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Cline

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[54] **EXERCISING DEVICES**

[76] Inventor: **Vance Allen Cline,** 4831 N. Karlov, Chicago, Ill. 60630

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[51] **Int. Cl.** **A63b 13/00,** A63b 21/00

[58] **Field of Search** ..... 272/81, 82, 84, 57 D, 79 R, 272/58, 67

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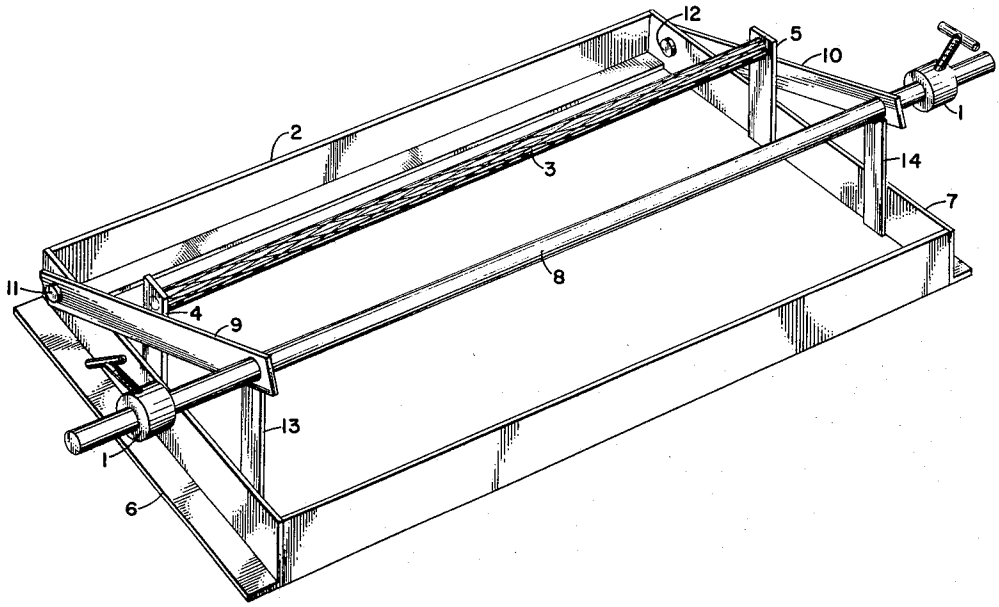
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Primary Examiner—Paul E. Shapiro

[57] **ABSTRACT**

An exercising device, useful in developing the muscles of the lower legs, ankles and feet. A rectangular frame supports a heel rest and pivotally mounts a pair of swing arms. The ends of the swing arms are spanned by a weight holding bar on which weights are secured by collars. A user places his heel on the heel rest and his toes under the weight bar and exercises by bending his ankle.

