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Description

[0001] The invention relates to a combination of a hospital bed and a bed cover. The invention furthermore relates to a bed cover to provide such a combination, to a use of such a bed cover, to a method for preventing a bed with used bedding from contaminating its surroundings, and to a method for providing a bed free from contamination.

[0002] In hospitals, hospital beds can stay unoccupied for several hours up to several days after discharge of the patient who occupied the bed. Due to work pressure, the making of a bed may be delayed for several hours to days. For example, in the weekends hospitals are low on personnel. When a patient is discharged on Friday, it may take to Monday before the bed is cleaned properly and the bed linen is changed. In the mean time, the unmade bed with its used bed linen provides an unpleasant view. For example patients in adjacent beds are confronted with the unmade bed and the used bed linen. The hospital bed, in particular the used bed linen, may provide unpleasant odours or even form a contamination source for patients, in particular patients having a weakened immune system.

[0003] US 2007/0000100 A1 discloses a clamp device for temporarily securing a bed sheet to the frame of a hospital stretcher.

[0004] GB 2484291 A discloses an incontinence sheet that may be attached to a mattress. The incontinence sheet is used to protect the bed-mattress.

[0005] DE 2914971 A1 discloses a hospital bed cover with a central part 7 which covers the top of the mattress and with two longitudinal flaps 8, 9 which extend vertically downwardly beyond a bottom edge of a mattress and a head board flap 12 as well as a foot board flap 13 which extend over the head board and the foot board and which leave the lateral sides of the head board and the foot board freely accessible as is clearly visible in Fig. 3. In order to solve this free accessibility, DE'971 discloses in Figs. 5 and 6 a solution with additional flaps 34 which in turn are divided in flaps 37, 38 by fold line 36 and which may be folded over around the lateral sides of the foot board 3 and the head board 2.

[0006] US-5 575 025 A discloses a protective cover for disposition over a patient bearing structure, i.e. a gurney. As with DE'971, the protective cover of US'025 has a central part and four flaps which are indicated as side portions 28 and 30 and head end portion 32 and foot end portion 34. The dimension of the side portions 28, 30 and head end portion 32 and foot end portion 34 are such that they overlie the inner surface of each side railing 14, 16 of the gurney 10 and overlie the inner surfaces of the head end railing 18 and the foot end railing 20. The side portions 28, 30 and foot end portion 34 and head end portion 32 are folded about an uppermost end of each corresponding railing 14, 16, 18 and 20 and protect a portion of the outer surface of each railing.

[0007] It is noted that from practice "fitted sheets" are known which have an elastic cord extending along a peripheral edge. The sizes of those known fitted sheets are tailored to the size of the mattress around which they are to be fitted.

[0008] It is an object of the invention to at least partially reduce or even obviate the problems described hereinabove and preferably to prevent used bed linen from providing an unpleasant view, unpleasant odours, and/or from being a source of contamination.

[0009] According to the present invention, this object is achieved by providing a combination of a hospital bed and a bed cover according to claim 1.

[0010] The bed cover thus covers the mattress and bed linen provided thereon as well as the top end of the bed itself.

[0011] By providing a bed cover according to the invention to the hospital bed, bacteria and-or viruses are contained on the bed, mattress and bedding.

[0012] Furthermore, the bed cover provides a barrier for odours and provides an unmade bed with a more tidy appearance. In an embodiment the bed cover is made of an opaque material such that the bedding is hidden from view, which provides the bed with a clean and tidy appearance. In an alternative embodiment, the cover, or part thereof, is transparent or semi-transparent such that it is possible to check the condition of the mattress and bedding under the bed cover without removing it from the bed.

[0013] The bed cover is applied over the frame of the bed. It is not inserted between the mattress and the bed frame like a bed sheet to apply it to the bed. Therefore, the bed cover can be applied simply and quickly, and without making contact with the used bed linen. Furthermore, since bed is covered, cleaning of the bed can be delayed. Therefore, the bed cover can be applied by untrained personnel, and, when in periods few personnel is available and time is limited, in a minimum of time.

[0014] In an embodiment, the cover according to the invention is provided on opposite ends with a first and a second pouch section that respectively fit a top section of a footboard and a top section of a headboard of the hospital bed. Thus, the cover more closely follows the contour of the bed, which provides the covered bed with a less voluminous appearance.

[0015] In a further embodiment, the mattress support frame is provided with a left and a right side rail, located between the footboard and the headboard on opposite sides of the mattress, and the cover is on opposite ends provided with a first and a second pouch section that respectively fit a top section of the left and the right side rail. Thus, the cover follows more closely the contour of the bed, which provides the covered bed with a less voluminous appearance.

[0016] In an embodiment, the bed cover is dimensioned such that a central section of the bed cover rests upon the top of the mattress and/or bedding provided thereupon. Thus, the cover more closely follows the contour of the bed, which provides the covered bed with a

less voluminous appearance.

[0017] In an alternative embodiment, the cover is dimensioned such that it spans the mattress and bedding from footboard to headboard, such that a centrals section of the bed cover stays free form the top of the mattress and a space is provided between the top of the mattress and the bedding provided thereupon and the bed cover.

[0018] It is noted that a hospital bed is typically provided with wheels to facilitate moving the bed around, and with bumpers on its sides for minimizing damage while moving it, for example reducing the impact when the bed bumps into a wall while being moved. The bumpers are often provided in the form of rotatable wheels which facilitate moving the bed along a wall while the bumpers contact said wall.

[0019] In an embodiment according to the invention, the hospital bed is provided with bumpers, for example in the form of wheels rotatable about a vertical axis, at the corners of the mattress support frame, and the cover is provided with openings that overlap with the bumpers provided at the corners of the bed, such that the bumpers protrude through said openings.

[0020] With a cover having openings that overlap with the bumpers, movement of the covered bed is possible with a reduced risk of the cover tearing between the wall and bumpers when the bed is transported through the hospital and collides with a wall. Thus, a combination of a hospital bed and such a bed cover according to the invention can be moved through a hospital with a reduced risk of the barrier provided by the cover being broken.

[0021] The bed can for example be moved to another room where the cover is removed and the bed is cleaned and provided with clean bedding. Preferably, the clean made bed is subsequently provided with a clean cover, to provide a combination according to the invention, and is for example driven to another room. When the bed is to be used by a patient, the bed cover is released and removed from the bed.

[0022] In an alternative embodiment, the bed is provided with bumpers, for example in the form of wheels rotatable about a vertical axis, at the corners of the mattress support frame, and the cover is provided with local reinforcements, for example in the form of plastic sheets integrated in or applied to the cover, which overlap with bumpers provided at the corners of the bed, to prevent the cover from tearing when the bumpers collide with for example a wall.

[0023] In a further embodiment, the bed cover is provided with grip sections, for example of a plastic sheet material having a rough surface, placed at strategic places on the bed cover. These grip sections indicate where the covered frame can be engaged to provide a person with a secure grip on the frame beneath the cover. The grip sections thus facilitate engaging the bed, for example to push it into another room.

[0024] In an embodiment, the bed cover is provided with, preferably loop shaped, hand grips on its outside surface and / or its inside surface, to facilitate applying the cover to and/or removing the cover from the bed. For example grips can be provided on one end on the inside of the bed cover to enable a person to easy engage the bed cover and facilitate pulling the bed cover over the hospital bed, in particular the frame of the bed. Grips can be provided on the outside of the bed cover to facilitate engaging the cover and positioning the bed cover on the bed, in particular the frame of the bed.

[0025] In an embodiment, the bed cover is provided with openings that secure the bed cover to the mattress support frame of the hospital bed by receiving projecting parts and / or corner parts of that frame in said openings and thus hooking the bed cover behind those frame parts of the bed, preferably frame parts projecting from a bottom side of the mattress support frame. Thus, in a simple and efficient way a coupling device is provided for securing the cover to the frame of the bed.

[0026] In an embodiment of a combination of a hospital bed and a bed cover according to the invention, the fastening device comprises a cinching cord, for example a bungee cinching cord, provided along its contour, for cinching the periphery of the cover against, preferably below, the mattress support.

[0027] The bed cover according to the invention preferably is bag shaped, and placed over the bed with its opening directed downwards. In an embodiment, the cover is provided with one or more loops or a tunnel along its contour, the loops or tunnel supporting a cinching cord along along the contour of the bed cover, e.g. the opening of the bag shaped cover, for cinching the periphery of the bed cover against, preferably below, the support frame supporting the mattress. The cinch cord is preferably at least exposed at a location at the foot end of the bed, to allow a person standing by the foot end to manipulate the cinch cord. When the bed cover is applied over the bed, the cinch cord can be pulled to cinch the periphery of the cover against or below the mattress support frame.

[0028] In an embodiment, the bed cover is provided with a releasable fastening device, for example zippers, snap buttons, Velcro, or magnets, etc, that releasable connects different sections of the cover to each other and thus makes the bed cover more closely fit the bed, and/or that fastens sections of the cover to the frame of the bed. Thus, the bed cover can be applied while having a wide shape, which facilitates pulling the bed cover over the different frame parts of the bed, and can be made to fit the bed more tightly after it has been applied. Therefore, a tight fit can be achieved even when applying a wide bed cover and/or a bed cover that not exactly fits the dimensions of the hospital bed.

[0029] In an embodiment, the bed cover is provided with a non releasable fastening device, for example sticky surfaces, tie raps, etc., that connects different sections of the bed cover to each other, and that thus makes the bed cover more closely fit the bed, and/or to fastens sections of the bed cover to the frame of the bed, which fastening device can only be removed by destroying it,

for example breaking or tearing it. Thus, it functions as a temper evidence device and indicates if a bed cover has been (temporarily) removed after been applied to the bed. This is in particular relevant when the bed cover is used to protect a cleaned, made bed. Broken fastening devices may indicate the bed cover has been removed, and the bed may no longer been clean.

[0030] In an embodiment, one or more resilient wires, for example bungee wires, are provided in or on the bed cover, each running across a section of the cover, such that the one or more resilient wires pull the bed cover towards the top surface of the mattress. Thus a tight fit can be achieved even when applying a wide bed cover and/or a bed cover that not exactly fits the dimensions of the bed.

[0031] In a further embodiment, the resilient wires are at their ends provided with a fastening device, for example a loop or hook, which realisably fastens the end to the frame of the bed. For example, after such a bed cover is applied to the bed and the fastening device has been used to releasable fasten the bed cover, the resilient wires are applied to further secure the bed cover on the bed. The resilient wires can for example be looped around a headboard or footboard, of hooked with on end to the bed frame below the mattress at one side of the bed, extend over the mattress, and hooked with an opposite end to the bed frame below the mattress at an opposite side of the bed.

[0032] When the resilient wires are integrated in the bed cover, they are applied when the bed cover is applied to the bed. In an embodiment, the ends of the wires are subsequently hooked to the frame of the bed, or to each other, to further secure the bed cover to the bed.

[0033] In an embodiment one or more, preferably antibacterial, filters are provided in the bed cover for passing through air while containing containments, to let air escape from below the cover via the filters when applying the bed cover to the hospital bed. This facilitates applying the bed cover to the bed. It also reduces the chance of bacteria and viruses being spread by moving air while applying the bed cover to the hospital bed.

[0034] In a further embodiment, the filters are reusable filters and/or are placed in a cartridge for replacement of the filters. Thus, the covers can be reusable covers, which are washed or otherwise cleaned and/or decontaminated after being used without damaging the filters.

