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

(11) Publication number: **0 283 321**
A2

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **88302451.5**

(22) Date of filing: **21.03.88**

(51) Int. Cl.[4]: **A 61 H 1/00**
A 63 B 21/00

(30) Priority: **20.03.87 GB 8706632**

(43) Date of publication of application:
21.09.88 Bulletin 88/38

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

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(54) Improvements in or relating to exercising equipment.

(57) Exercising equipment includes an exercise bench comprising a frame (1,2,3) carrying a seat portion (25,26) for the exerciser. The frame (1,2,3) is mounted for pivotal movement between a generally horizontal first position in which it is supported on the floor and a generally vertical second position. The exerciser can sit on the seat portion (25,26) and carry out exercises when the frame is in its first position. When the exercises have been completed the frame can be pivoted to its second position for storage purposes. The frame may be mounted in a cupboard (9,29) which completely accommodates the equipment when the frame is in its second position.

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Description

Improvements in or relating to Exercising Equipment

This invention relates to exercising equipment and is concerned with a bench for enabling the user to carry out exercises for the purpose of improving physical health and/or fitness.

The value of physical exercise is well known and various types of exercising equipment are available to facilitate the carrying out of physical exercise. One such type of equipment is known as a bench and comprises a floor-supported generally horizontally extending frame which accommodates a seat portion on which the user can sit or lie whilst carrying out exercises such as lifting weights (which may be pivotally mounted on the frame) by means of the arms and/or legs. Benches of this type do, however, require to be located in a room, or part of a room, dedicated to the purpose of physical exercise. Thus, they cannot ordinarily, be used in domestic houses since the necessary space is not normally available.

It is an object of the present invention to provide a bench which can be used in the home but which, when not in use, can be stored without occupying a significant amount of space which may be needed for other purposes.

Accordingly, the present invention provides exercising equipment including an exercise bench comprising a frame, a means of supporting the frame on the floor, and a seat portion on the frame for the exerciser, said frame being pivotally mounted so that it can be pivoted between a horizontally extending first position in which the exerciser can sit or lie on said seat portion and carry out desired exercises and a second position in which it is generally vertically extending for storage purposes.

The equipment of the present invention is particularly useful for installation in domestic premises where it is not possible to permanently dedicate a room or part of a room to the equipment. Thus, when it is desired to use the equipment, the frame is pivoted to its first position and the desired exercises are carried out. Thereafter, the frame can be pivoted to its second position in which it takes up much less room.

In accordance with an embodiment, the frame is pivotally mounted on a fixed generally vertically extending second frame which may also include weights to be moved by the exerciser when carrying out exercises.

In a particularly preferred embodiment, the vertically extending second frame and the first mentioned frame,(when in its generally vertical second position), can be accommodated in a wall cupboard preferably provided with doors whereby the equipment can be stored away out of sight. When it is desired to use the equipment, it is merely necessary to open the cupboard doors and move the first mentioned frame to its horizontally extending first position.

For a better understanding of the invention, and to show how the same may be carried into effect, reference will now be made, by way of example, to the accompanying drawing which shows a perspective view of exercising equipment in accordance with the present invention.

Referring now to the drawing, the equipment comprises a first frame formed of tubular steel of about 1 1/4" in diameter. The frame comprises a generally U-shaped member including limbs 1 and 2 with a cross member 3 rotatably mounted between limbs 1 and 2. The cross member 3 is attached to a leg portion 4 which terminates in a foot portion 5 in contact with the floor 6 of the room in which the equipment is located to support the first frame on the floor 6 in a generally horizontal first position. A means (not shown) is provided to lock the leg portion 4 in its generally vertical frame supporting position. The equipment additionally includes a fixed vertically extending second frame also formed of tubular steel of 1 1/4" diameter. The second frame is located in a cupboard and is in the form of a U-shaped member having limbs 7 and 8. The limbs 7 and 8 are provided with brackets 31 secured to the wall 9 of the room at the back of the cupboard by fixing screws (not shown) passing through holes 32 in the brackets 31. The free lower ends of the limbs 7 and 8 are engaged in tubular collars 33 attached to plates 34 which are secured to the floor 6 by fixing screws (not shown) passing through holes 35 in the plates. The free ends of the limbs 1 and 2 of the frame are mounted on limbs 7 and 8 respectively of the vertically extending second frame so that they can pivot about horizontal axis 27.

The first frame is provided, at the closed end of its U-shaped member with a cylindrical socket 10 to receive a curved support member 11, the socket being perpendicular to the plane of the U-shaped member. An angled member 12 is mounted, for pivotal movement about a horizontal axis 13, on the free end of the member 11. A first transverse frame member 14 is affixed to the angled member 12 towards one of its free ends and a second transverse member 15 is fixed to the angled member 12 at its other free end. A transverse member 16 is also affixed to curved support member 11. The transverse members 14, 15 and 16 lie in planes parallel to the plane of the U-shaped member and each is provided with a resilient sleeve 17 at its free ends. Members 11, 12, 14, 15 and 16 are all formed of tubular steel of 1 1/4" diameter.

