(12) UK Patent Application (19) GB (11) 2 048 085 A

(21) Application No **8010946**
(22) Date of filing **1 Apr 1980**
(30) Priority data
(31) **7913622**
(32) **19 Apr 1979**
(33) **United Kingdom (GB**
(43) Application published
10 Dec 1980
(51) **INT CL³**
A63B 21/16
(52) Domestic classification
A6M 8J1BY 8J1Y 8JY
(56) Documents cited
GB 1318240
GB 1169148
GB 1004500
GB 497883
GB 438128
GB 419982
US 3709487A
(58) Field of search
A6M
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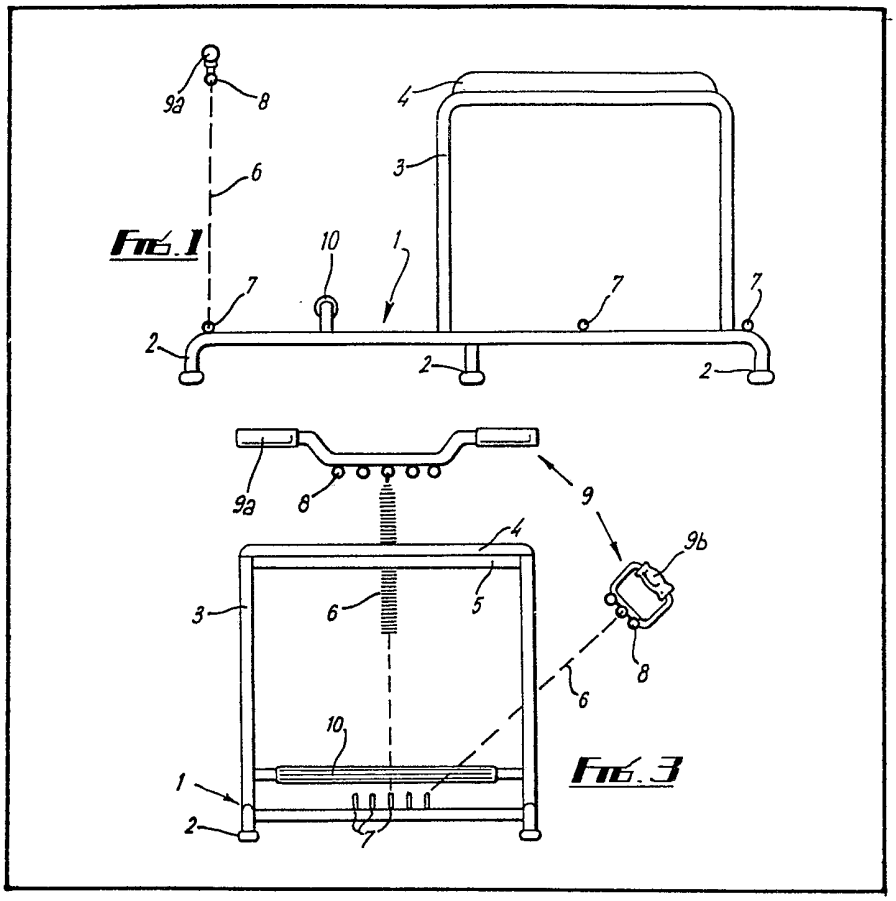
(54) Exercise Apparatus

(57) The apparatus has a rigid base 1 supporting a padded seat 4, the base having metal eyes 7 for attachment of springs 6 in order that a large variety of exercises can be performed on the apparatus by attaching the springs at different locations on the base and adopting different positions to expand the springs in use. Apertured brackets may be provided in place of the metal eyes.



