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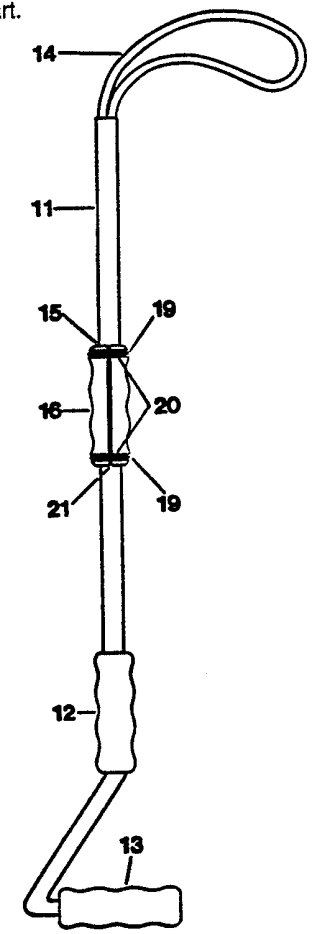
(54) Exercise device

(57) A hand held exercise device has a shaft 11 with one or more fixed handles 12, 13 and 14, together with a sleeve divided longitudinally into two parts incorporating a handle 16 which slides along the shaft. Resistance to movement along the shaft of the sleeve and handle varies according to how hard the handle is gripped due to friction between the sleeve of the handle and the shaft. Exercises are performed by gripping one of the fixed handles in one hand and the sliding handle in the other hand and either pushing the handles together or pulling them apart.

Fig 1



The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1982.

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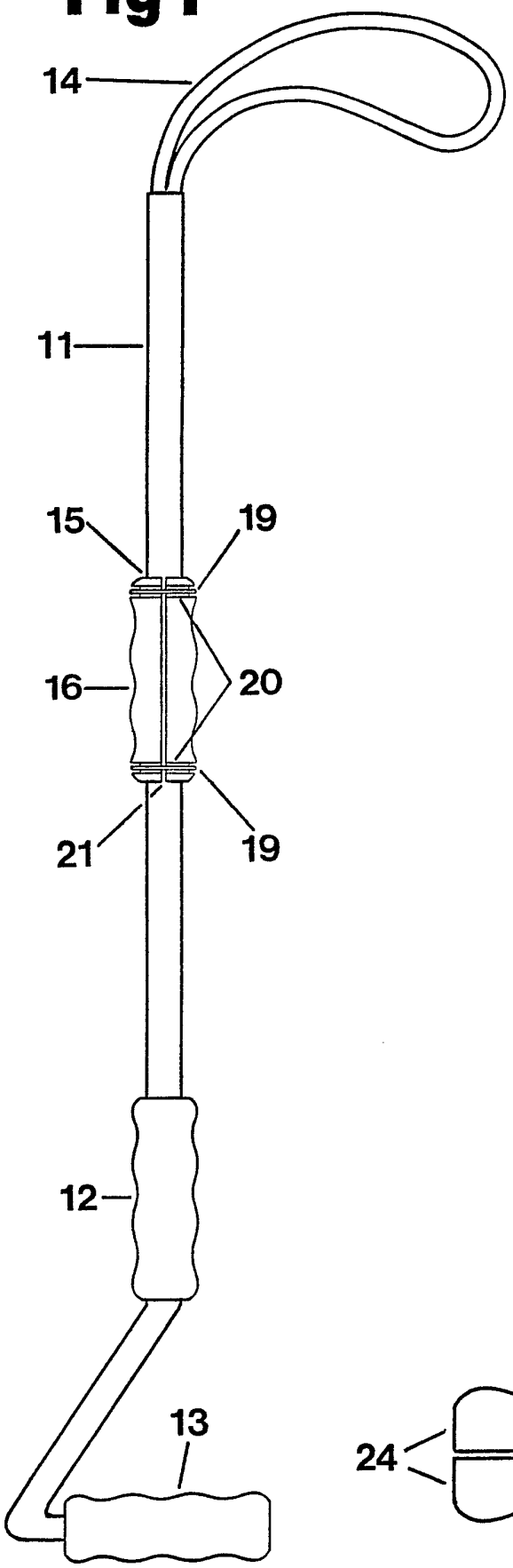
Fig 1



