

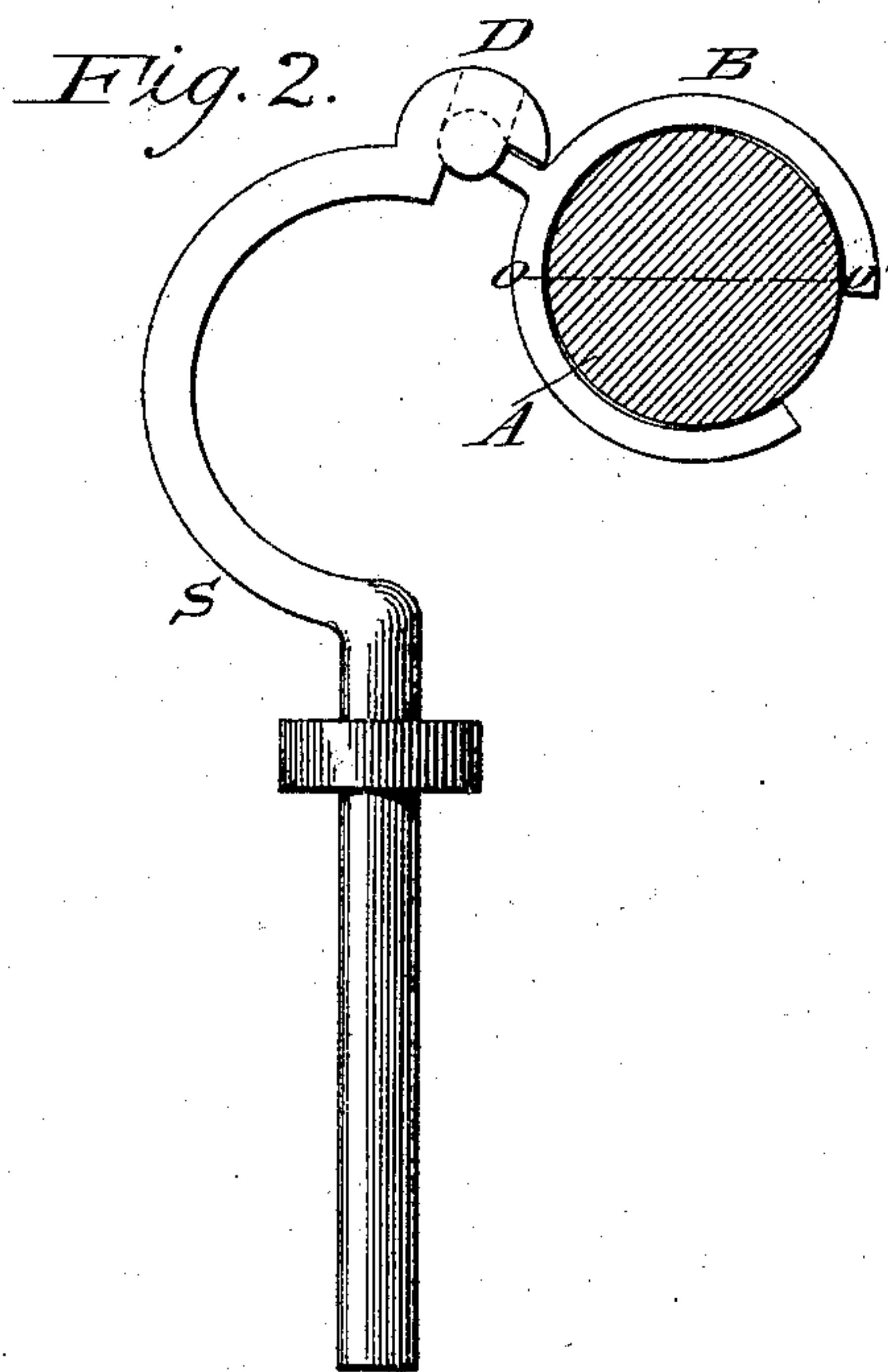
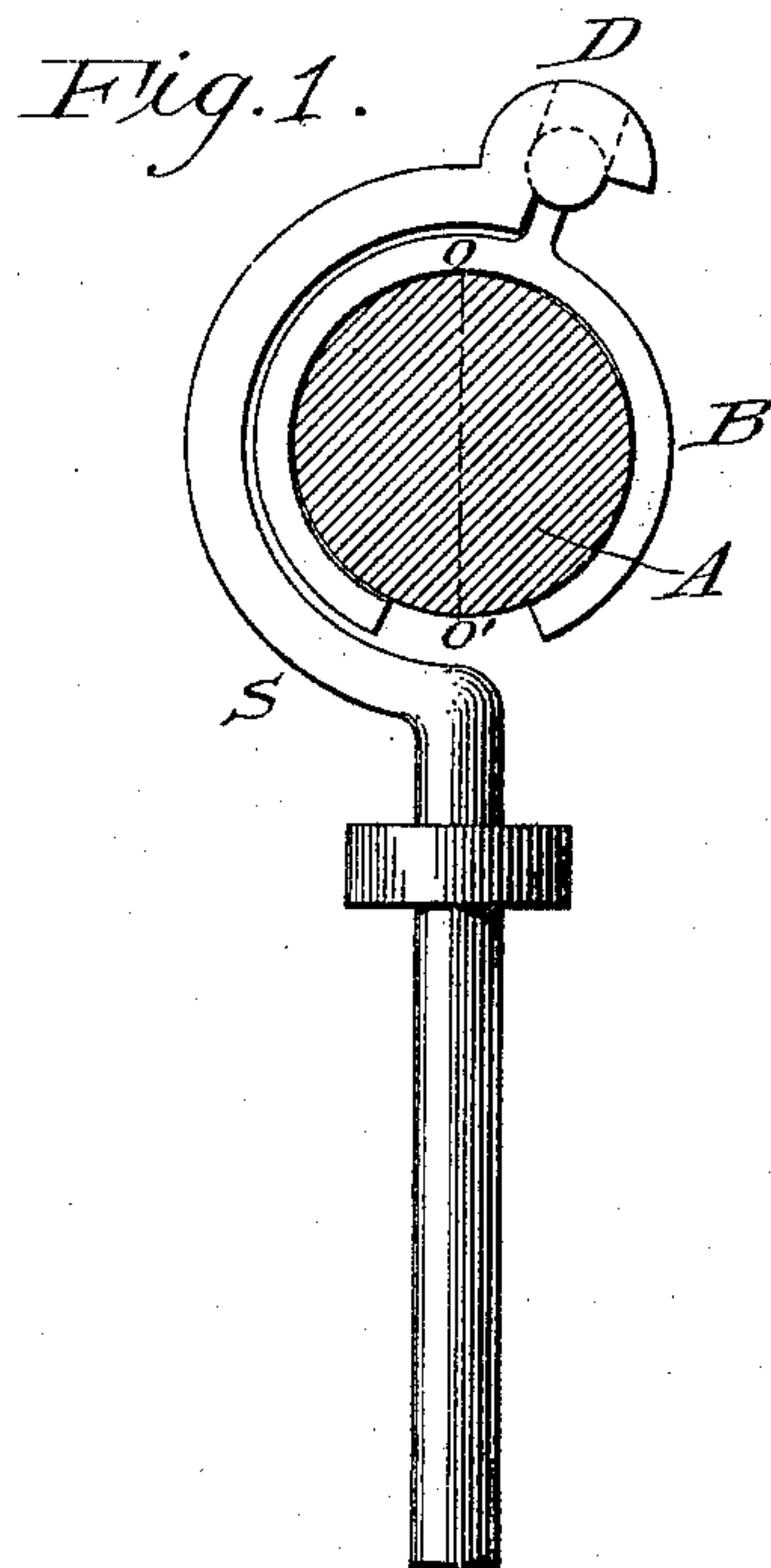
(No Model.)

