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Price et al.

(54) TURN-ASSIST WITH ACCESS AREAS

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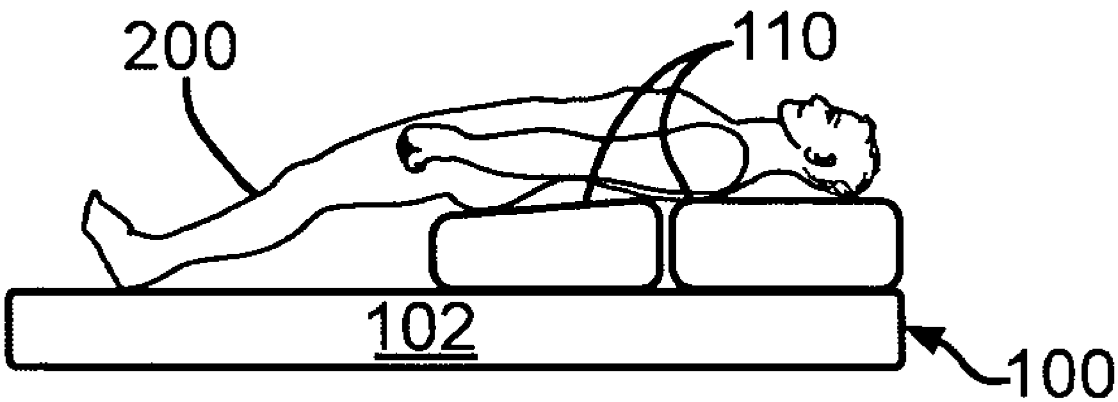
(52) **U.S. Cl.** **5/710**; 128/845; 5/655.3

(57) **ABSTRACT**

The present invention is directed to controlling the inflation and deflation either collectively or individually of individual rotational (turn-assist) bladders to allow a patient caregiver to obtain easy access to the patient's body that is positioned toward the rotational (turn-assist) bladders.



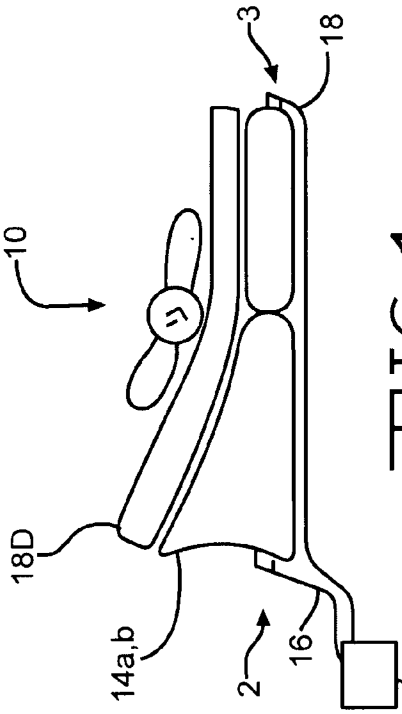


FIG. 1 (Prior Art)

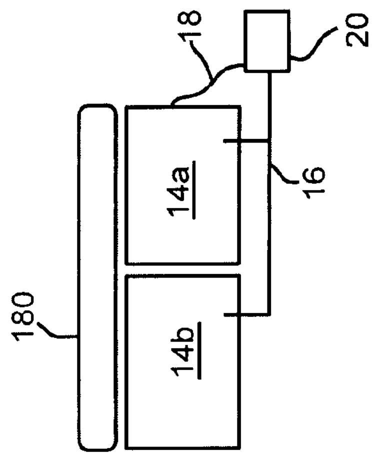


FIG. 2 (Prior Art)

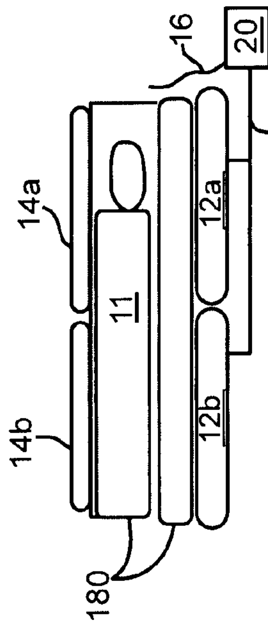


FIG. 3 (Prior Art)

