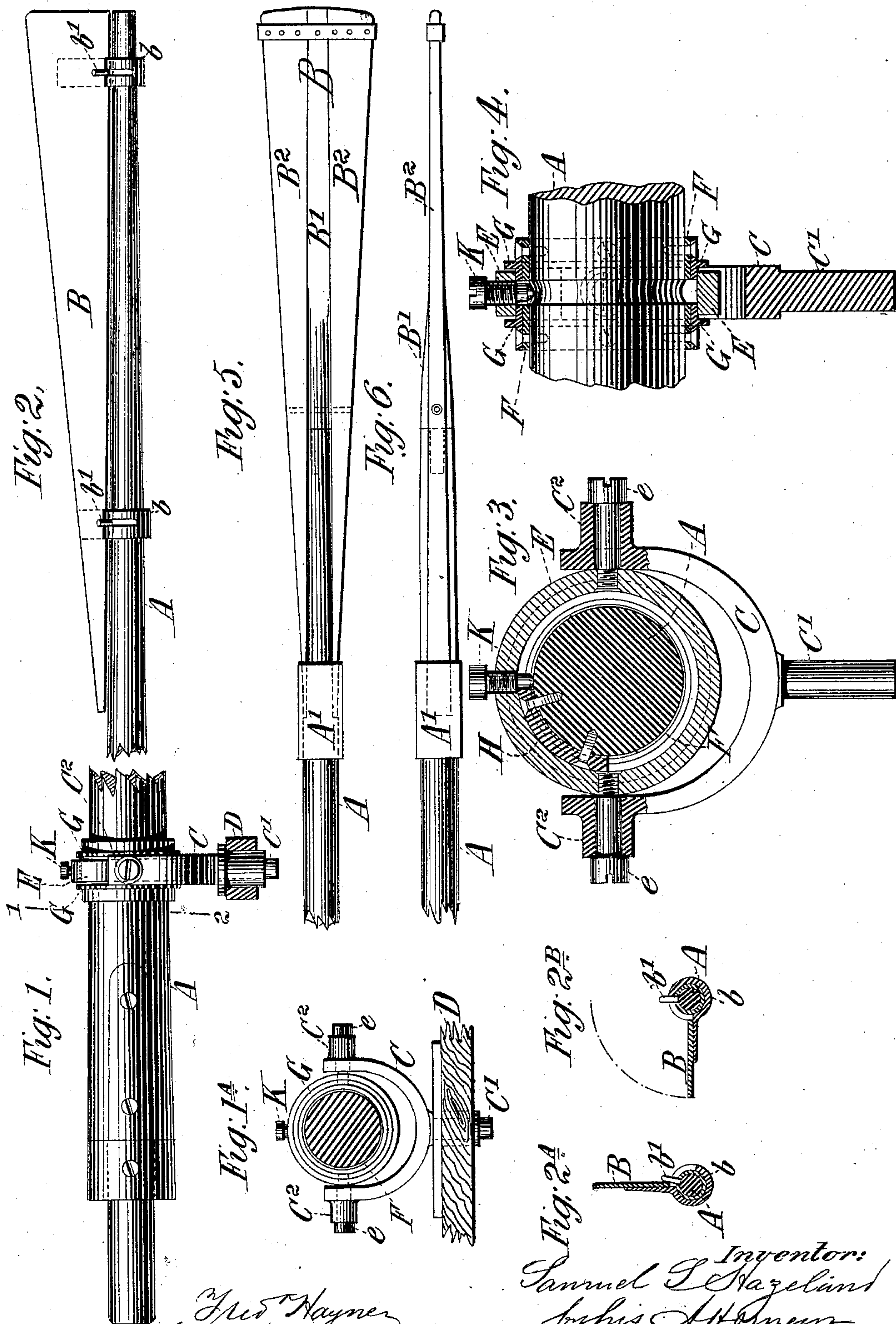


(No Model.)

S. S. HAZELAND.
 OAR AND OAR LOCK.

No. 281,873.

Patented July 24, 1883.



Witnesses: { Geo. Hayner
Ed. L. Moran

Inventor:
Samuel S. Hazeland
by his Attorneys
Brown & Brown

UNITED STATES PATENT OFFICE.

SAMUEL SEARLE HAZELAND, OF PARISH OF ST. SAMPSON'S, COUNTY OF CORNWALL, ENGLAND.

OAR AND OAR-LOCK.

