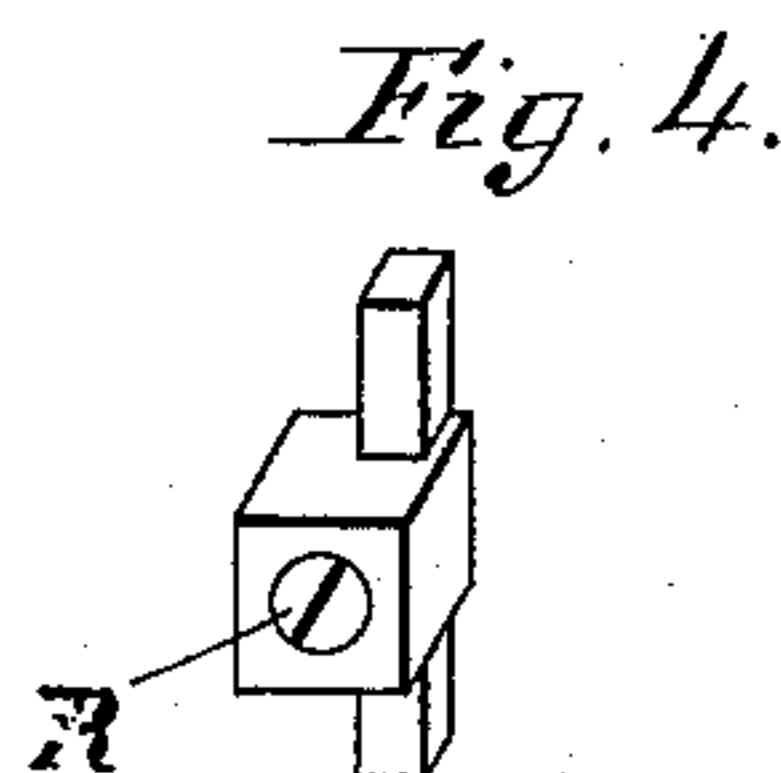
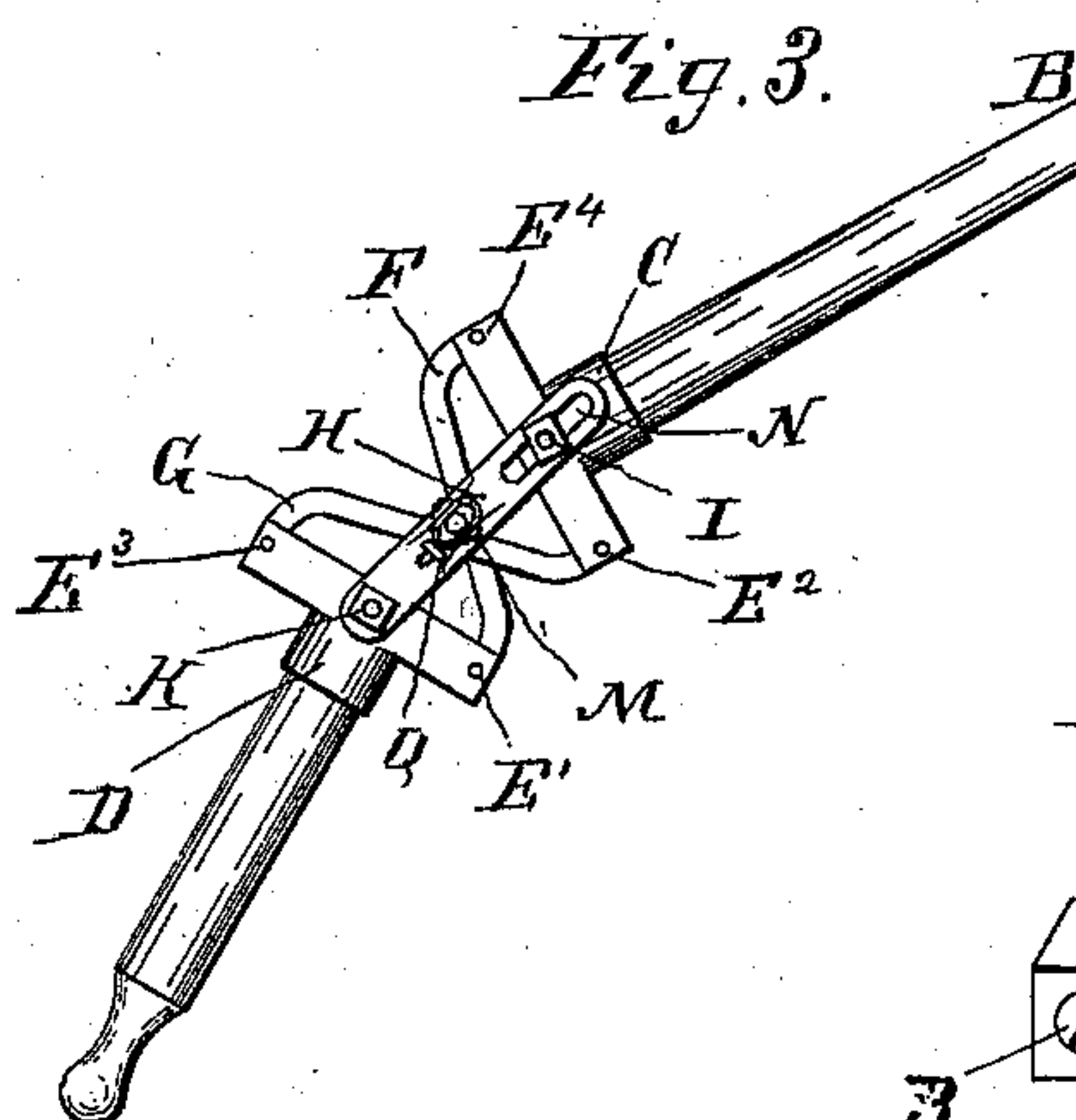
