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(54) **Chair**

Stuhl

Chaise

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(56) References cited:
**WO-A-2008/085174 DE-A1- 4 105 512
GB-A- 2 176 396 GB-A- 2 375 294
US-A- 5 536 067 US-A- 5 667 278**

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Description

Technical field

[0001] The present invention relates to a chair.

[0002] More particularly the present invention relates to an orthopaedic - ergonomic chair, suitable for being used for working activities, e.g. activities requiring use of a personal computer, even for long time periods.

Prior art

[0003] At present, white-collar workers, both in industry and in the service sector as well as in the public authorities, spend most of their working hours sitting at a desk in front of a personal computer.

[0004] Also in private life and in leisure the personal computer has got an important role, and the hours spent while sitting at a desk at work are supplemented by further hours spent in this manner also in the evening and during weekends.

[0005] It has been realised that use of conventional chairs for long periods leads, in the long-term, to muscular ailments and pains in articulations, especially lumbar pains and sciatica.

[0006] In this respect, when personal computers started becoming commonly used in offices and homes, who studied ergonomics recommended the use of backless stools where the user is supported in a partial kneeling position thanks to a pair of padded knee supports located in front of the seat.

[0007] A stool of such kind is disclosed for instance in US 4,848,841.

[0008] Even though stools of such kind can theoretically provide a better skeletal and muscular support, many users deem such backless stools extremely uncomfortable, especially if they are to be used for long time periods.

[0009] In order to obviate such drawback, solutions have been developed concerning chairs that can pass from a conventional position, where the seat is parallel to the supporting plane (hereinafter referred to as "ergonomic position"), to a position where the seat is tilted forward (hereinafter referred to as "orthopaedic position") and the user can take a partial kneeling position, healthier for muscles and articulations.

[0010] Chairs of this kind are disclosed for instance in US 4,765,684 and US 2007/0063569.

[0011] Both solutions disclosed in the documents mentioned above relate to a chair comprising a seat that is tiltable about a horizontal rotation axis arranged at the front side of the seat, and a telescopic column acting on the rear portion of said seat to cause rotation and forward tilting of the seat.

[0012] Said solutions have however some drawbacks.

[0013] In particular, it is to be noted that, according to the proposed solutions, when the chair is in orthopaedic position, i.e. with the seat tilted forward, the user's back

tends to move away from the chair back. In other words, when the chair is in orthopaedic position, the user is substantially in the same conditions as if he/she used a backless stool.

[0014] Without the support of the chair back, the user's back and neck tend to sink, resulting in pains to the user's back and the cervical region.

[0015] US 5667278 on which the preamble of claim 1 is based, discloses a chair equipped with a mechanism for adjusting the tilt of the chair seat by varying the length of a member having variable length; the length variation of said member causes the seat to pass from a position substantially parallel to the ground to a position tilted relative to the ground through a rotary movement of the seat about a rotation axis defined by said mechanism and moved vertically while the length of said member is varied.

[0016] It is the main object of the present invention to overcome the drawbacks of the prior art, by providing a chair that can pass from an ergonomic position to an orthopaedic position and that ensures, in both positions, the maximum support and comfort to the user.

[0017] It is another object of the present invention to provide a chair that can be made to pass from an ergonomic position to an orthopaedic position by means of a mechanism that is cheap and simple to manufacture, so as to provide a product that is competitive on the market.

Description of the invention

[0018] The above and other objects are achieved by means of a chair as claimed in the appended claims.

[0019] According to the invention it is provided a chair as claimed in claim 1.

[0020] Depending on the embodiments, the arrangement of said first and second members of the adjusting mechanism can provide for a forward or rearward location of the rotation axis relative to the seat.

[0021] The seat may be tilted by acting on the adjusting mechanism, and more particularly by varying the length of the variable-length member and by keeping the horizontal rotation axis stationary.

[0022] In this manner, it is advantageously possible to obtain a simple adjusting mechanism, which can be manufactured in cheap manner and which can be used in several chair types, either equipped with a supporting frame or having a seat structure cantilevered with respect to a supporting base.

[0023] Thanks to the structure of the chair according to the invention, in which the chair back is associated with the seat and which ensures a constant angle between said seat and said chair back, in any position the chair can take, the user's back is always supported in the most correct and less fatiguing posture.

[0024] A preferred feature of the invention is that the projection of the portion of the chair back on which the user's back rests lies within the seat portion occupied by the user, whatever the tilt of the seat relative to the base

may be.

[0025] According to another preferred feature of the invention the pair of padded supports for the user's knees can be moved from a hidden or inactive position (chair in ergonomic position) to an exposed position or position of use (chair in orthopaedic position) by means of a simple rotary and/or translational movement.

[0026] A further, but not the last, advantage of the invention is the possibility of having supporting bases equipped with feet or castors, without need of modifying the chair structure for that reason.

Brief description of the Figures

[0027] Further advantages and features of the chair according to the invention will become apparent from the following detailed description of some preferred embodiments thereof, given by way of non limiting example with reference to the accompanying drawings, in which:

- Fig. 1 is a side view of the chair according to a first embodiment of the invention, in ergonomic position;
- Fig. 2 is a side view of the chair shown in Fig. 1, in orthopaedic position;
- Fig. 3 is a front view of the chair shown in Fig. 1;
- Fig. 4 is a side view of the chair according to a second embodiment of the invention, in ergonomic position;
- Fig. 5 is a side view of the chair shown in Fig. 4, in orthopaedic position;
- Fig. 6 is a side view of the chair shown in Fig. 4, equipped with castors.

Description of some preferred embodiments

[0028] Referring to Figs. 1 to 3, chair 1 according to a first embodiment of the invention comprises a frame 3, a seat 5, a chair back 7 and a pair of padded supports 9 for the user's knees.

[0029] Frame 3 includes a supporting base 3a and a pair of uprights 3b. In the example illustrated, uprights 3b are joined at their top by a connecting member 3c, and supporting base 3a, uprights 3b and connecting member 3c advantageously consist of a single, suitably bent, hollow cylindrical metal tube. However, it is clear that several other solutions are possible for making frame 3, as far as both the structure and the choice of materials are concerned.

