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(54) **Exercise tool**

Trainingswerkzeug

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EP 2 759 320 B1

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Description

[0001] The present invention relates to an exercise tool according to the preamble of appended claim 1.

[0002] That the at least three pillars are rigidly interconnected only means that they have to keep a fixed distance to each other, which could be obtained for example by being separately fixed on the same plate or on another carrier or even in a said ground, such as a floor.

[0003] The invention relates to exercise tools of the type mentioned above for all types of exercise, and/or physical activity, everything from exercise of physically healthy people in the form of exercisers or competitive athletes to rehabilitation training of people with reduced physical ability or fear of movement, for example due to an accident, injury or the like. Also play-related exercise is included, especially for kids in preschool or school.

[0004] An exercise tool of such a type is already known through the documents US 7 309 303 and FR 2 947 595 A1. In document US 7 309 303 an exercise device having pillars and bars is disclosed. Furthermore the exercise tool or exercise station disclosed in FR 2 947 595 A1 is intended to have different exercise tools, such as expanders, secured to the bars and beams thereof, but it is nowhere in that document mentioned that the bars and the pillars may be so arranged that exercise is to be carried out by entering and exiting an inner room defined by the pillars and the bars. However, the construction of this exercise station makes it possible to obtain offering of such an exercising possibility which is the reason for placing this feature in the preamble of appended claim 1.

[0005] Thus, the invention is directed to an exercise tool of the type defined in the preamble of claim 1, i.e. which allows forming of a said inner room and enables movement of the bars between different positions, so that the exercise possible in that tool may be made efficient and by simple means be adapted to the size, ability and other desires, such as degree of difficulty and effort, of the person to use the tool for training.

SUMMARY OF THE INVENTION

[0006] The object of the present invention is to provide an exercise tool of this type which offers improved possibilities to carry out efficient exercise therein with respect to such exercise tools already known.

[0007] This object is according to the invention obtained by providing such an exercise tool with the features listed in the characterising part of appended claim 1.

[0008] Thus, by the new approach to arrange a centre pillar in said inner room and the offering of the possibility to arrange bars between this centre pillar and the pillars defining said inner room, the range of training activities possible to carry out in the exercise tool will be considerably increased. This relates especially to possibilities to climb around in and to hang in the tool. Thus, an exercise tool with the features defined in claim 1 will be quite different than any other exercise tool known and

provide a possibility to carry out other type of training than known exercise tools.

[0009] According to an embodiment of the invention said bars have a strength allowing a person exercising in the tool to stand on or to hang in the bars. The possibilities for variations of the exercise in the tool increases by that.

[0010] According to another embodiment of the invention the exercise tool comprises four said pillars configured to form a respective corner of said inner room. Four pillars are suitable for obtaining a space-efficient exercise tool with a said inner room of suitable size and possibility for varying exercise in the tool. The four pillars are then advantageously positioned in the stand in such a way that they form rectangular corners of the inner room, and each of the four pillars may then be positioned at the same distance to the both adjacent pillars so as to provide said inner room with a square bottom surface, which then also enables use of equal bars regarding the length between the different pillars.

[0011] According to a further embodiment of the invention the third engagement members of the centre pillar comprises bottom holes facing a respective pillar defining said inner room for receiving an end of a said bar, the latter pillars have through-holes aligned with said bottom holes for bringing a bar through these and to and into the bottom holes of the centre pillar, and the through-hole has an inner stop configured to require a lifting of the bar end in the through-hole for withdrawal of a bar from the position between the respective pillar and centre pillar in said exercise mode of the tool. This means that the bars very easily and fastly can be moved between different positions at various heights between the centre pillar and the other pillars and still be held safely in place in the respective positions. The or those persons exercising in the tool will thereby not experience it as hard work to change the appearance of the tool for changing the degree of difficulty of an exercise motion or prepare the tool for a different exercise motion.

[0012] According to another embodiment of the invention said engagement members of the pillars comprise recesses configured to receive ends of said bars. Said engagement members of pillars and the engagement members of bars interacting therewith are by that advantageously configured to require lifting of a bar to remove it from the pillars, once a bar is positioned between two pillars in said exercise mode of the tool, which results in that the bar is effectively being held in place by means of the gravity. According to a further development of this embodiment of the invention the end of a said bar is also elliptically formed, which makes it possible to secure it by twisting it so that it fastens in the recesses.

[0013] According to another embodiment of the invention said first engagement members comprise recesses in the form of grooves in the respective pillar, said grooves being open so as to allow introduction of an end of a bar therein while moving the bar transversally to its longitudinal extension. The bars may by that easily be

put in place between two pillars and be removed therefrom. According to a further development of this embodiment said grooves have a bottom with at least one portion sloping in the direction of introduction of a bar end therein for retention of the bar end in said use mode by means of the gravity, and in the embodiment mentioned above also by means of the ellipticity.

[0014] According to another embodiment of the invention the pillars of the stand have a height of 1.5 - 3 meters or 1.8 - 2.5 meters. This together with providing the pillars with engagement members for enabling arrangement of said bars at 5-30 or 10-25 different heights is suitable for an exercise tool with an attractively small space requirement and great opportunities for variation of the exercise therein.

[0015] According to another embodiment of the invention the bars and/or the pillars are made of wood or made mainly of wood, which is a suitable material regarding costs, strength, reliability and appearance of an exercise tool of this type.

[0016] Further advantages as well as advantageous features of the invention will appear from the following description.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] An exercise tool according to an embodiment of the invention cited as an example is described hereinafter with references to the appended drawings, in which:

Fig. 1 is a perspective view obliquely from above of an exercise tool according to the invention,

Fig. 2 is a perspective view enlarged with respect to Fig. 1 of a part of the tool according to Fig. 1 showing the arrangement of a bar between corner pillars of the tool,

Fig. 3 is a view corresponding to Fig. 2 illustrating the arrangement of a bar between a centre pillar and the corner pillar of the tool in Fig. 1, and

Figs. 4-6 are views illustrating the tool according to Fig. 1 in different exercise positions and how a person can be exercising in the tool in these positions.

