

G. R. MOORE.

Improvement in Propelling Devices for Vessels.

No. 129,488.

Patented July 16, 1872.

Fig. 1

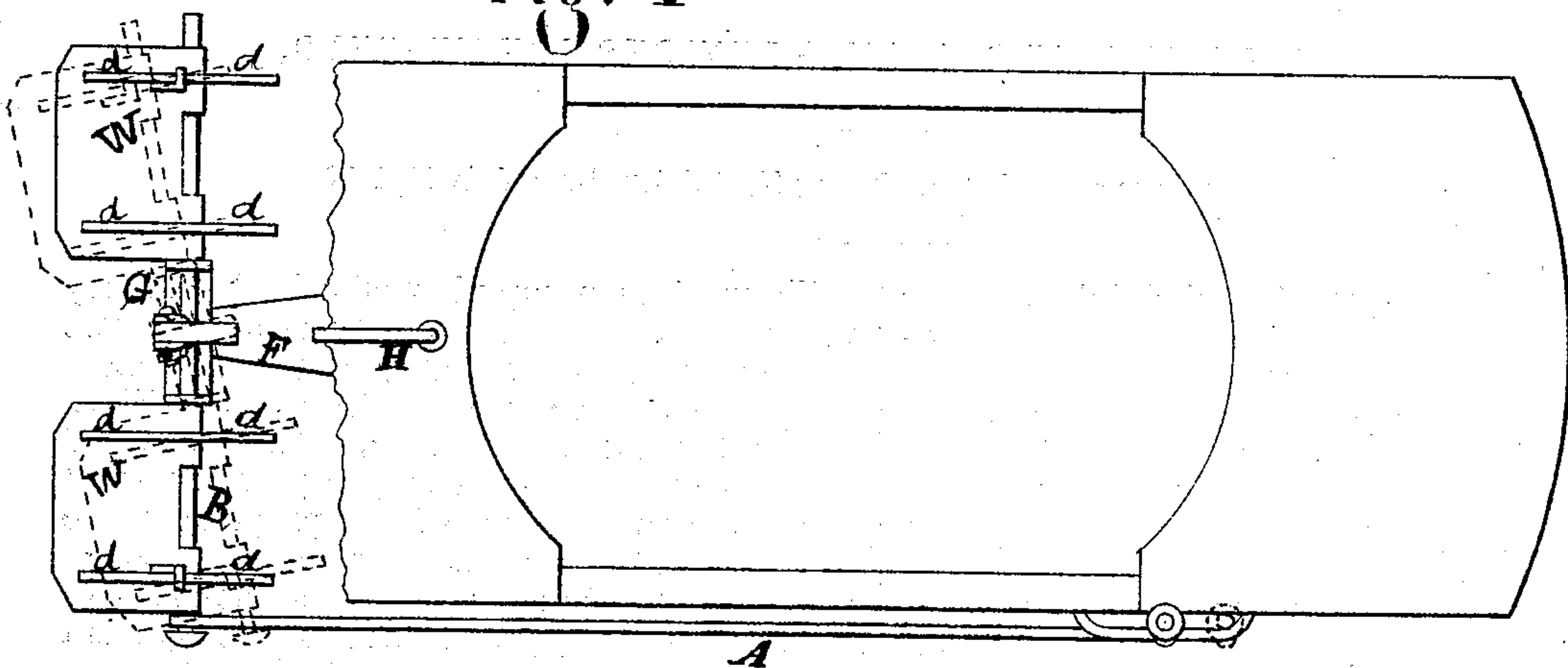


Fig. 2

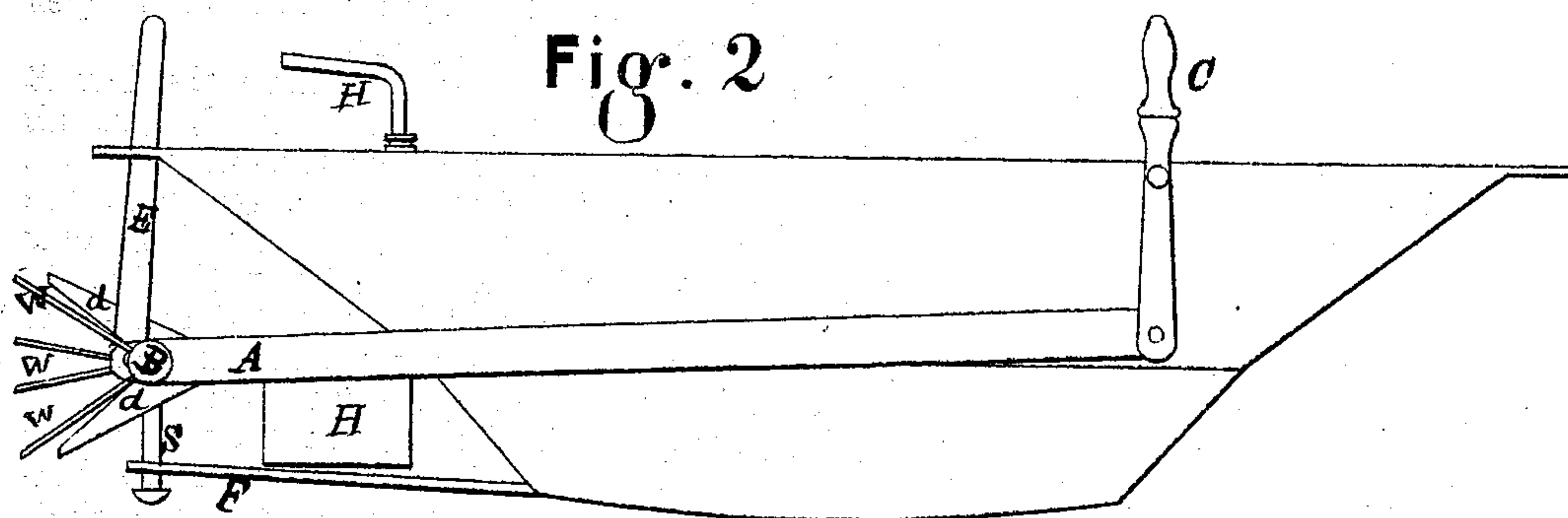


