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(54) **SUPPORT APPARATUS FOR SEATED PATIENT**

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APPAREIL SUPPORT POUR PATIENT ASSIS

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Description

TECHNICAL FIELD

[0001] This invention relates to a patient support apparatus for use in conjunction with a bed, chair, stool or operating table.

BACKGROUND ART

[0002] The present method of administering treatments such as an epidural to a patient is most unsatisfactory and is in general in conflict with hospital policies of non-manual contact and lifting.

[0003] Present epidural procedures require the patient to sit on the edge of the bed or operating table, lean forward into the hands of a wardsperson while the qualified medical practitioner administers the epidural from across the bed. The procedures are traumatic for the doctor, the patient and the wardsperson for obvious reasons.

[0004] The wardsperson may be male or female, large or small, as can be the patient. A small wardsperson could not be confident of safely supporting a large patient during this dangerous procedure.

[0005] It is also very difficult to ensure adequate curvature of the lumbar spine during epidural, spinal, endoscope procedures, while being held by a wardsperson.

[0006] WO 0 409 740 A discloses a chain for material support. US-A-3 041 636 discloses an invalid lifter and transporting device.

[0007] An object of the present invention is to provide an apparatus for providing supplementary support to a patient undergoing a variety of procedures from a seated position.

[0008] Further objects and advantages of the present invention will become apparent from the ensuing description which is given by way of example only.

DISCLOSURE OF INVENTION

[0009] The present invention relates to a patient support, for use with a bed, chair, stool or operating table, for providing supplementary support to a patient in a sitting position providing supplementary support to a patient in a sitting position, according to one or several of the appended claims. Said support comprising; support comprising;

- (a) a main limb having an elongate upright and a footing,
- (b) a brace having an elongate upright and a footing said brace being pivotably connected to the main limb and adapted to provide support for the main limb when it is erected on a surface, and
- (c) a rest for receiving and providing support to a patient's upper body, the arrangement and construction being such that when the support is erected and placed adjacent to a patient in a seating position the

patient can lean forward and be provided with bodily support.

[0010] The main support arm of the brace can be provided with adjustable engagement means which can be adjusted for engagement beneath a horizontal member of a bed.

[0011] Means can be provided by which the pivotable connection between the brace and the upright can be locked.

[0012] The engagement means can be pivotably and telescopically mounted on the brace.

[0013] The footing of the brace can be provided with ground wheels or rollers.

[0014] The footings of the main limb and brace can extend to either side of the uprights thereof.

[0015] The upright of the main support can be provided with a plurality of crossbars to provide support for a patient's feet and/or for use as handle bars.

[0016] The positions of the crossbars on the main support can be adjustable.

[0017] The rest can comprise a crossbar and a sternum support mounted centrally of the crossbar.

[0018] The apparatus can include a facial support/receptacle mounted on the crossbar in a position opposite sternum support.

[0019] The facial support receptacle can pivot with respect to the crossbar.

[0020] Elements of the rest can be padded and upholstered.

BRIEF DESCRIPTION OF THE DRAWINGS

[0021] Aspects of the present invention will now be described with reference to the accompanying drawings in which;

Figure 1 is a rear perspective view of apparatus according to the present invention, and

Figure 2 is a front perspective view of the apparatus of figure 1, and

Figures 3 and 4 are front and side views of the apparatus of figure 1, and

Figures 5 and 6 are side and front views of the rest for the apparatus of figure 1, and

Figures 7 and 7(e) are schematic drawings showing various modes of use for the apparatus of the present invention.

[0022] With respect to the drawings apparatus according to the present invention comprises a main limb generally indicated by arrow 1 having an elongate upright 2 and a footing 3, a brace generally indicated by arrow 4 which has an upright 5 and a footing 6 and a rest generally indicated by arrow 7 for providing support for a patient's upper body parts.

[0023] The footing 3 of the limb 1 can be cylindrical tube having opposed ends 8 extending to either side of

upright 2.

[0024] The upright 2 which can be manufactured from metal tubestock mounts a plurality of cross-bars generally indicated by arrow 9. One crossbar 9a can be fixed and two others 9b are adjustable on the upright 2.

[0025] As will be explained later the crossbars 9 can be used either as footrests or as handle bars.

[0026] The adjustable crossbars 9b can be fitted to a collars 10 having threaded locking members 11.

[0027] The upright 5 is adapted to act as a brace for the upright 2 and is pivotably connected to the upright by a pivot arrangement 12. When the apparatus is correctly positioned the pivot connection can be locked using a locking device such as an allen key (not shown).

[0028] The footing 6 of the upright 5 extends to either side of the upright 5 and can be provided with wheels or rollers 13.

[0029] The upright 5 mounts adjustable engagement means generally indicated by arrow 14. The engagement means 14 is slidable and lockable on the upright 5 and comprises a collar 15 and a lock 16. Forks 17 extend from the collar 15 and mount a telescopic arm 18.

