No. 710,147. Patented Sept. 30, 1902.

W. B. GOODWIN.

ROWING APPLIANCE.

(Application filed Jan. 21, 1901.)

(No Model.)

Fig. 1.

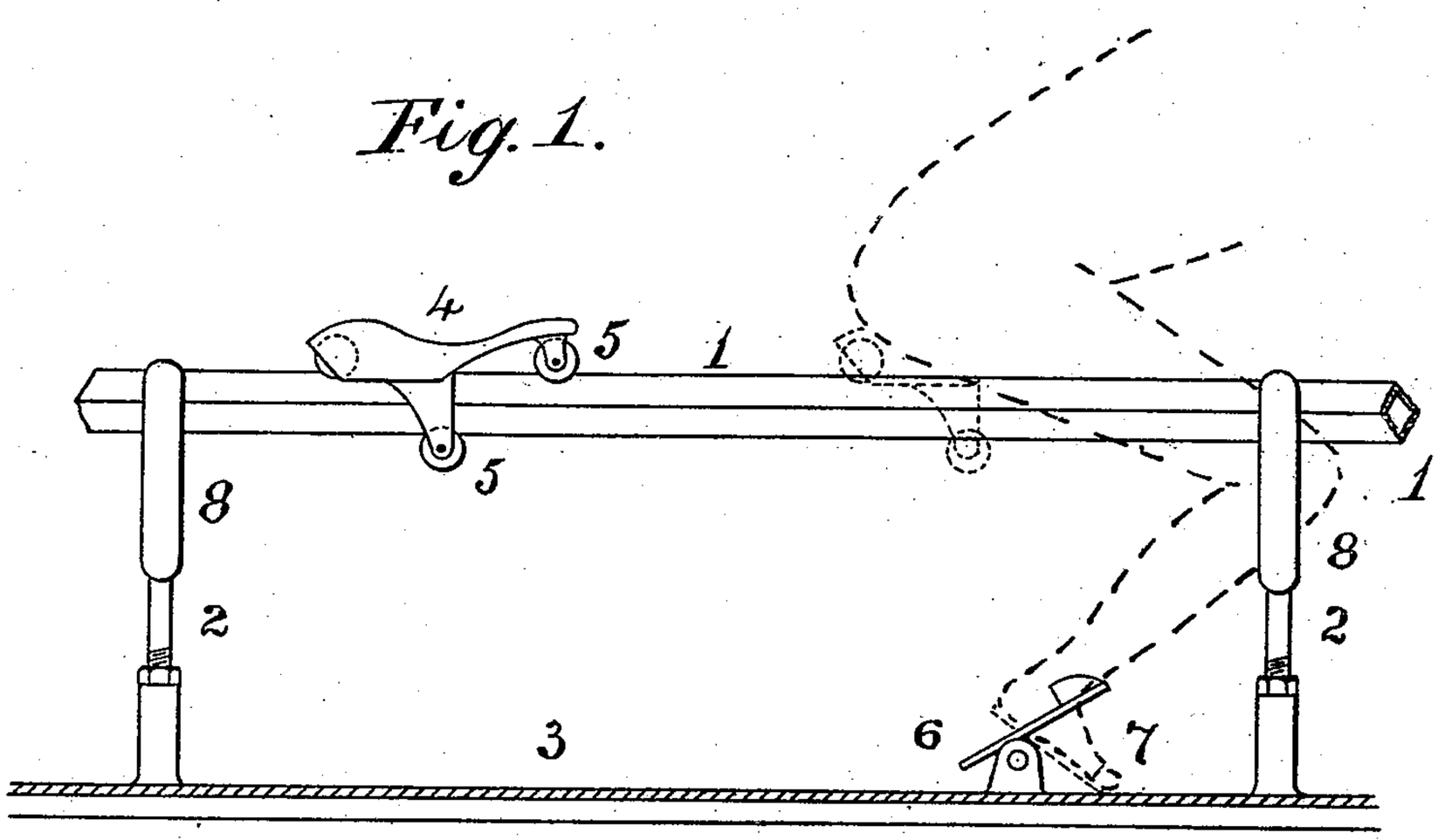
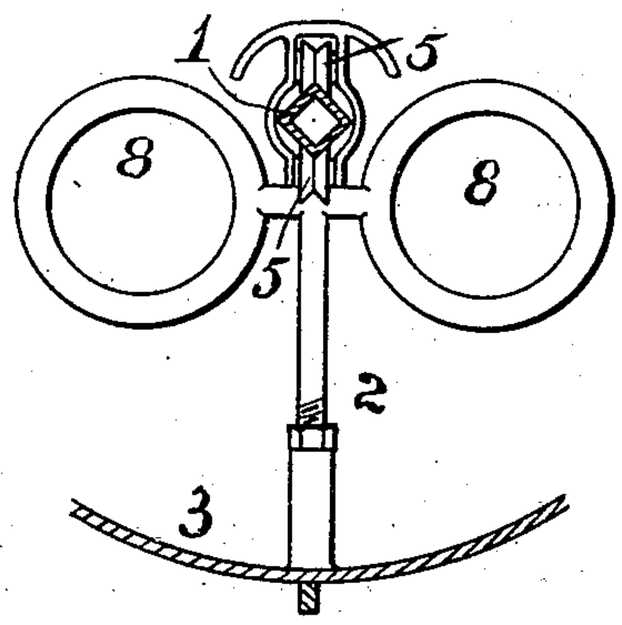


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM B. GOODWIN, OF SAN FRANCISCO, CALIFORNIA.

