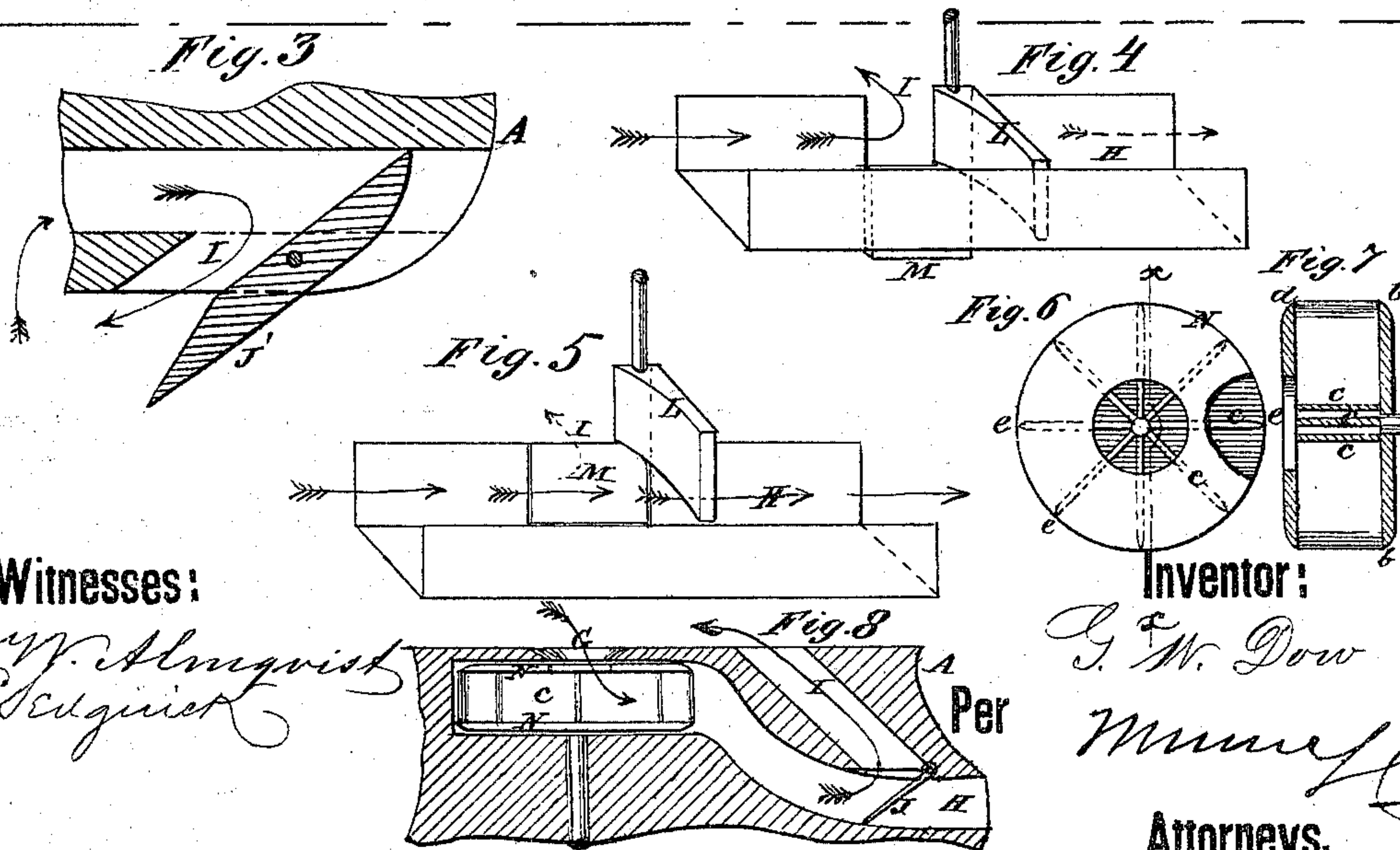
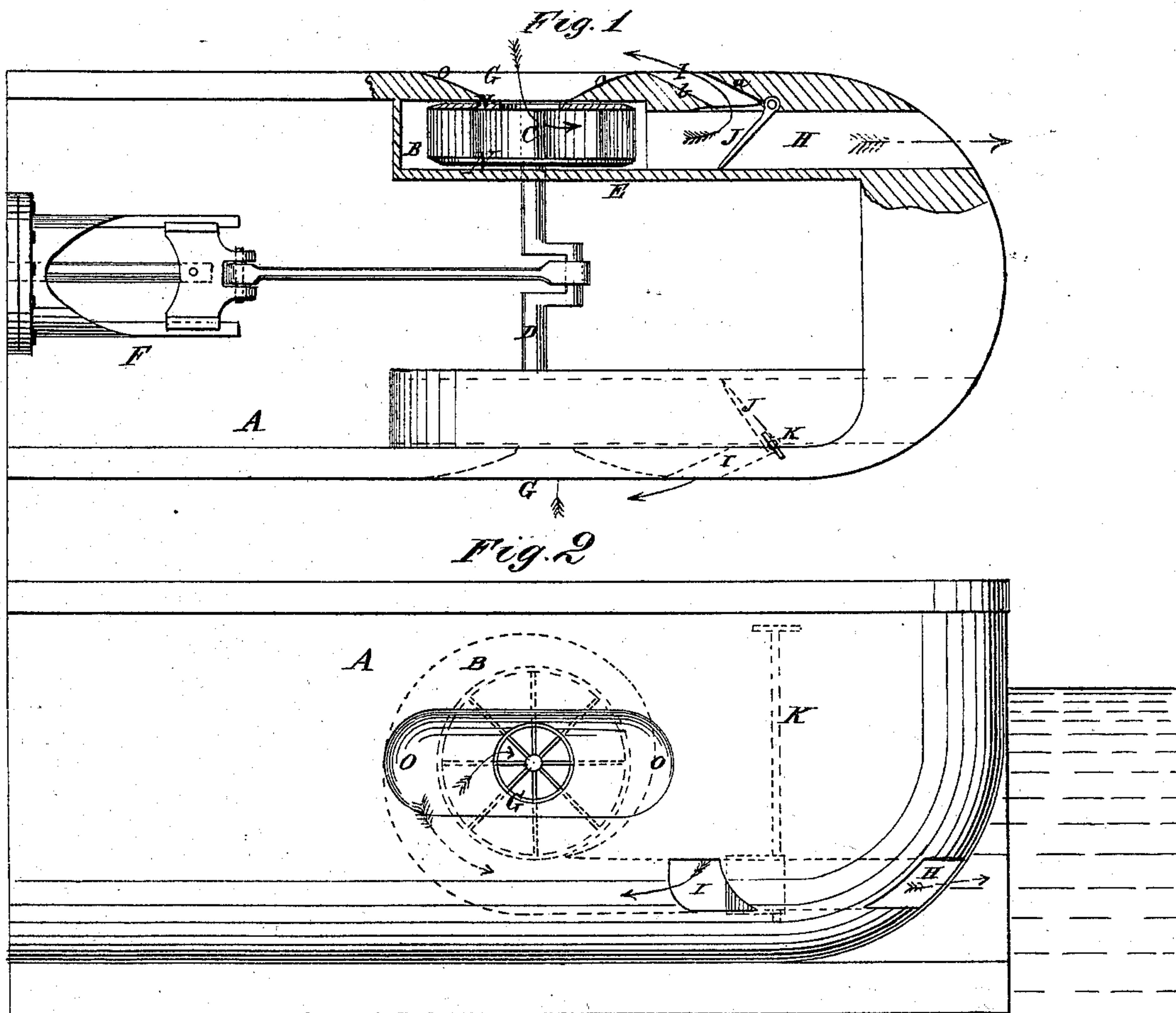


