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(54) **Personal exercise machine for swimming-like movements**

Trainingsgerät für schwimm-ähnliche Bewegungen

Dispositif pour des exercices de mouvements de natation

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(56) References cited:
**EP-A- 0 861 680 DE-A- 2 708 378
DE-C- 81 304 DE-C- 712 294**

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Description

[0001] The present finding concerns an improved device, through which it is possible to carry out gymnastic exercises in a horizontal position with four handles used by a person to rest his hands and feet on, respectively, as well as a suspended mattress, on which a person lies during the gymnastic exercise.

[0002] EP-A2-0861680, to the same applicant, describes a personal device for carrying out gymnastic exercises comprising a rigid support frame with extendable shafts which can be connected together, where at the two outer upper shafts return pulleys for cables are fixed which terminate with handles, in which the hands and feet of the person who intends to do exercise are rested.

[0003] A mobile extended seat is also foresees on which the body of the user lies down, also foreseeing a series of pulleys, mounted on the upper central cross-member and in an upper central position thereof, which allow the return of the support cables, advantageously of the elastic type, for the central extended seat as well as for the handles, so as to allow the person laying on the mobile extended seat to make a gymnastic movement similar to swimming.

[0004] The purpose of the present finding is that of foreseeing one constructive solution to be applied to the patented device described above, in order to improve its operation and to allow it to also be used by a person with substantial mobility difficulties.

[0005] Specifically this constructive solution has the purpose of stabilising the central extended seat at the start of gymnastic activity.

[0006] Such constructive solution is illustrated in the attached drawings, which show only the novelty elements of the device, for a complete description thereof referring to the text of the previous patent, where:

- figure 1 (Tav. I) represents an overall perspective view of the device;
- figure 2 (Tav. II) represents an overall perspective view of the improved elements of the device;
- figure 3 represents detailed views, front and plan respectively, of the hooking bracket for the cables.

[0007] As can be seen in fig. 1, the device, *per se* known, substantially consists of a frame 1, which comprises two extendable vertical shafts, which support an upper horizontal cross-member, to which two parallel longitudinal cross-members are attached, in turn connected to other horizontal cross-members, both adjustable in length and in width.

[0008] A series of pulleys are mounted on the central shaft, so as to allow the return of the bearer cables 27 and the actuating cables 26 for the handles, which support the hands and feet of the person lying down, as well as the mobile central extended seat, which supports the

person's body.

[0009] As can be seen in fig. 2, the adjustment of the load value on the central extended seat 70, in relation to the weight of the person lying on it, is carried out by detaching the end (point "K") equipped with a spring catch for the cable 30 of the extended seat itself, to rehook the same end spring catch for said cable (30 with a dotted line) on one of the holes 31 present on the bracket 32, arranged on the upright of the frame 1 (see fig. 3).

[0010] As can be seen again in figure 2, the stabilisation of the central extended seat on the horizontal plane is realised, in the direction of the axis "X", through the cable 40 and in the direction of the axis "Y" with the cables 50.

[0011] Finally, according to the invention as can be seen in both figures 1 and 2, a stabilising group 60 for the central extended seat, with which the central extended seat itself is positioned in the lower end stop position, is associated with the device of the known type, to ease the supporting action of the person.

[0012] Operatively, at the start of the gymnastic exercise the person, through the keypad 61 - downhill button - actuates the motor of the winding roller 62, which takes care of winding the belt 63, connected to the extended seat, which pulls it back until it is rested on the dampened trestle 64, so as to avoid possible oscillations of the extended seat itself and to thus ease the person getting up.

[0013] After the person has got into position lying down on the extended seat, through the keypad (uphill button) he unlocks the action of the winding roller 62, which allows the free unwinding of the belt 63, with the consequent lifting, produced by the elastic pulling back of the cables, up to the operating position, corresponding to the equilibrium condition between the weight of the person lying down and the sum of the elastic forces of the cables.