[0030] According to that first embodiment of the invention, seat 5 of chair 1 is pivotally mounted at its rear side between uprights 3b, as shown by arrow F in Figs. 1 and 2. More particularly, said seat 5 is pivotally mounted onto a transverse bar 3d joining uprights 3b and defining a corresponding horizontal rotation axis for seat 5.

[0031] Advantageously, according to the preferred embodiment shown in Figs. 1 to 3, an Ω -shaped plate 11 is fastened to bottom wall 5a of seat 5, at the rear portion thereof, and said plate 11 forms, together with bottom wall 5a of said seat 5, a slot in which transverse bar 3d

passes and is freely displaceable.

[0032] Thanks to such a feature, seat 5 not only can rotate relative to uprights 3b, but it also has a certain freedom of translational movement relative to said uprights 3b.

[0033] According to that embodiment of the invention, a tilt adjusting mechanism is interposed between seat 5 and base 3a, and such mechanism comprises a first member consisting of frame 3 and the corresponding transverse bar 3d, and a second member consisting of a gas-operated telescopic column 13, 15 with variable length.

[0034] In order to make seat 5 rotate relative to uprights 3b, gas-operated telescopic column 13, 15 with variable length acts on said seat 5 at the front portion thereof. More particularly, the top end of column 13, 15 is connected, through an articulated joint 17, to a plate 19 secured to bottom wall 5a of seat 5, at the front portion thereof.

[0035] Gas-operated telescopic column 13, 15 is mounted within a support 21 carried by a pedestal 23 connected to supporting base 3a of frame 3 by a pair of transverse bars 25.

[0036] Gas-operated telescopic column 13, 15 can be operated by the user by means of a lever 27, in order to vertically displace extendable portion 13 of column 13, 15 and, consequently, to make seat 5 tilt, thereby making it pass from the configuration shown in Fig. 1 (ergonomic position) to the configuration shown in Fig. 2 (orthopaedic position).

[0037] More in detail, referring in particular to Fig. 1, when gas-operated telescopic column 13, 15 is in its extended position, seat 5 is substantially parallel to the supporting plane of supporting base 3a (ergonomic position).

[0038] Referring instead to Fig. 2, by acting on lever 27, it is possible to bring gas-operated telescopic column 13, 15 to its retracted position; correspondingly, seat 5 will be in a forward tilted position, where it forms an angle α different from 0 with the supporting plane of supporting base 3a (orthopaedic position).

[0039] Advantageously, in order to avoid an excessive inclination of seat 5, which could result into an uncomfortable configuration and an incorrect posture of the user, the end portion of telescopic column 13, 15 is provided with a stop member 29, e.g. a vertical pin, which, in correspondence of a predetermined maximum tilt angle α_{MAX} , abuts against plate 19 and prevents a further forward tilting of seat 5.

[0040] The comparison between Figs. 1 and 2 makes the operation of the slot formed in Ω -shaped plate 11 clear, said slot ensuring, while seat 5 is being tilted, a translational movement of seat 5 relative to transverse bar 3d, which slides in the slot formed by plate 11.

[0041] According to the invention, back 7 of chair 1 is associated with seat 5, so that the angle between said back 7 and said seat 5 remains constant whatever configuration is taken by the chair and, in particular, for any tilt angle, in the range 0° to α_{MAX} , of seat 5 relative to the

supporting plane.

[0042] In other words, contrary to what happens in the prior art chairs, projection "S" on seat 5 of the portion of chair back 7 onto which the user's back rests (which portion substantially corresponds to the central portion of chair back 7) always lies within area "Z" occupied by the user, whatever position is taken by chair 1, as it clearly appears from Figs. 1 and 2.

[0043] Consequently, the user is always supported by chair back 7, both when chair 1 is in ergonomic position (Fig. 1), and when chair 1 is in orthopaedic position (Fig. 2).

[0044] In the example illustrated, chair back 7 is carried by an arm 31 which is removably associated, e.g. by means of screws, with plate 11, which in turn is secured to bottom wall 5a of seat 5. However, it is clear that any system for rigidly connecting chair back 7 to seat 5 can be used as well.

[0045] Advantageously, the connection between arm 31 and plate 11 may be adjustable in longitudinal direction, so that chair back 7 can take different positions relative to seat 5. In order to ensure the maximum user's comfort, chair back 7 includes a padded cushion, which is secured to arm 31 by means of a connecting plate 33 and which provides support and comfort to the user's back in correspondence of the lumbar region.

[0046] Preferably, connecting plate 33 may slide along arm 31 and may be locked at different positions relative to said arm.

[0047] As it is clearly apparent from the above description, chair back 7 can thus be positioned in a plurality of different positions, so as to adapt itself to the different physical structure of the different users.

[0048] According to the invention, padded supports 9 of chair 1 can be easily moved from an inactive position, when chair 1 is in ergonomic position, to a position of use, when chair 1 is in orthopaedic position.

[0049] In the illustrated embodiment, the passage from one position to the other takes place through a simple rotary movement.

[0050] To this end, said padded supports 9 are mounted on a pair of handlebars 35, in turn secured onto a U-bent tube 37 rotatably connected to vertical support 32 of gas-operated telescopic column 13, 15 through a rotary joint 39.

[0051] In this manner, U-bent tube 37, together with padded knee supports 9, can rotate about the axis of support 21, as indicated by arrow R. In particular, they can move from a first position, in which they are hidden under seat 5 when chair 1 is in ergonomic position (Fig. 1), to an exposed position in front of and below seat 5, when chair 1 is in orthopaedic position (Fig. 2).

[0052] Advantageously, stop means can be provided to lock said padded supports 9 in either position.

[0053] Even though in the illustrated example the passage from one position to the other is obtained by means of a rotation, it will be apparent for the skilled in the art that padded supports 9 could even be translated from an

inactive position to a position of use and vice versa, for instance by means of sliding guides.

[0054] Preferably, in order to ensure a better stability for chair 1, especially when it is in orthopaedic position, an anti-overturning plate 41 is provided, which is secured to pedestal 23 and which projects forward beyond frame 3. Possibly, said anti-overturning plate 41 may be slidable, so that it can be kept in a retracted position when chair 1 is in ergonomic position.

[0055] Turning now to Figs. 4 and 5, there is shown a second embodiment of the chair according to the invention, generally denoted 101.

