

J. WEICH.

Propelling Mechanism for Vessels.

No. 136,475.

Patented March 4, 1873.

Fig. 1

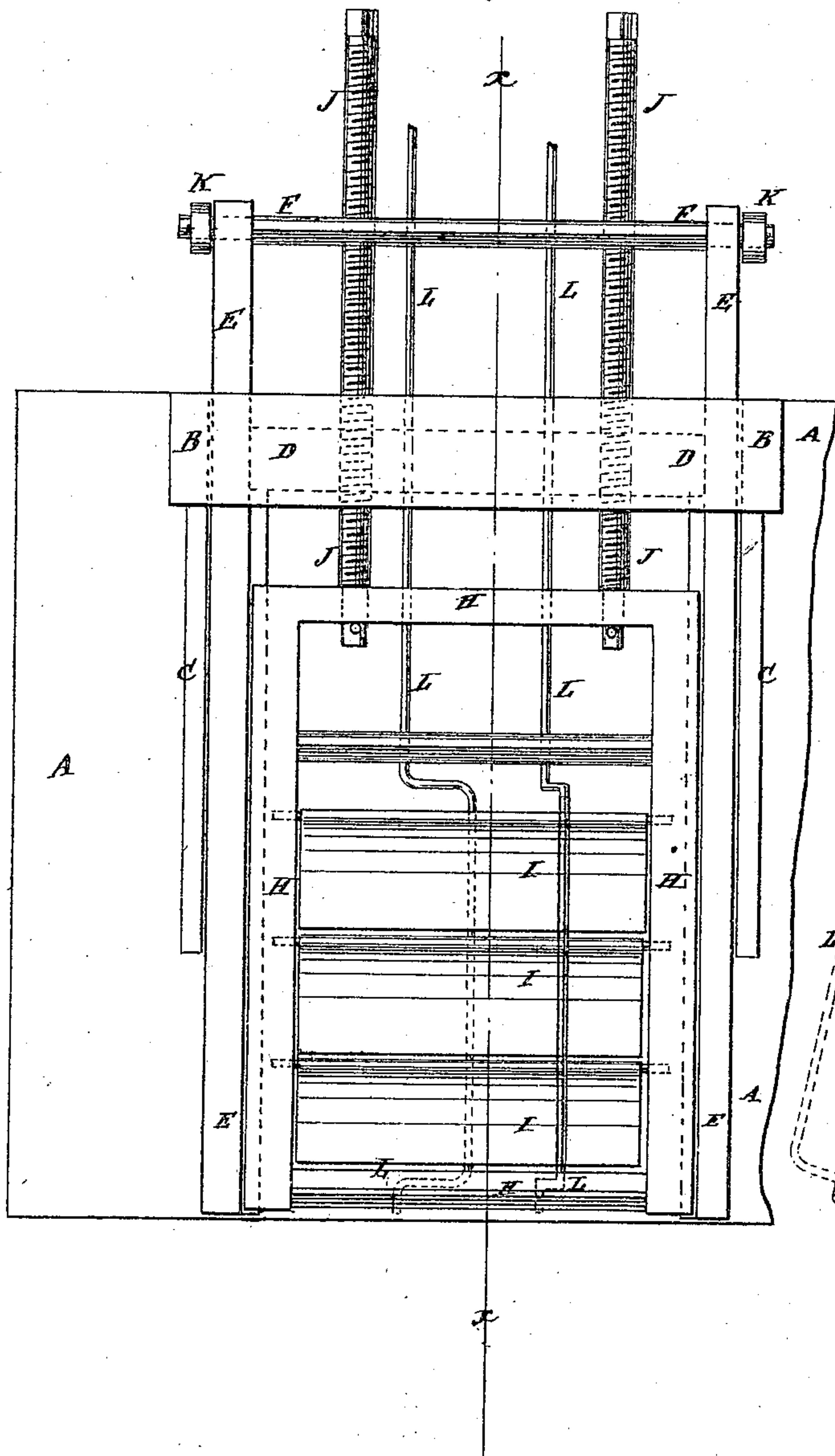
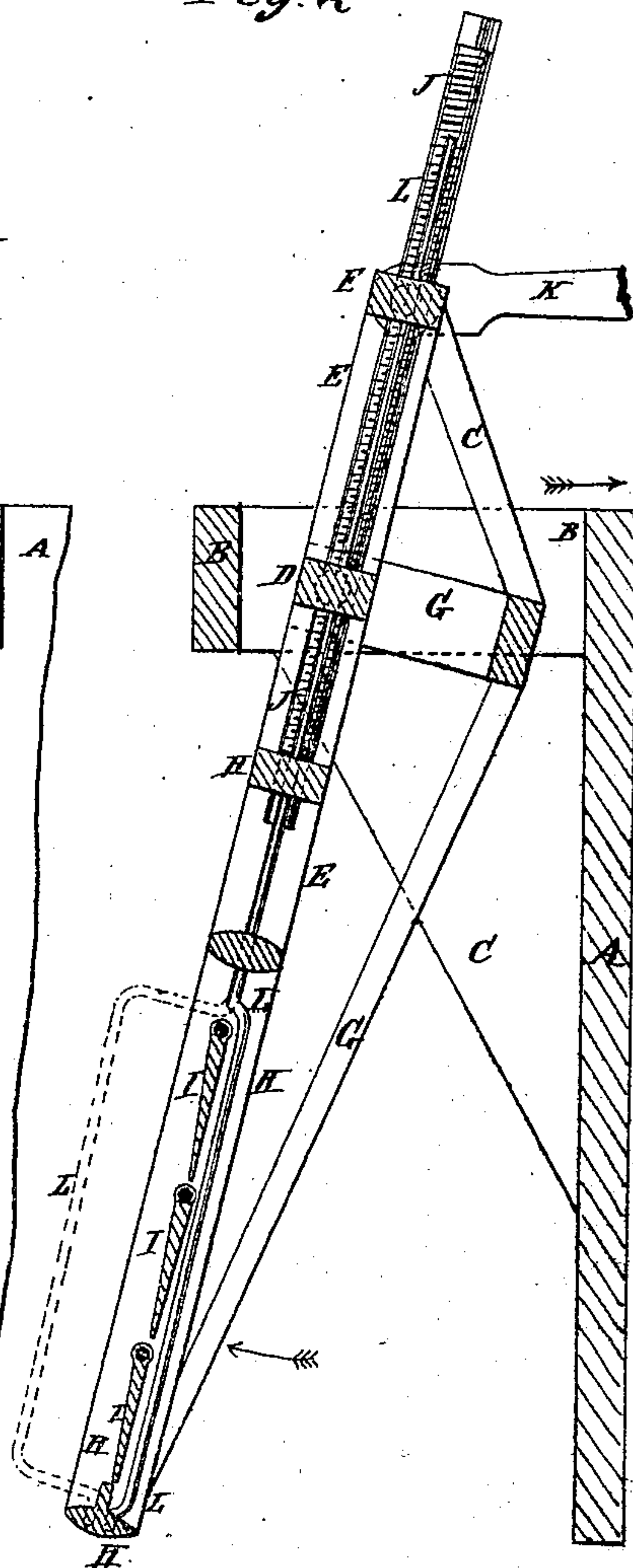