DETAILED DESCRIPTION OF AN EMBODIMENT OF THE INVENTION

[0018] The exercise tool 1 shown in Fig. 1 comprises a stand 2 with five parallel pillars 5-9 mutually rigidly interconnected via a plate 3. The pillars are via suitable securing means 10 such as mountings and screws secured on the plate 3 functioning as support means for arrangement of the stand on a ground with the pillars extending vertically. The pillars 5-8 are corner pillars, each positioned at the same distance to the two adjacent

pillars so as to provide an inner room 11 defined by the pillars with a square bottom surface on the plate 3, while the pillar 9 is a centre pillar arranged in said inner room 11.

[0019] The pillars have the same height, for example 1.5-3 meters and here about 2.2 meters. The stand is stabilized at the top by beams 12, 13 connecting corner pillars diagonally arranged to each other and to the centre pillar.

[0020] The tool has a plurality of bars, of which only two 14, 15 are shown in Fig. 1 for illustration purpose but can be significantly more to the number, such as easily 10, 20 or more. The bars are configured to each extend between two of the pillars.

[0021] Each corner pillar 5-8 has a plurality of, here more exactly 20, first engagement members 16 (see also Figs. 2 and 3) arranged at different heights along the respective pillar and both ends of the bars have second engagement members configured to interact with said first engagement members in order to hold the bars removably arranged between the pillars in an exercise mode of the tool. Said first engagement members more exactly comprise recesses in the form of grooves 16 in the respective corner pillar, which grooves are open in one end 18 so as to allow introduction of an end portion 17 of a bar 14 therein while moving the bar transversely to its longitudinal extension. The groove 16 has a bottom 19 with at least one portion sloping in the direction of introduction of a bar end therein for retention of the bar end in said exercise mode by means of the gravity. The end portion 17 of the bar further has an elliptical cross-section with a length of the shortest axis of the ellipse corresponding to or being smaller than the width of the groove 16 with up to some millimetres, which means that the bar has to be "correctly twisted" for being able to be inserted in the groove. This ellipticity of the end portion 17 of the bar assists the gravity to efficiently retain the bar in the exercise position.

[0022] The centre pillar 9 (see especially Fig. 3) has third engagement members in the form of bottom holes 20 facing a respective pillar 5-8 defining said inner room 11 for receiving an end of a bar 15. The corner pillars 5-8 have through-holes 21 aligned with said bottom holes 20 for bringing a bar through these and to and into the bottom holes of the centre pillar. The through-hole 21 has an inner stop 22 configured to require a lifting of the bar end in the through-hole for withdrawal of a bar from the position between the respective pillar 5-8 and the centre pillar 9 in the exercise mode of the tool. The bars to be arranged between corner pillars and the centre pillar have for this reason no end portion with elliptical cross-section.

[0023] From the above description and Figs. 1-3 it is made abundantly clear that bars can easily be moved to extend between two adjacent corner pillars or a corner pillar and the centre pillar at different heights and safely be held in place in the selected positions without requiring any further securing members. The bars are arranged in different ways depending on what a person wishes to

exercise in the tool. At such exercise the person can use the bars as barriers to pass under or over or to climb on or hang in.

[0024] With the exercise tool according to the invention a person can exercise by performing motions in every motion plane, (median plane, dorsal plane, transversal plane) wherein it is especially preferable to combine exercise in several different motion planes, such as motion planes in the form of bending forwards (flexion), bending backwards (extension), bending sideways (lateral flexion) and rotation (to the right or to the left, or outwards and inwards rotation), bringing a body part/extremity outwards or inwards (abduction or adduction) of the body of the person exercising. A few of a large amount of possible training exercises are now to be described with reference to Figs. 4-6, in which a few details of the tool shown in Figs. 1-3 are not shown.

[0025] It is shown in Fig. 4 how a bar 23 can be arranged at a suitable height between two corner pillars 5, 6 to step over, and another bar 24 to bend under. It is shown here how a person exercising moves sideways into said inner room by stepping over the bar 23 and simultaneously bending forwards under the bar 24. By this motion pattern are in addition to hip flexor muscles, such as m.iliopsoas, among others the muscle on the front side of the thigh (m.quadriceps femoris) and also abs and back muscles and other muscles of the torso exercised, since the upper part of the body has to be tensioned during the bending forwards under the bar 24. A bending sideways (lateral flexion) and also a bending forwards (flexion) of the body occur by the motion. The height of the bar 23 is adjusted according to the ability of the person to lift his legs and can be increased as for example a person in rehabilitation training have regained part of his former strength.

[0026] It is shown in Fig. 5 how bars 25, 26 are arranged between the centre pillar 9 and a corner pillar 5 and how a person located in said inner room steps over the lower bar 25 and simultaneously bends the upper part of the body backwards (extension) to pass under the higher bar 26. Partly other muscles are by that exercised than by the motion shown in Fig. 4. By combining motions of types shown and varying these by different positions of bars a very all-round exercise loading the most diverse of muscle groups in the body can be achieved safely and easily controlled.

[0027] Another possible type of exercise in the exercise tool is shown in Fig. 6, in the form of climbing on bars 27-32 arranged at different heights between the centre pillar 9 and corner pillars. By arrangement of a large amount of bars between the different pillars in the exercise tool it is also possible to step and climb around in the exercise tool in the most shifting manner and thereby also move completely or partly hanging in bars. It is also possible to perform training exercises in the form of e.g. chin-ups (pull-ups) by hanging in a bar or with simultaneous partly support from the feet on the ground.

