J. Heroux

Oar & Oar Lock.

No. 89,663. Patented May. 4, 1869.

Fig 1.

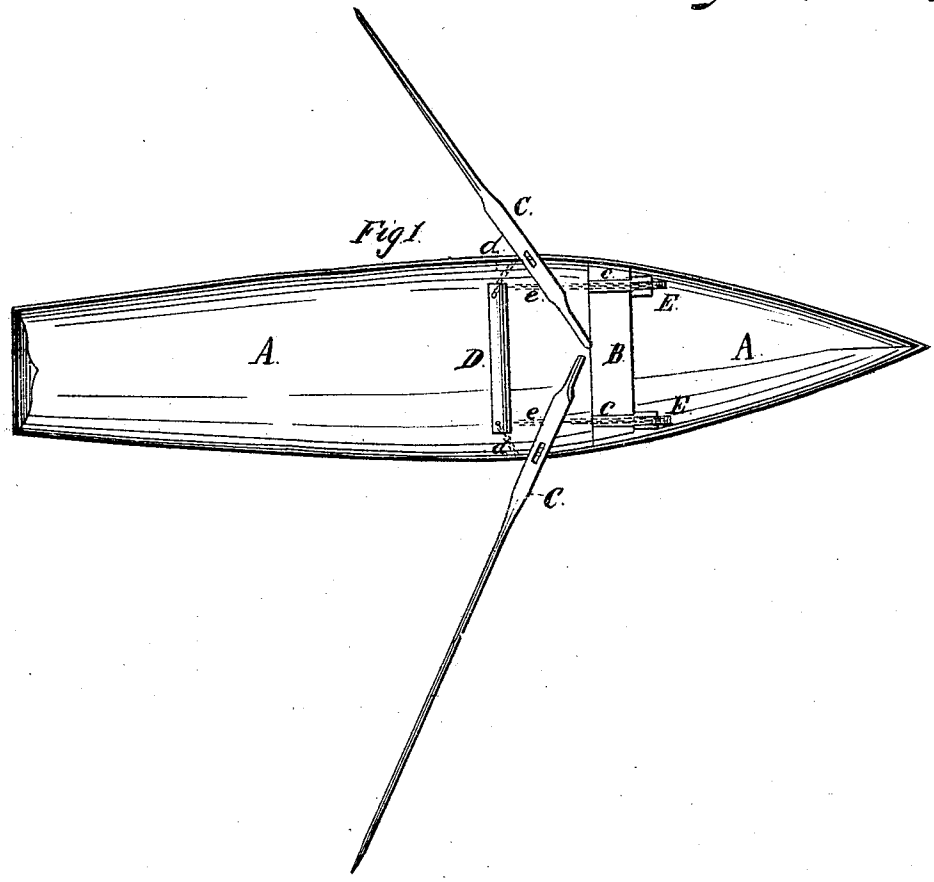
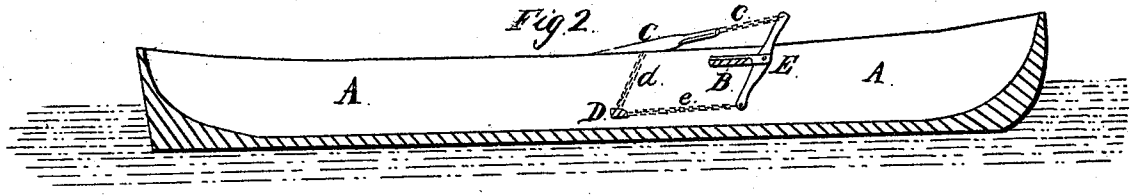


Fig 2.



Witnesses.
Isaac Washburn
C. H. Bishop

Inventor
Joseph Heroux.
by Prindle and Co Attys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

United States Patent Office.

JOSEPH HÉROUX, OF ST. PAUL, MINNESOTA.

Letters Patent No. 89,663, *dated May* 4, 1869.

IMPROVEMENT IN PROPELLING BOATS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOSEPH HÉROUX, of St. Paul, in the county of Ramsey, and in the State of Minnesota, have invented an Improved Apparatus for Propelling Boats; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a top or plan view of a boat with my improvements attached; and

Figure 2 a vertical longitudinal section of the same.

Letters of like name and kind refer to like parts in each of the figures.

My invention is intended to furnish means by which an oarsman can use his feet as well as his hands for moving the oars and propelling a boat; and to this end

It consists of a cross-bar suspended horizontally within and across a boat, in a convenient position to receive the feet of an oarsman when seated, and connected by chains, or other suitable means with the lower ends of two vertical levers, pivoted to the sides of the boat, or the front edge of the seat, the upper ends of said levers being in turn connected with the inner ends of the oars, so that a backward pressure of the feet upon said cross-beam shall cause the inner ends of said oars to move forward.

In the annexed drawing—

A represents the boat;

B, the oarsman's seat; and

C C, the oars, working upon pins secured upon the gunwale.

D represents a cross-bar suspended across the boat, near its bottom, by means of chains *d d*, secured to the ends of said bar and the gunwale of said boat.

E E represent two levers pivoted at their centre to the front edge of the seat B, their lower ends being connected by chains *e e* to the ends of the cross-bar D, while their upper ends are connected by other chains *c c* to the inner ends of the oars C C.

The operation of this device will be readily understood.

The oarsman places himself upon the seat B, with his feet upon the bar D, and his hands grasping the oars, which he operates in the usual manner.

Instead, however, of his feet remaining stationary, as heretofore, they are drawn back and pushed forward at each stroke of the oars, to which they impart motion by means of the levers E E and their connecting chains.

It will of course be at all times necessary to guide the oars with the hands, but the power required to move said oars, can be easily furnished by the legs when it is desired to rest the arms.

The advantages possessed by this invention, are—

First, the oarsman is enabled to bring all of the muscles of his body into action, and consequently can exert a much greater force, and secure greater speed, than by operating the oars solely through the hands.

Second, the oarsman is enabled to perform the same labor with less fatigue, and also to exert himself for a greater length of time, as he can use his arms alone, or in connection with his feet, or can operate the oars entirely with the latter, (except to guide them,) when he desires to rest his arms.

Third, the device is simple, cheap, and durable, and can be readily attached to or removed from any boat without alteration of its parts.

Having thus fully set forth the nature and merits of my invention,

What I claim as new, is—

The cross-bar D, or its equivalent, by means of which, through suitable mechanism, motion can be imparted to the oars, by the feet of an oarsman, substantially as shown.

Also, the levers E E, when pivoted to the boat, and connected with the cross-bar D, or its equivalent, and with the inner ends of the oars C C, substantially as and for the purpose specified.

Also, the cross-bar D, and levers E E, together with their connecting-chains *d d*, *e e*, and *c c*, in combination with the boat A and oars C C, substantially as shown and for the purpose described.

In testimony that I claim the foregoing, I have hereunto set my hand, this 26th day of December, 1868.

JOSEPH HÉROUX.

Witnesses:

CHARLES LAJOU,

CHS. D. HÉBERT.