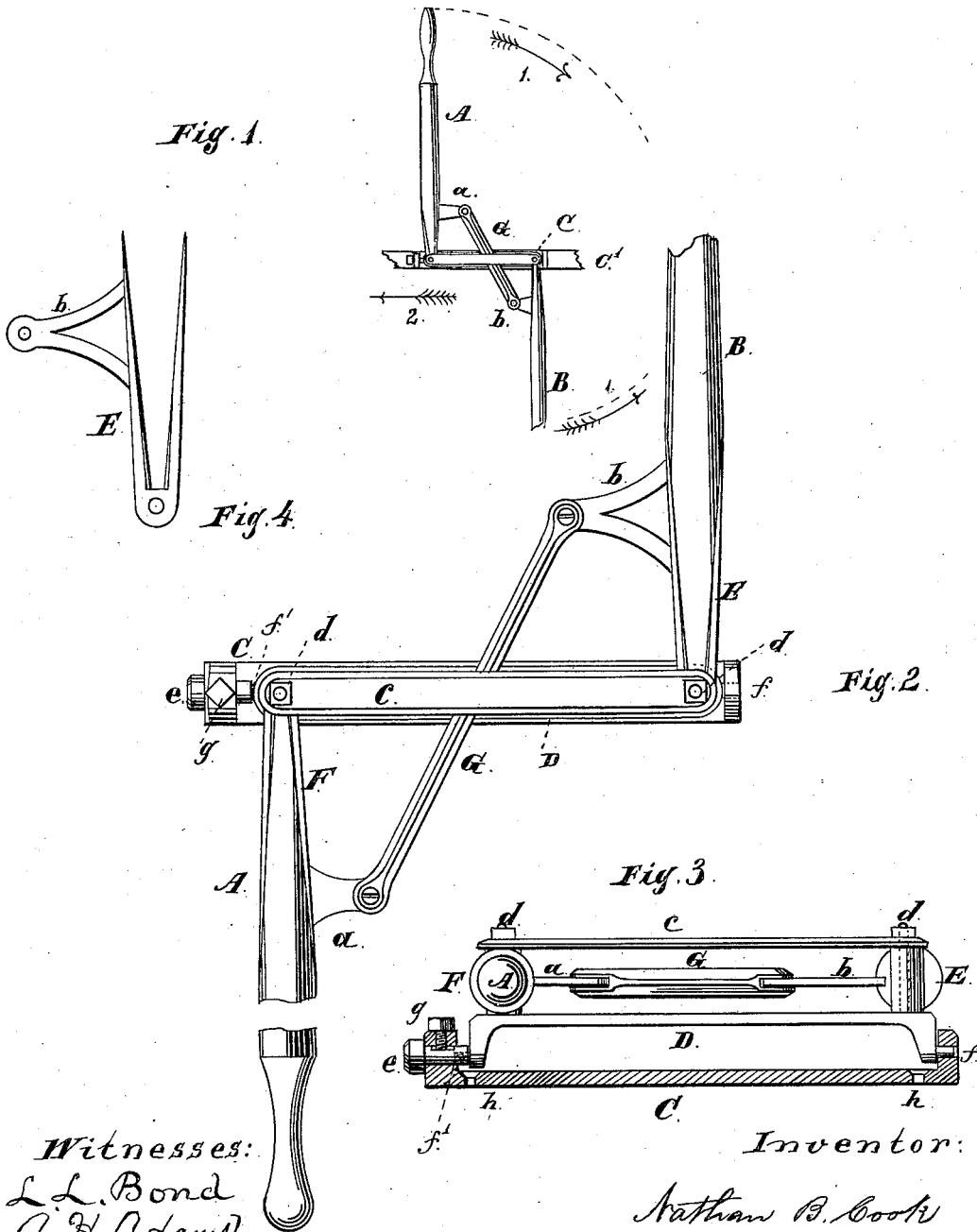


N. B. COOK.
Oar and Oar-Lock.

No. 210,502.

Patented Dec. 3, 1878.



Witnesses:
L. L. Bond
A. H. Adams.