[0056] In that second embodiment of the invention, chair 101 includes a supporting base 103a, on which a seat 105 having a chair back 107 is cantilevered.

[0057] According to the invention, said seat 105 is associated with supporting base 103a through an adjusting mechanism 113, 115 comprising a first, central gas-operated telescopic column 113 and a second, obliquely arranged side gas-operated telescopic column 115.

[0058] Said central column 113 is secured, on the one side, to base 103a through a pedestal 123 and, on the other side, through a hinge 117, to a plate 119 secured to bottom wall 105a of seat 105 in the front portion thereof. Said hinge 117 defines a corresponding horizontal rotation axis for seat 105.

[0059] Side column 115 has a first, bottom end pivotally connected to the upper, extendable member of column 113 through a connecting member 151, and a second, top end pivotally connected to said plate 119 through a connecting member 153 positioned rearwards of hinge 117 towards chair back 107.

[0060] Thanks to such an articulated arrangement of seat 105 relative to adjusting mechanism 113, 115, it is possible both to raise seat 105 relative to supporting base 103a, by acting only onto the first, central gas-operated column 113 through a control lever associated therewith, and to change the seat tilt by acting onto the second gas-operated column 115 through a corresponding second control lever.

[0061] Padded supports 109 are moreover provided, which are mounted onto a tubular frame 135, rotatably associated with pedestal 103 through a corresponding rotary joint 139, to allow the padded supports to easily move from an inactive position, when chair 101 is in ergonomic position (Fig. 4), to a position of use, when chair 101 is in orthopaedic position (Fig. 5).

[0062] According to such an embodiment of the invention, chair back 107 is associated with seat 105 through a shaped supporting bracket 103, secured to bottom wall 105a of seat 105, in the rear portion thereof, through a threaded pin having a knob 155.

[0063] Advantageously, said bracket 103 can slide relative to seat 105 and can be locked in position at the desired distance by means of knob 155, so as to adjust the distance of the portion of chair back 107 onto which the user's back rests.

[0064] Advantageously, in this second embodiment of

the invention too, projection "S" on seat 105 of the portion of chair back 107 onto which the user's back rests (which portion substantially corresponds to the central portion of chair back 107) always lies within area "Z" occupied by the user, whatever position is taken by chair 101.

[0065] Referring to Fig. 6, there is shown an embodiment of the chair according to the invention in which base 157 is equipped with castors 159 (for instance five castors) associated with corresponding arms 161. In the example illustrated, said base 157 is associated with a chair made in accordance with the embodiment shown in Fig. 4, yet it is possible to provide with castors also chairs made in accordance with the other embodiments previously described.

Claims

1. A chair comprising a supporting base (3a; 103a), a seat (5; 105) associated with said base, a chair back (7; 107) associated with said seat, a pair of padded knee supports (9; 109) associated with said base, and a mechanism (3, 13, 15; 113, 115) for adjusting the tilt of the seat interposed between said base and said seat, which mechanism comprises a first member (3; 113) defining a substantially horizontal rotation axis (3d; 117) for the seat, and a second member (13, 15; 115) with variable length, said rotation axis (3d, 117) is kept stationary during the rotation of the seat (5; 105). **characterized in that** wherein said rotation axis is located on the seat and the length variation of said second member causes said seat to pass from a position substantially parallel to said base to a position tilted relative to said base through a rotary movement of the seat about said rotation axis
2. The chair as claimed in claim 1, wherein the projection (S) on said seat (5) of the portion of chair back (7) onto which the user's back rests lies within the seat region occupied by the user, however the seat is tilted relative to the base.
3. The chair as claimed in claim 1 or 2, wherein said first member of the adjusting mechanism includes a frame (3) having a pair of uprights (3b), and wherein said seat (5) is pivotally mounted between said uprights (3b) on a transverse bar (3d) joining said uprights (3b) in correspondence of the rear portion of said seat, and wherein said second member of the adjusting mechanism includes a gas-operated telescopic column (13, 15) located in correspondence of the front portion of said seat.
4. The chair as claimed in claim 3, wherein an Ω -shaped plate (11), fastened onto the bottom wall (5a) of said seat (5), is provided, said plate (11) forming, together with said bottom wall (5a) of said seat (5),

a slot in which said transverse bar (3d) slides.

5. The chair as claimed in claim 1, wherein said first member of said adjusting mechanism includes a substantially vertical central gas-operated telescopic column (113) and wherein said second member includes an obliquely arranged gas-operated telescopic side column (115).
6. The chair as claimed in claim 5, wherein said central column (113) is secured on the one side to said supporting base (103a) and on the other side through a hinge (117), to a plate (119) secured to the bottom wall (105a) of the seat (105) at the front portion thereof, said hinge (117) defining a corresponding horizontal rotation axis for the seat (105).
7. The chair as claimed in claim 6, wherein said side column (115) has a first end pivotally connected to the upper expendable member of the column (113) through a connecting member (151), and a second end pivotally connected to said plate (119) through a connecting member (153) positioned rearwards of the hinge (117) towards the chair back (107).
8. The chair as claimed in claim 1, wherein said padded supports (9) are rotatably associated with said chair and can be moved from a first position, in which they are hidden under said seat (5), to a second position in which they are exposed in front of said seat (5).
9. The chair as claimed in claim 8, wherein said padded supports are rotatably associated with said first and second members of said adjusting mechanism.
10. The chair as claimed in claim 1, wherein an anti-overturning plate (41) extending forward beyond said seat (5), is provided, said plate being slidable between a first position, in which it is retracted under said seat (5), and a second position, in which it is extended forward beyond said seat (5).

Patentansprüche

1. Stuhl mit einer Tragbasis (3a; 103a), einem Sitz (5; 105), der zu der Tragbasis gehört, einer Rückenlehne (7; 107), die zu dem Sitz gehört, einem Paar gepolsterter Kniestützen (9; 109), die zu der Basis gehören und einem Mechanismus (3, 13, 15; 113, 115) zum Einstellen der Neigung des Sitzes, eingefügt zwischen die Basis und den Sitz, wobei der Mechanismus ein erstes Element (3; 113) aufweist, das eine im Wesentlichen horizontale Rotationsachse (3d; 117) für den Sitz definiert, und ein zweites Element (13, 15; 115) mit veränderlicher Länge aufweist, wobei die Rotationsachse (3d, 117) während der Drehung des Sitzes (5; 105) stationär gehalten wird, wo-

bei sich die Rotationsachse auf dem Sitz befindet und die Längenvaryation des zweiten Elements veranlasst, dass der Sitz von einer im Wesentlichen zu der Basis parallelen Position in eine zu der Basis geneigte Position durch eine Drehbewegung des Sitzes um die Rotationsachse übergeht.

