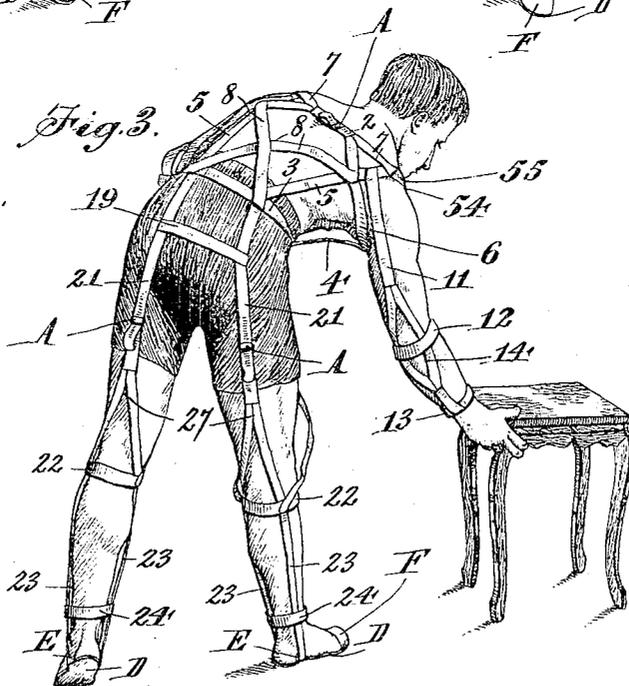
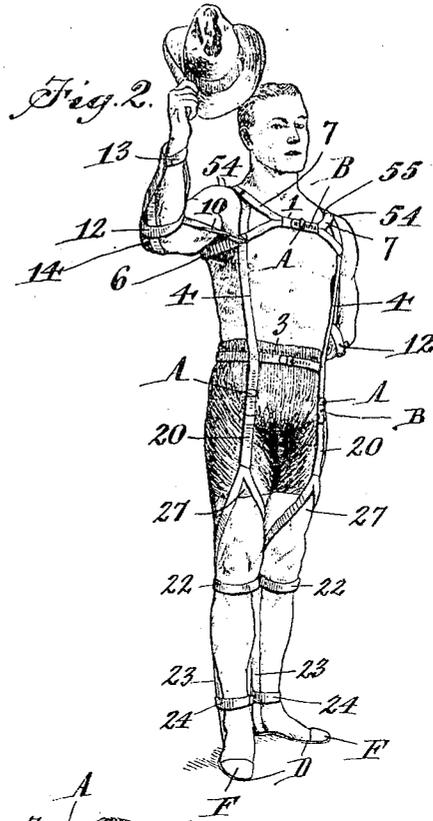
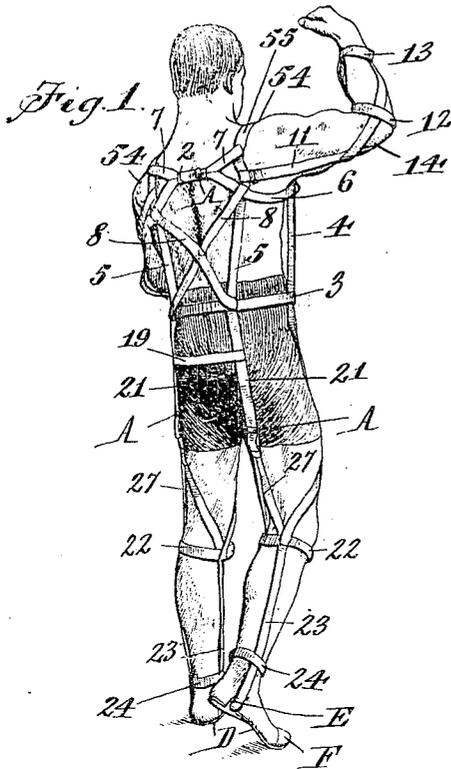


H. J. BRADSTREET.  
EXERCISING DEVICE.

APPLICATION FILED JUNE 30, 1904.