[0030] The degree that the arm 18 extends is adjustable and the arm 18 can be locked in position by a locking device 19.

[0031] In use the engagement means 14 can be set at an angle beneath the rail of a bed or operating table with the contact position ensuring that the apparatus cannot roll away from the bed or table. Means such as allen keys (not shown) may be used to lock arm 18 at a set incline.

[0032] The rest 7 can be adjustably mounted on the end of the upright 2 and locked in position by a locking device 20. The rest has a shaft 21 which can telescope within the upright 2.

[0033] The rest 7 has a crossbar 22, a sternum support 23 and a facial support/receptacle 24 and all elements of the rest can be padded and upholstered for the comfort of users.

[0034] The sternum support 23 is a substantially L-shaped appendage to the crossbar 22.

[0035] The facial support 24 is provided with a face opening 25. The facial support 24 is able to pivot with respect to the sternum support. A pivoting action can be achieved by using an internal hinge (not shown) or by virtue of the resilience of the material from which the core or body of the rest 7 is manufactured.

[0036] The shape and configuration of the rest is designed to provide due comfort to female patients and provides space to either side of the sternum support for the patient's breasts. Because the sternum support extends some way towards the patient position adequate space is provided between a patient and the upright 2 to accommodate the stomach of a pregnant female patient.

[0037] Figures 7 to 7(e) are schematic drawings showing various modes of use of the apparatus of the present invention.

[0038] In figure 7 the patient 26 is seated on a support 27. The patient's arms extends over crossbar 22 of the

rest 7 and the crossbar 9 is gripped. The patient's chest is hard against the sternum support 23 and the patient's feet 26b rest on crossbar 9b. The patient's upper body is leaning towards the apparatus.

[0039] In figure 7a a similar position to that of figure 7 is assumed by the patient and in this instance the patient's face is engaged with facial support 24 and the patient's back is on a steeper incline.

[0040] In figures 7(b) the patient's arms are beneath the crossbar 22, are crossed over and grip the crossbar 9.

[0041] In figure 7(c) the patient's arms extend over the crossbar 22 and grip crossbar 9.

[0042] In figure 7(d) the patient's arms 26a extend over the crossbar 22 and a cross-over grip is employed.

[0043] In figure 7(e) the patient's arms 26a extend over the crossbar 22 and the feet 26b are not in contact with crossbar 9b.

[0044] The present invention provides a stable, strong, multiple adjustable, total support system for all sizes of patients. By virtue of its multiple adjustments, the apparatus ensures all patients position themselves with adequate curvature of the lumbar spine for ease of procedures. The apparatus is adjustable to fit all hospital beds and operating tables. The invention has a scope for many uses including, but not limited to:

Epidural procedures

Spinal treatments

Endoscopy

Maternity care

[0045] Aspects of the present invention have been described by way of example only and it should be appreciated that modifications and additions may be made thereto.

Claims

1. Patient support, for use with a bed, chair, stool or operating table, for providing supplementary support to a patient in a sitting position, said patient support comprising:

a main limb (1) comprising an elongate upright (2) and a footing (3);

a rest (7) connected to the upright (2) of said main limb (1), for receiving and providing support to the upper body of a patient;

a floor engaging brace (4) comprising an elongate upright (5) and a footing (6), said brace (4) being pivotally connected to the main limb (1) and adapted to provide support for the main limb (1);

said patient support being **characterised in that:**

the elongate upright (5) of said floor engag-

- ing brace (4) is provided with pivotally and telescopically adjustable engagement means (14), said adjustable engagement means (14) being suitable for engaging beneath an horizontal member of a bed, chair, stool or operating table, so that, in use, the patient support cannot roll away from the bed or table.
2. Patient support according to claim 1, **characterised in that** it further comprises a foot support (9) attached to and extending from said main limb (1) for supporting the feet of said patient seated on said horizontal support.
 3. Patient support according to claim 1, **characterised in that** it further comprises locking means adapted to lock the connection between said brace (4) and said main limb (1).
 4. Patient support according to claim 1, **characterised in that** said footing (6) of said brace (4) is provided with ground wheels or rollers (13).
 5. Patient support according to claim 1, **characterised in that** the footings (3, 6) of the main limb (1) and brace (4) extend transversally with respect to the uprights (2, 5) thereof.
 6. Patient support according to claim 1, **characterised in that** the upright (2) of the main limb (1) is provided with a plurality of crossbars (9), said crossbars (9) being adapted to support a patient's feet and/or being adapted to be used as handle bars.
 7. Patient support according to claim 6, **characterised in that** the positions of the crossbars (9) on the main limb (1) are adjustable.
 8. Patient support according to claim 1, **characterised in that** the rest (7) of the patient support comprises a crossbar (22) and a sternum support (23) mounted centrally of the crossbar (22).
 9. Patient support according to claim 8, **characterised in that** it further comprises a facial support/receptacle (24, 25) mounted on the crossbar (22) in a position opposite the sternum support (23).
 10. Patient support according to claim 9, **characterised in that** the facial support/receptacle (24, 25) is able to pivot with respect to the crossbar (22).
 11. Patient support according to claim 10, **characterised in that** elements of the rest (7) are padded and upholstered.