2. Stuhl nach Anspruch 1, wobei die Projektion (S) auf dem Sitz (5) des Abschnitts der Stuhlrückenlehne (7), auf der der Rücken des Benutzers ruht, innerhalb des Sitzbereichs, den der Benutzer belegt, liegt, ungeachtet wie der Sitz zu der Basis geneigt ist.
3. Stuhl nach Anspruch 1 oder 2, wobei das erste Element des Einstellmechanismus einen Rahmen (3) aufweist, der ein Paar Ständer (3b) hat, und wobei der Sitz (5) schwenkend zwischen den Ständern (3b) auf einer Querstange (3d), die die Ständer (3b) in Entsprechung mit dem Hinterabschnitt des Sitzes verbindet, montiert ist, und wobei das zweite Element des Einstellmechanismus eine mit Gas betriebene Teleskopsäule (13, 15) umfasst, die sich in der Entsprechung des Vorderabschnitts des Sitzes befindet.
4. Stuhl nach Anspruch 3, bei dem eine Ω -förmige Platte (11), die auf der Bodenwand (5a) des Sitzes (5) befestigt ist, bereitgestellt ist, wobei die Platte (11) gemeinsam mit der Bodenwand (5a) des Sitzes (5) einen Schlitz bildet, in dem die Querstange (3d) gleitet.
5. Stuhl nach Anspruch 1, bei dem das erste Element des Einstellmechanismus eine im Wesentlichen vertikale, zentrale, mit Gas betriebene Teleskopsäule (113) umfasst, und wobei das zweite Element eine schräg angeordnete mit Gas betriebene teleskopische Seitensäule (115) aufweist.
6. Stuhl nach Anspruch 5, wobei die zentrale Säule (113) auf der einen Seite an einer Tragbasis (103a) und auf der anderen Seite über ein Scharnier (117) an der Platte (119), die an der Bodenwand (105a) des Sitzes (105) an dessen Vorderabschnitt gesichert ist, befestigt ist, wobei das Scharnier (117) eine entsprechende horizontale Rotationsachse für den Sitz (105) definiert.
7. Stuhl nach Anspruch 6, wobei die Seitensäule (115) ein erstes Ende hat, das schwenkend mit dem oberen streckbaren Element der Säule (113) über ein Verbindungselement (151) verbunden ist, und ein zweites Ende, das mit der Platte (119) über ein Verbindungselement (153), das rückwärts von dem Scharnier (117) zur Stuhlrückenlehne (107) hin positioniert ist, schwenkend verbunden ist.
8. Stuhl nach Anspruch 1, wobei die gepolsterten Stüt-

zen (9) drehend mit dem Stuhl verbunden sind und von einer ersten Position, in der sie unter dem Sitz (5) verborgen sind, zu einer zweiten Position, in der sie vor dem Sitz (5) freigelegt sind, bewegt werden können.

9. Stuhl nach Anspruch 8, wobei die gepolsterten Stützen drehend mit dem ersten und dem zweiten Element des Einstellmechanismus verbunden sind.
10. Stuhl nach Anspruch 1, wobei eine Umfallschutzplatte (41), die sich über den Sitz (5) hinaus erstreckt, bereitgestellt ist, wobei die Platte zwischen einer ersten Position, in der sie unter dem Sitz (5) zurückgezogen ist, und einer zweiten Position, in der sie sich über den Sitz (5) hinaus nach vorn erstreckt, gleitbar ist.

Revendications

1. Chaise comprenant une base support (3a ; 103a), un siège (5 ; 105) associé à ladite base, un dossier de chaise (7 ; 107) associé audit siège, une paire de supports rembourrés (9 ; 109) pour les genoux, associés à ladite base, et un mécanisme (3 ; 13 ; 15 ; 113 ; 115) intercalé entre ladite base et ledit siège pour régler l'inclinaison du siège, lequel mécanisme comprend un premier élément (3 ; 113) définissant, pour le siège, un axe de rotation (3d ; 117) sensiblement horizontal, et un second élément (13 ; 15 ; 115) ayant une longueur variable, chaise dans laquelle ledit axe de rotation est placé sur le siège et la variation de longueur dudit second élément fait que ledit siège, sous l'effet d'un mouvement rotatif du siège autour dudit axe de rotation, passe d'une position sensiblement parallèle à ladite base, à une position inclinée par rapport à ladite base, **caractérisée en ce que** ledit axe de rotation (3d ; 117) étant maintenu fixe au cours de la rotation du siège (5 ; 105).
2. Chaise selon la revendication 1, dans laquelle la projection (S) sur ledit siège (5) de la partie du dossier de chaise (7) sur laquelle s'appuie le dos de l'utilisateur, se trouve à l'intérieur de la zone d'assise occupée par l'utilisateur, bien que le siège soit incliné par rapport à la base.
3. Chaise selon la revendication 1 ou 2, dans laquelle ledit premier élément du mécanisme de réglage comprend un cadre (3) comportant une paire de montants (3b), et dans laquelle ledit siège (5) est monté à pivotement entre lesdits montants (3b), sur une barre transversale (3d) reliant lesdits montants (3b), en correspondance de la partie arrière dudit siège, et dans laquelle ledit second élément du mécanisme de réglage comprend une colonne télesco-

pique (13 ; 15) actionnée par un gaz et placée en correspondance de la partie avant dudit siège.