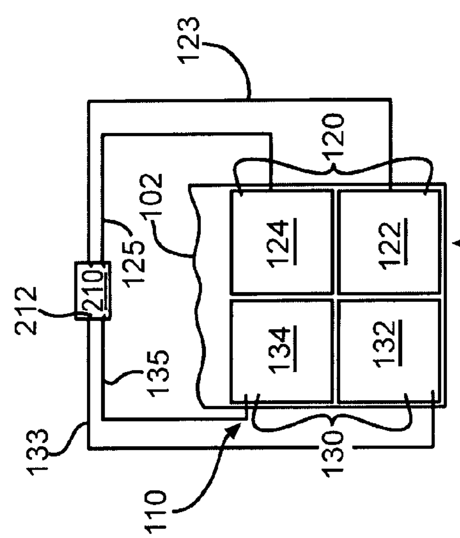


FIG. 4

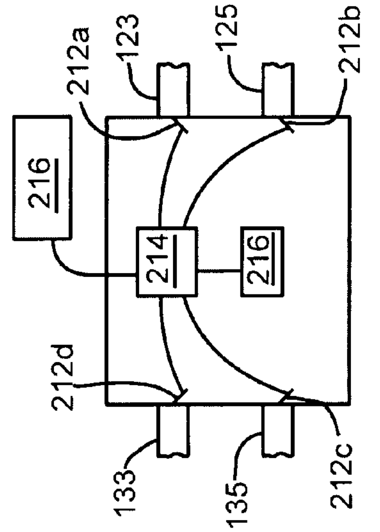


FIG. 8

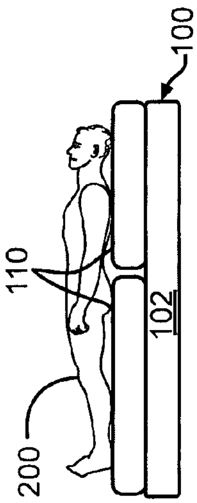


FIG. 5

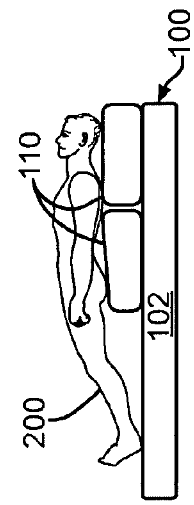


FIG. 6

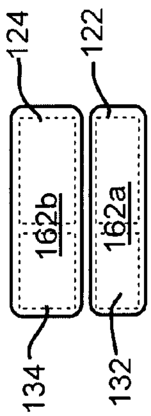


FIG. 7

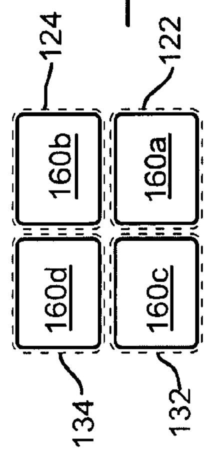


FIG. 13

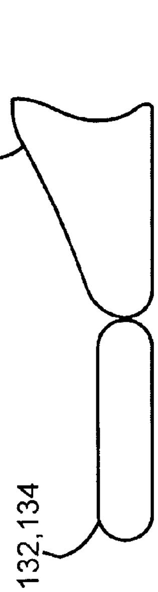


FIG. 9a

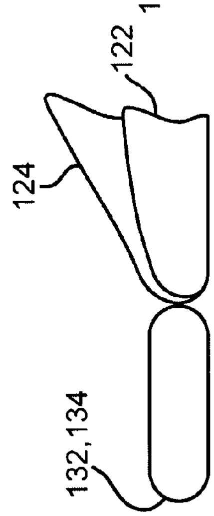


FIG. 9b

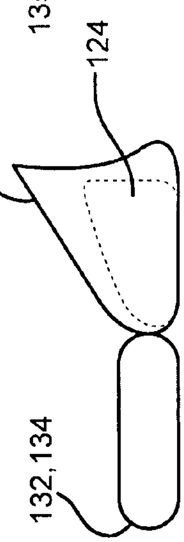


FIG. 9c

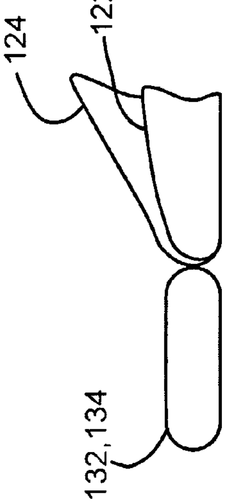


FIG. 10

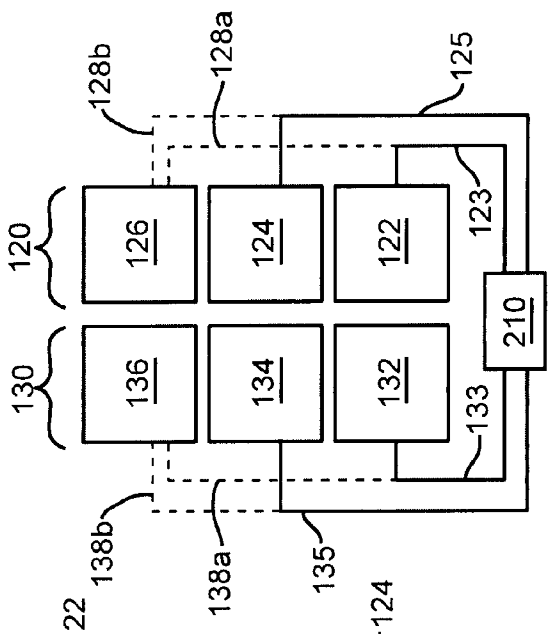


FIG. 11

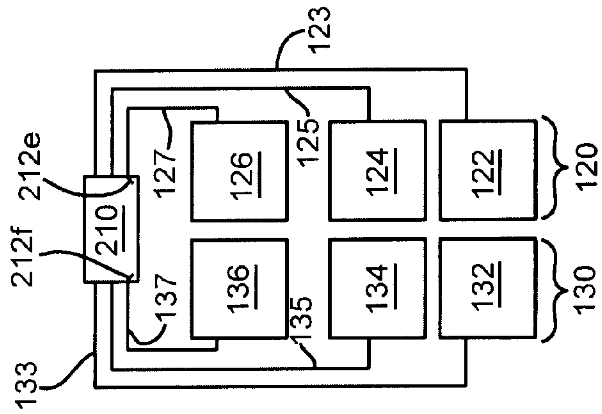


FIG. 12

TURN-ASSIST WITH ACCESS AREAS

CLAIM OF PRIORITY

[0001] This application claims priority to U.S. provisional patent application Ser. No. 60/838,453, filed on Aug. 17, 2006.