Patentansprüche

1. Haltevorrichtung für Patienten, die mit einem Bett, Stuhl, Hocker oder Operationstisch verwendet wird, um einem sitzenden Patienten eine zusätzliche Stütze zu verleihen, diese Haltevorrichtung für Patienten schließt ein:
 - ein Hauptbein (1), das einen langen Pfosten (2) und einen Fuß (3) enthält;
 - eine Stütze (7), die mit dem Pfosten (2) des genannten Hauptbeins (1) verbunden ist, um den Oberkörper des Patienten zu empfangen und abzustützen;
 - eine Stützbefestigung (4) am Boden, die einen langen Pfosten (5) und einen Fuß (6) enthält, diese Stütze (4) ist drehbar und mit dem Hauptbein (1) verbunden und dient als Stütze für das Hauptbein (1);
 die genannte Haltevorrichtung für Patienten ist **dadurch gekennzeichnet, dass:**
 - der lange Pfosten (5) der genannten Stützbefestigung (4) am Boden mit regulierbaren, drehbaren und teleskopischen Befestigungsvorrichtungen (14) ausgestattet ist, diese regulierbaren Befestigungsvorrichtungen (14) dienen dazu, unter dem horizontalen Element von einem Bett, Stuhl, Hocker oder Operationstisch befestigt zu werden, so dass die Haltevorrichtung für Patienten während der Verwendung nicht vom Bett oder Tisch wegrollen kann.
2. Haltevorrichtung für Patienten gemäß Patentanspruch 1, die **dadurch gekennzeichnet ist, dass** sie außerdem eine Fußstütze (9) enthält, die am Hauptbein (1) befestigt ist und sich von dort erstreckt, um die Füße des genannten sitzenden Patienten auf der genannten horizontalen Stützvorrichtung abzustützen.
3. Haltevorrichtung für Patienten gemäß Patentanspruch 1, die **dadurch gekennzeichnet ist, dass** sie außerdem Blockiervorrichtungen enthält, die dazu dienen, die Verbindung zwischen der genannten Stütze (4) und dem genannten Hauptbein (1) zu blockieren.
4. Haltevorrichtung für Patienten gemäß Patentanspruch 1, die **dadurch gekennzeichnet ist, dass** der Fuß (6) der genannten Stütze (4) mit Rädern oder Rollen für den Boden (13) ausgestattet ist.
5. Haltevorrichtung für Patienten gemäß Patentanspruch 1, die **dadurch gekennzeichnet ist, dass** die Füße (3, 6) des Hauptbeins (1) und der Stütze (4) sich quer zu ihren Pfosten (2, 5) erstrecken.

6. Haltevorrichtung für Patienten gemäß Patentanspruch 1, die **dadurch gekennzeichnet ist, dass** der Pfosten (2) des Hauptbeins (1) mit mehreren Querträgern (9) ausgestattet ist, diese Querträgern (9) dienen dazu, die Füße eines Patienten abzustützen und/oder als Griffe verwendet zu werden. 5
7. Haltevorrichtung für Patienten gemäß Patentanspruch 6, die **dadurch gekennzeichnet ist, dass** die Positionen der Querträger (9) am Hauptbein (1) regulierbar sind. 10
8. Haltevorrichtung für Patienten gemäß Patentanspruch 1, die **dadurch gekennzeichnet ist, dass** die Stütze (7) der Haltevorrichtung für Patienten einen Querbalken (22) und eine Brustbeinstütze (23) enthält, die zentral am Querbalken (22) angebracht ist. 15
9. Haltevorrichtung für Patienten gemäß Patentanspruch 8, die **dadurch gekennzeichnet ist, dass** sie außerdem eine Stütze/Aufnahme für das Gesicht (24, 25) enthält, die am Querbalken (22) in der gegenüber liegenden Position zur Brustbeinstütze (23) angebracht ist. 20 25
10. Haltevorrichtung für Patienten gemäß Patentanspruch 9, die **dadurch gekennzeichnet ist, dass** die Stütze/Aufnahme für das Gesicht (24, 25) sich gegenüber dem Querbalken (22) drehen kann. 30
11. Haltevorrichtung für Patienten gemäß Patentanspruch 10, die **dadurch gekennzeichnet ist, dass** die Stützelemente (7) gepolstert und verkleidet sind. 35

