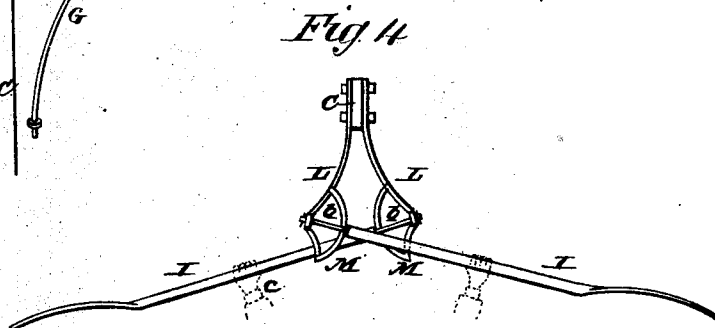
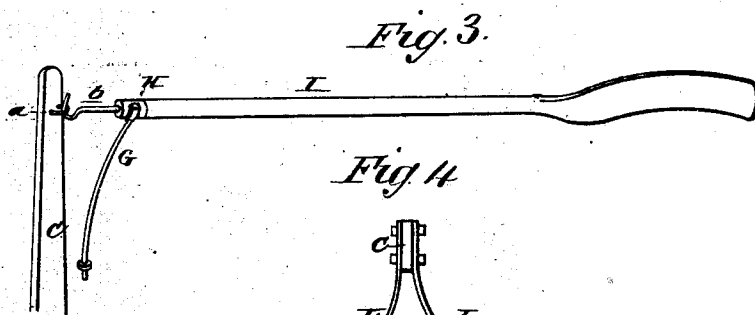
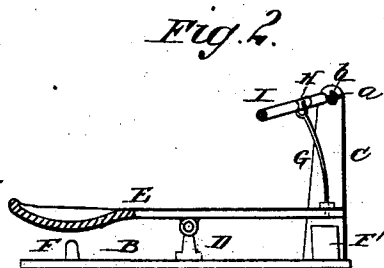
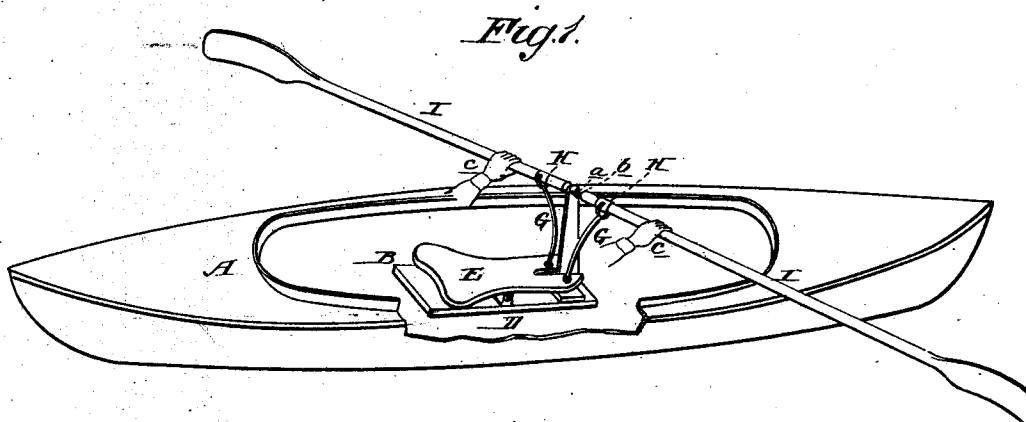


(No Model.)

E. HEYDE.  
Boat Rowing Apparatus.

No. 237,019.

Patented Jan. 25, 1881.



WITNESSES:

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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

EDWARD HEYDE, OF EAST SAGINAW, MICHIGAN.

## BOAT-ROWING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 237,019, dated January 25, 1881.

Application filed November 5, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD HEYDE, of East Saginaw, in the county of Saginaw and State of Michigan, have invented a new and Improved Boat-Rowing Apparatus, of which the following is a specification.

