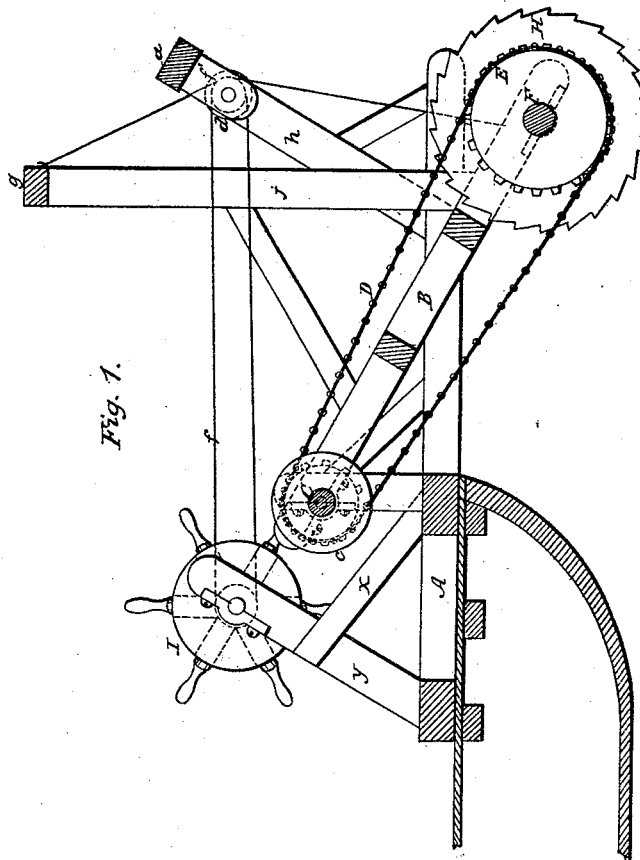
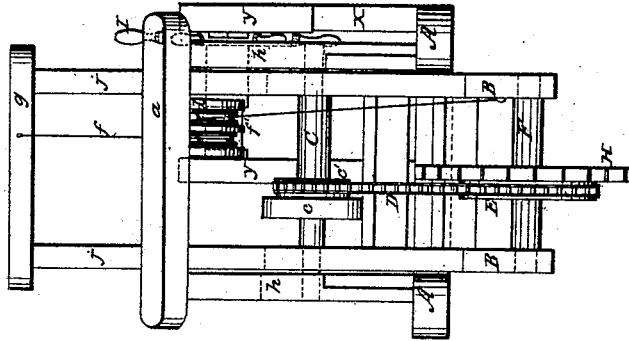


Propelling Boats Over Shoals.

Patented July 11, 1865.



C. Rogers
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Otia Olds

UNITED STATES PATENT OFFICE.

OTIA OLDS, OF AURORA, NEW YORK.

IMPROVED WHEEL FOR THE PROPULSION OF VESSELS IN SHOAL WATER.

Specification forming part of Letters Patent No. 48,715, dated July 11, 1865.

To all whom it may concern:

Be it known that I, OTIA OLDS, of the town of Aurora, county of Erie, and State of New York, have invented a new and useful Device for Drawing or Propelling Vessels over Shoals in Rivers; 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.

The nature of my invention consists in arranging and using a ground-wheel, in combination with a compound frame projected from the bow of the boat, (for propelling the boat,) in such manner that a lever-purchase may be obtained to lift upon the bow of the boat, to ease it over a shoal or bar, while the wheel rolls upon the bed of the stream and exerts a propelling power upon the boat.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure I is a longitudinal section of my device. Fig. II is a front elevation. Fig. III is a plan view.

A, Fig. I, is a rectangular frame made fast to the bow of the boat. B is also a rectangular frame, attached to frame A by means of shaft C, upon which is a hand-wheel, *c*, and chain-wheel *c'*. The mortise-chain D passes over the chain-wheel *c'* and over the corresponding chain-wheel, E, which is secured to shaft F, which runs on journals fitted in suitable boxes. Shaft F is placed at the end of frame B, thus carrying the traction or ground wheel H in front. At the rear end of the frame A are two posts, *y y*, inclining forward and supported by braces *x x*. A hand-wheel, I, is placed in the posts, while a rope or chain, *f*, passes several times around the shaft and forward around pulleys *d d*. Hangers *f'*, secured to cross-piece *a*, connect posts *h h*. This rope or chain passes

from the pulley to and is secured to cross-piece *g*, that connects with inclined posts *j j* in frame B.

The frames A and B together constitute what I call a "compound frame," the frame A being made fast to the bow of the boat, as shown at T, and projecting therefrom, and the frame B being hung in the frame A by means of the shaft C, so that it is free to swing thereon. It is of sufficient length to allow the traction or ground wheel H (which is hung therein as shown) to roll upon the bed of the stream and pull the boat forward. In case the boat shall drag heavily upon a bar of sand in the stream a purchase is obtained through the described series of ropes, chains, and pulleys by turning the hand-wheel I in one direction, so that the bow of the boat will be lifted and rest mainly upon the ground-wheel, and in this way the boat is easily carried over the bar or shallow places in the stream. In case of deep water the ground-wheel may be lifted entirely off from the bottom of the stream by turning the hand-wheel I in the opposite direction, and caused to revolve in the water, and thus acting as a water-wheel. A similar device may also be placed and used at the stern of the vessel to advantage. Steam-power may be applied to the traction-wheel in any common or well-known manner.

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

The combination of the traction or ground wheel H with the compound frame A B, (including the hand-wheel I and lifting ropes and pulleys,) so that a purchase may be obtained to lift upon the bow of the boat, substantially as described.

OTIA OLDS.

Witnesses:

C. ROGERS,
C. S. PRINCE.