Revendications

1. Support pour patients, à utiliser avec un lit, une chaise, un tabouret ou une table d'opération, pour fournir un support supplémentaire à un patient en position assise, ledit support pour patients comprenant : 40
- Une colonne de soutien principale (1) composée d'un montant allongé (2) et d'un pied (3); 45
un appui (7) relié au montant (2) de ladite colonne principale (1), pour recevoir et fournir un support pour le haut du corps d'un patient;
un soutien (4) d'ancrage au plancher comprenant un montant allongé (5) et un pied (6), ledit soutien (4) étant relié de manière pivotante à la colonne principale (1) et capable de servir de support à ladite colonne principale (1);
ledit support pour patients étant **caractérisé en ce que:** 50
- le montant allongé (5) dudit soutien (4) d'ancrage au plancher est muni de moyens d'emboîtement (14) réglables au niveau du pivotement et télescopique, lesdits moyens d'emboîtement réglables (14) étant capables de s'emboîter au-dessous d'un élément horizontal d'un lit, une chaise, un tabouret ou une table d'opération, de sorte que, lors de son utilisation, le support pour patients ne peut pas rouler hors du lit ou de la table.
2. Support pour patients selon la revendication 1, **caractérisé en ce qu'il** comprend encore un support pour les pieds (9) rattaché à la colonne principale et s'allongeant à partir de ladite colonne principale (1) pour soutenir les pieds dudit patient sur ledit support horizontal.
3. Support pour patients selon la revendication 1, **caractérisé en ce qu'il** comprend encore des moyens de blocage capables de bloquer la liaison entre ledit soutien (4) et ladite colonne principale (1).
4. Support pour patients selon la revendication 1, **caractérisé en ce que** ledit pied (6) dudit soutien (4) comporte des roulettes ou rouleaux pour le sol (13).
5. Support pour patients selon la revendication 1, **caractérisé en ce que** les pieds (3, 6) de la colonne principale (1) et du soutien (4) s'allongent dans le sens transversal par rapport à leurs montants (2, 5).
6. Support pour patients selon la revendication 1, **caractérisé en ce que** le montant (2) de la colonne principale (1) est pourvu d'une pluralité de traverses (9), lesdites traverses (9) étant capables de soutenir les pieds d'un patient et/ou d'être utilisées comme poignées.
7. Support pour patients selon la revendication 6, **caractérisé en ce que** les positions des traverses (9) sur la colonne principale (1) sont réglables.
8. Support pour patients selon la revendication 1, **caractérisé en ce que** l'appui (7) du support pour patients comprend une traverse (22) et un support pour le sternum (23) monté en position centrale sur la traverse (22).
9. Support pour patients selon la revendication 8, **caractérisé en ce qu'il** comprend encore un support/réceptacle pour le visage (24, 25) monté sur la traverse (22) dans une position opposée au support pour le sternum (23).
10. Support pour patients selon la revendication 9, **caractérisé en ce que** le support/réceptacle pour le visage (24, 25) est en mesure de pivoter par rapport à la traverse (22). 55

11. Support pour patients selon la revendication 10, **caractérisé en ce que** les éléments de l'appui (7) sont rembourrés et revêtus.

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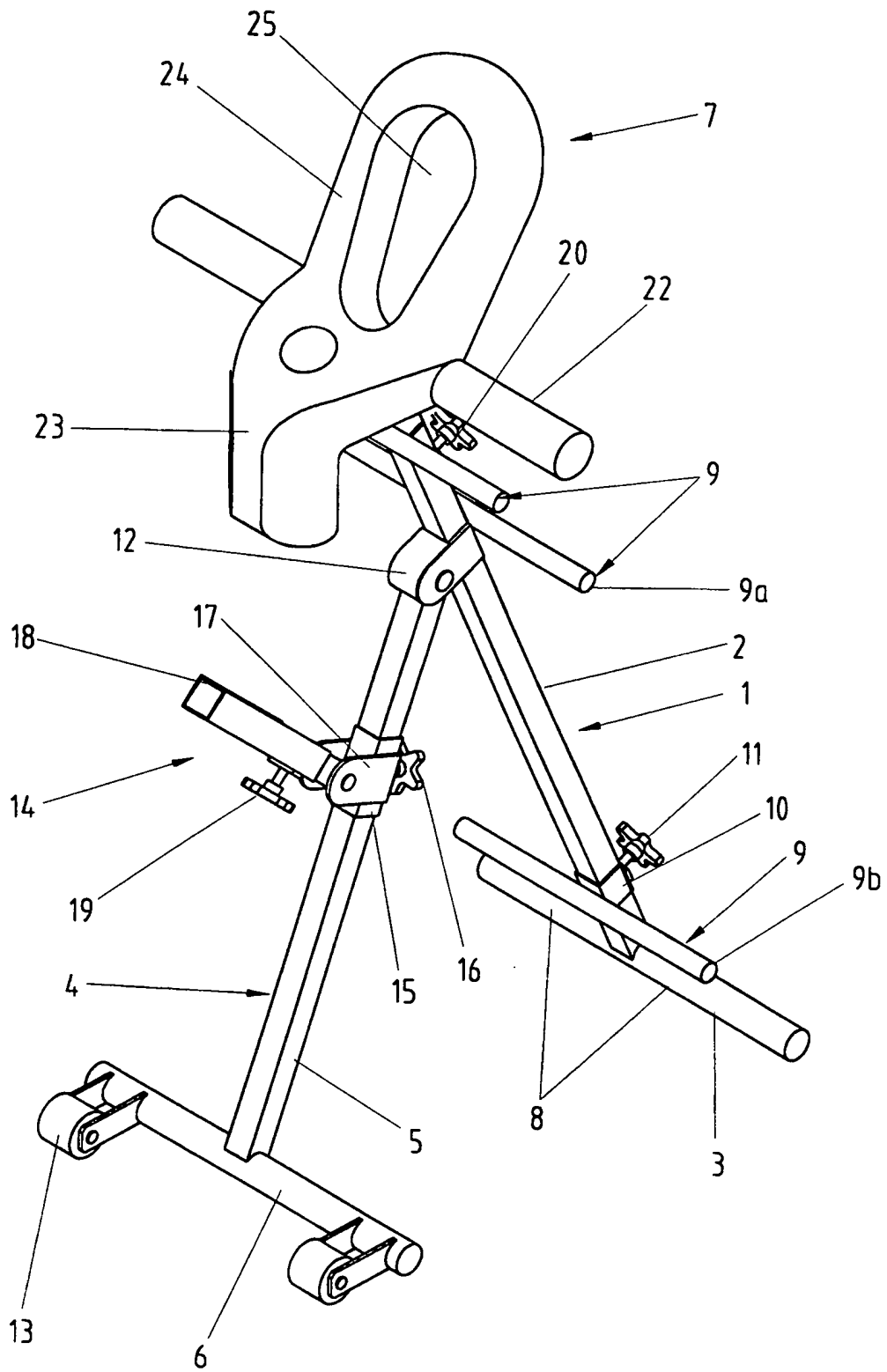