H. M. HOYT.

OAR LOCK.

No. 369,715.

Patented Sept. 13, 1887.



Witnesses:

J. H. Whittlesey.
J. S. DeRoche.

Inventor:

Henry M. Hoyt,
by Charles F. Whittlesey,
his attorney.

UNITED STATES PATENT OFFICE.

HENRY MARTYN HOYT, OF SEATTLE, WASHINGTON TERRITORY.

OAR-LOCK.

SPECIFICATION forming part of Letters Patent No. 369,715, dated September 13, 1887.

Application filed May 11, 1886. Serial No. 201,864. (No model.)

To all whom it may concern:

Be it known that I, HENRY MARTYN HOYT, of Seattle, in the county of King, Washington Territory, have invented certain new and useful
5 Improvements in Oar-Locks, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

My invention relates to improvements in
10 oar-locks; and the objects of my improvements are to produce an oar-lock which, while being secured to the boat, will hold the oar fast in place so that it cannot drop or slip from the lock, and is at the same time made capable of
15 "feathering" the oar when in use in the water—that is, of turning the oar in the lock so as to be flat or nearly flat (on the back-stroke) to the water. Such feathering is accomplished automatically or without any force applied by
20 the oarsman to turn the oar in the oar-lock, as must be done in the old style of oar-locks, but simply by pushing the oars back on the recovery of the stroke.

By the use of my invention no mechanical
25 skill is necessary on the rower's part. An adequate amount of physical force to push and pull the oars is the only requisite. These objects and ends I attain by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical or side view of my invention when at rest, showing all its parts, the oar (marked A) being herein shown in section clamped by the band B of the oar-lock, a ball-
35 and-socket or a universal joint (marked D) being employed upon the top or end of the curved support S, upon which swings the band B outward from the support S and backward to it again, as hereinafter more elaborately explained. The band B is shown herein securely
40 bound around the oar and holding it.

Fig. 2 is a vertical view showing the same parts as Fig. 1 when the pushing force has been applied to the oar, and the band B, carrying the oar A, has been swung out from the curved support S upon the universal joint D.

The dotted lines *o o'*, which appear in the figures, represent the position which the oar-blade assumes with reference to the surface of
50 the water rowed upon, being in Fig. 1 perpendicular to such surface when the stroke in the

water begins, and in Fig. 2 being parallel thereto as the feathering begins and the stroke ends, the oar-blade thus being swung entirely
55 through a right angle.

