

J. O'NEIL.

Means for Propelling Vessels.

No. 144,474.

Patented Nov. 11, 1873.

Fig. 1.

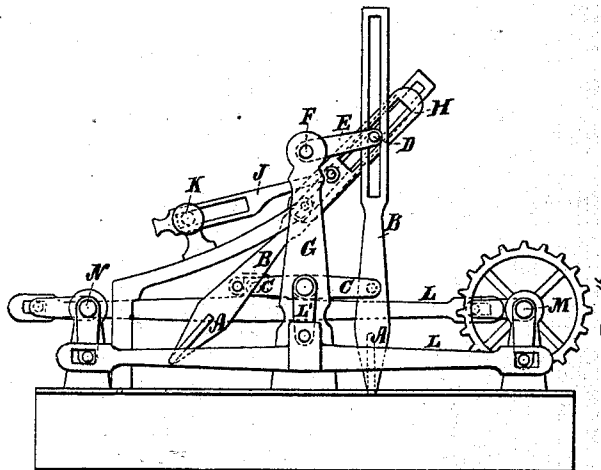


Fig. 2.

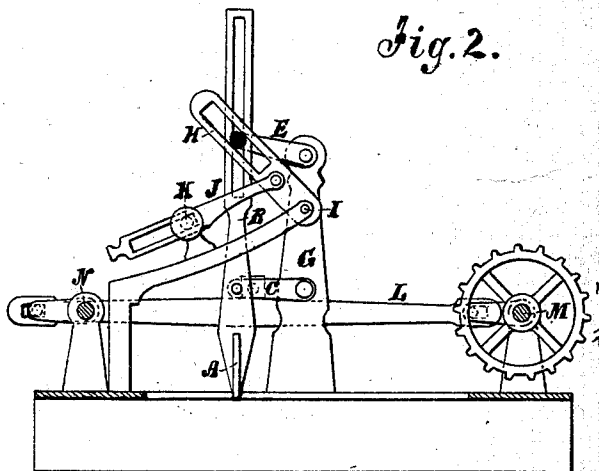
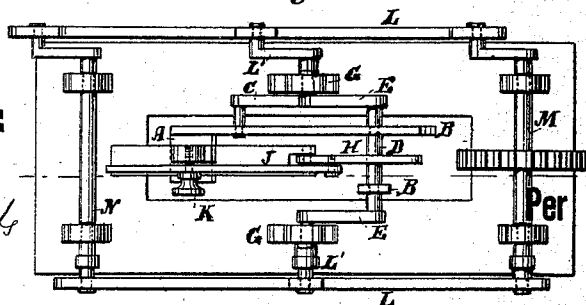


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN THE MEANS FOR PROPELLING VESSELS.

Specification forming part of Letters Patent No. **144,474**, dated November 11, 1873; application filed October 4, 1873.

To all whom it may concern:

Be it known that I, JOHN O'NEIL, of the city, county, and State of New York, have invented a new and useful Improvement in Steamboat-Paddles, of which the following is a specification:

My invention relates to improvement in the class of propellers formed of oscillating paddles; and it consists, chiefly, in the arrangement of the upper pivot for the slotted stems of the paddles to shift forward or backward of the vertical plane of the crank, so as to hold the paddles in such manner that they dip vertically into the water, and thus save the loss of power due to beating it obliquely.

Figure 1 is a side elevation of a paddle mechanism arranged according to my invention, showing the position of the aforesaid pivot for causing the paddles to enter the water vertically when propelling the boat to the right. Fig. 2 is a longitudinal sectional elevation, showing the position for said pivot when propelling the boat to the left; and Fig. 3 is a plan view of the mechanism.

Similar letters of reference indicate corresponding parts.

A represents the paddles; B, the stems; C, the cranks for vibrating them, and D the pivot for the stems. This pivot I mount in the free end of a couple of cranks, E, which turn on centers F in the stand G, above the bearings of cranks C, so that said pivot can

be readily shifted from one side to the other of said stands, as indicated in Figs. 1 and 2, to hold the paddles vertically when entering the water, whichever way the boat is to be propelled.

For holding said pivot, also for shifting it, I employ the slotted lever H, pivoted to the end of a stationary arm at I, and having the pivot pass through its slot, and also having a shifting-rod, J, connected to it, and also connected to the stand, and binding-screw K, to fasten it in any required position.

In large machines this bar J will have power apparatus of any suitable kind for moving it, if necessary, and any other holding and fastening contrivance may be employed instead of the binding-screw and stud.

The cranks C, for working the paddles, may have the power applied by the rods L and cranks M N, or any other equivalent means.

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

The adjustable pivot D, cranks E, lever H, shifting-bar J, and fastening devices K, combined and arranged with paddles A B, substantially as specified.

JOHN O'NEIL.

Witnesses:

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