FIG 1.

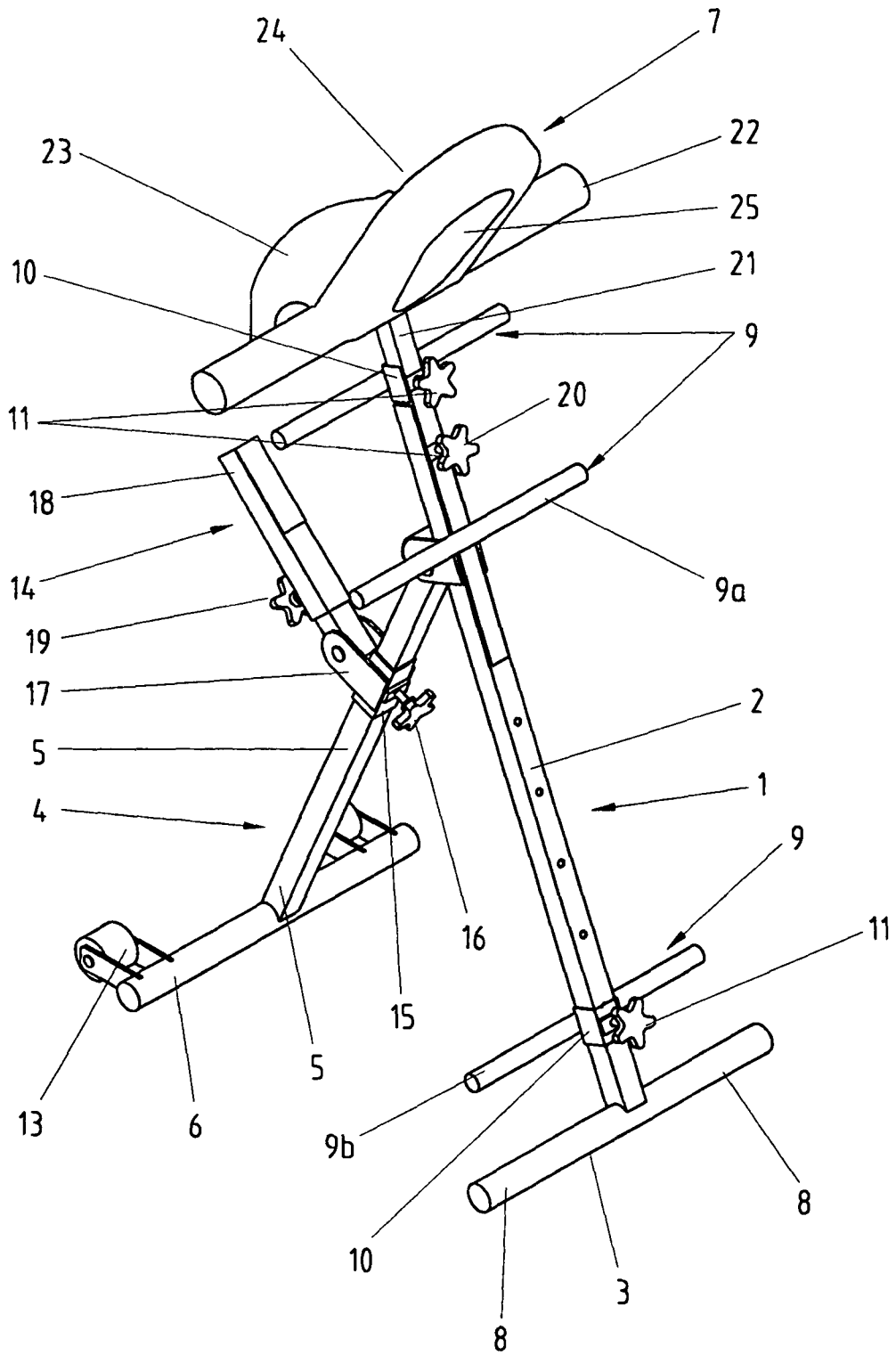


FIG 2.

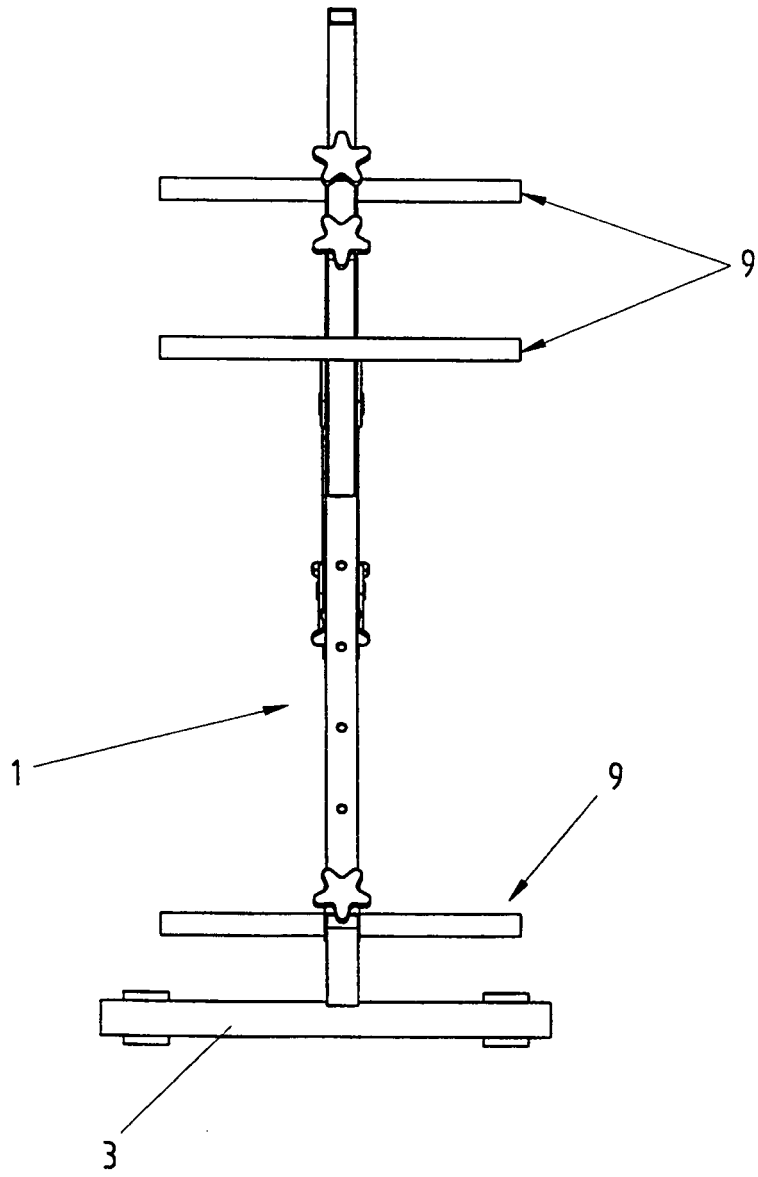


FIG 3.

