

(No Model.)

D. STOCKING.
ROWING GEAR FOR BOATS.

No. 319,935.

Patented June 9, 1885.

Fig. 1.

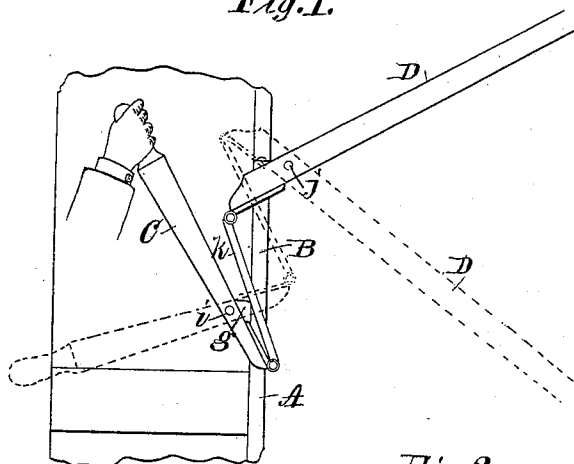


Fig. 2.

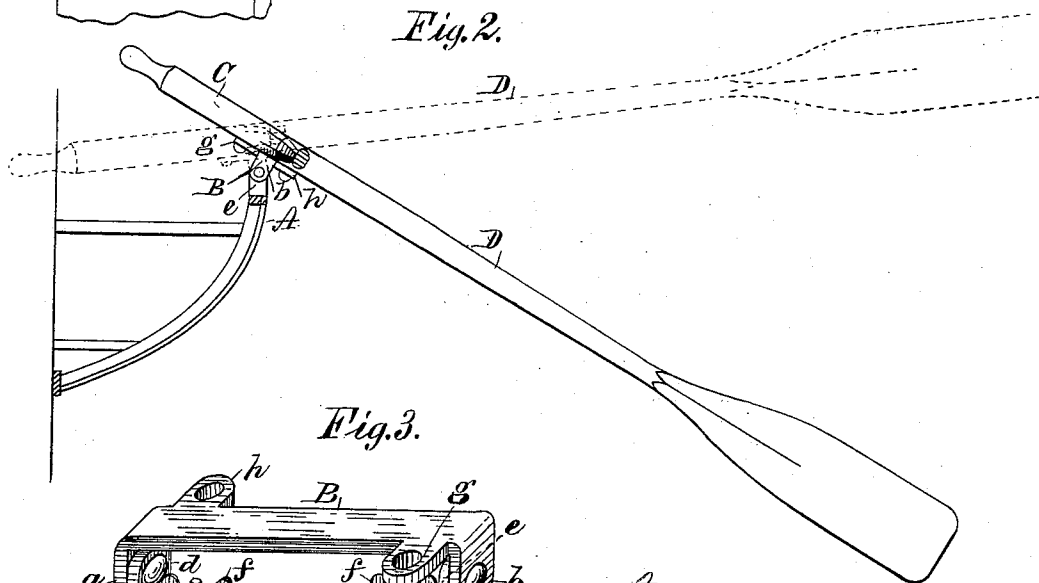
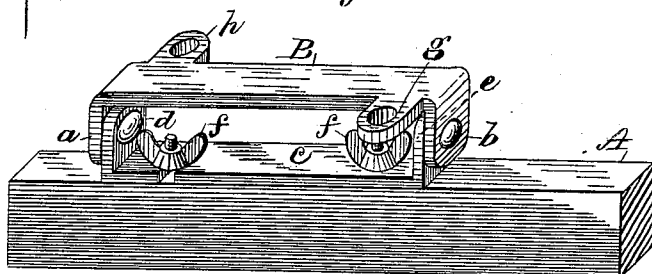


Fig. 3.



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ROWING-GEAR FOR BOATS.

SPECIFICATION forming part of Letters Patent No. 319,935, dated June 9, 1885.

Application filed August 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, DANIEL STOCKING, a citizen of the United States, residing at Fort Atkinson, in the county of Jefferson and State of Wisconsin, have invented certain new and useful Improvements in Rowing - Gear for Boats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to rowing-gear for boats; and it consists in the mechanism hereinafter described, whereby I secure great strength, force, convenience, utilization of power, and ease of manipulation in bow-facing oars.

