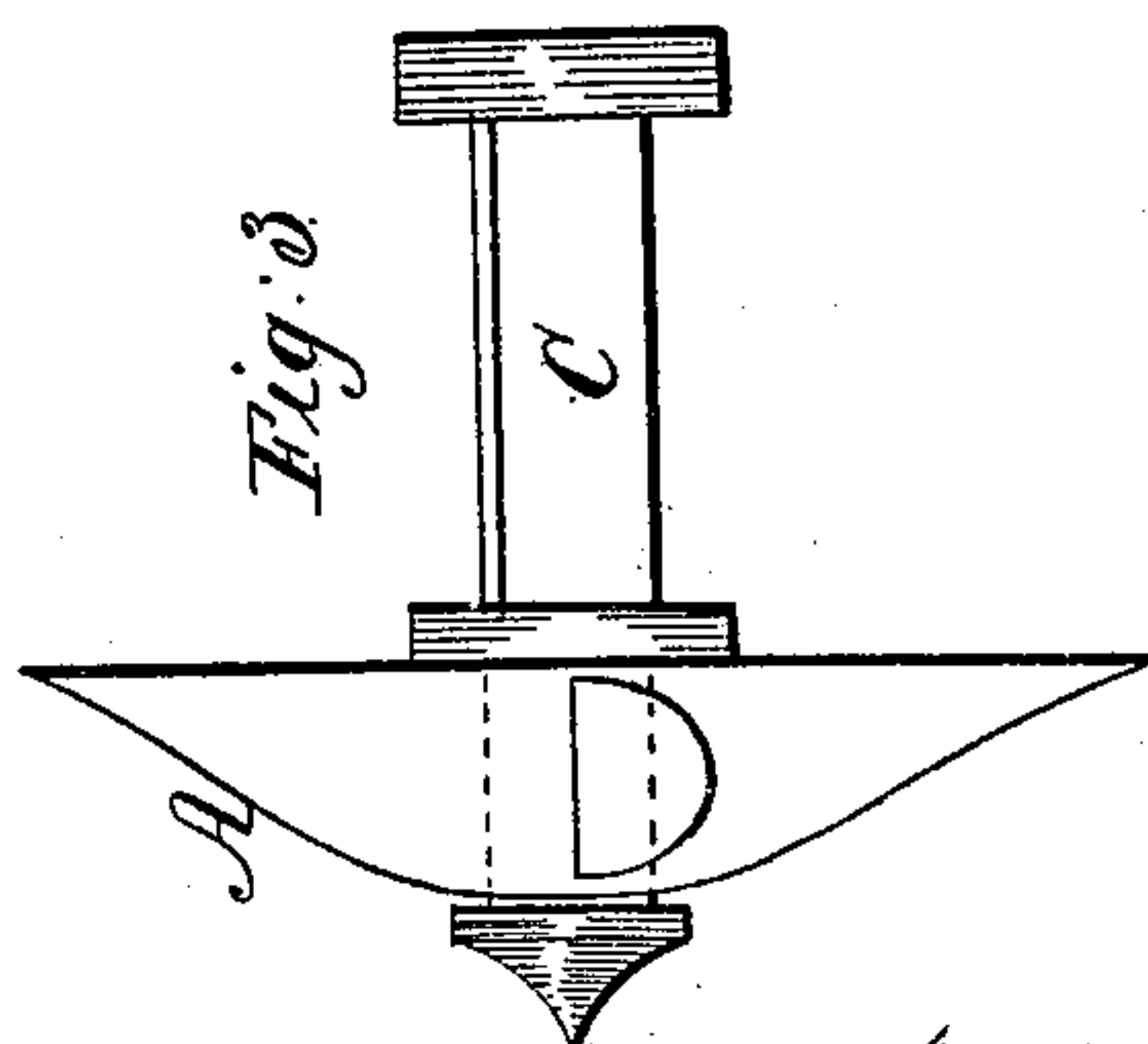


Fig. 3.

Inventor.

Witnesses.

Thos Holmes M. D.

J. A. Houston

J. Franklin Reigart

UNITED STATES PATENT OFFICE.

J. FRANKLIN REIGART, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVED MEANS FOR AID IN THE PROPULSION OF VESSELS.

Specification forming part of Letters Patent No. 39,067, dated June 30, 1863.