4. Chaise selon la revendication 3, dans laquelle il est prévu une plaque (11) en forme de Ω , fixée sur la paroi de fond (5a) dudit siège (5), ladite plaque (11) formant avec ladite paroi de fond (5a) dudit siège (5), une fente dans laquelle coulisse ladite barre transversale (3d). 5
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5. Chaise selon la revendication 1, dans laquelle ledit premier élément dudit mécanisme de réglage comprend une colonne télescopique centrale (113) sensiblement verticale, actionnée par un gaz, et dans laquelle ledit second élément comprend une colonne télescopique latérale (115) agencée de façon oblique et actionnée par un gaz. 15
6. Chaise selon la revendication 5, dans laquelle ladite colonne centrale (113) est fixée, d'un côté, à ladite base support (103a) et, de l'autre côté, par une articulation (117), à une plaque (119) fixée à la paroi de fond (105a) du siège (105), au niveau de la partie avant de celui-ci, ladite articulation (117) définissant, pour le siège (105), un axe de rotation horizontal correspondant. 20
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7. Chaise selon la revendication 6, dans laquelle ladite colonne latérale (115) comporte une première extrémité reliée de façon pivotante à l'élément supérieur pouvant être déployé de la colonne (113), par un élément de liaison (151), et une seconde extrémité reliée de façon pivotante à ladite plaque (119), par un élément de liaison (153) positionné derrière l'articulation (117) vers le dossier de chaise (107). 30
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8. Chaise selon la revendication 1, dans laquelle lesdits supports rembourrés (9) sont associés, de manière rotative, à ladite chaise et peuvent être déplacés, passant d'une première position dans laquelle ils sont dissimulés sous ledit siège (5), à une seconde position dans laquelle ils sont en vue à l'avant dudit siège (5). 40
9. Chaise selon la revendication 8, dans laquelle lesdits supports rembourrés sont associés, de manière rotative, auxdits premier et second éléments dudit mécanisme de réglage. 45
10. Chaise selon la revendication 1, dans laquelle il est prévu une plaque antibasculement (41) s'étendant vers l'avant au-delà dudit siège (5), ladite plaque pouvant coulisser entre une première position dans laquelle elle est rentrée sous ledit siège (5), et une seconde position dans laquelle elle est déployée vers l'avant au-delà dudit siège (5). 50
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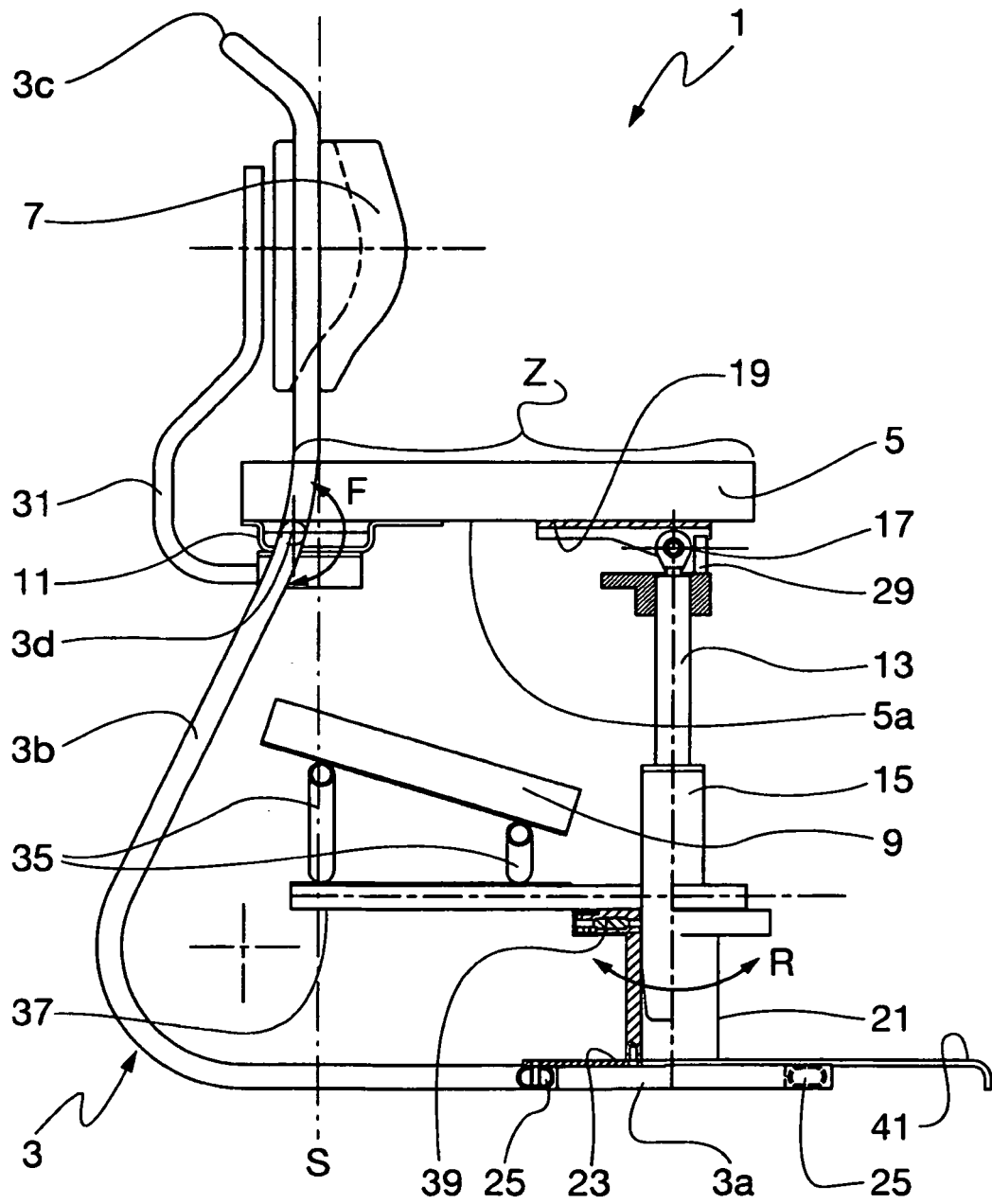