FIELD OF THE INVENTION

[0002] The present invention is directed to a mattress configuration that allows a patient to be turned.

BACKGROUND OF THE INVENTION

[0003] Inflatable therapeutic supports for patients have been well known for many years. Such therapeutic supports include inflatable mattresses and cushions.

[0004] Most therapeutic supports are designed to reduce "interface pressures." Interface pressures are the pressures encountered between the therapeutic support and the skin of a patient positioned on the therapeutic support. It is well known that interface pressures can significantly affect the well-being of immobile patients in that higher interface pressures can (a) reduce local blood circulation, (b) cause bed sores and (c) cause other medical complications. With inflatable mattresses, such interface pressures depend (in part) on the air pressure within the inflatable bladders.

Bladders

[0005] Every inflatable therapeutic support has at least one bladder. That bladder has a top surface capable of receiving an object, a bottom surface that is opposite the top surface, and at least one side surface positioned between the top and bottom surfaces. These various surfaces define a bladder cavity that receives a fluid. The bladder material can be a fluid impermeable material, fluid permeable material or combinations thereof depending on the desired application. For example, the bladder material can be a polymeric material, for example, vinyl, polyethylene, polyurethane or combinations thereof. The bladder can be made from a single piece of material or a plurality of materials to obtain the desired results.

[0006] In addition, the bladder cavity receives the fluid, normally air or an aqueous solution, through an inlet from a fluid source. The fluid travels from the fluid source through a conduit(s) and a control unit.

[0007] The control unit, for example, has a plurality of input keys interconnected to at least a microprocessor. The patient or patient's caregiver controls the therapeutic support through the input keys. The term input keys means a keyboard system, switches, software chips, levers, dials or any other conventional device that is used as an input device by the patient or patient's caregiver to control the operation of the therapeutic support.

[0008] In the microprocessor embodiment, the microprocessor receives the desired instructions from the input keys. From those instructions, the microprocessor processes those instructions to transmit the desired signals to operate a pump, an air compressor, a fan, valves and/or switches that push, pull and/or allows (by potential energy contained in the bladder(s)) a fluid into, through or to pass into a first conduit(s) to the respective bladder(s). Prior to entering the conduits, the fluid is contained within a reservoir and/or ambient environment; a.k.a., fluid source.

[0009] From this fundamental understanding of inflatable bladders, the variations of bladders are evident. For example, some bladders (1) have the inlet removed after the fluid is inserted into the bladder cavity so the bladder is a self-contained, static bladder and (2) retain the inlet so the bladder is a dynamic bladder that can receive and/or release fluid from the bladder cavity. The present invention is directed to controlling a dynamic bladder. Accordingly we will discuss these bladders in greater detail.

[0010] In the dynamic bladder embodiment, the fluid exits the bladder through at least one outlet. In one version, the fluid exits the outlet (a.k.a., the inlet) through the first conduit to return to the fluid source. In other versions the fluid exits the outlet (not the inlet) through a second conduit to a receiving unit, distinct from the fluid source, or the fluid source. Another version has the surface of the bladder having a plurality of apertures designed to release a portion of the fluid toward the object positioned above the inflatable bladder (a.k.a., low-loss bladder). Other outlet versions have combinations of the above-identified outlet versions.

[0011] There may be alternative embodiments to these generic descriptions of dynamic bladders and control units. The bladders may have alterations to (1) generate desired fluid flow patterns within the bladder, (2) obtain desired bladder firmness and (3) allow the bladder adaptability for the therapeutic support system. To obtain such results and others like it, the bladders could have predetermined button welds, welds, and slits along welds. Welds are locations where the bladder's top surface is connected to the bladder's bottom surface.

Standard Bladder Therapeutic Support

[0012] One such embodiment of a therapeutic support having multiple bladders is disclosed by Hand et al. in expired U.S. Pat. No. 5,606,754. Hand et al. disclose "a . . . patient support system [having] a rigid support frame [and] a plurality of inflatable [bladders] supported upon the support frame with each [bladder] having an upper surface so that the plurality of [bladders form] a patient support surface. The inflatable [bladders] are pressurized and maintained at a predetermined pressure. This predetermined pressure may be a patient height and weight specific pressure profile." It is known that the bladders can be positioned horizontally (a.k.a., perpendicular to a patient properly positioned on the therapeutic support) and/or vertically (a.k.a., parallel to a patient properly positioned on the therapeutic support) in relation to the support frame. This therapeutic support embodiment is known as a standard bladder therapeutic support.

