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(54) **INFLATABLE SYSTEM FOR ENABLING POSTURAL CHANGES OF PATIENTS IN A CLINICAL
BED OR THE LIKE**

AUFBLASBARES SYSTEM FÜR DIE HALTUNGSANPASSUNG VON PATIENTEN IM KLINIKBETT
ODER DERGLEICHEN

SYSTEME GONFLABLE DESTINE A FACILITER LES CHANGEMENTS DE POSTURES DE
MALADES DANS UN LIT D'HOPITAL OU ANALOGUE

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Description

PURPOSE OF THE INVENTION

[0001] The present specifications refer to a draw sheet for changing patient positions in a hospital or similar bed, specifically to a piece designed as a draw sheet which suitably facilitates patient position changes, both in terms of the patient's comfort and in ease of handling for nursing staff, preventing overstrains that might cause them back injuries or harm or injuries.

[0002] The purpose of the invention thus focuses on a draw sheet with which patients can easily be moved, in order to achieve a change in the patient's position on the bed to prevent bedsores or pressure sores due to long periods in one position on the bed, as well as to facilitate changing the bedclothes with no need to remove the patient from the bed.

FIELD OF THE INVENTION

[0003] This invention is applicable in the industry devoted to the manufacture of accessories for patient care.

BACKGROUND OF THE INVENTION

[0004] It is a well-known fact that when a patient is bedridden for long periods of time, the pressure of the body against the bed causes sores known as bedsores to be formed on those areas of the body, which are obviously undesirable.

[0005] A known method to try to eliminate this problem is the use of special mattresses to prevent bedsores, but these only apply to patients who are always in a supine position.

[0006] Hospital beds having a liquid silicone surface are also known, which have a highly sophisticated design and constitute a very complex solution for moving the patient, with the resulting expense that the incorporation of these items in establishments where patients are treated, and even in private homes, entails.

[0007] The foregoing means that, at the present time, and in the vast majority of cases, this type of patient who is bedridden for a long time is moved in a natural way, specifically through the application of physical force exerted by nursing staff, to move the patient by the shoulders and legs until he is placed in a lateral position, with a pillow being placed along his sides, if desired, to change pressure points and thus prevent the aforementioned sores.

[0008] Apart from considerable physical effort by the aforementioned nursing staff, this also means that back injuries are possible in the staff who perform these tasks, due to the positions required to carry out these efforts, especially when the patient is heavily built.

[0009] Through Patent application number US 3,775,781, a draw sheet is known that is made up of a piece subdivided into two similar areas (14) and (15),

which in collaboration with an air-propelling pump generates the action of moving the patient located on top of it, in order to put him in a lateral position according to the air blown into the parts made of flexible material that make up each of the areas (14) and (15), thus achieving a change in the position of the patient located in the central area from supine to lateral through the air that is blown into each individual area.

[0010] The parts that make up the draw sheet are located on the bottom of the larger sides of the bed structure.

[0011] Through Patent GB 2,026,315, a piece designed as a draw sheet is also known, which has a flat surface sheet, more or less rigid, and incorporates an internal unit of a flexible material, which, when air is introduced, also allows the patient to be moved into a lateral position.

[0012] However, the applicant is not aware of the current existence of a draw sheet that has lateral appendages, and which in turn is provided with the attribute of incorporating some parts forming units of flexible material inside two adjacently-situated compartments, inside of which the parts receiving the blown-in air allow the patient to be moved, with both the inserted parts and the emerging lateral pieces directly collaborating to facilitate the change in position or movement, thus resulting in a unit of textile material that may be washed or sanitized after each use.

DESCRIPTION OF THE INVENTION

[0013] The draw sheet for changing patient positions in a hospital or similar bed that is proposed by the invention resolves the aforementioned problem in a fully satisfactory manner, not only allowing patient position changes but all necessary moving of the patient with practically no physical effort in these operations by specialized nursing staff, achieving a solution that is structurally simple and functionally effective.

[0014] For this purpose, and more specifically, the draw sheet for changing patient positions in a hospital or similar bed consists of a basically flat unit, textile in nature, on which two compartments are collaterally established, separated in the central area by a line of stitching, and whose lower ends have openings, with the body of the draw sheet being subdivided through three longitudinal lines of stitching.

[0015] Each of these areas or chambers is complemented with the incorporation of an inflatable pillow in its interior, equipped with the respective valve, so that when the draw sheet is placed under the patient and air is blown into the inflatable pillows, the increase in their volume causes the patient's body to tilt in the direction opposite the inflated pillow, and vice-versa.

