(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 384 702**
A1

(12) # EUROPEAN PATENT APPLICATION

(21) Application number: **90301799.4**

(22) Date of filing: **20.02.90**

(51) Int. Cl.[5]: **A63B 21/02, A63B 21/055, A63B 21/04, A63B 21/16, A63B 23/00**

(30) Priority: **24.02.89 GB 8904265**

(43) Date of publication of application: **29.08.90 Bulletin 90/35**

(84) Designated Contracting States: **AT BE CH DE DK ES FR GB GR IT LI LU NL SE**

(71) Applicant: **INOVATION LEISURE COMPANY LIMITED**
99 Mayne Street, Hanford
Stoke-on-Trent, Staffordshire ST4 4RB(GB)

(72) Inventor: **Sanders, John, c/o Inovation Leisure Company Limited 99 Mayne Street Hanford Stoke-on-Trent, Staffordshire ST4 4RB(GB)**
Inventor: **Powner, Kenneth John, c/o Inovation Leisure Company Limited 99 Mayne Street Hanford Stoke-on-Trent, Staffordshire ST4 4RB(GB)**

(74) Representative: **Campbell, Iain Angus et al**
Swindell & Pearson 48 Friar Gate
Derby DE1 1GY(GB)

(54) **Improvements in or relating to exercising apparatus.**

(57) A portable exercising apparatus comprises a box member (10) for carrying the apparatus and use as a platform, a plurality of resilient means (34) adapted for attachment to the box and a handle (38) forming an exercising apparatus on which the user stands and exercises by pulling the handle against the resilient means.

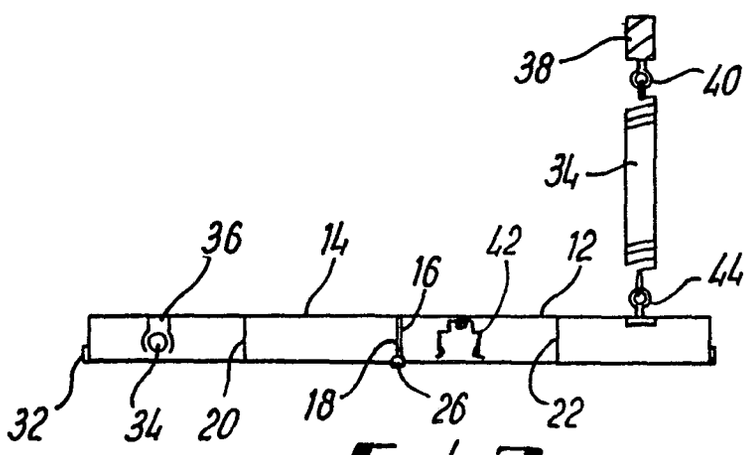

FIG. 3

EP 0 384 702 A1

Improvements in or relating to Exercising Apparatus

The present invention concerns improvements in or relating to exercising apparatus.

The trend for people, other than sportsmen or atheletes, to take regular exercise continues to increase and many people wish to carry out their exercise in a hospitable in-door environment. This has resulted in the setting up of gymnasium, health clubs etc. which provide exercise equipment, for example, weights and exercise machines. Such machines are often expensive and heavy and, consequently, not well suited to the needs of an individual who wishes to exercise in limited accommodation in his home.

Attempts have been made to duplicate such exercise equipment at low cost but these have not been particularly satisfactory and have resulted in products which are not sufficiently robust to cope with the stresses to which they are subjected nor are they portable.

It is an object of the present invention to obviate or mitigate these disadvantages.

According to the present invention there is provided a portable exercising apparatus comprising a first rigid anchor member and a second rigid member connectable to the first member by resilient means, said anchor member being a platform which the user can restrain.

Preferably the resilient means comprise a set of members (34) from which the user can select suitable members. Preferably, the resilient means comprise a set of different length coiled springs (34), arranged in pairs, a pair of springs being used simultaneously between the anchor and second member.

Preferably the anchor member comprises a box-like structure (10) which, in the in-use condition, is opened out and in the storage condition, provides a container for the second member (38) and the set of resilient means (34).

Preferably the box member (10) comprises two hingedly interconnected halves (12, 14), a carrying handle (28) and locking means (32) to hold the box in the closed condition.

Preferably, also additional clamping means (46) are provided to hold the container with one half (12) thereof, hinged through 180° relative to the other half (14), to the in-use condition.