The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

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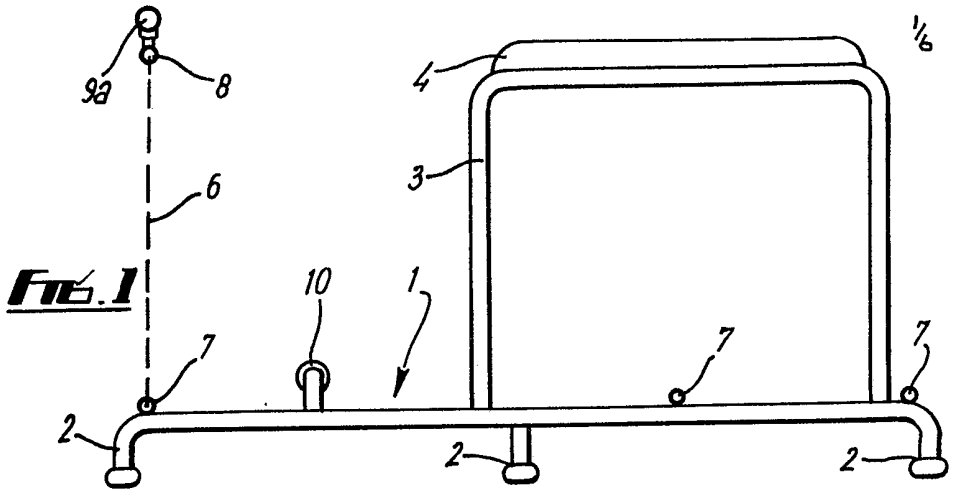

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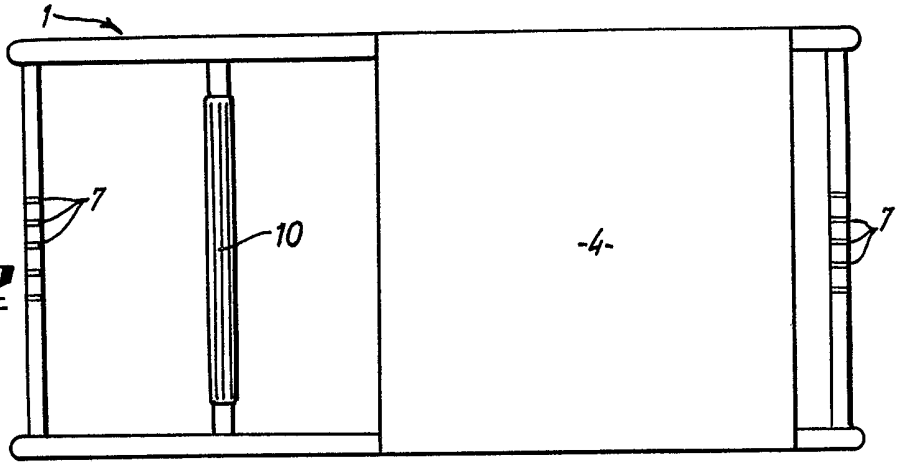

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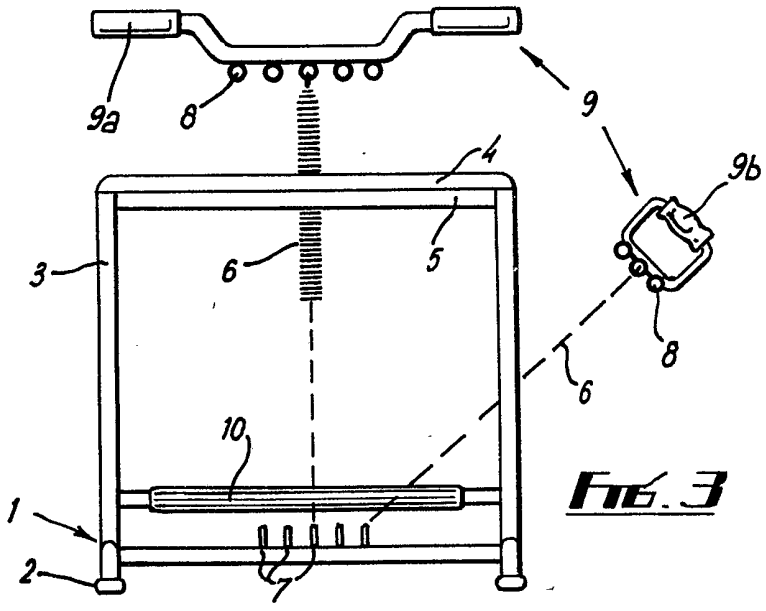