[0035] In an embodiment, the bed cover is a disposable cover made of for example paper or an artificial material such as a flexible plastic composite foil material, and is preferably provided with an antibacterial coating. Thus, after use, a used cover can simply be discarded and a new cover can be used to provide combination according to the invention.

[0036] In an embodiment, the inside surface of the bed cover, i.e. the surface facing the bed, has a texture and / or print and / or colour that differs from the respective texture and / or print and / or colour of the outside surface of the cover, i.e. the surface facing substantially away form the bed. Thus, when applying the bed cover, it is clear which side of the cover should be facing the bed. This is in particular beneficial when one way filters are provided in the bed cover. Furthermore, different colours can be used for example for bed covers used for covering a hospital bed that still has to be cleaned, and for covers used for covering a hospital bed that has already been cleaned.

[0037] In an embodiment, the bed cover is provided with a document pouch, the document pouch preferably comprising a see through section, for holding documents providing information such as information relating to the patient, regarding the bed cover, etc. Thus, the cover can be used, more in particular the cover can be provided with documents, to indicate for example which patient has been designated the particular bed, when the bed is to be cleaned, or when the bed was cleaned and who has cleaned the bed. The document pouch can be an integral part of the bed cover or for example can be glued or sewn onto the bed cover, or be releasable attached thereto using for example Velcro, snap buttons, etc. In an alternative embodiment, the bed cover, or sections thereof, are suitable for writing upon. Thus, information can be applied directly onto the bed cover and no pouch is necessary.

[0038] In an embodiment, the combination according to the invention is provided with a fastening device configured for attachment to the frame of the bed, which fastening device, when mounted to the bed, can be separated from and reattached to the bed cover, and can thus be used with different bed covers. For example hooks or Velcro strips can be applied to the frame of the hospital bed for engaging loops or Velcro strips of a bed cover and thus facilitate applying, more in particular fixing, the bed cover to the hospital bed to provide a combination according to the invention.

[0039] In a further embodiment, of a combination of a hospital bed and a bed cover according to the invention, the hospital bed is provided with a storage device, such as a bag or open box, for storing the bed cover, which storage device is fixed to the hospital bed, preferably to the footboard of the bed with, for example, hooks or a bracket.

[0040] In a further embodiment, the storage device is provided with fixing devices to attach a bed cover to the storage device, such as hooks or Velcro strips for respectively engaging loops or Velcro strip provided on a bed cover. Thus one end of the bed cover can be fixed to the storage device upon, prior to, or after removing the bed cover from the storage. The attachment to the storage device facilitates pulling the cover over the hospital bed, since it prevents the attached end form slipping over the footboard.

[0041] The invention furthermore provides a hospital bed cover made of sheet like material and provided with a fastening device along its periphery, for covering a hospital bed, the bed comprising a pedestal frame, a mattress support frame supported by the pedestal frame, a

mattress supported by the mattress support frame, a headboard and a footboard provided on opposite ends of the mattress support frame. The bed cover is configured to provide a combination of a cover and a hospital bed as disclosed herein, i.e. the cover is dimensioned such that it fits the hospital bed and when applied extends over the headboard, footboard and at least part of the mattress support frame, and is provided with a fastening device, for example comprising a cinch cord or Velcro strips, along its periphery to releasable fasten the bed cover on the bed, preferably cinch the periphery of the bed cover below the mattress support frame, such that the bed cover provides a barrier between at least the top part of the mattress support frame, the footboard, the headboard and the mattress on one side of the bed cover and the surroundings of the hospital bed on the other side of the bed cover. The invention furthermore provides a use of such a bed cover according to the invention, more in particular the use of such a bed cover for providing a hospital bed, its mattress and the bedding provided thereupon with a barrier between a top part of a frame of the hospital bed as well as the mattress supported by that frame and the bedding provided on that mattress, and the surroundings of the hospital bed, by applying the cover to the bed such that the cover extends from the top of the frame down past the mattress and releasable fastening the cover to a section of the frame of the bed located below the mattress using a fastening device provided along the periphery of the cover.

[0042] The invention furthermore provides a method for preventing a hospital bed and the bedding provided thereupon from contaminating its surroundings, the hospital bed comprising a pedestal frame, a mattress support frame supported by the pedestal frame, a mattress supported by the mattress support frame, a headboard and a footboard provided on opposite ends of the mattress support frame, and used bedding on top of the mattress. The method comprises the steps:

- Applying a cover according to the invention to the bed such that the cover extends from the top of the frame down past the mattress, and;
- releasable fastening the cover on the bed, preferably cinch the periphery of the cover below the mattress support frame, such that the cover provides a barrier between at least the top part of the mattress support frame, the footboard, the headboard and the mattress on one side of the cover and the surroundings of the bed on the other side of the cover.

[0043] The invention provides a further method for providing a hospital bed free from contamination, the hospital bed comprising a pedestal frame, a mattress support frame supported by the pedestal frame, a mattress supported by the mattress support frame, a headboard and a footboard provided on opposite ends of the mattress support frame. The method comprises the steps:

- Removing used bedding from the mattress;
- Cleaning the bed;
- Making the bed using clean bedding;
- Applying a bed cover according to the invention to the hospital bed such that the cover extends from the top of the hospital bed down past the mattress, and;
- Releasable fastening the bed cover on the hospital bed using a fastening device provided along the periphery of the bed cover, preferably cinch the periphery of the bed cover below the mattress support frame, such that the bed cover provides a barrier between at least a top part of the mattress support frame, the footboard, the headboard and the mattress on one side of the bed cover and the surroundings of the hospital bed on the other side of the bed cover.

[0044] In addition, a method according to the invention may, prior to applying the bed cover, comprise the following steps:

Providing a storage device comprising the bed cover;
Mounting the storage device to the bed;
Removing the bed cover from the storage device, and;
Connecting the bed cover to the storage device.

[0045] The invention thus provides also a bed cover, a use of that cover and a method for use in a hospital and with a hospital bed when a hospital bed is not yet cleaned or is already cleaned but not yet to be used. Thus, a hospital bed can be provided with a clean appearance, contamination by an unclean hospital bed can be limited and/or contamination of a cleaned hospital bed can be limited.

[0046] Advantageous embodiments of a combination of a hospital bed and a bed cover according to the invention, the cover, the use and the methods according to the invention are disclosed in the subclaims and in the description, in which the invention is further illustrated and elucidated on the basis of a number of exemplary embodiments, of which some are shown in the schematic drawing.

BRIEF DESCRIPTION OF THE DRAWINGS

[0047] In the drawings;

Fig. 1 shows a schematic top view of a bed cover according to the invention;
Fig. 2 shows a schematic top view of an alternative bed cover according to the invention;
Fig. 3 shows a schematic perspective view of a second alternative bed cover according to the invention when applied to a bed:

Fig. 4 shows a schematic perspective view of a

hospital bed;
Fig. 5 shows a schematic perspective view a third alternative bed cover according to the invention partially applied to the hospital bed of Fig. 4;
Fig. 6 shows a schematic perspective view from below of a combination of a hospital bed, also shown in Fig. 5, and a bed cover according to the invention;
Fig. 7 shows a schematic perspective view of a section of a fourth alternative bed cover according to the invention being applied to a hospital bed;
Fig. 8 shows a schematic perspective of the bed cover of Fig. 7 being fastened to the hospital bed;
Fig. 9 shows a schematic perspective view of the bed cover of Fig. 7 being applied to the hospital bed;
Fig. 10a shows a schematic perspective view of a first alternative combination of a hospital bed and a bed cover according to the invention;
Fig. 10b shows a schematic view of a blank of sheet material for making the bed cover shown in Fig. 10a;
Fig. 11a shows a schematic perspective view of a second alternative combination of a hospital bed and a bed cover according to the invention;
Fig. 11b shows a schematic view of blanks of sheet material for making the bed cover shown in Fig. 11a;
Fig. 12a shows a schematic perspective view of a third alternative combination of a hospital bed and a bed cover according to the invention, and;
Fig. 12b shows a schematic view of a blank of sheet material for making the bed cover shown in Fig. 12a.

[0048] Fig. 1 shows a schematic top view of a bed cover 1 according to the invention. A bed cover according to the invention is made from a material such as paper, linen, cotton, or from a plastic material, for example PVC, Latex, Polyester, Ethyl, Vinyl, Ethylene-Vinyl Acetate (EVA), Polyethylene Vinyl Acetat (PEVA), Polyethylene (PE), Polyurethane (PU), Polypropylene (PP) or Ecoplast. Also, the bed cover can comprise a blend of materials, for example of one or more of the above mentioned materials, such as a Polyester and Cotton blend, a Polyester and Polyamide blend, an Ethylene Vinyl Acetate and Polyethylene blend, etc, Also, the bed cover can comprise a combinations of materials, for example a layer of paper material sandwiched between two layers of plastic foil material or one or more layers of fibre material sandwiched between two layers of foil material, etc. The bed cover is preferably provided with an antibacterial coating at at least on one side, preferably at its inside, i.e. the side of the cover facing the bedding when bed cover is applied to a hospital bed.

[0049] In the particular embodiment shown the bed cover 1 is made of a sheet like material, and the contour of the bed cover is elliptical. At four points, the cover 1 is along its periphery 2 provided with openings 3 which function as a grip to facilitate manipulating the bed cover, and thus facilitate applying it to a bed to provide a combination according to the invention. When the cover is designed for use with a particular type of bed, the openings 3 are preferably provided such that they can also be used to hook behind the corners of the frame supporting he mattress, or behind other protruding parts of the frame of the hospital bed, to fix the cover to the bed.
It is noted that additional grips can be provided on the inside and/or outside surface of the bed cover to further facilitate applying the cover to a hospital bed.

[0050] In the embodiment shown in Fig. 1 , the bed cover 1 is along its periphery 2 furthermore provided with a resilient wire 4. The resilient wire is integrated with the bed cover, for example sewn onto the bed cover, as shown, or passed as a lace through eyelets or openings in the cover. When the bed cover 1 is applied to a bed, the resilient wire 4 ensures that the periphery 2 of the cover 1 is pulled against the frame of the bed.

[0051] The resilient wire furthermore facilitates applying the cover to the bed. When one end of the bed cover is hooked about the frame or foot cover of the hospital bed, the resilient wire can be kept under tension while moving the other end of the cover to the other end of the frame or headboard. Thus it can be ensured that the end already in place stays properly positioned.

[0052] In the embodiment shown in Fig. 1 , the bed cover 1 is along its periphery 2 furthermore provided with a fastening device in the form of a lace 5 for releasable fastening the bed cover 1 to a hospital bed and thus provide a combination according to the invention. In the particular embodiment shown, the lace 5 has been passed through a single loop shaped channel extending all along the periphery of the bed cover. A tightening location 6 has been provided, where the ends of the lace 5 come out of the channel. By pulling the ends of the lace 5, the periphery 2 of the bed cover 1 is cinched against the mattress support frame, preferably below the mattress support frame. The lace thus functions as a cinching wire.

[0053] In the embodiment shown, the tightening location 6 is provided at the end of the bed cover 1 that, when the bed cover has been applied to a hospital bed, is located at the foot end of the bed. In an alternative embodiment, the tightening location can be provided at other locations, for example on the part of the bed cover that, when the cover is applied to a hospital bed, is located along a side of the bed.

[0054] At a tightening location 6, the ends of the lace 5 come out, to enable, when the bed cover 1 has been applied to a bed, tightening of the lace and thus cinching the periphery 2 of the cover 1 against the frame of the bed. By subsequently securing the lace 5, for example by tying both ends together, the bed cover is secured in its position on the bed.