Similar letters of reference indicate similar parts throughout the views.

I make use of the universal joint D to swing the oar-band B, which allows the oar-band B to move through a right angle outward from
60 the curved support S and back again.

The oar A is fastened in a ring or band, B, at the usual distance from the end of the oar-handle by direct clamping of the band B around the oar-handle, as illustrated in the
65 figures. This ring or band B is of any convenient size, and is made with a suitable opening in it, through which to admit, if desired, the small portion of the oar-handle. It is hung or attached in any convenient way at its
70 top to a curved support, S, at the end of the curve, forming therewith a universal joint, D, as in the figures. This curved support S is composed, as shown, of a lower straight post or part and an upper bent or curved portion,
75 all in one solid piece, the top or end of its curve terminating in the universal joint D, as already detailed. The lower straight part of S is, for operation, made to stand upright and to act within a suitable pocket in the gunwale
80 of the boat and turns axially in the pocket with the backward and forward play of the oars, as in an ordinary oar-lock for loose oars.

All the parts of my invention are made of cast-iron, preferably. They can be made of
85 any other suitable material.

The hinge or joint at the top of the bend or curve of the support S is intentionally put a little in front of the center line of the support, so that the mere weight of the oar in the band
90 B will partly accomplish the feathering before the pushing force is exerted, and therefore make less pushing force necessary to turn the oar in rowing through the proper angle.

The oarsman in position in the boat looks
95 toward the convex side of the curved support S. The band B is so made and hung that it rests firmly against the curve of the support S on its concave side, and thus affords suitable resistance while the oar is being drawn through
100 the water on the propelling half of the stroke. Upon reaching the end of the stroke, when it

is desired by the oarsman to lift the outer end or blade of the oar from the water for the back-stroke or "recover," he merely pushes against the oar-handle, when the universal joint D 5 allows the oar to turn automatically through such an angle that the oar-blade comes out of the water without any twisting force on the part of the oarsman, and accomplishes the back-stroke in the desired position—that is, 10 the oar-blade is carried along flat or parallel to or nearly flat or parallel to the surface of the water. When the end of the back-stroke is reached and it is desired to place the oar in the water for another stroke, by simply relieving the pushing force and applying the 15 pulling force the oar automatically falls back into position, the blade then fixing itself vertically—*i. e.*, its edge falling perpendicularly into the water—the blade being then in a 20 position opposite to that in which it was carried along the surface of the water in the feathering operation.

The upper curve of the support S may, for the sake of convenience, be bent outward from 25 the true perpendicular of its upright portion toward the water, so as to give the oar any suitable angle with the surface of the water as it hangs within the embrace of the band B. Thus can such angle be regulated.

30 It is apparent that by the employment of my invention is produced a self-feathering and easily-managed oar-lock, by which much labor is saved to the oarsman, and speed in rowing is consequently thereby enhanced. My oar-lock regulates the angle of the oar-blade with 35 the surface of the water, and removes the liability of the oar to drop out of the lock into the water, which is one of the faults of the loose oars now generally in use.

40 My invention can be adapted easily as well to outrigger attachments on boats as to the gunwales of boats, and it is my design so to make use of it, and so to claim it herein.

45 I am aware that Hills, in Patent No. 19,851, (oar-locks,) August 6, 1858, obtained a patent for a suspended oar operating in half-rings, with set or adjusting-screws; but I do not claim Hills' constructions. My invention is a decided improvement upon Hills' patent

in this more particularly—to wit, my substitution of a universal joint upon a curved support, S, in front of the center line of the support's upright portion, acting in conjunction with the band B, tightly clamping the oar, 50 does away with the half-rings and rings, and set-screws and adjusting-screws, and other 55 special contrivances which said Hills is obliged to employ to make his machine at all operative, while the universal joint in my combination is both novel and useful. Moreover, the 60 placing of my joint a suitable distance in front of the center line of the standard of my support, thereby causing the oar to begin the operation of feathering by gravity before any forward force is applied thereto by the oars- 65 man, makes a practical machine, capable of self-feathering the oar under all circumstances, (which Hills' machine is not,) and thereby greatly relieves the oarsman. My bending the curved part of the support out over the water 70 gives my machine the power of regulating the angle which the oar makes with the water—a novel, important, and valuable feature.

Having thus fully described my invention, what I claim as new, and desire to secure by 75 Letters Patent of the United States, is as follows:

1. The curved support S, its curved portion bent outwardly, universal joint D upon the support in front of the center line of its stand- 80 ard, and the band B, tightly clamping the oar to form a self-feathering oar-lock, substantially as herein set forth and detailed.

2. In oar-locks, the curved support S and band D, clamping the oar, united so as to form 85 upon the top of the curved support S in front of the center line of its standard a universal joint, D, operating through the support and band upon the moving oar, substantially as shown. 90

In testimony that I claim the foregoing I have hereunto set my hand, this 19th day of March, 1886, in the presence of two witnesses.

HENRY MARTYN HOYT.

Witnesses:

U. R. NIESZ,
ROBERT ALLAN.