

P. RIPPINGHAM.
Propelling Canal-Boats.

No. 133,891.

Patented Dec. 10, 1872.

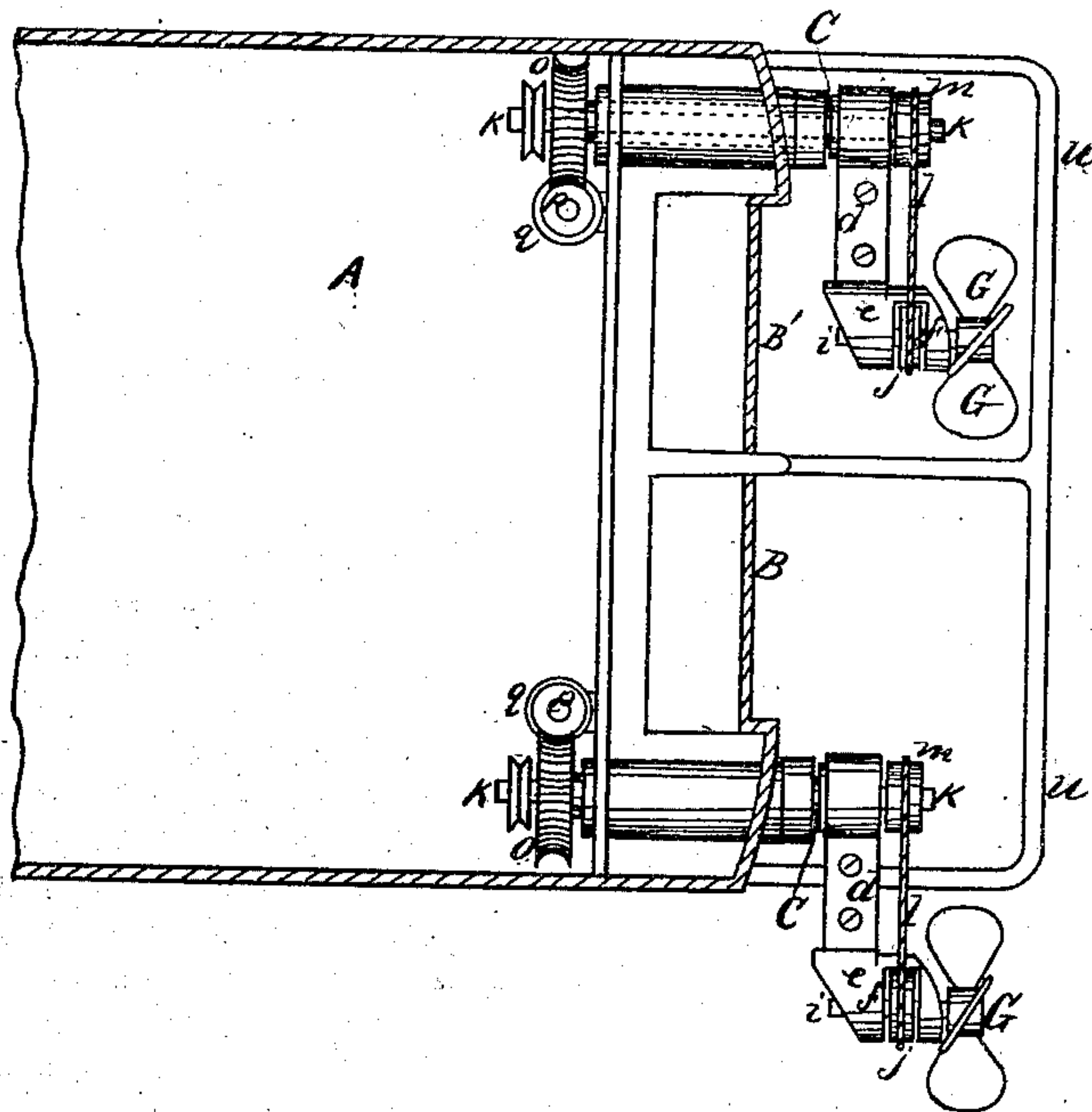


Fig. 1.