Inventor:
Nathan B. Cook

UNITED STATES PATENT OFFICE.

NATHAN B. COOK, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN OARS AND OAR-LOCKS.

Specification forming part of Letters Patent No. 210,502, dated December 3, 1878; application filed August 30, 1878.

To all whom it may concern:

Be it known that I, NATHAN B. COOK, of Chicago, Cook county, and State of Illinois, have invented certain new and useful Improvements in Oars, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a top or plan view; Fig. 2, a similar view enlarged; Fig. 3, an elevation of the devices connecting the oar with the boat, and for holding and pivoting the same; and Fig. 4, a plan view of one of the oar-irons detached.

The object of my invention is to construct an improved rowing-oar which will be nearly noiseless in operation, and so arranged that the oarsman will face the same way that the boat is moving; and its nature consists in so coupling the oar and its handle with their support as to relieve the coupling-link and its joints from strain and friction in dipping or raising the oar, and in so combining the oar with its support as to give the oar a free and easy movement without loss of motion or rattling of the joints.

In the drawings, A indicates the handle; B, the oar; C, the bed-plate, or plate by which the device is attached to the gunwale of the boat; D, the rocking bar or plate; E, the coupling-iron of the oar; F, the coupling-iron of the handle; G, the coupling link or bar; *a*, bracket or projection by which the link G is pivoted to the handle; *b*, bracket for connecting the coupling-link with the oar; *c*, bar or plate for connecting and steadying the pivot-pins; *d*, pivot-pins or bolts; *e*, sliding bolt or pivot-pin for connecting or disconnecting the rocking plate D, and is hollow, so as to receive the pivot *f'* of one end of the rocking plate; *f*, the pivot for the opposite end, and *g* a set or thumb screw for locking the sliding bolt *e*.

The boat, except a small portion of a gunwale at C', is not shown, as my device is designed to be applied to any ordinary boat. The plate C is made so as to fit or rest upon the top of the gunwale, and is secured in place by inserting screws or screw-bolts in the holes *h*. Instead of these holes, bolts for pass-

ing through the gunwale may be applied. Its ends are raised, as shown, to furnish a proper bearing for the pivots or journals *f f'*, and the sliding pin *e*. The sliding pin *e* is provided with an opening to receive the pivot *f'* at its inner end, and prevent the rocking plate from getting out of position. Its side is flattened or cut away, so as to give the set-screw a firm bearing, which prevents the end-thrust of the plate D from getting the bolt *e* out of position.

The rocking plate D has its ends bent down, as shown, and the pivots or journals *f f'* are permanently attached. It is made somewhat shorter than the space between the ears of the plate C, so that it can be easily lifted out when the pin *e* is slid back or removed.

The pivots *d* are attached at or near the ends of the rocking plate. The ends of the irons E and F are placed on these pivots. The plate *c* is then placed on the pivots, which are provided with screw-nuts or keys at their upper ends, and is thus fastened in place, and prevents the pivots from getting out of position, and the handle or oar from slipping off.

I have found it to be an advantage to make the bracket *b* longer than *a*, as it gives an improved leverage on the oar when it is thrown backward, or is nearly in line with the gunwale.

The arrow 1 indicates the movement of the handle. Arrow 2 indicates the direction of the boat.

I am aware that the handle and blade of an oar have been heretofore separated, pivoted to the side of a boat, and connected by a link.

I am aware that an oar divided in two parts, which are connected together, and the parts pivoted separately to a swinging plate or bar, is not new, and I do not claim such, broadly, as my invention.

In my invention the construction is such as to render the parts readily adjusted in position and easily removable, and at the same time are strong and durable.

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

1. The combination of the base-plate C, with

ears or lugs at its ends, the rocking plate D, provided with vertical pins $d d$, the handle A, oar B, coupling-irons E F, brackets $a b$, and connecting-link G, all substantially as and for the purposes herein set forth.

2. In combination with the bed-plate C and rocking plate D, having pivots $f f'$, the slid-

ing bolt or pivot-pin e and set-screw g , substantially as and for the purposes herein set forth.

NATHAN B. COOK.

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