

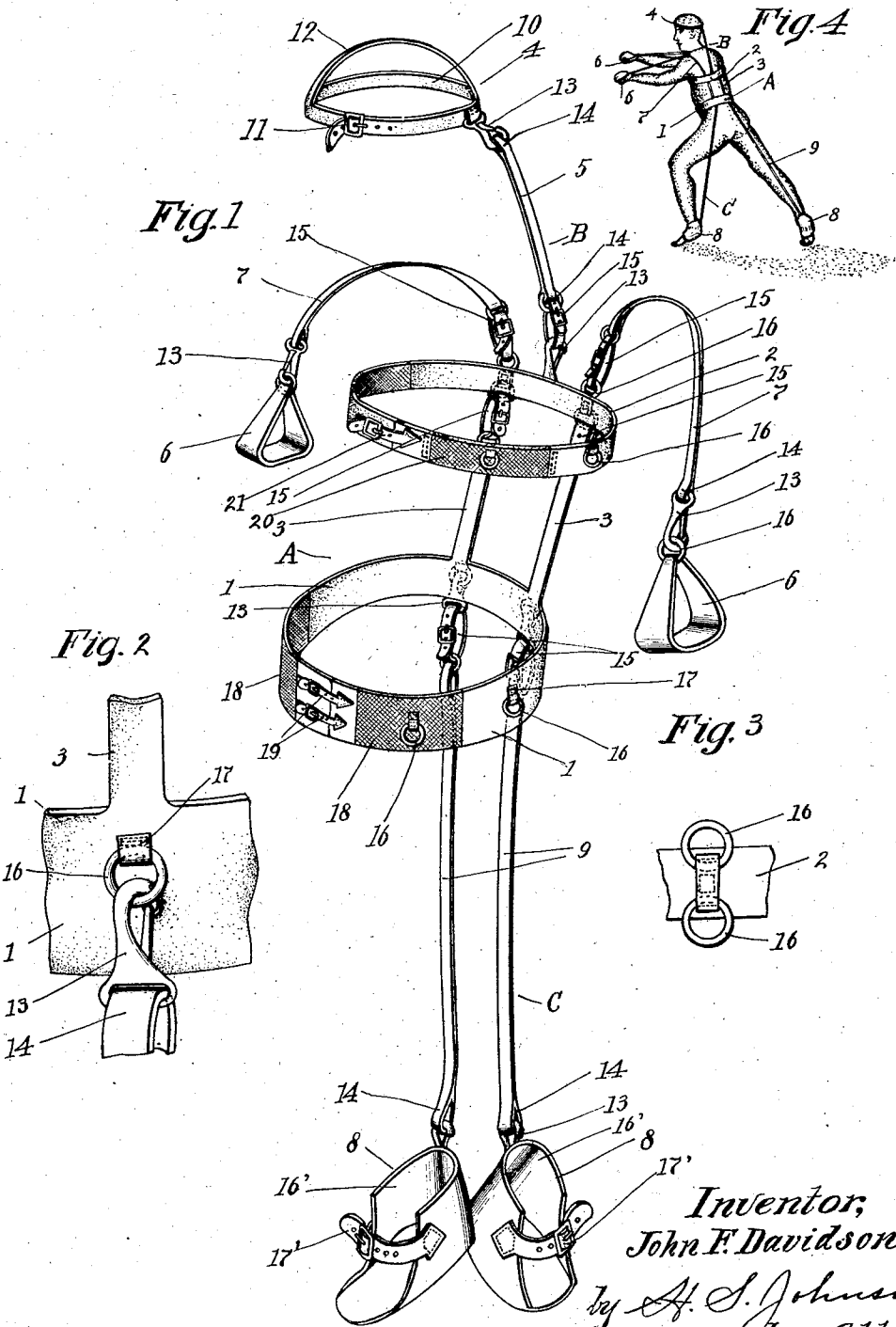
Feb. 22, 1927.