Fig. 1

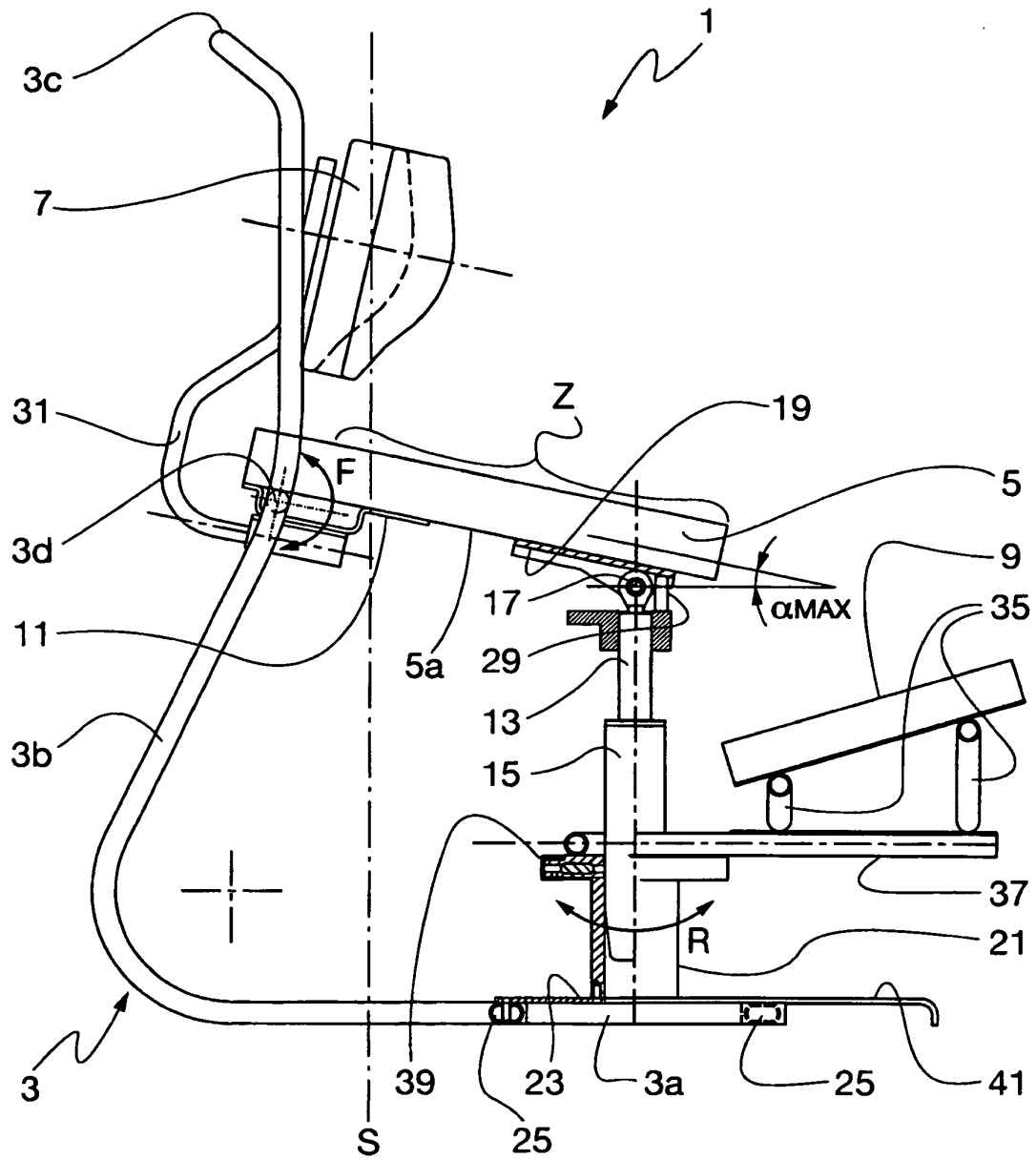


Fig. 2

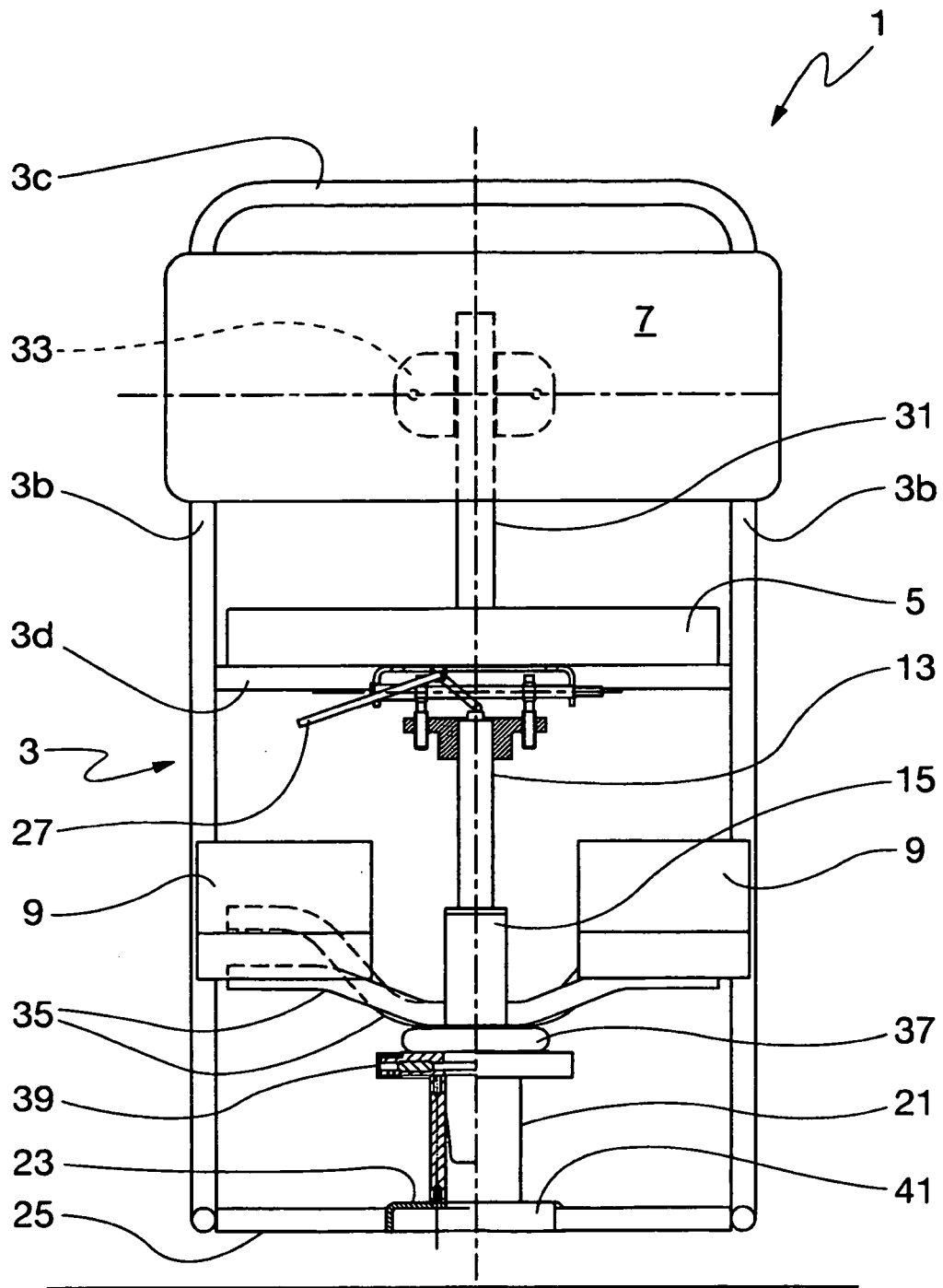


Fig. 3

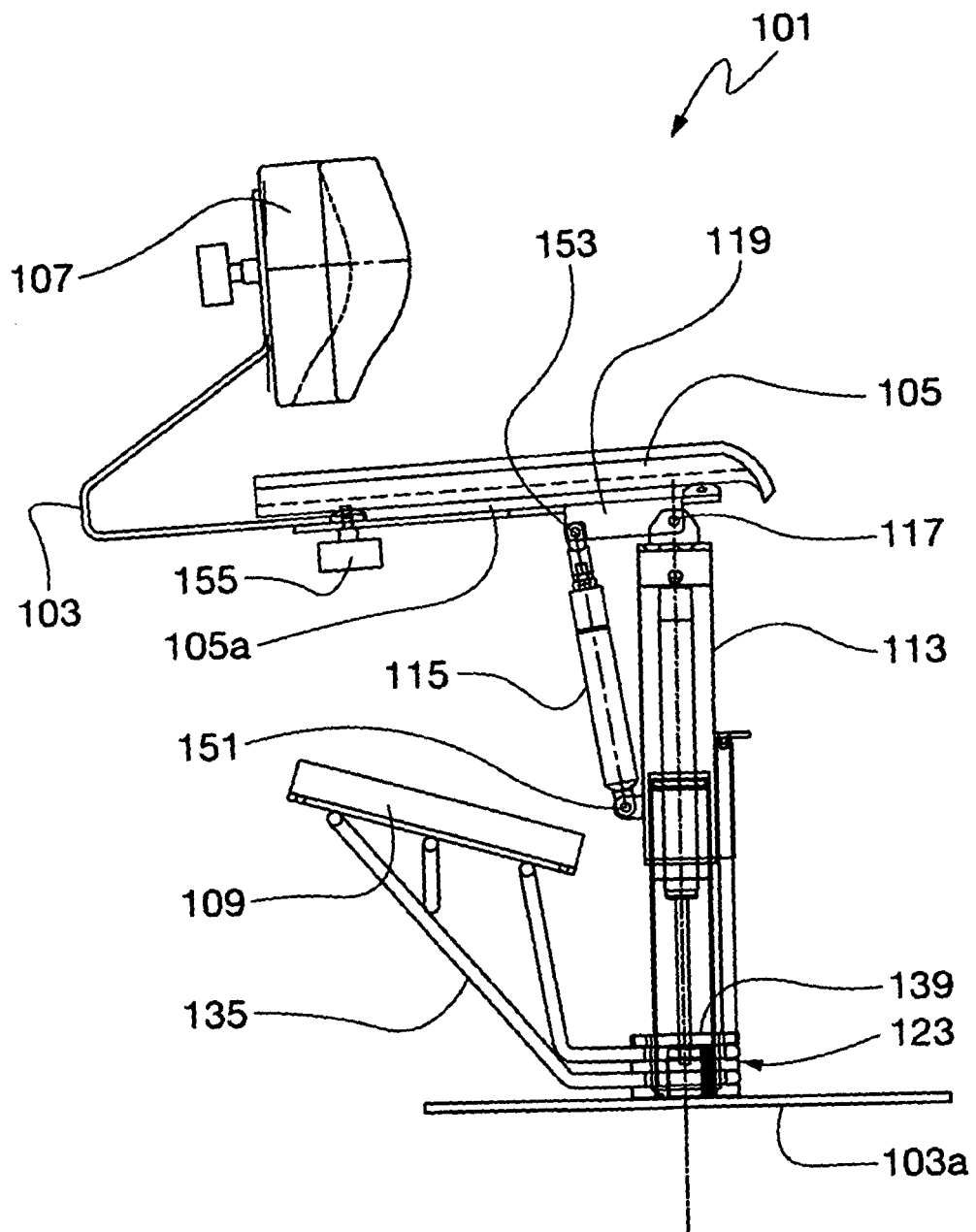


