

T. H. BROSNIHAN.
BOW FACING OAR.

No. 604,601.

Patented May 24, 1898.

FIG. 1.

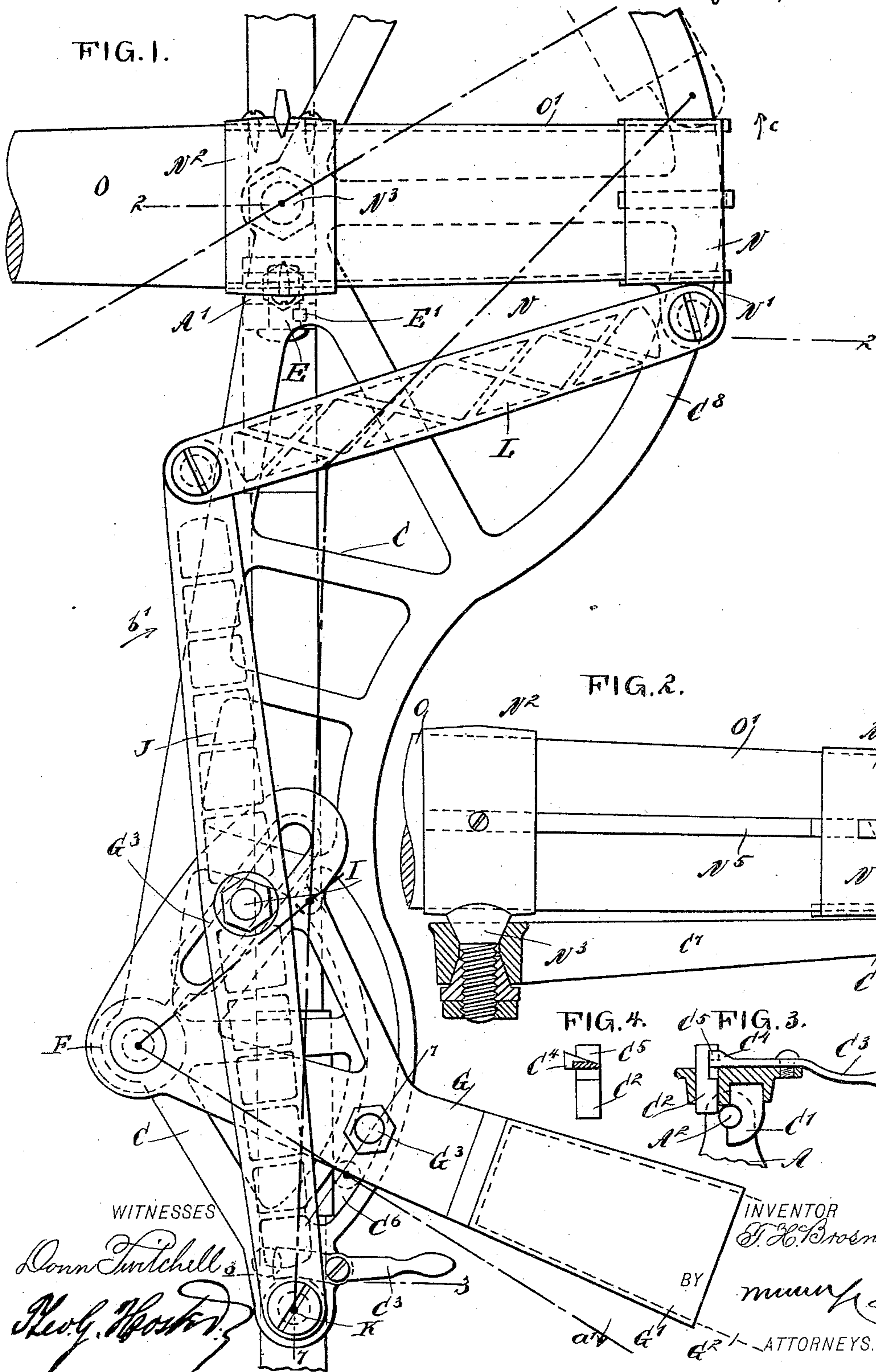


FIG. 2.

