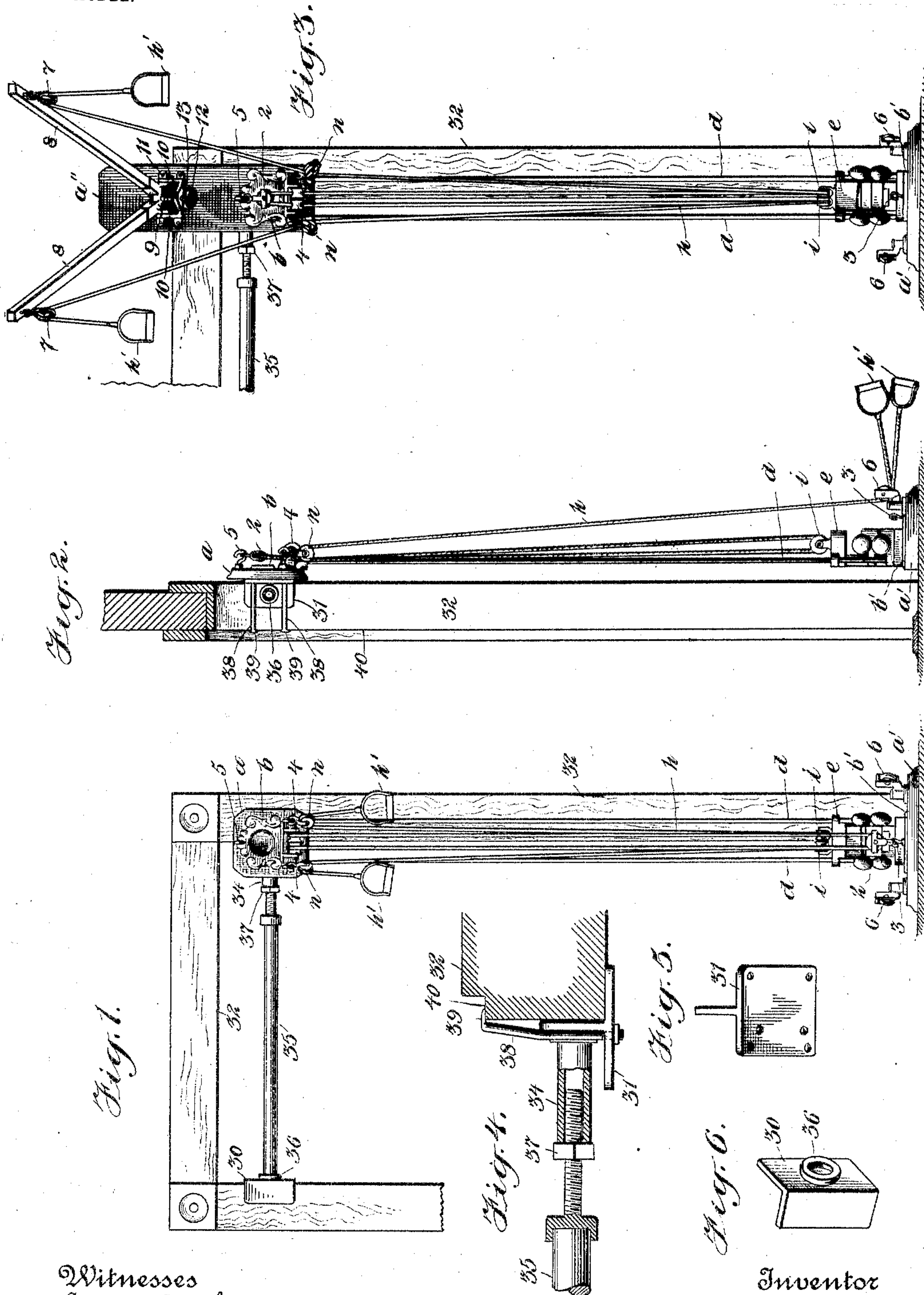


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W. J. BRYON, JR.
EXERCISING APPARATUS.
APPLICATION FILED MAR. 28, 1904.