To all whom it may concern:

Be it known that I, J. FRANKLIN REIGART, of the city of Washington, District of Columbia, have invented a new and useful improvement in marine propellers, which I style "the self-acting and revolving wave propeller and breaker;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification—

The nature of my invention is a self-acting and revolving wave propeller and breaker, revolving on the front end of a shaft (projecting from the fore part or prow) in advance of the vessel, to stir and break the pressure of the water in front and to reduce the resistance of the water against the vessel.

The invention is a revolving wheel, operating at right angles with the progress of the vessel, to open the way for it to move freely and smoothly forward.

That my invention may be fairly understood by others, I desire to set forth the object, advantages, novelty, and its utility as follows:

This wave propeller and breaker is located in front to relieve the vessel from being checked and shocked by every wave, which will prevent the straining and shuddering motions of the ship, and the water in the engine-boilers from continually jumping; and as the fore part of the ship is freed of the resistance of the water, the pressure of the water and the blows of the waves against the vessel's stern and rear sides will add impetus to her forward motion, while her side-wheel propellers will safely give her all the speed that man can desire. The best steamboats glide along our rivers at a speed of twenty miles per hour, but none have exceeded fifteen miles on the ocean. The waters of our rivers are not the same as sea-water. They flow from springs modified by filtration through the superficial strata of the earth. Sea-water is more buoyant and holds in solution a variety of saline matters, of which by far the most abundant is common salt, therefore when we attempt to increase the speed of a vessel on the ocean, where she moves nearer the surface, the resistance is increased, the waters are heaped up, and she wedges into a bank of saline mat-

ter, and waves of infusoriæ or microscopic animalculæ, as a train of cars wedges into a snow-drift, and to realize a double velocity requires about eight times the amount of power; hence iron-clad vessels must move slower than others, iron being a magnet that draws the water to the ship's sides with force and draws with it the electro-magnetic particles of the ocean. The speed of such a vessel cannot, therefore, be accelerated, and every attempt to do so only drives it into a bank of electro-magnetic particles of solid and living matter. The ship's form is altered, the resistance is increased and she becomes an obstinate wedge. To relieve the wedge, the particles of matter in front must be put into motion, a tunnel or passage must be opened for the ship's entrance to run down an incline, not up. To do so, I invent and use a self-acting and revolving propeller and breaker to disturb and break the electro-magnetic body of matter heaped up in front of the ship, for by friction electricity and magnetism are separated. Therefore the electro-magnetic waves must be separated. Their active forces must be divided to give speed to a vessel; but the tunnel, the passage, or the smallest inclined way once opened (as the fibers of wood are opened before the wedge) the ship is no longer a stationary wedge, and she skims along with an augmented penetrating effect, at any rate of speed that the power of her engine with side propellers can give to her, for the pressure and friction of the water against her front sides are destroyed.

A represents the revolving wave propeller and breaker, which is self-acting, moving by the resistance of the water, in velocity with the speed of the vessel, and by the weight of the vessel, and may be constructed of two or more wings or blades; but one of four pointed wings with a convoluted and raised center I consider to be best adapted to the purpose, and made of copper will answer better than iron. I locate it near the water-line, upon the front end of a strong iron shaft or arm, C, projecting from the prow or fore part of a vessel. It need not be placed more than three or five feet in front, and need only be from eighteen to thirty-six inches in diameter, or according to one-sixth of the depth of the vessel below

the water-line. The shaft C can be made strong enough so as not to be broken off by the pressure of the water in front or the force of a side wave. The circular wave and current D in front, (seen at Figure 2,) as made by the wave-breaker A, will lessen the force of a side wave and the resistance of the water against the front sides of the ship. The lower wave, E, (seen at Fig. 1,) shows the open way in front of the ship.

Fig. 3 represents a side view of the breaker, and Fig. 4 a front view.

What I claim as my invention, and desire to secure by Letters Patent, is—

A self acting wave propeller and breaker, revolving and operating in advance of the vessel, for the purpose of accelerating its speed by dividing the waves and opening a way to relieve the vessel from the resistance of the water.

J. FRANKLIN REIGART.

Witnesses:

ABIEL PEVEY,

JOHN S. HOLLINGSHEAD.