The object of this invention is to facilitate the working of the oars of boats by a better application of the power of the rower; also, to dispense with the ordinary rowlocks; also, to make use of the weight of the rower in working the oars.

The invention consists in providing the boat with a rocking seat, upon which the oars are supported, their inner ends being pivoted to a fixed standard placed between the supports, the arrangement of parts being such that the motion of the body of the operator in pulling and feathering the oars will cause the seat to rise and fall, and thereby carry the oar-blades alternately into and out of the water.

Figure 1 is a perspective view of the apparatus in place in a boat. Fig. 2 is a side elevation of the apparatus, partly in section. Fig. 3 is an elevation showing an oar and its immediate connections. Fig. 4 is a plan of a modification of the device adapted for overlapped or crossed oars.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents a boat.

B is a base-board fixed in the bottom of the boat.

C is a standard rising from one end of the base-board B, and provided on either side at its top with staples *a a* for the engagement of the oar-hooks *b b*.

A bridge, D, rising from the center of the base-board B has hinged to its top, so as to rock in a vertical plane, the seat E on which the operator sits.

F F are stops at the opposite ends of the base-board B, beneath the seat E, to limit the movement of the latter.

G G are curved rods, whose lower ends are secured in the forward end of the rocking seat E, and in whose upper forked ends are swiveled the sockets or sleeves H H, through which the looms of the oars I I are passed, said sockets or sleeves H H being short pieces of tube supported between pins that project inward

from the forked ends of said rods G. The oars I I have inserted in the butt-ends of their looms metallic rods or hooks *b b*, and the butt-ends of the oars I I rest in the sockets H H, while the hooks *b b* engage in the staples *a a* on the opposite sides of the standard C.

The device of hook and staple securing the oars I I to the standard C is designed to admit of the necessary free movement of the oars I I, and a universal joint or other form of attachment that will better serve the purpose intended may be substituted for the device herein shown without departing from my invention.

The operator, sitting on the seat E, will balance by his weight the oars I I, and, placing his hands, as shown at *c*, outside of the sockets or universal joints H H, will operate the oars with perfect ease.

In Fig. 4 is shown a modification of the device, wherein outward curved braces L L are secured to either side of the standard C, and in the ends of these braces L L the oars I I are swiveled by their extensions, the rods or hooks *b b*, while segments M M secured to the ends of the braces L L serve as supports to the said oars I I in lieu of the rods G G. For an equal stroke of the blade these oars may be shorter and consequently lighter than those ordinarily used. With this device the oars can be quickly swung over the gunwale in-board when desired, and in case of collision with anything there are no outriggers projecting from the sides of the boat to increase her liability to upset. With this device, too, the hands of the oarsman may be placed conveniently apart, affording him a better opportunity for full exertion of strength, and the motion of the oarsman on the rocking seat assists in the raising and dipping of the oars, the weight of the forward part of the said seat tending to keep the oars on a level, or nearly to counterbalance them, so that they may easily be raised.

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

1. An improved boat-rowing apparatus, constructed substantially as herein shown and described, consisting of a rocking seat, E, carrying vertical rods G G, in whose upper

ends are supported the oars I I, whose inner ends are hooked or otherwise movably attached to a fixed central standard, C, all operated as set forth.

5 2. In a boat-rowing apparatus, the oars arranged in swiveled sleeves H, between the forks of curved rods G, rising from the front of seat, and end-hooked to a standard, C, between said rods, as shown and described.

10 3. In a rowing apparatus, the combination

of the rocking seat E with the oars I, the standard C, attachment *a b*, and supporting-rods G, substantially as herein shown and described, whereby the said oars are nearly counterbalanced, as set forth.

EDWARD HEYDE.

Witnesses:

FRED. ANNEHE,

ALLEN R. ENGLISH.