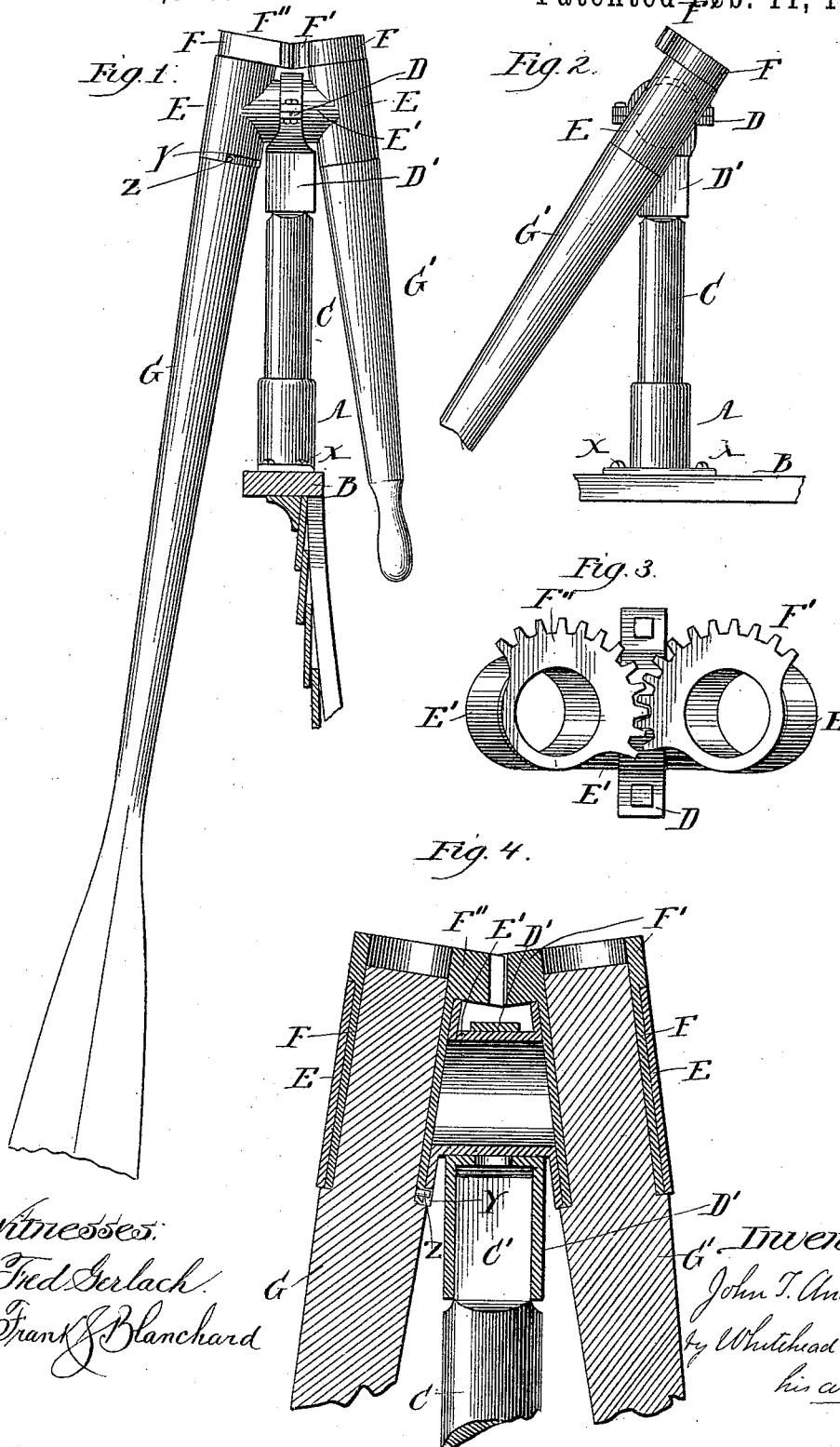


(No Model.)

J. T. ANDERSON.
BOW FACING OAR.

No. 420,925.

Patented Feb. 11, 1890.



Witnesses:

Fred Gerlach
Frank Blanchard

Inventor:

John T. Anderson
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UNITED STATES PATENT OFFICE.

JOHN T. ANDERSON, OF CHICAGO, ILLINOIS.

BOW-FACING OAR.

SPECIFICATION forming part of Letters Patent No. 420,925, dated February 11, 1890.

Application filed September 6, 1889. Serial No. 323,152. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. ANDERSON, a citizen of the United States, residing at the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Bow-Facing Oar, of which the following is a specification.

My invention relates to improvements in bow-facing oars for boats; and its object is to provide oars or rowing apparatus by means of which the boat may be propelled through the water by the rower sitting facing in the direction in which the boat is traveling; and its nature consists in the several parts and combinations of parts, hereinafter described and claimed in the claims as new. I attain this object by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 shows the entire machine, seen from the bow or stern of the boat, to which it is attached, showing the handle of the oar complete and a portion of the blade. Fig. 2 shows a side view of the device with a portion of the oar attached either at the beginning or end of the stroke. Fig. 3 shows the apparatus detached from the oar and viewed from above, and Fig. 4 a cross-section of the upper portion of my device with portion of the oar blade and handle attached.

Similar letters refer to similar parts.

The metal socket A is fastened firmly to the gunwale B of the boat by screws or bolts or by other appropriate fastening.