[0014] At this point the person, lying down on the extended seat, rehooks the keypad 61 on the bracket 62 and starts the gymnastic activity during which, by acting on the four cables equipped with handles, the gravitational weight on the central extended seat is reduced and an elastic pull-back of the bearer cables is thus generated, so as to create an effect of progressive increase in the size of oscillation of the extended seat itself.

Claims

1. DEVICE FOR CARRYING OUT PERSONAL GYM-NASTIC EXERCISES, of the type which comprises a rigid support frame with extendable shafts which can be connected together, where at the two outer upper shafts return pulleys for cables are fixed which terminate with handles, in which the hands and feet of the person who intends to do exercise are rested, providing a mobile extended seat on which the body of the user lies down, also providing a series of pulleys, mounted on the upper central cross-member and in an upper central position thereof, which allow

the return of the support cables, advantageously of the elastic type, for the central extended seat as well as for the handles, so as to allow the person laying on the mobile extended seat to make a gymnastic movement similar to swimming, the device providing means suitable for adjusting the load value on the central extended seat, in relation to the weight of the person lying on it, and providing means for stabilising the movement of the central extended seat in the horizontal plane during gymnastic exercise, the device being **characterised in that** it provides a stabiliser (60) for the central extended seat, which provides means able to position the central extended seat (70) against a fixed stopping means in correspondence to its lower position position, to ease the supporting action of the person at the start of the gymnastic exercise.

2. DEVICE FOR CARRYING OUT PERSONAL GYM-NASTIC EXERCISES, according to claim 1, **characterised in that** at the start of the gymnastic exercise, the person, through one keypad (61), actuates the motor of one winding roller (62), which takes care of winding one belt (63), connected to the extended seat (70), which pulls it back until it is rested on one dampened trestle (64).
3. DEVICE FOR CARRYING OUT PERSONAL GYM-NASTIC EXERCISES, according to claim 2, **characterised in that** through the keypad (61) the action of the winding roller (62) is unlocked, which allows the free unwinding of the belt (63), with the consequent lifting, produced by the elastic pulling back of the cables, up to the operating position, corresponding to the equilibrium condition between the weight of the person lying down and the sum of the elastic forces of the cables.

Patentansprüche

1. VORRICHTUNG ZUR AUSFÜHRUNG VON PERSÖNLICHEN GYMNASTIKÜBUNGEN, welche derart gestaltet ist, dass sie einen feststehenden Stützrahmen mit ausziehbaren Schäften umfasst, welche miteinander verbunden werden können, wobei bei den zwei äußeren oberen Schäften Rückführrollen für Seile befestigt werden, welche mit Griffen enden, in welchen die Hände und Füße der Person, welche die Übungen ausführen will, abgelegt werden, und über einen beweglichen sich in der Mitte verlängerten Sitz verfügt, auf dem der Körper des Benutzers aufliegt, sowie auch eine Anzahl an Rollen, welche auf dem oberen zentralen Querträger und in einer zentralen Position von diesem angebracht werden, und welche die Rückfuhr der Stützseile ermöglichen, die vorteilhafterweise elastisch sind, und sowohl für den sich in der Mitte verlängerten Sitz als auch für

die Griffe dienen, um der Person, welche auf dem sich in der Mitte verlängerten Sitz liegt, zu ermöglichen, eine Gymnastikbewegung auszuführen, welche der Schwimmbewegung gleicht, wobei die Vorrichtung über eine Einrichtung verfügt, welche geeignet ist, den Belastungswert auf dem sich in der Mitte verlängerten Sitz in Beziehung zum Gewicht der Person, die auf ihm liegt, zu regulieren, und über eine Einrichtung verfügt, welche die Bewegung des sich in der Mitte verlängerten Sitzes in der horizontalen Ebene während der Gymnastikübungen stabilisiert, wobei die Vorrichtung **dadurch gekennzeichnet ist, dass** sie über einen Stabilisator (60) für den sich in der Mitte verlängerten Sitz verfügt, welcher über eine Einrichtung verfügt, die geeignet ist, den sich in der Mitte verlängerten Sitz (70) an einer festsitzenden Halteeinrichtung zu positionieren, die sich in Übereinstimmung mit seiner unteren Position befindet, um das Abstützen der Person zu Beginn der Gymnastikübung zu vereinfachen.