[0055] The particular bed cover shown in Fig. 1 is fur-

thermore provided with a tail section 7 at the tightening location 6. This tail section 7 guides the loop supporting the cinching wire, i.e. the lace 5, away from the main part of the bed cover 1 . Such a tail section is beneficial especially when the frame section of the hospital bed supporting the mattress has a bottom surface facing a pedestal frame of the bed, i.e. a frame section preferably provided with wheels and supporting a height adjustment mechanism supporting the mattress support frame, and the periphery of the cover is designed to be pulled underneath the frame section supporting the mattress. This is in particular the case when the pedestal frame supporting the mattress support frame engages the latter in its central area only, as shown in Fig. 6. The tail section 7 allows for tightening the lace 5 next to the mattress support frame in stead of below the mattress support frame. The person tightening the lace does therefore not have to get beneath the frame section supporting the mattress, but can remain positioned beside the bed.

[0056] It is noted that a bed cover according to the invention can be provided with or without a resilient wire and/or a cinching wire along its periphery. Furthermore, the cinching wire can be applied with or without a tail section being present on the cover. Also, more than one cinching wire may be provided, and a cinching wire may be provided along sections of the cover, instead of along its periphery.

[0057] Fig. 2 shows a schematic top view of an alternative bed cover 21 according to the invention. This bed cover also has a periphery 22 along which a resilient wire 24, a cinching wire 25, and a tightening location 26 at a tail section 27 of the cover are provided. Two openings 23A are provided to provide a grip at one end of the cover, and two loops 23B are provided on the opposite end of the bed cover for the same purpose. It is noted that the cover 21 has an angular contour and a rectangular shape compared to the cover 1 shown in Fig. 1.

[0058] The bed cover shown in Fig. 2 is furthermore provided with openings 29 that match with bumpers provided at the corners of a hospital bed, such that the bumpers can protrude trough the openings, when the cover is applied to the bed, to prevent the cover from tearing when the bumpers collide with a wall.

[0059] The bed cover shown in Fig. 2 is furthermore provided with two antibacterial filters 28. The filters are provided in the cover for passing through air while containing containments. Thus only filtered air can escape from below the bed cover through the filters. When the bed cover is pulled over the frame of the hospital bed and towards the mattress, air trapped beneath the cover is allowed to escape via the filters, which thus facilitate applying the cover. The escaping air is filtered, and thus cleaned.

[0060] The bed cover shown in Fig. 2 is a disposable bed cover and is thus to be used once only. The shown filters 28 are fixed in the bed cover and are thus disposed off with the bed cover. In a preferred embodiment, the filters are reusable filters and are placed in a cartridge. Thus the filters can be cleaned, if necessary, and used again with another bed cover. In a further embodiment, the bed cover is a reusable cover. The filters might be filters that can be cleaned with the bed cover, or that are provided in a cartridge such that they can be cleaned separately or be disposed off and replaced after use.

[0061] Fig. 3 shows a schematic perspective view of a second alternative bed cover 31 according to the invention applied to a hospital bed, to provide a combination according to the invention. Of the hospital bed only the frame section supporting a mattress is shown, covered by the cover. The pedestal frame of the bed is not depicted.

[0062] The bed cover 31 shown in Fig. 3 fully covers a top part of the frame of the hospital bed, i.e. the mattress support frame and head board and foot board, and a mattress supported by that frame. The cover extends from the top of the frame down past the mattress but stays free from the floor. The frame section supporting the mattress is supported via a central pedestal (not shown) of the hospital bed. The mattress support frame has a bottom surface. The periphery of the bed cover 31 is pulled along this bottom surface beneath the mattress support frame, and secured in place with a cinching wire 35, presented via a tail section 37. The tightening section 36 is provided at a short side of the hospital bed, in this case at a foot end of the bed.

[0063] It is noted that a cover according to the invention is configured to not only cover the mattress and bedding, but also the top frame of the bed, i.e. the mattress support frame on which these are provided and the head board and foot board. Thus, contamination of a clean frame is prevented. On the other hand, the cover can cover an unclean frame, such that contamination of patients or products by contact with that frame is prevented.

[0064] To enable the bed cover to cover the frame of the bed, it is dimensioned to extend beyond the frame. A typical hospital bed has a length of 2,00 to 2,20 meters and a width of 0,80 meters. The headboard and the footboard add to the length of the bed, providing the bed with an overall length of for example 2,30 meters. The headboard and the footboard furthermore often extend at least 0,30 meters above the mattress, which typically has a thickness of about 25 cm or more. The bed cover is thus dimension such that it at least matches the outer dimension of the frame of the bed to be combined with, preferably is substantially larger to than the outer dimensions of the frame of the bed to enable an easy fit.

[0065] The bed cover is dimensioned such that it can cover at least the top of the frame of the bed. Since the cover can be applied quickly and without much effort, applying the bed cover to the bed takes much less time and training compared to cleaning and disinfecting a used hospital bed.

[0066] The bed cover 31 shown in Fig. 3 is provided, along its periphery 32, with openings 39. The openings 39 are located in the bed cover such that bumpers 39B provided on the corners of the bed extend through them.

Thus, the bumpers can contact for example a wall without the risk of the cover tearing up. This is in particular beneficial when the bumpers are rotatable wheels provided on vertical axis.

[0067] The bed cover 31 is furthermore provided with a document pouch 30 for holding documents providing information such as information relating to the patient, regarding the cover, etc. The document pouch 30 preferably comprises a see through section, to allow for visual inspection of the documents located in the pouch.

[0068] The bed cover 31 shown in Fig. 3 is dimensioned such that it bridges the mattress and bedding from footboard to headboard, and such that a centrals section of the cover stays free from the top of the mattress and a space is provided between the top of the mattress, bedding provided thereupon, and the cover.

[0069] It is noted that a hospital bed typically comprises a pedestal frame, a mattress support frame, a headboard and a footboard. The pedestal frame is most often provided with casters to enable easy movement of the bed. The wheels can be locked, for example when a patient has to be transferred in or out of the bed.

[0070] Fig. 4 shows a schematic perspective view of a hospital bed 51. The bed 51 has a pedestal frame 52, comprising a carriage with casters 58 and a linkage system 53 supporting a mattress supporting frame 54. The bed 51 furthermore comprises a headboard 55, a footboard 56, a mattress 57, wheel shaped bumpers 59 and side rails 58. The latter are of minimal dimensions and provided to support the mattress.

[0071] With most of the hospital beds, the mattress support frame is movably supported on the carriage, such that it can be raised and lowered relative to the carriage.

[0072] The most common hospital bed design, the pedestal frame comprises a linkage mechanism for moving the mattress support frame in the vertical direction. The mattress supporting frame has a bottom surface, facing towards the carriage, which, in the most common design, is supported in its central region by the pedestal or linkage mechanism.

[0073] Furthermore, in most cases the mattress support frame and/or sections thereof can be tilted to adjust the position of the mattress and of a patient lying on the mattress. Thus, the patient can for example be supported in a raised, tilted or sitting position.

[0074] The mattress support frame is at one end provided with a headboard and at its opposite end with a footboard. These boards are dimensioned such, that they extend above the mattress when positioned in the horizontal position, to protect the patient lying in the bed, provide the patient with some privacy. In particular the food board is also used for mounting equipment and/or information about the patient.

[0075] In addition, hospital beds can be provided with side rails that can be raised or lowered. There are a variety of different types of side rails to serve different purposes. While some are provided to prevent that the patient falls out of the bed, which can result in injury, others contain and/or support equipment that can aid the patient without physically confining the patient to the bed.

[0076] In an alternative embodiment, the hospital bed may be provided with a pedestal comprising four fixed legs, one situated at each corner of the bed. With a combination of such a hospital bed and a bed cover according to the invention, the bed cover is preferably provided with U-shaped openings in its contour for receiving those legs. Fastening means are provided on opposite sides of these openings, to enable passing the cover around the leg by moving the leg in the opening and subsequently attaching the cover sections forming the entry of the U-shaped opening to each other using the fastening means.

[0077] Fig. 5 shows a schematic perspective view of the hospital bed 51 , ass well as a bed cover 41 according to the invention, the latter being applied to the former to provide a combination according to the invention. The cover 41 is partially applied to the bed. The bed cover 41 has an angular contour and a rectangular shape. The cover 41 has a periphery 42 along which a cinching wire in the form of a lace 45 is provided. A tightening location 46 is provided at a tail section 47 of the cover 41 . Openings 43 are provided at the corners of the cover to provide a grip to engage the bed cover while applying it to the bed. The cover has been applied to the bed, but the cinching wire has not yet been used to pull the periphery against, in the particular embodiment shown against the bottom surface of the mattress support frame,

[0078] The bed cover 41 is furthermore provided with openings 49 that match bumpers 59 provided at the corners of the mattress supporting frame 56 of the bed, such that the bumpers can be inserted into the openings when the cover is applied to the bed, to prevent the bed cover from tearing for example when the bumpers collide with a wall.

[0079] Fig. 6 shows a schematic perspective view from below of the combined hospital bed 51 and bed cover 41 shown in Figs. 4 and 5. In Fig. 6 the bed cover 41 is fully applied, The lace 45 has now been used to pull the periphery 42 of the bed cover 41 below the mattress support frame 54 of the bed 51. In fig. 6 the bumpers 59 of the hospital bed 51 protrude through the cover via the openings 43. The lace 45 has been secured using a clamping device 50, thus fixing the cover 41 onto the hospital bed 51 , covering the headboard 55, footboard 56, side rails 58, mattress 57 and the mattress supporting frame 54. Thus, the cover provides a barrier between the mattress, the bedding, the upper part of the bed supporting the mattress and the bedding on one side and the surroundings of the bed on the other side.

[0080] Bed cover 41 is thus fit for covering a hospital bed or the like, more in particular for fully covering a top part of a frame of the hospital bed as well as a mattress supported by that frame. The bed cover 41, when applied to the hospital bed, extends from the top of the frame down past the mattress but stays free from the floor. The cover 41 is furthermore provided with a fastening device along its periphery for releasable fastening the cover be-

low a section of the frame of the bed located below the mattress, to provide a reliable barrier between the top part of the frame and the mattress and the surroundings of the bed.

[0081] By covering not only the mattress and the bedding, but also the top frame of the bed, the bed cover 41 provides a barrier between the used bedding, and other parts of the bed that may be contaminated by the patient using the bed. The bed cover thus provides a protecting barrier for the patients in adjacent beds and persons walking by the bed. In addition, the cover provides the hospital bed with a clean and tidy appearance.

[0082] The bed cover 41 shown in Fig. 5 and 6 is dimensioned such that it bridges the mattress and bedding from footboard to headboard, and such that a centrals section of the bed cover stays free form the top of the mattress and a space is provided between the top of the mattress, bedding provided thereupon and the cover.

[0083] Fig. 7 shows the hospital bed 51 provided with a storage device 60 mounted on the foot end of the bed, more in particular to the footboard 56 of the bed 51. The storage device 60 is box shaped with an open top side. By providing such a storage device for holding a bed cover, a cover is always ready for use when needed.

[0084] In an embodiment, the bed cover is provided in the storage device, such that it can be pulled in one motion from out of the storage and over the bed. This can for example be achieved by folding the cover in a particular way, for example by folding the sides of the cover towards the longitudinal axis and subsequently rolling or folding the cover into a compact package.

[0085] In an embodiment, a disposable bed cover is packaged in a sealed wrap to prevent the cover from getting dirty or being contaminated prior to use. In an alternative embodiment, the bed cover is located in a cleaned storage device. The storage device can be provided with a cover to sealingly close the device and keep the cover clean until needed.

