

[54] **WRIST EXERCISING DEVICE**
[76] Inventor: **Paul G. Hughes**, 55 Halfmoon Road,
Novato, Calif. 94947
[22] Filed: **April 17, 1972**
[21] Appl. No.: **244,739**
[52] U.S. Cl. 272/67, 272/DIG. 3
[51] Int. Cl. A63b 21/22
[58] Field of Search.....272/67, 68, 79 R, 79 D, 83 R,
272/83 A, 84, DIG. 3, DIG. 4; 73/379, 380,
381

[56] **References Cited**
UNITED STATES PATENTS

1,604,333	10/1926	Anderson	272/67
2,973,962	3/1961	Griffin	272/67
3,666,267	5/1972	McKinney	272/67

FOREIGN PATENTS OR APPLICATIONS

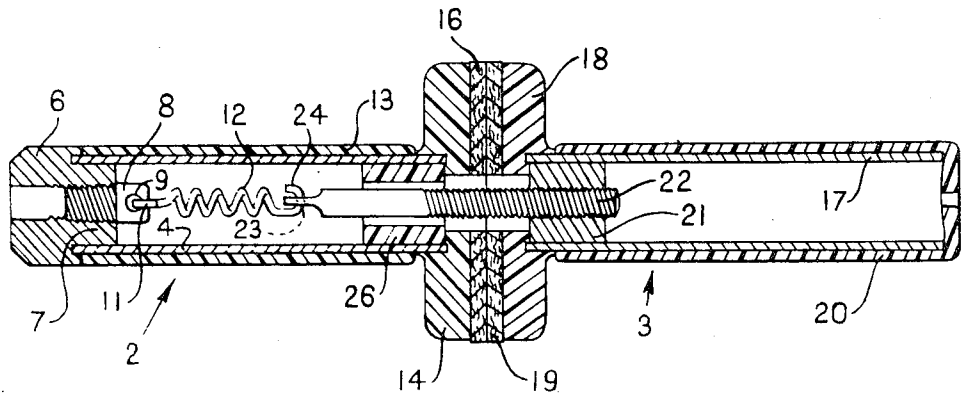
338,019	6/1921	Germany	272/67
97,425	7/1924	Austria	272/68

