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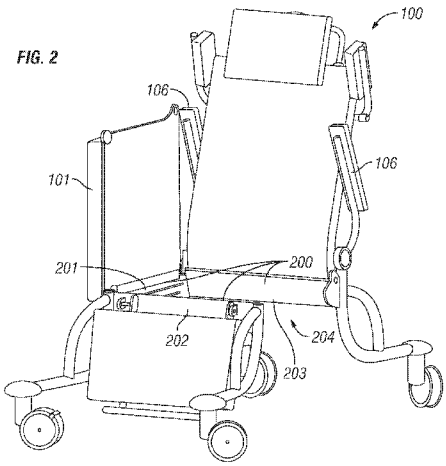

(57) Abstract: In accordance with one embodiment of the present invention, a transfer surface, such as a transfer chair, may include a movable portion, such as a seat support. The movable portion may move, for example, so that the transfer surface includes an open area in a middle section of the transfer surface. In one embodiment, the movable portion may move by rotating between a horizontal position and a vertical position or by sliding or folding towards the front, back or side of the transfer surface. A lifting device, such as a floor lift or caregiver, may move into the open area to, for example, access a patient on the far side of the transfer surface. For example, a lifting device may be moved into the open area in a middle section of the transfer surface from the left side of the transfer surface, may pick up a patient from a location to the right of the transfer surface, may move out of the open area to the left side of the transfer surface, the movable portion may be moved back to the middle section of the transfer surface, and the patient may be depos - ited onto the transfer surface. In this manner, the patient may be transferred from a location, such as a bed, to a transfer surface without being suspended over an open floor. In a similar manner, a patient may be transferred from a transfer surface to a location without being suspended over an open floor.

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PATIENT TRANSFER SURFACE

DESCRIPTION

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to U.S. Provisional Patent Application Serial No. 61/578,486, filed December 21, 2011 incorporated by reference herein.

BACKGROUND OF THE INVENTION

[0002] The present invention relates generally to patient handling systems and, more particularly, to a patient transfer surface.

[0003] To laterally transfer a patient from a supporting surface, such as a bed, an operating table or a car seat, it is often necessary to position a lifting device, such as a floor lift or a caregiver, directly along the side of the supporting surface. For example, the lifting device may need to be placed directly along the side of a supporting surface in order to lift the patient vertically from the supporting surface. Otherwise, if the lifting device is positioned at a distance from the supporting surface, the lifting device may not be able to reach the patient or, if it can reach the patient, the lifting device may only be able to lift the patient at an angle from vertical that puts the patient at risk of swinging towards the lifting device once the patient has been lifted.

[0004] In many situations, however, placement of the lifting device directly along the side of the supporting surface that a patient is to be transferred from prevents the transfer surface that the patient is to be transferred to from being placed along the side of the supporting surface that the patient is to be transferred from. Likewise, if a patient is to be transferred from a transfer surface to a supporting surface, placement of the lifting device directly along the side of the supporting surface prevents the transfer surface from being placed along the side of the

supporting surface. As a result, patients must often be suspended over the open floor during the process of being transferred from one surface to another surface. If a failure or accident were to occur during such a transfer, a patient could potentially fall tragically to the floor rather than just falling to the supporting surface or transfer surface that the patient is being transferred from or to. Perhaps not surprisingly, many patients fear such transfers over an open floor and such fear can be a source of patient stress and agitation. In fact, many patients are reluctant, or even refuse, to be transferred in a manner that suspends them over an open floor.

SUMMARY OF THE INVENTION

[0005] In accordance with one embodiment of the present invention, a transfer surface, such as a transfer chair, may include a movable portion, such as a seat support. The movable portion may move, for example, so that the transfer surface includes an open area in a middle section of the transfer surface. In one embodiment, the movable portion may move by rotating between a horizontal position and a vertical position or by sliding or folding towards the front, back or side of the transfer surface. A lifting device, such as a floor lift or caregiver, may move into the open area to, for example, access a patient on the far side of the transfer surface. For example, a lifting device may be moved into the open area in a middle section of the transfer surface from the left side of the transfer surface, may pick up a patient from a location to the right of the transfer surface, may move out of the open area to the left side of the transfer surface, the movable portion may be moved back to the middle section of the transfer surface, and the patient may be deposited onto the transfer surface. In this manner, the patient may be transferred from a location, such as a bed, to a transfer surface without being suspended over an open floor. In a similar manner, a patient may be transferred from a transfer surface to a location without being suspended over an open floor.

[0006] it can be appreciated that there is a significant need for a transfer surface, such as a chair capable of reclining, that can be placed directly along the side of a supporting surface and that, at the same time, allows a lifting device to be placed directly along the same side of the supporting surface. It can further be appreciated that there is a significant need for a transfer surface with a movable portion, such as a seat support, that is configured to move such that a lifting device may be placed within an open area of the transfer surface. It can further be appreciated that there is a significant need for a transfer surface with a frame designed to allow a lifting device to be placed within an open area of the transfer surface. Embodiments of the present invention can provide these and other advantages, as will be apparent from the following detailed description and accompanying figures.

DESCRIPTION OF THE DRAWINGS

[0007] FIG. 1 shows a perspective view of one embodiment of the transfer surface of the present invention.

[0008] FIG. 2 shows a perspective view of one embodiment of the transfer chair of the present invention with a seat support extending vertically.

[0009] FIG. 3 shows a perspective view of one embodiment of the transfer chair of the present invention adjacent to a floor lift.

[0010] FIG. 4 shows a perspective view of one embodiment of the transfer chair of the present invention with a floor lift positioned in the cavity of the transfer chair.

[0011] FIG. 5 shows a perspective view of one embodiment of the transfer chair of the present invention with a floor lift positioned in the cavity of the transfer chair and adjacent to a bed.

[0012] FIG. 6 shows a perspective view of one embodiment of the transfer chair of the present invention with a floor lift suspending a patient over a bed from the cavity of the transfer chair.

[0013] FIG. 7 shows a first perspective view of one embodiment of the transfer chair of the present invention with a floor lift in the process of transferring a suspended patient.

[0014] FIG. 8 shows a second perspective view of one embodiment of the transfer chair of the present invention with a floor lift in the process of transferring a suspended patient.

[0015] FIG. 9 shows a perspective view of one embodiment of the transfer chair of the present invention with a patient resting in the transfer chair.

[0016] FIG. 10 shows a perspective view of one embodiment of the transfer surface of the present invention with a movable portion that is configured to slide.

[0017] FIG. 11 shows a perspective view of one embodiment of a frame of the transfer chair of the present invention.

[0018] FIG. 12 shows a perspective view of one embodiment of the transfer chair of the present invention adjacent to a bed.

[0019] FIG. 13 shows a perspective view of one embodiment of the transfer chair of the present invention with a floor lift positioned in the cavity of the transfer chair.

[0020] FIG 14 shows a front view of one embodiment of the transfer chair of the present invention with a floor lift positioned in the cavity of the transfer chair.

[0021] FIG. 15 shows a perspective view of one embodiment of the transfer chair of the present invention with a floor lift suspending a patient over the transfer chair.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0022] In accordance with one embodiment of the present invention, a transfer surface, such as a transfer chair, may include a movable portion, such as a seat support. The movable

portion may move, for example, so that the transfer surface includes an open area in a middle section of the transfer surface. In one embodiment, the movable portion may move by rotating between a horizontal position and a vertical position or by sliding or folding towards the front, back or side of the transfer surface. A lifting device, such as a floor lift or caregiver, may move into the open area to, for example, access a patient on the far side of the transfer surface. For example, a lifting device may be moved into the open area in a middle section of the transfer surface from the left side of the transfer surface, may pick up a patient from a location to the right of the transfer surface, may move out of the open area to the left side of the transfer surface, the movable portion may be moved back to the middle section of the transfer surface, and the patient may be deposited onto the transfer surface. In this manner, the patient may be transferred from a location, such as a bed, to a transfer surface without being suspended over an open floor. In a similar manner, a patient may be transferred from a transfer surface to a location without being suspended over an open floor.

[0023] Reference is now made to FIG. 1 which shows a perspective view of one embodiment of the transfer surface of the present invention. In one embodiment, the transfer surface may include a movable portion. In this embodiment, the transfer surface comprises a transfer chair 100 that includes a movable portion comprising a seat support 101. The transfer chair 100 also includes a back support 102, a leg support 103, and arm rests 106. In other embodiments, the transfer surface may consist of other shapes, sizes, and configurations capable of supporting a person such as, for example, a bed, lift cart, cot, or stretcher. In other embodiments, the movable portion may consist of other shapes, sizes, and configurations capable of rotating, sliding, or moving to create an open area within the transfer surface and capable of supporting, in connection with the transfer surface, at least a portion of a person. In one embodiment, for example, the movable portion may be removed from the transfer surface to create an open area within the transfer surface and may be reattached to the transfer surface

so the transfer surface is configured to support a person. In one embodiment, the movable portion may comprise an accordion-like structure that, under compression, may be folded to create an open area within the transfer surface and, under tension, may be unfolded so that the transfer surface is configured to support a person. In one embodiment, the movable portion may consist of, for example, a door, gate, flap, cover, wrap, lid, cap or closure.

[0024] In this embodiment, the seat support 101 and arm rests 106 are shown to be in a horizontal position. In one embodiment, the transfer chair 100 may include a locking device 105. The locking device 105 may secure the seat support 101 into a horizontal position. In this embodiment, the locking device 105 is shown to be mounted to the frame of the transfer chair 100 in the vicinity of the back-left corner of the seat support 101. The transfer chair 100 may also rest on wheels 104 for wheeled transport.

[0025] Reference is now made to FIG. 2 which shows a perspective view of one embodiment of the transfer chair 100 of the present invention with the seat support 101 extending vertically. In this embodiment, the seat support 101 is configured to rotate from a horizontal position (as shown in FIG. 1) to a vertical position (as shown in FIG. 2). The portion of the transfer chair 101 that includes the seat support 101 may be referred to as the middle section of the transfer chair 100. The middle section may include a u-shaped frame 200 that includes a center element 201, a first extension element 202 and a second extension element 203. When the seat support 101 is rotated to extend vertically, an open area 204 may exposed. In one embodiment, the open area 204 may be defined by the u-shaped frame 200. In other embodiments, the open area 204 may consist of other shapes, sizes, and configurations, including, for example, an opening, a recess, a gap, a notch, a void, a nook, or a bay. The seat support 101 may connect to the center element 201 of the u-shaped frame 200. For example, the seat support 101 may be hinged to the center element 201.

[0026] in one embodiment, the center element 201 of the u-shaped frame 200 may extend along the right side of the middle section of the transfer chair 101, the first extension element 202 may extend along the front side of the middle section of the transfer chair 100, the second extension element 203 may extend along the back side of the middle section of the transfer chair 100, and the u-shaped frame 200 may be open along the left side of the middle section of the transfer chair 100. In other embodiments, the u-shaped frame 200 may be open along the right side of the middle section of the transfer chair 100 and the center element 201 of the u-shaped frame 200 may extend along the left side of the middle section of the transfer chair 100. In this embodiment, the arm rests 106 are configured to rotate upwards and extend vertically in order to allow the seat support 101 to rotate upwards without interference from the arm rests 106.

[0027] Reference is now made to FIG. 3 which shows a perspective view of one embodiment of the transfer chair 100 of the present invention adjacent to a floor lift 300. In this embodiment, a dampening device 301 is attached to the underside of the seat support 101. The dampening device 301 may hold the seat support 101 in a substantially vertical position. The dampening device may also dampen the rate at which the seat support rotates towards a horizontal position. In other embodiments, the dampening device may include other shapes, sizes, and configurations of devices to dampen movement of the seat support such as, for example, a locking gas spring, hydraulic cylinder, shock, actuator, or zero-gravity system.

[0028] In this embodiment, the floor lift 300 is shown to approach the transfer chair 100 from the left side of the transfer chair 100. In this embodiment, the left side of the middle section of the transfer chair 100 is open and will allow the floor lift 300 to enter into the cavity 204 created by the rotation of the seat support 101 to a vertical orientation. In one embodiment, the lowest sections of the frame of the transfer chair 100 (which in FIG. 3 is the legs 303 of the transfer chair 100) may be raised higher from the floor than the tops of the legs 302 of the floor

lift 300 and the legs 302 of the floor lift 300 may fit underneath the lowest sections of the frame of the transfer chair 100.

[0029] Reference is now made to FIG. 4 which shows a perspective view of one embodiment of the transfer chair 100 of the present invention with a floor lift 300 positioned in the cavity 204 of the transfer chair 100. In this embodiment, the floor lift 300 has been moved through the opening of the u-shaped frame 200 along the left side of the middle section of the transfer chair 100, into the cavity 204, and adjacent to the inside surface of the central element 201 of the u-shaped frame 200. The dampening device 301 may attach to the underside of the seat support 101 at a location that is proximate to the front edge 400 of the seat support 101 or, as shown in FIG. 4, proximate to the front-right corner 401 of the seat support 101. The attachment point 402 of the dampening device 301 to the seat support 101 may be located such that a lift cart 300 may be moved into the cavity 204 and in a position adjacent to the central element 201 without interference from the dampening device 301.

