June 24, 1969 R. A. BURZENSKI 3,451,675

SPRING TYPE EXERCISERS

Filed Sept. 14, 1966

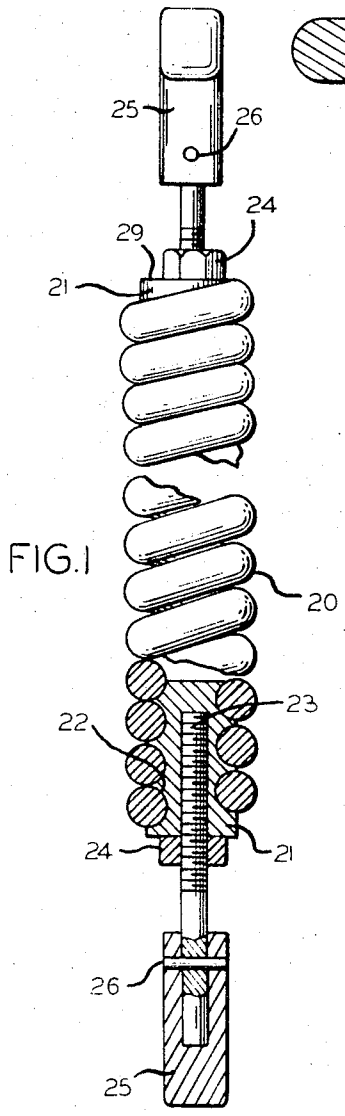


FIG. 1

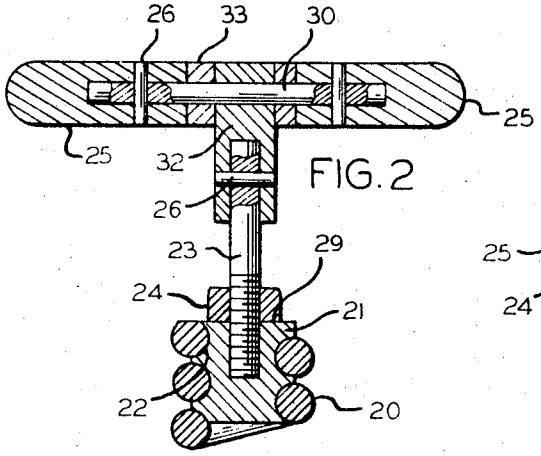


FIG. 2

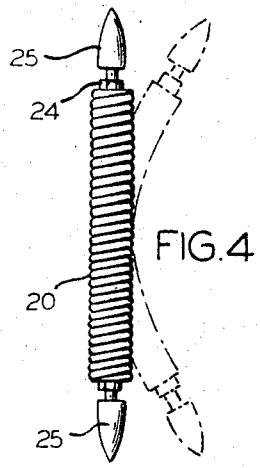


FIG. 4

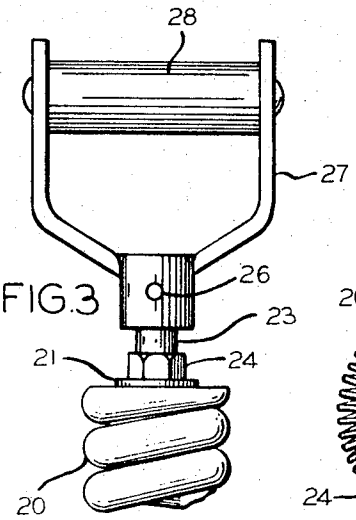


FIG. 3

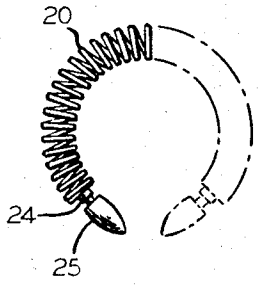


FIG. 5



FIG. 6



FIG. 7



FIG. 8



FIG. 9

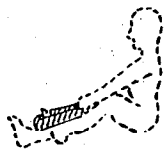


FIG. 10

INVENTOR
RALPH A. BURZENSKI

BY Irwin C. Alter

ATTORNEY

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SPRING TYPE EXERCISERS

Ralph A. Burzenski, 5429 N. 25th St., Milwaukee, Wis. 53209

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Int. Cl. A63b 21/02; F16f 1/12
U.S. Cl. 272—83 1 Claim

ABSTRACT OF THE DISCLOSURE

A coil spring type exerciser having a unique handle attachment arrangement associated therewith. The coil spring exerciser is used either by applying tensional forces through the use of the exerciser's hands or feet in conjunction with the major trunk portion of the exerciser's body or without touching the trunk portion of the exerciser's body.

My invention relates to improvements in exercisers and more particularly to an exerciser incorporating a relatively stiff expansion spring which is useful for dynamic active exercising.

The prime object of my invention is to provide an exercising device that depends on a closely wound expansion spring for its manipulation and its resistance to manipulation.

Another object of my invention is to provide a device of the character described that provides an exerciser that depends on the bending of the spring as well as its expansion.