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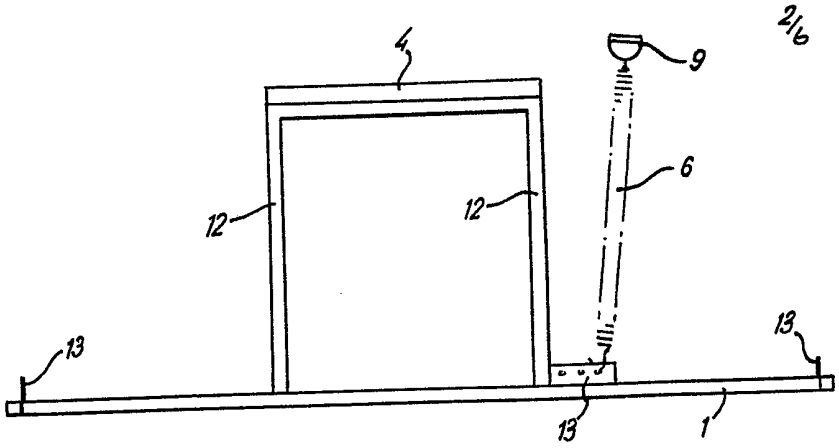

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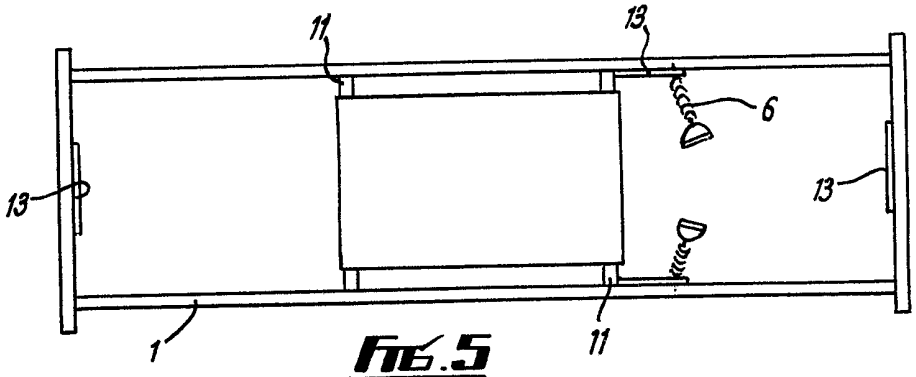

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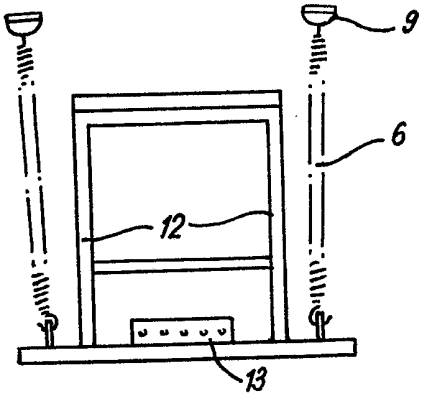

