

W. B. Curtis'

Rowing Machine

116417

PATENTED JUN 27 1871

fig: 1

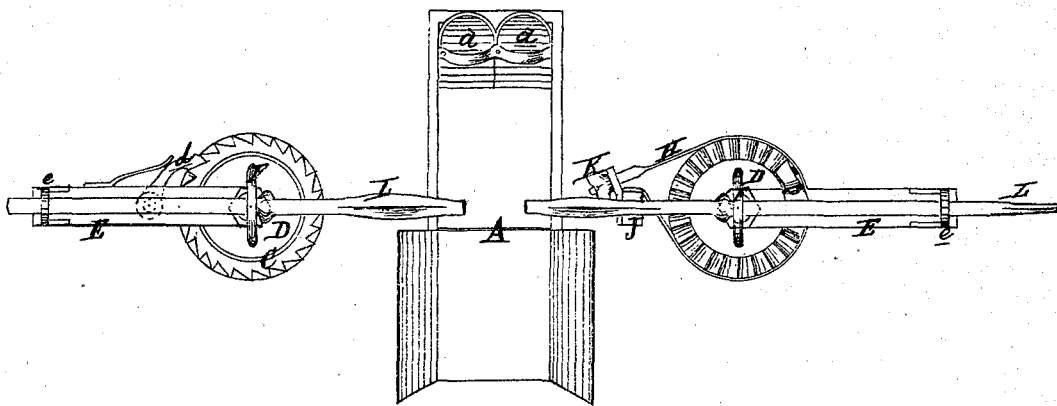
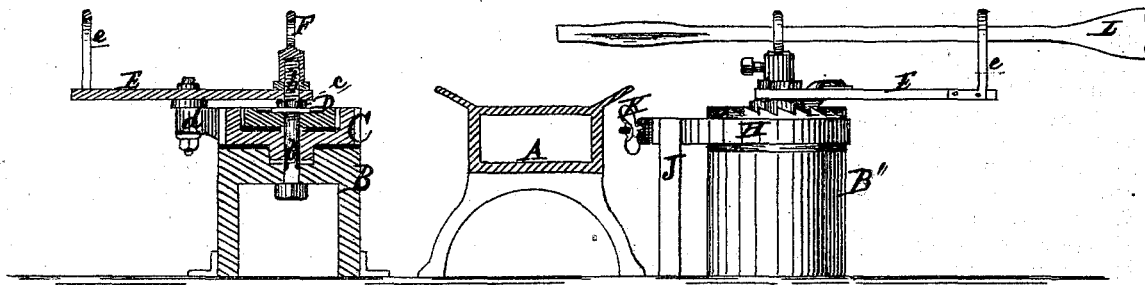


fig: 2



Witnesses:
Julius V. Leke
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Inventor:
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UNITED STATES PATENT OFFICE.

WILLIAM B. CURTIS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN ROWING-MACHINES.

Specification forming part of Letters Patent No. 116,417, dated June 27, 1871.

To all whom it may concern:

Be it known that I, WILLIAM B. CURTIS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Rowing-Machines; and I do hereby declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a plan of my device, and Fig. 2 a rear elevation, partially in section.

This invention has for its object the construction of a device which will enable an oarsman to keep up his practice throughout the winter or when detained from his boat; which will enable beginners to learn the art of rowing before entering a boat; which will enable the trainer to properly instruct a crew and to correct their faults with greater certainty than when in a boat; and which will enable a boat's crew to keep up their practice with regularity though one or more of their number may be absent. The invention consists in the peculiar construction and arrangement, with relation to a seat—all being fast to the floor—of certain blocks and standards, each provided with an arm, row-lock, and friction-ratchets or their equivalents, operating as more fully hereinafter set forth.

In the drawing, which represents the device as arranged for the use of one person, A represents a seat and body or waist of the boat, rigidly secured to the floor, and provided with foot-braces *d*. B B' are standards secured to the floor, one at either side of the seat. C is a friction-ratchet placed on the top of the standard B, rotating on a bolt, *b*, rising from the center of the standard, in which the lower end of said bolt is fixed so that it cannot turn. D is a friction-disk or washer placed in a recess in the upper side of the ratchet. Between the washer or disk and the ratchet, and between the latter and the standard, are interposed washers, of leather or other suitable material, to give a frictional resistance to the rotation of the ratchet. The required frictional resistance is obtained by screwing down a nut, *e*, upon the bolt *b*, against the disk D. E is an arm pivoted on the bolt *b* above the nut *e*

and extending out-board, and to which is pivoted a spring-pawl, *d*, which engages with the ratchet C. At the outer end of the arm is a loop or eye, *e*. F is the row-lock, threaded to screw upon the top of the bolt *b*. The standard B' and its attachments show a modification of the described device, by which the desired end may be attained; and it consists in securing to the top of the said standard a friction-pulley, the upper face of which is serrated, and is also arranged to turn on the central bolt. The arrangement of the arm E and row-lock F is similar to the others above described. The frictional resistance, in this case, is obtained from a belt, H, which is securely fastened at one end to a post, J, the other passing around the pulley and tightened by a thumb-screw, K, attached to said post—a simpler, cheaper, though, in practice, an inferior means of accomplishing the purpose. The standards should be placed at such a distance from the seat as will bring the row-locks as far apart as in actual practice, and the row-locks so adjusted that when the oars L are in place, resting upon the outer ends of the arms in the loops *e*, they will be at the same angle as when immersed in the water in rowing in a boat.

By constructing the box of such length as may be required for a four or six-oared crew, and placing the same number of standards, but alternately, on the sides thereof, such a crew can take their regular exercise as effectually as though constructed for a single person, as above described; and should one or more of their number be absent the remaining ones can use the machine, which could not be done in actual practice.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, in a rowing-machine, of a seat, A, the standards B and B', the rotating friction-ratchet C provided with washer D, the arm E provided with spring pawl *d*, and the row-lock F, all constructed, arranged, and operated substantially as described and shown.

WILLIAM B. CURTIS.

Witnesses:

HARRY S. SPRAGUE,
W. S. ROGERS.