2 SHEETS—SHEET 1.

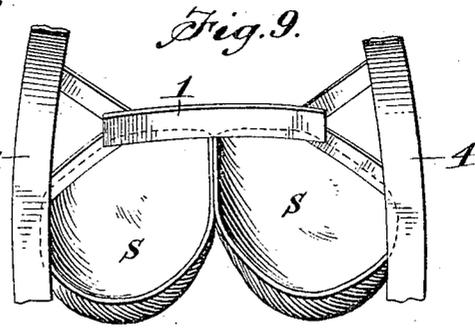
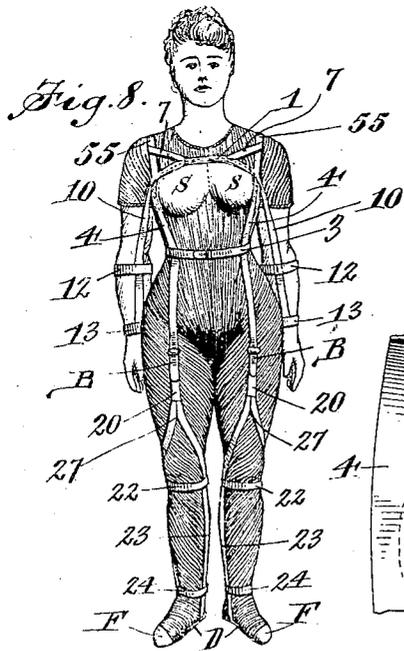
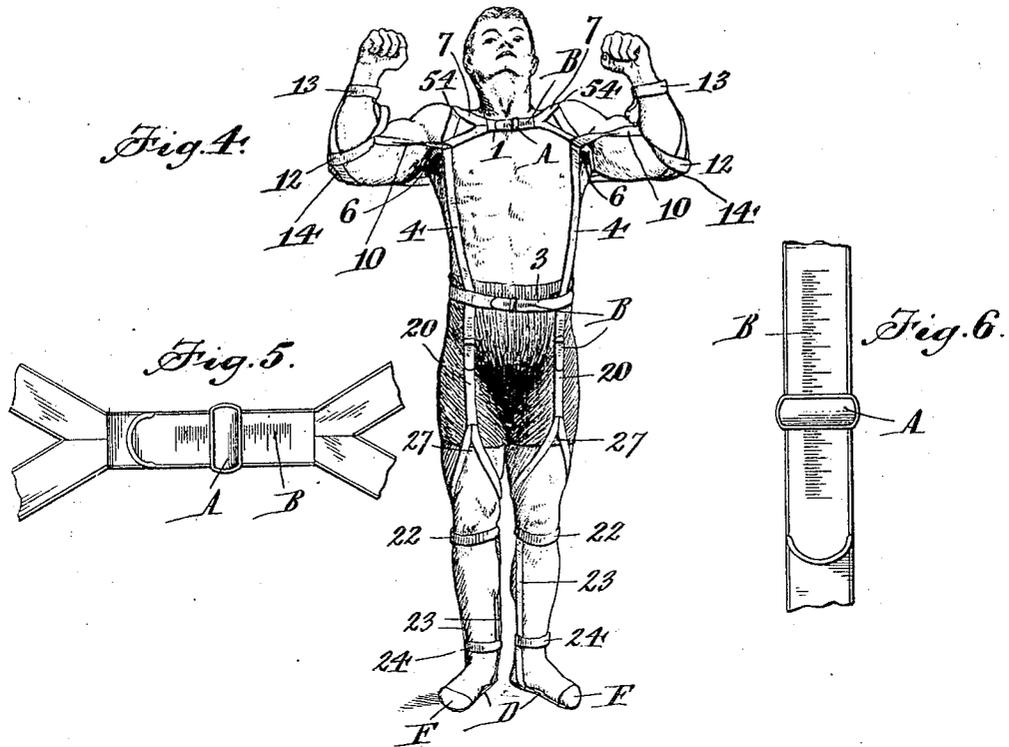


Witnesses:  
*Julius Lantke*  
*Edwin Maier*

*Robert J. Bradstreet, Inventor.*  
*By Neuhart & Neuhart, Attorneys*

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2 SHEETS—SHEET 2.



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Robert J. Bradstreet, Inventor.  
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# UNITED STATES PATENT OFFICE.

HOBERT J. BRADSTREET, OF BUFFALO, NEW YORK, ASSIGNOR TO AUTO PHYSICAL TRAINER COMPANY, OF BUFFALO, NEW YORK, A CORPORATION OF NEW YORK.

## EXERCISING DEVICE.

No. 807,908.

Specification of Letters Patent.

Patented Dec. 19, 1905.

Application filed June 30, 1904. Serial No. 214,781.

*To all whom it may concern:*

Be it known that I, HOBERT J. BRADSTREET, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Exercising Devices, of which the following is a specification.

This invention relates to exercising devices, more especially of that class which are adapted to be applied to the human body and to exert strain or resistance in opposition to the movements of the various members; and its object is to construct a device which will develop practically every muscle of the body without any special effort—that is, without going through any particular movements—as every movement of the body will place a tension on certain muscles, even if one is raising his hat to bow, raising an arm, stooping, writing, walking, or, in fact, making any movement of the body.