[0016] Any source of adequate pressure may be used to inflate each pillow, such as, for example, pressurized air, pressurized oxygen or any other non-inflammable gas, of the types that are normally available in any hos-

pital environment.

[0017] In accordance with another of the invention's characteristics, the aforementioned flat unit that makes up the draw sheet, whose length is perceptibly adjusted to the patient's trunk area in order to make it easier to wash the genital area, as if it extended past that area it would hinder certain tasks, has been planned to have a width that is considerably greater than the bed's width, and is equipped with self-fastening means, such as, for example, adhesive strips, on the end sections that are unrelated to the aforementioned chambers; these self-fastening means, used in collaboration with the rails on the bed where the patient is located, specifically in each case with the rail on the opposite side, allow the patient to be held in a stable manner first on one side of the bed, and next on the other, allowing the bedclothes to be changed with relative simplicity and great ease.

DESCRIPTION OF THE DRAWINGS

[0018] To complement this description and for the purpose of allowing for better understanding of the characteristics of the invention, a set of drawings of an illustrative and non-restrictive nature, in which the following items are represented, is attached as an integral part of these specifications:

Figure number 1: Shows a schematic perspective view of the draw sheet for changing patient positions in a hospital or similar bed, in accordance with the purpose of this invention, with the draw sheet located on the surface of a bed mattress, on which draw sheet complementary inflatable pillows are incorporated which appear in their initial installation position, partially inserted in the positioning chambers and in a fully deflated position.

Figure number 2: Corresponds to a situation similar to the one shown in Figure number 1, with the draw sheet duly installed on a bed, and with one of the inflatable pillows in position, provided with the air in its interior that will facilitate moving the bedridden patient.

Figure number 3: Represents a plan view of the draw sheet, fully extended.

Figure number 4: Corresponds to a front elevation view of the draw sheet of the invention with the left inflatable face inflated.

Figure number 5: Shows a view similar to the one represented in Figure number 4, incorporating the chamber located on the right side inflated with air.

PREFERRED EMBODIMENT OF THE INVENTION

[0019] As can be seen in the aforementioned figures,

the draw sheet for changing patient positions in a hospital or similar bed is made up of a flat unit (1), whose width is considerably greater than that of the bed (2) in a transverse direction, which must be adjusted so that its end areas in correspondence with the flat unit (1) have a substantial overhang over the sides of said bed (2), as can be seen in figure number 2; this flat unit (1) is equipped, at least, with a wide circular section, corresponding to the width of the bed (2), incorporating a double wall, which in collaboration with an intermediate line of stitching (3) and two lateral lines of stitching (4), forms two chambers (5), open towards the headboard and footboard of the bed (2), each of which is designed to accommodate in its interior an inflatable pillow (6), equipped with an inflating valve (7), to which respective tubes are joined for introducing and extracting an appropriate fluid, such as, for example, air, oxygen or another non-inflammable gas from any suitable pressurized source.

[0020] The pillows (6) are inserted, while deflated, into the respective chambers (5), and in this position scarcely influence the bed (2) in its general context; the draw sheet is placed upon the bed, at the patient's lower area or under the patient, with the latter centered on the longitudinal axis corresponding to the line of stitching (3) located in the center of the bed (2).

[0021] When a change in the patient's position is desired, such as, for example, turning his body towards the left side of the bed, in accordance with the graphic representation shown in figure number 2, one need only inflate the pillow (6) on the right side, as shown in the aforementioned figure, so that tilting of the patient's body towards the desired location will automatically occur; next, said pillow (6) is deflated, and for a position change in the opposite direction, a similar action will be performed, except by inflating the pillow (6) on the opposite side.

[0022] The broad end extensions on the flat unit (1) are intended for changing the bedclothes, and to this effect it is planned that these end areas of the flat unit will have a plurality of adhesive strips (8) on their lower inner surface, so that during the process of changing the bedclothes, as shown in figures 4 and 5, after one of the pillows (6) has been inflated, the end section of the flat unit (1) folds back on itself, clasping the opposite rail (9) of the bed (2); this means that the patient is shifted on the bed towards the aforementioned rail, at the same time as the draw sheet is raised on the other half of the bed (2), allowing that half of the bedclothes to be worked with; next, the same operation is performed in the opposite direction, as shown in figure number 5, which allows work to be easily done with the other half of the bedclothes, to completely remove them and/or put them on.

