L. D. TICE.

Exercising Machines.

No. 137,394. Patented April 1, 1873.

fig. 1.

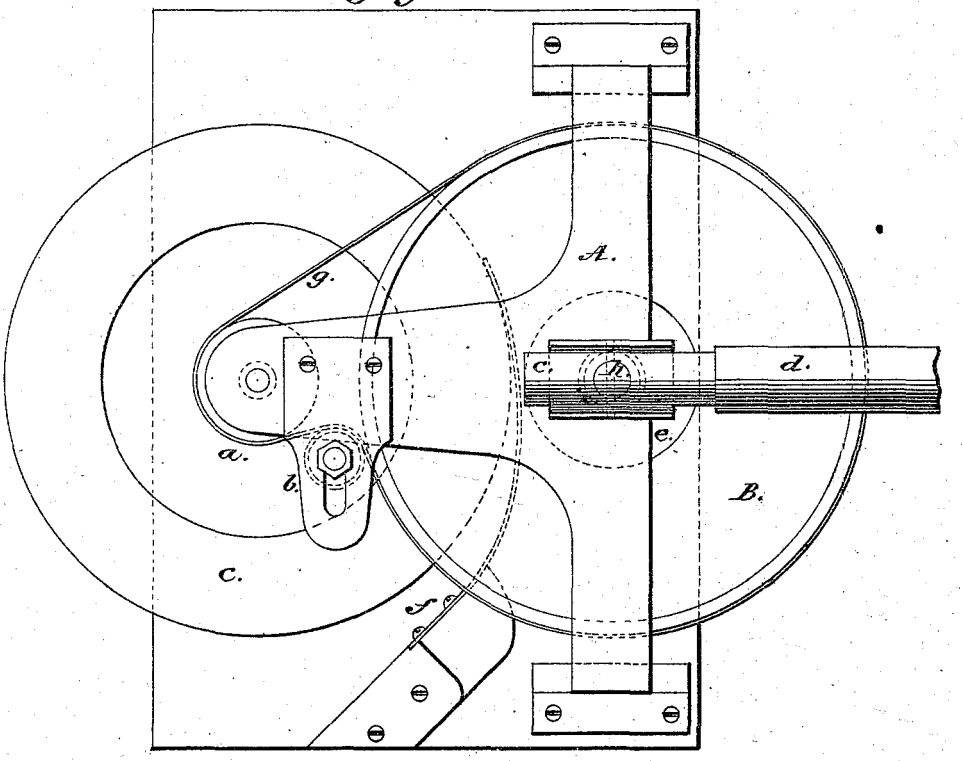

fig. 2.

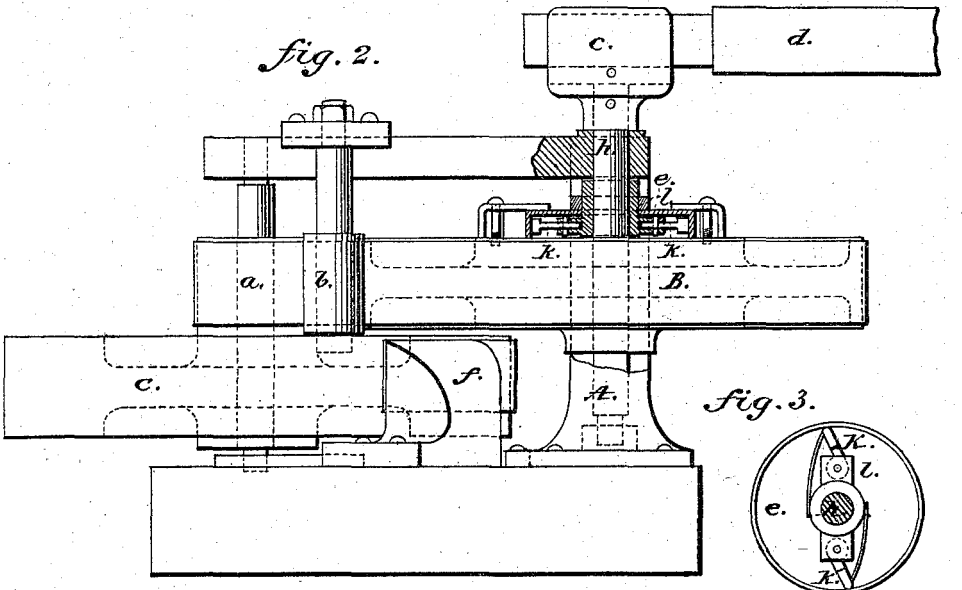

fig. 3.

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LEONARD D. TICE, OF NEW YORK, N. Y.

IMPROVEMENT IN EXERCISING-MACHINES.

Specification forming part of Letters Patent No. **137,394**, dated April 1, 1873; application filed January 28, 1873.

To all whom it may concern:

Be it known that I, LEONARD D. TICE, of New York, N. Y., have invented certain Improvements in Means of Physical Culture and Exercise, of which the following is a specification:

The object of my invention is to provide a means for physical culture and exercise. An oar is provided with the proper resisting mechanism, so arranged as to conform to the motion of a boat, being propelled through the water by oars. This is accomplished, as shown, by the following figures:

Figure 1 is a top view of the machine. The frame A carries two wheels, B and C, connected by the belt *g*, carried around the tightening-pulley *b*. *f* is a friction-brake, pressed against the rim of the fly-wheel C to give the required resistance. Fig. 2 is a side elevation. The oar-lock *c* has a shaft, *h*, extending through the frame A, wheel B, into the bearing J. Attached to the shaft *h* is a pair of friction-clutches, more fully shown in Fig. 3.

c, the oar-lock; *d*, the oar; *k k*, the friction-clutches; *l l*, the friction-arms, made fast upon the shaft *h*; *a*, the driven pulley, upon the fly-wheel C; *b*, the tightening-pulley; *f*, the friction-brake; and *e*, the friction-rim attached to the driving-wheel B, which is loose upon the shaft *h*.

In the forward motion of the oar the friction-clutches press against the rim *e*, and give motion to the driving-wheel B and fly-wheel C. In the back stroke the clutches are relieved, and the oar returned for another stroke without resistance.

The motion of the fly-wheel is continuous, but not uniform; by its use a more natural and elastic feeling is obtained, and a development of the muscles is secured identical with that produced by rowing.

Claim.

In combination with an oar-lock, *c*, shaft *h*, and an operating-lever, *d*, the friction-clutches *k*, wheels B and C, pulleys *a b*, brakes *f e*, and belt *g*, all arranged substantially as described, and for the purpose set forth.

LEONARD D. TICE.

Witnesses:

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