July 26, 1955 A. B. URBAN 2,714,008

EXERCISERS

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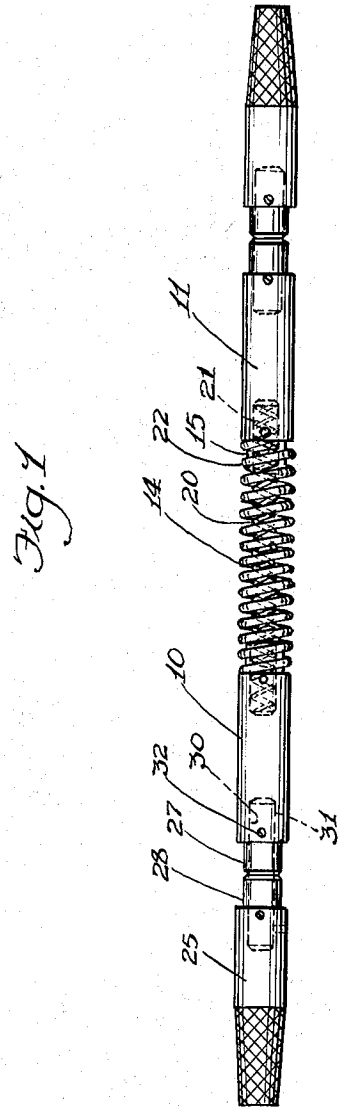



Fig. 1

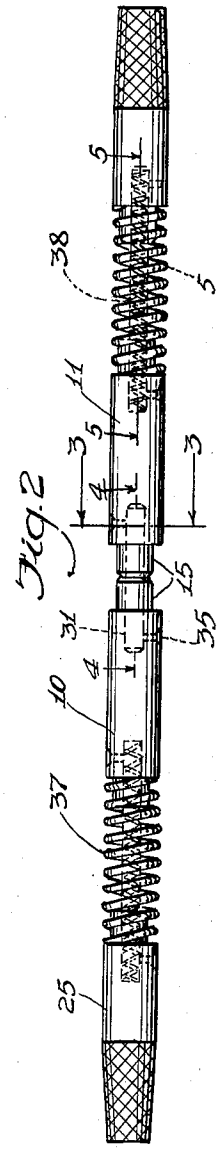



Fig. 2

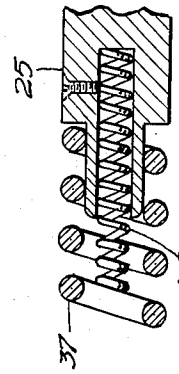



Fig. 5

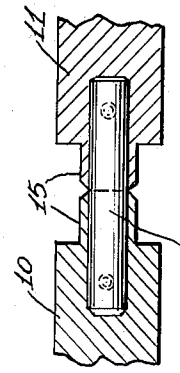



Fig. 4

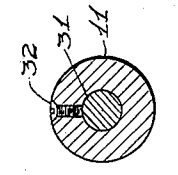



Fig. 3

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2,714,008

# EXERCISERS

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2 Claims. (Cl. 272—83)

My invention relates to devices employed for manual exercise, and more particularly to such devices as are of a portable nature and employing springs. Accordingly, it is one object of the present invention to provide an exerciser which is in the form of a bar and includes one or more springs designed to be tensioned when portions of the bar are maneuvered.

A further object is to employ a bar of the type referred to which includes one or more springs interposed between its sections at locations corresponding to the type of exercise desired.

A still further object is to provide an exerciser which includes a facility for exercising the arms, and is convertible to include a similar facility for exercising the wrists.

An additional object is to design the novel exerciser in a compact, elongated form, whereby to favor its storage in a narrow space.

Another object is to construct the exerciser as an assembled article which may be dismantled for packing in a compact bundle.

An important object is to include a minimum number of parts in the novel exerciser, whereby to render its manufacturing cost relatively low.

With the above objects in view, a better understanding of the invention may be had by reference to the accompanying drawing, in which—

Fig. 1 is an elevation of the novel exerciser in the form designed for exercising the arms;

Fig. 2 is a similar view of the exerciser converted to the form designed for exercising the wrists; and

Figs. 3, 4 and 5 are, respectively, sections on the lines 3—3, 4—4 and 5—5 of Fig. 2.

In accordance with the foregoing, specific reference to the drawing indicates the main portion of the exerciser as a pair of alined bars **10** and **11** which are spaced endwise. While these bars may be of any cross-section, it is preferable for purposes of smoothness and compactness to make them of circular cross-section, as shown in Fig. 3.