[0086] Fig. 7 furthermore shows a schematic perspective view of a section of the cover 41 according to the invention being applied to the hospital bed 51 . Fig. 9 shows a schematic perspective overview of the cover 51 being applied to the hospital bed. In Figs. 8 the storage device 60, mounted to the bed, is shown in more detail. The cover 41 is provided with an opening that can be used to connect the cover to the storage device 60 by inserting a plug 73 through an opening in the cover and into an opening in the storage device. This movement is indicated with arrow 70 in Fig. 7. Fig. 8 shows the cover while its tail section has been attached to the storage device.

[0087] Fixing one end of the bed cover to the storage device, more in particular to the central area of the foot board, facilitates pulling the cover over the bed towards the head board. Since the cover is already securely mounted to the footboard it will not slip. Thus, by providing a storage device on the footboard to witch the cover can be attached, facilitates applying the cover to the bed and provides an extra securing location is provided for attaching the cover to the bed, and thus securing it when in its applied position.

[0088] The storage device according to the invention is preferably provided with means for mounting the storage device on the bed. The storage device can be attached to the foot board of the bed, as shown in the figures. Alternatively, the storage device can be mounted to the side of the bed, to the bottom of the bed below the mattress supporting frame, to the head board, or to the night stand. The storage device can be provided with a grip to facilitate transport and/or manipulation by a person.

[0089] In the embodiment shown, the storage device is box shaped. In an alternative embodiment the storage device is a flexible bag or pouch.

[0090] Instead of or in addition to the storage device, other fastening devices can be permanently mounted on the frame to be used with different covers. For example, hooks or Velcro strips can be attached to the frame and/or headboard and/or footboard and/or rails for respectively engaging loops or Velcro strip provided on a cover.

[0091] In addition to, or in stead of the fastening devices mentioned above, a cover according to the invention can also be provided with releasable fastening devices in the form of for example zippers, snap buttons, Velcro, or magnets, etc, to releasable connect different sections of the cover to each other and to thus make the cover more closely fit the bed, and/or to fasten sections of the cover to the frame of the bed. Thus, the cover can for example be fastened at is corners to the frame of the bed using Velcro strips attached to the cover.

[0092] Also, sections of the cover or lips attached to the cover can be provided with sticker sections, covered with protective foil prior to use, which can be used to attach the sticker section of the cover to another section of the cover. Thus, a section of the cover can be looped or hooked behind a section of the frame of the bed and subsequently be attached to another section of the cover to secure the cover to the frame. Also, the cover can thus be made to more tightly fit the frame of the bed. By providing a releasable adhesive the cover can be removed without tearing it.

[0093] In an alternative embodiment, non releasable fastening devices in the form of for example sticky surfaces, tie raps, etc to connect different sections of the cover to each other and to thus make the cover more closely fit the bed, and/or to fasten sections of the cover to the frame of the bed. The non releasable fastening devices are provided with tear or brake lines or other devices which allow removing them from the frame, but only by destroying them. Thus, the cover can be properly used only once, and it is prevented that for example a used cover is by accident applied to a clean bed. A broken fastening device is clear indicator the cover ahs been used already.

[0094] Fig. 10a shows a schematic perspective view of a first alternative combination 100 of a hospital bed

111 and a bed cover 101 according to the invention. Fig. 10b shows a schematic view of a blank of sheet material for making the bed cover 101 shown in Fig. 10a;

[0095] The bed cover 101 is similar to the one shown in Fig. 3. The bed cover 101 shown in Fig. 10a is made of a transparent material, such that the hospital bed 111, more in particular the headboard 115, footboard 116 and mattress 117, are visible through the bed cover. Thus, visual inspection of the bedding is possible, while the bed is covered and thus shielded.

[0096] The bed cover 101 shown in Fig. 10 is more or less box shaped, with an open bottom, and is dimensioned such that it bridges the mattress 117 and bedding from footboard 116 to headboard 115, and such that a centrals section of the bed cover 101 stays free from the top of the mattress and a space is provided between the top of the mattress, bedding provided thereupon, and the cover.

[0097] The bed cover 101 is provided with a tail section 107 presenting wire ends 105 for pulling the periphery 102 of the bed cover 101 against the frame of the bed 111. The tail section 107 is located at the head of the bed 111 and thus not visible in Fig. 10a. The bed cover 101 is furthermore provided with a closable opening 110a that allows to install a bracket 110b to the foot board 116 while the bed cover 101 is applied to the bed 111.

[0098] The blank of the bed cover 101 shown in Fig. 10b has a rectangular top section 121, in which two filters 108 are provided. The top section 121 is connected along its sides with two side sections 122 and a head section 123 and a foot section 124. The side sections 122 are connected to the head section 123 and the foot section 124 to form the bed cover 101. Preferably this is done during production of the bed cover by stitching or gluing them together.

[0099] The sides 122 and the head section 123 and the foot section 124 are provided with flaps 125 that form the periphery of the bed cover. In the embodiment shown, the flaps 125 are provided with tunnels 126 for guiding wire 105 along the periphery of the bed cover 101. In the embodiment shown, the wire 105 is provided in sections which, during production, are tight together to form a single cinching wire.

[0100] In the embodiment shown, the length of the top section 121 is about 2150 mm and its width is about 900 mm. The length of the sides 122 is similar to the length of the top section 121, i.e. about 2150 mm, and the width of the sides is about 500 mm. The length of the head section 123 and the foot section 124 is similar to the width of the sides 122, i.e. 500mm, and their length is similar to the width of the top section 121 , i.e. about 900 mm. In the embodiment shown, the flaps 125 extend over a distance of about 80 mm, the tunnels adding another 20 mm,

[0101] This provides a general indication of the dimensions of a bed cover according to the invention only. Dimension may differ, depending on the dimensions of the bed, or beds, the bed cover is to be combined with.

[0102] Fig. 11a shows a schematic perspective view of a second alternative combination 200 of a hospital bed 21 1 and a bed cover 201 according to the invention. Fig. 11b shows a schematic view of blanks of sheet material for making the bed cover 201 shown in Fig. 11a;

Similar to the bed cover 101 shown in Figs. 10a and 10b, the bed cover 201 is made of a transparent material, such that the hospital bed 211 , more in particular the headboard 215, footboard 216 and mattress 217, are visible through the bed cover. The bed cover 201 differs form the bed cover 101 in that it is provided with a first pouch section 231 and a second pouch section 232 that respectively fit a top section of the footboard 216 and a top section of the headboard 215 of the hospital bed 211. The top section 221 of the bed cover 201 lies on the bedding.

[0103] In the embodiment shown, the length of the top section 221 is about 2070 mm and its width is about 900 mm. The sides are provided as separate section to be connected with the top section during production. The length of the sides 222 is similar to the length of the top section 221, i.e. about 2070 mm, and the width of the central section of the sides is about 250 mm. The head section 223 and the foot section form an integral part with the top section. They are to be folded during production to form the pouch sections of the bed cover. The length of the head section 223 and the foot section 224 is similar to the width of the end sections of the sides 222, i.e. about 500mm, and their length is about 790 mm. In the embodiment shown, the flaps 225 extend over a distance of about 80 mm, the tunnels adding another 20 mm.

[0104] Fig. 12a shows a schematic perspective view of a third alternative combination 300 of a hospital bed 311 and a bed cover 301 according to the invention. Fig. 12b shows a schematic view of a blank of sheet material for making the bed cover 301 shown in Fig. 12a. The cover 301 is made of a non transparent material.

[0105] The cover 301 is, in addition to pouch sections 331 and 332 for receiving the headboard and the footboard of the bed 311, provided with pouch sections 333 and 334 for receiving side rails mounted along the sides of the bed. By providing the side pouch sections 333, 334, the bed cover 301 more closely follows the contour of the bed 311.

[0106] In the embodiment shown, the bed cover 301 is dimensioned such that the central top section 321 of the cover rests upon the top of the mattress and bedding provided thereupon when the cover is applied to a hospital bed.

[0107] In an alternative embodiment, the bed cover is configured such that it leaves a space between the cover and the mattress. This space allows for irregular piles of bedding on the mattress to be covered with a straight cover, i.e. without the cover showing bulky where the bedding is disposed.

[0108] In the embodiment shown, the length of the top section 321 is about 2070 mm and its width is about 820 mm. The side sections 322 form an integral part with the

top section 321. They are to be folded during production to form pouch sections. The length of the side sections 322 is similar to the length of the top section 321, i.e. about 2070 mm, and the width of the side sections is about 790 mm. The head section 323 and the foot section 324 form an integral part with the top section 321. They are to be folded during production to form pouch sections. The length of the head section 323 and the foot section 324 is similar to the width of the sides 322, i.e. about 790 mm. The width of the head section 323 and foot section 324 at the top section is 820 mm, and the end away from the top section 900 mm.

[0109] It is noted that the blanks shown in Figs 10b, 11b, 12b are examples only. With the knowledge thus provided it should be clear to the skilled person that bed covers according to the invention can be produced in alternative ways also.

[0110] For preventing a hospital bed and the bedding provided thereupon from contaminating its surroundings, the bed comprising a pedestal frame, a mattress support frame supported by the pedestal frame, a mattress supported by the mattress support frame, a headboard and a footboard provided on opposite ends of the mattress support frame, and used bedding on top of the mattress, a bed cover according to the invention is preferably applied according to the steps mentioned below.

[0111] The bed cover is applied to the hospital bed such that the cover extends from the top of the frame down past the mattress. For example by applying a first end of the cover over the foot board, engaging grips provided on the cover to position the cover on the footboard, engaging grips on the opposite end of the cover and pulling the cover over the bed, applying and positioning it on the headboard.

[0112] After the bed cover has been placed over the frame of the bed, releasable fastening the cover to a section of the frame of the bed located below the mattress using a fastening device provided along the periphery of the cover.

[0113] In a method according to the invention the periphery of the cover is cinched below the mattress support frame, such that the cover provides a barrier between at least the top part of the mattress support frame, the footboard, the headboard and the mattress on one side of the cover and the surroundings of the bed on the other side of the cover.

[0114] It is noted that a cover according to the invention can also be combined with a made, clean, hospital bed. When a bed is cleaned and made, it may remain unoccupied for some time. To prevent the bed from coming untidy, or contaminated by for example air borne pollutants, a cover according to the invention can be applied to the bed to provide a barrier between the bed and its surroundings, and thus protect the clean and made bed from contamination. A new patient is thus guaranteed a clean bed. In an embodiment, the inside surface of the cover has a texture and / or print and / or colour that differs from the texture and / or print and / or colour or the outside surface. Thus, the texture and /or print and / or colour indicates if the covered bed is a cleaned bed or not.

[0115] For providing a hospital bed free from contamination, the bed comprising a pedestal frame, a mattress support frame supported by the pedestal frame, a mattress supported by the mattress support frame, a headboard and a footboard provided on opposite ends of the mattress support frame, a method comprising the following steps is provided.

[0116] For applying a cover to a cleaned hospital bed, first the used bedding are removed, the bed is cleaned and made with clean bedding. Subsequently, the bed and bedding are covered with a cover according to the invention, for example in the way described above. After the cover has been placed over the frame of the bed, the cover is releasable fastened to a section of the frame of the bed located below the mattress, preferably beneath the frame supporting the mattress, using a fastening device provided along the periphery of the cover.

[0117] Preferably the periphery of the cover is cinched below the mattress support frame, such that the cover provides a barrier between at least the top part of the mattress support frame, the footboard, the headboard and the mattress on one side of the cover and the surroundings of the bed on the other side of the cover.

