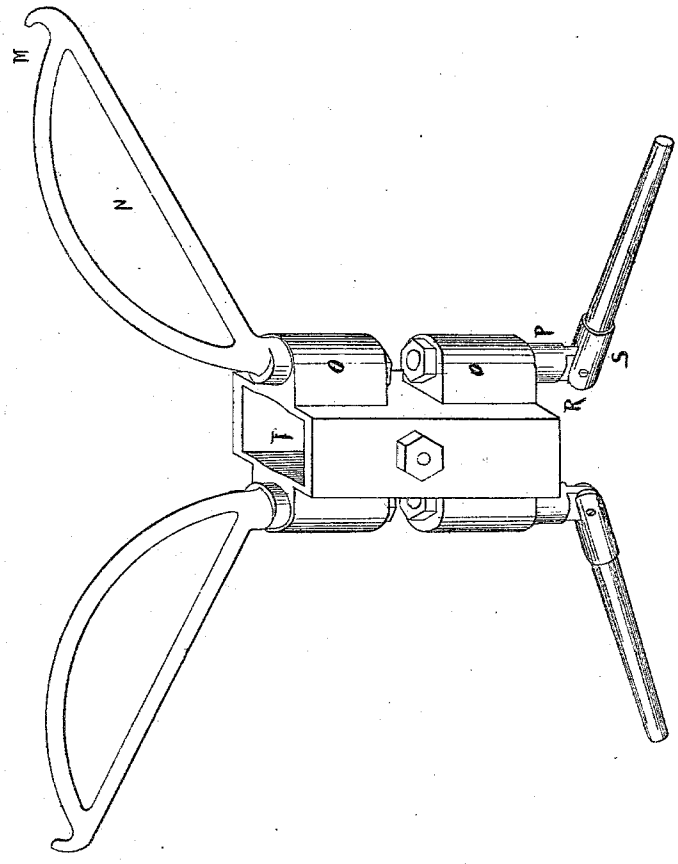
3 Sheets--Sheet 1.

N. DAVENPORT.

Improvement in Oars.

No. 115,584. Patented June 6, 1871.



Witnesses.
C. E. Davenport
J. M. Landon

Nelson Davenport

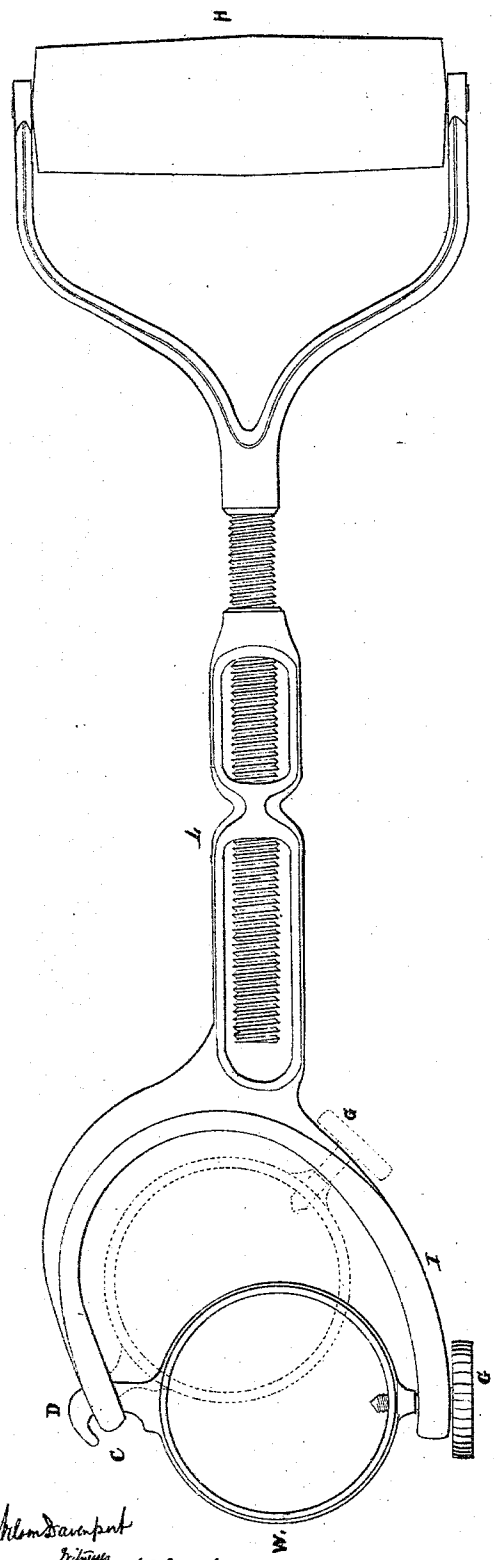
AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

