No. 739,302. PATENTED SEPT. 22, 1903.

J. P. FRETWELL & J. T. BROWN.

BOW FACING OAR.

APPLICATION FILED APR. 24, 1903.

NO MODEL.

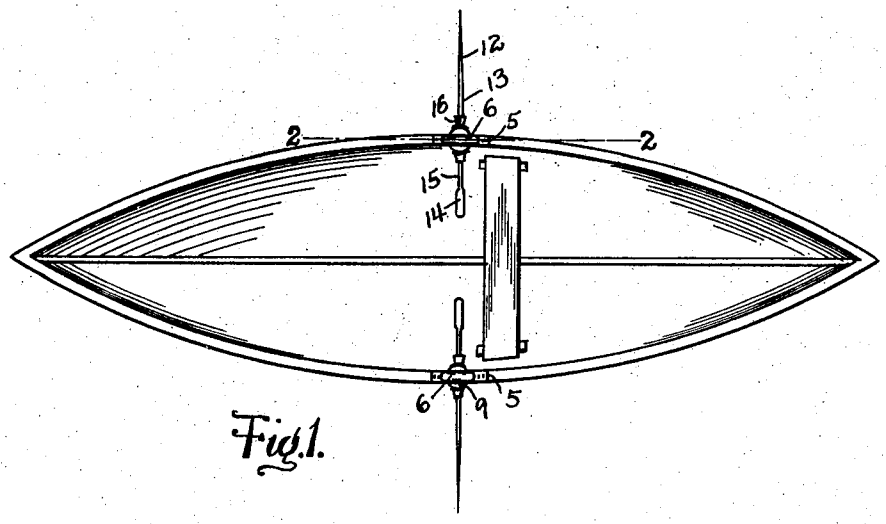

Fig. 1.

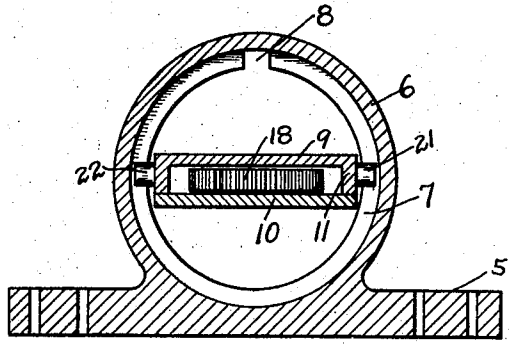

Fig. 2.

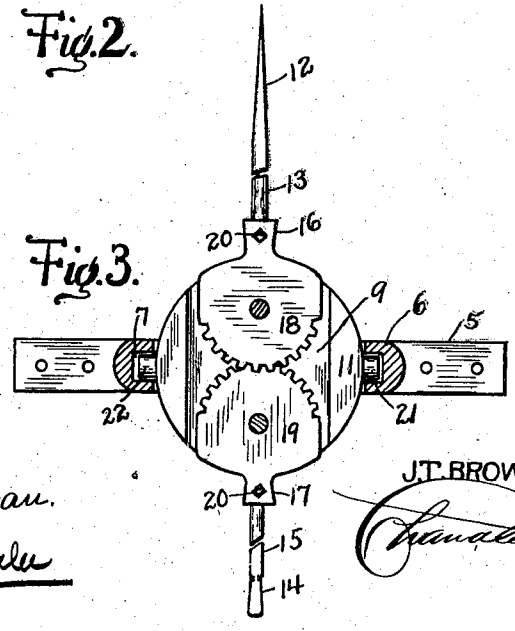

Fig. 3.

Witnesses
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No. 739,302. Patented September 22, 1903.

UNITED STATES PATENT OFFICE.

JOSEPH P. FRETWELL AND JAMES T. BROWN, OF PANASOFFKEE, FLORIDA.

BOW-FACING OAR.

SPECIFICATION forming part of Letters Patent No. 739,302, dated September 22, 1903.

Application filed April 24, 1903. Serial No. 154,190. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH P. FRETWELL and JAMES T. BROWN, citizens of the United States, residing at Panasoffkee, in the county of Sumter, State of Florida, have invented certain new and useful Improvements in Bow-Facing Oars; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to bow-facing oars; and it has for its object to provide a construction wherein the oars may be operated to propel a boat in the direction that the operator is facing and which, furthermore, may be manipulated to cause the blades of the oars to engage the water at any desired angle.

An additional object of the invention is to provide a construction wherein the carrier to which the oar-sections are pivoted will be held securely against accidental displacement while in action, while it may be readily removed when desired.

In the drawings forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a top plan view of the complete structure. Fig. 2 is a vertical section on line 2 2 of Fig. 1. Fig. 3 is a horizontal section, including the trunnions of the carrier.

Referring now to the drawings, the present construction includes what may be called the "lock," which comprises an angle-plate 5, which in practice is bolted to the gunwale of the boat and from which rises the annular guide 6, which is grooved continuously of its inner face, as shown at 7, there being an opening 8 through one wall of the groove at the uppermost side of the guide for a purpose which will be presently explained. In connection with the annular guide is employed a carrier comprising disks 9 and 10, of which the former has depending flanges 11 at diametrically opposite points and against which is bolted the disk 10, so that said disks are held in spaced relation and the carrier is hollow.

The oar proper comprises a blade 12, having a stem 13, and a handle 14, having a stem 15, the outer ends of these stems being engaged in the sockets 16 and 17, respectively, of the segmental gears 18 and 19, which are pivoted centrally between the disks 9 and 10 at diametrically opposite points thereof. The socket-pieces of the segmental stems project from between the disks to permit of ready application and removal of the handle and blade and to permit of manipulation of the retaining set-screw 20.

From the flanges 11 project trunnions 21 and 22, which lie in the groove or channel 7 in the inner face of the guide 6 and which travel through the groove or channel when the carrier is rotated in the plane of the guide and which permit of rocking of the carrier at whatever point in the channel said trunnions may be. The opening 8 in the side wall of the channel permits of application and removal of the carrier, it being understood that when the carrier is applied to the guide one of the trunnions is engaged with the channel at the lowermost portion thereof, and the other trunnion is then passed laterally through the opening 8 into the channel, after which the carrier may be moved to horizontal position or to lie in any other desired plane.

With this construction it will be seen that the oarsman may face the bow of the boat while operating the oars and that when he pulls upon the handles of the oars the blades will travel in the direction of the stern of the boat by reason of the mutual engagement of the segmental gears 18 and 19, while vertical movement of the handles of the oars will give to the blades the same corresponding movements as is the case with the ordinary single-piece oar.

It will be understood that in practice modifications of the specific construction shown may be made and that any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

In a bow-facing oar, the combination with an annular vertical guide having a continuous channel in its inner face and an opening through one side of the channel at the uppermost point thereof, of a carrier comprising disks, one of which has depending flanges against which the other disk is secured and by which the disks are held in spaced relation, trunnions carried by the flanges and rotatably and slidably engaged with the chan-

nel, said trunnions being movable through the opening in the side of the channel, intermeshing segmental gears pivoted between the disks at diametrically opposite points and having socket-pieces projecting from the carrier in opposite directions, a handle removably engaged in one of the socket-pieces, a blade having a stem removably engaged in the other socket-piece and set-screws engaged with the socket-pieces for holding the handle and blade-stem therein.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSEPH P. FRETWELL.
JAMES T. BROWN.

Witnesses:
GOREE NELSON,
F. L. RUTLAND.