[0118] In addition, a method according to the invention may comprise the following steps prior to applying the cover.

Providing a storage device comprising the cover, mounting the storage device to the bed, removing the cover from the storage device, and connecting the cover to the storage device.

[0119] In an embodiment, a cover according to the invention is a disposable cover made out of paper or an artificial material such as a flexible plastic composite material which material is preferably provided with an antibacterial coating.

[0120] The bed cover can be provided with one or more openings for receiving equipment coupled to the frame of the bed, for example a tv-mount or a stand for a monitor.

[0121] In addition to the bed cover according to the invention can be provided with a cover for covering a device and/or additional bracket mounted to the hospital bed, for example to the footboard or headboard of the bed. Such additional covers are preferably provided with the same characteristics, i.e. material and material properties, as the bedcover. Such an additional cover preferably is bag shaped, i.e. provided with one open side in which the equipment or bracket is inserted, in addition to, or as an alternative, such a cover can be provided with flaps that can be wound or folded about the object to be covered. Preferably, fastening means such as snap buttons, Velcro, cinching wire, etc are provided for securing the cover on the bracket or equipment and/or to the bed cover.

[0122] In a further embodiment, the cover for covering

a device and/or additional bracket is incorporated with the bed cover, i.e. is an integral part thereof or for example both are sewn together.

[0123] It is noted that in an alternative embodiment of a bed cover according to the invention the bed cover is provided without a fastening device in the form of for example a cinching wire for fastening the cover against the bed frame.

[0124] In this text, as a sheet material is considered to be any thin, flexible, material, such as cotton sheets, paper sheets, plastic sheets or foils, etc. The foil or sheet material is preferably composed out of antibacterial fibres and/or impregnated or coated with an organic antibacterial A bed cover can be formed from a flat sheet material, or from pre-shaped sheet material and can be a woven material or for example an extruded material or any other type of sheet like material.

Claims

1. Combination of a hospital bed (51, 111, 211, 311) and a bed cover (1, 21, 31, 41, 101, 201, 301), wherein

   the hospital bed (51, 111, 211, 311) comprises a pedestal frame (52), a mattress support frame (54) supported by the pedestal frame (52), a mattress (57, 117, 217) supported by the mattress support frame (54) and a headboard (55, 115) and a footboard (56, 116) provided on opposite ends of the mattress support frame (54), wherein the bed cover (1, 21, 31, 41, 101, 201, 301) is made of a sheet like material and covers the footboard (56, 116), the headboard (55, 115), the mattress (57, 117, 217) and the mattress support frame (54) such that the bed cover (1, 21, 31, 41, 101, 201, 301) extends from the top of the bed (51, 111, 211, 311) down past the mattress (57, 117, 217), and
   wherein the bed cover (1, 21, 31, 41, 101, 201, 301) is provided with a fastening device along its periphery (2, 22, 32, 42, 102) that releasably fastens the bed cover (1, 21, 31, 41, 101, 201, 301) on the bed (51, 111, 211, 311) by cinching the periphery of the bed cover below the mattress support frame, such that the bed cover (1, 21, 31, 41, 101, 201, 301) provides a barrier between at least the top part of the mattress support frame (54), the footboard (56, 116), the headboard (55, 115) and the mattress (57, 117, 217) on one side of the bed cover (1, 21, 31, 41, 101, 201, 301) and the surroundings of the bed (51, 111, 211, 311) on the other side of the bed cover (1, 21, 31, 41, 101, 201, 301);
   wherein the bed cover (1, 21, 31, 41, 101, 201, 301) is dimensioned such that it spans the mattress (57, 117, 217) and bedding from footboard to headboard, such that a central section of the bed cover stays free form the top of the mattress and a space is provided between the top of the mattress and the bedding provided thereupon and the bed cover;
   wherein the fastening device comprises a cinching cord provided along its contour, for cinching the periphery (2, 22, 32, 42, 102) of the cover (1, 21, 31, 41, 101, 201, 301) against and below the mattress support frame (54);
   wherein the bed cover (1, 21, 31, 41, 101, 201, 301) is a disposable cover made of paper, fiber material or artificial material, such as a flexible plastic composite foil material.

2. Combination of a hospital bed and a bed cover according to claim 1, wherein the bed cover (201, 301) is provided on opposite ends with a first and a second pouch section (231, 232; 331, 332) that respectively fit a top section of a footboard (216) and a top section of a headboard (215) of the hospital bed (211).

3. Combination of a hospital bed and a bed cover according to claim 2, wherein the mattress support frame is provided with a left and a right side rail, located between the footboard and the headboard on opposite sides of the mattress, and wherein the bed cover (301) is on opposite ends provided with a first and a second pouch section (333, 334) that respectively fit a top section of the left and the right side rail.

4. Combination of a hospital bed and a bed cover according to claim 1, wherein the bed cover (1, 21, 31, 41, 101, 201, 301) is provided with openings (3, 39, 43, 49) that secure the bed cover (1, 21, 31, 41, 101, 201, 301) to the mattress support frame (54) of the hospital bed (51, 111, 211, 311) by receiving projecting parts of that frame (54) in said openings (3, 39, 43, 49) and thus hooking the bed cover (1, 21, 31, 41, 101, 201, 301) behind those frame parts of the bed (51, 111, 211, 311.

5. Combination of a hospital bed and a bed cover according to one or more of the preceding claims, wherein the inside surface of the bed cover (1, 21, 31, 41, 101, 201, 301), i.e. the surface facing the bed (51, 111, 211, 311), has a texture, print, or colour that differs from the respective texture, print or colour of the outside surface of the bed cover (1, 21, 31, 41, 101, 201, 301), i.e. the surface facing substantially away from the bed (51, 111, 211, 311).

6. Combination of a hospital bed and a bed cover according to one or more of the preceding claims, wherein the hospital bed (51, 111, 211, 311) is provided with a storage device (60) for storing the bed cover (1, 21, 31, 41, 101, 201, 301), which storage

device (60) is fixed to the hospital bed (51, 111, 211, 311)with hooks or a bracket.

7. Combination of a hospital bed and a bed cover according to claim 6, wherein the storage device (60) is provided with a fixing device (73) to attach a bed cover (1, 21, 31, 41, 101, 201, 301) to the storage device (60).

8. Combination of a hospital bed and a bed cover according to one or more of the preceding claims, wherein the bed cover (1, 21, 31, 41, 101, 201, 301) is provided with an antibacterial coating.

Patentansprüche

1. Kombination aus einem Krankenhausbett (51, 111, 211, 311) und einem Bettbezug (1, 21, 31, 41, 101, 201, 301), wobei

das Krankenhausbett (51, 111, 211, 311) einen Sockelrahmen (52), einen Matratzenstützrahmen (54), der von dem Sockelrahmen (52) gestützt wird, eine Matratze (57, 117, 217), die von dem Matratzenstützrahmen (54) gestützt wird, und ein Kopfteil (55, 115) und ein Fußteil (56, 116) umfasst, die an gegenüberliegenden Enden des Matratzenstützrahmens (54) bereitgestellt sind,
wobei der Bettbezug (1, 21, 31, 41, 101, 201, 301) aus einem bahnartigen Material hergestellt ist und das Fußteil (56, 116), das Kopfteil (55, 115), die Matratze (57, 117, 217) und den Matratzenstützrahmen (54) bedeckt, so dass sich der Bettbezug (1, 21, 31, 41, 101, 201, 301) von der Oberseite des Bettes (51, 111, 211, 311) nach unten an der Matratze (57, 117, 217) vorbei erstreckt, und
wobei der Bettbezug (1, 21, 31, 41, 101, 201, 301) mit einer Befestigungsvorrichtung entlang seines Umfangs (2, 22, 32, 42, 102) versehen ist, die den Bettbezug (1, 21, 31, 41, 101, 201, 301) lösbar auf dem Bett (51, 111, 211, 311) befestigt, indem der Umfang des Bettbezugs unter dem Matratzenstützrahmen eingespannt wird, so dass der Bettbezug (1, 21, 31, 41, 101, 201, 301) eine Barriere zwischen wenigstens dem oberen Teil des Matratzenstützrahmens (54), dem Fußteil (56, 116), dem Kopfteil (55, 115) und der Matratze (57, 117, 217) auf einer Seite des Bettbezugs (1, 21, 31, 41, 101, 201, 301) und der Umgebung des Bettes (51, 111, 211, 311) auf der anderen Seite des Bettbezugs (1, 21, 31, 41, 101, 201, 301) bereitstellt;
wobei der Bettbezug (1, 21, 31, 41, 101, 201, 301) so bemessen ist, dass er die Matratze (57, 117, 217) und Bettzeug vom Fußteil zum Kopfteil überspannt, so dass ein mittlerer Abschnitt des Bettbezugs von der Oberseite der Matratze frei bleibt und ein Raum zwischen der Oberseite der Matratze und dem darauf bereitgestellten Bettzeug und dem Bettbezug bereitgestellt ist;
wobei die Befestigungsvorrichtung eine entlang ihrer Kontur vorgesehene Spannschnur umfasst, um den Umfang (2, 22, 32, 42, 102) der Abdeckung (1, 21, 31, 41, 101, 201, 301) gegen und unter den Matratzenstützrahmen (54) zu spannen;
wobei der Bettbezug (1, 21, 31, 41, 101, 201, 301) ein Einwegbezug aus Papier, Fasermaterial oder künstlichem Material, wie einem flexiblen Kunststoffverbundfolienmaterial, ist.

2. Kombination aus einem Krankenhausbett und einem Bettbezug nach Anspruch 1, wobei der Bettbezug (201, 301) an gegenüberliegenden Enden mit einem ersten und einem zweiten Taschenabschnitt (231, 232; 331, 332) versehen ist, die jeweils zu einem oberen Abschnitt eines Fußteils (216) und einem oberen Abschnitt eines Kopfteils (215) des Krankenhausbetts (211) passen.

3. Kombination aus einem Krankenhausbett und einem Bettbezug nach Anspruch 2, wobei der Matratzenstützrahmen mit einem linken und einem rechten Seitengitter versehen ist, die sich zwischen dem Fußteil und dem Kopfteil auf gegenüberliegenden Seiten der Matratze befinden, und wobei der Bettbezug (301) an gegenüberliegenden Enden mit einem ersten und einem zweiten Taschenabschnitt (333, 334) versehen ist, die jeweils zu einem oberen Abschnitt des linken und des rechten Seitengitters passen.

4. Kombination aus einem Krankenhausbett und einem Bettbezug nach Anspruch 1, wobei der Bettbezug (1, 21, 31, 41, 101, 201, 301) mit Öffnungen (3, 39, 43, 49) versehen ist, die den Bettbezug (1, 21, 31, 41, 101, 201, 301) am Matratzenstützrahmen (54) des Krankenhausbettes (51, 111, 211, 311) sichern, indem vorstehende Teile dieses Rahmens (54) in den Öffnungen (3, 39, 43, 49) aufgenommen werden, und somit der Bettbezug (1, 21, 31, 41, 101, 201, 301) hinter diesen Rahmenteilen des Bettes (51, 111, 211, 311) eingehängt wird.

5. Kombination aus einem Krankenhausbett und einem Bettbezug nach einem oder mehreren der vorhergehenden Ansprüche, wobei die Innenfläche des Bettbezugs (1, 21, 31, 41, 101, 201, 301), d. h. die dem Bett (51, 111, 211, 311) zugewandte Oberfläche, eine Textur, einen Aufdruck oder eine Farbe aufweist, die sich von der entsprechenden Textur, dem Aufdruck oder der Farbe der Außenfläche des Bettbezugs (1, 21, 31, 41, 101, 201, 301), d. h. der dem

Bett (51, 111, 211, 311) im Wesentlichen abgewandten Oberfläche, unterscheidet.

