(No Model.)

R. REACH.

EXERCISING APPARATUS.

No. 420,415. Patented Jan. 28, 1890.

Fig. 1

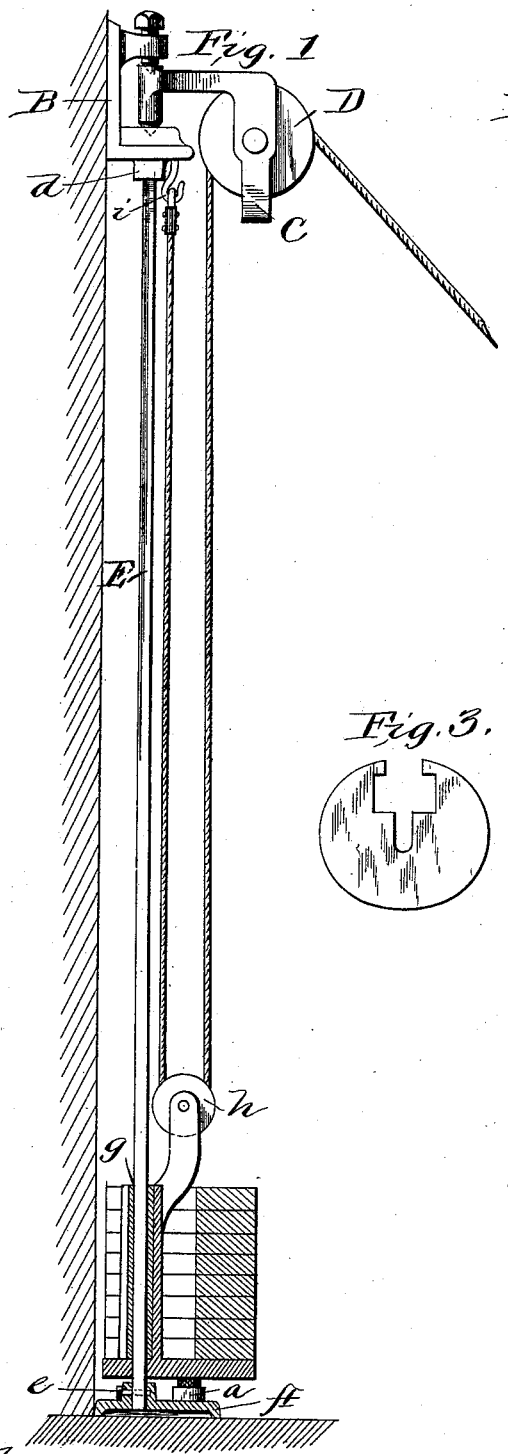

Fig. 2.