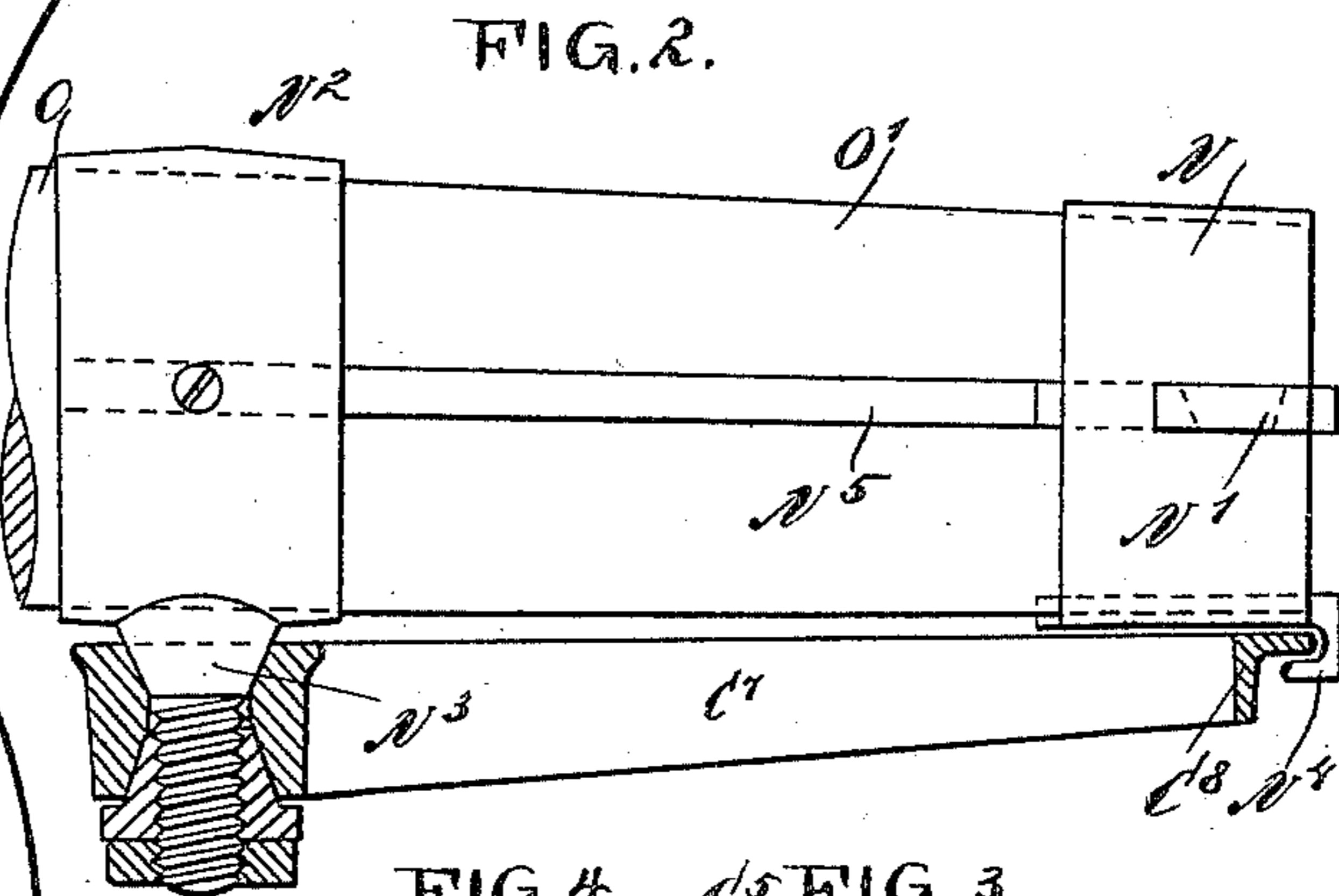


FIG. 4.