In the drawings, Figure 1 is a top view of my device, showing its position in rowing at the moment when the blade of the oar at the beginning of the stroke strikes the water, and by dotted lines indicating its position at the moment the blade is lifted from the water at the close of the stroke. Fig. 2 is a rear view of my device attached to the gunwale of the boat on the line of motion of the oar and hand-lever. Fig. 3 is a detail showing rocking bar and method of attachment to the gunwale of the boat.

The same letters refer to like parts in all the views.

In the drawings, A is the gunwale of the boat. B is a rocking bar. C is a hand-lever, and D is the oar.

The rocking bar B is a plate having its ends upturned, forming lugs *a* and *b*, and through which it is pivoted to plate *c*, having corresponding lugs, *d* and *e*, at its respective ends, whereby said rocking bar has a rocking or revolving motion at right angles to its length, said plate *c* being affixed to the top of the gunwale A, preferably by bolts affixed in the gunwale, and having upwardly-extending ends provided with screw-threads and hand-nuts *f*, said plate *c* being also provided with recesses, one near each end on either side extending inwardly from the edge of the plate, adapted to receive the retaining-bolts extending upwardly from the gunwale, said recesses being so

located on opposite edges of the plate that the resistance offered by the stroke of the oar in rowing crowds the plate at said recesses against and upon said bolts, said plate being also held firmly in position upon the gunwale by the thumb-screws *ff* on said retaining-bolts, and being adapted by means of said recesses to be readily removed from and replaced on the gunwale when desired, the releasing or attaching said plate being easily accomplished by the set-screws *ff*.

The rocking bar B is provided with two lugs, *g* and *h*, extending outwardly in the plane of its width, one lug on each side, and respectively near each end of the bar, which lugs are each provided with an aperture for the reception of a bolt or pintle.

The hand-lever C is pivoted upon the rocking bar at *i* by a bolt passing through it and through the lug *g*, and the oar D is pivoted on said rocking bar at *j* by a bolt passing through it and through the lug *h*.

The tension-arm *k* is hinged at one extremity to the short arm of the hand-lever C, which extends outwardly from the fulcrum *i*, and at the other extremity to the short arm of the oar D, which extends inwardly from the fulcrum *j*. It is obvious that power exerted on the long inner arm of hand-lever C in the direction of and forcing this arm toward the stern of the boat would move the blade of the oar in the same direction, thereby propelling the boat forward, whereby the rower is required to face the bow of the boat in propelling the boat ahead by pulling on this oar in the ordinary manner of operating oars.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In rowing-gear for boats, the plate *c*, provided with diagonally-opposite recesses on its longitudinal edges adapted to receive and bear against the retaining-bolts fixed in and extending upwardly from the gunwale of the boat, and end lugs *d* and *e*, in combination with the rocking plate B, provided with diagonally-opposite apertures *g* and *h*, for attachment of the oar and lever, and with the end lugs *a* and *b*, by and through which lugs said rocking plate is pivoted to the plate *c*, substantially as and for the purpose set forth.

2. In rowing-gear for boats, the plate *c*, provided with diagonally-opposite recesses on its longitudinal edges adapted to receive and bear against the retaining-bolts fixed in and extending upwardly from the gunwale of the boat, end lugs *d* and *e*, and rocking plate B, provided with diagonally-opposite apertures *g* and *h*, for attachment of the oar and lever, and with the end lugs *a* and *b*, by and through which
10 lugs said rocking plate is pivoted to the plate *c*, in combination with the lever C and oar D, said lever and oar being both centrally piv-

oted on the rocking plate, the one at *h* and the other at *g*, and the tension-arm *k*, hinged at one extremity to the inner end of the short arm of the oar, and at the other extremity to the outer end of the short arm of the lever C, substantially as and for the purpose set forth. 15

In testimony whereof I affix my signature in presence of two witnesses.

DANIEL STOCKING.

Witnesses:

C. A. CASWELL,
WARNE RAWLIN.