Fig. 4

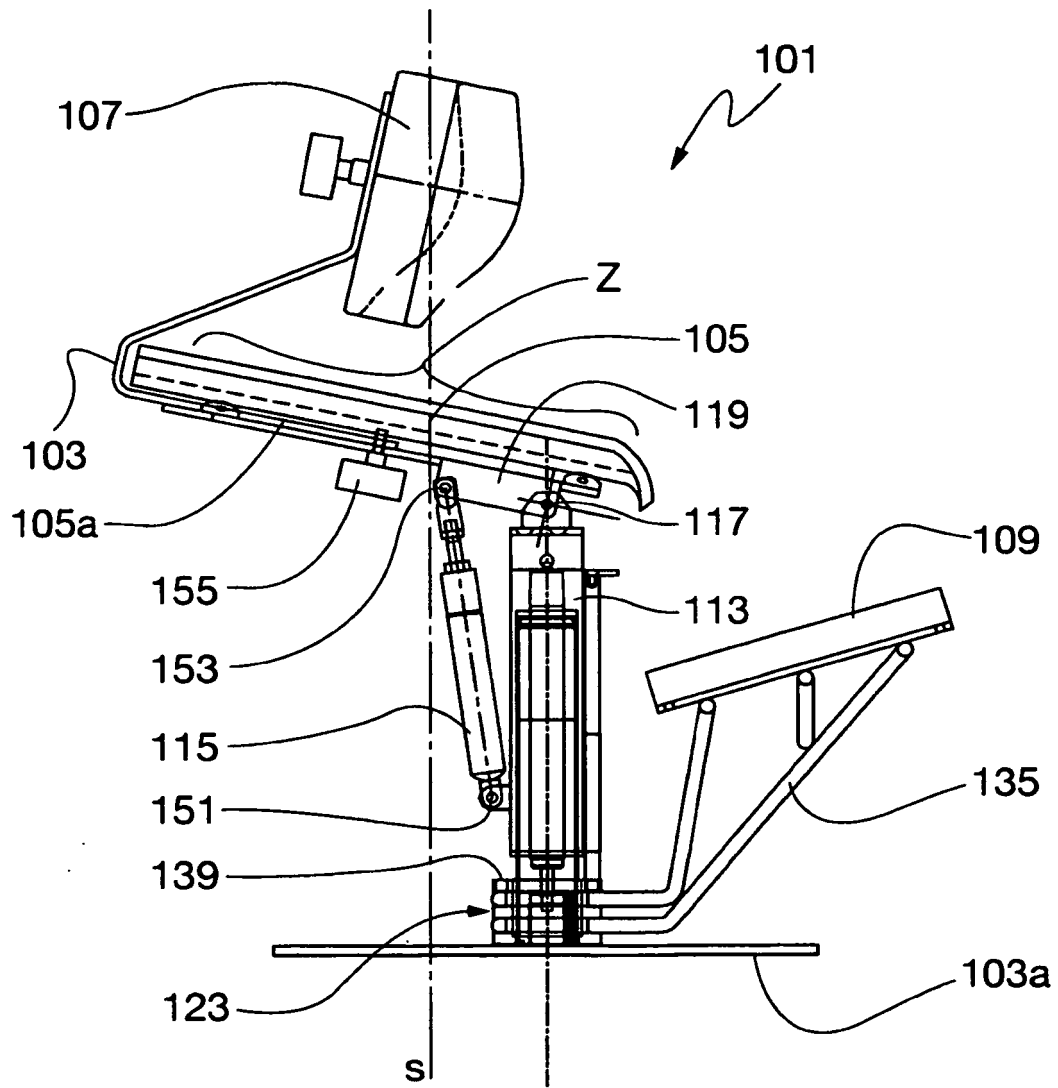


Fig. 5

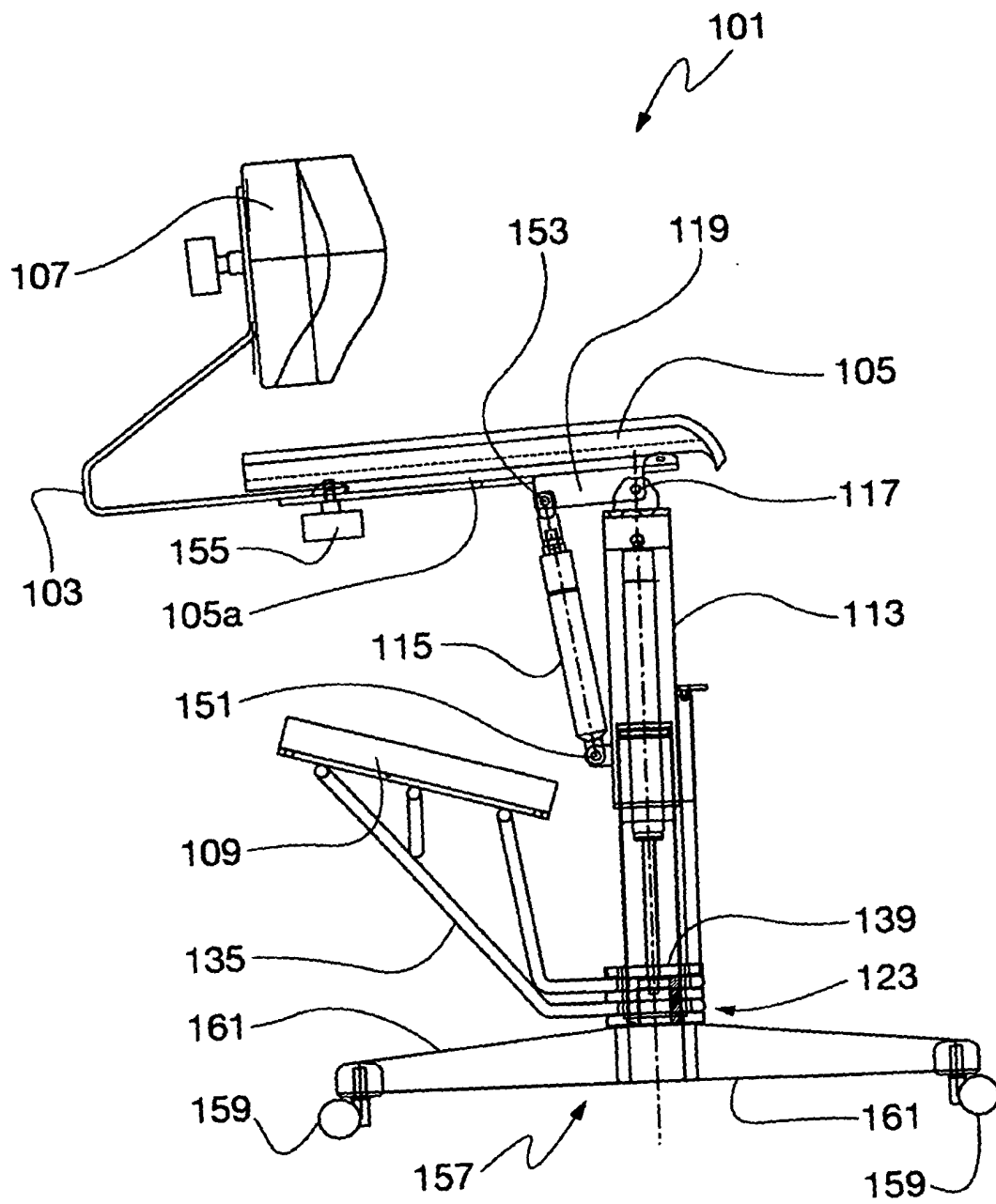


Fig. 6

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 4848841 A [0007]
- US 4765684 A [0010]
- US 20070063569 A [0010]
- US 5667278 A [0015]