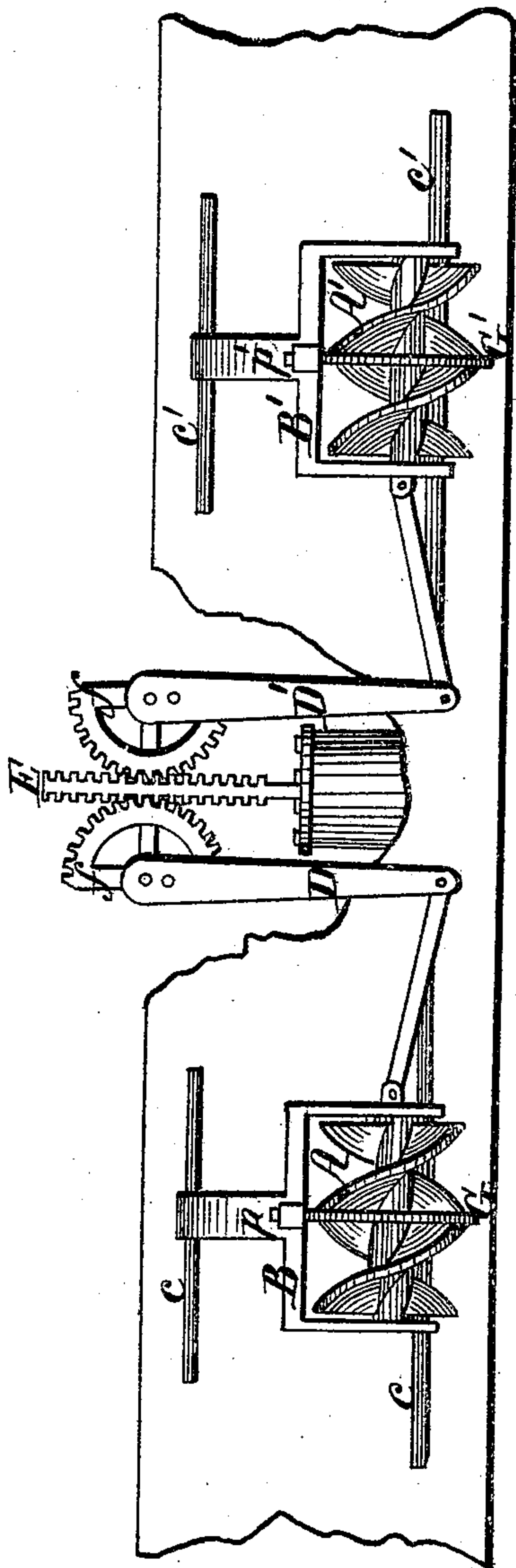


S. W. Rowell.
Screw Propeller.

N^o 95,731.

Patented Oct. 12, 1869.



Witnesses
J. S. Loomis
J. S. Loomis

Inventor.
S. W. Rowell
Per his Atty.
J. S. Loomis.

United States Patent Office.

SIDNEY W. ROWELL, OF RUTLAND, VERMONT.

Letters Patent No. 95,731, dated October 12, 1869.

IMPROVED SCREW-PROPELLER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, SIDNEY W. ROWELL, of Rutland, in the county of Rutland, and State of Vermont, have invented a new and useful Improvement in Screw-Propellers for Steam-Vessels; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and the letters of reference marked thereon.

My invention consists in giving the propelling-screw a reciprocating motion in the direction of its axis, and so controlling its movements, by a ratchet and pawl, or other equivalent device, that when moving forward in the direction of the progress of the vessel, it will rotate freely in the water, but when moving back it will remain rigid and not yield to the resistance of the water in its rear.

In applying my invention to a vessel, I prefer to place two propelling-screws on each side of the vessel, and so work them that while one is moving forward the other is moving back.

The accompanying drawing shows my invention as applied to the side of a steam-vessel, in the manner above indicated.

A and A' are the two propelling-screws, each embraced in a frame, B B'.

These frames are mounted upon strong cylindrical bars, *c c* and *c' c'*, attached to the side of the vessel, so as to slide freely upon said bars, the frames standing out so that the screws, with their ratchet-wheels, will revolve without coming in contact with said bars.

D and D' are two sweeps, operated by a reciprocating rack, E, and two cog-segments, *f f*, or they may be operated by any other suitable machinery, to move the sliding frames B B' in opposite directions at the same time.

G G' are ratchet-wheels, rigidly secured upon the same shafts with the propelling-screws; and

P P' are pawls to prevent the screws from turning when moving back, but allow them to rotate freely when moving forward.

The ratchet-wheels and pawls are to be so constructed that the action of the pawls upon the ratchets may be reversed at pleasure, so as to allow the screws to revolve when moving back, but remain rigid when moving forward, for the purpose of backing the vessel.

Various modes for effecting this will at once suggest themselves to any mechanic of ordinary skill.

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

The reciprocating propelling-screw, with attachments to hold it rigidly when moving in one direction, and to allow it to rotate freely when moving in the opposite direction, substantially as and for the purpose herein set forth.

S. W. ROWELL.

Witnesses:

A. H. TUTTLE,
E. C. TUTTLE.