

(No Model.)

B. FARLEY.
EXERCISING MACHINE.

No. 337,942.

Patented Mar. 16, 1886.

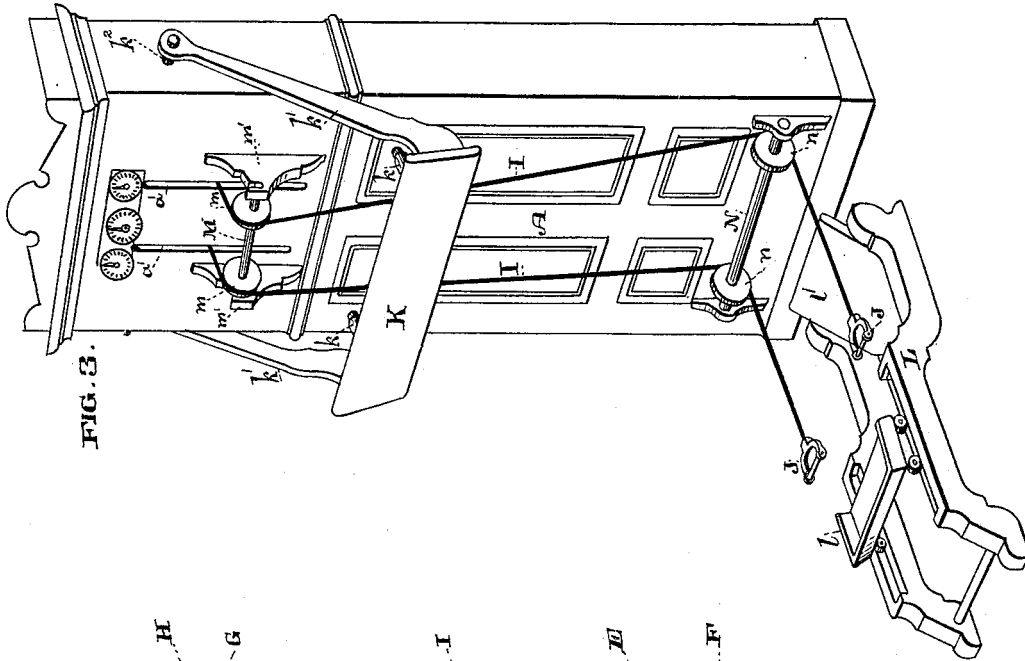


FIG. 3.

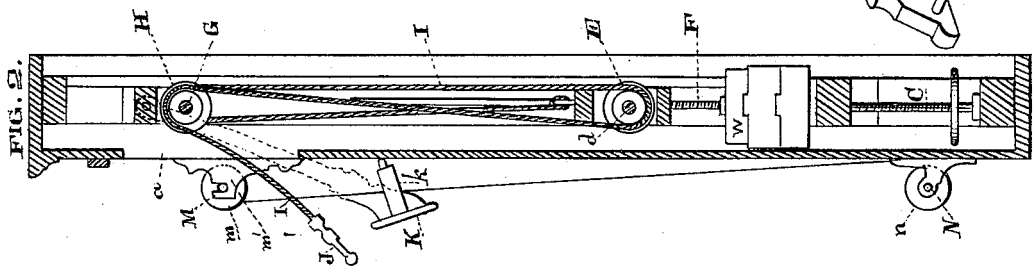


FIG. 2.

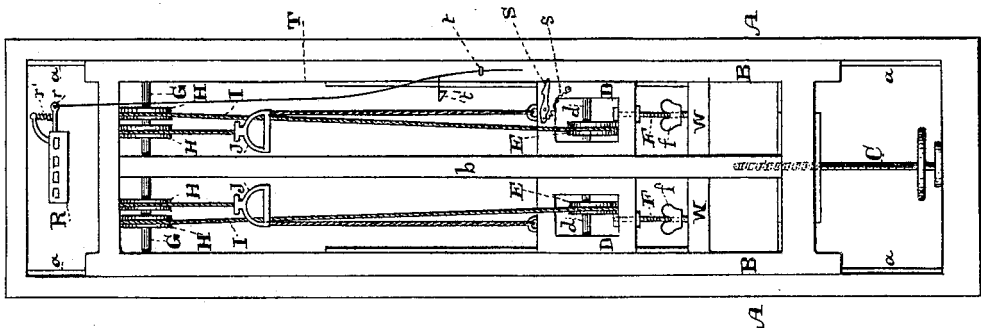


FIG. 1.

