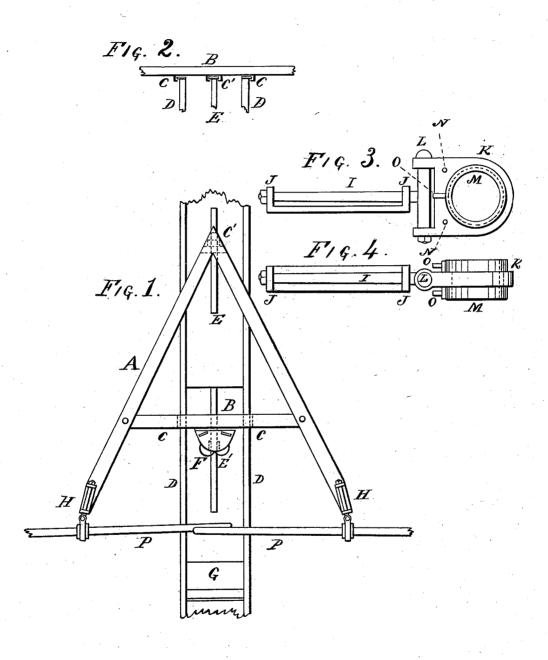
(No'Model.)

## E. A. BENNETT. Rowing Gear for Racing Boats.

No. 230,690.

Patented Aug. 3, 1880.



WITNESSES: William R. Brooks. Walter S. Rost. Eugene A Bennett. INVENTOR.

## United States Patent Office.

EUGENE A. BENNETT, OF PHELPS, NEW YORK.

## ROWING-GEAR FOR RACING-BOATS.

SPECIFICATION forming part of Letters Patent No. 230,690, dated August 3, 1880.

Application filed May 11, 1880. (No model.)

To all whom it may concern:

Be it known that I, EUGENE A. BENNETT, of the town of Phelps, county of Ontario, and State of New York, have invented a new and useful Improvement in the Rowing-Gear of Racing-Boats, of which the following is a specification.

In the usual construction of rowing-boats for racing purposes, in which the outrigger is stationary, in order to secure the greatest possible sweep of the oar the seat is made to slide backward and forward with the oarsman.

My invention consists, mainly, of a sliding 15 outrigger of novel construction, and represented in the drawings accompanying this specification.

Figure 1 represents a plan or top view; Fig. 2, a partial end view, showing the guides upon which the outrigger slides; Figs. 3 and 4, detailed views of the oar-locks.

The same letters of reference refer to the

same parts in all the views.

A, Fig. 1, represents a triangular frame baving a cross-piece at B. On the under side of this cross-piece are guides C C, sliding upon corresponding ways on the gunwales of the boat D D. At the forward end of the triangle is another guide, C', sliding upon a corresponding way, E, in the center of the boat. To the cross-piece B is fastened the footboard F, at a suitable angle, with convenient places for the heels and straps for the toes. A guide, E', similar to those mentioned above, is placed under the foot-board, with a way in the center and bottom of the boat.

G shows the seat upon which the oarsman sits. At the forward ends of the frame are placed the oar-locks HH. (Shown more in detail by Figs. 3 and 4.) They consist of a double swivel, the horizontal bolt I, working in the lugs JJ, the head K, working on the perpendicular bolt L. In the head K is a rotating sleeve, M, having a flange on both sides. This sleeve M is fastened to the oar, and twists or rotates with the oar in feathering the same. N N are pins projecting on both sides of the head K. O is another pin projecting from the sleeve M, which, so striking alternately the pins N N, permits the sleeve, and consequently the oar, to be turned only through one-quarter of a revolution, as is required in feathering the oar. PP show the oars broken off at their outer ends.

The operation of my invention is as follows: 55 The oarsman, sitting upon the seat G, places his feet upon the foot-board F, his toes in the straps. To make ready for a stroke he grasps the oars in his hands in the usual manner, draws the entire outrigger toward him 60 by drawing up his legs and feet, at the same time extending his hands and body in front and feathering the oar. To make the stroke the oars are entered in the water, the body thrown backward, the feet and legs ex- 65 tended, pushing the whole outrigger from him. A good-sized oarsman will thus move the whole outrigger backward and forward about eighteen inches, which gives just that much more effective stroke over and above 70 the fullest circular sweep of the oar upon its fulcrum, the oar-lock.

It will be seen that this is of great advantage and very effective, because parallel with the sides of the boat, and consequently with 75 the course, and is so much additional stroke to the circular sweep, which latter is as great in this as in the old form.

The friction is also reduced, being much less to move the outrigger than the seat with 80 the weight of the oarsman upon it.

A further advantage is the avoidance, in a great degree, of the pitching of the boat, as is the case when the body of the oarsman is drawn backward and forward with the seat.

I am aware that sliding oar-locks and sliding outriggers have been used before. This therefore, broadly, I do not claim as new.

The form and manner, however, in which I construct my sliding outrigger, by the trian-90 gular frame and its connections, possess the novelty and advantages over others in being stronger and better braced, lighter, and less likely to bind upon its ways, consequently moving with greater ease and free-95 dom.

What I therefore claim as my improvement in sliding outriggers, and desire to secure by Letters Patent, is—

The triangular frame AB, in combination 100 with the oar-locks HH, foot-board F, guides CC and C', and ways DD, E, and E', substantially as herein set forth and described.

EUGENE A. BENNETT.

Witnesses:

WALTER S. ROOT, WILLIAM R. BROOKS.