An embodiment of the present invention will now be described by way of example only, with reference to the accompanying drawings, in which;

Fig. 1 shows a perspective view of an exercise apparatus in a storage condition;

Fig. 2 shows a similar view of the apparatus in an open condition prior to use;

Fig. 3 shows a front view of the apparatus in the in-use condition, and

Fig. 4 shows a sectional end elvation in the in-use condition.

The exercise apparatus comprises a container 10 manufactured from aluminium alloy, comprising two similar halves 12, 14 inter-connected along a pair of mating longitudinal sides 16, 18. Each container includes a longitudinal partition 20, 22 dividing it into two storage sections and the side 24 of one half 12, on the side remote from the hinge 26, is provided a carrying handle, 28. Said side 24 and the corresponding side 30 of the other half 14 have co-operating claspe and hook means 32 to hold the container in the closed condition.

At least two pairs of coil springs 34 are stored in one storage compartment. Conveniently, they are held in place by hook or clip means 36 (Fig. 3). A rigid extruded aluminium alloy second member or handle 38 having connection means in the form of rings 40 fixed thereto adjacent to each end is stored in one compartment in the other half 12 of the box, with a clip means 42 being provided to hold the member in the storage position.

A pair of further connection means 44 in the form of rings are provided extending through the base of the container so that in use with said rings extending through the base of the container. A pair of springs 34 can be attached by one of their ends to the container adjacent to its end by the rings 44 and at the other ends to the bar 38 adjacent to its end by the rings 40.

A series of planned exercises can then be carried out by pushing the bar away from the container while the container is anchored by the user, for example, by the user standing, sitting, squatting or lying on the container.

It will be realised therefore that the invention provides, at relatively low costs, a relatively light weight and portable exercising arrangement on which a plurality of different exercises can be carried out the arrangement having sufficient rigidity and strength to withstand the high end repetitive loads exerted on it by the user.

Various modifications can be made without departing from the scope of the invention, for example, additional connection means can be provided on the container and the bar so that more than two springs can be connected between them to increase the loading. These additional springs can be stored in the container when not in use. Conveniently, the apparatus includes a first pair of six inch long springs and a second pair of eighteen inch long springs. Greater lengths of springs can be provided by inter-connecting the individual lengths. In a further modification, spring fixing

means can take a form other than a ring, for example, they could be snap hooks, bolts or any convenient means. Additionally, the container could take a number of different forms and could be provided with clamping means shown diagramatically at (46) so that one half could be clamped relative to the other, when the container is in its open, in use, condition.

Claims

1. A portable exercising apparatus comprising a first rigid anchor member, a second rigid member, resilient means connecting the first member to the second member characterised in that said anchor member (10) is a platform which the user can restrain.

2. Apparatus as claimed in Claim 1, characterised in that the resilient means comprise a set of members (34) from which the user can select suitable members.

3. Apparatus as claimed in Claim 1, characterised in that the resilient means comprise a set of different length coiled springs (34), arranged in pairs, a pair of springs being used simultaneously between the anchor and second member.

4. Apparatus as claimed in any of Claims 1 to 3, characterised in that the anchor member comprises a box-like structure (10) which, in the in-use condition, is opened out and in the storage condition, provides a container for the second member (38) and the set of resilient means (34).

5. Apparatus as claimed in Claim 4, characterised in that the box member (10) comprises two hingedly interconnected halves (12, 14), a carrying handle (28) and locking means (32) to hold the box in the closed condition.

6. Apparatus as claimed in Claim 4 or Claim 5, characterised in that clamping means (46) are provided to hold the container with one half (12) thereof, hinged throughout 180° relative to the other half (14), to the in-use condition.

7. Apparatus as claimed in any one of the preceding Claims, characterised in that hook or clip means (36) are provided to hold the resilient means in a storage condition.

8. Apparatus as claimed on any one of the preceding Claims, characterised in that the first and second members (10, 38) and the resilient means (34) have removable interconnected means (40, 44) to enable assembly of the apparatus to the in-use condition from the storage condition.