[0030] Reference is now made to FIG. 5 which shows a perspective view of one embodiment of the transfer chair 100 of the present invention with a floor lift 300 positioned in the cavity 204 of the transfer chair 100 and adjacent to a bed 500. In this embodiment, the transfer chair 100 is shown to be positioned so that the outside surface of the central element 201 is adjacent to the bed 500. The floor lift 300 is shown to be positioned so that the front of the floor lift 300 is adjacent to the inside surface of the central element 201. The swivel bar 501 of the floor lift 300 is shown to be positioned over the center of the bed 500.

[0031] Reference is now made to FIG. 6 which shows a perspective view of one embodiment of the transfer chair 100 of the present invention with a floor lift 300 suspending a patient 600 over a bed 500 from the cavity 204 of the transfer chair 100. In this embodiment, the patient 600 is suspended over the bed 500 in a sling (not shown) that is attached to the swivel bar 501 of the floor lift 300. If the patient 600 were to swing towards the floor lift 300,

the cushion 601 attached to the outer surface of the seat support 101 is positioned so that the patient 600 would swing into the cushion 601 rather than the floor lift 300 or other portions of the transfer chair 100.

[0032] Reference is now made to FIG. 7 which shows a first perspective view of one embodiment of the transfer chair 100 of the present invention with a floor lift 300 in the process of transferring a suspended patient 600. In this embodiment, the floor lift 300 is positioned at a distance from the bed 500 so that the left side of the suspended patient 601 may touch the cushion 601 of the seat support 101. In this illustration, the patient 601may be in the process of being transferred from the bed 500 to the transfer chair 100, in which case the floor lift 300 may be moving in the direction 700 and the force of the patient 601 pressing against the cushion 601 may cause the seat support 101 to rotate from a vertical position towards a horizontal position. On the other hand, the patient 601 may be in the process of being transferred from the transfer chair 100 to the bed 500, in which case the mast 701 of the floor lift 300 may cause the seat support 101 to rotate towards a vertical position as the floor lift 300 moves in a direction opposite of the direction 700 towards the bed 500.

[0033] Reference is now made to FIG. 8 which shows a second perspective view of one embodiment of the transfer chair 100 of the present invention with a floor lift 300 in the process of transferring a suspended patient 600. In this embodiment, the front of the lift cart 300 is positioned adjacent to the left side of the transfer chair 100 and the seat support 101 is shown to be in a position that is slightly above horizontal. In this illustration, the patient 601 may be in the process of being transferred from the bed 500 to the transfer chair 100, in which case the floor lift 300 may be moving in the direction 700 and the seat support 101 would be rotating towards a horizontal position. On the other hand, the patient 601 may be in the process of being transferred from the transfer chair 100 to the bed 500, in which case the seat

support 101 may be beginning to rotate from a horizontal position towards a vertical position as the floor lift 300 moves in a direction opposite of the direction 700 towards the bed 500.

[0034] In this embodiment, the patient 600 is shown to be suspended over the space where left edge of the bed 500 lies adjacent to the right edge of the transfer chair 100. if the suspended patient 600 were to fall at this point in the transfer, the patient 600 would only fall a short distance, onto the left portion of the bed 500 and right portion of the transfer chair 100, rather than falling to the floor.

[0035] Reference is now made to FIG. 9 which shows a perspective view of one embodiment of the transfer chair 100 of the present invention with a patient 600 resting in the transfer chair 100. In this illustration, the floor lift 300 is positioned to the left of the transfer chair 100. The transfer chair 100 is shown to the left of the bed 500 but the right side of the transfer chair 100 is no longer directly adjacent to the left side of the bed 500. The patient 600 appears to be resting comfortably rest in the transfer chair 100 and may be transported in the transfer chair 100 to other locations. In this illustration, the patient 601 may have just been transferred from the bed 500 to the transfer chair 100, in which case the floor lift 300 and the transfer chair may have been moved in the direction 700. On the other hand, the patient 601 may be about to be transferred from the transfer chair 100 to the bed 500, in which case the floor lift 300 may be moved in a direction opposite of the direction 700 towards the transfer chair 100 and the transfer chair 100 may be moved in the same opposite direction towards the bed 500.

[0036] It can be appreciated by one of ordinary skill in the art that the illustrations in the sequence of FIG. 6, FIG. 7, FIG. 8, and FIG. 9 may show embodiments of a method transferring a patient to a transfer surface, and the same illustrations in the sequence of FIG. 9, FIG. 8, FIG. 7, and FIG. 6 may show embodiments of a method transferring a patient from a transfer surface.

[0037] Reference is now made to FIG. 10 which shows a perspective view of one embodiment of a transfer surface of the present invention with a seat support 1002 that is configured to slide. In this embodiment, the transfer surface comprises the transfer chair 1000 that includes a frame 1005, a back support 1001, a seat support 1002, a leg support 1003, and arm rests 1004. The seat support 1002 may be configured to slide forward on the frame 1004 from the middle section of the frame 1005 towards the front section of the frame 1005 so that a cavity 1009 is formed in the middle section of the transfer chair 1000. Likewise, the seat support 1002 may slide backward from the front section of the frame 1005 towards the middle section of the frame 1005 so that the seat support 1002 covers all or a portion of the cavity 1009.

[0038] In one embodiment, the distance 1007 between the front of the frame 1005 and the back of the frame 1005 may be greater than the distance between the extended legs of a floor lift. In one embodiment, the distance 1007 may be greater than one hundred twenty centimeters (120 cm). In one embodiment, the height 1008 of the lowest elements of the frame 1005 is greater than the height of the legs of a floor lift. In one embodiment, the height 1008 of the lowest elements of the frame 1005 is approximately sixteen inches (16 in.) or four hundred six millimeters (406 mm). In one embodiment, the back support 1001 of the transfer chair 1000 may include a gas spring 1006 which controls the recline angle of the back support 1001. In one embodiment, the transfer surface may include a vertical lift mechanism. The vertical lift mechanism may allow the height of the transfer surface to raised or lowered to for example, adjust the height of the transfer surface to the same height as the supporting surface of a patient. The vertical lift mechanism may be powered mechanically, electrically, or hydraulically.

[0039] Reference is now made to FIG. 11 which shows a perspective view of one embodiment of a frame 1005 of the transfer chair 1000 of the present invention. In this

embodiment, the frame 1005 includes a back section 1100, a middle section 1101, and a front section 1102. The back section 1100 of the frame 1005 may be rectangular in shape and include two legs that extend downwards from the back of the back section 1100 of the frame 1005. The middle section 1101 of the frame 1005 may be u-shaped with an opening on either the left side or right side of the middle section 1101 of the frame 1005. In this illustration, the middle section 1101 of the frame 1005 is open on the left side of the middle section 1101 of the frame 1005 and the central element 1104 of the u-shaped middle section 1101 of the frame 1005 forms the right side of the middle section 1101 of the frame 1005.

[0040] The front section 1102 of the frame 1005 may be u-shaped with an opening at the front of the front section 1102 of the frame 1005. The front section 1102 of the frame 1005 may include two legs 1104 that extend downwards from the left and right sides of the front section 1102 of the frame 1005. In this illustration, the legs 1104 are shown to extend downwards from the front of the left and right sides of the front section 1102 of the frame 1005.

[0041] Reference is now made to FIG. 12 which shows a perspective view of one embodiment of the transfer chair 1000 of the present invention adjacent to a bed 1202. In this embodiment, the transfer chair 1000 is positioned next to the bed 1202 such that the left side of the bed 1202 is directly adjacent to the right side of the transfer chair 1000. The seat support 1002 of the transfer chair 1000 is shown to be moving in the direction 1203 towards the leg support 1003 of the transfer chair 1000 to create a cavity 1204 in the transfer chair 1000. The floor lift 1200 may be moved towards the transfer chair 1000 in the direction 1205.

[0042] Reference is now made to FIG. 13 which shows a perspective view of one embodiment of the transfer chair 1000 of the present invention with a floor lift 1200 positioned in the cavity 1204 of the transfer chair 1000. In this embodiment, the seat support 1002 has moved in the direction 1203 towards the leg support 1003 of the transfer chair 1000. As a

result, the cavity 1204 has extended to a width that has allowed the floor lift 1200 to move into the cavity 1204 closer to the bed 1202. From this position of the floor lift 1200, the swivel arm 1301 of the floor lift 1200 may be positioned over a patient 1301 on the bed 1202. The legs 1201 of the floor lift 1200 are shown to have passed underneath the frame 1005 of the transfer chair 1000. In addition, a portion of the central element 1104 of the frame 1005 is visible in the cavity 1204.

[0043] Reference is now made to FIG. 14 which shows a front view of one embodiment of the transfer chair 1000 of the present invention with a floor lift 1200 positioned in the cavity 1204 of the transfer chair 1000. In this embodiment, the floor lift 1200 is positioned within the cavity 1204 with the front of the floor lift 1200 adjacent to the right edge of the transfer chair 1000 and the left edge of the bed 1202. A patient 1300 is shown suspended over the bed 1202 in a sling that is attached to the swivel arm 1301 of the floor lift 1200. The legs 1201 of the floor lift 1200 are shown to have passed underneath the frame 1005 of the transfer chair 1000 and to extend underneath the bed 1202.

[0044] Reference is now made to FIG. 15 which shows a perspective view of one embodiment of the transfer chair 1000 of the present invention with a floor lift 1200 suspending a patient 1300 over the transfer chair 1000. In this embodiment, the floor lift 1200 has been moved out of the cavity 1204 and, as a result, the suspended patient 1300 has been moved from a location over the bed 1202 to a location over the transfer chair 1000. The seat support 1002 of the transfer chair 1000 may also move in the direction 1500 so that the seat support 1002 covers the cavity 1204. In this illustration, the seat support 1002 has been moved towards the back support 1001 so that only a narrow gap exists between the back edge of the seat support 1002 and the bottom edge of the back support 1001. If the suspended patient 1300 were to fall at this point in the transfer, the patient 1300 would only fall a short distance onto the transfer chair 1000 rather than falling to the floor.

[0045] it can be appreciated by one of ordinary skill in the art that the illustrations in the sequence of FIG. 12, FIG. 13, FIG. 14, and FIG. 15 may show embodiments of a method transferring a patient to a transfer surface, and the same illustrations in the sequence of FIG. 15, FIG. 14, FIG. 13, and FIG. 12 may show embodiments of a method transferring a patient from a transfer surface.

[0046] While the present system and method has been disclosed according to the preferred embodiment of the invention, those of ordinary skill in the art will understand that other embodiments have also been enabled. Even though the foregoing discussion has focused on particular embodiments, it is understood that other configurations are contemplated. In particular, even though the expressions "in one embodiment" or "in another embodiment" are used herein, these phrases are meant to generally reference embodiment possibilities and are not intended to limit the invention to those particular embodiment configurations. These terms may reference the same or different embodiments, and unless indicated otherwise, are combinable into aggregate embodiments. The terms "a", "an" and "the" mean "one or more" unless expressly specified otherwise.

[0047] When a single embodiment is described herein, it will be readily apparent that more than one embodiment may be used in place of a single embodiment. Similarly, where more than one embodiment is described herein, it will be readily apparent that a single embodiment may be substituted for that one device.

[0048] In light of the wide variety of possible devices and methods for patient supports, the detailed embodiments are intended to be illustrative only and should not be taken as limiting the scope of the invention. Rather, what is claimed as the invention is all such modifications as may come within the spirit and scope of the following claims and equivalents thereto.

[0049] None of the descriptions in this specification should be read as implying that any particular element, step or function is an essential element which must be included in the claim

scope. The scope of the patented subject matter is defined only by the allowed claims and their equivalents. Unless explicitly recited, other aspects of the present invention as described in this specification do not limit the scope of the claims.

CLAIMS

1. A transfer surface comprising:

a transfer chair with a seat support, said seat support configured to rotate between a horizontal position and a vertical position wherein rotation of said seat support towards a vertical position creates a cavity in a middle section of said transfer chair.

2. The transfer surface of claim 1 wherein at least one side of said seat support is hinged to said transfer chair.

3. The transfer surface of claim 1 wherein said cavity comprises one or more of the **following:** an opening, a recess, a gap, a notch, a void, a noon, or a bay.

4. The transfer surface of claim 1 wherein said cavity is configured to accommodate a lifting device when said seat support is rotated to a vertical position.

5. The transfer surface of claim 1 wherein said transfer chair includes a frame with a back section that includes a rectangular portion, a middle section that includes a u-shaped portion having an opening to either the left or right side of said frame, and a front section that includes a u-shaped frame having an opening to the front side of said frame.

6. The transfer surface of claim 1 wherein said transfer chair includes a frame with a back section that includes a rectangular portion and a middle section that includes a u-shaped portion having an opening to either the left or right side of said frame.