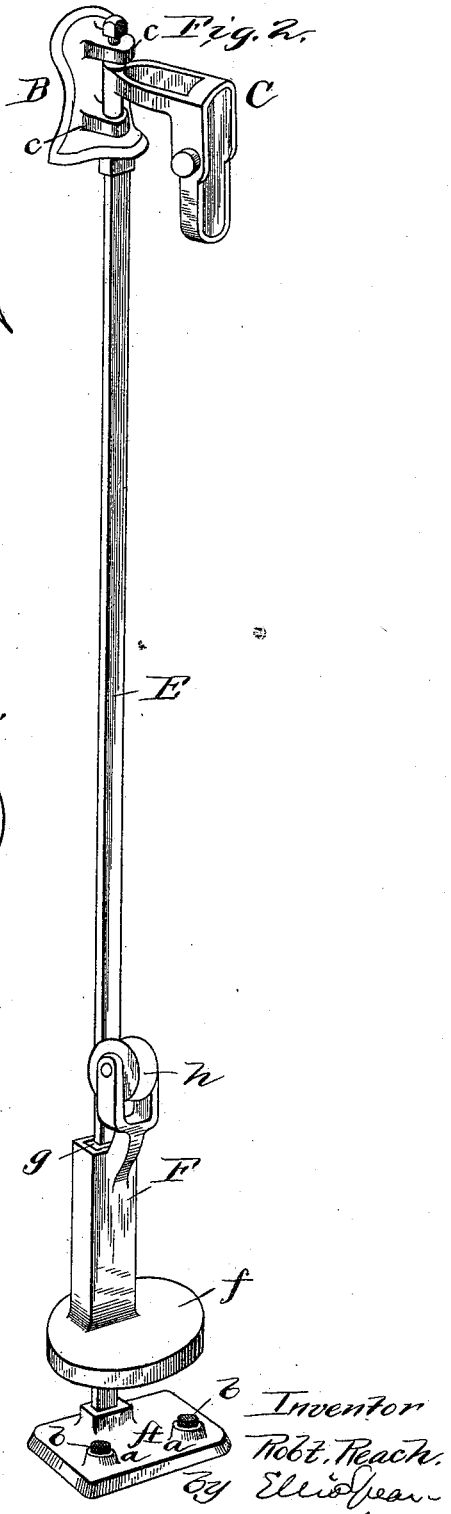

Fig. 3.

Witnesses
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EXERCISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 420,415, dated January 28, 1890.

Application filed June 5, 1889. Serial No. 313,127. (No model.)

To all whom it may concern:

Be it known that I, ROBERT REACH, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Exercising Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention has for its object, principally, the simplifying of that class of exercising-machines in which the weights are carried in the loop of the operating cord or rope and guided by two or more guide-rods. In my present invention I obviate the necessity of providing two guide-rods, which have been required heretofore to prevent the rotation of the weight-carrier in its vertical movement, by providing a single guide-rod of non-circular form in cross-section.

While I have shown the invention as applied to a simple form of wall-machine and in connection with a weight-carrier supported in the loop of a single operating cord or rope, it will be understood that the invention may be applied to any kind of an exercising apparatus which includes a vertically-movable weight-carrier which it is desirable to make non-rotating in its vertical movement.

My invention therefore consists, broadly, in connection with a weight-carrier and means for operating it vertically, of a non-circular guide for said weight-carrier, whereby it is made non-rotating.

The invention further consists in the details of construction relating to the particular machine shown, though these details may likewise be applied to other machines of the same general class.

In the accompanying drawings, Figure 1 represents a side elevation of an apparatus embodying my invention with the weight-carrier and weight in section. Fig. 2 is a perspective view of the apparatus with the weights removed from the carrier, and Fig. 3 is a detail view of the weight.

In the drawings, A represents the base-plate, which is a simple casting with sockets *a a*, adapted to receive the buffers *b b*, which are of rubber or felt. The upper casting, which supports the directing-pulley, is shown at B, and is provided with projections *c c*, which form a support for the bracket C, which in turn supports the directing-pulley D. From the under face of the upper casting B and from the upper face of the lower casting A project sockets *d e*, which are adapted to receive the opposite end of a connecting-rod E, (shown in the drawings as of a rectangular form in cross-section,) and this rod serves as the guide for the weight-carrier F. The weight-carrier has a base *f* with its projecting hollow spindle, through which the rod E passes, and the opening in the base-plate is of substantially the same shape as the rod E, while the space between the walls of the hollow spindle and the face of the rod E is filled by felt or other packing, as shown at *g*. Thus the weight-carrier is prevented from rotating by reason of the non-circular shape of the rod E.

I desire it to be understood that I do not limit myself to the shape of the rod E, as shown, as it may be of any form except circular.

The usual pulley *h* is supported by a bracket extending from the spindle of the weight-carrier, and the operating-rope is secured at the point *i* to the upper casting, forming a loop, in which is supported the weight-carrier, and passing over the directing-pulley *e* to the handle or apparatus to which it may be connected. The weights conform, substantially as shown in Fig. 3, to the base-plate *f* of the weight-carrier, having a slotted portion for encircling the spindle of the said carrier.

The bracket C is of angular shape, with a space between its walls for the reception of the directing-pulley, while the end which is connected to the upper casting has a cone-shaped lower end fitting a corresponding socket in one of the projections *c*, while a screw passes through the other projection, and is provided with a cone-shaped end fitting a corresponding depression.

What I claim is—

1. The combination, with a weight-carrier, and means for operating it, of a non-circular

guide therefor and supports for the guide, substantially as described.

2. In combination, a weight-carrier, a non-circular rod for guiding said carrier, and a bushing between said carrier and rod, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT REACH.

Witnesses:
EMANUEL HOFF,
FRED. G. HOFF.