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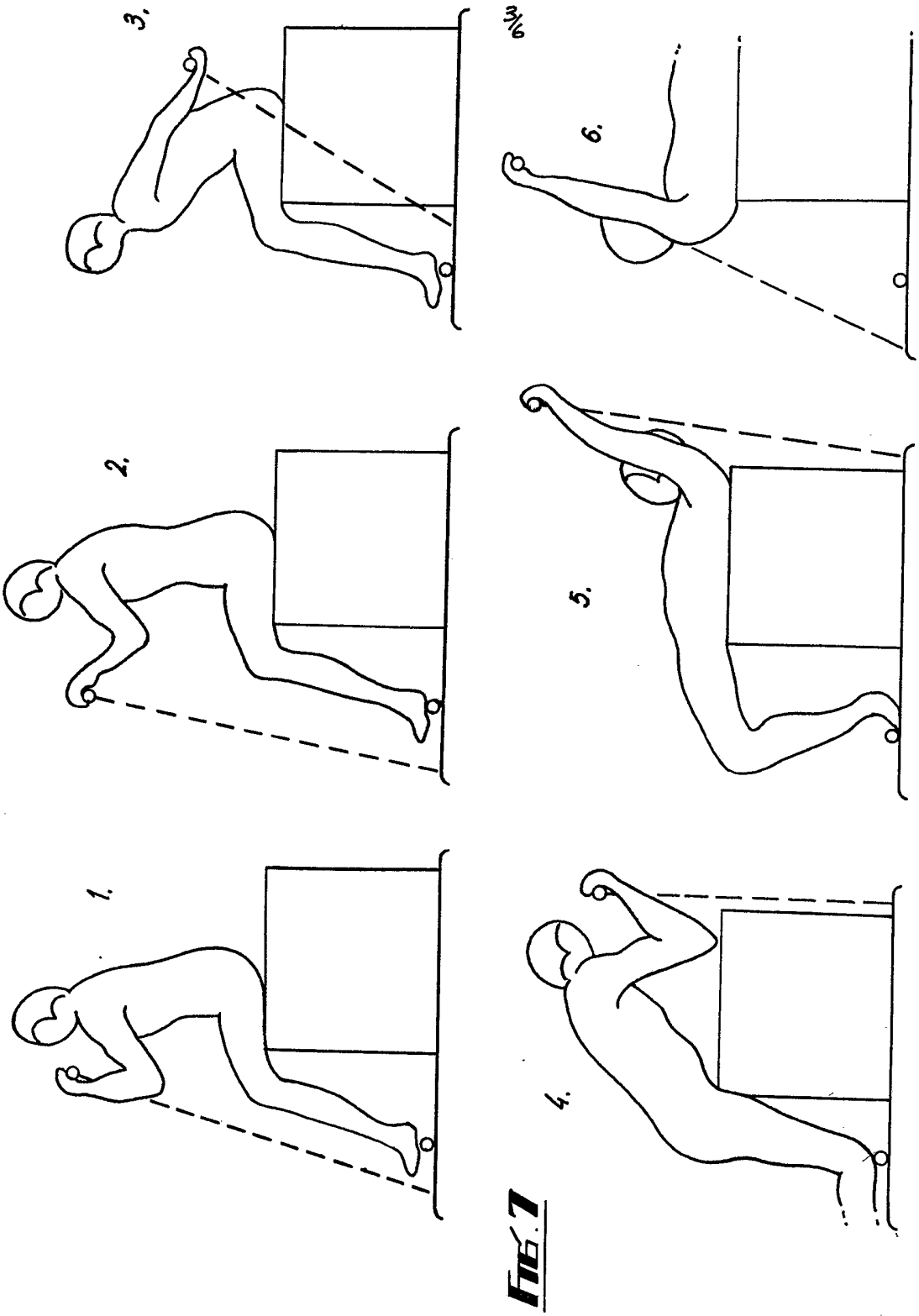