7. The transfer surface of claim 1 wherein said transfer chair includes a frame with a middle section that includes a u-shaped portion having an opening to either the left or right side of said frame and a front section that includes a u-shaped frame having an opening to the front side of said frame.

8. The transfer surface of claim 1 wherein said transfer chair includes a frame with a u-shaped portion having an opening to either the left or right side of said frame.

9. The transfer surface of claim 1 wherein said transfer chair includes a frame with a u-shaped portion having a central element to either the left or right side of said frame.

10. The transfer surface of claim 1 wherein said transfer chair includes a frame with a u-shaped portion having a central element to either the left or right side of said frame and an opening to the side of said frame that is opposite of the side of said frame of said central element.

11. The transfer surface of claim 1 wherein said transfer chair includes a frame with a u-shaped portion having a central element to either the left or right side of said frame and wherein at least one side of said seat support is hinged to said central element.

12. The transfer surface of claim 1 wherein said transfer chair includes a frame with a u-shaped portion having a central element to either the left or right side of said frame, said central element having an outside surface configured to be positioned adjacent to a supporting surface and an inside surface configured to be positioned adjacent to the front side of a lifting device when said seat support is rotated to a vertical position.

13. The transfer surface of claim 1 further comprising a frame with a u-shaped portion having an opening to the front of said frame.

14. The transfer surface of claim 1 wherein said seat surface is configured to rotate towards a horizontal position if a force is applied against the outer surface of said seat support.

15. The transfer surface of claim 1 wherein said seat surface is configured to rotate towards a vertical position if a force is applied against the inner surface of said seat support.

16. The transfer surface of claim 1 wherein said transfer chair is configured to have a length greater than the distance between the extended legs of a floor lift.

17. The transfer surface of claim 1 wherein said transfer chair includes a frame with the lowest elements of said frame configured to rest at a height greater than the top of the legs of a floor lift.

18. The transfer surface of claim 1 wherein said transfer chair includes a frame with the lowest elements of said frame configured to rest at a height approximately equal to or greater than four hundred six millimeters.

19. The transfer surface of claim 1 wherein the outer surface of said seat support includes a cushion.

20. The transfer surface of claim 1 wherein said transfer chair includes a back support and leg support.

21. The transfer surface of claim 1 wherein the inner surface of said seat support is configured to attach to a dampening device.

22. The transfer surface of claim 1 wherein said seat support is attached to a dampening device configured to dampen the rate of rotation of said seat support.

23. The transfer surface of claim 1 further comprising a lock configured to secure said seat support in a horizontal position.

24. The transfer surface of claim 1 wherein said transfer chair rests on wheels.

25. The transfer surface of claim 1 wherein said transfer chair includes a hack support configured to recline to an approximately horizontal orientation.

26. A transfer surface comprising;

a transfer chair with a seat support, said seat support configured to move horizontally from a middle section of said transfer chair to a front section or a back section of said transfer chair to create a recess in said middle section of said transfer chair.

27. The transfer surface of claim 26 wherein at least one side of said seat support is connected to said transfer chair.

28. The transfer surface of claim 26 wherein said recess includes one or more of the following: an opening, a cavity, a gap, a notch, a void, a nook, or a bay.

29. The transfer surface of claim 26 wherein said recess is configured to contain at least a portion of a lifting device.

30. The transfer surface of claim 26 wherein said transfer chair includes a frame with a back section that includes a rectangular portion, a middle section having an opening to either the left or right side of said frame, and a front section having void to the front side of said frame.

31. The transfer surface of claim 26 wherein said transfer chair includes a frame with a back section that includes a rectangular portion and a middle section having void to either the left or right side of said frame.

32. The transfer surface of claim 26 wherein said transfer chair includes a frame with a middle section having a void to either the left or right side of said frame and a front section having void to the front side of said frame.

33. The transfer surface of claim 26 wherein said transfer chair includes a frame having a void to either the left or right side of said frame.

34. The transfer surface of claim 26 wherein said transfer chair includes a frame having a central element to either the left or right side of said frame.

35. The transfer surface of claim 26 wherein said transfer chair includes a frame having a central element to either the left or right side of said frame and a void to the side of said frame that is opposite of the side of said frame of said central element.

36. The transfer surface of claim 26 wherem said transfer chair includes a frame having a central element to either the left or right side of said frame and wherem at least one side of said seat support is attached to said central element.

37. The transfer surface of claim 26 wherein said transfer chair includes a frame having a central element to either the left or right side of said frame, said central element having an outside surface configured to he positioned adjacent o a supporting surface and an inside surface configured to be positioned adjacent to the front side of a lifting device when said seat support has been moved to said front section or said back section of said transfer chair.

38. The transfer surface of claim 26 further comprising a frame having an opening to the front of said frame.

39. The transfer surface of claim 26 wherein said seat surface is configured to slide horizontally.

40. The transfer surface of claim 26 wherein said transfer chair includes front legs and back legs, said front legs spaced at least 120 centimeters from said back legs.

41. The transfer surface of claim 26 wherein said seat support is further configured to move vertically.

42. The transfer surface of claim 26 wherein said transfer chair includes a frame with the lowest elements of said frame configured to rest at a height approximately equal to or greater than four hundred six millimeters.

43. The transfer surface of claim 26 wherein the outer surface of said seat support includes a cushion.

44. The transfer surface of claim 26 wherein said transfer chair includes a back support and leg support.

45. The transfer surface of claim 26 wherein the inner surface of said seat support is configured to attach to a dampening device.

46. The transfer surface of claim 26 wherein said seat support is attached to a dampening device configured to dampen the movement of said seat support.

47. The transfer surface of claim 26 wherein said transfer chair mcludes a lock configured to secure said seat support in said middle section of said transfer chair.

48. The transfer surface of claim 26 wherein said transfer chair rests on wheels.

49. The transfer surface of claim 26 wherein said transfer chair includes a back support and leg support that are configured to recline to an approximately horizontal orientation.

50. A transfer surface comprising:

an elongated surface configured to support the body of a patient, wherein a movable portion of said elongated surface is configured to move vertically or horizontally in order to create a void in a middle section of said elongated surface.

51. The transfer surface of claim 50 wherein at least one side of said movable portion is hinged to said elongated surface.

52. The transfer surface of claim 50 wherein said void is configured to accommodate at least a portion of a lifting device when said movable portion is rotated to a vertical position.

53. The transfer surface of claim 50 wherein said void includes at least one of the following: an opening, a recess, a gap, a notch, a cavity, a nook, or a bay.

54. The transfer surface of claim 50 wherein said elongated surface includes a frame with a back section that includes a rectangular portion, a middle section having an opening to either the left or right side of said frame, and a front section having an opening to the front side of said frame.

55. The transfer surface of claim 50 wherein said elongated surface includes a frame with a back section that includes a rectangular portion and a middle section that includes a u-shaped portion having an opening to either the left or right side of said frame.

56. The transfer surface of claim 50 wherein said elongated surface includes a frame with a middle section having an opening to either the left or right side of said frame and a front section having an opening to the front side of said frame.

57. The transfer surface of claim 50 wherein said elongated surface includes a frame having an opening to either the left or right side of said middle section of said elongated surface.

58. The transfer surface of claim 50 wherein said elongated surface includes a frame having a member to either the left or right side of said frame.

59. The transfer surface of claim 50 wherein said transfer chair includes a frame having a member to either the left or right side of said frame and an opening to the side of said frame that is opposite to the side of said frame of said member.

60. The transfer surface of claim 50 wherein said elongated surface includes a frame having a member to either the left or right side of said frame and wherein at least one side of said movable portion is connected to said member.

61. The transfer surface of claim 50 wherein said elongated surface includes a frame having a member to either the left or right side of said frame, said member having an outside surface configured to be positioned adjacent to a supporting surface and an inside surface configured to be positioned adjacent to the front side of a lifting device when said movable portion is rotated to a vertical position or slid from said middle section.

62. The transfer surface of claim 50 further comprising a frame having an opening to the front of said frame.

63. The transfer surface of claim 50 wherein said movable portion is configured to rotate towards a horizontal position if a force is applied against the outer surface of said movable portion.

64. The transfer surface of claim 50 wherein said movable portion is configured to rotate towards a vertical position if a force is applied against the inner surface of said movable portion.

65. The transfer surface of claim 50 **wherein** the distance **between** the front legs of said elongated surface and the back legs of said elongated surface is **at** least 120 centimeters.

66. The transfer surface of claim 50 wherein said elongated surface includes a frame with the lowest elements of said frame configured to rest at a height greater than the top of the legs of a floor lift.

67. The transfer surface of claim 50 wherein said elongated surface includes a frame with the lowest elements of said frame configured to rest at a height approximately equal to or greater than four hundred six millimeters.

68. The transfer surface of claim 50 wherein the outer surface of said movable portion includes a cushion.

69. The transfer surface of claim 50 wherein said elongated surface includes a back support and leg support.

70. The transfer surface of claim 50 wherein the inner surface of said movable portion is configured to attach to a dampening device.

71. The transfer surface of claim 50 wherein said movable portion is attached to a dampening device configured to dampen the movement of said movable portion.

72. The transfer surface of claim 50 wherein said elongated surface mcludes a lock configured to secure said movable portion in a horizontal position.

73. The **transfer** surface of claim 50 **wherein** said elongated surface rests on wheels.

74. The transfer surface of claim 50 wherein said elongated surface includes a back support configured to recline to an approximately horizontal orientation.

75. A transfer surface comprising:

an elongated surface including a front section, a back section, and an open area in between said front section and said back section; and

a movable portion configured to cover said open area, wherein said elongated surface is configured to support the body of a patient with said movable portion covering at least a portion of said open area.

76. The transfer surface of claim 75 wherein said movable portion is configured to rotate between a horizontal position and a vertical position.

77. The transfer surface of claim 75 wherein said movable portion is configured to slide to the front, back or side of said elongated surface.

78. The transfer surface of claim 75 wherein said movable portion is configured to fold towards the front, back or side of said elongated surface.

79. The transfer surface of claim 75 wherem said movable portion is configured to fold, under compression, towards the front, back or side of said elongated surface and to unfold, under tension, to cover at least a portion of said open area.

80. The transfer surface of claim 75 wherein at least one side of said movable portion attaches to said elongated surface.

81. The transfer surface of claim 75 wherein said open area is configured to accommodate at least a portion of a lifting device.

82. The transfer surface of claim 75 wherein said open area comprising at least one of the following: an opening, a cavity, a recess, a gap, a notch, a void, a nook, or a bay.

83. The transfer surface of claim 75 wherem said elongated surface includes a frame with a back section that includes a rectangular portion, a middle section having an opening to either the left or right side of said frame, and a front section having an opening to the front side of said frame.

84. The transfer surface of claim 75 wherein said elongated surface includes a frame with a back section that includes a rectangular portion and a middle section having an opening to either the left or right side of said frame.

85. The transfer surface of claim 75 wherein said elongated surface includes a frame with a middle section that includes a u-shaped portion having an opening to either the left or right side of said frame and a front section that includes a u-shaped frame having an opening to the front side of said frame.

86. The transfer surface of claim 75 wherein said elongated surface includes a frame with a u-shaped portion having an opening to either the left or right side of a middle section of said elongated surface.

87. The transfer surface of claim 75 wherein said elongated surface includes a frame with a u-shaped portion having a central element to either the left or right side of said frame.

88. The transfer surface of claim 75 wherein said elongated surface includes a frame with a u-shaped portion having a central element to either the left or right side of said frame and an opening to the side of said frame that is opposite to the side of said frame of said central element.

89. The transfer surface of claim 75 wherein said elongated surface includes a frame with a u-shaped portion having a central element to either the left or right side of said frame and wherein at least one side of said movable portion is hinged to said central element.

90. The transfer surface of claim 75 wherein said elongated surface includes a frame with a u-shaped portion having a central element to either the left or right side of said frame, said central element having an outside surface configured to be positioned adjacent to a supporting surface and an inside surface configured to be positioned adjacent to the front side of a lifting device.

91. The transfer surface of claim 75 further comprising a frame with a u-shaped portion having an opening to the front of said frame.

92. The transfer surface of claim 75 wherein said movable portion is configured to rotate towards a horizontal position if a force is applied against the outer surface of said movable portion.

93. The transfer surface of claim 75 wherein said movable portion is configured to rotate towards a vertical position if a force is applied against the inner surface of said movable portion.

94. The transfer surface of claim 75 wherein said elongated surface is configured to have a length greater than the distance between the extended legs of a floor lift.

95. The transfer surface of claim 75 wherein said elongated surface includes a frame with the lowest elements of said frame configured to rest at a height greater than the top of the legs of a floor lift

96. The transfer surface of claim 75 wherein said elongated surface includes a frame with the lowest elements of said frame configured to rest at a height approximately equal to or greater than four hundred six millimeters.

97. The transfer surface of claim 75 wherein the outer surface of said movable portion includes a cushion.

98. The transfer surface of claim 75 wherein said elongated surface includes a back support and leg support.

99. The transfer surface of claim 75 wherein the inner surface of said movable portion is configured to attach to a dampening device.