[0028] It is realized that the exercise tool according to

the invention advantageously could for example be placed in e.g. a preschool for motion exercise of children, in a gym, in a home for exercise in a home environment, at a physiotherapist for rehabilitation training etc.

[0029] The invention is of course not in any way restricted to the embodiment thereof described above, but many possibilities to modifications thereof will be apparent to a person with ordinary skill in the art without departing from the scope of the invention as defined in the appended claims.

[0030] The number of corner pillars could for example be different than four, such as five or more. Likewise could more than one pillar be arranged in said room, and "centre pillar" is to be interpreted broadly and also includes the case in which the pillar in question is not placed exactly at the center of the inner room, but that it is placed in the inner room at all. Except for the movable bars the tool could have one or more bars fixedly arranged between the pillars.

[0031] The grooves of the first engagement members could be open at the end opposite to what is shown in the figures, i.e. so that the bars instead are introduced in the grooves from inside the inner room and outwards and the bottom of the grooves has at least one portion sloping in the direction of introduction of a bar end therein away from the center of the inner room.

Claims

1. An exercise tool comprising:

- a stand (2) with at least three parallel pillars (5-8) rigidly interconnected and support means (3) configured to enable arrangement of the stand on a ground with the pillars extending vertically, and
- a plurality of bars (14, 15, 23-26) each configured to extend between two of the pillars, said

pillars being mutually positioned in the stand in such a way that they together with bars extending between them define an inner room (11) to enter and exit by a person exercising in the tool by passing the bars, each of the pillars (5-8) having a plurality of first engagement members (16) arranged at different heights along the respective pillar and both ends of the bars have second engagement members (17) configured to interact with said first engagement members in order to hold the bars removably arranged between the pillars in an exercise mode of the tool so as to allow removal of the bars from the pillars in order to remove a bar from the pillars or moving it to another position between two pillars defined by said first engagement members, **characterized in that** the stand (2), in addition to said pillars (5-8), has a centre pillar (9) arranged in said inner room (11) and extending parallel with respect to said

pillars and rigidly connected thereto, that the centre pillar (9) has a plurality of third engagement members (20) arranged at different heights along said centre pillar, said third engagement members being configured to interact with engagement members of ends of said bars, and that said pillars (5-8) defining the inner room (11) have fourth engagement members (21) configured to interact with engagement members of ends of said bars so as to allow said bars (15, 25, 26) to be removably arranged between the centre pillar and respective pillars.

2. An exercise tool according to claim 1, **characterized in that** the centre pillar (9) has said third engagement members (20) and the pillars (5-8) defining the inner room have said fourth engagement members (21) for allowing said bars (15, 25, 26) to be optionally arranged between the centre pillar and all of the pillars (5-8) defining the inner room
3. An exercise tool according to claim 1 or 2, **characterized in that** the third engagement members of the centre pillar (9) comprises bottom holes (20) facing a respective pillar (5-8) defining said inner room for receiving an end of a said bar (15, 25, 26), that the latter pillars have through-holes (21) aligned with said bottom holes for bringing a bar through these and to and into the bottom holes of the centre pillar, and that the through-hole has an inner stop (22) configured to require a lifting of the bar end in the through-hole (21) for withdrawal of a bar from the position between the respective pillar and centre pillar in said exercise mode of the tool.
4. An exercise tool according to any of the preceding claims, **characterized in that** said bars (14, 15, 23-26) have a strength allowing a person exercising in the tool to stand on or to hang in the bars.
5. An exercise tool according to any of the preceding claims, **characterized in that** it comprises four said pillars (5-8) configured to form a respective corner of said inner room (11).
6. An exercise tool according to claim 5, **characterized in that** the four pillars (5-8) are positioned in the stand (2) in such a way that they form rectangular corners of said inner room (11).
7. An exercise tool according to claim 6, **characterized in that** each of the four pillars (5-8) is positioned at the same distance to the both adjacent pillars so as to provide said inner room (11) with a square bottom surface.
8. An exercise tool according to any of the preceding claims, **characterized in that** said engagement members of the pillars comprise recesses (16, 21)

configured to receive ends of said bars.

9. An exercise tool according to claim 8, **characterized in that** said engagement members (16, 21) of pillars and engagement members of bars interacting therewith are configured to require lifting of a bar to remove it from the pillars, when a bar (14, 15, 23-26) is once positioned between two pillars in said exercise mode of the tool.
10. An exercise tool according to claim 8 or 9, **characterized in that** said first engagement members comprise recesses in the form of grooves (16) in the respective pillar, said grooves being open so as to allow introduction of an end of a bar (14, 23, 24) therein while moving the bar across its longitudinal extension.
11. An exercise tool according to claim 10, **characterized in that** said grooves (16) have a bottom (19) with at least one portion sloping in the direction of introduction of a bar end therein for retention of the bar end in said exercise mode by means of the gravity.
12. An exercise tool according to any of the preceding claims, **characterized in that** the pillars (5-9) of the stand have a height of 1.5 - 3 meters or 1.8 - 2.5 meters.
13. An exercise tool according to any of the preceding claims, **characterized in that** said pillars (5-9) are provided with engagement members (16, 21) for enabling arrangement of said bars (14, 15, 23-26) on 5 - 30 or 10 - 25 different heights.

