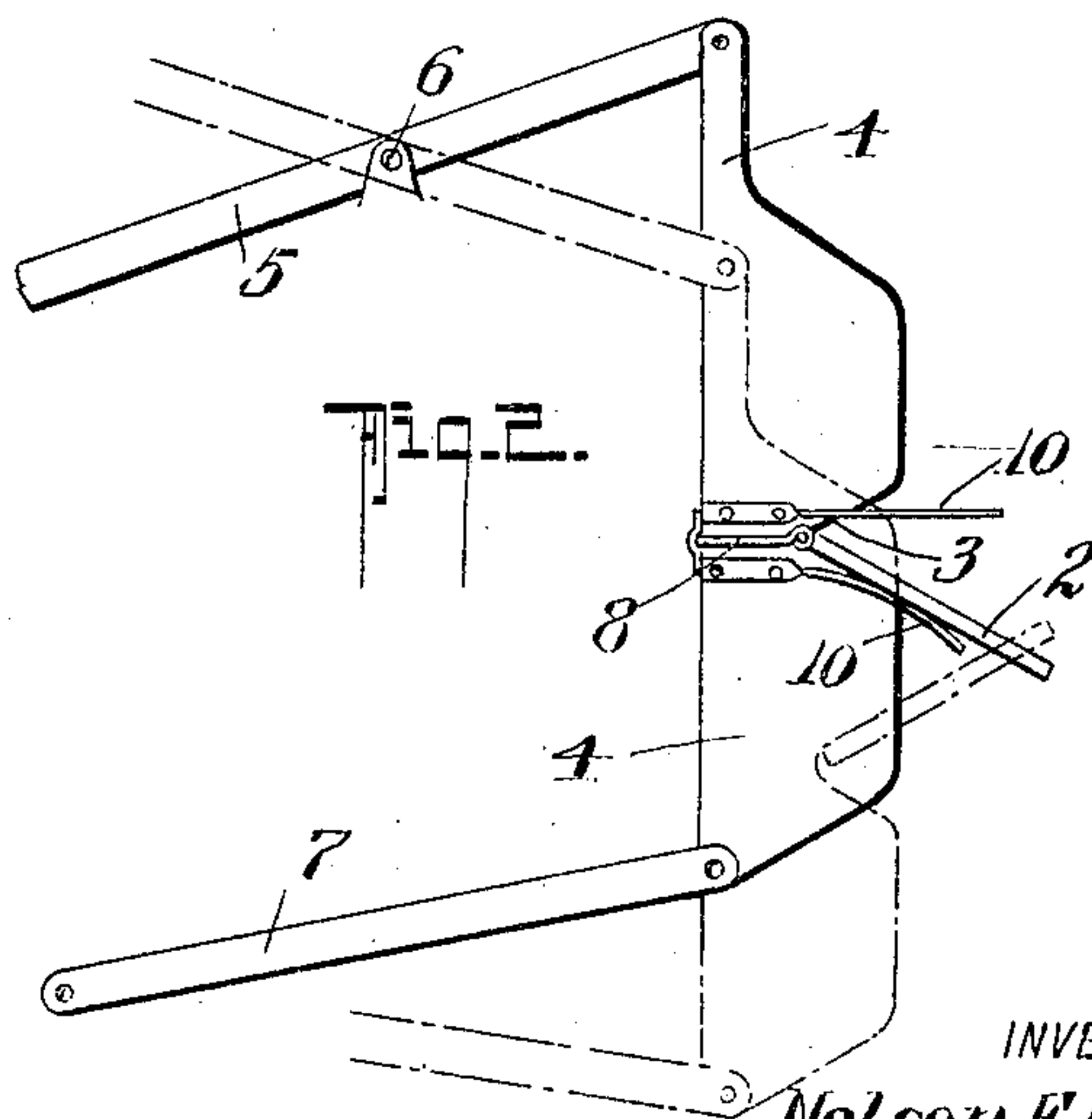