100. The transfer surface of claim 75 wherein said movable portion is attached to a dampening device configured to dampen movement of said movable portion.

101. The transfer surface of claim 75 wherein said elongated surface includes a lock configured to secure said movable portion in a horizontal position.

102. The transfer surface of claim 75 wherein said elongated surface rests on wheels.

103. The transfer surface of claim 75 wherein said elongated surface includes a back support configured to recline to an approximately horizontal orientation.

104. A method for transferring a patient to a transfer surface comprising:

rotating a movable portion of said transfer surface towards a vertical orientation in order to create an open area in a middle section of said transfer surface;

moving a lifting device into at least a portion of said open area;

lifting said patient with said lifting device;

rotating said movable portion towards a horizontal orientation in order to close at least a portion of said open area; and

lowering said patient onto said transfer surface.

105. The method of claim 104 wherein said transfer surface includes an elongated surface configured to support the body of a patient.

106. The method of claim 104 wherein at least one side of said movable portion is hinged to said transfer surface.

107. The method of claim 104 wherem said open area is configured to accommodate at least a portion of a lifting device.

108. The method of claim 104 wherein said open area includes one or more of an opening, a cavity, a recess, a gap, a notch, a nook, or a bay.

109. The method of claim 104 wherein said transfer surface includes a frame with a back section that includes a rectangular portion, a middle section that includes a u-shaped portion having an opening to either the left or right side of said frame, and a front

section that includes a u-shaped frame having an opening to the front side of said frame.

110. The transfer surface of claim 104 wherein said transfer surface includes a frame with a back section that includes a rectangular portion and a middle section that includes a u-shaped portion having an opening to either the left or right side of said frame.

111. The transfer surface of claim 104 wherein said transfer surface includes a frame with a middle section that includes a u-shaped portion having an opening to either the left or right side of said frame and a front section that includes a u-shaped frame having an opening to the front side of said frame.

112. The method of claim 104 wherein said transfer surface includes a frame with a u-shaped portion having an opening to either the left or right side of the middle section of said transfer surface.

113. The method of claim 104 wherein said transfer surface includes a frame with a u-shaped portion having a central element to either the left or right side of said frame.

114. The method of claim 104 wherein said transfer surface includes a frame with a u-shaped portion having a central element to either the left or right side of said frame and an opening to the side of said frame that is opposite to the side of said frame of said central element.

115. The method of claim 104 wherein said transfer surface includes a frame with a u-shaped portion having a central element to either the left or right side of said frame and wherein at least one side of said movable portion is hinged to said central element.

116. The method of claim 104 wherein said transfer surface includes a frame with a u-shaped portion having a central element to either the left or right side of said frame, said central element having an outside surface configured to he positioned adjacent to a supporting surface and an inside surface configured to be positioned adjacent to the

front side of a lifting device when said movable portion is rotated to a vertical position.

117. The method of claim 104 wherein said transfer surface includes a frame with a u-shaped portion having an opening to the front of said frame.

118. The method of claim 104 wherein said movable portion is configured to rotate towards a horizontal position if a force is applied against the outer surface of said movable portion.

119. The method of claim 104 wherein said movable portion is configured to rotate towards a vertical position if a force is applied against the inner surface of said movable portion.

120. The method of claim 104 wherein said transfer surface is configured to have a length greater than the distance between the extended legs of a floor lift.

121. The method of claim 104 wherein said transfer surface includes a frame with the lowest elements of said frame configured to rest at a height greater than the top of the legs of a floor lift.

122. The method of claim 104 wherein said transfer surface includes a frame with the lowest elements of said frame configured to rest at a height approximately equal to or greater than four hundred six millimeters.

123. The method of claim 104 wherein the outer surface of said movable portion includes a cushion.

124. The method of claim 104 wherein said transfer surface includes a back support and leg support.

125. The method of claim 104 wherein the inner surface of said movable portion is configured to attach to a dampening device.

126. The method of claim 104 wherein said movable portion is attached to a dampening device configured to dampen the rate of rotation of said movable portion.

127. The method of claim 104 wherein said transfer surface includes a lock configured to secure said movable portion in a horizontal position.

128. The method of claim 104 wherein said transfer surface rests on wheels.

129. The method of claim 104 wherein said transfer surface includes a back support configured to recline to an approximately horizontal orientation.

130. A method for transfer a patient from a transfer surface comprising:

sliding a movable portion of said transfer surface horizontally towards the front or back of said transfer surface in order to create an opening in a middle section of said transfer surface;

moving at least a portion of a lifting device into said opening;

lifting said patient with said lifting device;

sliding said movable portion horizontally over at least a portion of said opening; and

lowering said patient onto said transfer surface.

131. The method of claim 130 wherein said transfer surface includes an elongated surface configured to support the body of a patient.

132. The method of claim 130 wherem at least one side of said movable portion is attached to said transfer surface.

133. The method of claim 130 wherem said opening is configured to contain at least a part of a lifting device.

134. The method of claim 130 wherein said opening includes one or more of the following; a recess, a cavity, a gap, a notch, a void, a nook, or a bay.

135. The method of claim 130 wherein said transfer surface includes a frame with a back section that includes a rectangular portion, a middle section having a recess to either

the left or right side of said frame, and a front section having a recess to the front side of said frame.

136. The transfer surface of claim 130 wherein said transfer surface includes a frame with a back section that includes a rectangular portion and a middle section that includes a u-shaped portion having a gap to either the left or right side of said frame.

137. The transfer surface of claim 130 wherein said transfer surface includes a frame with a middle section having a void to either the left or right side of said frame and a front section having a void to the front side of said frame.

138. The method of claim 130 wherein said transfer surface includes a frame having a recess to either the left or right side of the middle section of said transfer surface.

139. The method of claim 130 wherein said transfer surface includes a frame having a member to either the left or right side of said frame.

140. The method of claim 130 wherein said transfer surface includes a frame having a member to either the left or right side of said frame and a recess to the side of said frame that is opposite to the side of said frame of said member.

141. The method of claim 130 wherein said transfer surface includes a frame having a member to either the left or right side of said frame and wherem at least one side of said movable portion is attached to said central element.

142. The method of claim 130 wherein said transfer surface includes a frame having a member to either the left or right side of said frame, said member having an outside surface configured to be positioned adjacent to a supporting surface and an inside surface configured to be positioned adjacent to the front side of a lifting device when said movable portion has been moved.

143. The method of claim 130 wherein said transfer surface includes a frame with a u-shaped portion having a recess to the front of said frame.

144. The method of claim 130 wherein said movable portion is configured to slide forward or backward if a force is applied against the outer surface of said movable portion.

145. The method of claim 130 wherein the underside of the frame of said transfer surface is configured to have clearance of greater than 120 centimeters in length.

146. The method of claim 130 wherein said transfer surface includes a frame with the lowest elements of said frame configured to rest at a height greater than the top of the legs of a floor lift.

147. The method of claim 130 wherein said transfer surface includes a frame with the lowest elements of said frame configured to rest at a height approximately equal to or greater than four hundred six millimeters.

148. The method of claim 130 wherem the outer surface of said movable portion includes a cushion.

149. The method of claim 130 wherein said transfer surface includes a back support and leg support.

150. The method of claim 130 wherem said transfer surface includes a lock configured to secure said movable portion.

151 . The method of claim 130 wherein said transfer surface rests on wheels.

152. The method of claim 130 wherein said transfer surface includes a back support configured to recline to an approximately horizontal orientation.

153. A method for transferring a patient to a transfer surface comprising:

moving a movable portion from at least a portion of said transfer surface in order to create an open area in a middle section of said transfer surface;

positioning at least a portion of a lifting device into said open area;

lifting said patient with said lifting device;

covering at least a portion of said open area with said movable portion; and

lowering said patient onto said transfer surface.

154. The method of claim 153 wherein said moving includes rotating said movable portion from a horizontal position towards a vertical position.

155. The method of claim 153 wherein said moving includes sliding said movable portion towards the back, front or side of said transfer surface.

156. The method of claim 153 wherein said moving includes folding said movable portion towards the back, front or side of said transfer surface.

157. The method of claim 153 wherein said moving includes removing said movable portion from said transfer surface.

158. The method of claim 153 wherein said covering includes rotating said movable portion towards a horizontal position.

159. The method of claim 153 wherem said covering includes sliding said movable portion over at least a portion of said open area.

160. The method of claim 153 wherein said covering includes unfolding said movable portion over at least a portion of said open area.

161. The method of claim 153 wherem said covering includes attaching said movable portion to said transfer surface.

162. The method of claim 153 wherein said transfer surface includes an elongated surface configured to support the body of a patient.

163. The method of claim 153 wherein at least one side of said movable portion is hinged to said transfer surface.

164. The method of claim 153 wherein said open area is configured to contain at least a portion of said lifting device.

165. The method of claim 153 wherein said open area includes one or more of an opening, a recess, a cavity, a gap, a notch, a void, a nook, or a bay.

166. The method of claim 153 wherein said transfer surface includes a frame with a back section that includes a rectangular portion, a middle section that includes a u-shaped portion having an opening to either the left or right side of said frame, and a front section that includes a u-shaped frame having an opening to the front side of said frame.

167. The transfer surface of claim 153 wherein said transfer surface includes a frame with a back section that includes a rectangular portion and a middle section that includes a u-shaped portion having an opening to either the left or right side of said frame.

168. The transfer surface of claim 153 wherein said transfer surface includes a frame with a middle section that includes a u-shaped portion having an opening to either the left or right side of said frame and a front section that includes a u-shaped frame having an opening to the front side of said frame.

169. The method of claim 153 wherein said transfer surface includes a frame with a u-shaped portion having an opening to either the left or right side of the middle section of said transfer surface.

170. The method of claim 153 wherein said transfer surface includes a frame with a u-shaped portion having a central element to either the left or right side of said frame.

171. The method of claim 153 wherein said transfer surface includes a frame with a u-shaped portion having a central element to either the left or right side of said frame and an opening to the side of said frame that is opposite to the side of said frame of said central element.

172. The method of claim 153 wherein said transfer surface includes a frame with a u-shaped portion having a central element to either the left or right side of said frame and wherein at least one side of said movable portion is hinged to said central element.

173. The method of claim 153 wherein said transfer surface includes a frame with a u-shaped portion having a central element to either the left or right side of said frame, said central element having an outside surface configured to be positioned adjacent to a supporting surface and an inside surface configured to be positioned adjacent to the front side of a lifting device when said movable portion is rotated to a vertical position.

174. The method of claim 153 wherein said transfer surface includes a frame with a u-shaped portion having an opening to the front of said frame.

175. The method of claim 153 wherein said movable portion is configured to rotate towards a horizontal position if a force is applied against the outer surface of said movable portion.

176. The method of claim 153 wherein said movable portion is configured to rotate towards a vertical position if a force is applied against the inner surface of said movable portion.

177. The method of claim 153 wherein said transfer surface is configured to have a length greater than the distance between the extended legs of a floor lift.

178. The method of claim 153 wherein said transfer surface includes a frame with the lowest elements of said frame configured to rest at a height greater than the top of the legs of a floor lift.

179. The method of claim 153 wherein said transfer surface includes a frame with the lowest elements of said frame configured to rest at a height approximately equal to or greater than four hundred six millimeters.

180. The method of claim 153 wherein the outer surface of said movable portion includes a cushion.

181. The method of claim 153 wherein said transfer surface includes a back support and leg support.

182. The method of claim 153 wherein the inner surface of said movable portion is configured to attach to a dampening device.

183. The method of claim 153 wherein said movable portion is attached to a dampening device configured to dampen the rate of rotation of said movable portion.

184. The method of claim 153 wherein said transfer surface includes a lock configured to secure said movable portion in a horizontal position.

185. The method of claim 153 wherem said transfer surface rests on wheels.

186. The method of claim 153 wherem said transfer surface includes a back support configured to recline to an approximately horizontal orientation.