2. VORRICHTUNG ZUR AUSFÜHRUNG VON PERSÖNLICHEN GYMNASTIKÜBUNGEN nach Anspruch 1, **dadurch gekennzeichnet, dass** zu Beginn der Gymnastikübung die Person mittels einer Kleintastatur (61) den Motor einer Wickelrolle (62) antreibt, welche für die Wickelung eines Gurtes (63) sorgt, der mit dem verlängerten Sitz (70) verbunden ist und ihn zurückzieht, bis er auf dem befeuchteten Gerüst (64) aufliegt.
3. VORRICHTUNG ZUR AUSFÜHRUNG VON PERSÖNLICHEN GYMNASTIKÜBUNGEN nach Anspruch 2, **dadurch gekennzeichnet, dass** durch die Kleintastatur (61) die Aktion der Wickelrolle (62) ungesperrt ist, was das freie Abwickeln des Gurtes (63) mit der daraus resultierenden Anhebung ermöglicht, welche durch das elastische Zurückziehen der Seile bis zur Betriebsposition erzeugt wird, dies in Übereinstimmung mit der Gleichgewichtserfordernis zwischen dem Gewicht der liegenden Person und der Summe der elastischen Kraft der Seile.

Revendications

1. DISPOSITIF POUR L'EXÉCUTION D'EXERCICES GYMNIQUES INDIVIDUELS, du type qui comporte un cadre rigide de soutien avec des barres étirables qui peuvent être reliées ensemble, où des poulies de retour pour les câbles sont attelées aux deux barres supérieures externes et se terminent par des poignées, où s'appuient les mains et les pieds de la personne qui entend faire de la gymnastique, présentant un siège mobile étiré sur lequel s'allonge le corps de l'utilisateur, présentant aussi une série de poulies, montées sur le membre transversal central supérieur et dans une position centrale supérieure

y afférente, qui permet le retour des câbles de soutien, avantageusement du type élastique, pour le siège étiré central ainsi que pour les poignées, de façon à permettre à la personne allongée sur le siège mobile étendu de faire un mouvement gymnique ressemblant à la natation, le dispositif présentant des moyens aptes à régler la valeur de la charge sur le siège étiré central, par rapport au poids de la personne y étant allongée, et présentant des moyens pour stabiliser le mouvement du siège étiré central sur le plan horizontale pendant l'exercice gymnique, le dispositif étant **caractérisé en ce qu'il** présente un stabilisateur (60) pour le siège étiré central, qui présente des moyens aptes à positionner le siège étiré central (70) contre un moyen fixe de blocage à proximité de sa position inférieure, en vue de faciliter l'action de soutien de la personne lors du commencement des exercices gymniques.

2. DISPOSITIF POUR L'EXÉCUTION D'EXERCICES GYMNIQUES INDIVIDUELS, selon la revendication 1, **caractérisé en ce que**, lors du commencement de l'exercice gymnique, par le biais d'un pavé numérique (61), la personne démarre le moteur d'un rouleau enrouleur (62), qui prend soin de l'enroulement d'une courroie (63), reliée au siège étiré (70), qui le tire en arrière tant qu'il n'est pas appuyé au cadre amorti (64).
3. DISPOSITIF POUR L'EXÉCUTION D'EXERCICES GYMNIQUES INDIVIDUELS, selon la revendication 2, **caractérisé en ce que**, par le biais du pavé numérique (61), l'action du rouleau enrouleur (62) est débloquée, ce qui permet l'déroulement libre de la courroie (63), avec le relèvement qui s'ensuit, produit par le tirage en arrière élastique des câbles, jusqu'à la position de fonctionnement, correspondant à la condition d'équilibre entre le poids de la personne allongée et la somme des forces élastiques des câbles.