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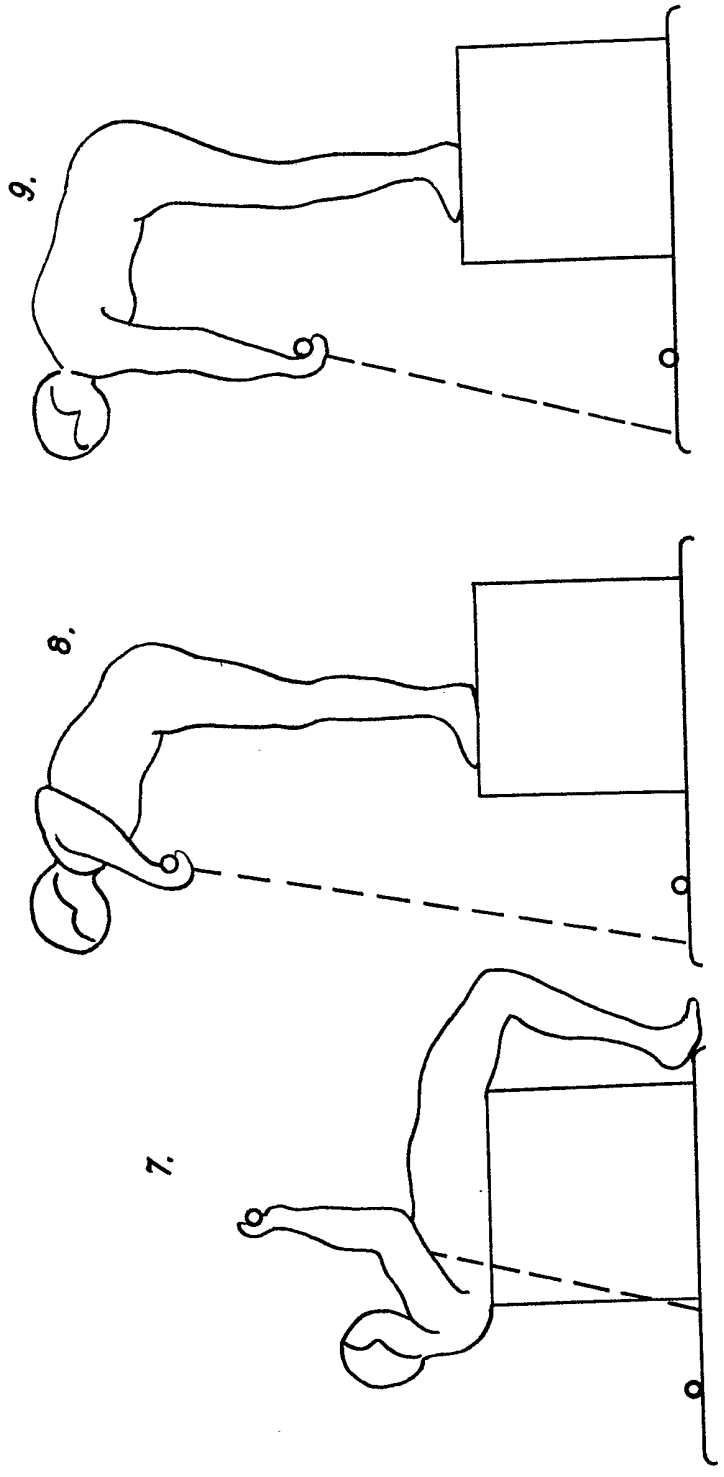

FIG. 7 (cont.)