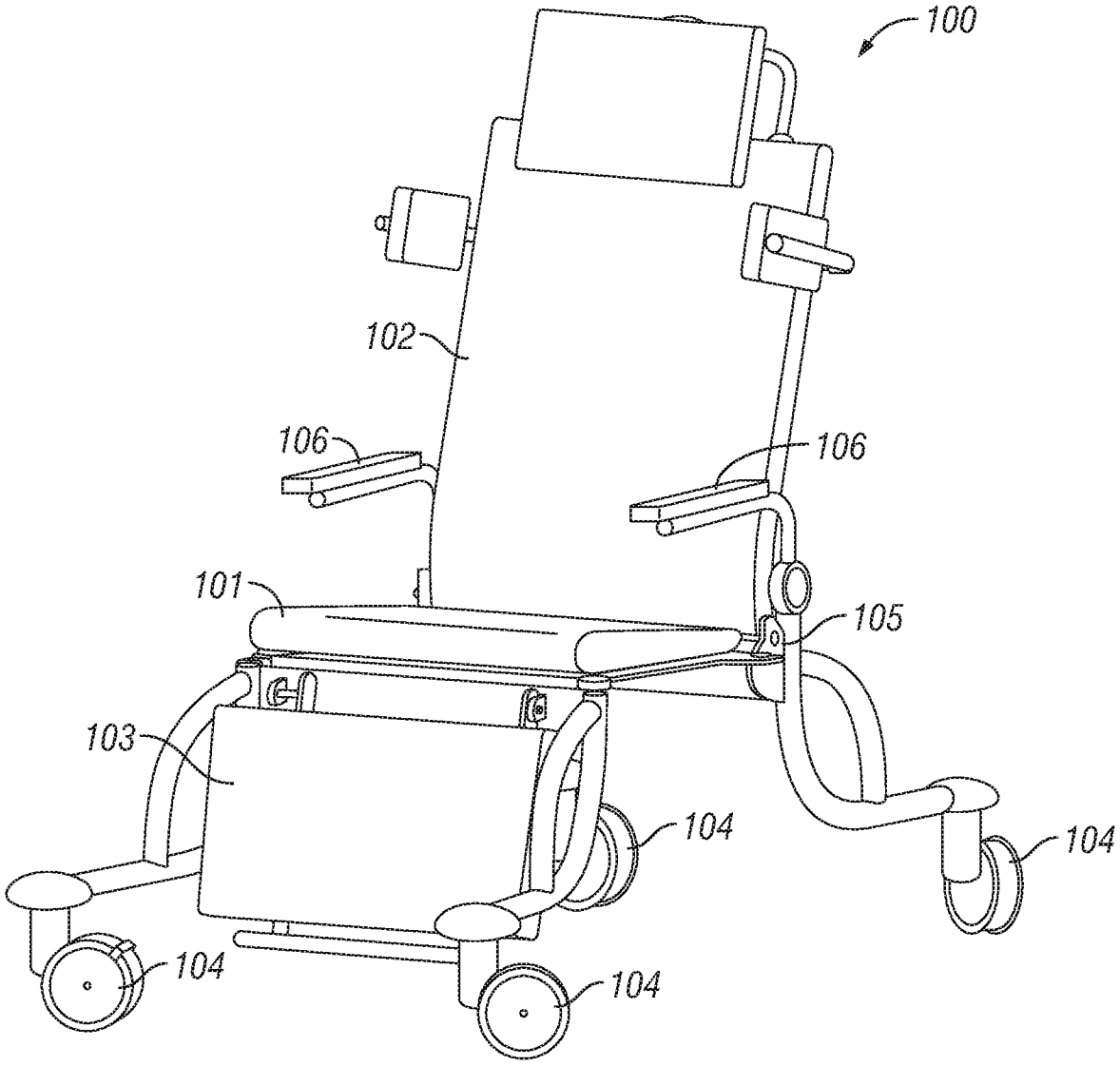

FIG. 1

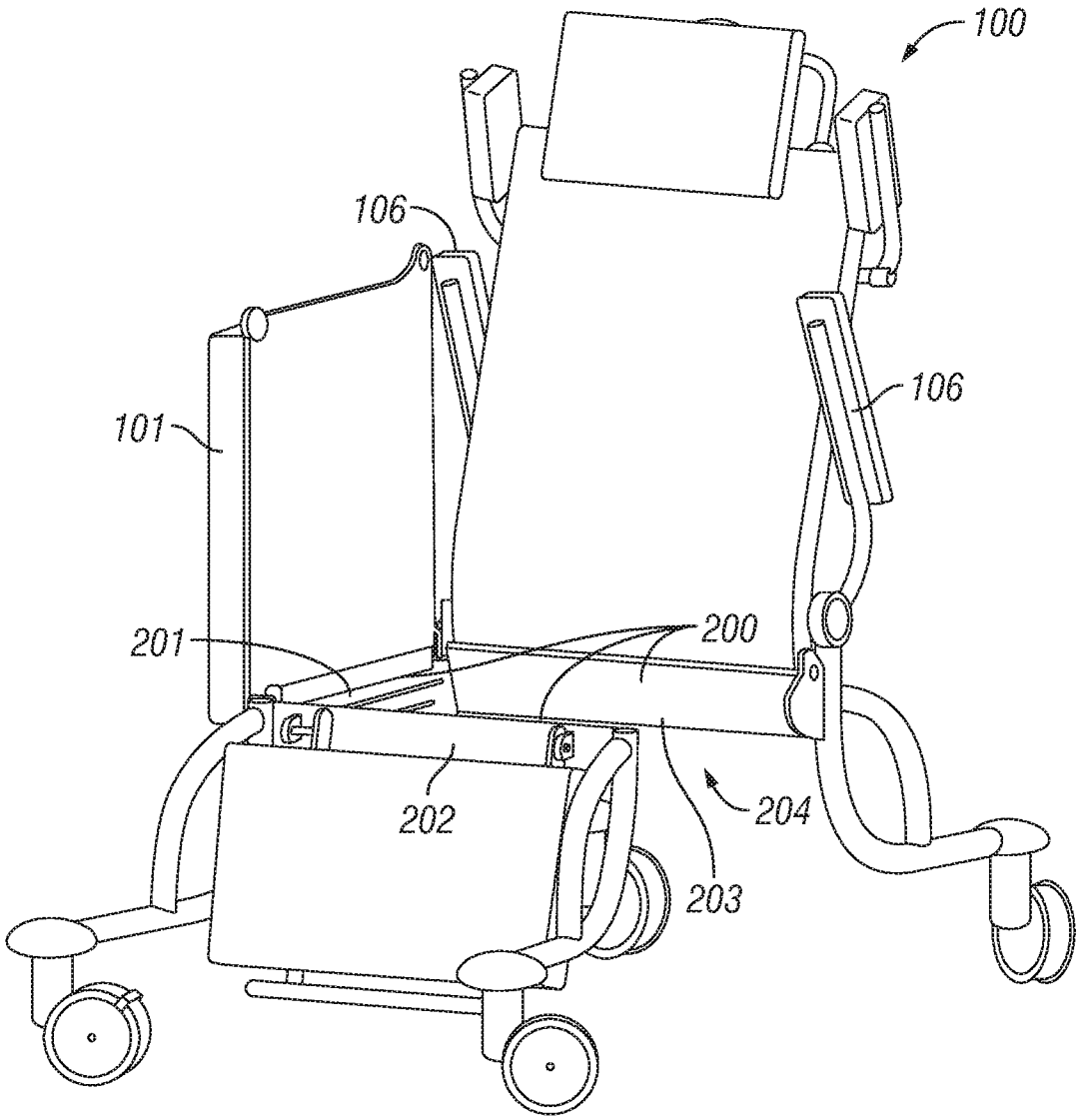

FIG. 2

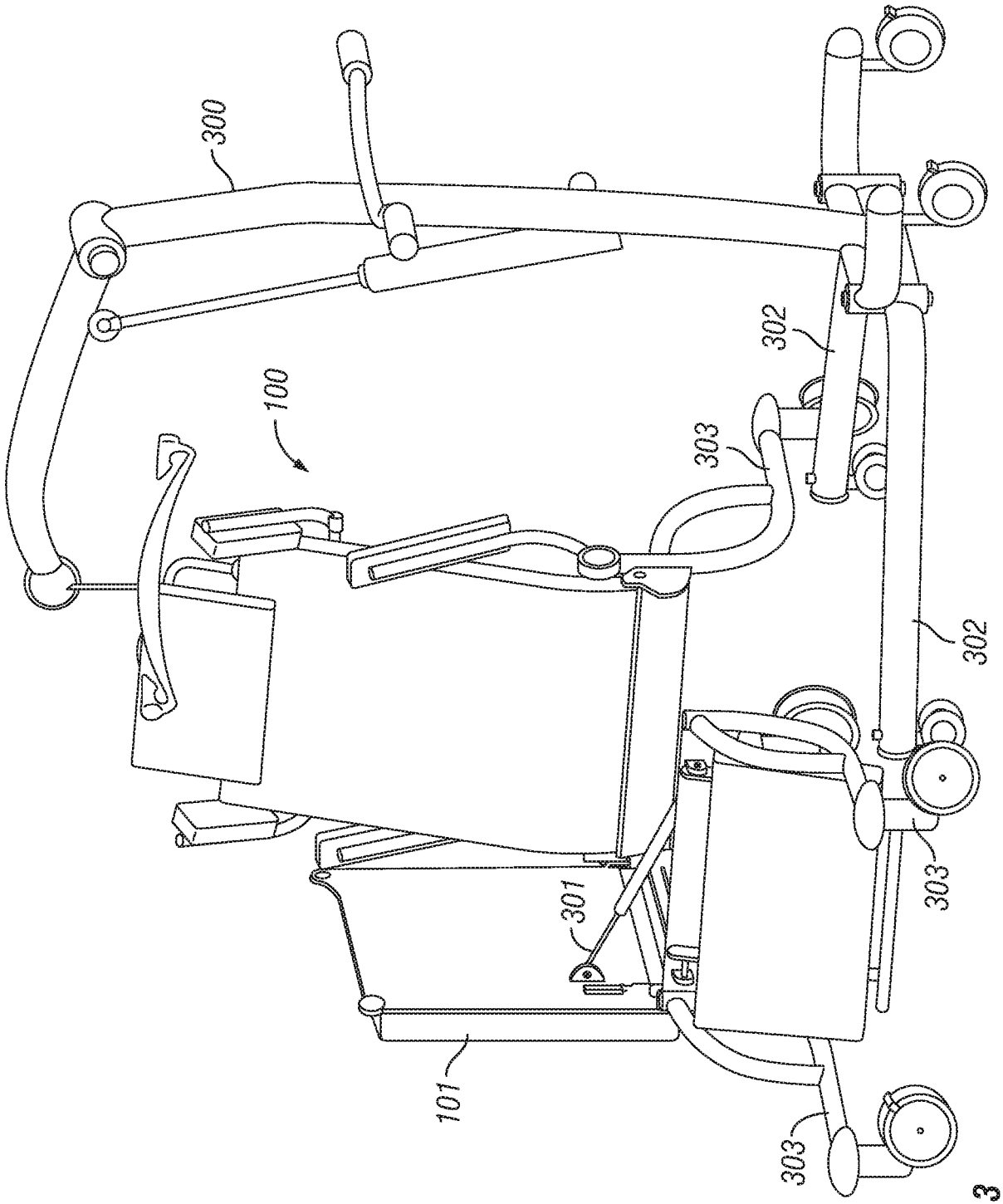

FIG. 3

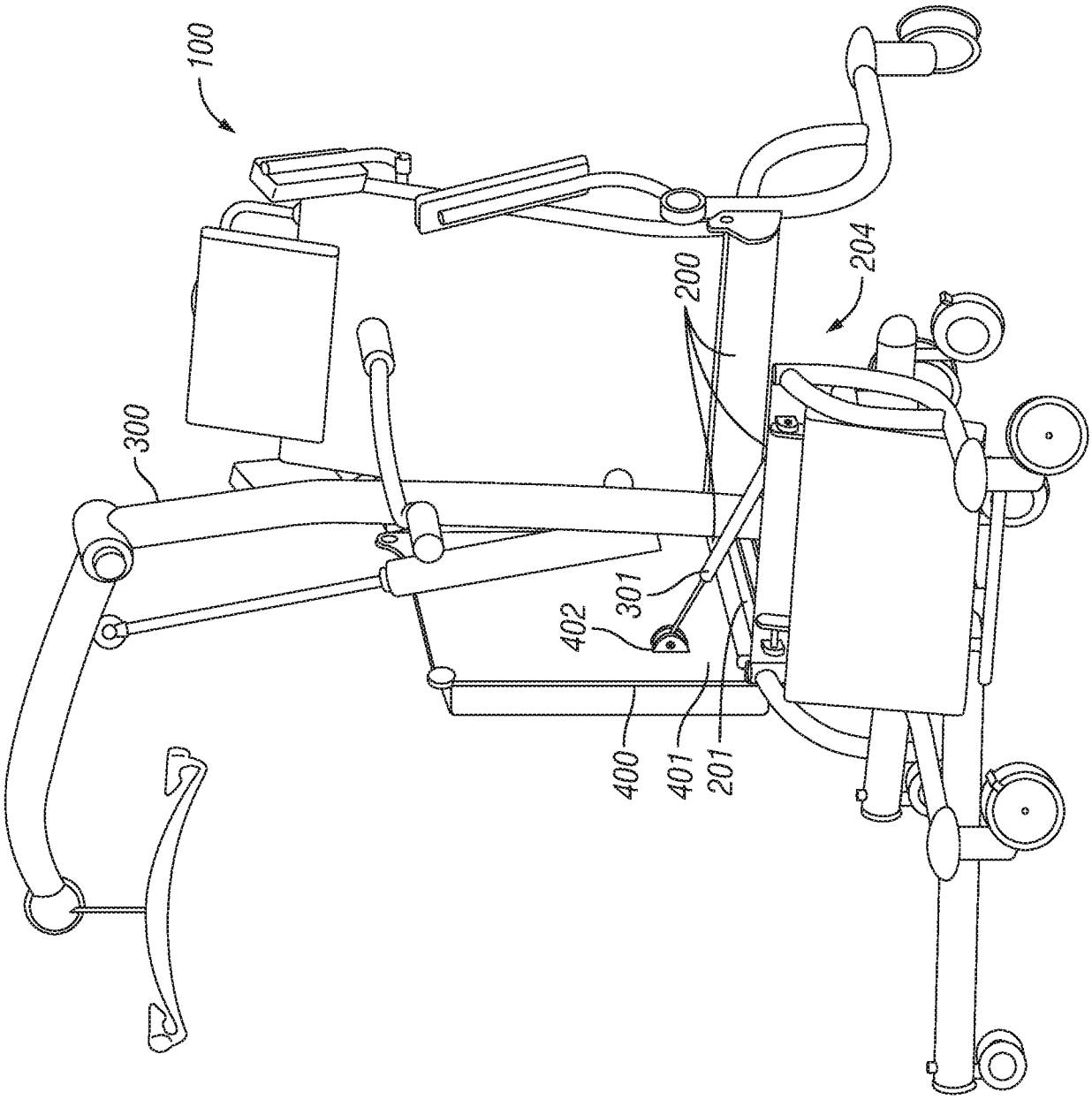

FIG. 4

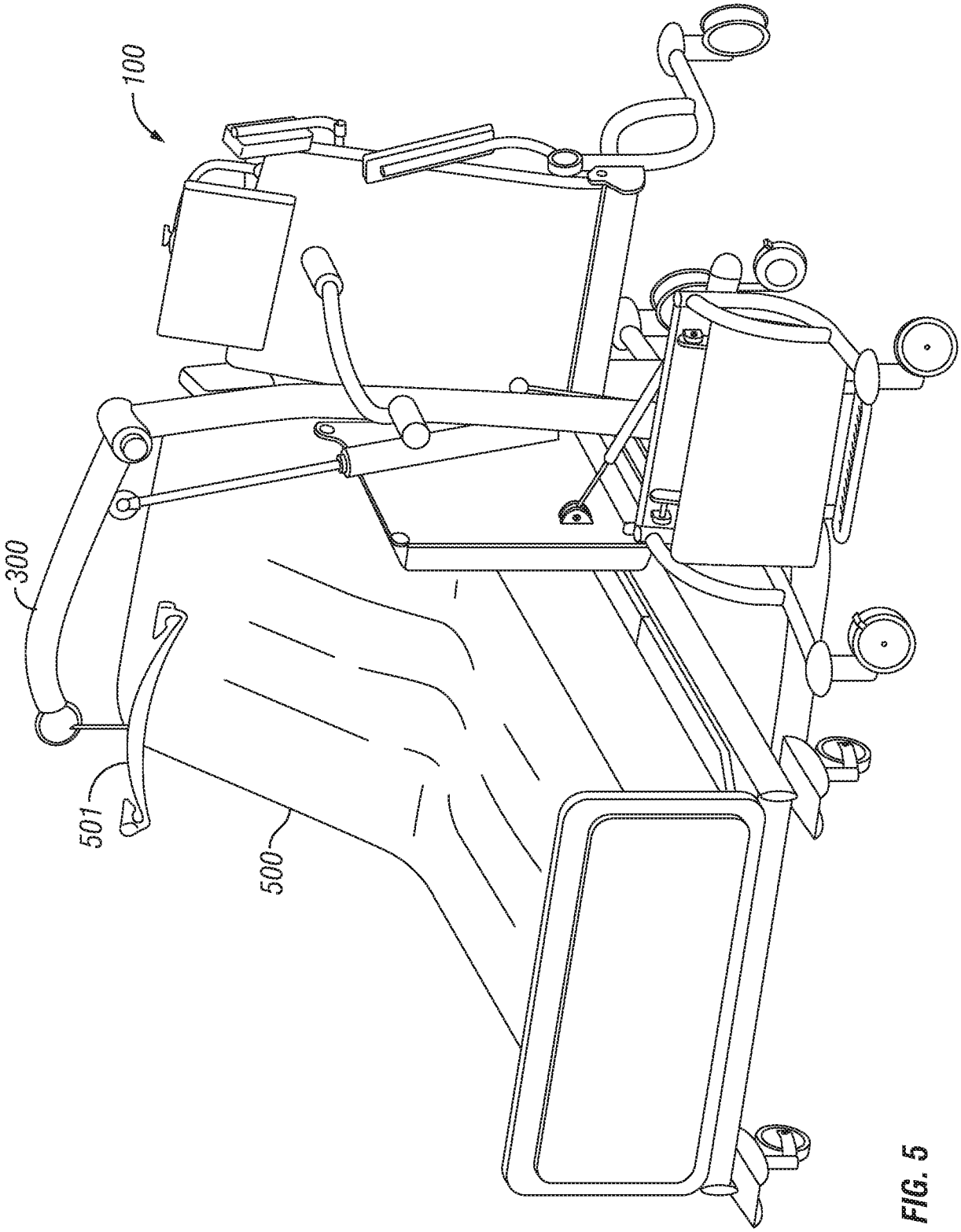