1,618,273

J. F. DAVIDSON

BODY EXERCISER

Original Filed Oct. 31, 1921



Inventor,
John F. Davidson
by A. S. Johnson
His Atty.

UNITED STATES PATENT OFFICE.

JOHN F. DAVIDSON, OF ST. PAUL, MINNESOTA.

BODY EXERCISER.

Application filed October 31, 1921, Serial No. 511,570. Renewed July 28, 1926.

This invention relates to physical exercisers, and more particularly to that type of devices designed to be supported and carried by the body of the user, an object of the invention being to provide a device whereby the limbs, head and neck of the user will be resisted against movement in certain directions, by tensely elastic bands radiating from an area located in the region of the spine and ranging from the girdle of the chest to the girdle of the abdomen.

A further object of the invention is the provision of a body receiving harness, which is adapted to be fastened to the trunk of the human body, to constitute a foundation, or fixed section to which the feet, hands and head are elastically connected by means of elastic bands so that a pull set up in the bands, will be concentrated in a certain area of the trunk of the user, the elastic bands being capable of adjustment and so arranged, that, when stretched, they will tend to flex the body of the user into various attitudes.

A still further object of the invention is the provision of a body exerciser, which will be adjustable whereby to vary the tensile resistance supplied by the elastic connections, by shortening or lengthening them, those parts of the exerciser constituting the foundation to which the elastics are connected, being also constructed of yielding or elastic material, whereby to so yieldingly bind the muscles of the abdominal and chest walls, as to impose work upon them in their effort to perform their normal functions.

To this end the invention consists in the construction, combination and arrangement of parts hereinafter described and claimed:

Figure 1 is a perspective view of my improved exerciser.

Figure 2 is an enlarged perspective view of a detachable hook and ring connection, whereby the elastic bands are detachably secured to the abdominal belt.

Figure 3 is a front view of a section of the chest girdle, showing the ring supports thereon, and

Figure 4 is a perspective view of a figure showing the exerciser in use.

The invention comprises a foundation section A, an upper body section B, and a lower limb section C.

Section A consists of an abdominal belt or girdle 1, and a chest band or girdle 2, said belt and band being connected by a

pair of spaced, vertically directed straps 3, said straps being disposed one on either side of the spine of the wearer.

The upper body portion B comprises a head piece 4, connected by means of an elastic band 5, (all the elastic bands being preferably of rubber) to the chest band 2; and two hand pieces 6, connected by elastic bands 7, on either side of the band 5, to the chest band and preferably in alinement with the straps 3.

The lower limb section C, consists of a pair of foot pieces 8, connected by the elastic bands 9, to the abdominal belt 1, said bands being also preferably in alinement with the straps 3.

The head piece 4 consists of a head strap 10, having buckle adjustment 11, said strap fastened around the skull across the forehead thereof; and a crown strap 12 secured at its ends to the head strap, and extending from the center of the forehead over the top of the skull to the rear thereof.

Secured to the rear of the head strap 10, preferably in alinement with the crown strap 12, is the snap hook 13, (which is typical of all the snap hooks hereinafter referred to) said snap hook being connected to the loop 14 of the elastic band 5. The ends of all the elastic bands shown are formed with loops similar to loop 14, these loops being preferably integral with the body of the band. The band 5 is connected to the chest band 2, by means of snap hook 13, and a strap adjustment link 15, said link being preferably made of a leather strap, having an adjustable buckle joint whereby the link may be lengthened when desired.

Thus, the length of the connection between the head piece and the chest band may be varied, to render the device available for persons of different size, and also for the purpose of increasing or reducing the tensile resistance of the band. The elastic band connections 7, connecting the hand pieces 6, with the chest band or girdle, include adjustable strap links 15, secured to the chest band, preferably by means of rings 16, as shown in Figure 2, of the drawings, and which is typical of all rings hereinafter referred to as ring connections, these rings being attached by means of a loop 17, of suitable material stitched to the chest band.

