

(No Model.)

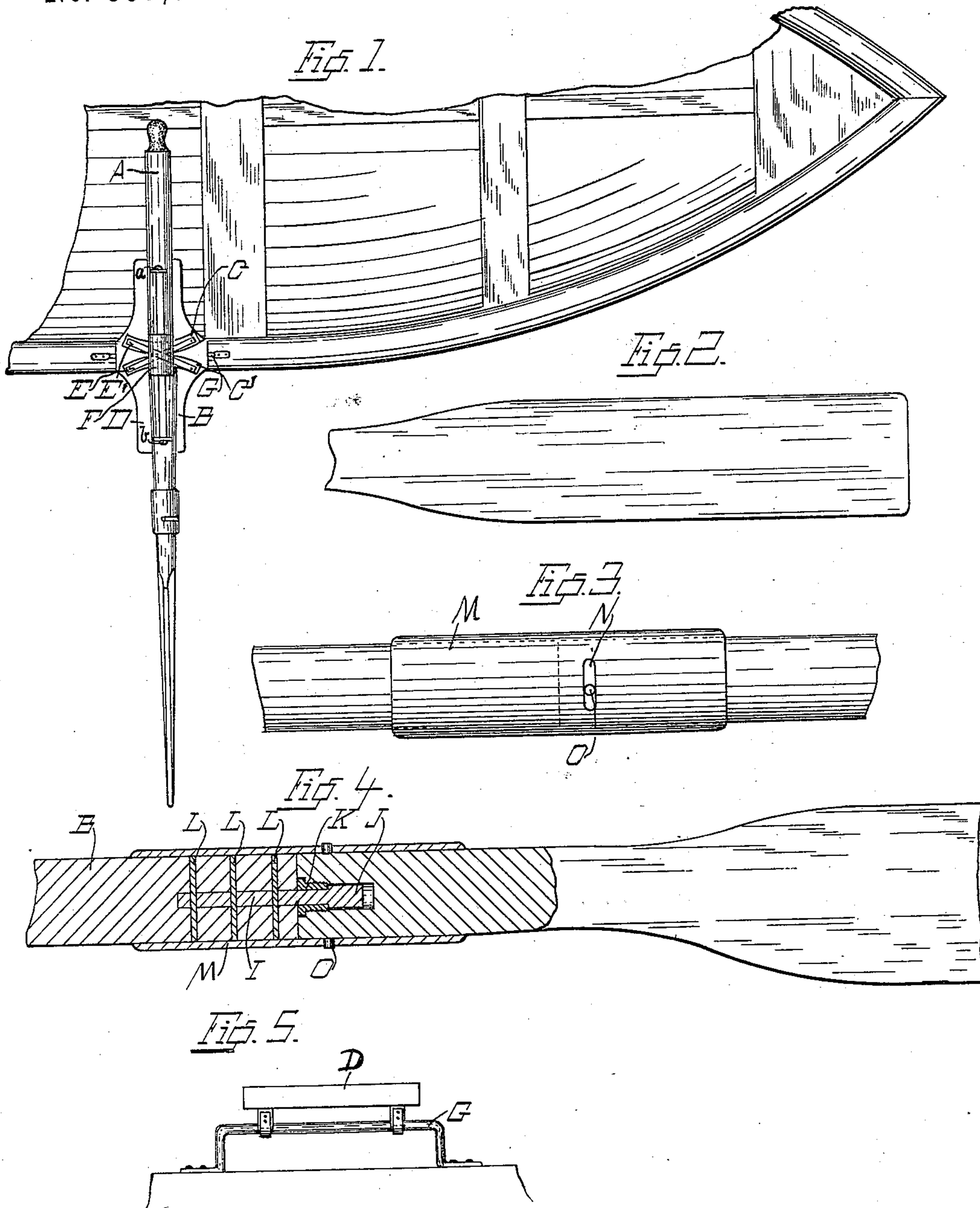
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S. A. TENNEY.

BOW FACING AND SELF FEATHERING OAR.

No. 557,318.

Patented Mar. 31, 1896.



Witnesses:
Ferd. A. Otto.
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Inventor
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Attorneys.

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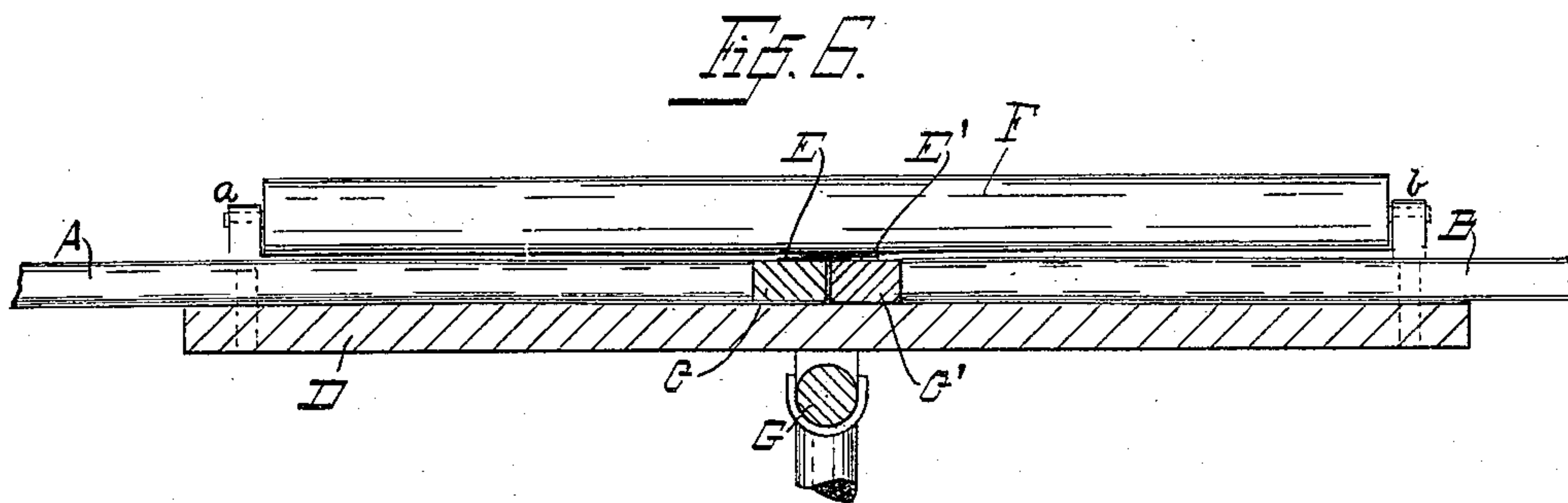
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UNITED STATES PATENT OFFICE.