The vertically extending second frame is provided with a slidable transverse member 18 which engages with the limbs 7 and 8 at its free ends. A vertically extending rod 19 is affixed to the slidable member 18 in its central portion and is connected, via a hook, (not shown) to a cable which extends vertically upwards over pulleys 20 and 21 and is then connected, by another hook, (not shown) to a bar 22 provided with resilient sleeves 23 at its free ends.

The pulleys 20 and 21 are suspended from a frame member 24 which is pivotally mounted about a vertical axis 28 on the closed end of the vertically extending second frame.

The horizontally extending first frame is provided with a seat portion shown in chain dotted lines. The seat portion is in two parts. The first part 25 is rigidly fixed in a generally horizontal plane to the limbs 1 and 2 of the horizontally extending first frame. The second part, 26 is pivotally mounted on the limbs 1 and 2 so that it can adopt various positions between a position in the same plane as part 25 and other positions in planes at an angle to the plane of part 25. A means, not shown, is provided for retaining the part 26 in selected positions.

In use of the equipment, the second part 26 of the seat portion is secured in its appropriate position and the user then sits or lies on the seat portion and performs physical exercises. In one such exercise, the user may sit with the legs over the transverse bar 16 on member 11 and with the ankles under the transverse bar 14 upon which weights may be mounted. The arms and legs can then be exercised by gripping the member 15 with the hands and pivoting the member 12 about axis 13. Many other variation of this exercise can be carried out as desired.

Further, weights can be mounted on the rod 19 and, by pulling down on the bar 22, the transverse member 18, rod 19 and the weights can be lifted vertically in order to exercise the arm and shoulder muscles.

When the exercising is completed, the member 11 may be slid out of the socket 10 and the member 24 may be rotated through 90° about axis 28 so as to lie in the same plane as the limbs 7 and 8. The seat part 26 is placed in the same plane as the seat part 25 and the generally horizontally extending first frame is then pivoted about axis 27 so that the limbs 1 and 2 are generally extending in the same direction as limbs 7 and 8 ie. vertically. As the limbs 1 and 2 are pivoted about axis 27, the cross member 3 is rotated with respect to the members 1 and 2 through about 90° so that the leg portion 4 is generally co-planar with the limbs 1 and 2. In this way, the first frame occupies very little space when pivoted to its vertically extending second position. The member 11 can then be placed adjacent to the limbs 7 and 8 and the whole device then concealed by closing the doors 29 of the cupboard.

Thus, when the equipment has been stored away in the cupboard, it occupies very little space and the room can be used for other purposes. Then, when it is desired to carry out the exercises, all that is required is to open the cupboard doors 29, pivot the first frame about axis 27 so as to move it from its generally vertical second position to a generally horizontal first position, rotate cross member 3 so that the foot portion 5 is in contact with the floor, swivel the member 24 so that it is at right angles to the plane of the limbs 7 and 8, and insert the free end of the member 11 into and through the socket 10. Exercising can then begin.

Typically, the dimensions and design of the equipment is such that when it is in its storage configuration, it occupies a space of dimensions not more than 6 feet high, 2 1/2 feet wide and 1 1/4 feet deep so that it can be stored in a cupboard of conventional size.

Claims

1. Exercising equipment including an exercise bench comprising a frame (1,2,3), a means (4,5) of supporting the frame on the floor, and a seat portion (25,26) on the frame for the exerciser characterised in that said frame (1,2,3) is pivotally mounted so that it can be pivoted between a horizontally extending first position in which the exerciser can sit or lie on said seat portion and carry out desired exercises and a second position in which it is generally vertically extending for storage purposes.

2. Exercising equipment as claimed in claim 1 wherein the frame comprises a generally U-shaped member including first and second limbs (1,2), a cross member (3) mounted between the first and second limbs, and a leg portion (4,5) attached to the cross member (3), the cross member (3) being rotatably mounted with respect to the first and second limbs (1,2) between a position in which the leg portion is co-planar with the first and second limbs (1,2) and a position in which it is perpendicualar to the first and second limbs (1,2).

3. Exercising equipment as claimed in claim 2 wherein the generally U-shaped member includes a socket (10) at its closed end extending perpendicularly to the plane of the U-shaped member, a curved support member (11) is engaged within the socket (10), and an angled member (12) is mounted on the curved support member for pivotal movement about a horizontal axis (13).

4. Exercising equipment as claimed in claim 3 wherein first and second transverse members (14,15) are affixed to the angled member (12) at its free ends and a transverse member (16) is affixed to the curved support member (11), the transverse members (14,15,16) lying in planes parallel to the plane of the U-shaped member.

5. Exercising equipment as claimed in any one of the preceding claims wherein the frame is pivotally mounted on a fixed generally vertically extending second frame (7,8).

