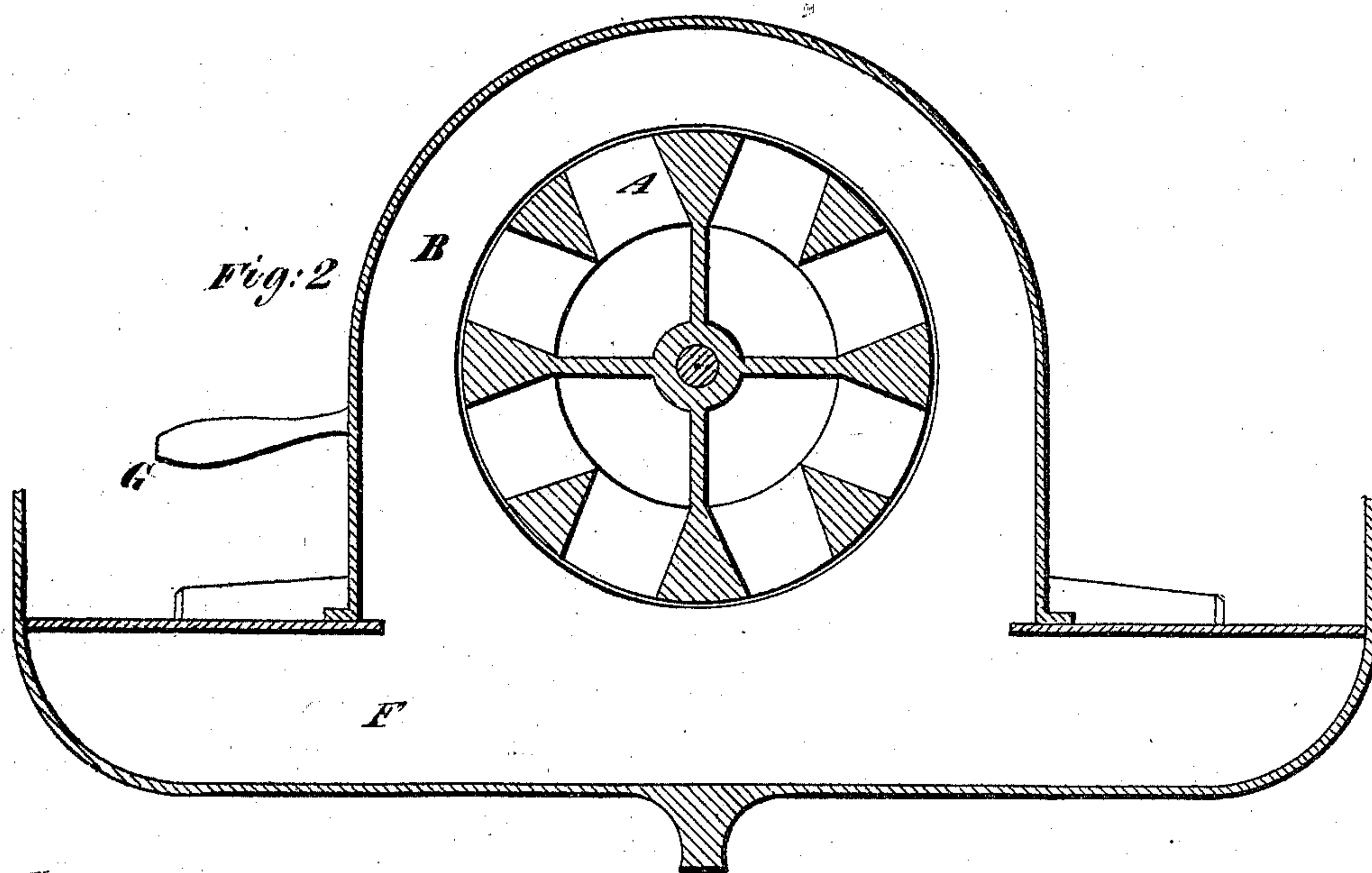
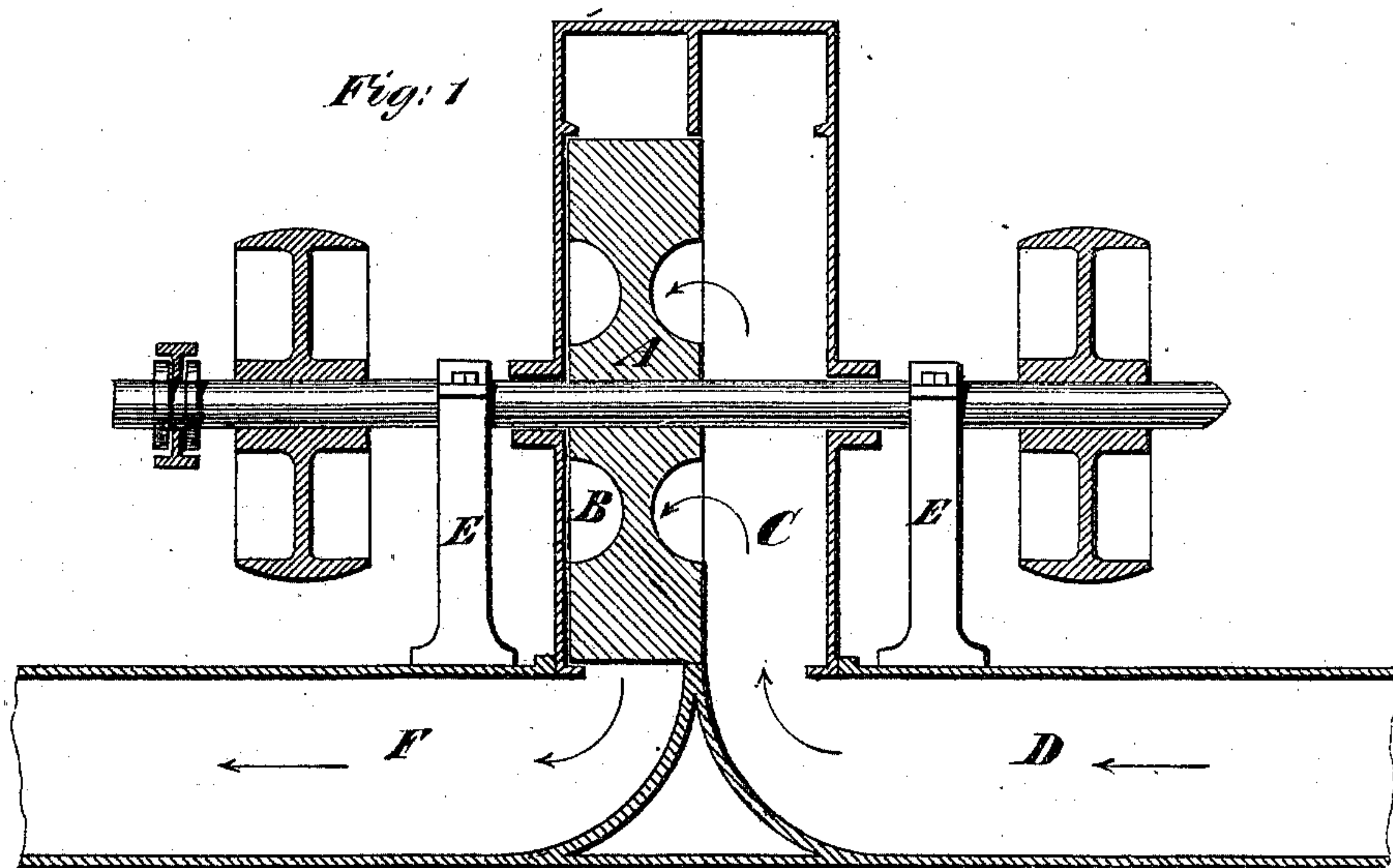