G. W. DOW.
Propelling Vessels.

No. 141,039.

Patented July 22, 1873.



Witnesses:

A. W. Almquist
Sedgwick

Inventor:

G. W. Dow
Per
Munnell
Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE W. DOW, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN PROPELLING VESSELS.

Specification forming part of Letters Patent No. 141,039, dated July 22, 1873; application filed March 22, 1873.

To all whom it may concern:

Be it known that I, GEORGE W. DOW, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Mode of Propelling Vessels; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification.

The invention consists in the improvement of that class of boats which use suction-wheels in the side of boat, drawing the water in from the side and discharging at stern or bow, according to whether it is desired to go forward or backward. It consists in the peculiar means for enabling the boat to be backed, as hereinafter described.

Figure 1 is partly a plan view and partly a horizontal section of a vessel with instrumentalities for propelling it by the mode which I propose. Fig. 2 is a side elevation. Fig. 3 is a detail section, showing a plan for utilizing the force of the expelled water for backing the vessel. Figs. 4 and 5 are detail views of devices for reversing the expelled water to back the vessel. Fig. 6 is a side elevation of a wheel with a part of one of the sides broken out. Fig. 7 is a transverse sectional elevation, and Fig. 8 is a horizontal section, of a part of the hull, showing a plan for placing the wheels closer to the outside of the hull, and for providing the requisite thickness of the outside wall of the discharging-channel to give sufficient length to the reversing-channel to direct the water properly.

A represents the hull of a vessel, having a scroll-shaped chamber, B, in each side, a little in advance of the stern, containing a wheel, c, on a shaft, D, extending from the interior of the vessel into said chambers through the partition-walls E. The power will be applied by a steam-engine, F, or any competent power

that may be preferred. G represents inlet-passages to the chambers through the sides of the vessel at the center of the wheels, H the discharge-passages, and I the lateral passages, which connect with the discharge-passages H behind the wheels, and extend out through the sides of the vessel, so that when the discharge of the expelled water at the stern is prevented it will escape in the direction of the bow to back the vessel. This may be done by a gate, J, fitted in the side of the channel H, and attached to a shaft, K, so that it can be adjusted against said side to close passage I, or across channel H to close it and open the reversing-channel; or a vertically-sliding gate of two parts, L and M, may be used, as in Figs. 4 and 5, being arranged so that when raised passage H will be opened and I closed, and when lowered H will be closed and I opened. The gate J, represented in Fig. 3, may also be used.

I am aware that a wheel operating in boats upon the same principle as mine is well known; but it employs a discharge tube or recess extending through from bow to stern, and closed by a valve on either side of wheel, one or the other of said valves being opened or closed, according to the direction in which it is intended to go. My return-passage I is, however, short, enables the boat to back with perfect ease, and, withal, economizes the storage room.

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

The combination, with suction-wheel and channel H, of the return-channel I, arranged as and for the purpose described.

GEORGE W. DOW.

Witnesses:

T. B. MOSHER,
ALEX. F. ROBERTS.