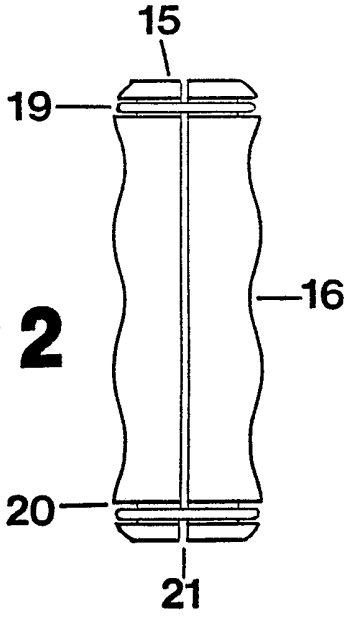


Fig 2

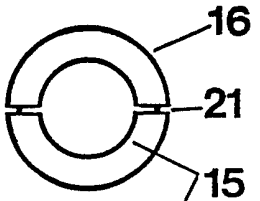


Fig 3

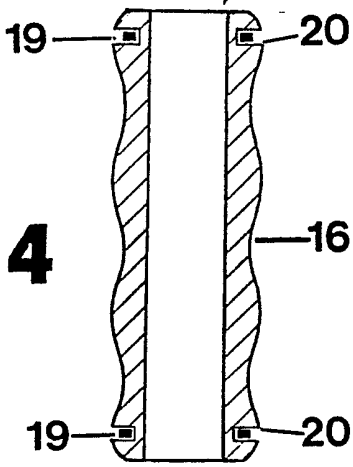


Fig 4

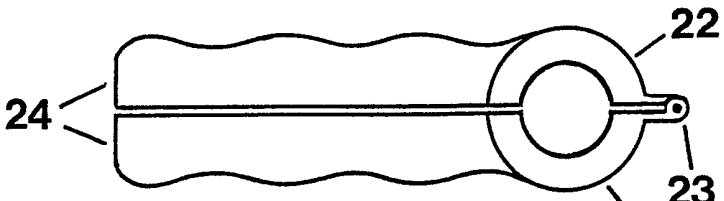


Fig 5

EXERCISE DEVICE

This invention relates to an exercise device.

There are a number of hand held exercise devices available which are designed to exercise various muscles of the body. However the usefulness of many of them is limited either by the restricted range of exercises that can be undertaken, or the fact that it is not possible to perform progressively harder exercises, or both.

According to the present invention there is provided an exercise device comprising a shaft with a handle or handles at one or both ends, together with a sleeve incorporating or attached to a handle which slides the length of the shaft, resistance to movement of the sleeve and handle along the shaft varying according to the degree of friction between the surfaces of the sleeve and the shaft which are in contact, the friction between the surfaces being increased or decreased by increasing or decreasing the pressure exerted on the surfaces through the handle incorporating or attached to the sleeve.

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawings in which:-

Figure 1 illustrates the complete device;

Figure 2 shows a side view of the sleeve incorporating a handle;

Figure 3 shows an end view of the sleeve incorporating a handle;

Figure 4 shows a cross section of the sleeve incorporating a handle; and

Figure 5 shows an alternative construction of the sleeve and handle.

Referring to the drawings, the exercise device comprises a rigid cylinder 11, preferably made of stainless or chromium plated steel, with handles 12 and 13 situated at one end of the cylinder. At the other end of the cylinder is provided a handle in the form of an adjustable strap 14.

The cylinder may be provided with means for dividing it into two or more sections for carrying or storage purposes.

A sleeve 15, which in this embodiment also forms a handle 16, is provided which can slide along the cylinder 11. The sleeve is divided longitudinally and comprises two identical parts . The two parts are coupled together by rings 19 housed in recesses 20. The dimensions of the rings and recesses are such that when the handle 16 is not being gripped firmly in the hand the sleeve is a loose fit on the cylinder and can slide freely along it.

The sleeve is constructed so that when the internal bearing surfaces of the two parts are in close contact with the external surface of the cylinder there is a small gap 21 between the two parts.

When the handle 16 is gripped in the hand the internal surfaces of the sleeve bear against the external surface of the cylinder and provide by means of friction between the surfaces resistance to movement along the cylinder. The harder the handle 16 is gripped the greater the force needed to move it along the cylinder. The sleeve bearing surfaces are constructed of a material which will be hard wearing and provide a suitable degree of friction with hand pressure on the handle. The bearing surfaces of the sleeve may have various tread patterns incorporated into them. They may also be constructed as removable sections so that they can be made of a different material to the main body of the sleeve, or replaced if worn.

In an alternative construction of the sleeve and handle, illustrated in Figure 5, the sleeve is divided longitudinally and comprises two identical parts 22, the two parts being coupled together by a hinged arrangement 23 on one longitudinal side. On the side opposite to the hinged arrangement is abutted on each sleeve part one half of a longitudinally divided handle 24 at right angles to the axis of the sleeve. When the two halves of the handle are gripped in the hand the internal bearing surfaces of the sleeve are applied against the external surface of the cylinder and provide by means of the friction between the surfaces resistance to movement along the cylinder.

To use the device for exercising the muscles of the upper body the handle 16 or 24 is gripped in one hand and one of the handles 12, 13 or 14 is gripped in the other hand. Depending on which muscles are being exercised the handles being gripped are either pushed towards each other or pulled apart. The amount of effort needed to achieve this and the speed at which the movement is performed depends on how hard the handle 16 or 24 is gripped and can be varied during the course of the movement.

Various leg exercises can be performed by lying on the floor and securing one or both feet in the adjustable strap 14 and gripping the handle 16 or 24 in one or both hands, then moving one or both feet either towards the handle 16 or 24 or away from it depending on the muscles being exercised.

To move the handle 16 or 24 back to the starting point for an exercise the grip is slackened so that the sleeve can slide along the cylinder without effort.

CLAIMS

1 An exercise device comprising a shaft with a handle or handles at one or both ends, together with a sleeve incorporating or attached to a handle which slides the length of the shaft, resistance to movement of the sleeve and handle along the shaft varying according to the degree of friction between the surfaces of the sleeve and the shaft which are in contact, the friction between the surfaces being increased or decreased by increasing or decreasing the pressure exerted on the surfaces through the handle incorporating or attached to the sleeve.

2 An exercise device as claimed in Claim 1 wherein the shaft is provided with means for dividing it into two or more sections.

3 An exercise device as claimed in Claim 1 or Claim 2 wherein a sleeve which also forms a handle is divided longitudinally into two or more parts which are coupled together by various means.

4 An exercise device as claimed in Claim 1, Claim 2 or Claim 3 wherein the bearing surfaces of the sleeve are constructed as removable sections.

5 An exercise device as claimed in any preceding claim wherein a handle is provided in the form of an adjustable strap.

6 An exercise device substantially as described herein with reference to Figures 1-5 of the accompanying drawings.

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