To this end the invention consists of an improved harness constructed of straps of elastic webbing of any suitable strength, shape, size, color, or material which will meet the requirements of different persons and conditions. This harness is made adjustable at different points, so that it can be fitted to bodies of different size, and the location of the various straps and branches is such as to cause the former to lie over parts which stretch in the ordinary movements of the body and the latter to lie over parts which bend, whereby such bending is not impeded. The following specification describes my preferred construction of this improved harness, as illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of the harness looking at the rear of the same. This view illustrates the harness as it appears when in use. Fig. 2 is a similar view looking at the front of the harness. Fig. 3 is a perspective view of the harness, showing the same as it appears on the body when the wearer is in a stooping position. Fig. 4 is a front view of the harness, which is intended to show the tension on the harness when the individual wearing the same is indulging in deep breathing or is raising his arms. Fig. 5 represents an enlarged fragmentary front view of the horizontal or connecting straps which lie

across the back and across the chest, showing the buckle to permit the adjustment. Fig. 6 is an enlarged front elevation of one of the vertical straps, showing the buckle for permitting adjustment of the harness to the body. Fig. 7 represents a perspective view of a sole, to which the vertical leg-straps are secured. Fig. 8 is a front view of a modified construction of the harness, showing the same designed to meet the requirements of the female sex. Fig. 9 is a fragmentary enlarged view of the vertical and horizontal straps of the harness, which lie across the chest of a female and which is provided with a breast-supporter.

Referring to the drawings, 1 represents the horizontal strap which lies across the chest and which is made adjustable by a buckle A or other means and provided with a scale B, either printed on or woven into the web of the material, and by which the tension across the chest can be varied from one to twenty pounds. The rear horizontal or neck strap 2 is similarly adjustable. The vertical straps are also constructed to permit of like adjustment, as shown in Fig. 6, and are also provided with scales B, whereby the tension of the straps can be accurately adjusted. This form of adjustment may also be used at the wrists, ankles, and elsewhere, as found necessary.

3 is the belt which surrounds the body on the waist-line and is attached to the upright front straps 4 4 and to the upright back straps 5 5, which latter are continued over the shoulders 54 and merge into the front body-straps 4. 6 represents straps passing under the arm-pits, attached to the front and back straps where they cross, and are connected with the chest and neck straps, as seen in Figs. 1 and 2.

7 represents shoulder-braces leading from the ends of the chest-strap in front and from the ends of the neck-strap in rear obliquely upward to the shoulder-straps 55, and thus forming triangles with the straps just described.

8 8 are two straps crossing each other on the back, connected at their point of crossing and forming an X, whose extremities are attached to the back straps at the point shown.

The harness for the arms comprises the following members: 10 10 are the front arm-

straps, leading from the lower angles of said triangles outward along the front of each arm, connected to the elbow-band 12, and attached to the wrist-band 13. 11 11 are the rear arm-straps, springing from the upright portions of the rear triangles and passing along the back of the arms in corresponding position. However, where these rear arm-straps 11 pass the elbows they are branched into loops 14, which are held open by attachment to the elbow-band 12, as best seen in Fig. 3, the purpose being to permit the free bending of the elbows.

The harness for the lower limbs comprises the following members: 20 20 are the front leg-straps, which are continuations downward from the front body-straps 4 and which preferably have the adjustment shown at B. 21 21 are rear leg-straps, which likewise continue the rear body-straps 5 and may also have adjustments. These rear leg-straps are preferably connected by a rump-strap 19 to prevent the slipping of the harness when a stooping posture is assumed, as seen in Fig. 3. Both the front and rear leg-straps branch just above the knees, as shown at 27, and the branches unite with each other at the sides of the legs at the point where they meet the knee-band 22. From thence the straps are continued downward along the sides of the legs, as at 23, cross, and unite with the ankle-bands 24, and pass onward to the foot-piece.

D represents a sole which is provided with two vertically and upwardly extending ears E, to which the side leg-straps 23 are sewed or otherwise secured. The said sole is also provided with a toe-piece F, which is intended to retain the sole in the proper position with relation to the foot while drawing the stocking or shoe over the foot. The principal function of this sole is to divide the strain of the vertical straps over the entire length of the foot, to which end the sole is of quite stiff material.

For the adaptation of this harness to the female form some slight variation in the adjustment of parts may be necessary; but this can generally be accomplished at the points where the buckles A are indicated. In this connection, however, I sometimes employ a breast-supporter, which consists of shields or screens S S, of proper material, attached to and carried by the chest-strap 1, as best seen in Figs. 8 and 9.