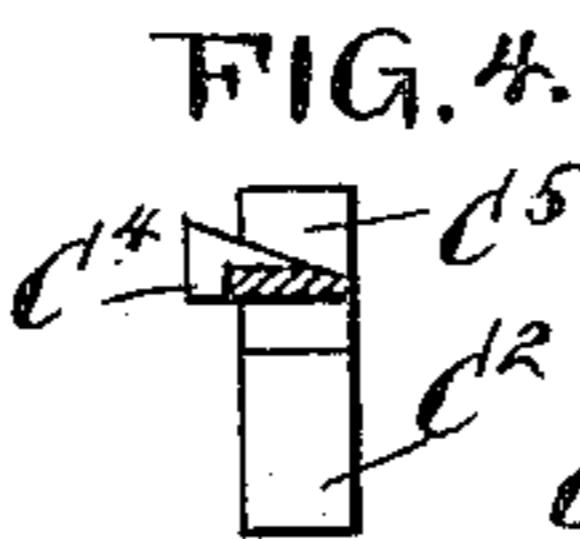
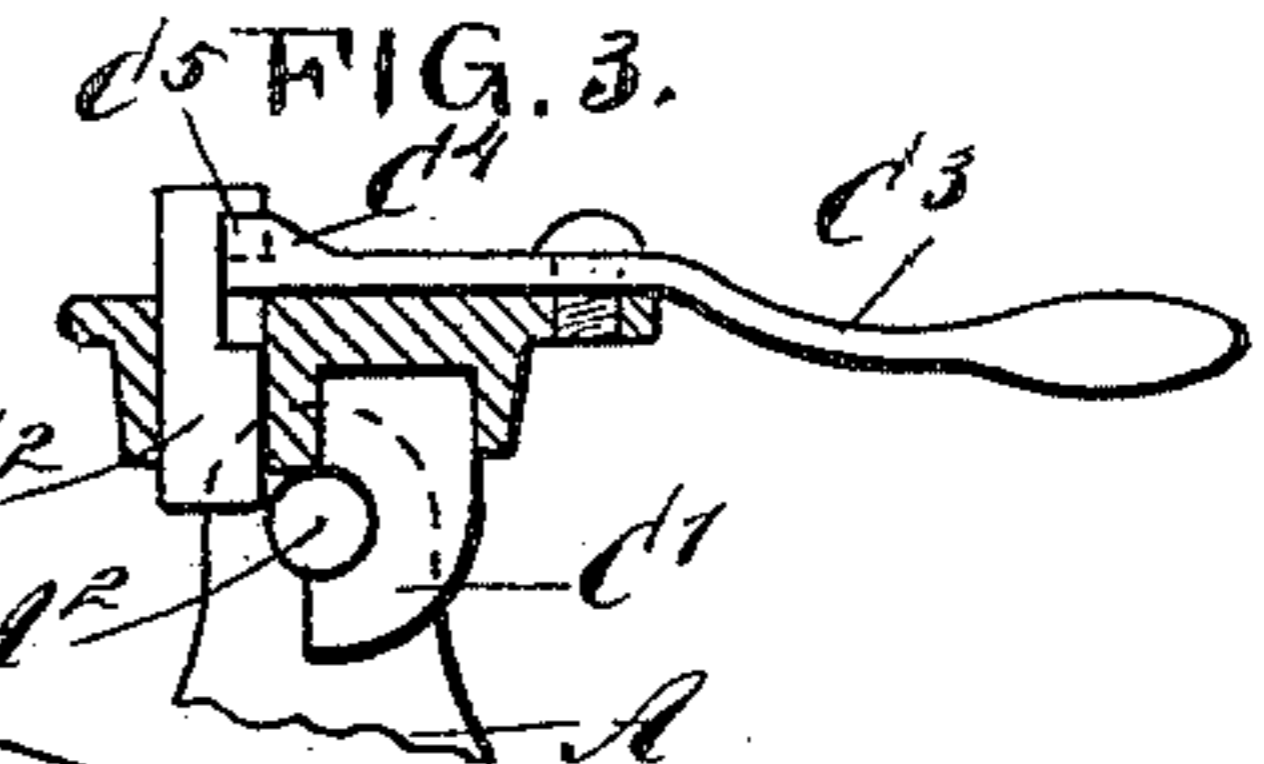


FIG. 3.