[0013] Wave Therapy

[0014] When the bladders on a standard bladder therapeutic support are positioned horizontally, the bladders can be divided into two sets and each set alternates with the other set (1-2-1-2) to provide wave therapy. Wave therapy is accomplished when (a) the first set of bladders receives fluid and, at the same time, the second set of bladders releases fluid; and then (b) the second set of bladders receives fluid and, at the same time, the first set of bladders releases fluid. That process causes a wave sensation under the patient. The wave therapy can occur with additional sets of bladders, for example "1-2-3-4-1-2-3-4", "1-3-2-1-3-2" and variations thereof.

[0015] The wave therapy, in one embodiment, is accomplished by having (a) the first set of bladders interconnect to the control unit through a primary first conduit system; and (b) the second set of bladders interconnect to the control unit through a secondary first conduit system. To obtain the desired wave therapy, the control unit positions a valve that transmits fluid to either the primary first conduit system or the secondary first conduit system in predetermined time frames to obtain the wave motion. The control unit can also alter the valve so the primary first conduit system and the secondary first conduit system receive fluid simultaneously if no wave therapy is desired.

Turn-Assist Bladder Therapeutic Support

[0016] Another therapeutic support embodiment is a turn-assist bladder therapeutic support or, in other words, an obvious variation of a rotating bladder therapeutic support. The rotating embodiment is a known therapeutic support used to decrease sores on immobile patients. An example of a rotating (turn-assist) therapeutic support is disclosed in U.S. Pat. No. 5,794,289 which is commonly assigned and is hereby incorporated by reference.

[0017] In U.S. Pat. No. 5,794,289, Gaymar describes a rotating therapeutic support **10** having upper and lower right side rotating bladder(s) **12***a,b* and upper and lower left side rotating bladder(s) **14***a,b* positioned below a bladder **180**. The rotating bladders rotate a patient by controlling the air pressure in the right set of rotating bladders and the left set of rotating bladders. The each set of rotating bladders are inflated and deflated simultaneously. This is accomplished by having the bladders **12***a,b* interconnected to the control unit **20** through a first conduit **16** and the bladders **14***a.b* interconnected to the control unit **20** through a second conduit **18** as illustrated in FIGS. **1**, **2**, and **3**.

[0018] To rotate a patient **11** to its right side requires decreasing the air pressure in the right set of rotating bladder(s) **12***a,b* while increasing the air pressure in the left side rotating bladder **14***a,b* so the left side is higher than the right side as illustrated in FIGS. **1**, **2** and **3**.

[0019] To rotate the patient to the patient's left side requires decreasing the air pressure in the left side rotating bladder(s) **14***a,b* and increasing the air pressure in the right side rotating bladder **12***a,b*, so it is opposite of what is illustrated in FIGS. **1**, **2** and **3**.

[0020] The air pressure required to rotate the patient depends on the patient's weight, body type and various other parameters. The quantity of air pressure that rotates one patient, e.g., 30 degrees, may rotate another patient, e.g., 5 degrees. For example, two female patients weigh 130 pounds, one patient is pear-shaped and the other is apple-shaped. The pear-shaped patient rotates 15 degrees with 10 mm Hg while an apple-shaped patient rotates 7 degrees with 10 mm Hg. Obviously each patient is unique and different and the control unit has to be controlled to provide the desired rotation for each patient.

[0021] As clearly set forth in Hill-Rom's U.S. patent application publication number 2006/0168736, turn-assist bladders and rotational bladders are essentially synonymous—"a turn-assist cushion or turning bladder or rotational bladder **74** . . . " If there is a difference between a turn-assist bladder and a rotation bladder, the difference is in the software used in the control unit. In the rotation bladder embodiment, the control unit (1) has the bladders in a set position—planar which can be completely deflated or just partially inflated, (2) rotates the patient, through the bladders, in a first direction by inflating one set of rotating bladders (for example the right set), (3) reverts the bladders to the set position, (4) rotates the patient, through the bladders, in a second direction by inflating the other set of rotating bladders (for example the left set) and (5) reverts to the set position. The turn-assist bladder embodiment, in contrast, eliminates the third step. Accordingly, it seems relatively obvious that the technology for the turn-assist embodiment is an obvious variation of the rotation bladder embodiment by merely altering, the software used in the control unit so the bladders are rotated from a first direction to a second direction without the intermediate step of reverting to a set position.

[0022] In the prior art, the upper section and the lower section for each set of rotational (or turn-assist) bladders are inflated at the same time to obtain the desired rotation. Moreover, the rotational (or turn-assist) bladders are positioned below other bladders or other cushion materials. See FIG. **11** (rotational bladders **184**, **188** are under cushion **180**) in U.S. Pat. No. 5,794,289; FIGS. **17** to **19** (rotational bladders **145**, **146**, **147**, **148** are under cushion **182**) in U.S. Pat. No. 6,584,628; FIG. **3** (rotational bladders **80** are below cushion **60**) in U.S. patent application publication number 2006/0168736; and FIG. **4** (rotational bladders **110** are positioned below cushions **33**) in U.S. Pat. No. 6,499,167. In other words, the rotating (turn-assist) bladders are positioned below another cushion which the patient is designed to be positioned upon.

[0023] Like the standard therapeutic support embodiment, the rotating therapeutic support embodiment can also provide wave therapy. In most embodiments, the wave therapy on a rotating therapeutic support embodiment occurs when (1) the rotating bladders are in the set position—generally planar—and (2) the wave therapy bladders are positioned above the rotating bladders. The wave therapy bladders are not the same as the rotating (turn-assist) bladders. Rotating (turn-assist) bladders do not perform wave therapy. One reason wave therapy is not performed by the rotating bladders is because the rotating bladders are positioned below another bladder, which may be undesirable.