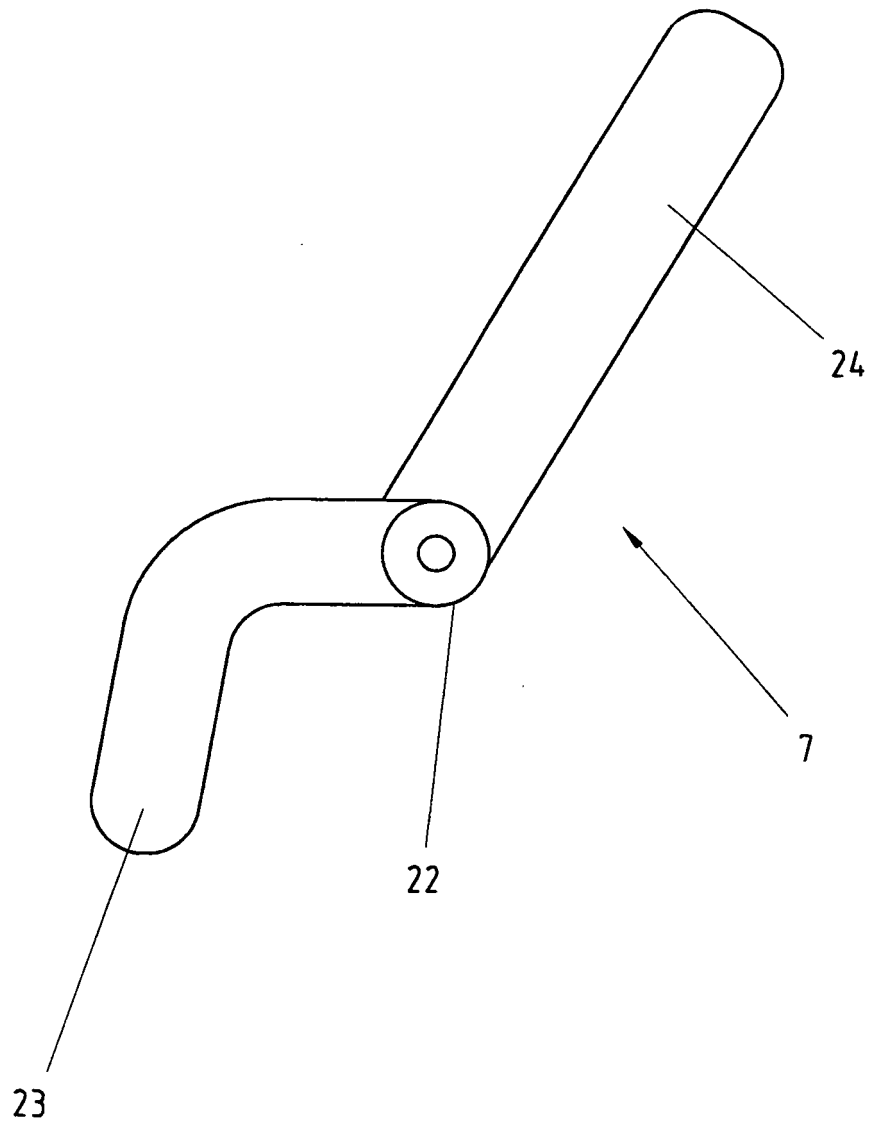


FIG 5.