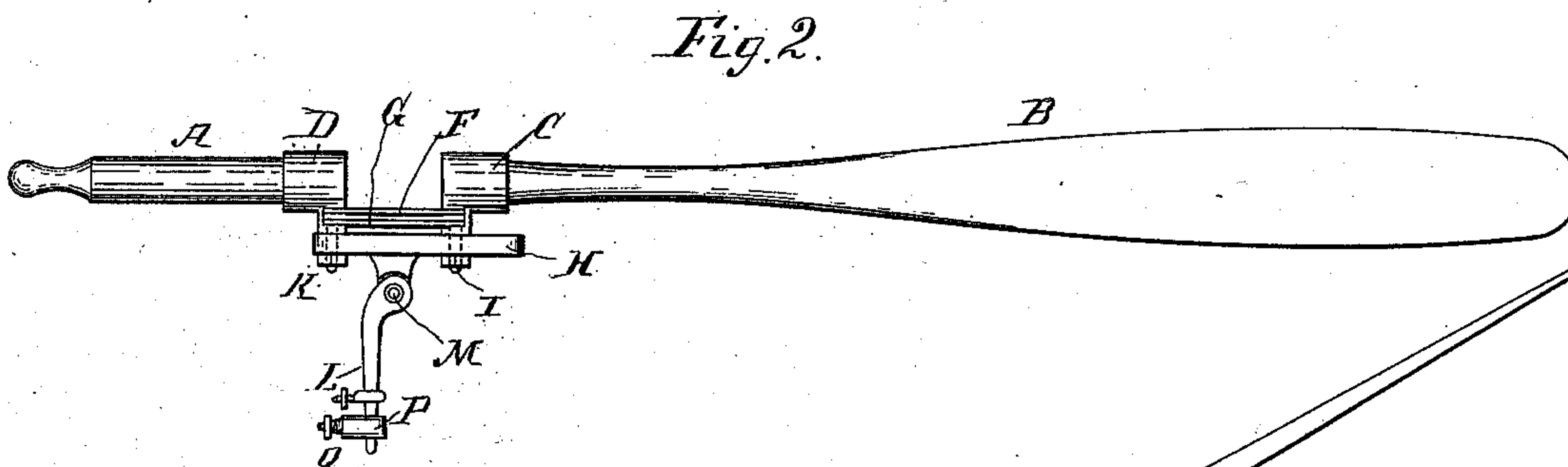
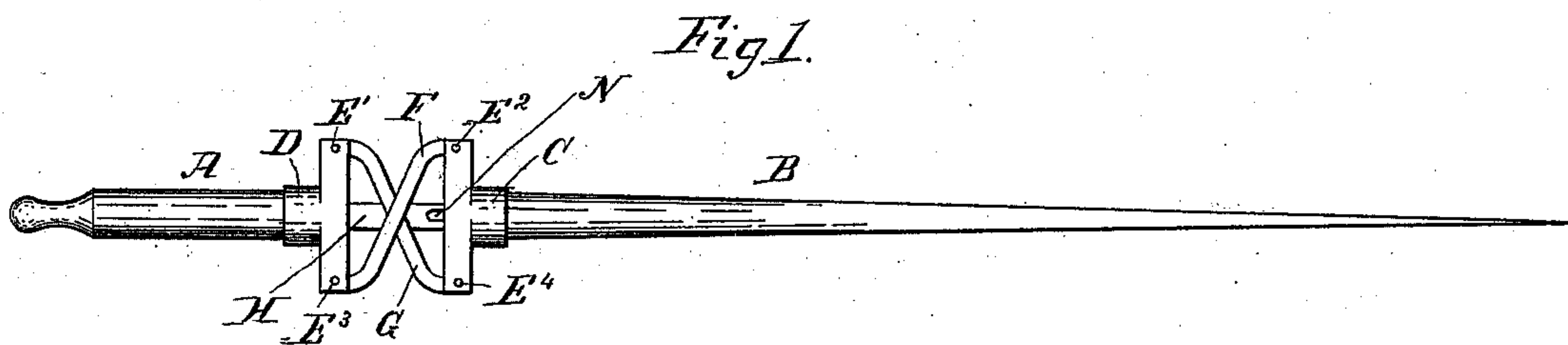