Patentansprüche

1. Trainingswerkzeug, umfassend:

- ein Gestell (2) mit mindestens drei parallelen Ständern (5-8), die starr miteinander verbunden sind, und Stützmitteln (3), die ausgestaltet sind, die Anordnung des Gestells auf einem Boden zu ermöglichen, wobei sich die Ständer vertikal erstrecken, und
- eine Vielzahl von Stangen (14, 15, 23-26), die jeweils ausgestaltet sind, sich zwischen zwei der Ständer zu erstrecken, wobei

die Ständer gegenseitig so in dem Gestell positioniert sind, dass sie zusammen mit Stangen, die sich zwischen ihnen erstrecken, einen Innenraum (11) bestimmen, der von einer Person, die in dem Werkzeug trainiert, durch Passieren der Stangen zu betreten und verlassen ist, wobei jeder Ständer (5-8) eine Vielzahl von ersten Eingriffselementen (16) auf-

- weist, die auf verschiedenen Höhen entlang des jeweiligen Ständers angeordnet sind, und wobei beide Enden der Stangen zweite Eingriffselemente (17) aufweisen, die ausgestaltet sind, mit den ersten Eingriffselementen zusammenzuwirken, um die Stangen zu halten, die in einem Trainingsmodus des Werkzeugs entfernbar zwischen den Ständern angeordnet sind, um so die Entfernung der Stangen von den Ständern zu ermöglichen, um eine Stange von den Ständern zu entfernen oder sie in eine andere Position zwischen zwei Ständern zu bewegen, die von den ersten Eingriffselementen bestimmt ist, **dadurch gekennzeichnet, dass** das Gestell (2) zusätzlich zu den Ständern (5-8) einen Mittelständer (9) aufweist, der in dem Innenraum (11) angeordnet ist und sich parallel in Bezug auf die Ständer erstreckt und starr mit ihnen verbunden ist, dass der Mittelständer (9) eine Vielzahl von dritten Eingriffselementen (20) aufweist, die auf verschiedenen Höhen entlang des Mittelständers angeordnet sind, wobei die dritten Eingriffselemente ausgestaltet sind, mit Eingriffselementen von Enden der Stangen zusammenzuwirken, und dass die Ständer (5-8), die den Innenraum (11) bestimmen, vierte Eingriffselemente (21) aufweisen, die ausgestaltet sind, mit Eingriffselementen von Enden der Stangen zusammenzuwirken, um es den Stangen (15, 25, 26) zu ermöglichen, entfernbar zwischen dem Mittelständer und den entsprechenden Ständern angeordnet zu sein.
2. Trainingswerkzeug nach Anspruch 1, **dadurch gekennzeichnet, dass** der Mittelständer (9) die dritten Eingriffselemente (20) aufweist und dass die Ständer (5-8), die den Innenraum bestimmen, die vierten Eingriffselemente (21) aufweisen, die es ermöglichen, dass die Stangen (15, 25, 26) optional zwischen dem Mittelständer und allen Ständern (5-8), die den Innenraum bestimmen, angeordnet werden.
 3. Trainingswerkzeug nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** die dritten Eingriffselemente des Mittelständers (9) Bodenlöcher (20) umfassen, die einem entsprechenden Ständer (5-8) zugewandt sind, der den Innenraum bestimmt, zum Aufnehmen eines Endes einer Stange (15, 25, 26), dass die letzteren Ständer Durchgangslöcher (21) aufweisen, die mit den Bodenlöchern ausgerichtet sind, um eine Stange durch diese und zu und in die Bodenlöcher des Mittelständers hinein zu bringen, und dass das Durchgangsloch einen inneren Anschlag (22) aufweist, der ausgestaltet ist, ein Anheben des Stangenendes in dem Durchgangsloch (21) zu erfordern, um eine Stange aus der Position zwischen dem entsprechenden Ständer und Mittelständer in dem Trainingsmodus des Werkzeugs zu entnehmen.
 4. Trainingswerkzeug nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Stangen (14, 15, 23-26) eine Stärke aufweisen, die es einer Person, die in dem Werkzeug trainiert, ermöglicht, auf den Stangen zu stehen oder an ihnen zu hängen.
 5. Trainingswerkzeug nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** es vier Ständer (5-8) umfasst, die ausgestaltet sind, eine entsprechende Ecke des Innenraums (11) zu bilden.
 6. Trainingswerkzeug nach Anspruch 5, **dadurch gekennzeichnet, dass** die vier Ständer (5-8) so in dem Gestell (2) positioniert sind, dass sie rechteckige Ecken des Innenraums (11) bilden.
 7. Trainingswerkzeug nach Anspruch 6, **dadurch gekennzeichnet, dass** jeder der vier Ständer (5-8) in dem gleichen Abstand zu den beiden angrenzenden Ständern positioniert ist, um so den Innenraum (11) mit einer quadratischen Grundfläche zu versehen.
 8. Trainingswerkzeug nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Eingriffselemente der Ständer Aussparungen (16, 21) umfassen, die ausgestaltet sind, die Enden der Stangen aufzunehmen.
 9. Trainingswerkzeug nach Anspruch 8, **dadurch gekennzeichnet, dass** die Eingriffselemente (16, 21) der Ständer und Eingriffselemente der Stangen, die mit diesen zusammenwirken, ausgestaltet sind, das Anheben einer Stange zu erfordern, um sie von den Ständern zu entfernen, wenn eine Stange (14, 15, 23-26) einmal zwischen zwei Ständern in dem Trainingsmodus des Werkzeugs positioniert ist.
 10. Trainingswerkzeug nach Anspruch 8 oder 9, **dadurch gekennzeichnet, dass** die ersten Eingriffselemente Aussparungen in Form von Nuten (16) in dem jeweiligen Ständer umfassen, wobei die Nuten offen sind, um das Einführen von einem Ende einer Stange (14, 23, 24) in sie hinein zu ermöglichen, wenn die Stange quer zu ihrer Längserstreckung bewegt wird.
 11. Trainingswerkzeug nach Anspruch 10, **dadurch gekennzeichnet, dass** die Nuten (16) einen Boden (19) mit mindestens einem Abschnitt aufweisen, der in der Richtung der Einführung eines Stangenendes in sie hinein abfällt, um das Stangenende im Trainingsmodus durch die Schwerkraft zurückzuhalten.
 12. Trainingswerkzeug nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Ständer (5-9) des Gestells eine Höhe von 1,5 - 3 Metern oder 1,8 - 2,5 Metern aufweisen.