FIG. 5

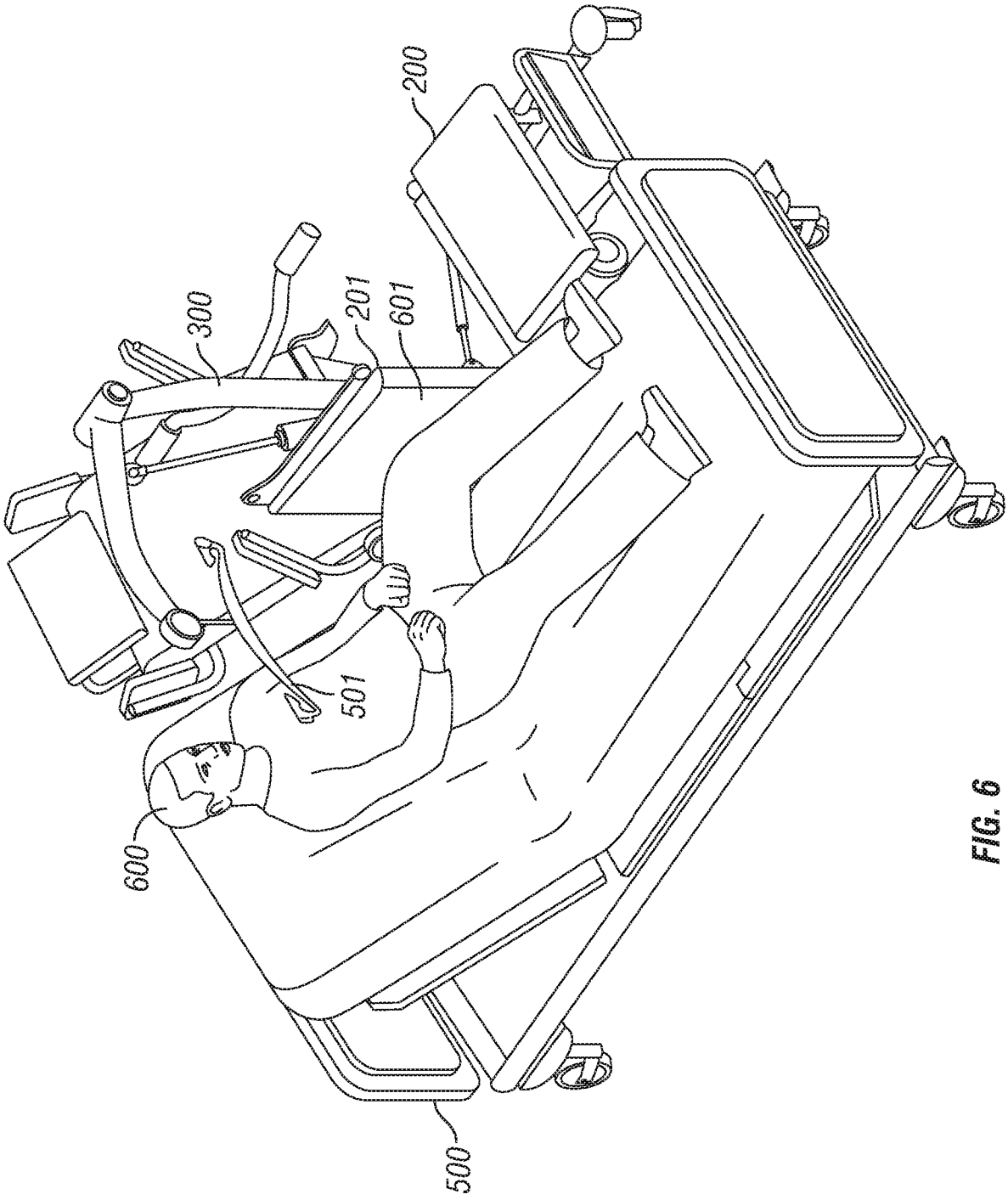

FIG. 6

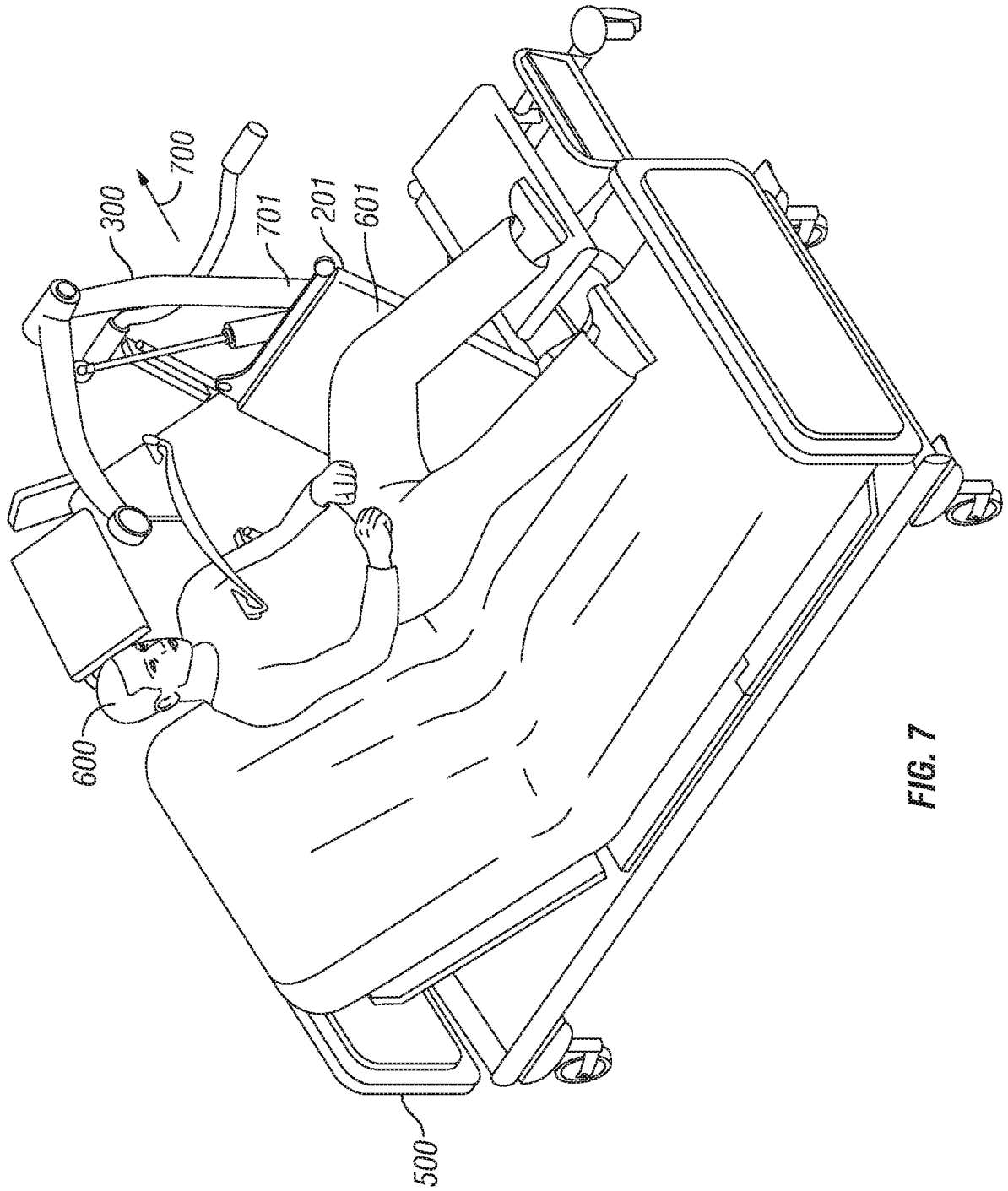

FIG. 7

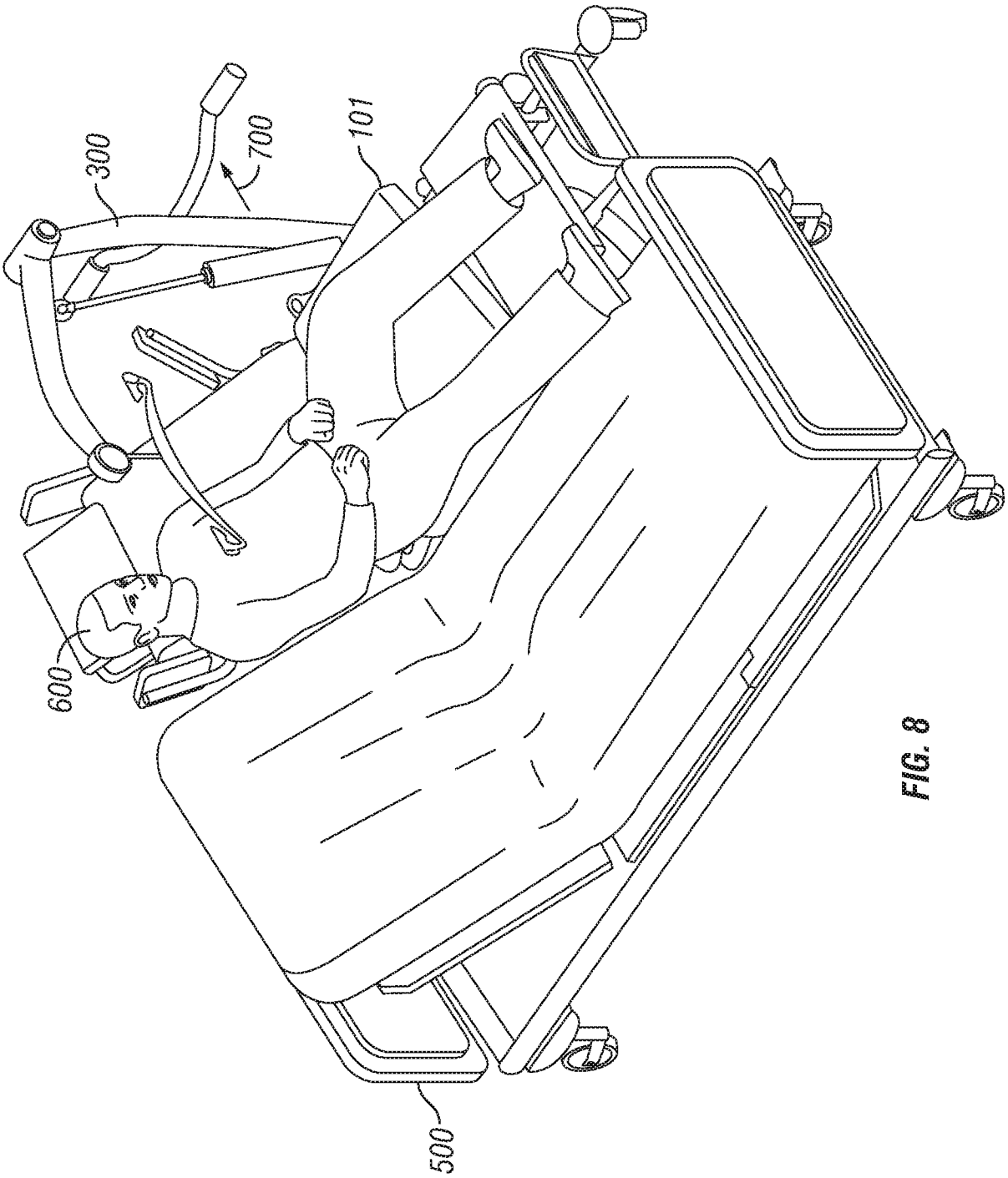

FIG. 8

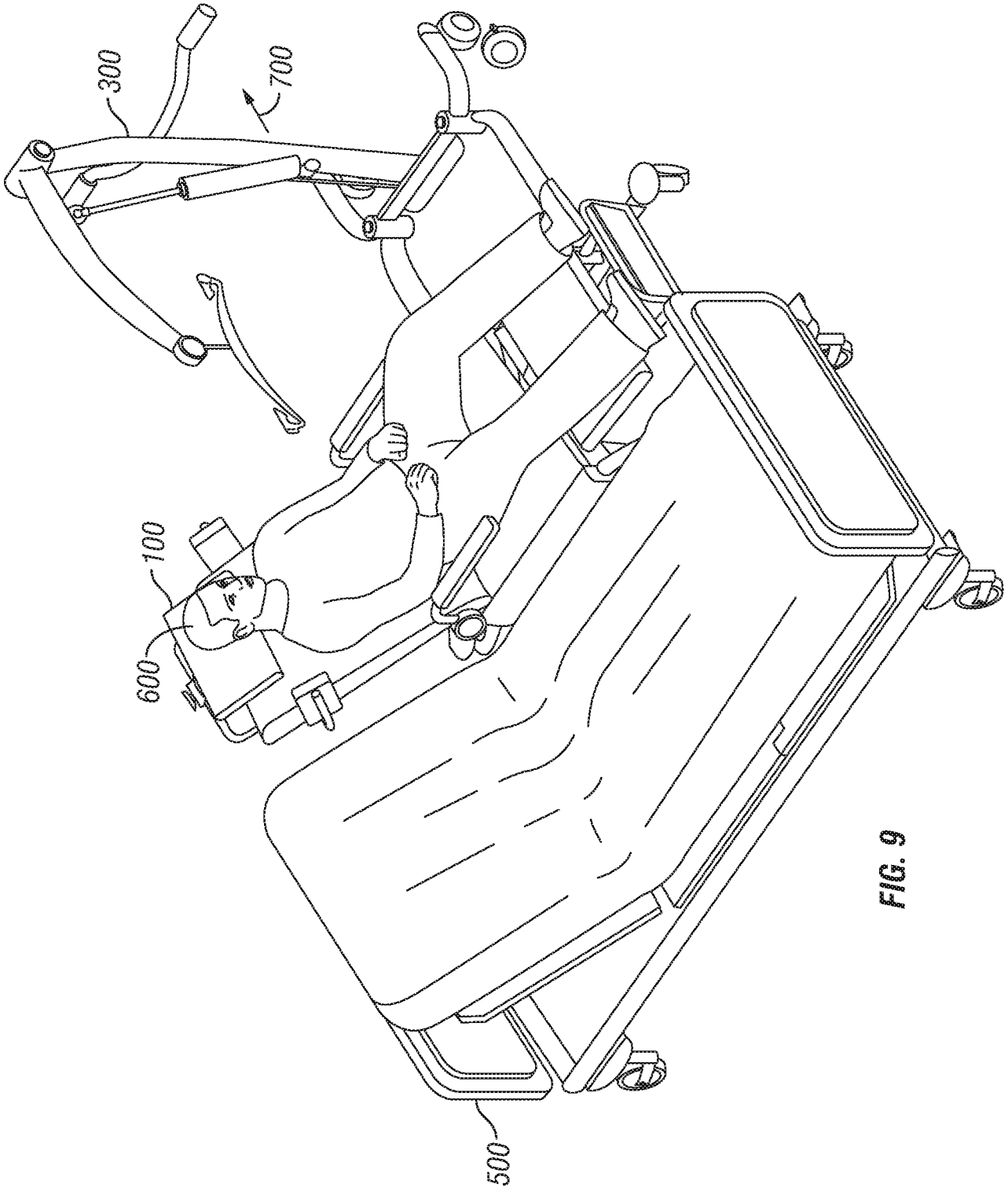

FIG. 9