[0023] Thus, the invention succeeds, in accordance with its fundamental aim, in enabling the bodily maneuvering of the patient, both for changing his position and for changing the bedclothes, to be performed with as

little inconvenience as possible to said patient and with minimal effort by the nursing staff.

Claims

1. Draw sheet for changing patient positions in a hospital or similar bed, of the type made up of a flat unit (1), preferably textile in nature and duly padded, on which, through a double wall, two laterally adjacent chambers (5) are established through an intermediate line of stitching (3) and two lateral lines of stitching (4), so that these chambers (5) are open towards the headboard and the footboard of the bed (2), receiving in their interior inflatable pillows (6) equipped with inflating valves (7), so that the inflation of one of these pillows (6) is performed by means of any pressurized fluid, causing the tilting or change in position of the patient towards the opposite side of the bed (2), with the chambers (5) as a whole having a width that coincides with the width of the bed (2) itself and a longitudinal dimension which is in turn in accordance with the patient's trunk area, and with the inflatable pillows (6) being inflated through the collaboration of air, oxygen or any other non-inflammable gas, appropriately pressurized, **characterized by** the fact that the flat unit (1) extends substantially on both sides of the chambers (5) forming wide sections equipped near their free end with self-fastening means (8), such as adhesive strips, enabling each of these ends to be secured, in the inflated position of the respective inflatable pillow (6), to the opposite rail (9) of the bed (2) during the process of changing the bedclothes on said bed (2).

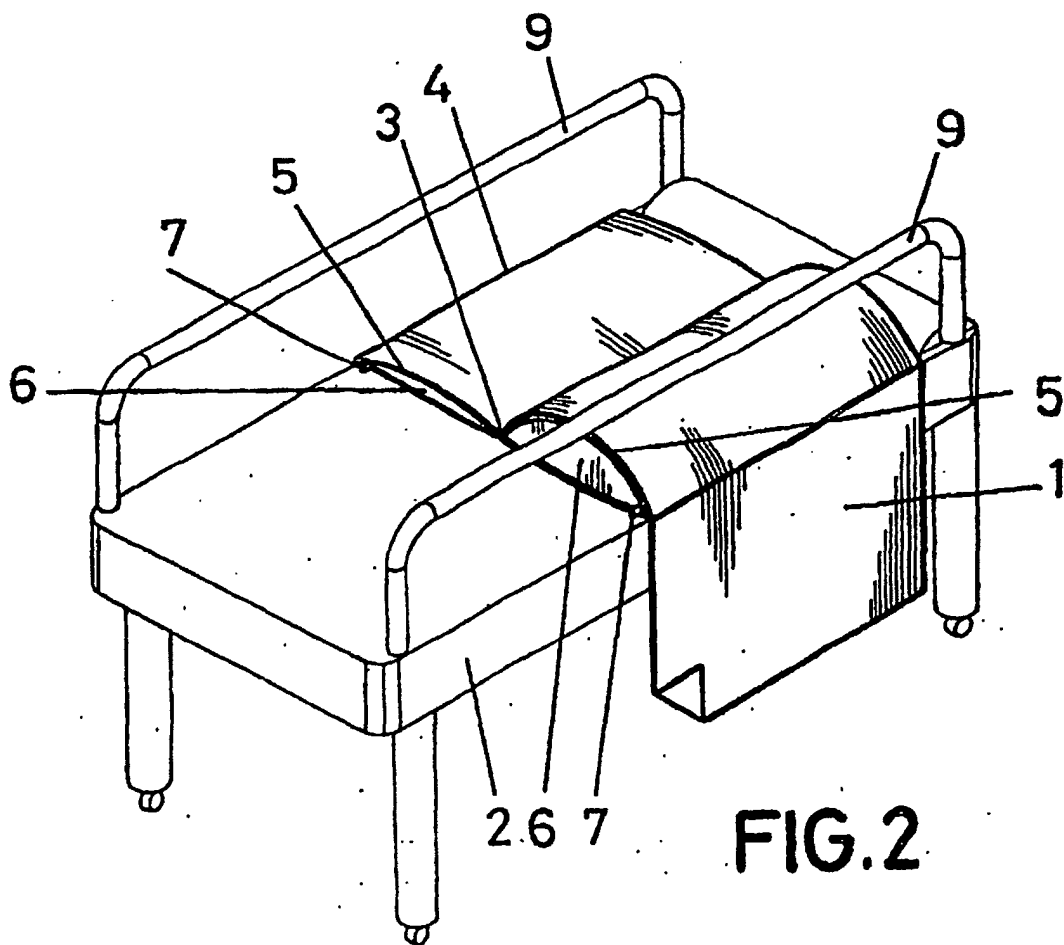
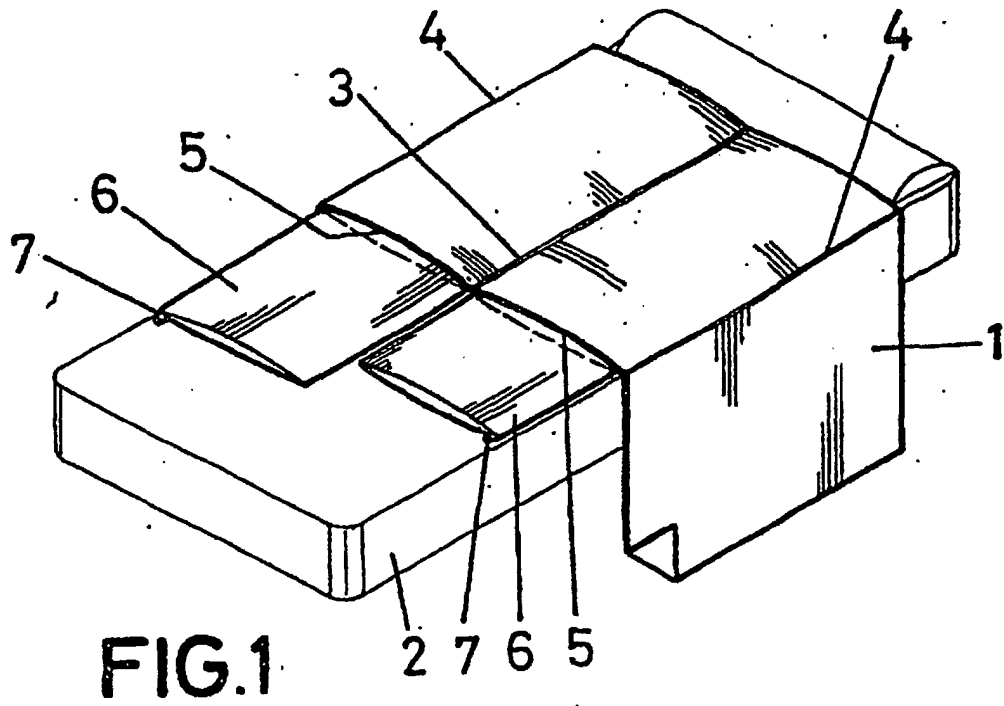
Patentansprüche