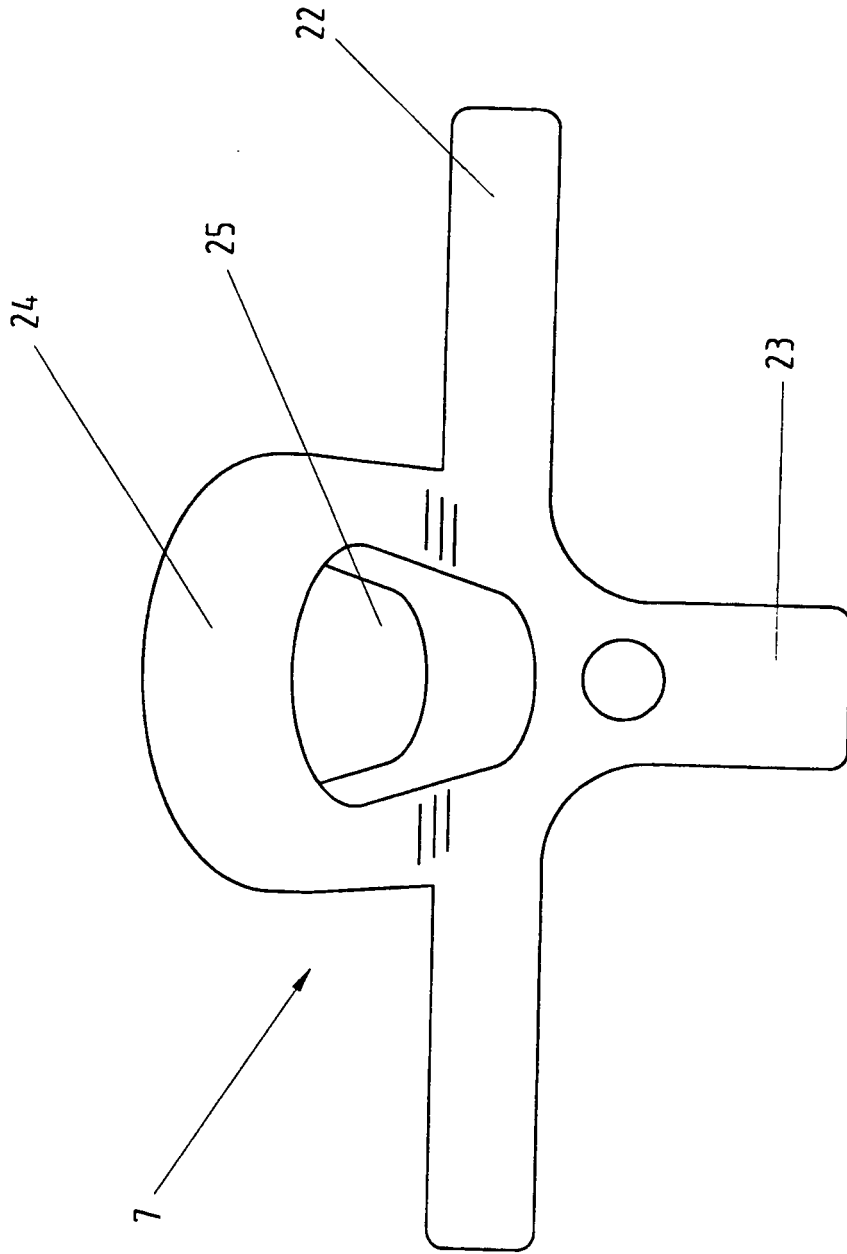


FIG. 6.

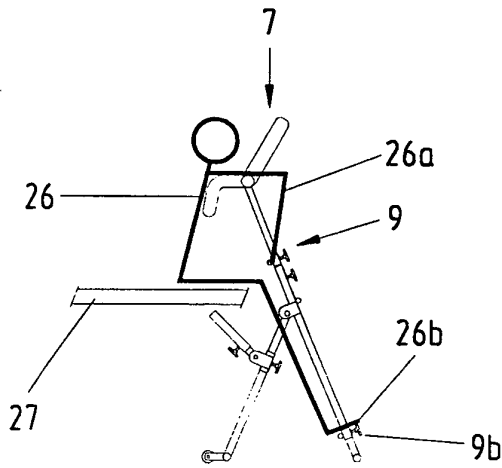


FIG 7.

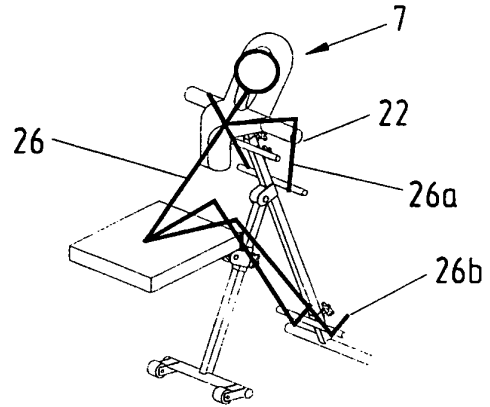


FIG 7(a).

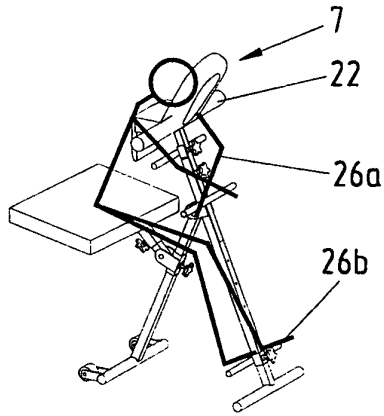


FIG 7(b).