WITNESSES

Donn Twitchell
Geo. H. H. H.

INVENTOR

T. H. Brosnihan

BY

M. H. H.

ATTORNEYS.

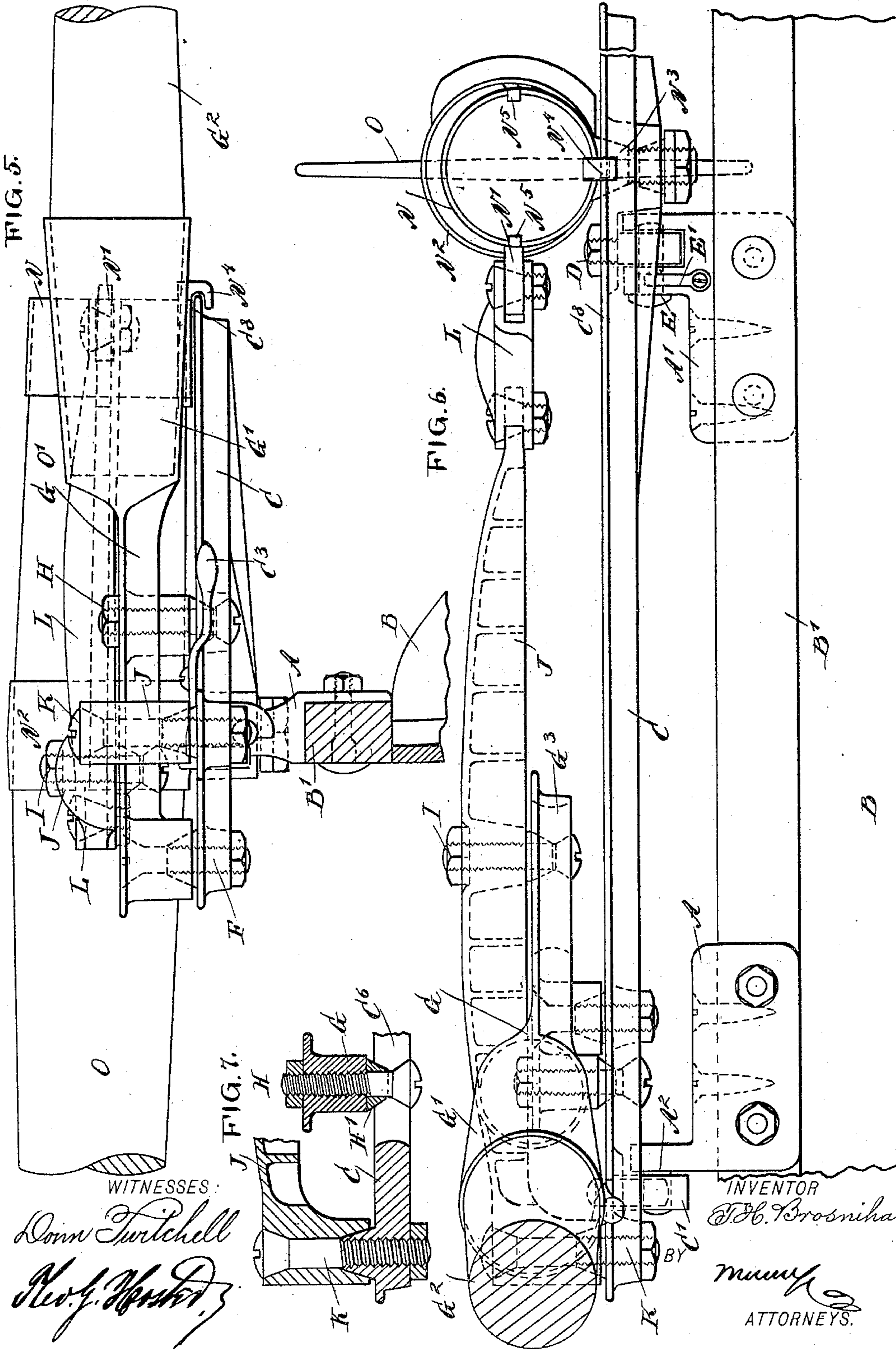
(No Model.)