Fig. 3

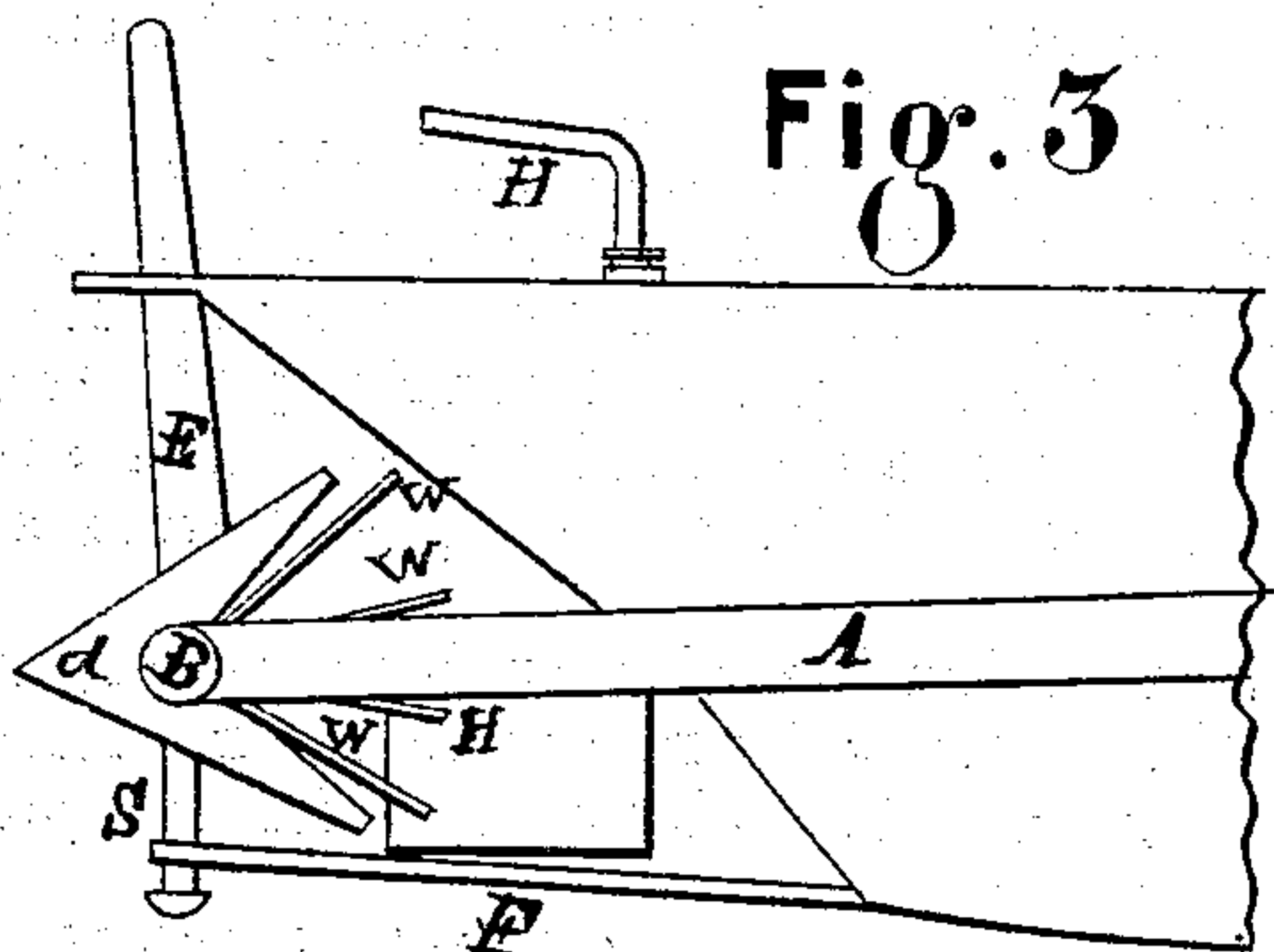
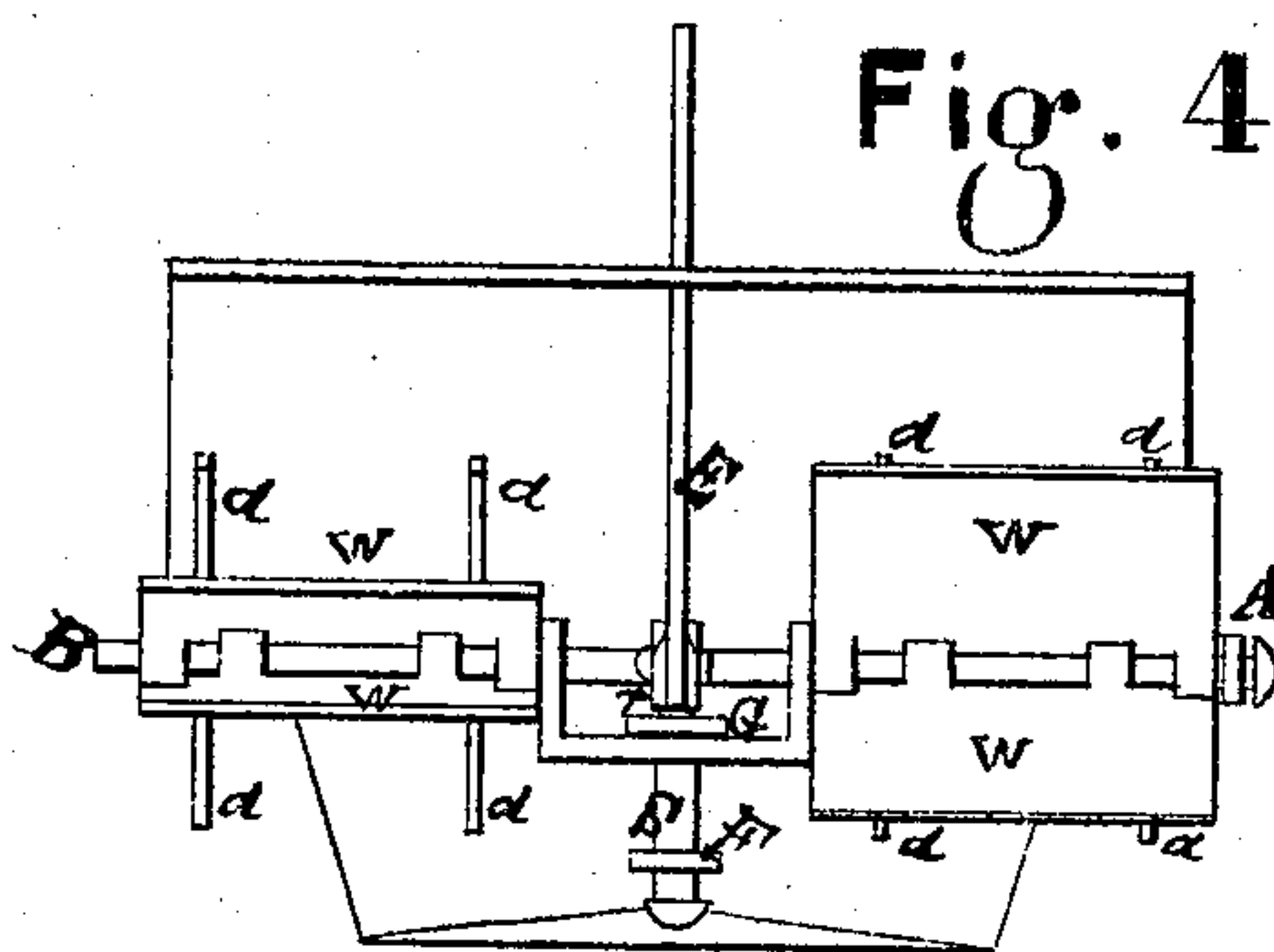