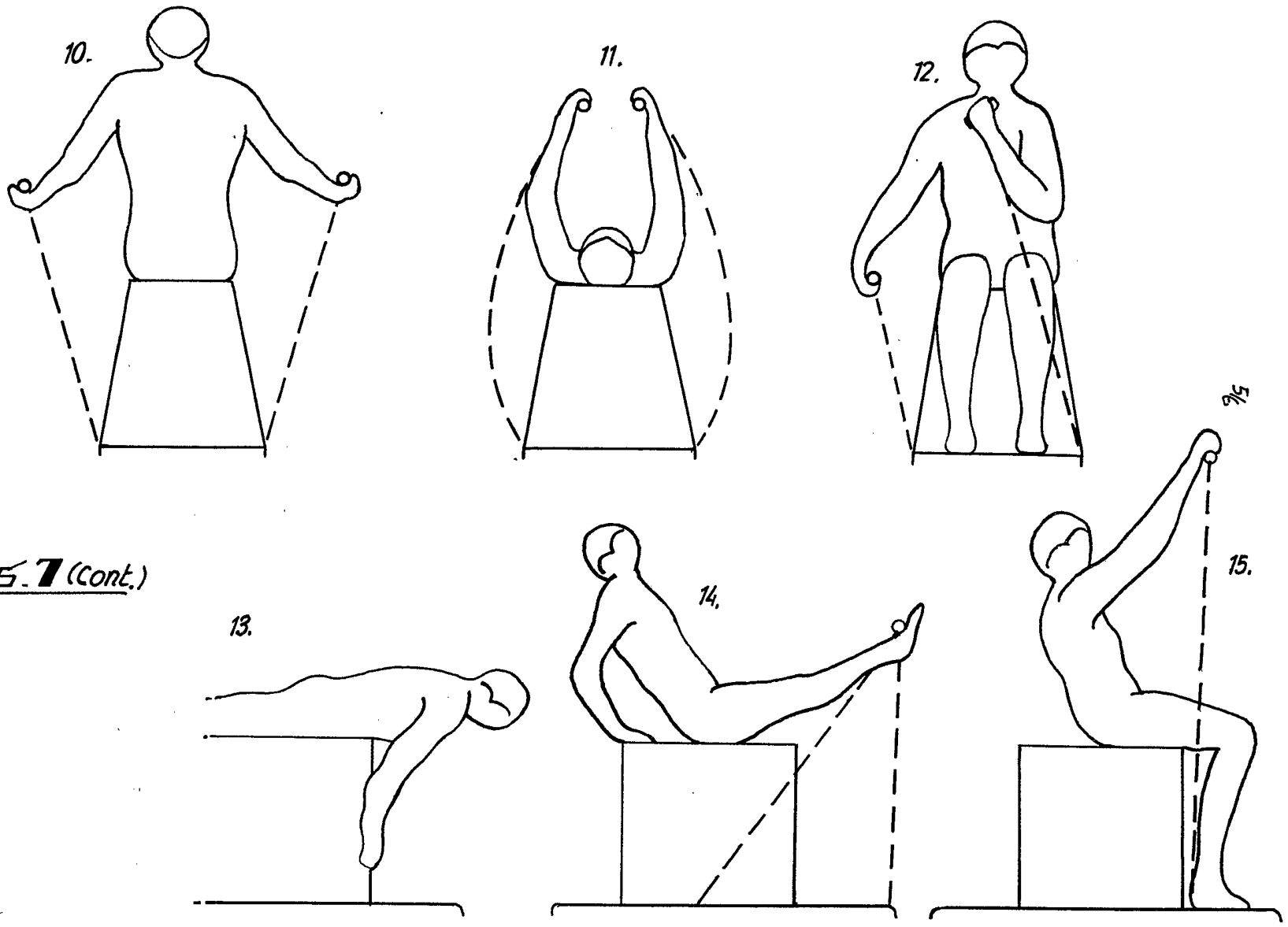

FIG. 7 (Cont.)

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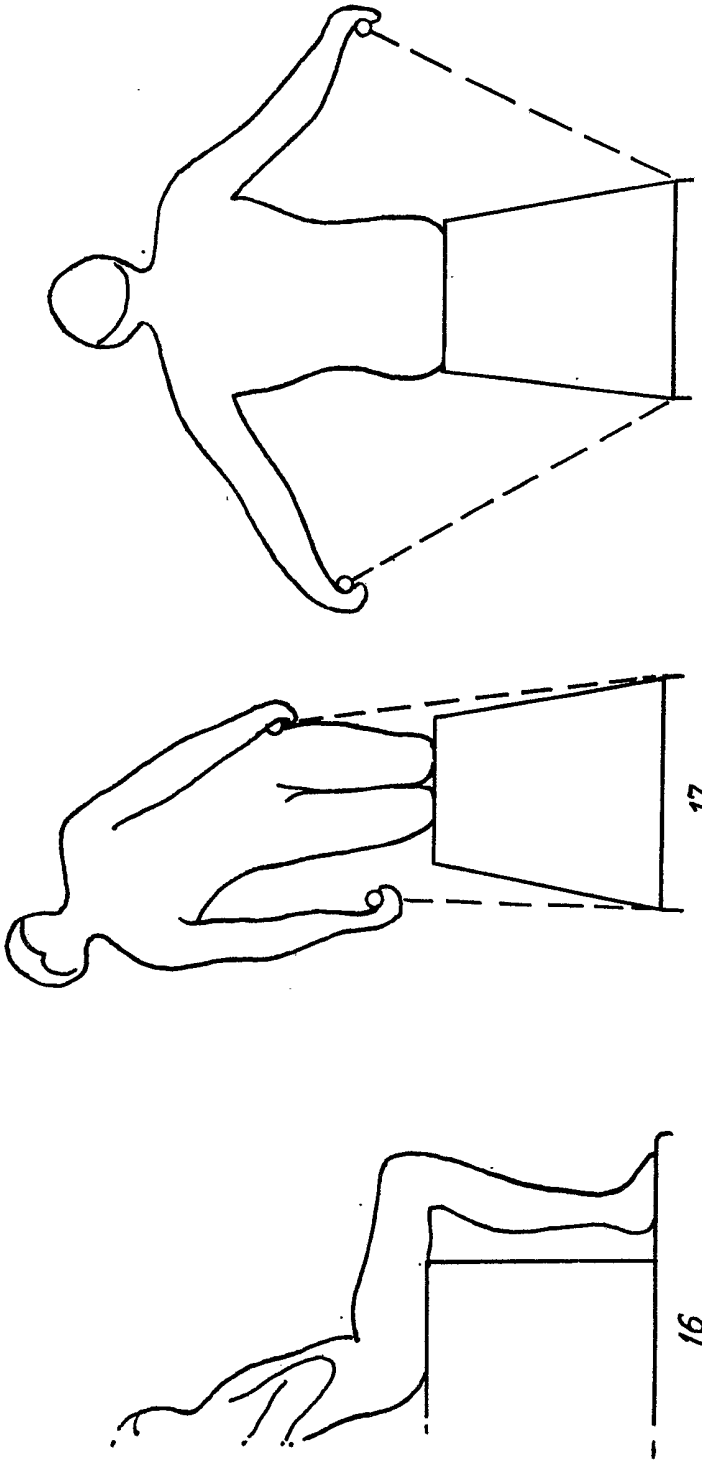