13. Trainingswerkzeug nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Ständer (5-9) mit Eingriffselementen (16, 21) versehen sind, um die Anordnung der Stangen (14, 15, 23-26) auf 5 - 30 oder 10 - 25 verschiedenen Höhen zu ermöglichen.

Revendications

1. Dispositif (1) pour faire de l'exercice comprenant:

- un bâti (2) ayant au moins trois colonnes (5 à 8) parallèles, reliées entre elles rigidement, et des moyens (3) de support configurés pour permettre de mettre le bâti sur un sol alors que les colonnes d'étendent verticalement et
- une pluralité de barres (14, 15, 23 à 26) configurées chacune pour s'étendre entre deux des colonnes,

les colonnes étant placées mutuellement dans le bâti de manière à définir, ensemble avec les barres s'étendant entre elles, un espace (11) intérieur dans lequel une personne faisant de l'exercice dans le dispositif entre et dont elle sort en passant entre les barres, chacune des colonnes (5 à 8) ayant une pluralité de premiers éléments (16) d'enclenchement disposés à des hauteurs différentes le long de la colonne respective et les deux extrémités des barres (11) et deuxième éléments (17) d'enclenchement étant configurés pour coopérer avec les premiers moyens d'enclenchement afin de maintenir les barres, montées de manière amovible entre les colonnes, dans un mode de dispositif dans lequel on fait de l'exercice, de manière à permettre de retirer les barres des colonnes afin de retirer une barre des colonnes ou de la mettre dans une autre position entre deux colonnes, définie par les premiers éléments d'enclenchement,

caractérisé en ce que le bâti (2) a, en plus des colonnes (5 à 8), une colonne (9) centrale disposée dans l'espace (11) intérieur et s'étendant parallèlement aux colonnes et y étant reliée rigidement, **en ce que** la colonne (9) centrale a une pluralité de troisièmes éléments (20) d'enclenchement disposés à des hauteurs différentes le long de la colonne centrale, les troisièmes éléments d'enclenchement étant configurés pour coopérer avec des éléments d'enclenchement d'extrémité des barres, et **en ce que** les colonnes (5 à 8) définissant l'espace (11) intérieur ont de quatrièmes moyens d'enclenchement, configurés pour coopérer avec des moyens d'enclenchement des extrémités des barres de manière à permettre à ces barres (15, 25, 26) d'être montées de manière amovible entre la colonne centrale et des colonnes respectives.

2. Dispositif pour faire de l'exercice suivant la revendication 1, **caractérisé en ce que** la colonne (9) centrale a les troisièmes éléments (20) d'enclenchement et les colonnes (5 à 8) définissant l'espace intérieur ont les quatrièmes éléments (21) d'enclenchement pour permettre aux barres (15, 25, 26) d'être montées à volonté entre la colonne centrale et toutes les colonnes (5 à 8) définissant l'espace intérieur.

3. Dispositif pour faire de l'exercice suivant la revendication 1 ou 2, **caractérisé en ce que** les troisièmes moyens d'enclenchement de la colonne (9) centrale comprennent des trous (20) borgnes faisant face à une colonne (5 à 8) respective définissant l'espace intérieur pour recevoir une extrémité d'une barre (15, 25, 26), **en ce que** les dernières colonnes ont des trous (21) traversant alignés avec les trous borgnes pour mettre une barre dans ceux-ci et dans les trous borgnes de la colonne centrale, et **en ce que** le trou traversant a une butée (22) intérieure configurée pour exiger un soulèvement de l'extrémité de la barre dans le trou (21) traversant pour retirer une barre de la position entre la colonne respective et la colonne centrale dans le mode de l'outil dans lequel on fait de l'exercice.

4. Dispositif pour faire de l'exercice suivant l'une quelconque des revendications précédentes, **caractérisé en ce que** les barres (14, 15, 23 à 26) ont une résistance permettant à une personne faisant de l'exercice dans le dispositif, de s'y mettre ou de s'y suspendre.

5. Dispositif pour faire de l'exercice suivant l'une quelconque des revendications précédentes, **caractérisé en ce qu'il** comprend quatre colonnes (5 à 8) configurées pour former un coin respectif de l'espace (11) intérieur.

6. Dispositif pour faire de l'exercice suivant la revendication 5, **caractérisé en ce que** les quatre colonnes (5 à 8) sont placées dans le bâti (2) de manière à former des sommets de rectangle de l'espace (11) intérieur.

7. Dispositif pour faire de l'exercice suivant la revendication 6, **caractérisé en ce que** chacune des quatre colonnes (5 à 8) est placée à la même distance des deux colonnes voisines de manière à ce que l'espace (11) intérieur ait une surface de fond carrée.

8. Dispositif pour faire de l'exercice suivant l'une quelconque des revendications précédentes, **caractérisé en ce que** les éléments d'enclenchement des colonnes comprennent des cavités (16, 21) configurées pour recevoir des extrémités des barres.