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UNITED STATES PATENT OFFICE.

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EXERCISING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 337,942, dated March 16, 1886.

Application filed September 14, 1885. Serial No. 177,116. (No model.)

To all whom it may concern:

Be it known that I, BERNARD FARLEY, of the city and county of San Francisco, and State of California, have invented an Improvement in Exercising-Machines; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to that class of exercising-machines for gymnasiums or private use in which weights are alternately raised and lowered for the purpose of developing the muscles.

My invention consists of an outer casing, a vertically-adjustable frame in the casing, and a peculiar arrangement of purchase-ropes passing over suitable pulleys on the frame, and adapted to raise and lower sliding weights, said ropes being provided with handles by which they are operated.

It consists, further, in a novel mechanism by which a record is made of the work performed in an adjustable back-rest, adapting the machine to be used for exercising a pushing force, and in a novel arrangement of guide-pulleys, by which the ropes can be continued and guided, to adapt the machine for use in connection with the sliding seat of a rowing-frame, all of which I shall hereinafter fully explain.

The object of my invention is to provide a simple and effective apparatus or machine which can be used to exercise the pulling-muscles, the pushing-muscles, and those muscles which are called into action in rowing.

Referring to the accompanying drawings, Figure 1 is a front elevation of my machine with the outer facing of the casing removed for the purpose of showing the interior mechanism. Fig. 2 is a vertical section of the same. Fig. 3 is a view of my machine, showing the outer casing and other parts, and also the rowing-frame.

A is a vertical casing, which is inclosed, as shown in Fig. 3. B is a frame, which is mounted within the casing upon tongues *a* therein, which fit within grooves in the sides of said frame. The frame B is supported at any elevation desired by means of the screw C, by the adjustment of which the frame B can be raised

or lowered, for the purpose I shall presently describe. The frame B is divided into two parts by a central strip, *b*.

D are bearings mounted in each part of the frame by tongues and grooves adapting them to be moved up or down. These bearings carry shafts *d*, upon which are pulleys E.

Secured to the bearings D are bolts F, the lower ends of which carry the weights W. These weights may be augmented by the addition of others, which are slipped onto the bolts after the manner of the weights on weighing-scales; and when additional weights are thus adjusted a thumb-screw, *f*, on the bolts binds said additional weights down to the permanent weights W.

In the top of the frame B are shafts G, upon each of which are two pulleys, H.

I are the ropes. The outer ends of these project through slots *a'* in the top of the face of the casing A, and are provided with handles J. These ropes pass from the handles over the inner ones of the pulleys H, down to and around the pulleys E below, up again, and over and around the outer ones of the pulleys H, and down again to the bearings D, with which they are connected, as shown in Fig. 1. This forms a block-and-tackle purchase.

The operation of the machine as far as described is as follows: By turning up the screw C, the frame B, with all its apparatus, may be adjusted to suit the height of the person exercising. Standing in front of the machine, he grasps the handles J and pulls them out toward him alternately, thus raising the weights W. This motion exercises the pulling-muscles.

In Figs. 2 and 3 I show a back board or rest, K, which extends transversely across the front of the main casing A, and is held at a short distance from said casing by means of short arms *k*. (Shown in Fig. 2.) This board is supported by side arms, *k'*, the upper ends of which are pivoted on the bearings *k''*, extending from the sides of the casing A. The person exercising places his back against the board K and forces outwardly the handles J, thus exercising the pushing-muscles. When the

board K is not in use, it can be swung on its pivots up to the top of the machine, and thus be out of the way.

In Fig. 3, L is a frame on the floor, which is provided with a sliding seat, *l*, and a foot-rest, *l'*, and constitutes the rowing-frame of the apparatus. When this is used, it is obvious that the ropes I must be properly directed and brought down within reach of the rower. To do this, I have the short shaft M, provided with pulleys *m*. This shaft is mounted in bearings *m'* on the face of the casing A, as shown in Fig. 2, in such a manner as to permit the shaft to be easily removed when not in use.