SPECIFICATION forming part of Letters Patent No. 281,873, dated July 24, 1883.

Application filed October 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL SEARLE HAZELAND, of the parish of St. Sampson's, in the county of Cornwall, England, experimental
5 machinist, have invented a new and useful Improvement in Oars and Rowlocks, of which the following is a specification, reference being had to the accompanying drawings.

This invention consists in an improvement
10 in oars and rowlocks, hereinafter described and claimed, whereby great command of the oar is afforded to the rower.

In the accompanying drawings I have shown my improved oar and the means for mounting
15 it in the gunwale of a boat.

Figures 1 and 2 show, respectively, the inner and outer ends of the complete oar mounted in the gunwale in the rowing position. Fig. 1^a is a section taken on the line 1 2 of Fig. 1.
20 Figs. 2^a and 2^b are sectional views, showing the position of the blade when pulling and feathering. Figs. 3 and 4 are sectional views of the improved rowlock, showing the mode in which it is fitted to the oar. Figs. 5 and 6
25 are plan and edge views, respectively, of the fixed blade employed when the oar mounted in the improved rowlock is to be feathered by hand instead of automatically.

In these figures, A is the shaft; B, the self-feathering blade, secured by slotted collars *b b* and pins *b' b'* to the outer end of the shaft in such a manner as to be capable of moving through an arc of ninety degrees, as shown clearly in Figs. 2^a and 2^b, the former representing the vertical position of the blade in the water when pulling; and the latter the horizontal or feathering position assumed by the blade after leaving the water.

C is the crutch rowlock, swiveling on the
40 pin C' in a hole in the gunwale D of the boat. The arms of the crutch rowlock C are formed with horizontal lumps or sockets C², which are bored to form long bearings for the trunnions *e* of a ring, E, which encircles the shaft A at
45 the point where it is to be supported by the

rowlock. The ring E is free to oscillate upon its trunnions *e e*, and is held in position on the shaft of the oar by means of two collars or flanged rings, G G, which lie one on either side of the ring E, and are secured to the oar
50 by screws, as shown in Fig. 4. The trunnions *e e* are formed, as shown best at Fig. 3, with smooth cylindrical stems, threaded ends, and screw-heads. The threaded ends are "set up" after the trunnions have been screwed into
55 the band or ring E. The rings G G are made sufficiently large to be put on over the handle of the oar, and a filling of leather or other material, F, may be inserted, if necessary, between the rings G G and the oar, so as to allow
60 of their fitting accurately. There is an annular space between the collars G G, and a stop-piece, H, Fig. 3, is screwed to the oar between the said collars, so that when the screw stop-pin K is inserted in a hole formed for this
65 purpose in the top of the ring E the degree of axial motion which can be given to the shaft A is restricted, and the rower can at once set the shaft in such a position as will bring the self-feathering blade B into position
70 for pulling or "backing water." When oars having blades of the ordinary form are used, the screw-pin K may be removed and the oar may be feathered by hand. In this case the self-feathering blade may be replaced by a
75 blade of the construction shown in Figs. 5 and 6. This blade B consists of a central portion, B', secured to the shaft of the oar A by a square pin and socket-joint, and two side pieces, B² B², riveted to the central portion, 80 B', and extending beyond it, on either side thereof, the projecting ends being secured to the shaft A by a collar or its equivalent, A'.

From the foregoing description it will be seen that an oar mounted in a rowlock as
85 shown is capable of a double swiveling motion, and also of an axial motion, which movements afford the rower the greatest command over the oar, and by means of the removable screw stop-pin K he is able to use either an oar with
90

a self-feathering blade or an oar having a fixed blade of the ordinary form, or of the novel construction shown in Figs. 5 and 6.

What I claim as my invention is—

- 5 In combination with the shaft of an oar, the crutch rowlock C, adapted to swivel in the gunwale or side of the boat, the ring E, surrounding the shaft and mounted to swivel in the rowlock C, the flanged collars or rings G
10 G, secured to the shaft, one on either side of the said ring, and stops for limiting the axial

motion of the shaft within the said ring, all substantially as herein described.

SAMUEL SEARLE HAZELAND.

Witnesses:

ROBERT BISHOP,
Solicitor, Householder, St. Anstell.

WM. PHILLIPS,
*Cooper, Householder, St. Anstell, Cornwall, Eng-
land.*

JAMES AUSTEN MEREDITH, *Notary.*