9. Dispositif pour faire de l'exercice suivant la revendication 8, **caractérisé en ce que** les éléments (16, 21) d'enclenchement des colonnes et les éléments d'enclenchement des barres coopérant entre eux sont configurés pour exiger un soulèvement d'une barre pour la retirer des colonnes lorsqu'une barre (14, 15, 23 à 26) est placée tout d'abord entre deux colonnes dans le mode du dispositif dans lequel on fait de l'exercice.
10. Dispositif pour faire de l'exercice suivant la revendication 8 ou 9, **caractérisé en ce que** les premiers éléments d'enclenchement comprennent des cavités sous la forme de rainures (16) dans la colonne respective, les rainures étant ouvertes de manière à y permettre l'introduction d'une extrémité d'une barre (14, 23, 24) tout en déplaçant la barre suivant son étendue longitudinale.
11. Dispositif pour faire de l'exercice suivant la revendication 10, **caractérisé en ce que** les rainures (16) ont un fond (19) ayant au moins une partie en pente dans la direction d'introduction d'une extrémité d'une barre pour retenir l'extrémité de la barre, dans le mode dans lequel on fait de l'exercice, au moyen de la force de gravité.
12. Dispositif pour faire de l'exercice suivant l'une quelconque des revendications précédentes, **caractérisé en ce que** les colonnes (5 à 9) du bâti ont une hauteur de 1, 5 à 3 mètres ou de 1, 8 à 2, 5 mètres.
13. Dispositif pour faire de l'exercice suivant l'une quelconque des revendications précédentes, **caractérisé en ce que** les colonnes (5 à 9) sont pourvues d'éléments (16, 21) d'enclenchement pour permettre de monter des barres (14, 15, 23 à 26) à 5 à 30 ou 10 à 25 hauteurs différentes.