Still another object of my invention is to provide a device that may be manipulated with the arms only, or with the hands and feet whereupon the user may activate and stimulate any number of the body's muscles.

A still further object of the invention is to provide an exerciser that may be applied to and thereby benefit any part of the body.

It is manifest to anyone familiar with spring type exercisers, that the prime object consists in their expansion during their manipulation, or use. The device illustrated, described and claimed herein employs a tightly wound relatively stiff expansion type of spring that is bent for application to any part of the body of the user, yet may be expanded for its function.

Other and further objects of my invention will become more apparent as the description proceeds, when taken in conjunction with the drawings, in which:

FIG. 1 is a fragmentary, partially cross-sectional view of the completely assembled device, with single grips extending outward therefrom on both ends thereof;

FIG. 2 is a cross-sectional view of one end of the device, showing a double grip arrangement;

FIG. 3 is a view of one end of the device in modified form, equipped with a handle;

FIG. 4 is a view of the device shown in FIG. 1, illustrating in phantom the manner in which it may be bent when in contact with the user's back, or shoulders;

FIG. 5 is a similar view of the device, illustrating the manner in which it may be bent to a circular contour; and

FIGS. 6 to 10, inclusive, show schematic views of the device applied in various ways.

Similar characters of reference indicate corresponding parts throughout the several views, and referring now to the same, character **20**, indicates a tightly wound relatively stiff expansion spring which may be of any diameter depending on the amount of resistance to force desired.

Adjacent each end of spring **20** is a solid end block **21**, threaded at its outer periphery **22** for complementary engagement with the inner surface of the coils of wound wire constituting the spring **20**.

Each block **21** is centrally threaded to accommodate therein a threaded rod **23** which, in turn, is equipped with a lock nut **24**. A grip **25** (see FIG. 1) is suitably attached to rod **23** as by means of a pin **26** passing therethrough or in any other convenient manner. Grip **25**, as shown, presents a gripping surface which extends along the longitudinal axis of spring **20**, when spring **20** is in its rest position.

Obviously, grips **25** may be of any design or contour or they may be replaced by a handle **27** as shown in FIG. 3. Handle **27** may be of any form, shape or contour so as to provide a grip, shown as **28**, which presents a gripping surface which lies transversely of the longitudinal axis of spring **20**.

Rod **23** and its threaded engagement with block **21**, permit grip **25**, or handle **27**, to be easily interchanged. These handle means are held in a preselected fixed position by actuation of lock nut **24** into engagement with surface **29** of block **21** in a locking position. Spring **20**, in addition to being pliable and bendable, as shown in FIGS. 4 to 10 inclusive, may also be stretched and expanded if desired during its manipulation.

The modified handle means construction shown in FIG. 2, has a cross or transverse rod member **30** which supports a pair of grips **25** which are held in position by the passage of pins **26** transversely therethrough. In this assemblage, rod member **30** engages head member **32** which in turn is connected to rod **23** as by the passage of pin **31** therethrough. As shown in FIG. 2, each grip is cushioned by the interposition of a spacer **33** between it and member **32**.

The "resilient" action of the tightly wound spring **20**, which may be of any desired resistance, will determine the amount of force that is to be exerted during the exercising process. The exercising process, of course, may involve expanding the spring, bending the spring or both, as indicated.

From the above description it will become apparent to anyone familiar with the art, that the device herein described has a definite function and purpose not heretofore shown in the art of resilient exercisers, and although I have shown a specific construction and arrangement of the parts, I am fully cognizant of the fact that many changes may be made in the parts and their arrangement without affecting the operativeness of the device, and it is intended that they be included within the spirit and scope of my invention especially as it is defined by the claims appended hereto.

Having thus described my invention, what I claim and desire to secure by United States Letters Patent is:

1. A spring type exercising device comprising, in combination, a tightly wound relatively stiff expansion spring having a first and a second end.

handle means associated with each of said ends to permit expansion and manipulation of said spring in response to forces placed thereon.

said handle means comprising a block having peripheral threading complementary to the coils of said spring adjacent to the ends thereof,

said spring disposed in threaded engagement with said block, a grip supported by said block,

said handle means further comprising a rod means inserted into said block in threaded engagement

therewith and connectable to said grip, said handle means comprises,

a pair of grips disposed in axially spaced relationship to each other,

a transverse rod member interconnecting said grips,

a head member supporting said transverse rod member,

a pair of spacers carried by said transverse rod member, each of said spacers being disposed in operative interposition with one of said grips and said head member, and

said head member disposed upon and attached to said rod

References Cited

UNITED STATES PATENTS

1,980,861	11/1934	Hunter	272—83
2,296,175	9/1942	Morkoski	287—86 XR
2,714,008	7/1955	Urban	272—83

RICHARD L. PINKHAM, *Primary Examiner.*

W. R. BROWNE, *Assistant Examiner.*

U.S. Cl. X.R.

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