ROWING APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 710,147, dated September 30, 1902.

Application filed January 21, 1901. Serial No. 44,193. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. GOODWIN, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Rowing Appliances; and I do hereby declare the following to be a full, clear, and exact description of the same.

This invention relates to improvements in rowing appliances particularly adapted to racing-boats, though not confined thereto.

The art of rowing and the efficient employment of the physical force of the rower find limitations as heretofore practiced in the mechanical arrangement of the human frame. These limitations are most apparent in rowing with the ordinary stationary seat. With this form of seat the reach of the oarsman is practically limited within a small angle of motion. The introduction of the sliding seat added to the available reach under practical conditions and increased the efficiency of the oarsman, but even with this advance limitations still existed, due to the inability of flexing the ankle-joint beyond a very limited degree. This sets another limit to efficiency.

The present invention has for one of its objects to provide for the requirements suggested and the removal of the limitations referred to.

Specifically stated, the object of this invention is to provide improved rowing appliances whereby the greatest possible physical force of the rower may be applied to the oar and to provide mechanical arrangements to facilitate this application of power. These objects are accomplished by means of the devices illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of this invention. Fig. 2 is an end elevation of the same.

Referring to the accompanying drawings, 1 is a longitudinal bar of suitable section preferably adjustable vertically and provided with suitable attachments 2 to secure it in the boat 3. Upon this bar 1 is slidably mounted a seat 4, which I preferably construct as a straddle or saddle seat provided with antifriction-rollers 5 or other suitable antifriction devices. Suitably located and attached to the boat is a foot-rest 6, pivotally journaled in suitable bearings 7, so as to provide a rocking motion of the treadle.

Suitably located and attached in any convenient manner to the boat I provide knee rings or sockets 8 of suitable form to receive the knees of the oarsman when his body is extended forward. This knee device may be made of any suitable material. I prefer to make it, as shown in Figs. 1 and 2, in the form of two pneumatic rings of rubber or other inflatable material to provide a soft cushion for the knees of the oarsman.

In Fig. 1 a portion of a figure of an oarsman is indicated by dotted lines, showing his knees in the rings and the foot-rest tipped to accommodate this position.

In practice pull on the oar is first brought to bear on the boat by pressure of the knees of the oarsman on the rings 8 and afterward upon the treadle or foot-rest 6, which by its pivotal provision accommodates itself to the varying positions assumed by the legs of the oarsman, the saddle-seat 4 forming a comfortable and convenient support peculiarly adapted to the necessities of the case. The supporting-bar 1 and its supporting-framework may be made of hollow section for strength and lightness.

It is obvious that many changes in form, construction, and arrangement may be made in this invention to accommodate it to various requirements or conditions of use without departing essentially from my invention. I therefore do not desire to confine myself to the exact form, construction, or proportion of parts shown.

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

1. In combination with the hull of a boat, a seat for an oarsman and a knee-rest suitably placed to receive the thrust of his knees when pulling on the oars.

2. In combination with the hull of a boat, a slidable seat for an oarsman and a knee-rest suitably placed to receive the thrust of his knees when pulling on the oars.

3. In combination with the hull of a boat, a straddle or saddle seat for an oarsman and a knee-rest suitably placed to receive the thrust of his knees when pulling on the oars.

4. In combination with the hull of a boat, a straddle slidable seat for an oarsman and

a knee-rest suitably placed to receive the thrust of his knees when pulling on the oars.

5. A boat provided with a longitudinal bar suitably secured therein and a saddle-seat slidable thereon, said boat being provided with a transversely-pivoted foot-rest and a knee-rest suitably placed to receive the thrust of the oarsman's knees when pulling on the oars.

6. A boat provided with a longitudinal bar vertically adjustable, suitably secured therein and a saddle-seat slidable thereon.

7. A boat provided with a longitudinal bar vertically adjustable, suitably secured therein and a saddle-seat slidable thereon and a foot-rest transversely pivoted in said boat.

8. A boat provided with a longitudinal bar vertically adjustable, secured therein and a saddle-seat slidable thereon, said boat provided with a transversely-pivoted foot-rest and a knee-rest suitably placed to receive the thrust of the oarsman's knees when pulling on the oars.

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