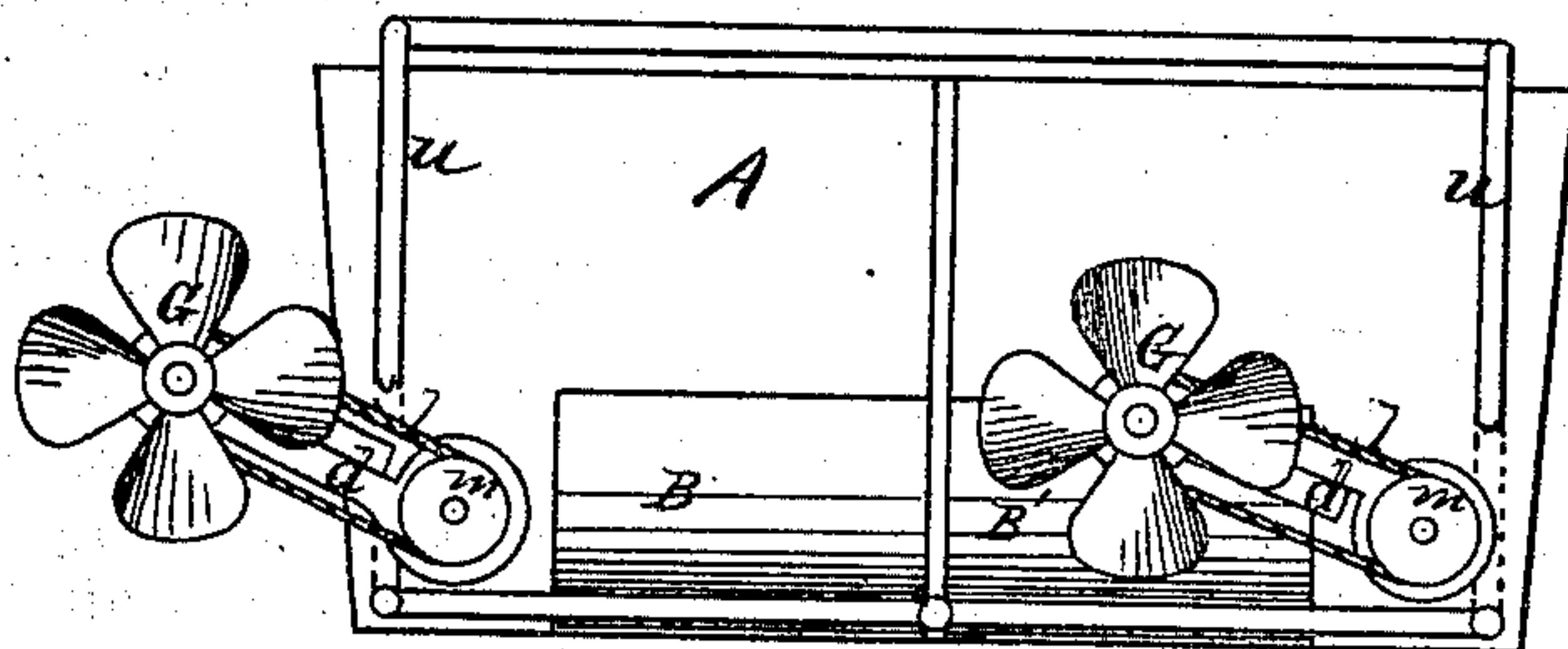


Fig. 2.