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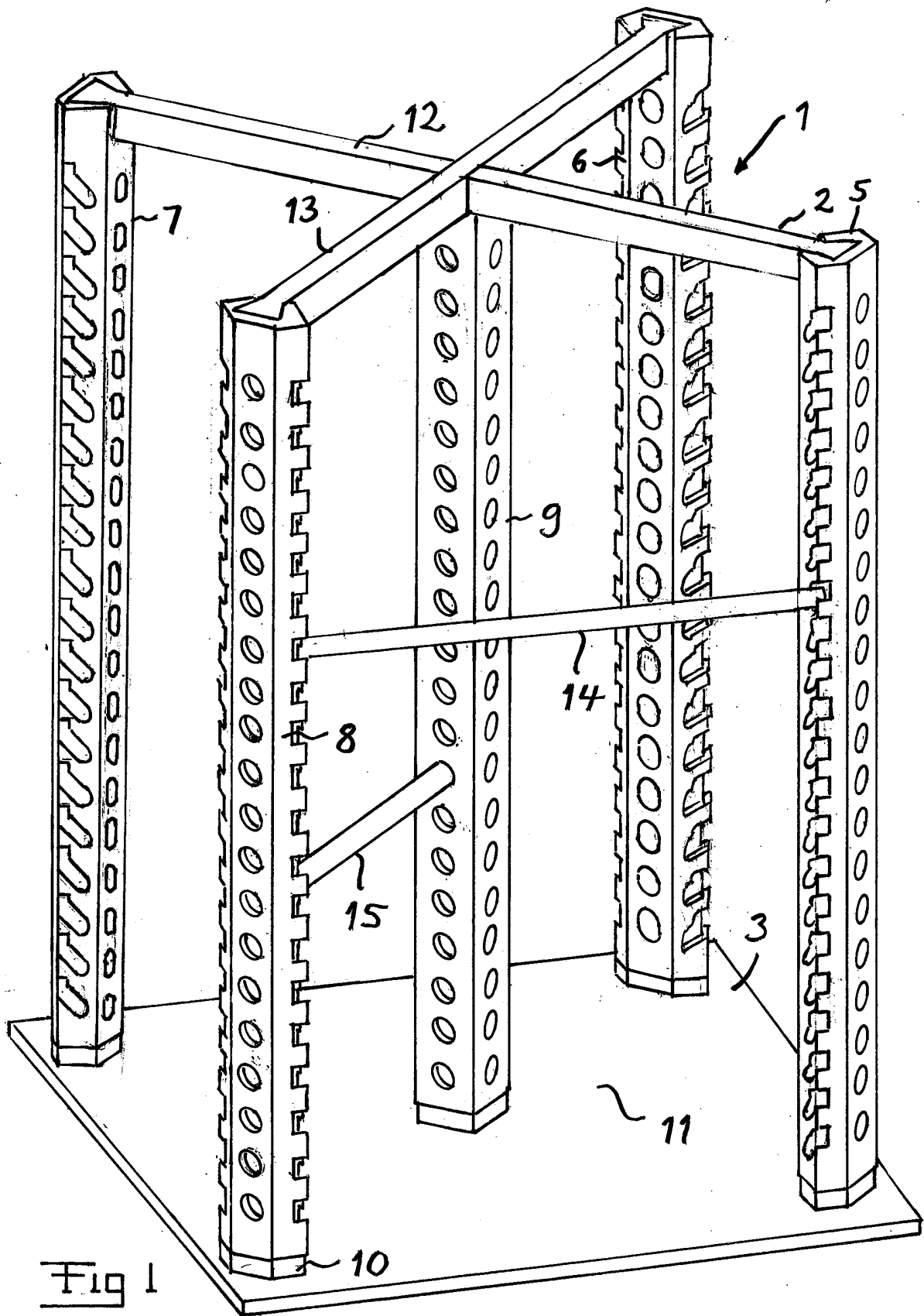
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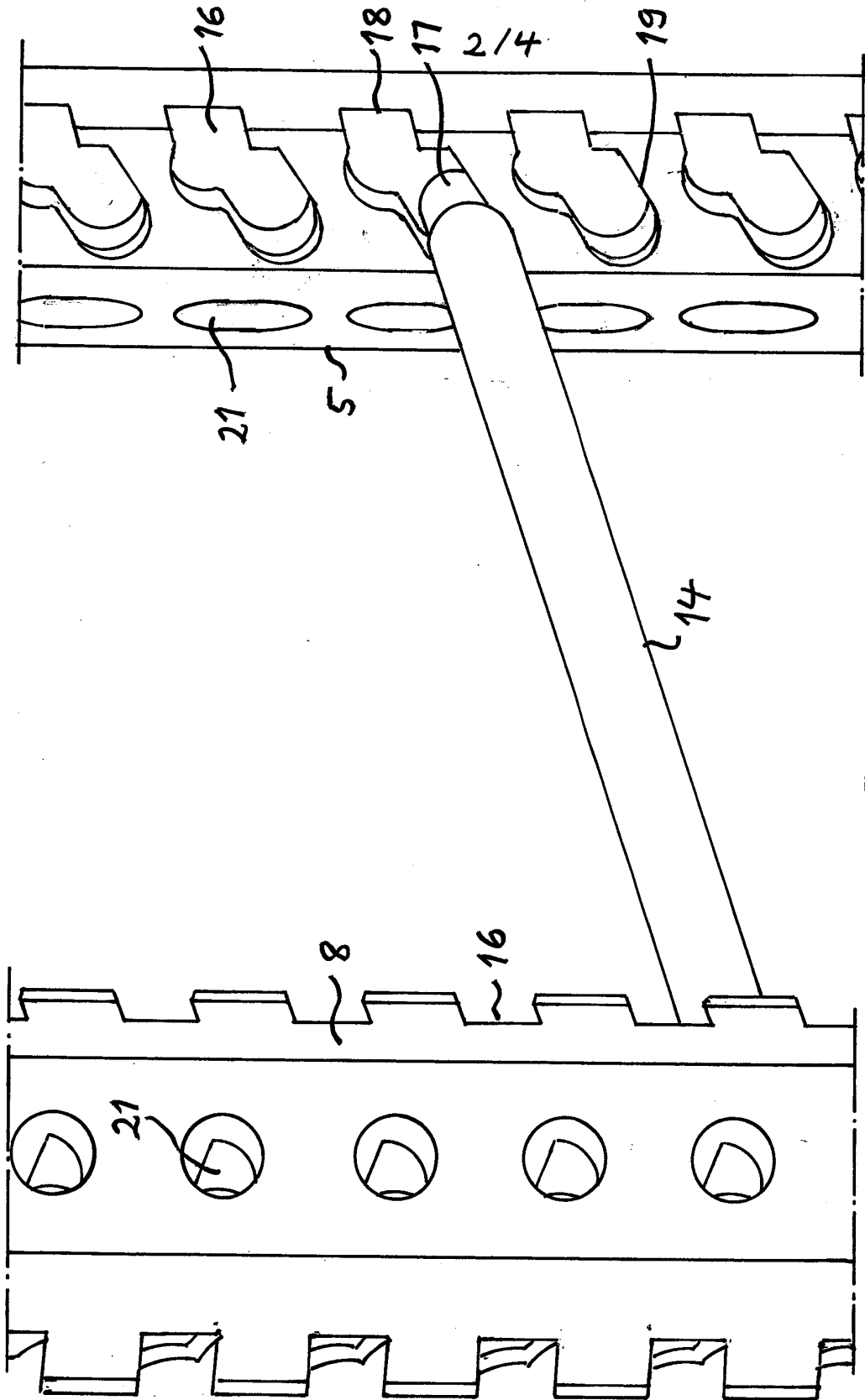
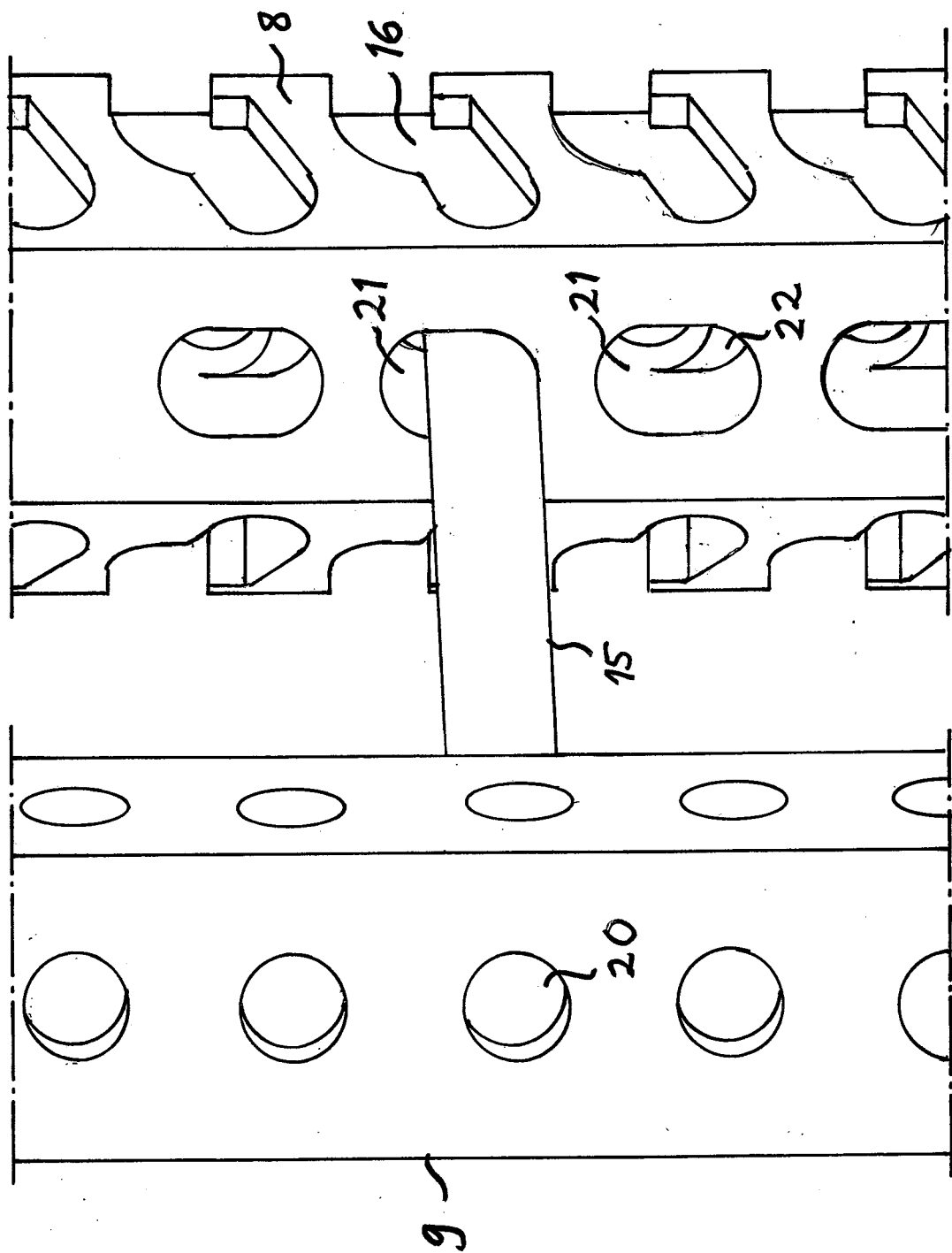