[0024] A problem with the prior art therapeutic supports is that it is difficult to access the portion of the patient's body that contacts the inflated bladder(s). The present invention solves that problem.

SUMMARY OF THE INVENTION

[0025] The present invention is directed to controlling the inflation and deflation of individual rotational (turn-assist) bladders to allow a patient caregiver to obtain easy access to the patient's body that is positioned toward the rotational (turn-assist) bladders.

BRIEF DESCRIPTION OF THE FIGURES

[0026] FIG. **1** illustrates a patient positioned over rotating bladders of a therapeutic support from a head end of the rotating bladders—Prior Art.

[0027] FIG. **2** illustrates FIG. **1** from arrow **2**—Prior Art.

[0028] FIG. **3** illustrates FIG. **1** from arrow **3**—Prior Art.

[0029] FIG. **4** illustrates a top view of rotational (turn-assist) bladders (a) on a support surface and (b) interconnected to a control unit.

[0030] FIG. **5** illustrates a side view of rotational (turn-assist) bladders on a support surface.

[0031] FIG. **6** illustrates an alternative embodiment of FIG. **5**.

[0032] FIG. **7** illustrates an alternative embodiment of FIG. **4** with additional cushions positioned over opposing left-right rotational (turn-assist) bladders.

[0033] FIG. **8** illustrates a schematic of the control unit.

[0034] FIG. **9***a* illustrates a side view of FIG. **4** taken from arrow **4** when the right rotational (turn-assist) bladders are being inflated simultaneously.

[0035] FIG. **9***b* illustrates an embodiment of FIG. **9***a* when the second right rotational (turn-assist) bladder remains inflated and the first right rotational (turn-assist) bladder deflates to expose a first portion of the patient that normally contacts the right rotational (turn-assist) bladder so a patient's assistant can care and treat the patient at the first portion without excessively disturbing the patient.

[0036] FIG. **9***c* illustrates an embodiment of FIG. **9***a* when the first right rotational (turn-assist) bladder is inflated and the second right rotational (turn-assist) bladder deflates to expose a second portion of the patient that normally contacts the right rotational (turn-assist) bladder so a patient's assistant can care and treat the patient at the second portion without excessively disturbing the patient.

[0037] FIG. **10** illustrates an alternative embodiment to accomplish FIGS. **9***a* and **9***b*.

[0038] FIG. **11** illustrates an alternative embodiment of FIG. **4**.

[0039] FIG. **12** illustrates an alternative embodiment of FIG. **4**.

[0040] FIG. **13** illustrates an alternative embodiment of FIG. **7**.

DETAILED DESCRIPTION OF THE PRESENT INVENTION

[0041] The present invention is directed to a variation of present rotational (turn-assist) support. The rotational (turn-assist) support **100** is similar to the prior art rotational (turn-assist) support surface **100**. One of the similarities is that the rotational (turn-assist) bladder system **110** is positioned on a support surface **102**. The support surface **102** can be a part of a mattress, a gelastic surface, a foam surface, a bladder surface, a solid surface or any other location that provides support to a patient. The variations are in the rotational (turn-assist) bladder system **110** and the control unit **210**. The rotational (turn-assist) bladder system **110** can extend the entire length of the support surface **100** as illustrated in FIG. **5** or just partially as illustrated in FIG. **6**.

[0042] As illustrated in FIG. **4**, the rotational (turn-assist) bladder system **110** has a right side bladder unit **120** and a left side bladder unit **130**. The right side bladder unit **120** is subdivided into at least a first right section **122** and a second right section **124**. Likewise, the left side bladder unit **130** is subdivided into at least a first left section **132** and a second left section **134**.

[0043] Unlike the prior art, the rotational (turn-assist) bladder system **110** can be positioned immediately below a patient **200**, as illustrated at FIGS. **5** and **6**, without any intervening cushion that interferes with the operation of the bladder system **110**. There is no single cushion material that overlies the entire rotational (turn-assist) bladder system **110** or an entire bladder unit **120**, **130** because that would violate the fundamental basis of the present invention. Instead there can be (a) individual cushions **160***a, b, c, d* positioned over bladders sections **122**, **124**, **132**, **134** as illustrated in FIG. **13** or (b) cushions **162***a, b* that extend across pairs of opposing left-right bladders sections, like sections **122** and **132** or sections **124** and **134** as illustrated in FIG. **7**.

[0044] There can be covers, blankets (conventional, conductive and/or convective) and/or pads (incontinence, heating, cooling, and/or positioning), not shown, positioned between the patient **200** and the rotational (turn-assist) bladder system **110**.

[0045] As illustrated in FIG. **4**, the first right side bladder unit **122** interconnects to the control unit **210** through a first right conduit **123** and the second right side bladder unit **124** interconnects to the control unit **210** through a second right conduit **125**. The control unit **210** distributes the desired amount of fluid to each right bladder unit **122**, **124**. Likewise, the first left side bladder unit **132** interconnects to the control unit **210** through a first left conduit **133** and the second left side bladder unit **134** interconnects to the control unit **210** through a second right conduit **135**. The control unit **210** distributes the desired amount of fluid to each left bladder unit **132**, **134** through the respective conduit. This embodiment is also not described, suggested or taught in the prior art because the prior art discloses that the bladder units **122**, **124** or **132**, **134** are to inflate simultaneously through the same conduits, not different conduits.