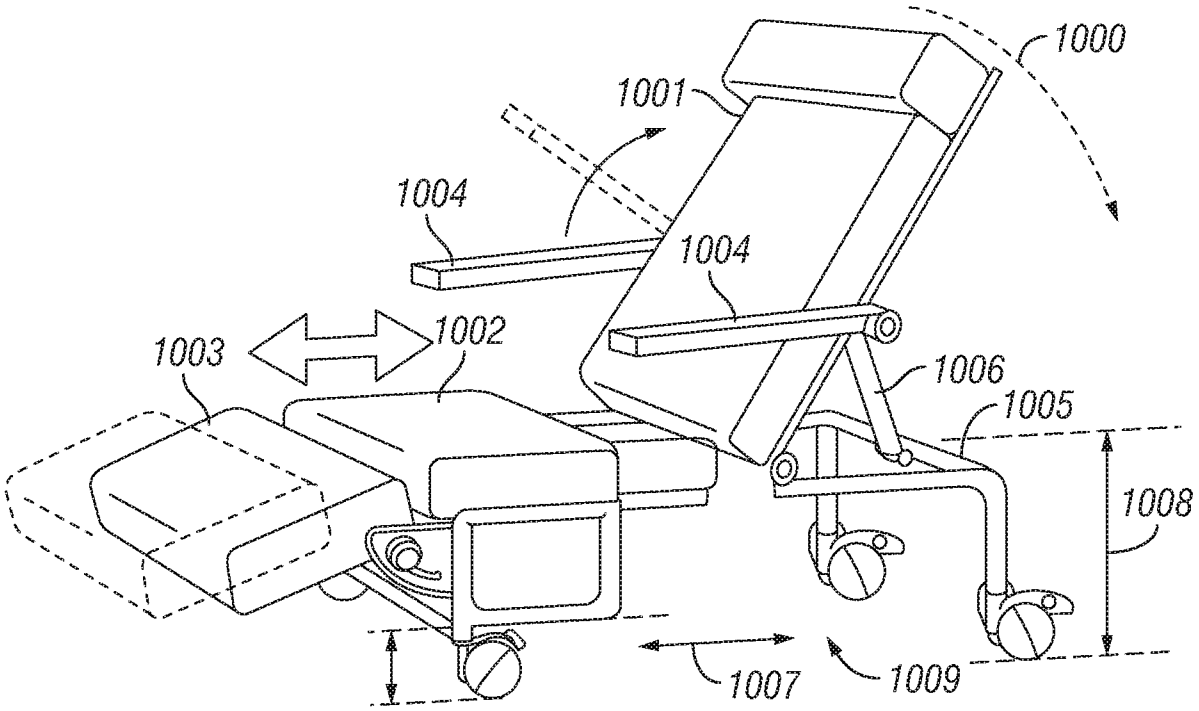
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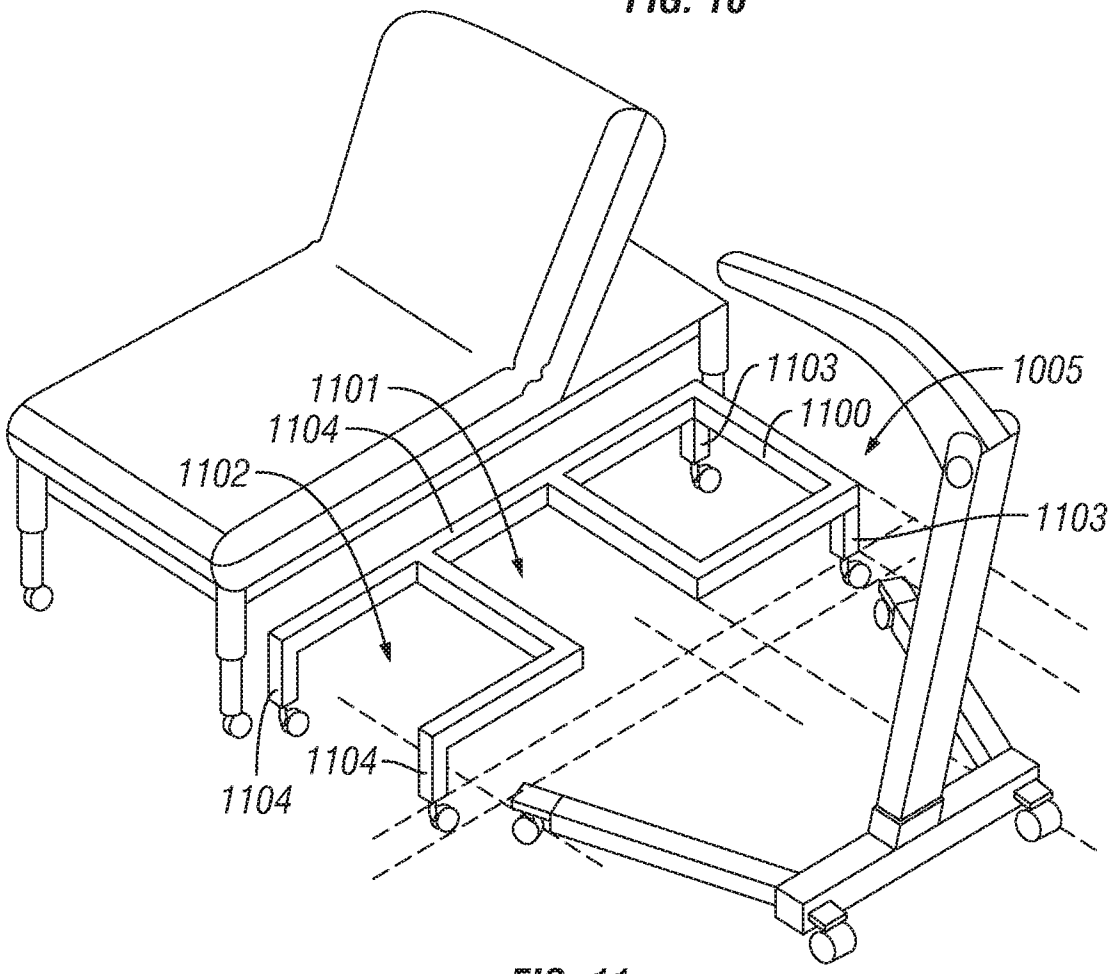
FIG. 10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1102
1103
1100
1005
1103
1104
1104

