May 19, 1925. 1,538,845

H. W. TITUS

PROGRESSIVE EXERCISER

Filed March 21, 1923

Fig. 1.

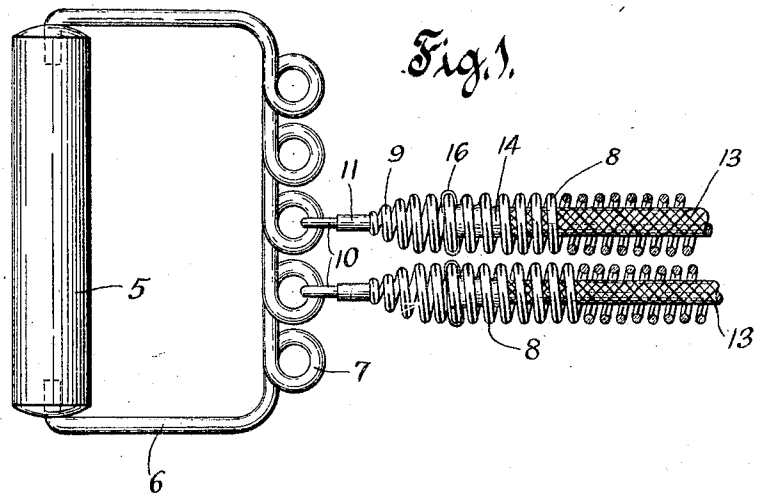


Fig. 2.

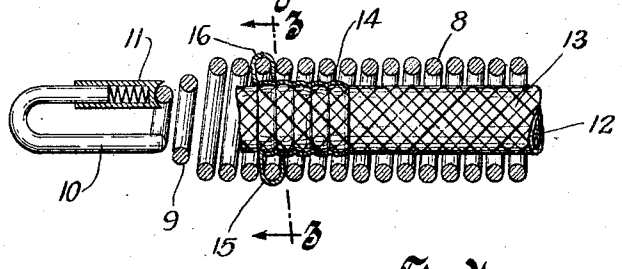


Fig. 5.

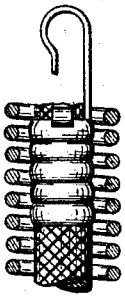


Fig. 3.

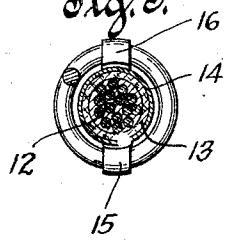
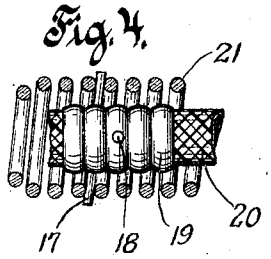


Fig. 4.



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Patented May 19, 1925. 1,538,845

UNITED STATES PATENT OFFICE.

HENRY W. TITUS, OF NEW YORK, N. Y., ASSIGNOR TO MARY WEIMAR, OF BROOKLYN, NEW YORK.

PROGRESSIVE EXERCISER.

Application filed March 21, 1923. Serial No. 626,448.

To all whom it may concern:

Be it known that I, HENRY W. TITUS, a citizen of the United States, and resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Progressive Exercisers, of which the following is the specification.

The device, the subject of this invention is a progressive exerciser of the elastic or expansible type and one that may be used in lieu of chest weights or other similar apparatus. This device is provided with a plurality of expansible devices, which may be placed under tension, to increase the load and the principal object of this invention is to provide an expansible member, combining features of well known elastic members with means for preventing the extension to an extent sufficient to destroy the elasticity.

The following then is what I consider the best means of carrying out this invention and the accompanying drawing should be referred to for a complete understanding of the specification which follows.

In the drawing:—

Fig. 1, is an elevation, partly in section, showing two strands of an exerciser secured to the handle.

Fig. 2, is an enlarged sectional view of the expansible members.

Fig. 3, a sectional view on the line 3—3 in Fig. 3, and

Fig. 4, a sectional view, showing a modification.

Fig. 5, is a modification, in elevation, showing the securing means for the elastic member.

Similar reference numerals indicate like parts in all the figures where they appear.

The handle member of my device is fully shown and described in the patent application filed by me under Serial #624,712 and consists of a grip 5 and bail 6, the bail being provided with a plurality of eyes 7, into which the expansible or elastic members are to be secured.

The elastic members, of which I may provide one or more, but which usually number ten in all, are each made up of a coiled spring as shown at 8, the end 9 of which is reduced and provided with a hook 10 and thimble 11, the hook and thimble being adapted to engage and secure the elastic member into the eye 7.

Within the spring member 8, I arrange a cable 12 which is an elastic cable made up of india rubber and fabric. I call particular attention to the outer covering of fabric shown at 13. This covering is coarsely woven of strong material and the strands of the weave should be continuous.

Secured at each end and upon the outer casing 13 are metallic thimbles 14, each provided with flanges or projections 15—16, adapted to engage convolutions of the spring member 8.

When this device is operated, it may be stretched out to the elastic limit of the cable 12 and spring 8. Such springs and cables have been used, but their elasticity has been ruined by stretching beyond their ability to recover.

The casing 13, co-operating through the thimbles 14, which are secured to the springs 8, at a point near the ends thereof, limit the expansible movement of both springs and cable, preventing the stretching of these members beyond their normal limit.

In Fig. 4, I show a construction similar to that shown in Fig. 2, but, in this figure, pins 17 and 18 extend through the thimbles 19 and cable 20 and engage the convolutions of the spring 21.

Other modifications may be made within the scope of the appended claims without departing from the principle or sacrificing the advantages of the invention.

Having carefully and fully described my invention, what I claim and desire to obtain is:—

1. An exerciser comprising a plurality of elastic members, one within the other and a cover upon one said member and means for securing each end of the other said member to said cover to prevent the movement of said members beyond their elastic limit.

2. In an exerciser, a coiled spring member and a non-metallic elastic member arranged within the coil of the spring member and clamps upon said non-metallic elastic member for securing said non-metallic elastic member to said spring member, at approximately the ends thereof.

3. In an exerciser, a coiled spring member and a non-metallic elastic member arranged within the coil of the spring member and means for securing said non-metallic elastic member to said spring member, at approximately the ends thereof, said non-

elastic member having a casing and means for securing it to said spring for limiting the movement of said elastic member and said spring.

4. In an exerciser, a resilient metallic member and an elastic non-metallic member arranged therewith, means for securing them in operative relation one within the other and fabric covering for said elastic member and means for securing it for preventing the extension of said members beyond the elastic limit thereof.

Signed at the city, county and State of New York, this 9th day of March, 1923.

HENRY W. TITUS.