FIG. 7 (Cont.)

SPECIFICATION

Exercise Apparatus

This invention relates to exercise apparatus.

There are a number of basic exercises for developing and exercising the various muscles of the body, but to perform all of the basic exercises has hitherto involved the use of several pieces of apparatus. This has necessitated the provision of a considerable amount of space to house the apparatus and allow its use.

In the specific area of body building the same problem exists in that many pieces of apparatus are required for a range of exercises. Different size weights must be held in store for fitment to barbells and the like so that the difficulty of lifting the apparatus can be varied. Again, therefore, large amounts of storage area must be available.

According to the present invention there is provided exercise apparatus having a rigid base from which extends a support in the form of a seat, the base having located members for attachment of springs at a plurality of sites spaced differently from the support.

The apparatus preferably includes also a set of springs or strands, akin to chest expanders, for attachment to the locating members in use. The locating members may have apertures for receiving hooked end portions of the springs.

The locating members are preferably provided on the base both forward and rearwards of the support, and may be at or intermediate the base ends. Most preferably locating members are provided directly below the support, for use in attaching springs for specific exercises.

The base may conveniently be in the form of a metal frame and is preferably tubular for lightness of weight and easy transport. In use it can in one particular form be a horizontal generally rectangular triangular framework having "eyes" in the appropriate positions acting as the locating members. It may be provided with feet for resting on the ground and these may be adjustable individually to compensate for irregularities. An upright extension can if desired be provided from the support to extend the potential support area, for example in the form of an inverted U-shaped bar. The bar and the support are preferably padded.

The support may be adjustable in position on the base to alter the distance between the locating members and the support for different exercises, and this may be achieved for example by making the support slidable in runners or locatable at spaced intervals.

Embodiments of the invention will now be described by way of example with reference to the accompanying drawings in which:

Fig. 1 is a side view of one form of the apparatus of the invention;

Figs. 2 and 3 are top and end view of the apparatus of Fig. 1;

Fig. 4 is a side view of another form of the apparatus of the invention;

Figs. 5 and 6 are top and end views of the apparatus of Fig. 3; and

Figs. 7(1) to (18) show schematically apparatus of the invention in use.

The apparatus of the embodiment of the invention of Figs. 1 to 3 has a horizontal base 1 which is rectangular and has feet 2 at each corner and mid-way along each side, the feet 2 being screw-adjustable for height. The base is made from hollow metal tube. Welded to the sides of the base 1 are a pair of inverted U-shaped metal tubes 3 which carry at their upper horizontal portion a padded seat 4 which spans between them and is strengthened by cross-members 5.