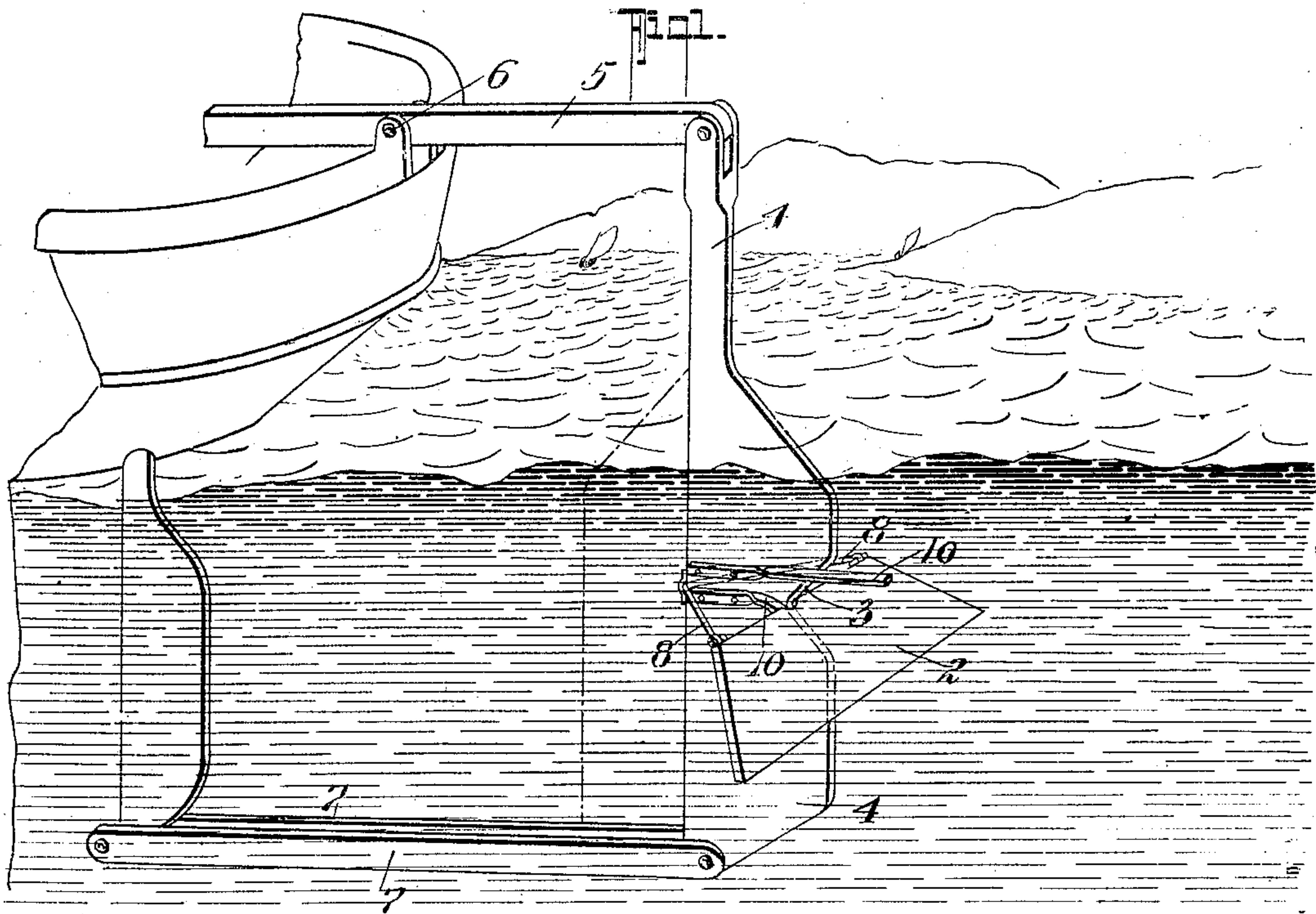