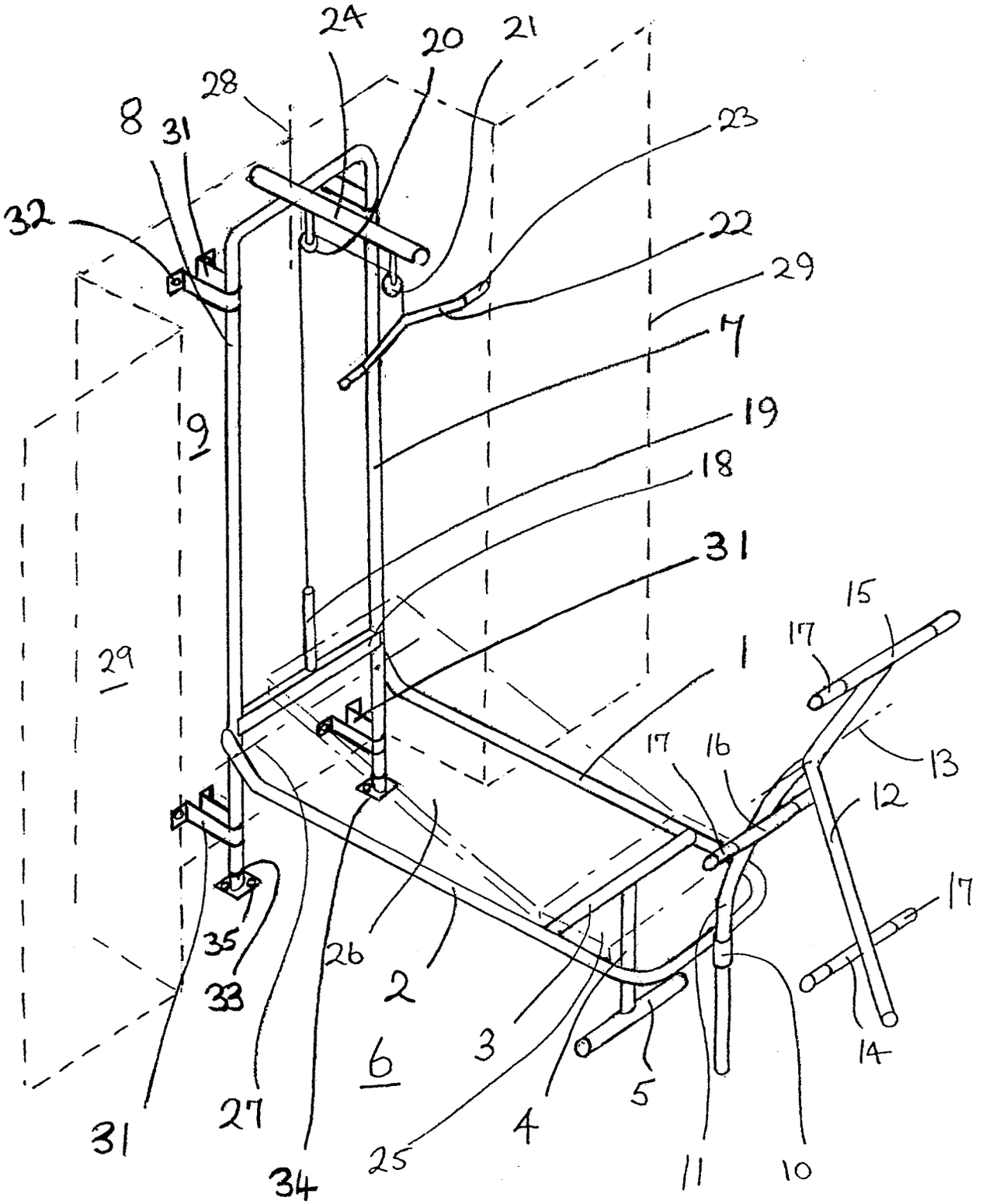
6. Exercising equipment as claimed in claim 5 wherein the second frame (7,8) comprises a generally U-shaped member including first and second limbs (7,8) and has means (31,32) to secure the second frame to a wall.

7. Exercising equipment as claimed in claim 6 and including a slidable transverse member (18) having free ends in engagement with the limbs (7,8) of the second frame, the transverse member (18) being adapted to receive weights and being connected, by means of a cable passing over a pulley (20,21) adjacent the closed end of the U-shaped member of the second frame (7,8), to a bar (22) to be gripped by the exerciser.

8. Exercising equipment as claimed in claim 7 wherein the pulley (20,21) is suspended from a frame member (24) mounted on the closed end of the U-shaped member of the second frame (7,8) for pivotting about a vertical axis (28).

9. Exercising equipment as claimed in any one of the preceding claims wherein the seat portion includes a first part (25) rigidly fixed to said pivotally mounted frame (1,2,3) and a second part (26) pivotally mounted on said pivotally mounted frame (1,2,3).

10. Exercising equipment as claimed in claim 1 and mounted in a cupboard (9,29), the cupboard enclosing the equipment when said pivotally mounted frame (1,2,3) is in its second position.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