FIG. 11

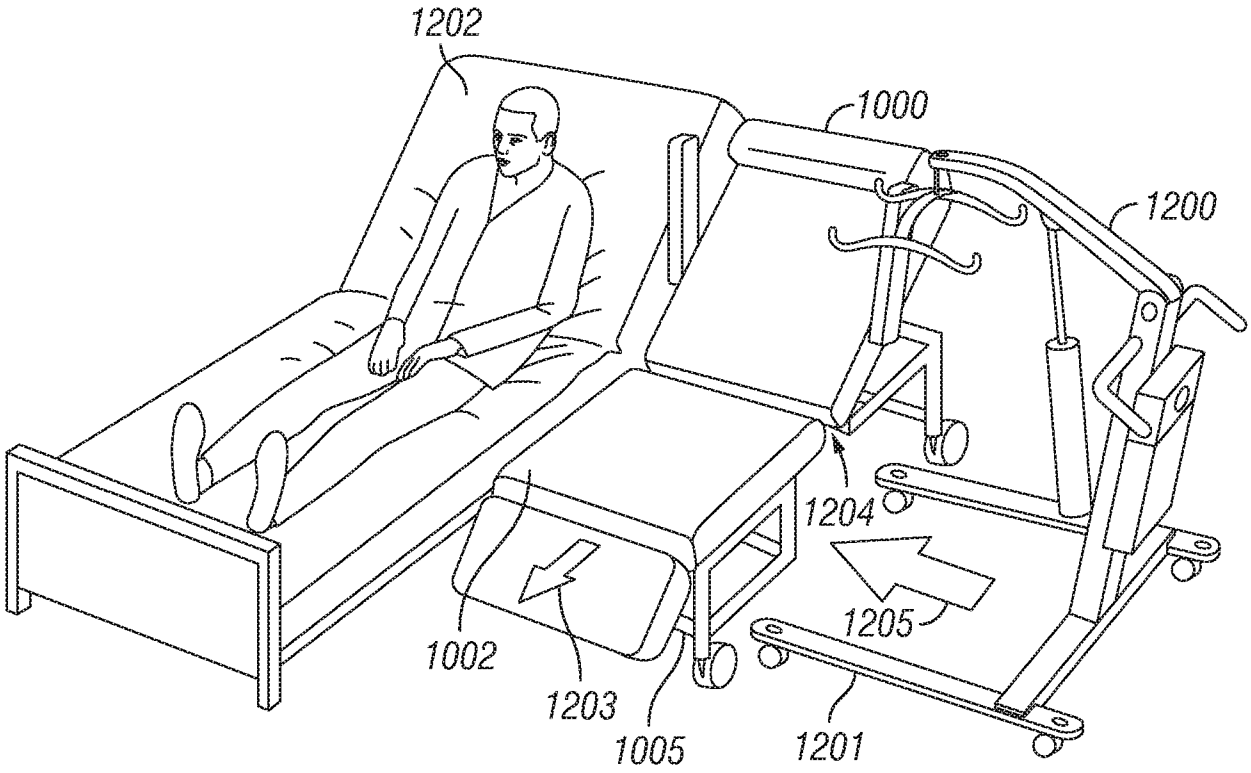
1202
1000
1200
1204
1205
1002
1203
1005
1201

FIG. 12

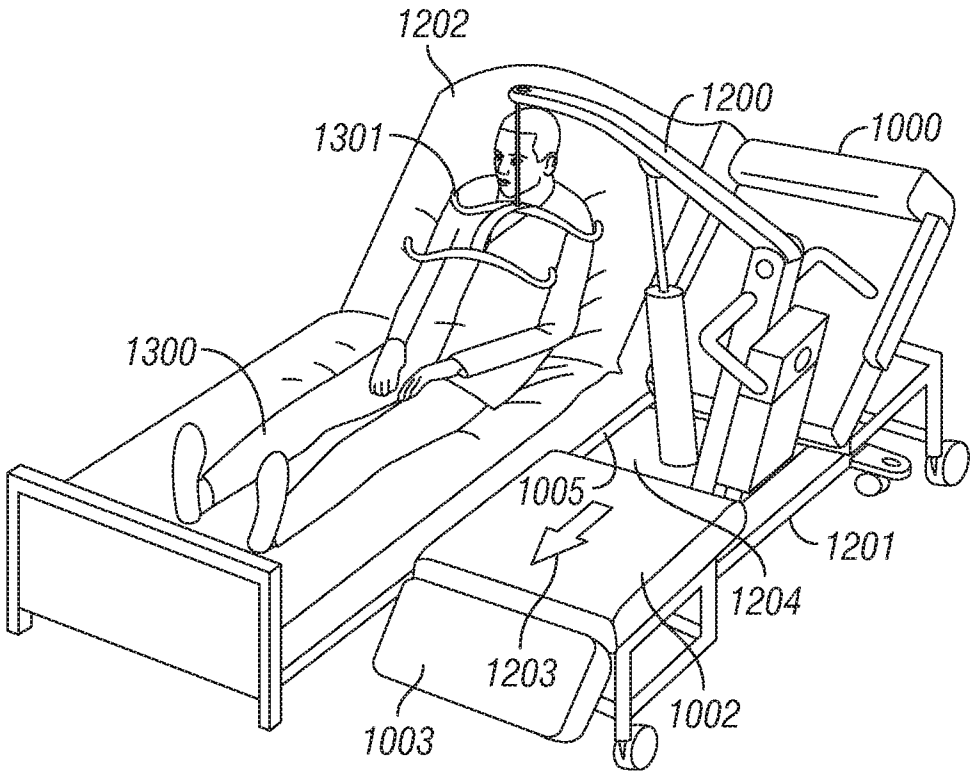
1202
1200
1000
1301
1300
1005
1201
1204
1203
1002
1003

FIG. 13

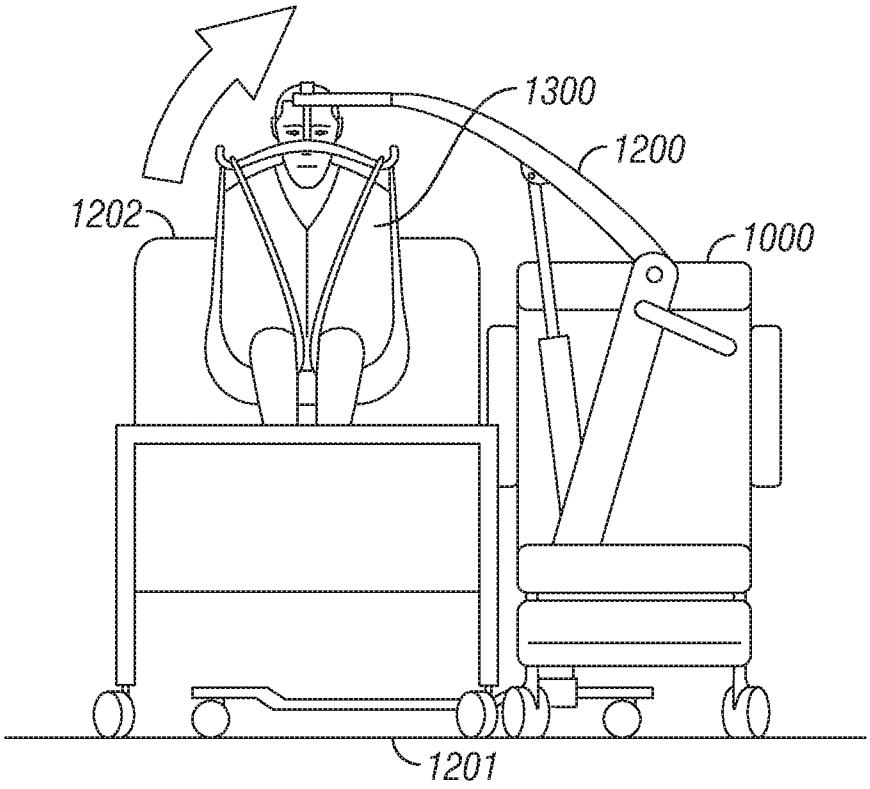
1300
1200
1202
1000
1201

FIG. 14

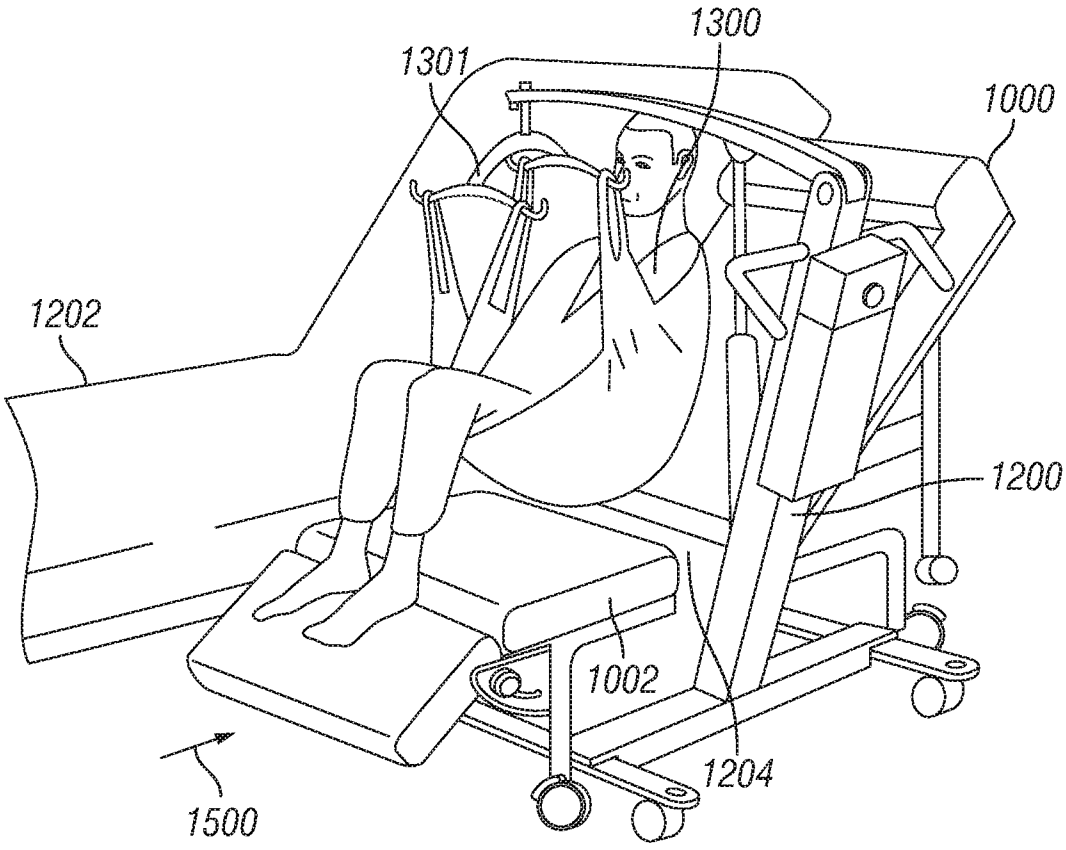
1300
1301
1000
1202
1200
1002
1204
1500

FIG. 15

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/071414

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61G5/00
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A61G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal , WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 866 495 A (DIEHL JAMES L ET AL) 30 December 1958 (1958-12-30) column 2, line 24 - line 58 column 4, line 48 - line 66 figures 3, 4 -----	1-19, 21-25
X	US 5 884 929 A (KINCAID DAVID W [US]) 23 March 1999 (1999-03-23) column 3, line 61 - column 4, line 9 column 4, line 62 - line 64 column 5, line 8 - line 14 column 5, line 33 - line 36 column 5, line 65 - column 6, line 24 column 5, line 54 - line 57 column 7, line 26 - line 27 figures 1-5 ----- -/- .	26-40, 42-49

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
4 March 2013	13/03/2013

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Somrner, Jean

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/071414

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 196 32 681 A1 (MUELLER STEFAN [DE]) 13 March 1997 (1997-03-13) column 3, line 60 - column 4, line 55 column 5, line 13 - line 16 column 6, line 15 - line 33 figures 1, 2, 4-6, 14	50, 52-103
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X	US 2011/084528 A1 (GIERSE KLAUS [DE]) 14 April 2011 (2011-04-14) paragraphs [0050], [0051], [0053], [0058] figure 3	26-28, 41,44, 48,50, 53,69, 73,75, 77,80, 82,98, 102

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2012/071414

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