NO MODEL.



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UNITED STATES PATENT OFFICE.

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EXERCISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 776,824, dated December 6, 1904.

Application filed March 28, 1904. Serial No. 200,279. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. BRYON, JR., a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Exercising Apparatus, of which the following is a specification.

This invention relates to exercising apparatus, and more particularly to that class of exercising apparatus in which a weight-carrier serving as a resistance medium is operated to slide on vertically-arranged guide-rods by means of an operating-rope passing over suitably-arranged pulleys, a type of such apparatus being disclosed in a prior patent of mine, No. 634,080, dated October 3, 1899. In the apparatus of my said prior patent a single operating-rope is employed which runs freely over the several connecting-pulleys of the apparatus and is provided with a handle at each end thereof, the said rope being arranged with its center or loop portion passing over a stationary pulley on the upper or wall bracket of the apparatus and with its two ends passing downwardly from such pulley under two pulleys on the weight-carrier and from thence up again and over two swiveled pulleys, these latter pulleys being also carried on the said wall-bracket. When the apparatus is arranged as thus described—that is, with those pulleys nearest the handles or operating ends of the rope at about the same height as the user's chest—the said operating ends of the rope will be caused by said pulleys to draw from the apparatus on a line even with the user's chest and the apparatus will be adapted for use for what is commonly known as "chest" exercise. The said apparatus is, however, also provided with means for rendering it capable of being used for what is known as "floor" exercise, in which case the pulleys will be so arranged that one of the operating ends of the rope will be caused to draw outwardly from the apparatus at a point adjacent to the floor. In adjusting the apparatus for this floor exercise, however, the parts are such that only one end of the rope may be operative, it being necessary to attach the other end thereof

to a stationary part of the apparatus. This is rendered necessary by reason of the fact that the rope is not sufficiently long and the apparatus is not provided with the necessary means to permit the use of a free-running operating-rope having handles at both ends thereof, as is permitted when the apparatus is adjusted for chest exercise. It is obvious, however, that the use of a free-running operating-rope having handles at both ends thereof is most desirable for whatever form of exercise the apparatus may be adapted, and it has therefore been one of the objects of my present invention to provide an apparatus of the character referred to having means whereby it may be adjusted for various forms of exercise—such as floor, chest, and overhead or so-called "intercostal"—and in each case the operating-rope be a free-running rope, having handles at both ends thereof to be grasped by the operator. In carrying this part of my invention into effect I attach a pair of pulleys to the weight-carrier and a pair of swiveled pulleys to the upper wall-bracket the same as in my said prior patent; but in the present case instead of mounting a single pulley on a fixed support on the wall-bracket in a position between the swiveled pulleys thereon for supporting the center or loop portion of the operating-rope, as in said prior patent, I mount two pulleys on the wall-bracket between the said swiveled pulleys thereon and pass the center or loop portion of the rope therefrom over an adjustable loose pulley that is adapted to be detachably connected with either the upper wall-bracket or lower floor-bracket, according to the form of exercise for which the apparatus is adjusted, the operating-rope being made sufficiently long to permit the loose pulley being attached to the floor-bracket when the apparatus is adjusted for chest exercise, and thereby providing for a like length of rope when the apparatus is adjusted for floor exercise by the shifting of the said loose pulley to the upper wall-bracket. As a part of my invention as embodied in this adjustable feature of the apparatus means are also provided for cooperation with the rope in permitting of its adjustment

for the different forms of exercise, as will be hereinafter more particularly pointed out in connection with the drawings.

In setting up for use an exercising apparatus of the present type the lower bracket is usually attached to the floor and the upper bracket to the wall or door-casing of a room. Screws or similar fastening means are usually employed for attaching these brackets to their respective supports, the use of which in connection with the upper bracket is objectionable because of their tendency to mar and damage the supporting-wall or door-casing; and it has therefore been a further object of my present invention to provide a simple and effective means for supporting the upper bracket of the apparatus in position without the aid of screws or similar fastening means that would tend to mar or damage the supporting part. This object I effect by a certain novel construction and combination of brackets and clamping parts which together form a holding-frame that may be readily and conveniently adjusted to the casing of any doorway and be frictionally held in position.