Into the socket A is firmly inserted the upright post C, which I prefer to make of wood, though it may be made of any suitable material. This is fixed in the socket A in any appropriate manner, so that it will not turn therein, either by having its lower end squared and inserted into a square hole in the socket, or otherwise. This upright is made of varying length to suit the size of the boat to which it may be attached, or to suit the individual preference of the rower as to the depth to which he may desire the blade of the oar to reach or the length of the handle he may wish to use. The top of this upright is firmly inserted into the metal bearing-box D, having at its lower portion the socket D', fitted for the reception of the upper end of the upright C. This I prefer

to do by making the socket D' square and by squaring the upper end of the upright C and without other fastening, as by so doing if the oar-blade G strikes a rock or some other fixed obstacle the top portion of the device will be lifted off without breaking the oar.

In the bearing-box D is placed the device shown, consisting of two metal tubes E E, cast with an axle E', having their inner surfaces polished to receive the tubes F F. These tubes E E are preferably cast upon the axle E' in such a way as to incline toward one another at a slight angle. This angle may be varied, however, at choice without changing the nature of the device. The axle E' rests in the bearing-box D and oscillates forward and backward therein toward the bow and stern of the boat and parallel with a line drawn from the bow to the center of the stern.

Into the tubes E E are placed closely-fitting tubes F F, having at their upper ends the mutilated gears F' F'', which mesh one into the other.

In the bottom of one of the outer tubes E is cut a slot Y, extending one-quarter of its circumference, and into the bottom of the tube F is placed the stop-pin Z, working in the slot Y, so as to prevent the tubes F F from making more than a one-quarter turn in the tubes E E. In the drawings this stop-pin and slot are shown upon the oar-blade side of the device, but they may of course be placed upon the other side.

Into the tubes F F are thrust from below the oar-blade G and oar-handle G', which are firmly fixed in the tubes F F. The tubes F F are polished upon their outer surface where it is inside the tubes E E, so as to work easily and smoothly therein. The pin is so arranged and fixed in the slot that when it rests against the shoulder of the slot at one end the oar-blade is at right angles with the course of the boat.

The bow-facing oars thus constructed and placed upon the boat are worked as follows: The oarsman seated facing the bow of the boat and grasping the handles of the oars thrusts them forward, thus moving the oar-blade with them toward the bow of the boat. Seeing that the oar-blade is at right angles

with the course of the boat, he pulls the handles toward him, when the oar-blade also moves with them through the water toward the stern of the boat, urging the boat forward.

5 At the end of the stroke the rower by a movement of the wrists turns the handle of the oar through one-quarter of a turn, being prevented from making a greater turn by the stop-pin and slot. This turn is communi-
10 cated by the mutilated gears F' and F'' to the oar-blade, which is thus "feathered" in the water. The rower then thrusts the handle forward, urging with it the oar-blade thus feathered through the "recover" through the
15 water to the beginning of the new stroke.

I am aware that bow-facing oars working by a system of levers have heretofore been made, and I do not therefore claim bow-facing oars broadly.

20 What I do claim is—

1. In apparatus for bow-facing oars, the oar divided into two parts, the blade and handle, inserted at their respective upper ends into tubes provided with mutilated intermeshing
25 gears at their respective upper ends and working in outer tubes fixed rigidly so as to incline toward one another at an angle on an axle working in a bearing-box, substantially as described, and for the use and purposes set
30 forth.

2. In bow-facing oars, the combination, with the divided oar, consisting of the blade G and handle G', of the tubes F F, into which the
35 upper ends of the blade and handle, respectively, are inserted, and having at their upper ends the mutilated gears F' and F'', the outer tubes E E, in which said tubes F F turn, inclined at an angle with one another and connected rigidly by the axle E', and the bearing-
40 box D, in which said axle E' turns, substantially as described, and for the uses and purposes set forth.

3. In bow-facing oars, the combination, with the divided oar, consisting of blade G and
45 handle G', of the tubes F F, into which the upper ends of the blade and handle, respectively, are inserted, and having at their upper ends the mutilated gears F' F'', the outer tubes E E, in which said tubes F F turn, in-
50 clined at an angle with one another and con-

nected rigidly by the axle E', the bearing-box D, in which the axle E' turns, the socket D', cast or otherwise constructed upon the lower portion of the bearing-box D, and the upright C, which is inserted into the socket D', sub-
55 stantially as described, and for the uses and purposes set forth.

4. In bow-facing oars, the combination, with the divided oar, consisting of blade G and handle G', of the tubes F F, into which the
60 upper ends of the blade and handle, respectively, are inserted, and having at their upper ends the mutilated gears F' and F'', the outer tubes E E, in which the tubes F F turn, inclined at an angle with one another and connected
65 rigidly by the axle E', the bearing-box D, in which the axle E' turns, the socket D', cast or otherwise constructed upon the lower portion of the bearing-box D, the upright C, which is inserted at its upper end into the
70 socket D', and the socket A, into which the lower end of the upright C is inserted and which is fastened to the gunwale B of the boat, substantially as described, and for the uses and purposes set forth.

5. In bow-facing oars, the combination, with the divided oar, consisting of blade G and handle G', of the tubes F F, into which the upper
75 ends of the blade and handle, respectively, are inserted, and having at their upper ends the mutilated gears F' and F'', and provided with the stop-pin Z, working in the slot Y in the outer tube E, the outer tubes E E, in which
80 the tubes F F turn, inclined at an angle with one another and connected rigidly by the axle E', the bearing-box D, in which the axle E' turns, the socket D', cast or otherwise constructed upon the lower portion of the bearing-
85 box D, the upright C, which is inserted at its upper end into the socket D', and the socket A, into which the lower end of the upright C is inserted, and which is fastened to the gunwale B of the boat, substantially as de-
90 scribed, and for the uses and purposes set forth.

JOHN T. ANDERSON.

In presence of—

CHARLES E. PICKARD,
GEORGE F. TALTY.