3 Claims, 4 Drawing Figures



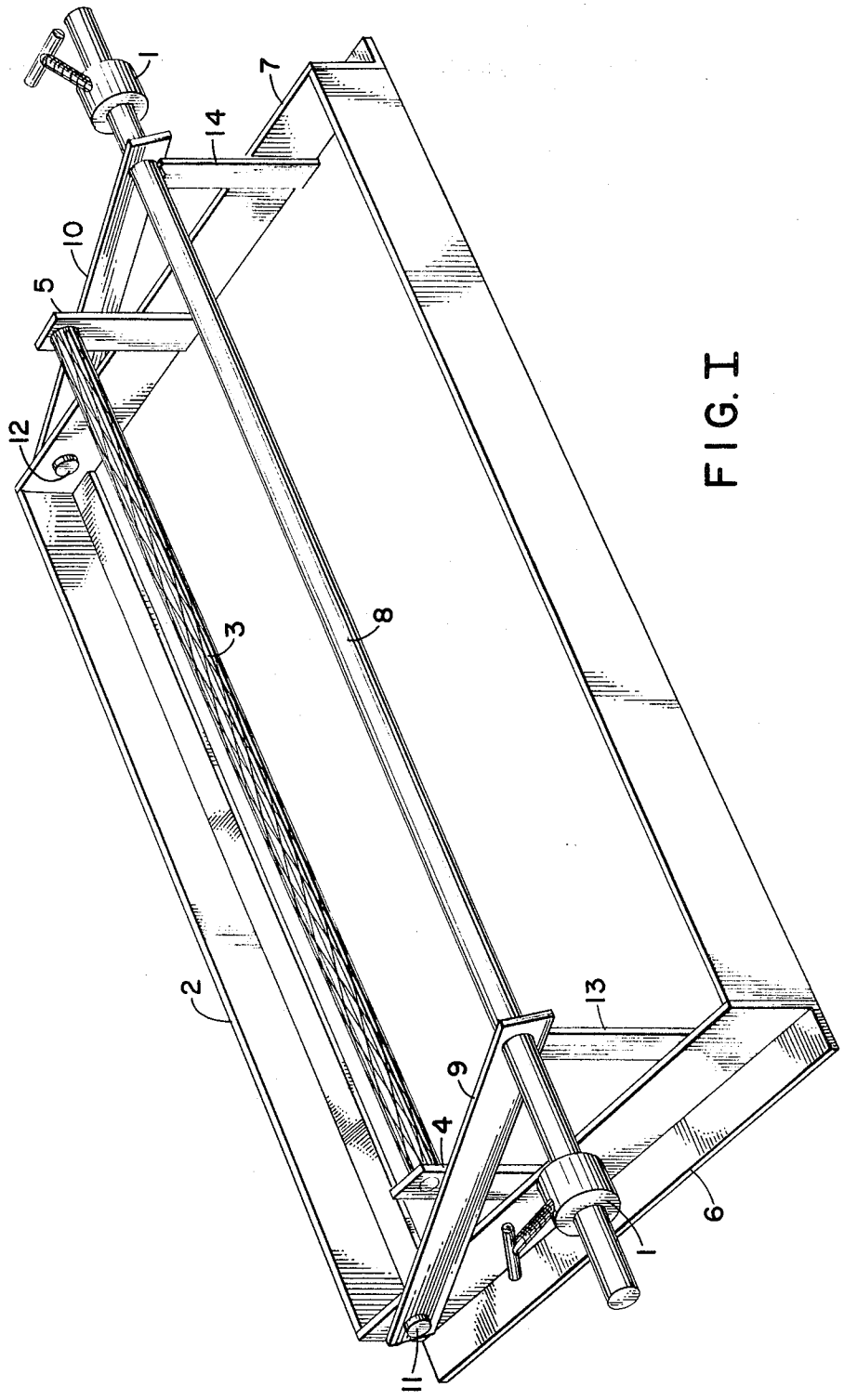


FIG. 1

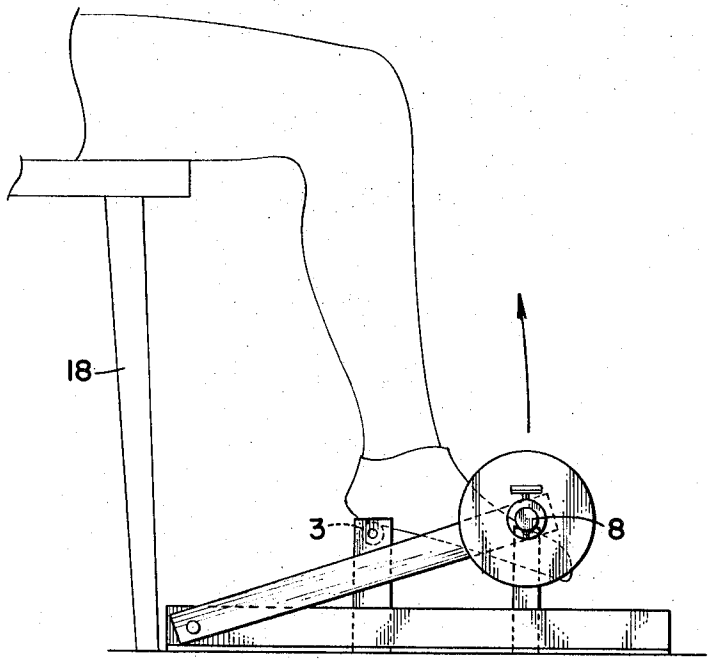


FIG. II

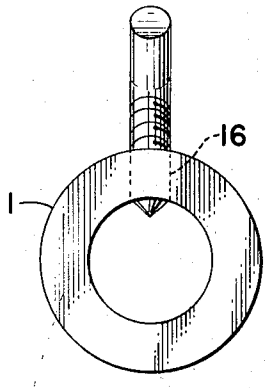


FIG. III a

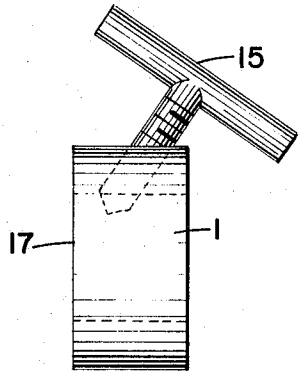


FIG. III b

EXERCISING DEVICES

DESCRIPTION

This invention relates generally to exercising devices, and more particularly to a device useful in the complete development of the muscles of the lower legs, ankles, and feet.

This device may also be used in the treatment of persons having foot arch problems, weakened legs or ankles; for example, someone who requires physical therapy, or one wishing to strengthen the legs, ankles and feet for other reasons (sports, etc.).

This invention also utilizes a different, and improved, weight holding collar, which could be used with many other exercising devices.

The present device permits a person to develop and strengthen the frontal shin area, of the lower leg. Primarily, this includes the peroneus longus, gastrocnemius, extensor digitorum longus, tibialis anterior, and soleus muscle groups. The present device can be set up within a few moments, to increase or decrease the resistance to the exercise. This is done by putting on or taking off, standard weights, as required by the individual. As a person's strength increases, more weight may be added to increase resistance.