Referring now to the accompanying drawings, forming part of this specification, Figure 1 is a front elevation of an exercising apparatus embodying my invention in operative position on a door-casing, which latter is shown as partly broken away. Fig. 2 is a side elevation of the same with the door-casing and a part of the holding-frame in section. Fig. 3 is a view similar to Fig. 1, showing the apparatus adjusted for overhead or intercostal exercise. Fig. 4 is a sectional detail showing a part of the holding-frame in operative position on one side of a door-casing, and Figs. 5 and 6 are detail views of parts of the holding-frame.

The apparatus forming the subject-matter of my present application is the same in many of its parts as that disclosed in my said prior patent, No. 634,080, the same comprising the upper wall-plate *a*, having a bracket *b* secured thereon, the lower floor-plate *a'*, having a bracket *b'* secured thereon, the vertically-arranged guide-rods *d d'*, supported at their opposite ends in said brackets, the weight-carrier *e*, mounted to slide on said guide-rods, and the operating-rope *h*, passing over suitably-arranged pulleys and connecting with said weight-carrier for raising and lowering the same. The arrangement of the pulleys over which the operating-rope passes in my present apparatus differs, however, as before referred to, from the arrangement disclosed in my said prior patent. In the present case, as shown in Fig. 1, the center or loop end of the rope *h* passes around a loose pulley 2, that is detachably connected with a hook 3 on the lower bracket *b'*, and from such pulley the two ends of the rope pass upwardly over two pulleys 4 4, mounted on the upper bracket *b* adjacent to the vertical center thereof, and from thence pass downwardly under two pul-

leys *i i* on the weight-carrier *e*, from which they again pass upwardly and over two swiveled pulleys *n n* on the bracket *b*. With this described arrangement of the rope and cooperating parts the apparatus will be adjusted for chest exercise.

When it is desired to adjust the apparatus for floor or rowing exercise, the loose pulley 2 will be shifted from its said position in connection with the hook 3 on the lower bracket to a position in connection with a hook 5 on the upper bracket, and the ends of the rope *h* will be drawn downward and under two swiveled pulleys 6 6 in the lower floor-plate, as shown in Fig. 2, the length of rope required in passing the two ends of the rope under the pulleys 6 6 being provided by the raising of the loose pulley 2, which engages the center or loop end of the rope.

The use of the loose pulley 2 in controlling the length of the rope, as described in connection with Fig. 2, also permits of the apparatus being adapted for overhead or so-called "intercostal" exercise, the only change required to adapt the apparatus for this form of exercise from the adjustment or arrangement of the parts shown in Fig. 2 being to remove the ends of the rope from under the pulleys 6 6 and pass the same over pulleys 7 7, carried by suitably-supported intercostal bars 8 8 in a position above the upper pulley support or bracket *b*, as shown in Fig. 3. These intercostal bars when used may be supported in any suitable manner, the same, as herein shown, being carried by a bracket 9, which is pivoted between two ears 10 10 on a base-plate 11, an adjusting-screw 12, having a screw-threaded connection with a flange 13 on said base-plate and engaging with the under side of the bracket 9, serving as a means to support the outer or pulley-carrying ends of the bars 8 in a vertically-adjustable position, whereby the pulleys thereon may be adjusted to suit the height of the user. The said base-plate 11, to which the bracket 9 is pivoted, may be attached to any suitable support, the same, as herein shown, being secured on the same wall-plate that carries the bracket *b*, the said wall-plate (indicated at *a''*) being similar to the corresponding wall-plates of the other views, but somewhat longer.