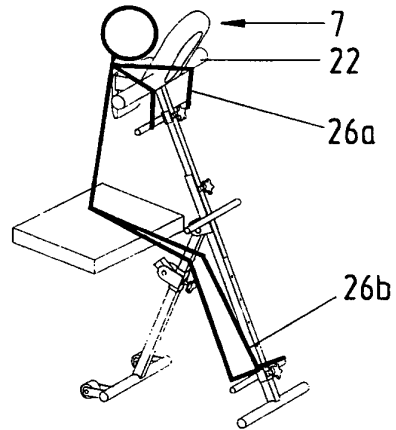


FIG 7(c).

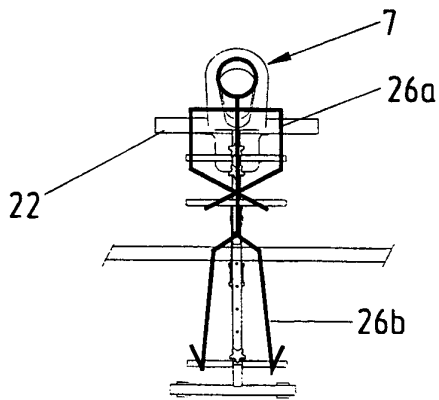


FIG 7(d).

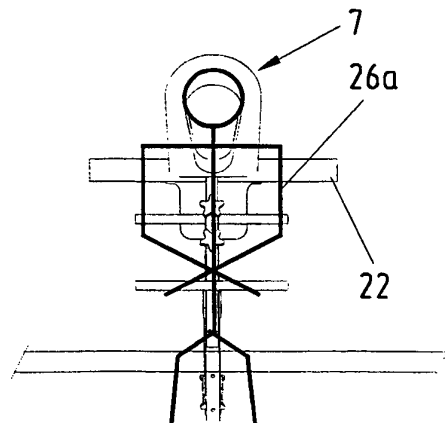


FIG 7(e).

REFERENCES CITED IN THE DESCRIPTION

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