[0046] The principle of how the control unit **210**, as illustrated schematically at FIG. **8** distributes fluid to different conduits and not to other conduits, or all of them is similar to the prior art. Instead, there are just more valves **212***a,b,c,d* interconnected to a microprocessor **214** that correspond to the respective conduits **123**, **125**, **133**, **135** to obtain the desired operation of the present invention.

[0047] Recall that the control unit **210**, for example, has a plurality of input keys **216** interconnected to at least the microprocessor **214**. That microprocessor **214** interconnects to pumps, fans, valves and/or switches (collectively box **216**) that push, pull and/or allows (by potential energy contained in the bladder(s)) a fluid into, through or pass into the conduit(s) **123**, **125**, **133**, **135** to the respective bladder(s) **122**, **124**, **132**, **134**. Prior to entering the conduits, the fluid is contained within a reservoir and/or ambient environment; a.k.a., fluid source. The fluid source can be within the control unit **210** or exterior to the control unit **210**. Likewise the input keys **216** can be a part of the control unit **210**, tethered to the control unit **210** or remotely interconnected to the control unit **210**.

[0048] The control unit **210** can be positioned within the support system **100** or exterior to it. It depends on how the product is to be designed.

Operation of the Product:

[0049] For this example, we will assume the patient will be initially turned to the left side. Obviously, the patient can be turned to the right side first, as well. It merely depends on (1) which side the patient wants to be positioned on first and/or (2) how the patient's assistant (including and not limited to a nurse, a nurse practitioner, a nurse's aide, an aide, a friend, and/or a family member), who can control the support surface, wants the patient to be positioned first.

[0050] The first right section **122** and the second right section **124** are inflated at the same time (same as the prior art) as illustrated in FIG. **9***a* or at different rates or times, as illustrated in FIG. **10**, to obtain the desired angle. The sections **122** and **124** can be inflated at different times and/or rates because (1) each section **122**, **124** is interconnected to the control unit **210** through different conduits and (2) the patient's assistant (or the manufacturer) can program the control unit through the microprocessor and/or input keys to open the valves to conduits **213**, **215** at different times or with different apertures to control the inflation rate.

[0051] In a first embodiment, once the patient is properly rotated (turned) to the desired angle with both sections **122**, **124** (as illustrated in FIG. **9***a*) inflated for rotation (turning) purposes, the patient's assistant can begin to deflate one of the inflated and rotated (turned) sections **122**, **124**. For purposes of this example as illustrated in FIG. **9***b*, the section **122** is initially deflated. Why begin to deflate just one of the inflated and rotated sections? That way, the patient's assistant exposes a predetermined area (examples include and are not limited to the right side of the sacral region, the thoracic region, the lumbar region, the cervical region, the abdominal area, and/or the chest area) of the patient that normally contacts the section **122**. Deflating the section **124** greatly enhances the patient's assistant ability to wash, treat, inspect the initial predetermined area of the patient, without the using props (pillows typically) or additional patient's assistants to hold the patient in position. This invention comforts the patient.

[0052] Once the patient's assistant is completed caring and treating the initial predetermined area, the section **122** is inflated to the desired level and the section **124** can be deflated to expose a second predetermined area of the patient as illustrated in FIG. **9***c*. Deflating the section **124** greatly enhances the patient's assistant ability to wash, treat, inspect the second predetermined area of the patient, without the using props (pillows typically) or additional patient's assistants to hold the patient in position.

[0053] Alternatively, when the section **122** is being inflated the section **124** can be simultaneously deflated to expedite the transition process.

[0054] It does not matter which section **122**, **124** is deflated first or second in this first embodiment, so long as the patient's assistant has the opportunity to expose a predetermined area to care and treat the patient while the patient remains in the rotated position.

[0055] A second embodiment occurs when the sections **122**, **124** are being inflated at different times or different rates as illustrated in FIG. **10**. The section that is being inflated at the slower rate or at a later time (hereinafter "slow section") inherently exposes a first predetermined area to the patient's assistant as shown in FIGS. **9***b* and **9***c*. That way the patient's assistant can wash, treat, inspect the predetermined area of the patient, without the using props (pillows typically) or additional patient's assistants to hold the patient in position. Once the slow section is fully inflated to the desired rotation (or turning) the fast section can be deflated so the patient's assistant can care and treat a different predetermined area of the patient.

[0056] Alternatively, when the slow section is being inflated the fast section can be simultaneously deflated to expedite the transition process.

[0057] A third embodiment occurs when the patient is rotated to the patient is rotated to the right side so sections **132** and **134** are inflated for rotation purposes. This third embodiment is the same as the first and second embodiments except the sections are on the opposite side of the support surface.