6. Kombination aus einem Krankenhausbett und einem Bettbezug nach einem oder mehreren der vorhergehenden Ansprüche, wobei das Krankenhausbett (51, 111, 211, 311) mit einer Ablagevorrichtung (60) zum Ablegen des Bettbezugs (1, 21, 31, 41, 101, 201, 301) versehen ist, wobei die Ablagevorrichtung (60) mit Haken oder einem Bügel am Krankenhausbett (51, 111, 211, 311) befestigt ist.

7. Kombination aus einem Krankenhausbett und einem Bettbezug nach Anspruch 6, wobei die Ablagevorrichtung (60) mit einer Befestigungsvorrichtung (73) versehen ist, um einen Bettbezug (1, 21, 31, 41, 101, 201, 301) an der Ablagevorrichtung (60) zu befestigen.

8. Kombination aus einem Krankenhausbett und einem Bettbezug nach einem oder mehreren der vorhergehenden Ansprüche, wobei der Bettbezug (1, 21, 31, 41, 101, 201, 301) mit einer antibakteriellen Beschichtung versehen ist.

Revendications

1. Combinaison d'un lit d'hôpital (51, 111, 211, 311) et d'un couvre-lit (1, 21, 31, 41, 101, 201, 301), dans laquelle

le lit d'hôpital (51, 111, 211, 311) comprend un châssis de piédestal (52), un châssis de support de matelas (54) porté par le châssis de piédestal (52), un matelas (57, 117, 217) porté par le châssis de support de matelas (54) et une tête de lit (55, 115) et un pied de lit (56, 116) fournis sur des extrémités opposées du châssis de support de matelas (54),
dans laquelle le couvre-lit (1, 21, 31, 41, 101, 201, 301) est composé d'un matériau de type drap et couvre le pied de lit (56, 116), la tête de lit (55, 115), le matelas (57, 117, 217) et le châssis de support de matelas (54) de sorte que le couvre-lit (1, 21, 31, 41, 101, 201, 301) s'étend depuis la partie supérieure du lit (51, 111, 211, 311) vers le bas au-delà du matelas (57, 117, 217), et
dans laquelle le couvre-lit (1, 21, 31, 41, 101, 201, 301) est doté d'un dispositif de fixation le long de sa périphérie (2, 22, 32, 42, 102) qui fixe de façon amovible le couvre-lit (1, 21, 31, 41, 101, 201, 301) sur le lit (51, 111, 211, 311) en serrant la périphérie du couvre-lit au-dessous du châssis de support de matelas, de sorte que le couvre-lit (1, 21, 31, 41, 101, 201, 301) fournit une barrière entre au moins la partie supérieure du châssis de support de matelas (54), le pied de lit (56, 116), la tête de lit (55, 115) et le matelas (57, 117, 217) sur un côté du couvre-lit (1, 21, 31, 41, 101, 201, 301) et l'entourage du lit (51, 111, 211, 311) sur l'autre côté du couvre-lit (1, 21, 31, 41, 101, 201, 301) ;
dans laquelle le couvre-lit (1, 21, 31, 41, 101, 201, 301) est dimensionné de telle sorte qu'il recouvre le matelas (57, 117, 217) et la literie depuis le pied de lit jusqu'à la tête de lit, de sorte qu'une section centrale du couvre-lit reste libre de la partie supérieure du matelas et qu'un espace est fourni entre la partie supérieure du matelas et la literie fournie sur celui-ci et le couvre-lit ;
dans laquelle le dispositif de fixation comprend un cordon de serrage fourni le long de son contour, pour serrer la périphérie (2, 22, 32, 42, 102) du couvre-lit (1, 21, 31, 41, 101, 201, 301) contre et au-dessous du châssis de support de matelas (54) ;
dans laquelle le couvre-lit (1, 21, 31, 41, 101, 201, 301) est un couvre-lit jetable composé de papier, d'un matériau de fibre ou d'un matériau artificiel, par exemple un matériau de feuille composite de plastique souple.

2. Combinaison d'un lit d'hôpital et d'un couvre-lit selon la revendication 1, dans laquelle le couvre-lit (201, 301) est doté sur des extrémités opposées de première et deuxième sections de poche (231, 232 ; 331, 332) qui s'adaptent respectivement à une section supérieure d'un pied de lit (216) et une section supérieure d'une tête de lit (215) sur le lit d'hôpital (211) .

3. Combinaison d'un lit d'hôpital et d'un couvre-lit selon la revendication 2, dans laquelle le châssis de support de matelas est doté de rails latéraux gauche et droit, situés entre le pied de lit et la tête de lit sur des côtés opposés du matelas, et dans laquelle le couvre-lit (301) est doté sur des extrémités opposées de première et deuxième sections de poche (333, 334) qui s'adaptent respectivement à une section supérieure des rails latéraux gauche et droit.

4. Combinaison d'un lit d'hôpital et d'un couvre-lit selon la revendication 1, dans laquelle le couvre-lit (1, 21, 31, 41, 101, 201, 301) est doté d'ouvertures (3, 39, 43, 49) qui fixent le couvre-lit (1, 21, 31, 41, 101, 201, 301) au châssis de support de matelas (54) du lit d'hôpital (51, 111, 211, 311) en recevant des parties en saillie de ce châssis (54) dans lesdites ouvertures (3, 39, 43, 49) et accrochant ainsi le couvre-lit (1, 21, 31, 41, 101, 201, 301) derrière ces parties de châssis du lit (51, 111, 211, 311).

5. Combinaison d'un lit d'hôpital et d'un couvre-lit selon

une ou plusieurs des revendications précédentes, dans laquelle la surface intérieure du couvre-lit (1, 21, 31, 41, 101, 201, 301), en d'autres termes la surface face au lit (51, 111, 211, 311), a une texture, une impression ou une couleur qui diffère de la texture, de l'impression ou de la couleur respective de la surface extérieure du couvre-lit (1, 21, 31, 41, 101, 201, 301), en d'autres termes la surface sensiblement opposée au lit (51, 111, 211, 311).

6. Combinaison d'un lit d'hôpital et d'un couvre-lit selon une ou plusieurs des revendications précédentes, dans laquelle le lit d'hôpital (51, 111, 211, 311) est doté d'un dispositif de stockage (60) pour stocker le couvre-lit (1, 21, 31, 41, 101, 201, 301), lequel dispositif de stockage (60) est fixé au lit d'hôpital (51, 111, 211, 311) avec des crochets ou une attache.

7. Combinaison d'un lit d'hôpital et d'un couvre-lit selon la revendication 6, dans laquelle le dispositif de stockage (60) est doté d'un dispositif de fixation (73) pour relier un couvre-lit (1, 21, 31, 41, 101, 201, 301) au dispositif de stockage (60).

8. Combinaison d'un lit d'hôpital et d'un couvre-lit selon une ou plusieurs des revendications précédentes, dans laquelle le couvre-lit (1, 21, 31, 41, 101, 201, 301) est doté d'un revêtement antibactérien.