2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

THOMAS H. BROSNIHAN, OF LIVERMORE FALLS, MAINE, ASSIGNOR TO FRANK A. MILLETT AND THOMAS H. BROSNIHAN, OF SAME PLACE.

BOW-FACING OAR.

SPECIFICATION forming part of Letters Patent No. 604,601, dated May 24, 1898.

Application filed September 14, 1897. Serial No. 651,644. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. BROSNIHAN, of Livermore Falls, in the county of Androscoggin and State of Maine, have invented certain new and useful Improvements in Bow-Facing Oars, of which the following is a full, clear, and exact description.

The object of the invention is to provide certain new and useful improvements in bow-facing oars whereby the operator can conveniently and forcibly manipulate the oars to insure a proper and easy propulsion of a boat without requiring much exertion on the part of the operator.

The invention consists principally of a rock-frame, an oar-holder pivoted on the said frame, a handle pivoted on the frame, and a connection of special construction between the handle and the oar-holder to impart a swinging motion to the same.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement. Fig. 2 is a cross-section of the rock-frame with the oar-holder in position, the section being on the line 2 2 of Fig. 1. Fig. 3 is a transverse section of the locking device for one end of the rock-frame, the section being on the line 3 3 of Fig. 1. Fig. 4 is a side elevation of the same with the lever end in section. Fig. 5 is an end elevation of the improvement. Fig. 6 is a side elevation of the same, and Fig. 7 is a sectional side elevation of part of the same on the line 7 7 of Fig. 1.

The improved device is mounted on brackets A A', placed a suitable distance apart and secured to the gunwale B' of a boat B, as is plainly illustrated in Fig. 6. On the bracket A is secured a pivot-pin A² for engagement with a half-bearing C', projecting from the under side of a rock-frame C, carrying an eyebolt D, engaging a pivot-pin E, removably held in the other bracket A', the two pivot-pins A² and E extending in alinement with

each other to permit the frame C to rock transversely. The pivot-pin E is normally locked in place by a spring-pressed pin E', held on the bracket A', but can be removed upon withdrawing the spring-pressed pin whenever it is desired to remove the device from the brackets and boat.

The half-bearing C' is held in position on the pivot-pin A² by a pin C², (see Figs. 3 and 4,) fitted to slide vertically in the frame C and engaged by the beveled end C⁴ of a lever C³, fulcrumed on the said frame C and under the control of the operator. Now by moving the lever C³ to one side the beveled end C⁴, engaging the corresponding shoulder C⁵ on the pin C², lifts the latter to disengage the half-bearing from the pin A² to permit of swinging the frame C inward on the eyebolt D whenever it is desired to quickly move the oar out of the path of an obstruction in a river or the like and also to permit of conveniently removing the rock-frame from the brackets A A' when the bolt D is withdrawn, as previously mentioned.

On the rock-frame C, near the bracket A, is held a vertically-adjustable pivot F, on which is fulcrumed a handle G, provided with the usual socket G' for receiving a handle-stick G², adapted to be taken hold of by the operator in the boat and pushed forward and backward for actuating the oar-blade, as hereinafter more fully described.

On the handle G is secured a guide-bolt H, carrying a friction-roller H', engaging a segmental slot C⁶, formed on the rock-frame C, so that a proper guiding is obtained for the handle G during the forward and backward motion given to the handle by the operator.