(No Model.)

S. R. SWEET.  
BOW FACING OAR.

No. 402,114.

Patented Apr. 23, 1889.



## Witnesses

C. J. Bell

Charles J. Stockman

Inventor

Stephen R. Sweet.

By his

Attorney

C. J. Campbell.

# UNITED STATES PATENT OFFICE.

STEPHEN R. SWEET, OF LIMA, OHIO, ASSIGNOR OF TWO-THIRDS TO WILLIAM ACKERMAN, OF SAME PLACE.

## BOW-FACING OAR.

SPECIFICATION forming part of Letters Patent No. 402,114, dated April 23, 1889.

Application filed April 24, 1888. Serial No. 271,753. (No model.)

*To all whom it may concern:*

Be it known that I, STEPHEN R. SWEET, a citizen of the United States, and a resident of Lima, in the county of Allen and State of Ohio, have invented a new and useful Bow-Facing Oar, of which the following is a specification.

My invention relates to an improvement in bow-facing oars.

Figure 1 is a top view. Fig. 2 is a side view. Fig. 3 is a bottom view, with the handle drawn around at the end of a short stroke; Fig. 4, end view of oar or blade socket.

A is the handle; B, the blade; C D, blade and handle-sockets; E' E<sup>2</sup> E<sup>3</sup> E<sup>4</sup>, pivots; F G, pivoted connecting-levers; H, connecting-slide; I K, pivots of the slide; L, fastening or drop for securing oar in slot or staple in the side of the boat; M, pivot by which the drop-piece is secured to a lug on slide H; N, slot in the slide H, in which the bolt I fits; P, staple or pocket screwed fast to the boat, in which the drop L fits; Q, bolt for securing staples to side of boat; R, screw passing through sockets C D into the blade and handle for taking up any looseness.

The operation and construction of my device are as follows:

I take an ordinary boat-oar, saw it in two, and fit the sawed ends each into the sockets C D. These sockets D are connected by the straps or levers F G, pivoted at the corners E' E<sup>2</sup> E<sup>3</sup> E<sup>4</sup>, and are also connected on the bottom by the strap H, having a slot, N, in one end. This strap H is pivoted at one end to the socket D, and the slot slides on the pivot I at the other. To a lug on the bottom of strap H is pivoted a drop-piece, L, which drops into a pocket or staple, P, bolted to the side of the boat.

In operation the oarsman drops the pieces L into a pocket or square staple bolted fast to the side of the boat, when the oar is in position for operation. The oarsman then, facing the bow of the boat, with the oar in front

of him, with the side of the oar having pivot E<sup>3</sup> next to him, operates the handle A in the usual manner. As the handle of the oar is drawn toward him and toward the rear of the boat the lever G pushes on the pivot E<sup>2</sup>, and the lever F pulls upon the pivot E<sup>4</sup>, and the blade of the oar moves in the same direction as the handle does, the two parts assuming the positions shown in Fig. 3, the pivot I on the bottom of socket C sliding in the slot N. On the return movement as the handle is pushed toward the bow the lever F pushes upon the pivot E<sup>4</sup>, and the lever G pulls upon the pivot E<sup>2</sup>, giving the blade the same movement as the handle again. The connecting piece H is pivoted to the stationary piece L in the boat at M, so that the oar can be dipped to any angle desired or raised out of the water at will. Should the oarsman get aground or in other position where he would wish to push off, he can raise his oar out of the staples P and use it to push with, and return it at will to its place again.

What I claim is—

1. The combination, with an oar made in two parts, of sockets for the reception of the inner ends of said parts, bars rigidly attached to said sockets at right angles to the oar, bent levers pivotally connecting the diagonal ends of said bars, and a pivotal shank connected to said sockets, substantially as described.

2. The combination of two sockets, an oar-handle in one socket, an oar-blade in the other socket, and a cross-bar rigidly attached to each socket, with bent levers pivotally connecting the diagonally-opposite ends of said cross-bars, and a slotted bar connected to said sockets and bearing, the shank or pin pivotally connected thereto, substantially as described.

STEPHEN R. SWEET.

Witnesses:

J. M. CAMPBELL,  
FRANK E. MEAD.