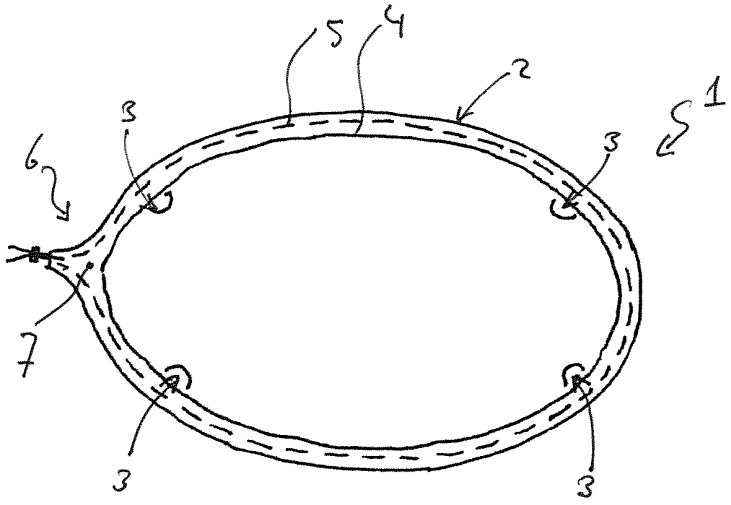


fig. 1

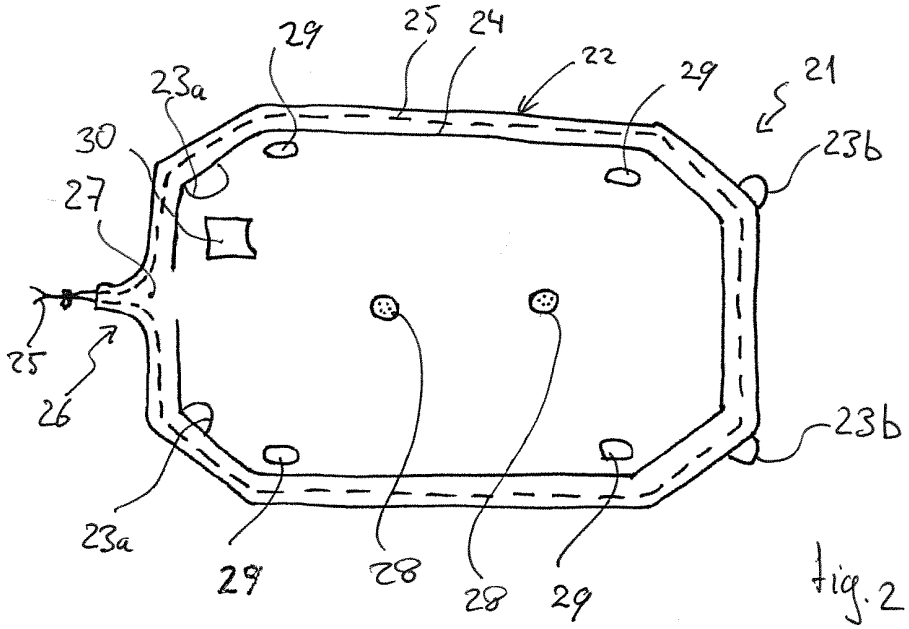


fig. 2

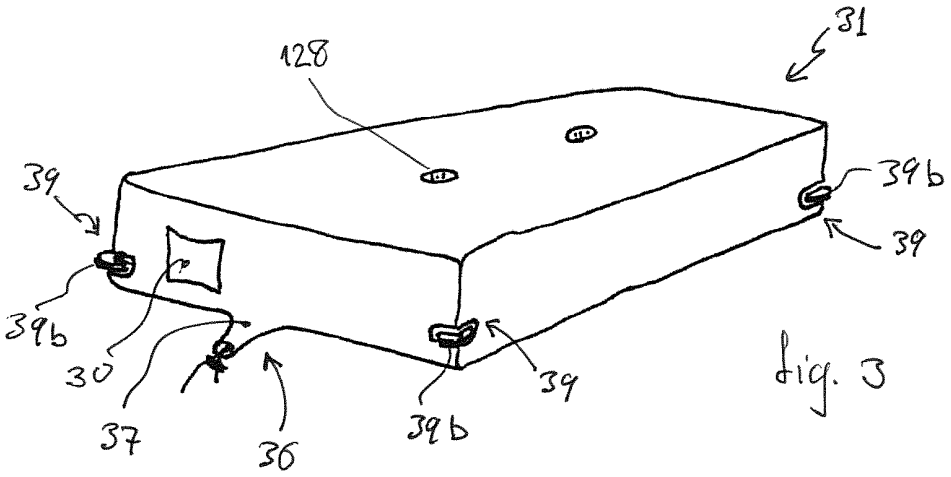


fig. 3

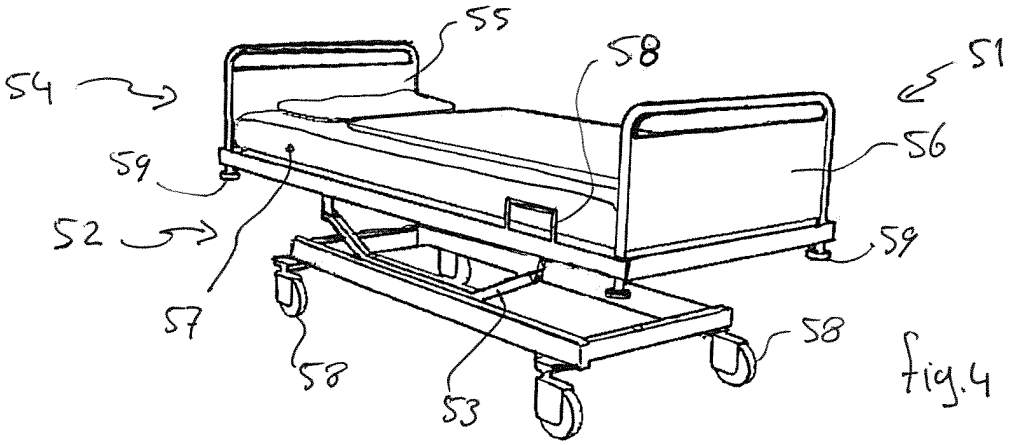


fig.4

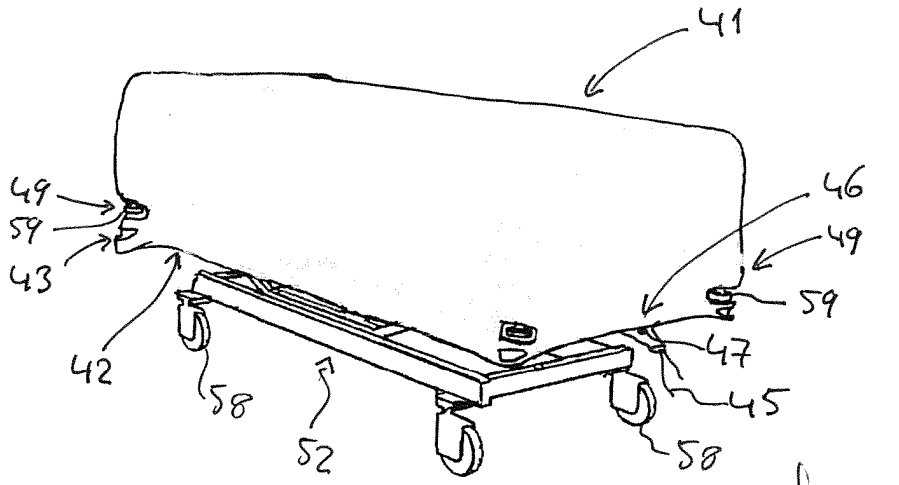


fig. 5

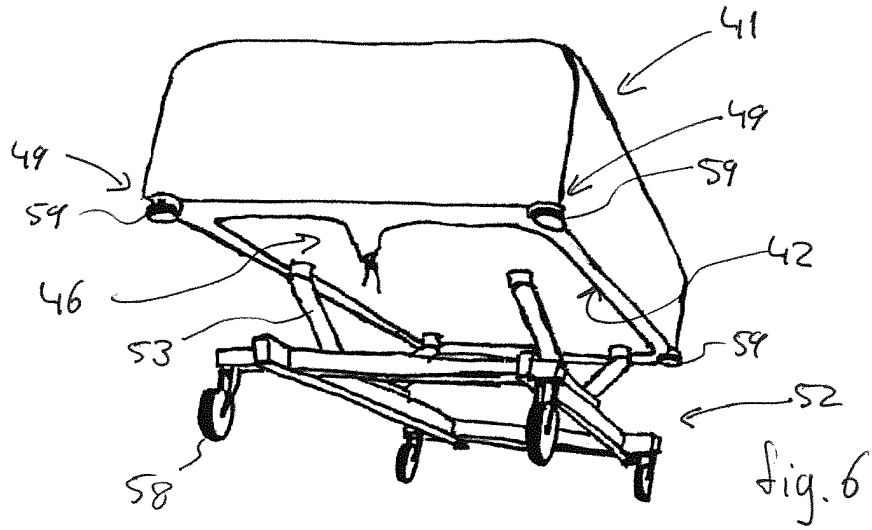


fig. 6

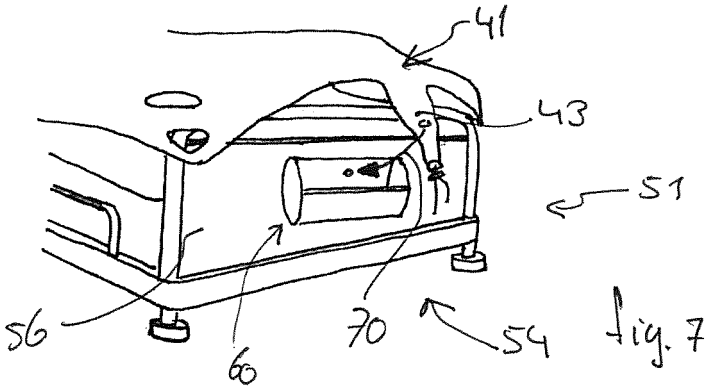


fig. 7

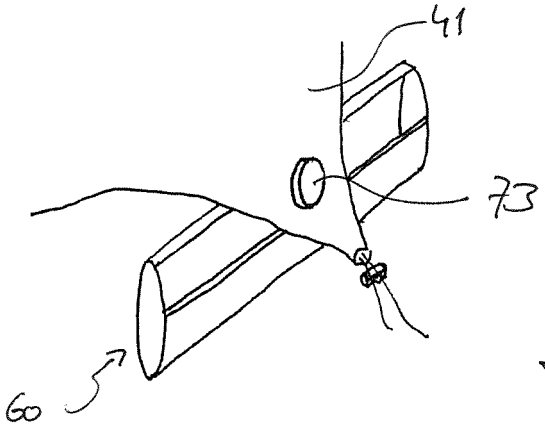


fig. 8

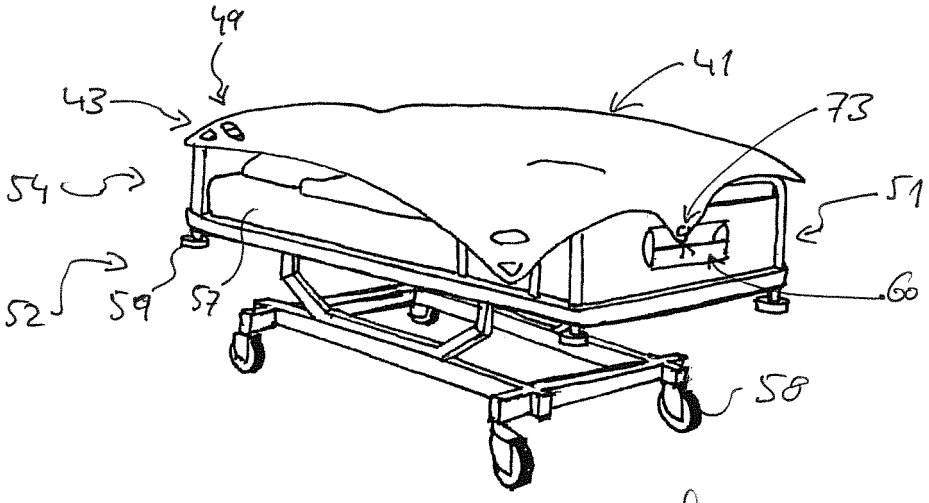