B. T. BABBITT.

Propelling Devices for Vessels.

No. 139,994.

Patented June 17, 1873.



Witnesses:

Fred Haynes
Fred Amick

Benjⁿ T. Babbitt
per Miles Brown & Alley
Attorneys

UNITED STATES PATENT OFFICE.

BENJAMIN T. BABBITT, OF NEW YORK, N. Y.

IMPROVEMENT IN PROPELLING DEVICES FOR VESSELS.

Specification forming part of Letters Patent No. **139,994**, dated June 17, 1873; application filed February 5, 1873.

To all whom it may concern:

Be it known that I, BENJAMIN TALBOT BABBITT, of the city, county, and State of New York, have invented an Improved Pump-Propeller for Propelling Canal-Boats and other Vessels, of which the following is a specification:

This invention relates to the propulsion of vessels by means of a centrifugal pump. The object is to provide for reversing the movement of the vessel without reversing the pump. To this end it consists in the combination of the wheel or rotating portion of the pump, a shell or case for the same divided laterally into two compartments, and two channels communicating with these compartments and leading one to the bow and the other to the stern of the vessel, whereby the wheel, simply by being shifted laterally from one compartment of its case to the other, may be made to pump in water from the stern of the vessel and force it out at the bow, or vice versa, and so propel the vessel in either direction.

In the accompanying drawing, Figure 1 is a longitudinal section of a portion of a vessel having my invention applied, and Fig. 2 is a transverse section of the same.

Similar letters of reference indicate corresponding parts in both figures.

A is the wheel or rotary portion of the centrifugal pump. Its buckets may be of any known suitable form, with a central opening to communicate with one compartment of its case, while the outer peripheral openings communicate with the other. The case or shell of the pump is semicircular at the top, and is parallel-sided from the top downward. It is divided laterally to form the two compartments B and C. A channel, D, in the vessel leads from the compartment C to the stern

of the vessel, and another channel, F, leads from the compartment B to the bow. The shaft of the wheel A is arranged fore and aft in the vessel, and is supported in bearings E E in such manner that it may be shifted longitudinally to change the wheel from one compartment of its shell or case to the other.

The pulley on this shaft which receives the driving-belt is made so broad that when the wheel is shifted the belt will not be thrown off. Instead of this, the pulley on the driving-shaft may be made broad if more desirable. The shaft may be shifted by a lever, G, as represented, or by any other suitable means.

When desirable to propel the vessel forward, the wheel of the pump is shifted into the rear compartment C of its case. Water is then drawn from the bow of the boat through the channel F into the central opening of the wheel, and is forced out through its peripheral openings into the channel leading to the stern of the vessel. When desirable to back the boat, the wheel is shifted into the forward compartment B of its case. Water is then drawn in from the stern of the vessel and forced out at the bow, and the vessel is thereby propelled rearward.

I claim—

The combination of the wheel A, arranged as described, its case or shell divided to form two compartments, B and C, and the channels D F leading from said compartments, one to the bow and the other to the stern of the vessel, essentially as and for the purpose herein specified.

BENJ. T. BABBITT.

Witnesses:

HENRY T. BROWN,
EDWIN H. BROWN.