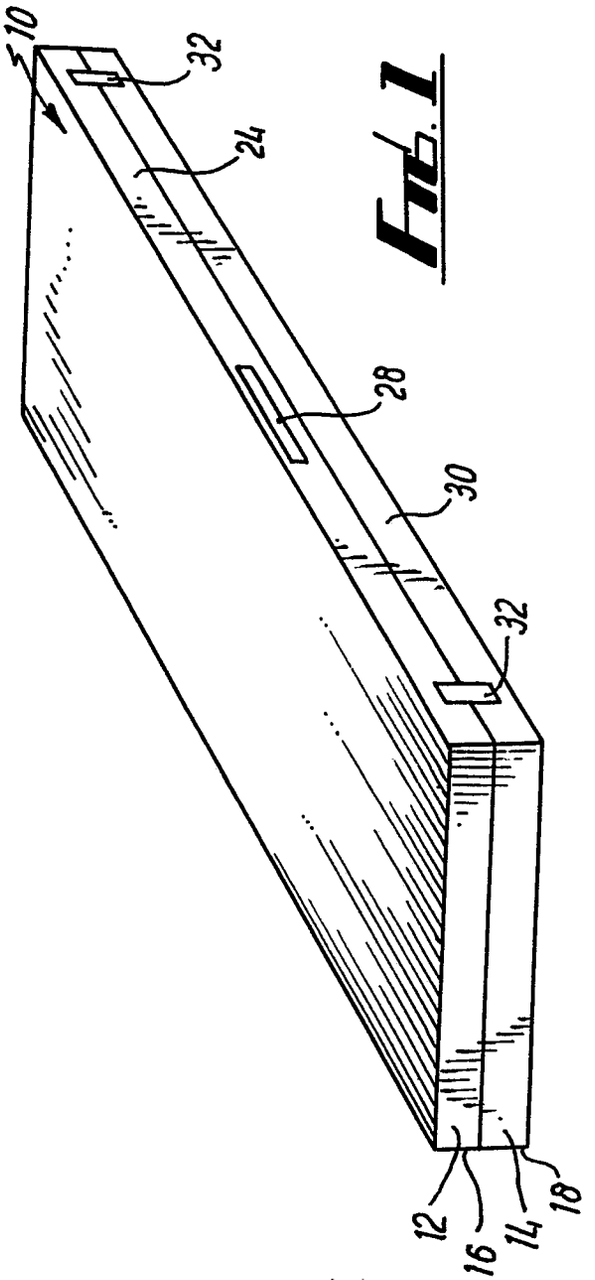
10
32
24
28
30
32
12
16
14
18

FIG. 1

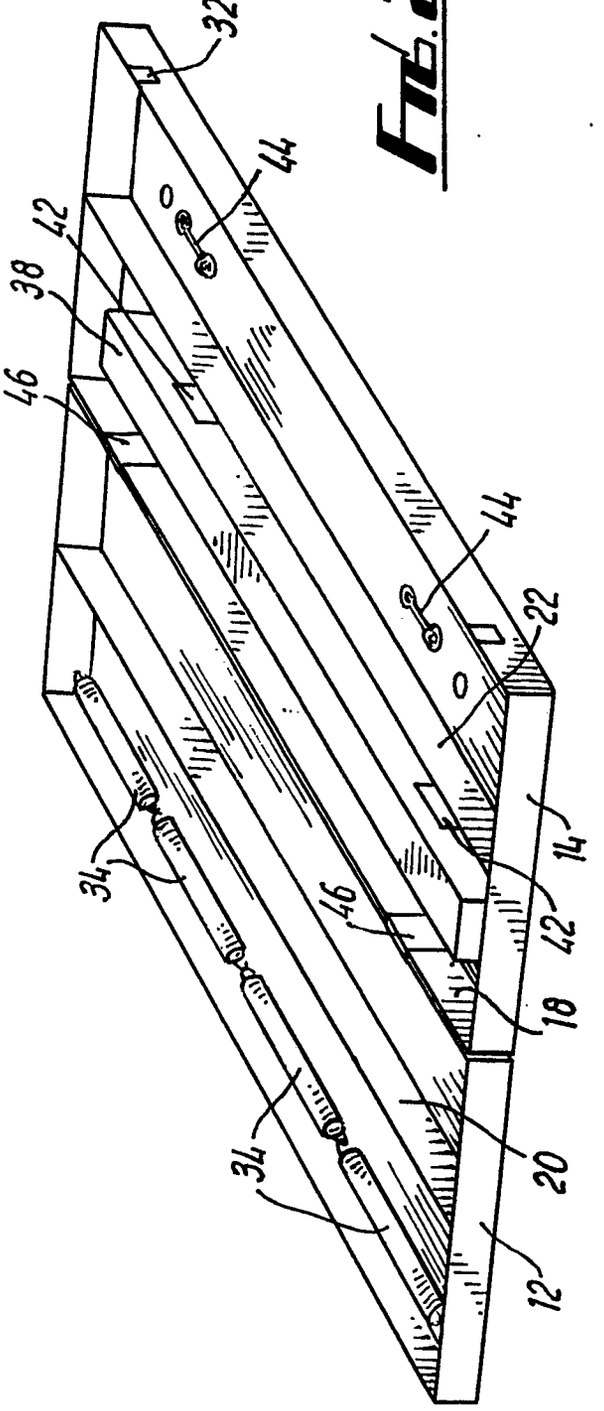
32
44
42
38
46
44
22
34
14
46
42
18
34
20
12