fig. 9

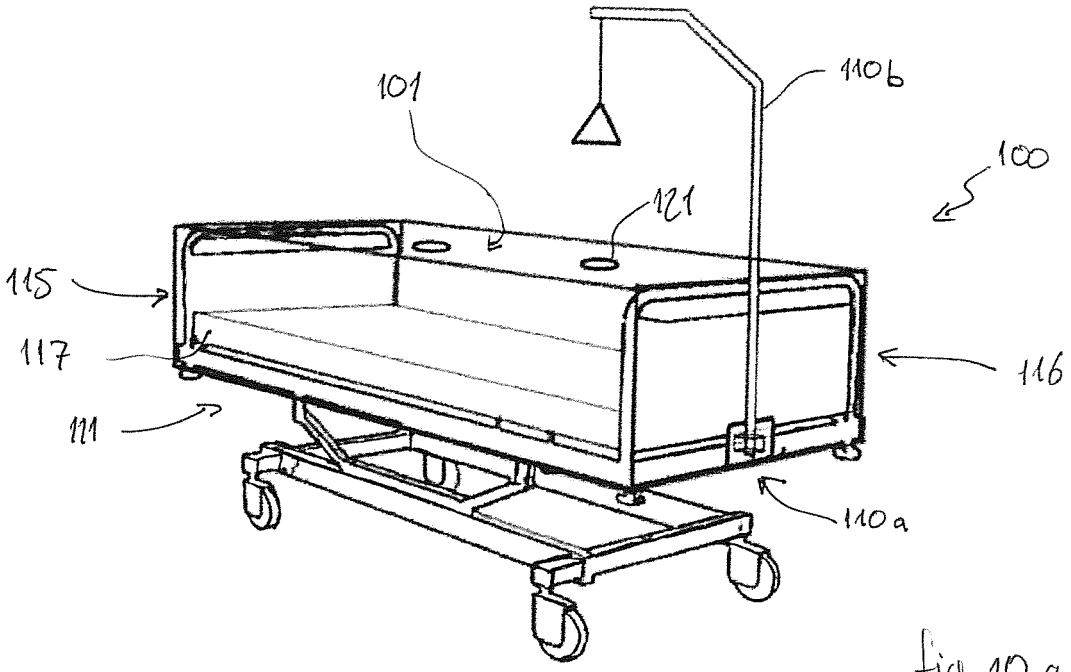


fig. 10 a

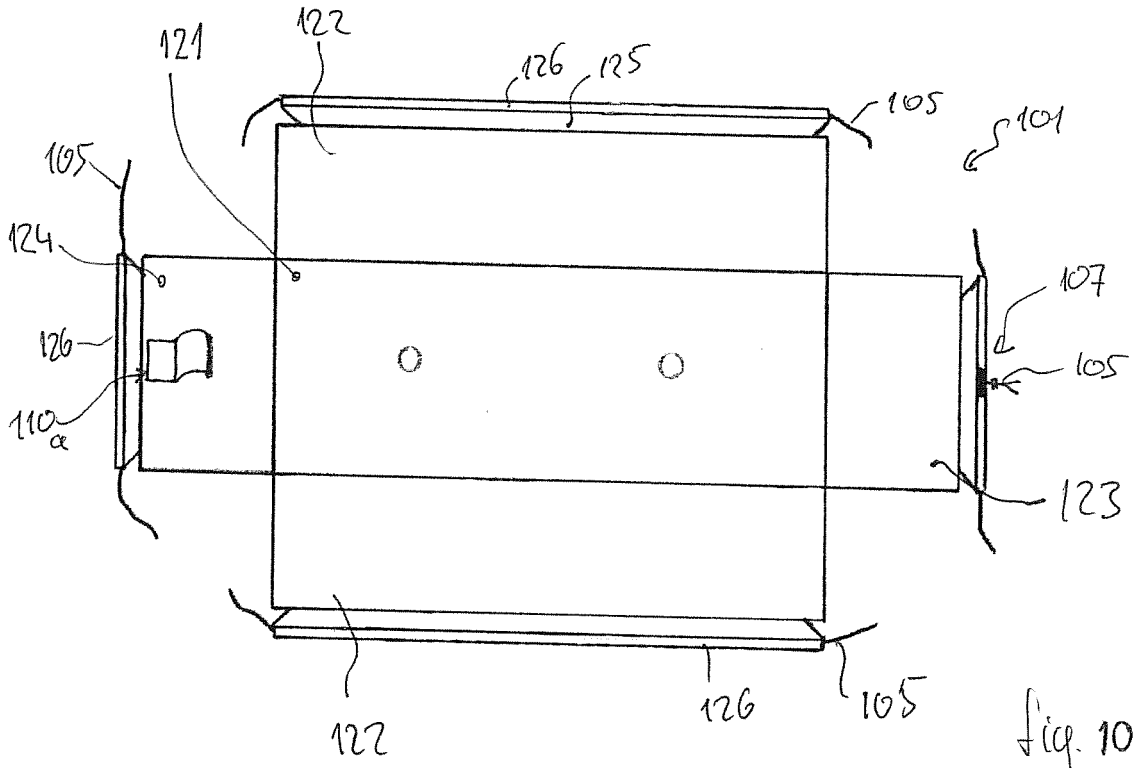


fig. 10 b

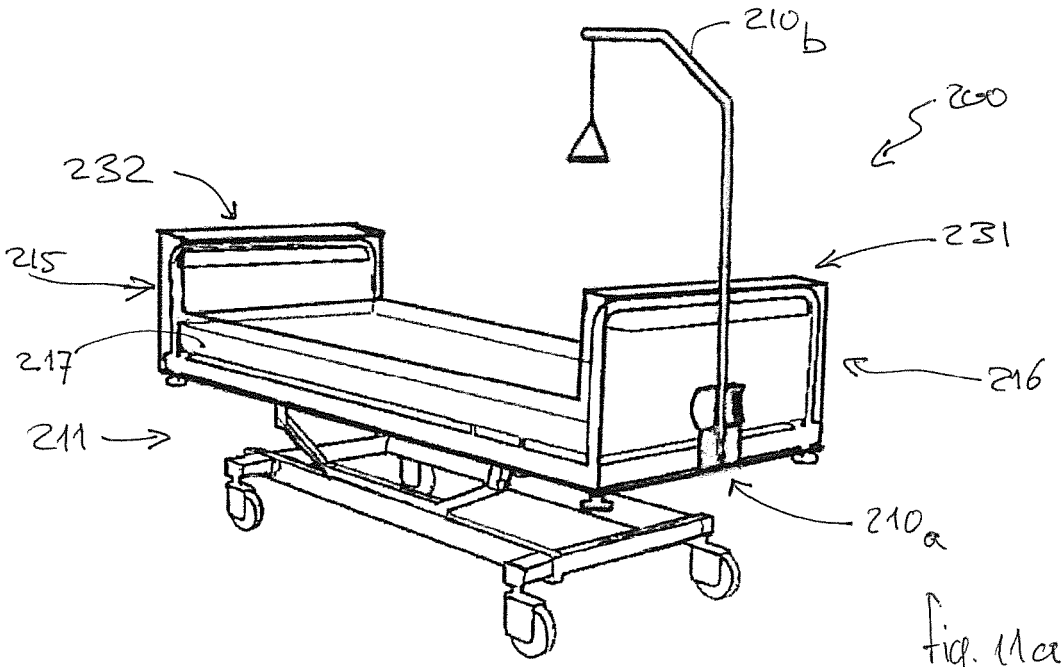


fig. 11a

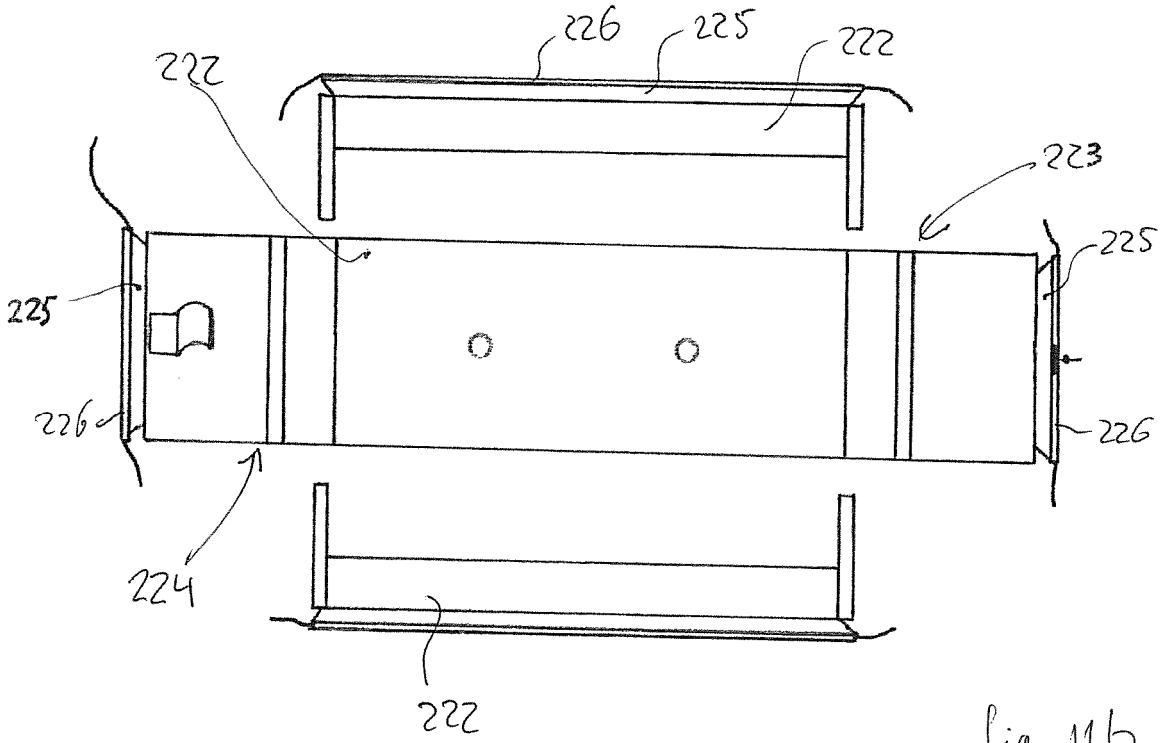


fig. 11b

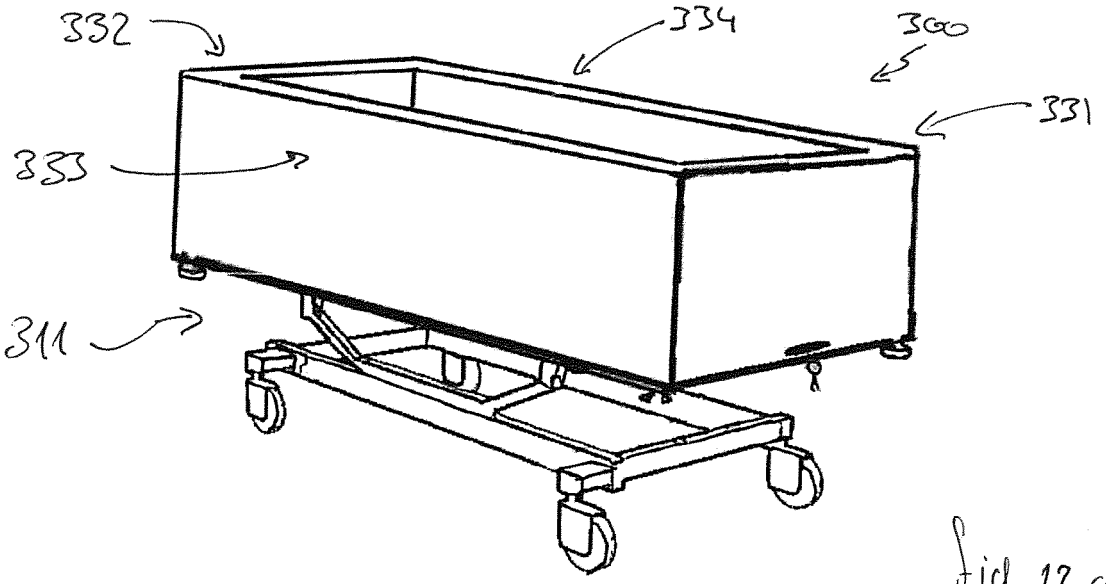


fig. 12a

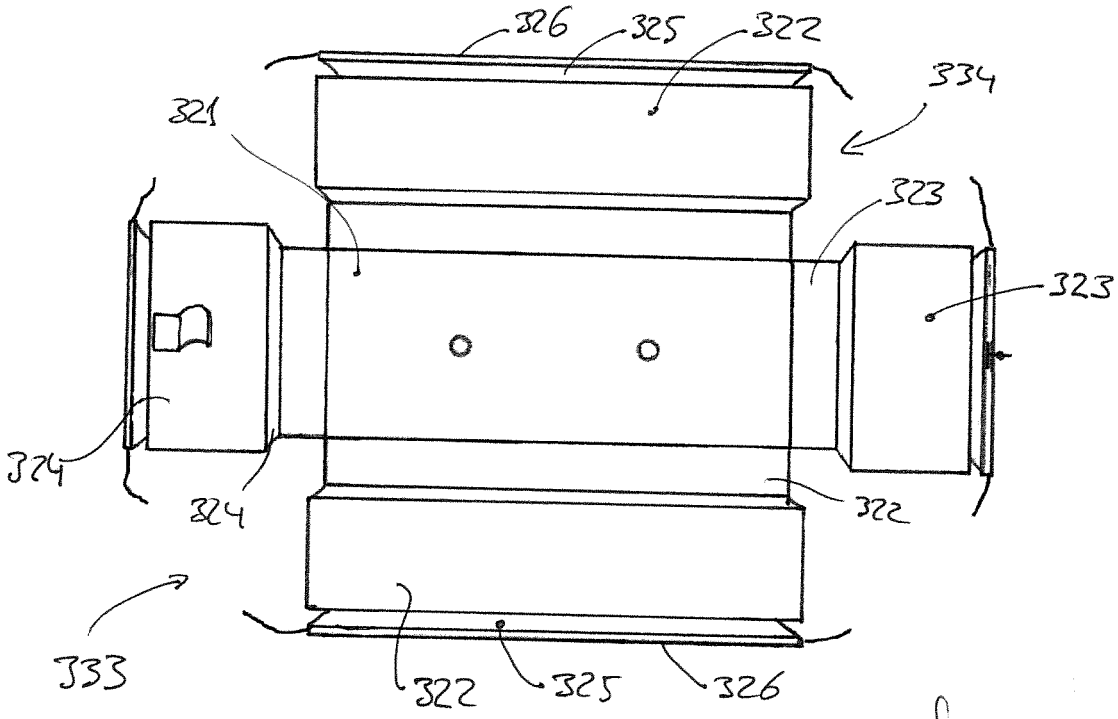


fig. 12b

REFERENCES CITED IN THE DESCRIPTION

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