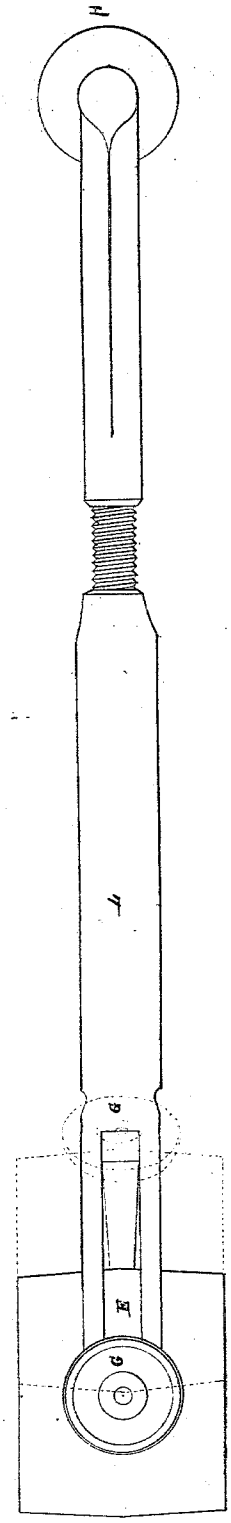
3 Sheets--Sheet 2.

N. DAVENPORT.

Improvement in Oars.

No. 115,584. Patented June 6, 1871.





Nelson Davenport
Witnesses
C. E. Davenport
J. M. Landon

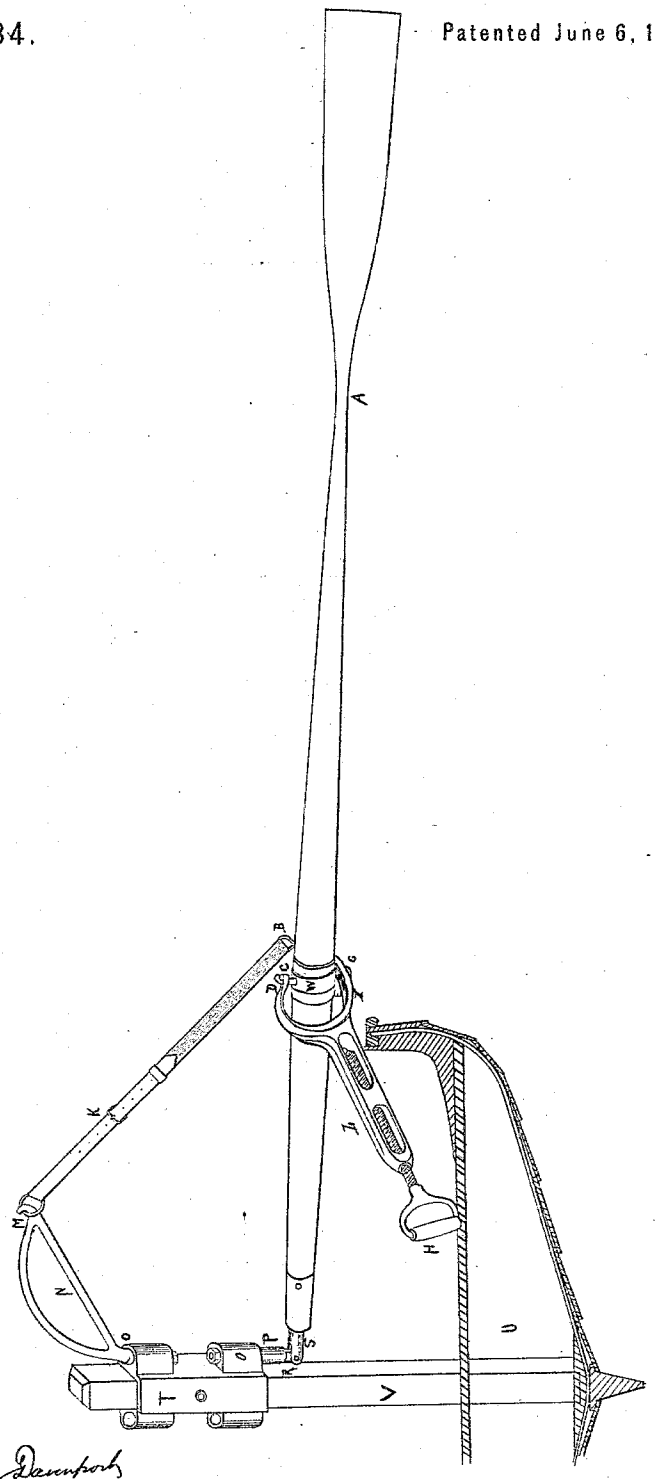
AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