A sturdy coil spring **14** is designed to be interposed between the inner ends of the bars **10** and **11**; and the latter are formed with reductions **15** designed to receive and support the end portions of the spring, as shown in Fig. 1. The diameter of the spring is substantially the same as that of the bar **11**, so as to render the spring a continuation thereof.

While the spring **14** is supported endwise by the bars **10** and **11**, as stated, no direct means are employed to attach the spring to the bars in order to connect the latter to the spring and against separation, this being for the reason that attaching devices between a sturdy spring and a support would either be too large in order to hold, or too weak if made small or compact. Accordingly, other means are employed for the contemplated purpose, such means primarily residing in a spring **20** of small diameter passing through the center of the spring **14**. The bars **10** and **11** are made with facing longitudinal cavities **21** into which the end portions of the internal spring



**20** lodge to a considerable extent. Set screws **22** passed through the extensions **15** are directed against the internal spring to complete the attachment thereof to the bars.

The form of exerciser illustrated in Fig. 1 is completed by endwise extension with handlebars **25**. In order to attach the latter to the bars **10** and **11**, such bars are extended at their outer ends with reduced sections **27**, while the handlebars **25** are extended inwardly with similar reduced sections **28**. The facing ends of the bars **10** and **11** and the handlebars **25** are formed with facing bores **30**, and a dowel **31** is lodged in such bores, the dowel being fixed in position by the driving of screws **32** through the bars into engagement with the dowel. It is now seen that the dowels **31** form rigid connecting means between the handlebars and the main bars **10** and **11**. With the exerciser constituted as described, gathering the handlebars **25** to arch the spring **14** will require the exertion of the arms with a rotary motion and constitute an exercise for the same.

In order to convert the exerciser into the form designed for the exercising of the wrists, the exerciser is constituted as shown in Fig. 2. Here, the main bars **10** and **11** are shown gathered endwise; and they are secured in the gathered position by the lodging of the dowel **31** in the cavities **21**, set screws **35** being applied through the bars to secure the dowel in place. The exerciser is thus made rigid in the center.

The converted form of the exerciser employs a pair of shorter coil springs **37** between the outer ends of the main bars **10** and **11** and the handlebars **25**; and a pair of internal springs **38** is disposed within the springs **37**. The outer and inner springs are connected to the adjoining bars in the same manner as was described in connection with the disposal of the spring **14** in the original structure, so that the modified exerciser is formed with flexible elements near the ends instead of in the center. Now, when the handlebars **25** are swung toward each other, the tendency to curve the springs **37** involves the twisting of the wrists, this constituting an exercise for the same.

It will now be evident that the novel exerciser has a number of advantageous features. First, it embodies a pair of rigid elements at the ends which may be maneuvered to arch a yieldable element in the center, the resistance of the latter requiring the effort of the arms to flex the exerciser, and such effort constitutes an exercise. Further, the exercise is convertible by simply dismantling the same and changing the order of assembly in a manner to provide springs in terminal regions and therefore require strength in the wrists in order to flex the exerciser, this also forming an exercise. Further, the exerciser is in a long, one-piece form, which is simple to handle and similar to an exercising wand. Further, the exerciser is constructed in a manner to be readtily dismantled and assembled into either form by simple means familiar to any person. Further, the exerciser utilizes simple and concealed means to secure its sections to each other and to a spring or springs intermediate thereof, retaining the neat and compact form of the device. Finally, the parts entering into the novel exerciser are of a nature readily available or produced by conventional shop methods, rendering the cost of the exerciser reasonable.

While I have described the invention along specific lines, various minor changes or refinements may be made in either of its forms without departing from its principle, and I reserve the right to employ all such changes and refinements as may come within the scope and spirit of the appended claims.

I claim:

1. An exerciser comprising an elongated bar formed of two sections separated endwise, handles carried by the

outer ends of the sections, and tension means between the sections designed to resist manual effort to swing the sections at an angle from each other, said tension means comprising a coil spring with ends applied to the inner ends of said sections, the same having cavities in the facing ends, an internal coil spring extending within the first-mentioned coil spring, the end portions of the internal coil spring loading in said cavities, and means to secure said end portions to the respective sections.

2. An exerciser comprising an elongated bar formed of two sections separated endwise, handles carried by the outer ends of the sections, and tension means between the sections designed to resist manual effort to swing the sections at an angle from each other, said tension means comprising a coil spring with ends applied to the inner ends of said sections, the same having cavities in the facing ends, an internal coil spring extending within the first-mentioned coil spring, the end portions of the internal coil spring lodging in said cavities, and set screws to secure said end portions to the respective sections.




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