1. Zugblatt zum Wechseln der Positionen eines Patienten in einem Krankenhaus- oder ähnlichen Bett von der Art, welche aus einer flachen Einheit (1), vorzugsweise von textiler Beschaffenheit und entsprechend gepolstert, gebildet ist, auf welchem durch eine Doppelwand zwei seitlich benachbarte Kammern (5) durch eine mittlere Nähnaht (3) und zwei seitliche Nähnähte (4) geschaffen sind, so dass diese Kammern (5) zum Kopfteil und zum Fußteil des Bettes (2) offen sind und in ihrem Inneren aufblasbare Kissen (6), welche mit Aufblasventilen (7) ausgestattet sind, aufnehmen, so dass das Aufblasen eines dieser Kissen (6) mittels jedes Druckmittels erfolgt und das Neigen oder Wechseln in der Position des Patienten zur gegenüberliegenden Seite des Bettes (2) bewirkt, wobei die Kammern (5) als ein Ganzes eine Breite, welche mit der Breite des Bettes (2) selbst übereinstimmt, und eine Längsausdehnung, welche wiederum mit dem

Rumpfbereich des Patienten in Übereinstimmung ist, aufweisen, und wobei die aufblasbaren Kissen (6) durch die Zusammenwirkung von Luft, Sauerstoff oder jedem anderen nicht entflammabaren Gas, welches auf geeignete Weise unter Druck gesetzt wird, aufgeblasen werden, **gekennzeichnet durch** die Tatsache, dass die flache Einheit (1) sich im Wesentlichen auf beiden Seiten der Kammern (5) erstreckt, welche breite Abschnitte bilden, welche nahe ihrem freien Ende mit selbsthaftenden Mitteln (8), wie beispielsweise Klebestreifen, ausgestattet sind, wodurch jedes dieser Enden in der aufgeblasenen Position des jeweiligen aufblasbaren Kissens (6) während des Vorgangs des Wechselns der Betttücher auf dem Bett (2) am gegenüberliegenden Geländer (9) des Bettes (2) befestigt werden kann.