In the handle G is arranged an angular slot G³, radiating from the pivot F and engaged by a bolt I, carried at or near the middle of a lever J, fulcrumed on a pivot K, secured to one end of the frame C near the bracket A, as is plainly shown in the drawings. The lever J is pivotally connected by a link L with a lug N', projecting from one side of a ferrule N, attached to the inner end O' of the oar-plate shaft, the said shaft being provided with a second ferrule N², placed a suitable distance outward from the ferrule N, to sup-

port a pivot N³, engaging a bearing C⁷ on the rock-frame C near the other bracket A'. The pivots N³, E, A², and K are in alinement with each other directly above the gunwale of the boat, as will be readily understood by reference to Fig. 1.

By the arrangement described the oar-holder, consisting of the ferrules N N² and pivot N³, is free to swing over the frame C, and is guided in such movement by a keeper N⁴, engaging a segmental bearing C⁸, formed on the inner side of the rock-frame C. (See Figs. 1 and 2.)

The ferrules N N² are preferably connected with each other by suitable bars or strengthening-ribs N⁵, set into the wood of the end O' of the oar-shaft, as indicated in the drawings.

Now it will be seen that when the several parts are in the position illustrated in Fig. 1 and the operator pulls the handle-stick G toward him then the swinging motion of the handle causes an inward swinging of the lever J in the direction of the arrow b', and this movement of the lever is transmitted by the link L to the inner ferrule N, so that the oar-holder is caused to swing in the direction of the arrow c—that is, the oar-blade is moved through the water to propel the boat forward.

In order to move the blade of the oar out of engagement with the water on the return stroke, the operator presses slightly downward on the inner end of the handle-stick G² to impart a swinging motion to the frame C and the parts carried thereby, so that the oar-shaft, with the oar-blade, is swung upward to move the oar-blade out of the water. The return stroke is then made, so that the parts are brought back to the position shown in Fig. 1, after which the inner end of the handle-stick is lifted upward to again insert the oar-blade into the water, after which the above-described operation is then repeated by giving another pull on the handle-stick in the direction of the arrow a'.

Now it will be seen that by the special construction described a comparatively long stroke is given to the handle and but little movement is given to the lever J and link L to insure a full and powerful swinging of the oar proper to propel the boat through the water with comparatively little exertion on the part of the operator.

Having thus fully described my invention,

I claim as new and desire to secure by Letters Patent—

1. A bow-facing oar, comprising a rock-frame, an oar-holder pivoted on the said frame, a handle pivoted on the frame a distance from the oar-holder, and a connection between the said handle and oar-holder, to impart a swinging motion to the oar-holder, the said connection comprising a lever fulcrumed on the rock-frame, and engaged by the said handle, and a link for connecting the free end of the lever with the said oar-holder, substantially as shown and described.

2. A bow-facing oar, comprising a rock-frame, an oar-holder mounted to swing on the said rock-frame, a link pivotally connected with the inner end of the said oar-holder, a lever fulcrumed on the said rock-frame, and connected at its free end with the said link, and a handle fulcrumed on the rock-frame, and provided with an angular slot engaged by a bolt carried by the said lever at or near the middle thereof, substantially as shown and described.

3. A bow-facing oar, comprising a rock-frame, an oar-holder mounted to swing on the said rock-frame, a link pivotally connected with the inner end of the said oar-holder, a lever fulcrumed on the said rock-frame, and connected at its free end with the said link, a handle fulcrumed on the rock-frame, and provided with an angular slot engaged by a bolt carried by the said lever at or near the middle thereof, and a bolt carried by the said handle, to engage a segmental guideway on the said frame, substantially as shown and described.

4. A bow-facing oar, provided with a rock-frame, brackets on which the rock-frame is mounted to swing, one of the brackets carrying for this purpose a fixed pivot-pin engaging a bearing on the rock-frame, and the other bracket carrying a removable pivot-pin engaging an eyebolt on the rock-frame, the bearing on the said rock-frame comprising a half-bearing or pin fitted to slide vertically, and a lever fulcrumed on the frame, for lifting the said pin, as set forth.

THOMAS H. BROSNIHAN.

Witnesses:

J. H. MAXWELL,
W. A. FRENCH.