ALTERNATIVE EMBODIMENTS

[0058] The right bladder unit **120** can have an additional bladder section **126** and the left bladder unit **130** can have an additional bladder section **136**. The additional bladder section **126** can be inflated/deflated by an extension **128***a,b* from conduit **123** or conduit **125** as illustrated in FIG. **11**; or a new conduit **127** as illustrated in FIG. **12** that is interconnected to the control unit **210** with its own valve **212***e*. That valve **212***e* is controlled by the microprocessor like any other valve **212** in the control unit **210**.

[0059] Likewise, the additional bladder section **136** can be inflated/deflated by an extension **138***a,b* from conduit **133** or conduit **135** as illustrated in FIG. **11**; or a new conduit **137** as illustrated in FIG. **12** that is interconnected to the control unit **210** with its own valve **212***f*. That valve **212***f* is controlled by the microprocessor like any other valve **212** in the control unit **210**.

[0060] If the additional bladders **126**, **136** are interconnected to the control unit **210** as illustrated in FIG. **12** that means that the additional bladders **126**, **136** are independently controlled in the same manner in which the other bladders **122**, **124**, **132**, **134** are controlled and described above. Alternatively, if the additional bladders **126**, **136** are interconnected to the control unit **210** as illustrated in FIG. **11** that means the additional bladders **126**, **136** operate in the same way as the bladder that the additional bladders **126**, **136** are interconnected with through the conduit system.

[0061] The additional bladder section **126**, **136** can be positioned adjacent to at least one of the other rotational (turn) bladders as illustrated in FIG. **11** or a predetermined distance from the other rotational (turn) bladders as illustrated in FIG. **12**.

Horizontal/Vertically

[0062] The bladder sections **122**, **124**, **126**, **132**, **134**, **136** can be positioned horizontally and/or vertically as defined above.

OTHER ALTERNATIVE EMBODIMENTS

Self-Monitoring

[0063] Programming an air pressure mattress unit requires a skilled technician. The skilled technician analyzes each patient and alters the programming to attain the desired rotation and air pressure. One means to avoid the expensive technician's analysis and re-programming is to create a self-monitoring mattress.

[0064] Previous self-monitoring air pressure mattresses have utilized electrical signal transmission devices and electrical signal receiving devices that sandwich the top and bottom of each bladder to monitor the bladder size. The bladder size corresponds to the desired rotation and air pressure. Such signal devices are disclosed in commonly assigned U.S. Pat. Nos. 5,794,289 and 5,926,883; which are hereby incorporated by reference. Those signal devices generate signals, like rf or light signals, that determine the proper level of inflation in the rotating (turning) bladders.

Conduits

[0065] The conduits can be conventional tubing used in the therapeutic industry. The conduits can have additional valves like a one-way passage valve.

[0066] It is intended that the above description of the preferred embodiments of the structure of the present invention and the description of its operation are but one or two enabling best mode embodiments for implementing the invention. Other modifications and variations are likely to be conceived of by those skilled in the art upon a reading of the preferred embodiments and a consideration of the appended claims and drawings. These modifications and variations still fall within the breadth and scope of the disclosure of the present invention.

We claim:

1. A therapeutic support comprising

a rotational (turn-assist) bladder system and a control unit;

the rotational (turn-assist) bladder system has a right side bladder component and a left side bladder component;

the right side bladder component has a first right section and a second right section and the left side bladder component has a first left section and a second left section;

the first right section interconnects to the control unit through a first right conduit and the second right section interconnects to the control unit through a second right conduit;

the first left section interconnects to the control unit through a first left conduit and the second left section interconnects to the control unit through a second left conduit;

the control unit pushes, pulls and/or allows a fluid into, through or pass into (a) the first left conduit to the first left section, (b) the second left conduit to the second left section, (c) the first right conduit to the first right section and/or (d) the second right conduit to the second right section;

the control unit has (a) a first left valve that controls (i) when the fluid enters the first left conduit, (ii) the amount of fluid that enters the first left conduit and (iii) the rate the fluid enter the first left conduit, (b) a second left valve that controls (i) when the fluid enters the second left conduit, (ii) the amount of fluid that enters the second left conduit and (iii) the rate the fluid enter the second left conduit, (c) a first right valve that controls (i) when the fluid enters the first right conduit, (ii) the amount of fluid that enters the first right conduit and (iii) the rate the fluid enter the first right conduit; and (d) a second right valve that controls (i) when the fluid enters the second right conduit, (ii) the amount of fluid that enters the second right conduit and (iii) the rate the fluid enter the second right conduit;

wherein the first right section and the second right section can be (a) inflated at (i) the same pressure level or different pressure levels, (ii) the same inflation rate or different inflation rates and/or (iii) the same time or different times; and/or (b) deflated at (i) the same time or different times, (ii) the same inflation rate or different inflation rates and/or (iii) the same pressure level or different pressure levels to allow a patient assistant to have access to and to provide care and/or treatment to a particular patient's body part that is positioned over the first right section or the second right section when the first right section or the second right section are inflated to rotate (turn) the patient and the other right section is (a) being inflated, (b) deflated or (c) being deflated;

wherein the first left section and the second left section can be (a) inflated at (i) the same pressure level or different pressure levels, (ii) the same inflation rate or different inflation rates and/or (iii) the same time or different times; and/or (b) deflated at (i) the same time or different times, (ii) the same inflation rate or different inflation rates and/or (iii) the same pressure level or different pressure levels to allow a patient assistant to have access to and to provide care and/or treatment to a particular patient's body part that is positioned over the first left section or the second left section when the first left section or the second left section are inflated to rotate (turn) the patient and the other left section is (a) being inflated, (b) deflated or (c) being deflated.