FIG. 2

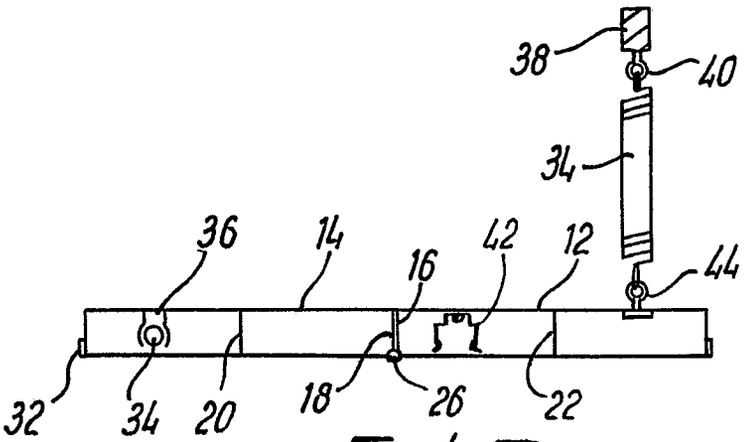

FIG. 3

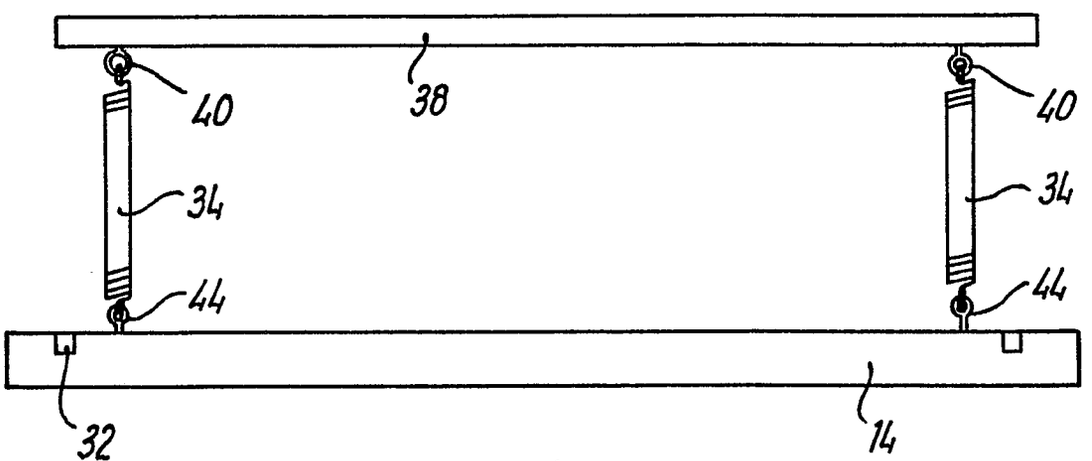

FIG. 4

European Patent Office

EUROPEAN SEARCH REPORT

Application number

DOCUMENTS CONSIDERED TO BE RELEVANT

EP 90301799.4

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int Cl 5)
X	US - A - 3 295 847 (MATT) * Fig. 1,2; description * --	1,2,4, 5,7	A 63 B 21/02 A 63 B 21/055 A 63 B 21/04 A 63 B 21/16 A 63 B 23/00
Y	DE - A - 2 111 860 (HASSDENTEUFEL) * Totality *	1	
A	* Totality * --	2,7,8	
Y	US - A - 3 664 666 (LLOYD) * Fig. 1-4; claims 1,2 *	1	
A	* Fig. 1-4; claims 1,2 * --	4,5,6	
A	DE - A - 2 260 363 (DUPRE) * Fig. 1,4; claim 1; page 4, 2nd break * --	2,4	
A	GB - A - 2 181 658 (ZYGMUND) * Fig. 1,4,5; abstract * ----	4,5,6	

TECHNICAL FIELDS SEARCHED (Int Cl 5)

A 63 B 21/00
A 63 B 23/00

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
VIENNA	02-05-1990	SCHÖNWÄLDER

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO Form 1503 03 82