SAMUEL A. TENNEY, OF HARTLAND, WISCONSIN.

BOW-FACING AND SELF-FEATHERING OAR.

SPECIFICATION forming part of Letters Patent No. 557,318, dated March 31, 1896.

Application filed July 18, 1895. Serial No. 556,351. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL A. TENNEY, a citizen of the United States, residing at Hartland, in the county of Waukesha and State of Wisconsin, have invented new and useful Improvements in Bow-Facing and Self-Feathering Oars, of which the following is a specification.

My invention relates to improvements in combined bow-facing and self-feathering oars. This form of oar has heretofore been objectionable on account of the fact that the construction of the joints has been such as to permit the oar to jerk when its movement is reversed, owing to the play of the interlocking ends; also on account of the difficulty in feathering a jointed oar.

The object of my invention is to provide, first, a form of joint which will not shift or jerk, and, second, to provide means for automatically feathering the oar with its reverse movement.

In the drawings, Figure 1 is a plan view of a portion of a boat, showing my invention in place. Fig. 2 is a side view of the oar-blade. Fig. 3 is a view of the feathering-joint, showing the bolt-engaging slot for limiting the rotary movement of the oar-blade. Fig. 4 is a sectional view of the joint drawn on the plane of the blade during the stroke. Fig. 5 is a side view showing the supporting-rod of the tilting plate. Fig. 6 is a side view of the meeting ends of the oppositely-moving oar-sections and the roller for holding them in place, with the tilting plate and segments shown in section. The roller is enlarged proportionately in order to clearly show its position and construction.

Reference-letters are used consistently through the several views.

The oppositely-moving oar-sections A and B are provided with segments C and C', respectively, at their adjacent ends, the oar-sections being attached to the segments at the center of their inner or concave side. The outer or convex sides are arranged in close contact and perform the partial rotation upon each other with the movement of the oar-sections. The two sections are pivotally secured at *a* and *b*, respectively, to the tilting plate D by vertical pivot-bolts passing through the center of the oars, and the diagonally oppo-

site ends of the segments C and C' are connected by the straps E and E', the latter being held to the tilting plate by the roller F, supported from the projecting ends of the pivot-bolts at *a* and *b* in an obvious manner. It is evident that the movement of the inner or hand-actuated section A in either direction will be communicated to the outer or blade-holding section B in the opposite direction through the straps E and E', the motion being kept perfectly regular with the contact of the segments. The tilting plate D is balanced over the raised supporting-rod G, the latter being attached to the gunwale of the boat. If desired, the plate may be secured in position on the rod by the strap G or any other suitable device, either removable or permanent.

For automatically feathering the oars I have provided an eccentric oar-blade, that portion below the longitudinal center of the oar being widest and adapted by its increased bearing in the water to tend to rotate the blade into a horizontal position. In order to permit the oar to thus feather with its return movement, I have provided a joint in the blade-stem and have so arranged the parts that the oar-blade is permitted to make the necessary quarter-turn with its reverse movement, but is held in its vertical position during the stroke. The construction of this joint is best shown in section in Fig. 4. I is a joint-pin provided with an elongated head J, adapted to be inserted in a socket in the blade-stem and held therein by the nut K. The projecting end is then inserted in a socket in the section B of the oar and held therein by the rivets L. A sleeve M, attached to the section B, is adapted to project over the blade-stem to relieve the strain upon the pin, and this projecting end of the sleeve is provided with a slot N on each side, extending one-quarter around the same. The oar-blade is then turned to its upright position and a bolt O is inserted through one end of the slot into the oar-stem in such manner as to permit the stem to rotate and feather the oar only during the forward movement.

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

1. A bow-facing and self-feathering oar, consisting of the combination with the tilting

plate, and the raised support therefor, of the oppositely-moving oar-sections pivoted thereto, and provided with the segments at their meeting ends, the straps connecting the diagonally-opposite ends of the segments, and the roller adapted to hold said segments in close proximity to the tilting plate, together with the eccentric oar-blade, adapted to automatically rotate, partially, upon the outer pivoted oar-section, upon its return movement, substantially as described.

2. In a bow-facing and self-feathering oar, the mechanism for automatically feathering the same, consisting of the combination of the

eccentric oar-blade, attached to the pivoted oar-section by a joint having the locking-pin I, nut K, and rivets L adapted to hold the sections rotatably together and the sleeve M provided with one or more slots N, and the bolt O adapted to limit the rotation of the oar-blade, substantially as described.

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

SAMUEL A. TENNEY.

Witnesses:

G. H. FRISBIE,
H. OVERBAUGH.