Fig 2



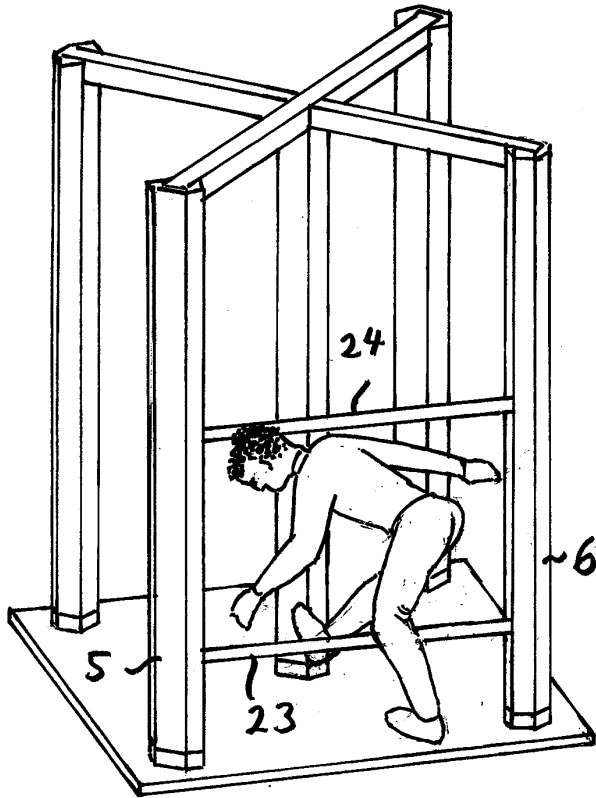


Fig 4

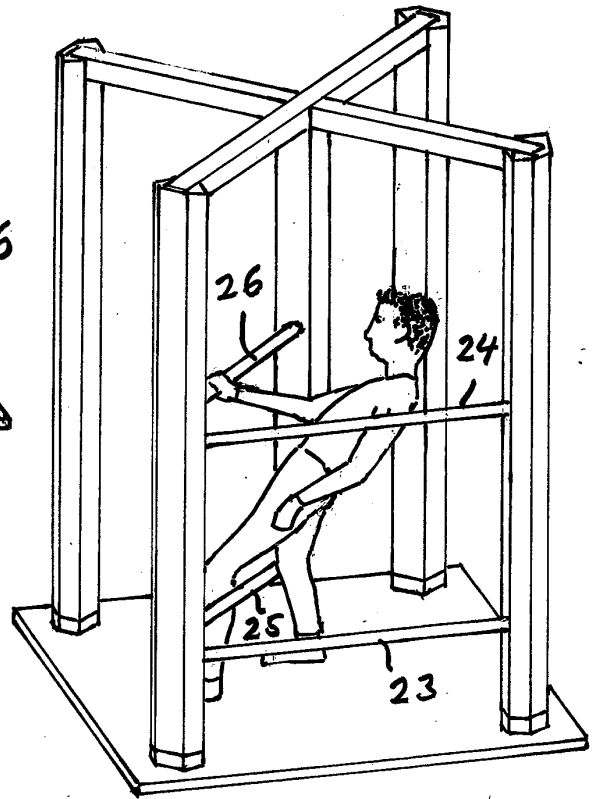


Fig 5

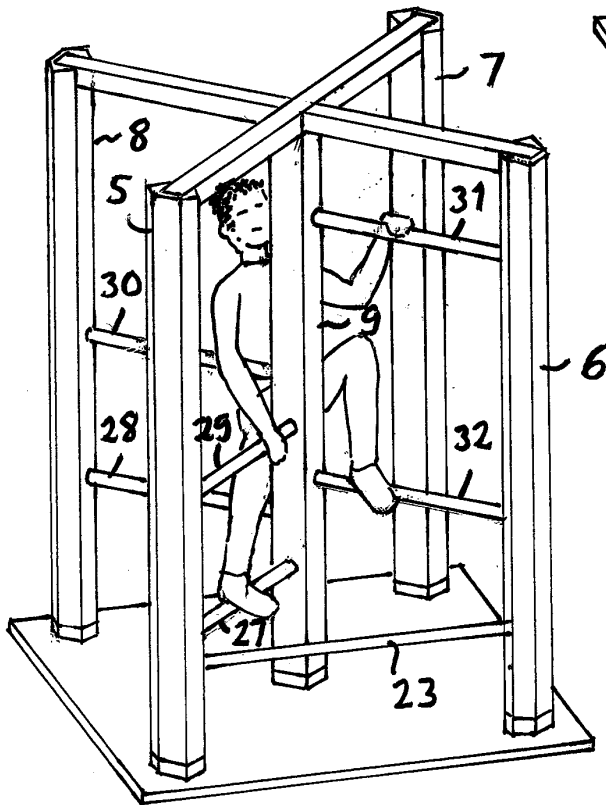


Fig 6

REFERENCES CITED IN THE DESCRIPTION

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