3 Sheets--Sheet 3.

N. DAVENPORT.

Improvement in Oars.

No. 115,584. Patented June 6, 1871.



Witnesses:
C. E. Davenport
J. W. Landon

Nelson Davenport

AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

NELSON DAVENPORT, OF TROY, NEW YORK.

IMPROVEMENT IN OARS.

Specification forming part of Letters Patent No. 115,584, dated June 6, 1871.

I, NELSON DAVENPORT, of Troy, Rensselaer county and State of New York, have invented certain Improvements in Row-Locks and Oar-Handles, of which the following is a specification:

Nature and Objects of the Invention.

The nature of my invention and its objects consist in the construction of row-locks and oar-handles, and their connections with the boat and oars in such manner that the boat will be propelled in the direction faced by the oarsman. The first part of my invention relates to the construction of the row-lock and the attachment of the oar thereto in such manner that the oar will not catch and bind to the lock, and also to the construction, adjustment, and attachments of the spring to the row-lock and to the oar in such manner that the oar can be raised or lowered to any point to suit the convenience of the oarsman, and the blade remain at the same distance from the water or to the same depth in the water when hanging by the spring, at whatever part of the arc the blade may be. The second part of my invention relates to the construction of the handle of the oar in such manner that no joint is necessary except one made by a hook and eye, and also so that it may be lengthened or shortened, as may be required by the oarsman.

Description of the Accompanying Drawing.

No. 1 is a side elevation of the row-lock, with cranes and oar-pins, embodying a portion of my invention. No. 2 is a side elevation and plan of the oar-handle and oar-band, embodying a portion of my invention. No. 3 is a side elevation of the whole, embodying my invention.

General Description.