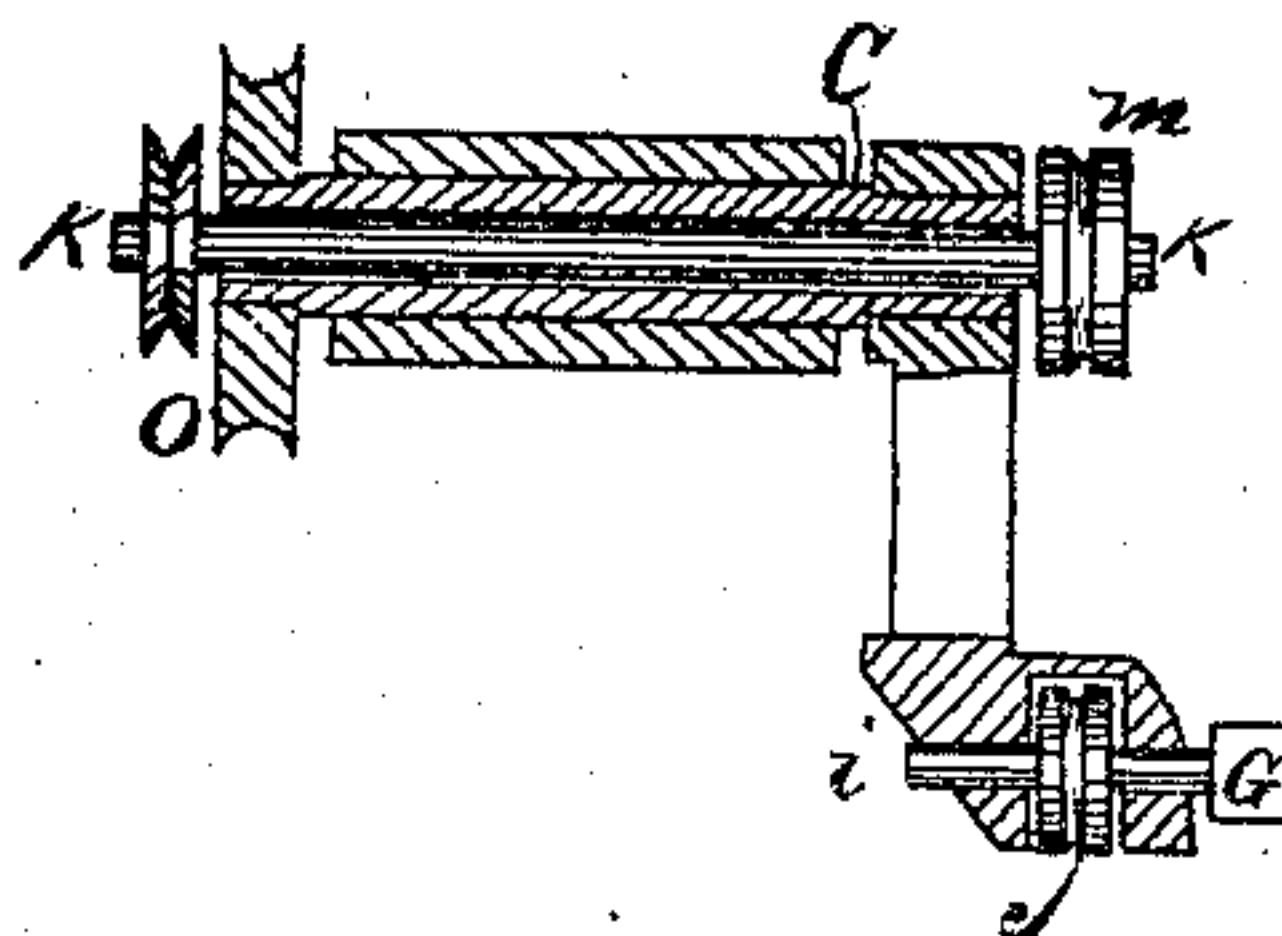
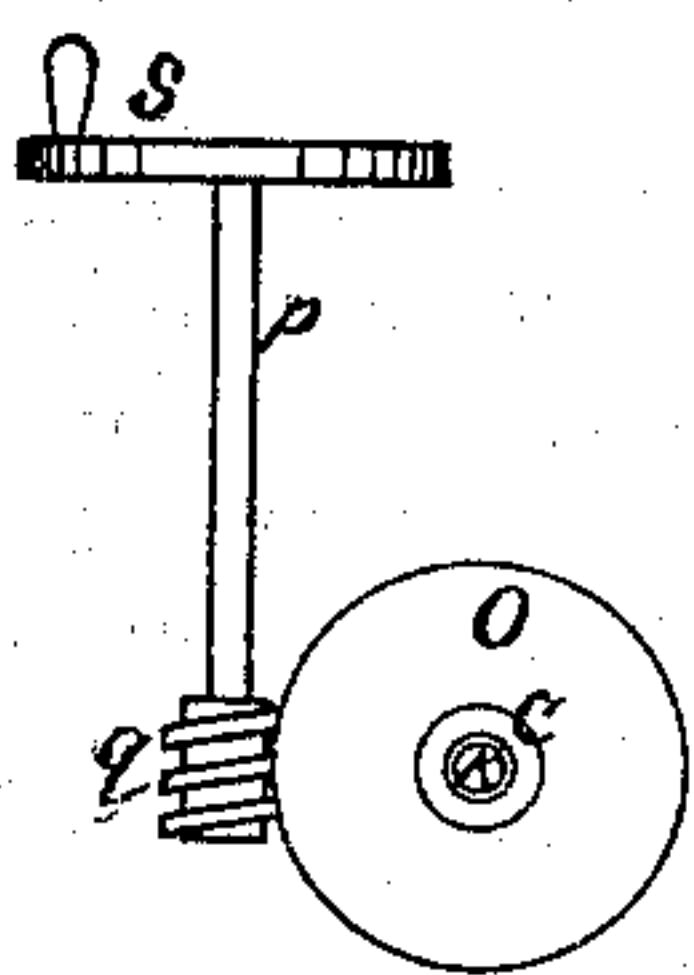


Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

PATRICK RIPPINGHAM, OF VIRGINIA CITY, NEVADA.

IMPROVEMENT IN PROPELLING CANAL-BOATS.

Specification forming part of Letters Patent No. 133,891, dated December 10, 1872.

To all whom it may concern:

Be it known that I, PATRICK RIPPINGHAM, of Virginia City, Storey county, State of Nevada, have invented an Improved Canal-Boat Propeller; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains, to make and use my said invention or improvement without further invention or experiment.

My invention relates to an improved arrangement of propellers, which is especially adapted for canal-boats and similar towing-vessels. My improvement consists in the employment of two towing-propellers, which are placed at the bow of the boat, and are so mounted that they can be raised or lowered in a circle about a center, as occasion requires, without removing them from their shafts.

In order to more fully illustrate and explain my invention, reference is had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a plan view, showing one propeller in the line of the channel beneath the boat, and the other thrown to the outside; Fig. 2 is a front view; and Fig. 3 is a sectional view of part of the device.

A represents a canal-boat or other towing-vessel. In the bow of this boat I construct two parallel channels or recesses, B B', which extend a short distance under its bottom at an angle, so that they will receive the current of water produced by the action of the propellers, and convey it under the boat. At each side of the bow of the boat, and outside of the channels B B', a hollow shaft, C, passes horizontally through a stuffing-box in the bow, so as to extend to the outside, as shown. Upon the extremity of this hollow shaft outside of the vessel, I firmly secure a strong arm, d, at right angles to it. This arm has a strong head, e, at its extremity, which stands at right angles to it in the manner of a crank. This head, e, is bored out horizontally, and has a transverse recess, f, made at or near its middle, which cuts the bore in the head. The propeller G is constructed in the ordinary manner, and has a fixed shaft, i, extending at right angles

from its center, on one side. This shaft passes through the bore in the head e, and has fixed upon it, in the recess f, a pulley, j. A spindle or small shaft, k, passes from the inside of the boat through the hollow shaft C, and has a pulley, m, fixed to its outside extremity. A chain-belt, l, then passes around the pulleys j and m, so that by revolving the shaft or spindle k, the propeller-wheel will be revolved. Secured to the hollow shaft C, inside of the boat, is a worm-wheel, o. A vertical shaft, p, has a worm, q, at its lower end, which engages with the wheel o, and a hand-wheel, s, at its upper end serves as a means of turning the shaft C. Now, by means of this hand-wheel, it is evident that the propeller-wheel can be revolved about the shaft as a center to any part of a circle it may be desired. A railing, U, is arranged to project in front of the propellers to guard them from injury.

In passing through the canal, the propeller-wheels are placed in front of the bow and beyond a line running parallel with the sides of the boat. In passing locks or other obstructions, the propeller-wheels are revolved in front of the center of the bow, forcing the water through the openings, under the bow. When the boat is partially laden or empty, the propeller-wheels are revolved in front and below the bottom of the boat.

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

1. The combination and arrangement of the hollow shaft C and arm d with the shaft k and propeller G, whereby I am enabled to revolve the propeller on its axis and also in a circle without removing it from its shaft, substantially as set forth.

2. The combination of the hollow shaft C, arm d, and head e with the shafts k i, pulleys m j, endless chain l, and propeller G, substantially as described and for the purpose set forth.

In witness whereof I hereunto set my hand and seal.

PATRICK RIPPINGHAM. [L. S.]

Witnesses:

T. M. FILLEBROWN,
J. H. HARRIS.