Revendications

1. Drap pour changer les positions de patients dans un lit d'hôpital ou similaire, du type constitué d'une unité plane (1), de préférence de nature textile et dûment rembourrée, sur laquelle, par une double paroi, sont établies deux chambres adjacentes latéralement (5), par une ligne de piqûres intermédiaires (3) et deux lignes de piqûres latérales (4), de sorte que ces chambres (5) soient ouvertes vers le panneau de tête et le panneau de pied du lit (2), recevant en leur intérieur des coussins gonflables (6) munis de soupapes de gonflage (7), de sorte que le gonflage de l'un de ces coussins (6) s'effectue au moyen de tout fluide sous pression, provoquant le basculement ou le changement de position du patient vers le côté opposé du lit (2), les chambres ayant, dans leur ensemble, une largeur qui coïncide avec la largeur du lit (2) lui-même et une dimension longitudinale qui correspond, quant à elle, à la zone de tronc du patient et les coussins gonflables (6) étant gonflés par la collaboration d'air, d'oxygène ou de tout autre gaz non inflammable, sous une pression appropriée, **caractérisé par le fait que** l'unité plane (1) s'étend substantiellement des deux côtés des chambres (5) formant de larges segments pourvus, près de leur extrémité libre, de moyens d'auto-fixation (8), tels que des bandes adhésives, permettant de fixer chacune de ces extrémités, dans la position gonflée du coussin gonflable respectif (6), à la traverse opposée (9) du lit (2) pendant l'opération de changement de la literie sur ledit lit (2).



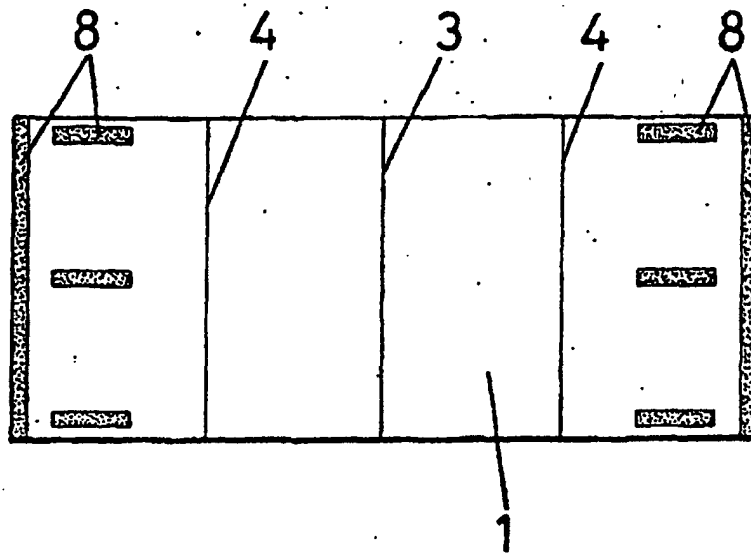


FIG. 3

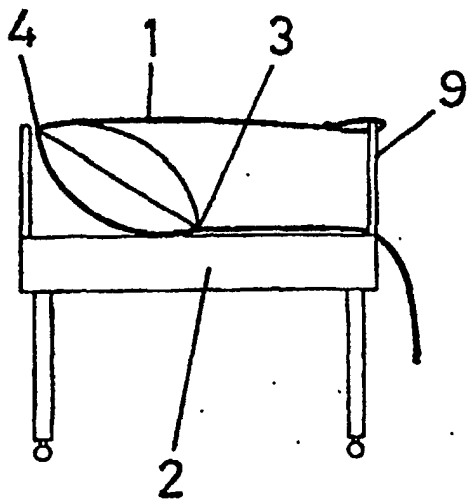


FIG. 4

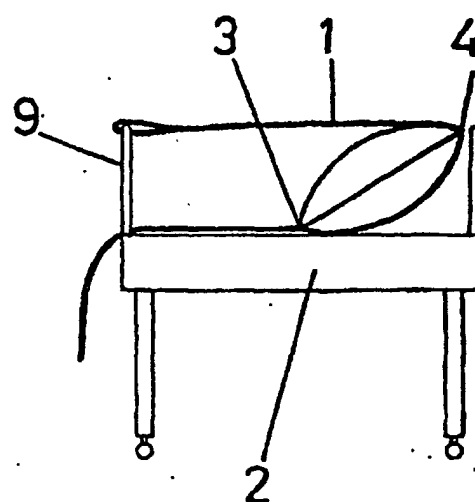


FIG. 5