The apparatus as described may be supported in operative position in any suitable manner; but I prefer to support it by attaching the floor-plate *a'* to the floor and the wall-plate *a* to my improved holding-frame, which latter I will now describe. This frame comprises two angle bracket-plates, (indicated at 30 and 31, respectively,) which are adapted to rest upon the corner of the door-casing, as 32, at opposite sides thereof, and be held in such position by an intermediate clamping-bar, one of said bracket-plates being adapted to have the wall-plate *a* of the apparatus screwed, bolted, or otherwise secured thereto. The

said clamping-bar in the present case is formed in two sections, one of which (indicated at 34) is tubular, and the other (indicated at 35) may be solid, these two sections being adapted to rest at their outer ends in suitable seats 36 on the opposite faces of the bracket-plates, and at their inner or adjacent ends being connected by the insertion of the end of the solid section into the open end of the tubular section, as clearly shown in Fig. 4, a nut 37 on the threaded end of the section 35 acting against the end of the section 34 and serving as a means to force the sections apart in an endwise direction and so clamp the bracket-plates 30 and 31 in a desired adjusted position on the door-casing. When the said bracket-plates are clamped in position by the clamping-bar as described, they will be firmly held in vertical position; but in order to prevent liability of the bracket-plate 31, to which the upper end of the apparatus is secured, working forward on the door-casing under the strain produced by the outwardly-pulling action of the ends of the operating-rope of the apparatus I prefer to employ two rods or bolts 38 38, which are connected at one end with the plate 31 by nuts, and at their opposite end are provided with heads 39, which engage with one side of the door-jamb 40 and lock the bracket-plate against forward movement.

Having thus set forth a practical embodiment of my invention, I do not wish to be understood as limiting myself to the particular details of construction and combinations of parts described, as the same may be more or less materially modified without departure from the invention. For instance, a single pulley or roll, preferably a broad one, may be used on the weight-carrier in lieu of the two pulleys 4 4 and on the upper bracket in lieu of the two pulleys 4 4 and perform the required function. Also each of the plates α and α' and their attached brackets instead of being formed in separate parts secured together may be formed in single integral parts. These and other similar changes might be made in the various details of the apparatus, but would all be within the scope of my invention, for

What I claim is—

1. In an exercising apparatus, the combination of upper and lower supports, the said upper support being provided with a plurality of pulleys, a weight-carrier movable between said supports and provided with a pulley, a loose pulley having means for detachable connection with the said upper and lower supports and being interchangeable in position from one to the other, a single operating-rope

passing over the said several pulleys with its center or loop portion engaging the loose one, and a pair of pulleys on the lower support to be engaged by the ends of the operating-rope, substantially as and for the purpose set forth.

2. In an exercising apparatus, the combination of upper and lower supports, the said upper support being provided with a plurality of pulleys, a weight-carrier movable between said supports and provided with a pulley, a loose pulley having means for detachable connection with the said upper and lower supports and being interchangeable in position from one to the other, a single operating-rope passing over the said several pulleys with its center or loop portion engaging the loose one, and a pair of pulleys with supporting means therefor located above the said upper support, substantially as and for the purpose set forth.

3. In an exercising apparatus, the combination of upper and lower supports, the said upper support being provided with a plurality of pulleys, a weight-carrier movable between said supports and provided with a pulley, a loose pulley having means for detachable connection with the said upper and lower supports and being interchangeable in position from one to the other, a single operating-rope passing over the said several pulleys with its center or loop portion engaging the loose one, a pair of "intercostal-exercise" pulleys with supporting means therefor located above the said upper support, and means for adjusting the vertical position of said "intercostal-exercise" pulleys.

4. In combination with an exercising apparatus, a holding-frame therefor, comprising an angle bracket-plate adapted to rest upon the corner of a door-casing or other similar support, and means, including a clamping-bar, for holding said bracket-plate against vertical or lateral movement on said door-casing or other similar support.

5. In combination with an exercising apparatus, a holding-frame therefor, comprising an angle bracket-plate adapted to rest upon the corner of a door-casing or other similar support, and means for exerting pressure upon said bracket-plate in two directions and at substantially right angles to each other and holding the same in adjusted position.

Signed at New York, in the county of New York and State of New York, this 25th day of March, A. D. 1904.

WILLIAM J. BRYON, JR.

Witnesses:

CHAS. F. DANE,
E. M. FAITH.