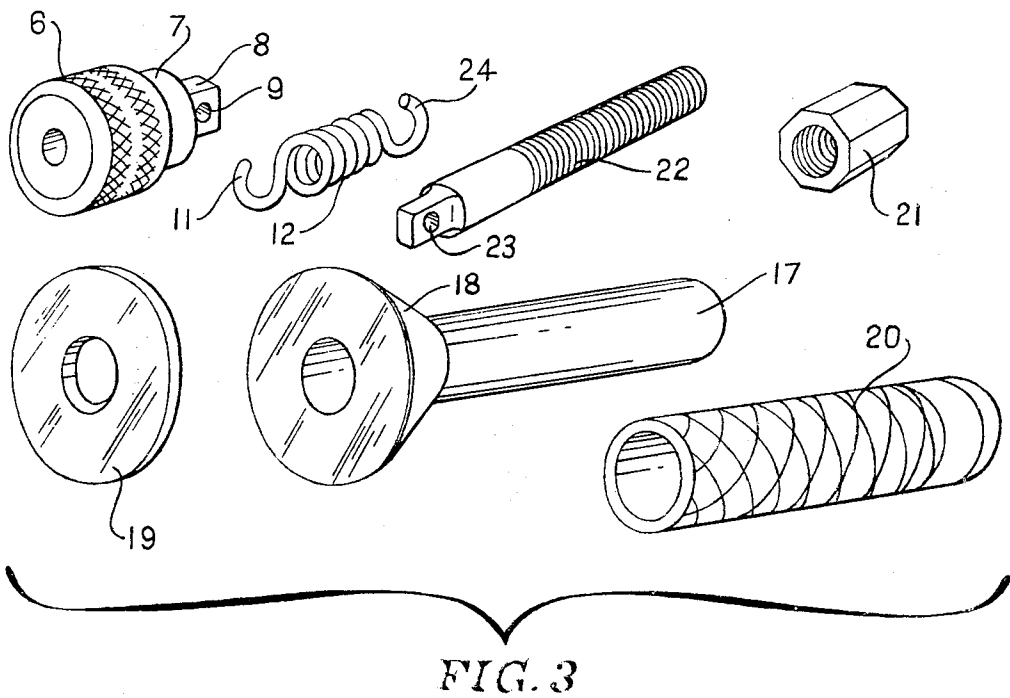
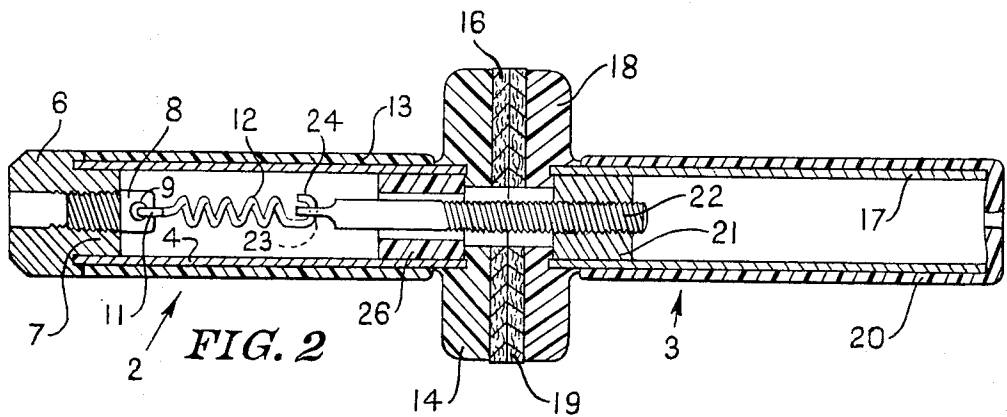
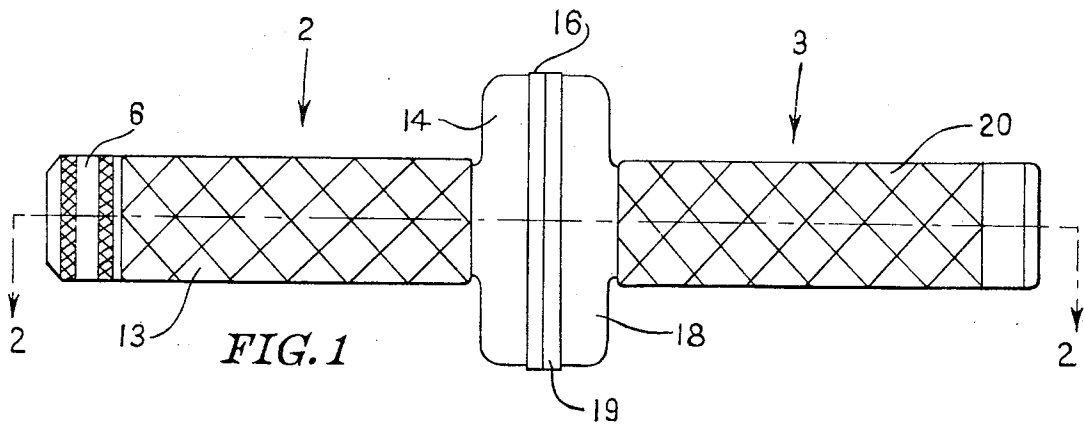
Primary Examiner—Richard C. Pinkham
Assistant Examiner—R. T. Stouffer
Attorney—Stanley Bialos

[57] **ABSTRACT**

An exerciser for wrists or the like, of two hand grip units provided with adjacent friction surfaces compressed together by spring means, the pressure exerted thereby being adjustable by a threaded rod screwed in one of the units to which a spring is connected; the spring being also connected to an adjusting knob on the other unit whereby spring tension is adjusted by turning the knob to move the rod.