It is an object of this invention, to provide an exercising device which may be utilized in the strengthening and developing of the lower leg, ankle, and foot area.

It is another object of this invention to provide an exercising device, which will permit treatment of the muscles being exercised with precise therapeutic resistance.

Still another object of this invention is to provide an exercising device which may be utilized by a person sitting on a chair in front of the device, without the necessity of permanently anchoring the exercising device. Adjustment, to the individual person, made by moving chair further from, or closer to, the exercising device.

Still a further object of this invention is to provide a new and improved weight holding collar, which may be used with many other exercising devices.

These together with other objects and advantages, which will become subsequently apparent, reside in the details of construction and operations, as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. I is a perspective view of the exercising device, with both weight holding collars (FIG. III), in place on the weight holding bar. No weights are on the bar in this view.

FIG. II is a side view of the device shown in FIG. I, weights are shown on the device, in this view. Also shown, is the position of the foot and leg, as placed in the exercise position.

FIGS. III*a* and III*b* are respectively a front view, and a side view, of the new, weight holding collar, also shown, on the exercise device of FIG. I, number **1.**

Referring now to the drawing, and FIGS. I and II in particular, the exercising device may be seen to include a frame, indicated generally at **2.** The frame is preferably constructed of 2-inch angle steel, and is secured, in a rectangular relationship, by means of welding or the like.

Referring again to FIGS. I and II in particular, the exercising device may be seen to include a heel rest indicated generally at **3,** and consisting preferably, of a knurled (roughened) section of 1 inch diameter pipe **3,** secured to two upstanding members **4** and **5.** These members, **4** and **5,** are then secured to frame members **6** and **7** respectively.

Referring further to FIGS. I and II, the exercising device may be seen to include a weight holding bar, indicated generally at **8,** and preferably consisting of a section of 1-inch diameter steel bar. Secured to the weight holding bar **8,** are two swing arm members **9** & **10.** These members **9** and **10** are preferably made of ¼ inch by 1½ inch flat steel, and are pivotal at points **11** and **12,** on frame members **6** and **7** respectively. Hardened steel bolts, and locknuts may be used as pivots, at points **11** and **12.**

Referring now to FIGS. I and II, the exercising device may be seen to include a pair of weight bar stops, indicated generally at **13** and **14.** These stops **13** and **14** are secured by welding or the like, to frame members **6** and **7** respectively. As best seen in FIG. I, the stops are located directly beneath the weight holding bar **8,** so as to hold the bar in a desirable position for beginning the exercise movement.

A further feature of this invention allows for the heel rest **3,** to be made adjustable. As this may be designed many different ways, no attempt is made to illustrate it here. This feature would allow the device to accept a wider range of foot sizes.

Referring now to FIG. III, the weight holding collar **1,** preferably consists of a steel ring **1,** with a center hole designed to accommodate the weight holding bar being used. This design further incorporates a threaded T screw **15,** running thru a threaded hole **16,** set at an angle, in the steel collar **1.** The angle of the threaded hole is set so as to allow the T screw to be turned, while the collars front face **17** is pushed against the exercise weights.

Referring now to the operation of the device in FIGS. I and II, the exercising device would be placed on the floor with preferably a chair **18,** facing the heel rest **3,** in a position suitable to the individual exerciser, With the exerciser seated in the chair, heels resting on the heel rest bar **3,** toes positioned beneath the weight holding bar **8** (FIG. III), the exercise may be begun by sliding back slightly in the chair, and pulling up and back with the toes. After pulling up the toes, (direction of arrow, FIG. II) the weight is released, so as to stretch the exercised area fully. This up and down movement with one or both feet is repeated until the lower leg is exercised completely. Resistance may be varied by adding or subtracting weight as required.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In combination an exercising device comprising a rectangularly constructed frame, including a foot heel rest assembly, consisting of a knurled shaft member secured to and supported by a pair of vertically disposed upstanding members secured adjacent the sides of two opposing transverse frame members, a weight holding bar assembly consisting of a shaft member, including a

pair of screw clamp weight collars, secured to a pair of opposing swing arm members, which are pivotal adjacent to the sides, at one end of the two forementioned opposing frame members, a pair of weight bar stops consisting of two vertically disposed upstanding members, secured adjacent to the sides of said opposing frame members, positioned beneath, and supporting the forementioned weight holding bar in proper position for beginning the exercise movement.

2. The structure of claim **1.** Wherein said screw clamp weight collars are comprised each of a length of heavy wall cylinder, sufficient length to provide stability, including a threaded T screw, running through a threaded hole set at an angle in relation to one face of said cylinder.

3. The structure of claim **1.** Wherein said weight holding bar is of sufficient length to accept a number of standard exercise weights, for the purpose of varying resistance to the exercise movement.

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