N. F. LOOMER.
BOAT PROPELLING DEVICE.
APPLICATION FILED JUNE 26, 1908.

923,283.

Patented June 1, 1909.



WITNESSES:

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NELSON F. LOOMER, OF LETELLIER, MANITOBA, CANADA.

BOAT-PROPELLING DEVICE.

No. 923,283.

Specification of Letters Patent.

Patented June 1, 1909.

Application filed June 26, 1908. Serial No. 440,520.

To all whom it may concern:

Be it known that I, NELSON F. LOOMER, citizen of the Dominion of Canada, residing at Letellier, in the Province of Manitoba, Canada, have invented a new and useful Improvement in Boat-Propelling Devices, of which the following is a specification.

This invention relates to an improved means for propelling a boat by means of a vertically moved blade, which is pivotally mounted to incline to each side of the horizontal plane.

The device is particularly designed as an auxiliary for small sail boats, but may be susceptible of development for vessels of a larger size.

The device is fully described in the following specification, reference being made to the drawings by which it is accompanied, in which:

Figure 1 is a perspective view showing the application of the device to the stern of a boat, and Fig. 2, a side elevation showing by dot and dash lines the reversed incline of the blade.

The propelling means consists of a thin flat blade 2, preferably shaped as a symmetrical trapezoid; which blade is pivotally mounted along the smaller of its parallel edges in a V shaped notch 3 in a vertical member 4 which member is connected to the hull of a boat in a manner that will permit of a reciprocating vertical movement being imparted to it as indicated by the dot and dash lines in Fig. 2. This may appropriately be done by suspending the upper end of the member 4 by a pin connection to the outer end of a lever 5, which lever is fulcrumed at 6 onto the rail at the stern of the boat and extends inboard that hand power may be applied to it, and by connecting the lower end of the member 4 by a link or links 7 to the stern post or other lower part of the hull of the boat.

Each end of the blade 2 is stayed by diagonal braces 8 to the back edge of the member 4, the connections to the blade 2 and to the member 4 being such as will permit of vertical movement.

In the operation of the device an up and down movement is imparted to the vertical member 4 by means of power applied to the inboard end of the lever 5, and under this movement the angle of the plane of the blade 2 is reversed within the limits of the V notch 3 and the blade so angled is pressed through the water imparting a forward movement to the boat.

Springs 10 may be introduced somewhat as shown in Fig. 2 to cushion the check of the blade 2 in the V notch 3.

As shown by dot and dash lines in Fig. 1 the member 4 may be reversed when desired.

Although the drawing shows only one blade, in the development of the device it may be found advisable to make use of more than one.

Having now particularly described my invention and the manner of its application and use, I hereby declare that what I claim as new and desire to be protected in by Letters Patent, is:

1. As a propelling means for boats, a horizontally disposed blade pivotally hinged to a vertical member radially connected to the hull of a boat, and means for imparting a vertical movement to the vertical member.

2. As a propelling means for boats, a horizontally disposed blade pivotally mounted on a vertically disposed member which vertical member is connected by approximately parallel links to the hull of the boat in a manner that will permit of vertical movement being imparted to the vertically disposed member, means for limiting and cushioning the angular movement of the blade, and means for imparting a reciprocating vertical movement to the vertical member.

3. As a propelling means for boats, a lever pivotally mounted to the after rail of a boat in a manner that will permit of movement in a vertical plane, a vertically disposed member pin-connected to the outboard end of said lever and radially connected at its lower end to the hull of the boat in a manner that will permit of movement corresponding to the lever from which it is suspended said vertically disposed member having a V shaped notch in

its after edge, a horizontally disposed blade
mounted in the notch of the vertically dis-
posed member and susceptible of angular
movement within the limits of its notch, and
5 diagonal stays connecting the outer ends of
the blade to the vertically disposed member
in a manner that will permit of the vertical
movement of the blade.

In testimony whereof I have signed my
name to this specification in the presence 10
of two subscribing witnesses.

NELSON F. LOOMER.

Witnesses:

JOHN COUGHLAN,
CARL R. LOOP,