8 Claims, 3 Drawing Figures





WRIST EXERCISING DEVICE

This invention relates to an exercising device; particularly adapted for strengthening and exercising the wrists, hands, arms, and other parts of the body of a person.

SUMMARY AND OBJECTS

Exercisers are known which are adapted to be grasped by the hands and which comprise parts relatively rotatable with respect to each other by turning the hands in opposite directions. They are advantageous for strengthening the wrists, arms, and other parts of the body, particularly for athletes such as boxers, baseball players, golfers, and others. Devices of such character have been composed of a complex number of parts.

Summarizing the invention, it comprises a simple structure composed of few and simple parts which can be readily assembled and disconnected, and at the same time provide ready adjustment of pressure applied to spring-pressed friction surfaces. The exerciser consists essentially of a pair of hand grip units having facing discs provided with friction surfaces held together under pressure which is readily adjustable. The friction surfaces resist turning movement of the units relative to each other when the units are hand manipulated.

One of the units has adjacent one end thereof a screw threaded anchoring member or part in which a rod is threaded for lengthwise adjustment. The rod is connected to a coil spring completely housed within the other unit, the spring being connected to an adjusting knob on such other unit. By turning the adjusting knob, the spring turns to thus move the rod lengthwise. As a result, the spring tension is adjusted by turning the knob with consequent movement of the rod.

From the preceding description, it is seen that the invention has as its objects, among others, the provision of an improved exerciser composed of few and simple parts, which can be assembled or disassembled easily, and which is of economical and simple construction. Other objects of the invention will become apparent from the following more detailed description and accompanying drawings in which:

DESCRIPTION OF DRAWINGS

FIG. 1 is an elevational view of the exerciser.

FIG. 2 is a horizontal section taken in a plane indicated by line 2—2 in FIG. 1.

FIG. 3 is an exploded view of various principal parts of the device.

DETAILED DESCRIPTION

The device comprises two hand grip units 2 and 3. The left-hand unit appearing in FIG. 2 comprises a handle tube 4, desirably of plastic material, having journalled on one end thereof an adjusting knob 6, preferably of aluminum. Knob 6 is provided at its inner end with a boss 7 which provides a bearing, journalled in the tube so that the knob may be readily turned in either direction. Rigidly secured at the inner end of bearing 7 is a spring anchor 8 having an eye 9 in which one end 11 in the form of a hook of a coil spring 12 is detachably connected; the spring being completely housed within tube 4.

Adhesively bonded to tube 4 by any suitable strong adhesive, such as an epoxy resin, is a rubber hand grip sleeve 13. At its inner end tube 4 has an enlarged bearing disc 14 secured thereto; the disc being desirably of light weight plastic material press fitted on and adhesively bonded to the tube by a strong adhesive. A disc 16 of friction material to provide a friction surface, is adhesively bonded to the inner face of disc 14 by any suitable strong adhesive, such as an epoxy resin. The right-hand hand grip unit appearing in FIG. 2 is of similar construction, comprising desirably a plastic tube 17, enlarged bearing disc 18, friction disc 19, and rubber hand grip sleeve 20.

Rigidly secured by a suitable adhesive, such as the aforementioned epoxy resin, in the inner end of the right hand grip tube 17 is a metal anchoring nut or member 21 having internal screw threads in which is screw threaded a rod or shaft 22, having an eye 23 in which is detachably connected hook end 24 of coil spring 12, which is opposite to hook end 11 of the spring. Although not necessary, but desirable, a guide ferrule 26 is adhesively bonded to the inside of left tube 4 adjacent the inner end thereto, through which rod 22 extends.

From the preceding, it is seen that hand grip units 2 and 3 are separate parts, detachably connectable and which when compressed together under tension of coil spring 12 are held tightly together to cause engagement of friction surfaces 16 and 19 and thus resist turning movement of the units relative to each other. The pressure between friction surfaces 16 and 19 may be readily adjusted by turning or rotating knob 6 in either direction to move the rod 22 lengthwise in its threaded connection with anchoring member 21, resulting in adjustment of the tension placed on spring 12.