It will not be necessary to have a clear understanding of this harness to expatiate at great length on the mode and advantages of its use. It is clear that when the right arm is raised, as seen in Fig. 1, the rear arm-strap will be stretched slightly. When deep breathing occurs or both arms are raised, as in Fig. 4, all the front and back straps 4 5 will be stretched, and possibly some pull may be given to the leg-straps. When a stooping posture

to one side is assumed, as in Fig. 3, the leg-straps for one leg will be stretched suitably, and if the body is inclined forward, as well as sidewise, the rear leg-straps will be stretched the most. In fact, none of the ordinary movements of the body can be performed without exerting more or less tension on some of the various straps, and as the latter are elastic they yield sufficiently, while slightly opposing the movement, and hence giving exercise to the muscles which are used. I do not consider it necessary that the elbow, wrist, knee and ankle bands shall be of elastic material, as they serve as points of attachment for the others. The large cross on the back is especially useful as bringing into play a greater resistance than the vertical straps would afford when one side of the body is moved in excess of the other. I consider it highly important to employ loops at the elbows and branches above the knees, whereby the natural bends assumed by these members shall not be impeded.

What is claimed as new is—

1. An exercising device for the human frame consisting of vertical elastic straps extending from the feet upward and branching forward and rearward to pass over the shoulders, and elastic straps extending across the chest and back and connected with the vertical straps at their points of crossing.
2. An exercising device for the human frame consisting of a belt, elastic straps extending from the belt upward over the shoulders, straps extending across the chest and back, and elastic straps extending along the arms on opposite sides thereof to wristbands and being connected to the latter.
3. An exercising device for the human frame consisting of elastic straps extending from the feet upward over the shoulders, wristbands, and elastic straps extending thence inward across the chest and back and connected with the vertical straps at their points of crossing.
4. In an exercising device, the combination with the side leg-straps leading from the feet upward along the sides of the legs, and front and rear leg-straps along the thighs, of branches consisting of oblique straps leading from the lower ends of said front and rear straps into the upper ends of said side straps whereby the movements of the knees are not impeded, and means for supporting the upper ends of said front and rear straps.
5. In an exercising device, the combination with a belt, knee-bands and ankle-bands, of elastic straps leading from the belt down the rear of the legs, branched above the knee-pits, connecting with the knee-bands at the sides of the latter, thence leading downward along the sides of the limbs, and secured to said ankle-bands.
6. In an exercising device, the combination with a belt, knee-bands and ankle-bands; of

elastic straps leading from the belt down the rear of the legs, branched above the knee-pits, connecting with the knee-bands at the sides of the latter, thence leading downward along the sides of the limbs, and secured to said ankle-bands, and a transverse rump-strap connecting the rear leg-straps.

7. In an exercising device, the combination with a belt, and two elastic straps leading from points in the front of the belt over the shoulders to points in the rear of the belt; of transverse straps at the front and rear of the body, straps leading under the armpits across the upright straps and connected with the transverse straps, and shoulder-piece straps leading from the transverse straps obliquely upward to the shoulder-straps and forming triangles with said armpit-straps.

8. In an exercising device, the combination with a belt, upright straps leading from it over the shoulders, transverse straps on the chest and back, and oblique straps extending from the transverse straps to the vertical straps and forming triangles; of wristbands and elbow-bands, and straps leading from the former attached to the latter, and extending along the front and rear of the arms, their inner ends being connected with said triangles in front and rear.

9. In an exercising device, the combination with a belt, upright straps leading from it over the shoulders, transverse straps on the chest and back, and oblique straps extending from the transverse straps to the vertical straps and forming triangles; of wristbands and elbow-bands, and straps leading from the former attached to the latter, and extending along the front and rear of the arms, their

inner ends being connected with the lower ends of said front triangles and with the outer arms of said rear triangles.

10. In an exercising device, the combination with a belt, straps leading thence over the shoulders, and straps leading from these straps outward along the arms; of a cross on the back consisting of two oblique straps connected where they cross each other, attached at their lower ends to the points of union between the upright back straps and the belt, and connected at their upper ends adjacent the points of union between the upright back straps and the arm-straps.

11. In an exercising device, the combination with a belt, straps leading thence over the shoulders, and straps leading from these straps outward along the arms; of a cross on the back consisting of two oblique straps connected where they cross each other, attached at their lower ends to the points of union between the upright back straps and the belt, and connected at their upper ends adjacent the points of union between the upright back straps and the arm-straps, transverse chest-straps connecting the upright straps, and armpit-straps leading from these transverse straps under the arms and united to the upright back straps at the points where the upper arms of the cross are attached.

In testimony whereof I have affixed my signature in the presence of two subscribing witnesses.

HOBERT J. BRADSTREET.

Witnesses:

CHAS. F. BURKHART,  
EMIL NEUHART.