The rings are mounted sufficiently loose in said loop as to permit a substantially universal movement of the link straps 15.

The upper ends of the straps 3, are also provided with adjustable link straps, having ring connections with the breast band 2, the ring connections with the link straps of the elastic bands 7, being secured to the chest band, by a band of material extending through the rings, and firmly stitched to the chest band as shown in Figure 3 of the drawings.

At their outer ends, the bands 7 have hook connections 13 with the rings 16, which latter, in turn are connected to the hand pieces 6, the latter consisting of a loop preferably of leather and adapted to receive the hand or be gripped thereby. A glove may be substituted for the loops if desired.

Obviously, by adjusting the strap links 15, the length between the hand pieces 6, and the chest band, may be extended or reduced as required.

The foot pieces 8, of the lower limb section, consist of heel enclosures 16' having instep straps 17', whereby the foot may be firmly strapped into the foot piece, the latter being secured by means of the hook connection 13, to the loop 14 of the bands 9.

At their upper extremities, the bands 9 have adjustable strap link connections 15, with the hooks 13, which in turn have ring connections 16, with the belt 1. Thus, the distance between the belt 1 and the foot pieces may be adjusted, as to length as desired.

The abdominal belt 1, is somewhat wider than the chest girdle, and is provided with two elastic sections 18, made of manufactured elastic material, such as is used for the elastic straps of ordinary suspenders and the like, the belt being provided with strap and buckle fastening 19, whereby it may be adjusted to be firmly fastened around the abdomen of the wearer. The belt is further provided with a pair of additional rings 16, mounted at side thereof, which are intended to receive the strap links 15, of the elastic bands 9, when it is desired to move the foot pieces, so that the direction of pull of the bands on the lower limbs, when they are exercised, may be changed from the rear of the belt to the side or front of the abdomen.

The construction of the chest girdle, is similar to that of the belt, it having two elastic sections 20, strap and buckle fastening 21, and rings 16, whereby the upper limb exerciser elements forming part of the upper body portion B, may be shifted to the side or front of the chest band.

In operation, as shown in Figure 4, the pull of the elastic bands, when the limbs are outstretched, tend to bend or flex the upper and lower limbs, of the user, while the band 5 yieldingly resists a forward movement of the head, whereby the muscles of the limbs and neck may be energized to oppose the tension of the elastic mediums through a course of vigorous exercises, to develop them.

By moving the upper and lower limb elements from the rear rings to the rings provided at the front and side of the chest band, the tendency to pull the body backward is reversed, so that the arms when extended will be subject to a downward pull, as distinguished from an upward pull when the bands are resting on the shoulders, as shown in Figure 4.

The section A, constitutes a foundation, or a part fixed to the body of the wearer, designed to withstand the strains and stresses to which it is subjected by the activities of the limbs, neck and head. Soft canvass shoes may be substituted for the foot pieces shown, and other forms of foundation sections devised, without departing from the spirit of the invention.

I claim:

1. A body exerciser comprising in combination, a pair of body encircling belts, connected to each other at the rear but being unconnected at the front, a pair of hand pieces, elastic members connecting said hand pieces to the upper belt in alinement with the points at which the belts are connected, a head piece, an elastic member connecting said upper belt intermediate said hand piece members with said head piece, a pair of foot pieces, and elastic members connecting said foot pieces with said lower belt in alinement with the points at which the belts are connected.

2. A body exerciser comprising an abdominal belt and a chest belt, strap connections between these belts at the rear thereof and parallel to the spine, hand pieces, elastic members connecting the hand pieces to the chest belt in alinement with the strap connections, foot pieces, elastic members connecting the foot pieces to the abdominal belt in alinement with the strap connections, a head piece, and an elastic member connecting the head piece to the chest belt at a point intermediate of the strap connections.

In testimony whereof I affix my signature.

JOHN F. DAVIDSON.