Fig. 2



Witnesses:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN PROPELLING MECHANISMS FOR VESSELS.

Specification forming part of Letters Patent No. **136,475**, dated March 4, 1873.

To all whom it may concern:

Be it known that I, JOHN WEICH, of the city, county, and State of New York, have invented a new and useful Improvement in Vibrating Propeller, of which the following is a specification:

Figure 1 is a rear view of my improved device, shown in working position. Fig. 2 is a detail vertical section of the same taken through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention is an improvement in the class of vibrating propellers provided with floats or paddles pivoted so as to swing in either direction according as the boat or vessel to which the propeller may be applied is to move forward or back. The improvement consists in the provision of bent rods, in combination with floats pivoted horizontally and at their upper edges, whereby the movement of said floats is controlled, as hereinafter described.

A represents the stern of a boat, to the upper part of which is securely attached a strong horizontal frame, B, which is further strengthened by braces or brackets C. To the side bars of the frame B are pivoted the ends of a bar, D, to which, near its ends, are secured the bars E, the upper ends of which are connected and held in their proper relative position by a cross-bar, F, to which are attached the ends of the connecting-rods K, by which motion is given to the bars E from the engines. The bars E are strengthened by the brace-frames G. H is a frame, which slides up and down upon ways upon the inner sides of the bars E. I are paddles, which are pivoted at the upper part of their end edges to the side bars of the frame H. To the top bar of the frame H are swiveled the lower ends of the screws J, which pass through screw-holes in the bar F, so that by turning the said screws up or down the paddles are adjusted

to the proper depth in the water. The screws J may be turned by a lever, a crank, a hand-wheel, or other convenient means. L are two rods, which pass down through the cross-bars F D of the bars E, and through the cross-bars of the frame H. In the rods L, between the cross-bars of the frame H, are formed long cranks or off-sets, so that when the said rods are turned to bring their cranks at right angles with the frame H the paddles I can take a horizontal position; and when the said rods are turned to bring their cranks parallel with the frame H the paddles I will be prevented from turning. One rod L passes down upon the inner or forward side of the paddles I, and the other rod L passes down upon the outer or rearward side of said paddles I.

By this arrangement, when the boat is to move forward, the forward crank L is turned parallel with, and the other at right angles to, the frame H, so that the said paddles, when moving forward, may take a horizontal position to pass through the water with the least possible resistance, and when moving to the rearward will be in a vertical position to bear strongly against the water. When the boat is to move backward, the positions of the rods L will be exactly reversed.

The rods L are secured by keys or other suitable means which will hold them securely in place when adjusted, and will enable them to be readily reversed when desired.

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

In combination with the paddles I, pivoted in a vibrating frame, the rods L L, bent or curved, as specified, whereby they are adapted to act as stops, alternately, for said paddles.

JOHN WEICH.

Witnesses:

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