Thus rod 22 is movable by motion transmitted to it through spring 22 which in turn varies the pressure between friction surfaces 16 and 19. In this connection, although the right hand grip unit 3 is shown to comprise plastic hollow tube 17 and anchoring member 21, this is to provide lightness because insofar as the principle is concerned, handle tube 17 could be a solid member in which rod 22 could be directly threaded at the inner end of the handle. However, the left tube 4 is hollow to house spring 12 completely, and also the left hand portion of rod 22.

In FIG. 3 only the friction disc 19, enlarged bearing disc 18, tube 17, and grip 20 of the right grip unit are shown, it being understood that the corresponding parts for the left hand grip unit are similar. In assembling the exerciser, it is only necessary to connect spring 12 to rod 22, and to adjusting knob 6, bring the friction surfaces 16 and 19 together, and insert such assembly through tube 4 and screw shaft 22 into anchor 21. Adjustment of the pressure to suit the individual using the exerciser, can be readily effected by turning knob 6 to the desired extent.

Any suitable friction material which will provide good friction surfaces may be employed, but, it has been found most advantageous to make the friction discs 16 and 19 of leather because leather provides excellent frictional resistance, and at the same time the surfaces will not fuse together under strong tension of spring 22. Spring 12 is a heavy, stiff metal spring of which any suitable type may be employed which will

readily turn upon adjustment of knob 6 and thus turn rod 22 when knob 6 is turned in either direction to adjust the rod longitudinally for varying spring tension.

In the embodiment of the invention illustrated, desirable, although not critical, dimensions are a handle length of about 5 inches with an outside diameter of about seven-eighth of an inch. An outside diameter of the enlarged discs is about 2½ inches with a thickness of about five-eighths of an inch and an inside disc diameter of about seven-eighth of an inch. The leather friction surface adhesively bonded to the discs may be desirably about one-eighth of an inch. Coil spring 12 is preferably of steel wire about one-eighth of an inch in diameter composed of about 6 coils in close engagement and is of about three-fourth of an inch outside diameter. These dimensions are given merely as an example for providing a convenient size exerciser.

I claim:

1. An exerciser comprising a pair of hand grip units each having fixedly secured adjacent one end thereof a disc provided with a friction surface engageable with the friction surface of the other unit for resisting turning of the units relative to each other when the surfaces are compressed together, one of said units having an internally screw threaded anchor fixed thereto and the other of said units having an adjusting knob rotatably mounted thereon adjacent the end thereof opposite its friction surface end, and means for maintaining said friction surfaces in engagement under pressure which can be adjusted comprising a threaded rod screwed in said anchor adjacent one end thereof and which is adjustable lengthwise upon turning of said rod in said

anchor, a coil spring connected adjacent one end thereof to the opposite end of said rod, the opposite end of said spring being connected to said adjusting knob whereby the spring tension can be adjusted by turning the knob to move the rod.

2. The exerciser of claim 1 wherein each of the hand grip units comprises a handle and each of the discs is of greater width than the handle to provide enlarged friction surfaces.

3. The exerciser of claim 1 wherein the coil spring has its ends detachably connected to the rod and knob to enable assembly or disassembly of the exerciser.

4. The exerciser of claim 3 wherein the ends of the springs are in the form of hooks detachably connected in eyes in the rod and the knob.

5. The exerciser of claim 1 wherein the friction surfaces are of leather.

6. The exerciser of claim 1 wherein each hand grip unit comprises a hollow plastic tube and each disc is of plastic material bonded to a tube.

7. The exerciser of claim 1 wherein at least one of the hand grip units comprises a hollow tube, and the spring is housed in the tube.

8. The exerciser of claim 1 wherein at least one of the hand grip units comprises a hollow tube, the adjusting knob has a bearing part journaled in said tube and which is provided with an eye within the tube, the rod projects into the hollow tube and is also provided with an eye, and the spring is within the tube and has hooks connected in said eyes.

* * * * *

35

40

45

50

55

60

65