On the bottom of the casing, as shown in Fig. 3, is a shaft, N, carrying pulleys *n*. The ropes I are extended by securing other ropes to them, and are brought down over the pulleys *m* above, and down behind and under the pulleys *n* below, and thence to within reach of the rower. It will thus be seen that my machine is adapted for exercising different sets of muscles, and may be used for either or any of them, as may be desired.

In order to indicate the amount of work done from day to day, I have the following mechanism: Upon the top face of the casing A is a registering device, R, the peculiarities of construction of which I need not describe further than to say that it is of any usual form, having dial-plates on its face which indicate units, hundreds, &c., operated by means of a vibrating lever, *r*, which is held to its place by a spring, *r'*. Upon the sliding bearing D is a bevel-faced lug, S, which is held to its normal position by a spring, *s*. Upon the side of the frame B is a guide, *t*, through which loosely passes a rod, T, the upper end of which is attached to the lever *r*, which operates the indicating mechanism. Upon the rod T is secured a lug or arm, *t'*. As the bearing D ascends, the lug S upon it, through coming in contact with the lug *t'*, simply slips by it, but as it comes down it bears on said lug and moves the rod T down, thus operating the indicator. In this way the person exercising can know just how much work he does from day to day.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an exercising-machine, the casing A, in combination with the frame B, mounted in said casing; and adapted to be vertically adjusted to accommodate different heights of operators, weights on the frame B, and ropes secured to the weights and extending outside of the casing A, whereby said weights may be raised and lowered, substantially as herein described.

2. In an exercising-machine, the casing A, in combination with the frame B, mounted within said casing, and the screw C, supporting said frame B, and adapted to adjust it vertically to suit the height of the operator, weights mounted on and carried by the frame

B, and ropes for raising and lowering the weights, substantially as herein described.

3. In an exercising-machine, the casing A and the frame B within it, in combination with the sliding bearings D in the frame B, the weights W, suspended from said bearings, pulleys on the bearings and in the frame B above, and ropes attached to the bearings and passing over the pulleys to the outside of the casing, substantially as herein described.

4. In an exercising-machine, the casing A, the frame B therein, having shafts G in its top, with pulleys H thereon, in combination with the bearings D, mounted and adapted to slide in the frame B, the weights W, suspended from the bearings, the shafts *d* in said bearings, and pulleys E on said shafts, and the ropes I, secured to the bearings and passing over the pulleys E and H, as described, and the handles J on the ends of the ropes, substantially as herein described.

5. In an exercising-machine, the sliding bearings D, in combination with the bolts F, the weights W on said bolts, and the thumb-screws *f*, by which additional weights may be secured to the weights W, substantially as herein described.

6. In an exercising-machine, the casing A, having the registering device R upon it, in combination with the sliding bearings D, carrying weights W, and means for raising and lowering the sliding bearings, and a mechanism operated by the movement of the bearings to cause the registering device to operate substantially as herein described.

7. In an exercising-machine, the registering device R, having an operating-lever, *r*, and the reciprocating bearings D, carrying the weights, in combination with the mechanism by which the movement of the bearings is recorded by the registering device, consisting of the lug S on one of the bearings, the rod T, connected with the lever *r* of the registering device, and the lug *t'* on said rod, with which the lug S comes in contact, substantially as herein described.

8. An exercising-machine comprising the casing A, the frame B, mounted and adapted to be vertically adjusted therein, the screw C, by which said frame is supported and adjusted, the bearings D in the frame B and adapted to slide therein, the weights W, suspended from said bearings, the ropes I, secured to the bearings and passing over suitable pulleys thereon, and pulleys mounted in the frame B above, the registering device R, and mechanism by which the movement of the bearings is indicated by the said device, substantially as herein described.

9. In an exercising-machine, the casing A, the weights W within the casing, and the ropes I, by which said weights are raised and lowered, in combination with the back-rest K, having arms *k'*, pivoted to the bearings *k'* on the sides of the casing, and short arms *k*,

holding the back-rest out from the casing, substantially as herein described.

10. In an exercising-machine having weights and ropes adapted to raise and lower them, as described, the casing A, in combination with the removable shaft M on the front of the casing, having guide-pulleys *m* for the ropes, and the guide-pulleys *n* at the bot-

tom of the casing, substantially as herein described.

In witness whereof I have hereunto set my hand.

BERNARD FARLEY.

Witnesses:

S. H. NOURSE,
C. D. COLE.

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