

PATENT SPECIFICATION

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(54) GYMNASTIC EXERCISE APPLIANCE

(71) I, WERNER GEISSEL-BRECHT, a citizen of the German Federal Republic, of 3001 Meitze, German Federal Republic, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The invention relates to a gymnastic exercise appliance for pull and press exercises consisting of two telescopic tubes which fit one within the other and which have gripping handles at their outer ends.

Gymnastic appliances are known for the purpose of press exercises consisting of two tubes fitting one within the other in the manner of a telescope, with an internal coil spring, the tubes having at their outer ends disk-shaped, rubber-covered handles. Such appliances are unsuitable for pull exercises and for combined press and pull exercises.

According to present thinking in gymnastic theory the whole muscular system can be toned up and developed by using a determined number of selected press and pull exercises. In order to achieve this it has been proposed, according to the U.K. Patent Specification No. 1,233,395 to employ an appliance as aforesaid with ropes which interconnect the two handles. Pressing exercises are carried out by pushing the two handles together, thereby telescoping the two tubes against the action of the coil spring, whilst for pull exercises the ropes are gripped mid-way between the handles and pulled apart. The press and pull exercises tone up mainly the muscular system of the arms and the pull exercises in addition tone up the muscular system of the legs.

It is an object of this invention to provide an improved appliance of simplified construction.

According to the invention there is provided a gymnastic exercise appliance for pull and press exercises, comprising two tubes fitted telescopically one within the other and each of which has at its end remote from the other tube a gripping

handle, wherein the handles are interconnected externally of the tubes by resiliently flexible spring elements, which constitute the sole resilient connection between the handles.

The spring elements may consist of rods or bars of glass-fibre-reinforced plastics or of metal. When metal bars or rods are used they may be provided with one or more twists or loops in order to achieve the desired elasticity.

The ends of the spring elements are preferably pivotally connected to the handles for pivotal movement relative thereto upon flexure of the elements. A swivel hub or a ball-and-socket swivel joint may be best suited for such pivotal connections.

The invention will be further described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a partly sectioned front elevation of an exercise appliance according to the invention, illustrating the use of two different examples of spring elements in the appliance;

Figure 1a is a cross-sectional view of part of one of the handles of the appliance, showing a laterally deflected spring;

Figure 2 is a longitudinal cross-section of one end of the appliance, taken on line B—B in Figure 1, and

Figure 3 is a side elevational view of one of the handles of the appliance.

The illustrated embodiment of the gymnastic exercise appliance according to the invention consists of two tubes 1 and 2 of which tube 1 fits telescopically within tube 2. The outer ends of the tubes 1 and 2 are closed by gripping handles 4 which also serve as abutments for two resiliently flexible spring elements 3a and 3b in the form of resilient rods or bars.

In Figure 1 two alternative examples of the spring elements are illustrated: the spring element 3a comprises a simple resiliently flexible rod of glass fibre-reinforced plastics material, while the spring element 3b comprises a metal rod formed with loops 8.

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Each of the two handles 4 has an integral projection 5 which is a press fit into the outer end of the adjacent tube 1 or 2 so as to be securely attached thereto.

5 The ends of the spring elements 3a and 3b are anchored to respective hubs 6 by means of safety disks 7, the hubs 6 being rotatable in respective sockets in the handles 4, as illustrated in Figure 1a. The
10 hubs 6 can pivot about an axis perpendicular to the plane of flexion of the spring elements 3a, 3b. The hubs 6 could be replaced by ball-joints or other joint or hinge elements.

15 The safety disks 7 can be slid into engagement with the respective spring element in one direction, whilst in the opposite direction they hold the ends of the spring element immovably tight, thereby
20 being able to transmit considerable force.

In order to perform pulling exercises, the spring elements 3a and 3b are gripped manually in the middle and pulled apart, in the directions of the arrows 9 and 10, as
25 represented by the broken lines in the drawing. Should one desire to develop the muscular system of the legs, the spring elements should be pulled apart by the feet in the direction of the arrows 9 and 10.

30 The gymnastic exercise appliance according to the invention can be used for both pull and press exercises and has the advantage of being technically very simple. The appliance may also be lighter than those which employ internal springs, since
35 there are no components inside the telescopic tubes and the assembly cost may be reduced by at least one third. Moreover, since there is no internal spring, the telescopic tubes can be of smaller diameter
40 than those of the previously mentioned known appliances, and can be

manufactured in plastics or synthetic material.

WHAT I CLAIM IS:—

1. A gymnastic exercise appliance for pull and press exercises, comprising two tubes fitted telescopically one within the other and each of which has at its end remote from the other tube a gripping
45 handle, wherein the handles are interconnected externally of the tubes by resiliently flexible spring elements, which constitute the sole resilient connection between the handles. 50

2. A gymnastic exercise appliance according to Claim 1, in which each spring element consists of a rod of glass-fibre-reinforced plastics material. 55

3. A gymnastic exercise appliance according to Claim 1, in which each spring element consists of a metal rod. 60

4. A gymnastic exercise appliance according to Claim 3, in which each spring element is formed with one or more twists or loops. 65

5. A gymnastic exercise appliance according to any one of the preceding Claims, in which the ends of the spring elements are pivotally connected to the handles for pivotal movement relative thereto upon flexure of the spring elements. 70

6. A gymnastic exercise apparatus substantially as herein described with reference to and as shown in the accompanying drawings. 75

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WHAT I CLAIM IS:—

1. A gymnastic exercise appliance for pull and press exercises, comprising two tubes fitted telescopically one within the other and each of which has at its end remote from the other tube a gripping
50 handle, wherein the handles are interconnected externally of the tubes by resiliently flexible spring elements, which constitute the sole resilient connection between the handles.

2. A gymnastic exercise appliance according to Claim 1, in which each spring element consists of a rod of glass-fibre-reinforced plastics material.

3. A gymnastic exercise appliance according to Claim 1, in which each spring element consists of a metal rod.

4. A gymnastic exercise appliance according to Claim 3, in which each spring element is formed with one or more
65 twists or loops.

5. A gymnastic exercise appliance according to any one of the preceding Claims, in which the ends of the spring elements are pivotally connected to the handles for pivotal movement relative
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