2. The therapeutic support of claim **1** wherein the control unit has an input system that allows a patient and/or patient assistant to control the first left valve, the second left valve, the first right valve, and the second right valve.

3. The therapeutic support of claim **2** wherein the control unit has a microprocessor, and the microprocessor is interconnected between (i) the input system and (ii) the first left valve, the second left valve, the first right valve, and the second right valve.

4. The therapeutic support of claim **1** wherein the rotational (turn-assist) bladder system uses low air loss bladders.

5. The therapeutic support of claim **1** further comprising a third left section wherein the third left section is interconnected to the control unit through an extension of the first left conduit or an extension of the second left conduit.

6. The therapeutic support of claim **1** further comprising a third left section wherein the third left section is interconnected to the control unit through a third left conduit.

7. The therapeutic support of claim **1** further comprising a third right section wherein the third right section is interconnected to the control unit through an extension of the first right conduit or an extension of the second right conduit.

8. The therapeutic support of claim **1** further comprising a third right section wherein the third right section is interconnected to the control unit through a third right conduit.

9. The therapeutic support of claim **1** wherein the first right section and the second right section are horizontal in relation to the therapeutic support.

10. The therapeutic support of claim **1** wherein the first right section and the second right section are vertical in relation to the therapeutic support.

11. The therapeutic support of claim **1** wherein the first right section and the second right section extend the entire length of the therapeutic support.

12. The therapeutic support of claim **1** wherein the first right section and the second right section extend the partially along length of the therapeutic support.

13. The therapeutic support of claim **1** further comprising cushion material positioned over individual right and/or left sections; or opposing (a) first left and right sections or (b) second left and right sections.

14. The therapeutic support of claim **13** wherein the cushion material is selected from a static bladder, wave therapy bladders, gelastic material, foam, and combinations thereof.

16. The therapeutic support of claim **1** wherein the therapeutic support is a mattress.

17. The therapeutic support of claim **1** wherein the therapeutic support is a seat cushion, a back cushion, or combination thereof.

18. The therapeutic support of claim **1** wherein the control unit is within the therapeutic support.

19. The therapeutic support of claim **1** wherein the control unit is exterior to the therapeutic support.

20. A method of treating a patient comprising:

positioning a patient on a therapeutic support having

a rotational (turn-assist) bladder system and a control unit;

the rotational (turn-assist) bladder system has a right side bladder component and a left side bladder component;

the right side bladder component has a first right section and a second right section and the left side bladder component has a first left section and a second left section;

the first right section interconnects to the control unit through a first right conduit and the second right section interconnects to the control unit through a second right conduit;

the first left section interconnects to the control unit through a first left conduit and the second left section interconnects to the control unit through a second left conduit;

the control unit pushes, pulls and/or allows a fluid into, through or pass into (a) the first left conduit to the first left section, (b) the second left conduit to the second left section, (c) the first right conduit to the first right section and/or (d) the second right conduit to the second right section;

the control unit has (a) a first left valve that controls (i) when the fluid enters the first left conduit, (ii) the amount of fluid that enters the first left conduit and (iii) the rate the fluid enter the first left conduit, (b) a second left valve that controls (i) when the fluid enters the second left conduit, (ii) the amount of fluid that enters the second left conduit and (iii) the rate the fluid enter the second left conduit, (c) a first right valve that controls (i) when the fluid enters the first right conduit, (ii) the amount of fluid that enters the first right conduit and (iii) the rate the fluid enter the first right conduit; and (d) a second right valve that controls (i) when the fluid enters the second right conduit, (ii) the amount of fluid that enters the second right conduit and (iii) the rate the fluid enter the second right conduit;

wherein the first right section and the second right section can be (a) inflated at (i) the same pressure level or different pressure levels, (ii) the same inflation rate or different inflation rates and/or (iii) the same time or different times; and/or (b) deflated at (i) the same time or different times, (ii) the same inflation rate or different inflation rates and/or (iii) the same pressure level or different pressure levels to allow a patient assistant to have access to and to provide care and/or treatment to a particular patient's body part that is positioned over the first right section or the second right section when the first right section or the second right section are inflated to rotate (turn) the patient and the other right section is (a) being inflated, (b) deflated or (c) being deflated;

wherein the first left section and the second left section can be (a) inflated at (i) the same pressure level or different pressure levels, (ii) the same inflation rate or different inflation rates and/or (iii) the same time or different times; and/or (b) deflated at (i) the same time or different times, (ii) the same inflation rate or different inflation rates and/or (iii) the same pressure level or different pressure levels to allow a patient assistant to have access to and to provide care and/or treatment to a particular patient's body part that is positioned over the first left section or the second left section when the first left section or the second left section are inflated to rotate (turn) the patient and the other left section is (a) being inflated, (b) deflated or (c) being deflated;

controlling the inflation/deflation of one set of first and second sections so either the first or the second section is inflated or deflated so at least a portion of the patient that contacts the one set of first and second sections is exposed so that portion of the patient can be treated and cared for, while the other set of first and second sections is in the set position.

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