U is a section of the boat. A is the oar. V is an upright, made of wood, and from one to two inches square and about three feet long, firmly secured to the bottom of the boat and at its sides with braces. This upright is the support of the ~~ore~~ oar. T is the row-lock, made of metal, to fit the upright closely, yet is movable upon it, and is secured to it at the proper point by a bolt running through it and the upright. It is about four inches long and of sufficient thickness to bear the strain. O O are eyes cast upon each side of the lock. P is a pin through the lower eye on each side, secured at the top by a nut, and turning easily in the eye. S is the oar-pin, forming, with the pin P, the joint R. This oar-pin is from five to six inches long and about one-half inch in diameter, with a hub cast on the joint end to prevent the striking of the oar-handle against the eye. This oar-pin is inserted into a hole in the loom of the oar and so fitted that the oar will roll easily upon it. The joint R and the loose pin P admit of all the necessary motions of the oar in rowing. N is a small crane, so fitted into the upper eye O on each side of the row-lock that it will turn easily and freely, and is secured at the bottom of the eye with a nut. K is an adjustable spring, of rubber or other suitable material, one end of which is attached to the ~~ore~~ oar by the hook B, and the other end of which is attached to the crane by a ring on the spring and a hook on the end of the crane. This spring supports the ~~ore~~ oar above or upon the water when not drawn into it, and also prevents the oar from slipping off the oar-pin, yet with little power will permit the forcing of the oar into the water to any necessary depth. It is made adjustable by a strap and buckle, so that the oar can be elevated or depressed to suit the convenience of the oarsman. This spring being attached to the oar and crane, the crane will turn easily and simultaneously with the oar and the pin P, thus keeping the oar-blade at the same distance above the water at whatever point it may be when hanging from the spring or when being pushed backward for the stroke. H is the handle; L, the arm; and C and I the prongs of the arm by which the ~~ore~~ oar is worked. W is the oar-band; D, the hook on top of the band; and G, the screw-pin, securing the arm and prongs to the band and the band to the oar. The arm L is made of metal, and is from four to eight inches long, and is hollow or open in two sections to relieve it of weight, the solid or uncut sections being tubes to admit the screw of the handle H, by means of which the handle may be lengthened or shortened, as required by the oarsman and the width of the boat. The prongs C and I are cast solid to the arm, and so shaped on the inner sides that the band W will remain at some distance from the prongs at whatever point it may be when worked. The up-

per prong C has an eye in the end, and the lower prong I has a slot commencing near the outer end and extending back far enough to allow the required and necessary roll of the oar. The oar-band W is made of metal, and is about two inches wide and of sufficient thickness to bear the strain, and fits closely around the loom of the oar. On one side of the band is cast a small hub to give a sufficient hold for the threads of the screw-pin G, which passes through the slot of the prong I and the hub and the band, and secures the band firmly to the oar. Upon the band, directly opposite the hub, is cast the hook D, which secures the upper prong to the band and works easily and freely in the eye, allowing the necessary motions of the prongs when worked. This band is adjusted upon the oar so that the hook D will be on a line with the upper edge of the blade, and may be as far from the end as the oarsman may require.

When the oar, by means of the handle H, is pushed backward through and out of the water for the stroke, it is necessarily feathered, because the upper prong of the arm pushes against the hook on the top of the oar-band, and the screw-pin G runs easily back in the slot of the lower prong. When the stroke is made, and as soon as the oar-blade is pulled into the water, the roll of the oar is reversed until the pin G strikes the end of the slot in the lower prong, when the face of the blade is at a right angle with the surface of the water. By this operation the boat is propelled in the direction faced by the oarsman.

By the use of the row-lock and its attachments, as herein described, the oar will never catch or bind as it will in the locks now used for a similar purpose; and by the use of the adjustable spring, as herein described, the oar-blade can be raised or lowered to the proper point without moving the row-lock, and the end of the oar will not be drawn so closely against the hub of the oar-pin by the spring as to prevent the free roll of the oar.

By the use of the arm L without any joint except that made by the hook and eye at band, the power is more directly applied to the oar, and is more effective than with the jointed arm now in use.

I do not claim as new a band upon the oar, nor a handle attached to it, by which the boat is propelled in the direction faced by the oarsman, nor the principle of feathering the oar with a handle.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The adjustable row-lock T with the eyes O O, substantially as and for the purposes hereinbefore set forth.

2. The combination with the lower eye O with the pin P and oar-pin S, substantially as and for the purposes hereinbefore set forth.

3. The combination of the stiff arm L with the hook-and-eye joint at the oar-ring, substantially as and for the purposes herein set forth.

4. The combination of the adjustable handle H with the arm L and the hook-and-eye joint at the oar-ring, substantially as and for the purposes herein set forth.

5. The combination of the small crane N with the adjustable spring K and the oar, substantially as and for the purposes herein set forth.

NELSON DAVENPORT.

Witnesses:

C. E. DAVENPORT,

J. M. LANDON.