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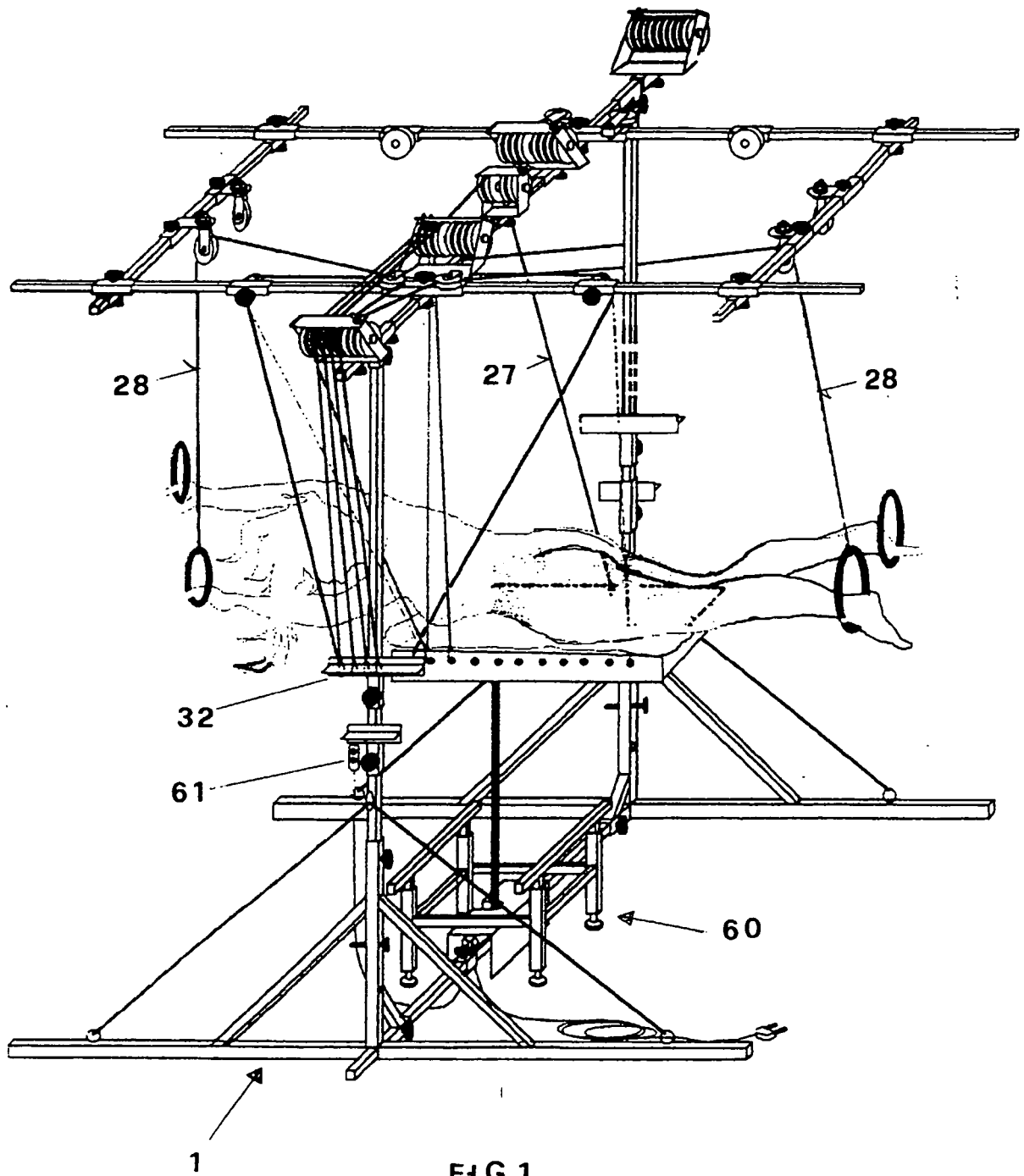