Fig. 4



Witnesses  
*Thos. Dallas*  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN PROPELLING DEVICES FOR VESSELS.

Specification forming part of Letters Patent No. 129,488, dated July 16, 1872.

I, GEO. R. MOORE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Machinery for Propelling Boats, of which the following is a specification:

The object of my invention is to provide machinery to be operated by steam or other power for propelling boats. I seek to obtain efficiency without producing unreasonable shore-wash. In this instance the characteristic machinery of my device is all connected with a horizontal vibrating bar about as long as the width of the boat. This bar is hung centrally in a right-angled double joint below the water-line at the stern of the boat. From either end of this bar toward the center there are loosely-hinged wings in pairs, opening and closing as jaws. There are also fixed stays upon the bar which determine just how far the wings may open or close. Also, a right-angled stem from the center of the bar, with which a lever is connected for giving it the half turn required to reverse the wings and change the direction of their force. The hinged side of the wings must always be in the direction the boat is designed to move.

It will be seen, as the bar vibrates horizontally, in this case, the wings open and close vertically. A rapid vibration of the bar in an arc of about thirty degrees will cause the splashes of the right and left pairs of wings to be thrown in broad circles, having some tendency to expend themselves against each other. A connecting-rod from the bar to a pivoted upright lever for the hand, near the bow of the boat, is the only means shown here for vibrating the bar; but the application of any known force is simple and quite within the knowledge of any suitable manufacturer. Doubtless the device I am presenting is capable of as many varieties of application as any other mode.

In my model and drawing a simple canal-boat is represented with my winged propeller attached.

Figure 1 is a top view of a boat with my winged propeller attached at the stern. The upper part of the boat at the stern is broken away to bring the propeller into view. Fig. 2 is a side view of the same, with the bar B turned so that its appendages point outward and indicate the force of the propeller to be used in that direction. Fig. 3 is the same view with the bar B reversed, so as to move the boat in the opposite direction. Fig. 4 is a rear view, and shows the relative length of the wings. It indicates one pair of the wings open and the other relatively closed.

A is a connecting-rod uniting the bar B with the pivoted upright lever C, through which motion can be communicated to the propeller. *d d d d* are fixed stays upon the bar B to stop the wings at that point. *w w w w* are wings hinged loosely on the bar B. They are in pairs, and in Figs. 2, 3, and 4 one pair is represented as open and the other closed. E is a lever pivoted to a stem upon the bar B for giving it a half turn, and thus reversing the wings. F is a frame-work from the bottom of the boat, and terminates in a socket, S, for the reception of the stem-part of the right-angled double joint G, which carries the horizontal bar B. H is the ordinary helm.

I claim as my invention—

1. In combination with navigable vessels, the propelling device consisting of the oscillating horizontal beam B provided with stops *d d*, with the two pairs of hinged paddles or wings *w w*, when arranged for operation, substantially as and for the purpose herein set forth.

2. In combination with such propeller, the lever E and arm *x* for reversing the motion of said wings, substantially as and for the purposes herein set forth.

GEO. R. MOORE.

Witnesses:

THO. DALLAS,  
JOHN PERRY.