The base has at its front and rear locating members in the form of metal eyes 7 arranged in groups of five, and further group is provided on a cross-member below the seat 4.

Springs or strands 6 are provided for attachment at one end to the eyes 7 and at their other end to eyes 8 on hand or foot grips 9. These grips 9 can be in the form of handlebars 9a for gripping by both hands or both feet, or in the form of smaller handles 9b for gripping by one hand. The handlebars 9a have five eyes 8 and the handles 9b have three eyes 8.

A specifically-shaped foot bar (not shown) can be provided having rings for positive location of the feet, and eyes for attachment of the springs.

Figs. 4 to 6 illustrate a further form of the apparatus in which the base 1 is a rectangular metal frame of square-section tubing 5 feet long and 2 feet wide which is designed to lie flat on the ground. A pair of cross-members 11 span between the longer sides of the base 1 and from these four legs which are 12 inches long extend upwardly to support the padded seat 4. The locating members are provided by apertured brackets 13 welded to the base 1 at each of its shorter sides and adjacent two of the legs 12. Strands 6 are provided for engagement in the apertures.

Examples of the manner in which the apparatus of these embodiments of the invention can be used are shown in Figs. 7(1) to (18), the numbered excercises being:

Exercise

1. Curl—works upper arm (bicep) helps waistline
2. Reverse curl—works forearm, wrist
3. Rear raise—works rear upper arm (triceps) helps waistline
4. Preacher curl—works bicep
5. Tricep extension—works tricep, shoulders
6. Pullover—works chest, shoulders
7. Press—works chest, arms
8. Bentover rowing—works upper back, arms, shoulders
9. Deadlift—works lower back, waistline
10. Flys—works chest
11. Lying flys—as exercise 10
12. Leg curls—works biceps, upper back
13. Leg curls—works rear thigh, calf
14. Leg raises—works front thigh, waist

15 Front overhead pulls—works shoulders, arms
16 Sit-ups—works waistline
17 Side bends—works waistline sides
18 Side raises—works outer shoulders

The apparatus of these embodiments are each a single piece of equipment which can be used for many exercises, and in particular all the basic exercises for use not only in developing the muscles but in general keep-fit. The springs used can be selected in strength according to the build and capacity of the user, for example individual springs requiring 40 lb for extension can be used, giving a total of 200 lbs when five springs are used together. A greater or lesser number of strength of springs can alternatively be used to provide the desired resistance.

The apparatus of these embodiments are compact and easily portable, and can be used to provide exercises which are at least as effective in building muscles and general keep-fit as are exercises using barbells and other bulky and heavy apparatus. In this the use of strands, or springs, in combination with a specially-designed frame and support allows such exercises to be performed in a very small area and with a minimum of equipment. The apparatus of these embodiments of the invention are therefore ideal for exercising in the home or in confined spaces; they are of especial benefit as a result for use by sailors and others for whom space is of a premium.

Modifications and improvements can be made without departing from the scope of the invention.

Claims

1. Exercise apparatus having a rigid base from which extends a support in the form of a seat, the base having locating members for attachment of springs at a plurality of sites spaced differently from the support.

2. Apparatus according to Claim 1, wherein the locating members are provided on the base both forwards and rearwards of the support.

3. Apparatus according to Claim 1 or 2, wherein the locating members are provided on the base both adjacent the support and spaced from the support.

4. Apparatus according to Claim 1, 2 or 3, wherein the locating members have apertures for receiving hooked end portions of springs.

5. Apparatus according to any one of the preceding claims, wherein springs are provided attached to the locating members.

6. Apparatus according to any one of the preceding claims, wherein the support has an upper padded face.

7. Apparatus according to any one of the preceding Claims, wherein the base is made of tubular metal.

8. Apparatus according to any one of the preceding Claims, wherein the support is adjustable in position on the base.

9. Exercise apparatus substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

Printed for Her Majesty's Stationery Office by the Courier Press, Leamington Spa, 1980. Published by the Patent Office, 25 Southampton Buildings, London, WC2A 1AY, from which copies may be obtained.