FIG 1

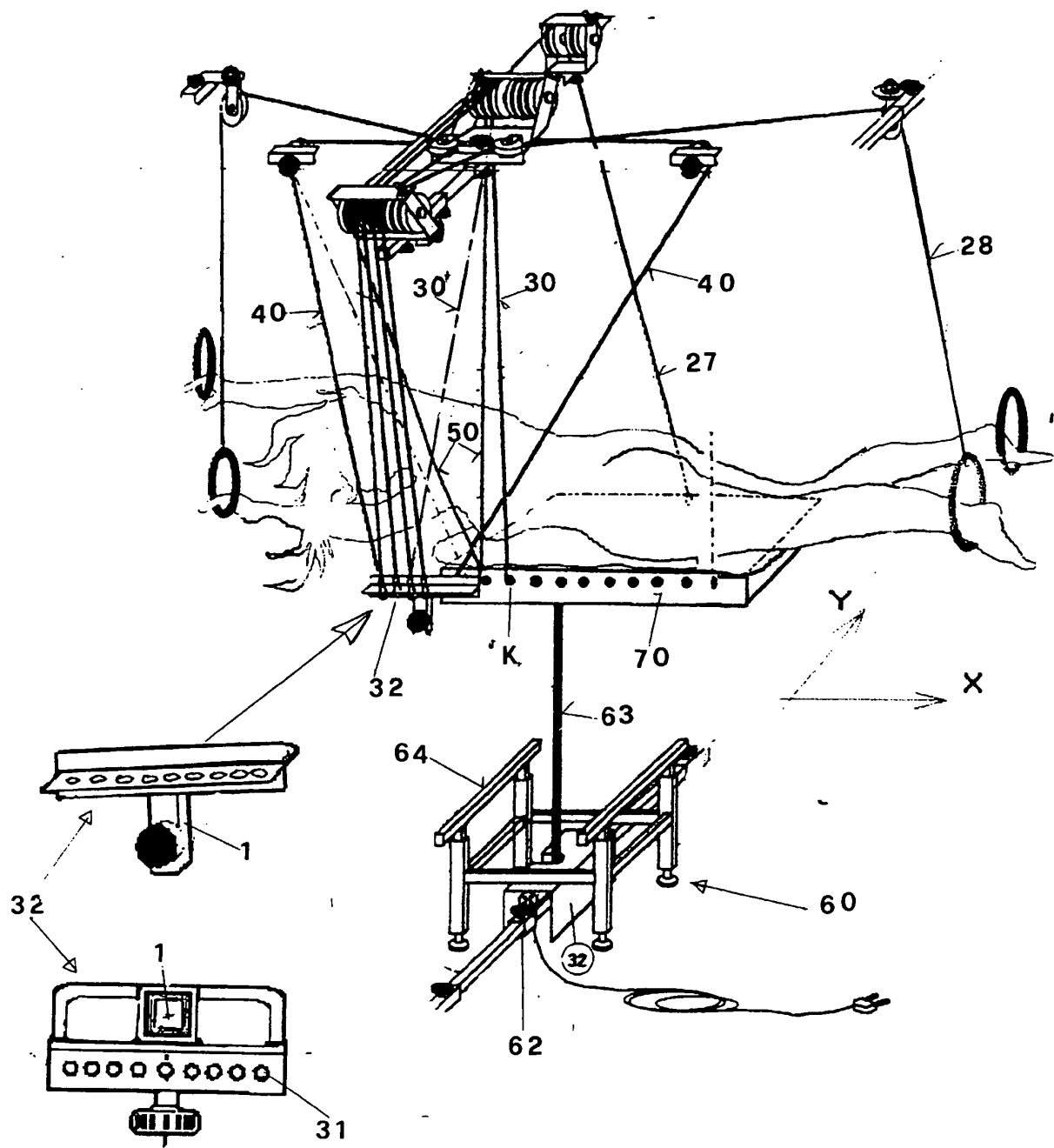


FIG.2

FIG.3