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(54) **ADJUSTABLE LOUNGER**

(57) Lounger (10), comprising a frame (11) and a pivotally adjustable bed surface (12), wherein the bed surface (12) and the frame (11) comprise a co-operating combination of a member (134) projecting transversely to the longitudinal direction of the lounger and a corresponding recess (118, 172), characterised in that the recess (172) is provided with a closure in the form of a movable closing member (170), wherein a movement of the closing member allows for opening and closing the recess (172), thus allowing the projecting member (134) to be locked up in the recess when the bed surface is in the horizontal position in order to lock the bed surface in place relative to the frame.

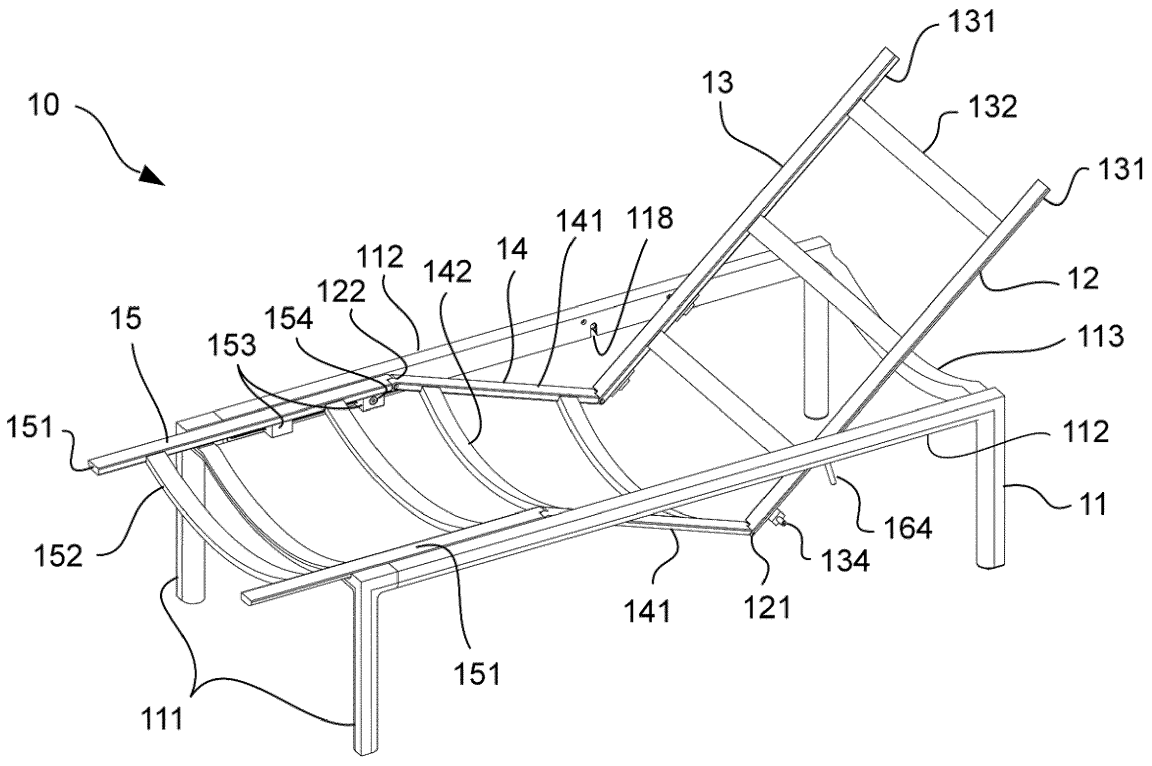

FIG 1

EP 3 078 300 A1

Description

[0001] The present invention is related to adjustable loungers, particularly for use as garden furniture or for outdoor use.

[0002] Such an adjustable lounger is known from EP 1243206 and comprises a frame that supports a bed surface. The bed surface is divided into three segments, i.e., a head segment, a middle segment, and a foot segment. The segments are connected with one another via hinges, and the head segment is attached to the frame via a fixed pivot point, whilst the foot segment is horizontally movable in a longitudinal direction of the frame. The lounger further comprises a locking mechanism in order to adjust and lock the bed surface into a specific tilt position. Such loungers in which the bed surface consists of three segments provide an ergonomic and highly comfortable sitting position compared to beds with only one single tilting segment.

[0003] One problem with loungers of the aforementioned type is locking them in the completely horizontal or flat position. Due to the various hinges, the lounger has an inherent flexibility that always causes a certain amount of play when locked. Particularly when lying, in the flat position, this play or flexibility is experienced as uncomfortable. Precisely in this flat position, in which the three segments are positioned horizontally and in line with one another, it is very difficult, or even impossible, to limit the play without additional locking of the hinging segments. In EP 1243206, this additional locking is provided by a protruding pin that engages from the frame into the head segment, and retracts therefrom when the handle of the locking mechanism is operated. The precise effect of the engagement and retraction of the pin is, however, not described in the aforementioned document, and it is not clear how this can be achieved.

[0004] In BE 1020220 the additional locking in the flat position is described in Fig. 12. A hinged gear engages the head segment at the head of the lounger. A disadvantage of such a mechanism is that the user must stand up to unlock the head segment in order to shift the bed surface from the flat position to a tilt position (sitting position).

[0005] The present invention aims to provide a lounger of the abovementioned types that is more user-friendly.

[0006] The present invention aims to provide a lounger with an adjustable bed surface that can be locked into every position in a satisfactory manner, both in a tilted and in a flat position, and in which the locking mechanism can be operated from a recumbent or seated position.

[0007] In a preferred aspect, the invention aims to allow the bed surface to be locked in every position by means of a single operation.

[0008] In a preferred aspect, the invention aims to provide a lounger with an adjustable bed surface that can be locked in every position, in which the locking means are configured such that they do not alter the appearance of the lounger.

[0009] In a preferred aspect, the invention aims to provide for steplessly variable adjustment/locking of the lounger.

[0010] According to an aspect of the invention, there is provided a lounger as set out in the appended claims.

[0011] A lounger according to aspects of the invention comprises a frame and a bed surface. The bed surface is divided into at least three parts, including a torso segment, a middle segment, and a foot segment, wherein the three parts are hingedly connected to one another and wherein the torso segment is connected to the frame by means of an advantageously fixed pivot point. The lounger comprises means for locking the bed surface in one or more tilt positions relative to the frame.

[0012] According to aspects of the invention, the lounger comprises a co-operating combination of a member projecting transversely to the longitudinal direction of the lounger and a corresponding recess. One of these two elements, i.e., the projecting member or the corresponding recess, is attached to the bed surface, preferably to the torso segment, and the other of the two elements is provided in or on the frame. The recess is configured to receive the projecting member when the bed surface is in a completely horizontal position. According to aspects of the invention, this recess is provided with a closure. This closure comprises a closing member that is advantageously horizontal and advantageously linearly movable. By moving the closure, the recess can be opened and closed. This allows the projecting member to be locked up in the recess when the bed surface is in the horizontal position, thus locking the bed surface relative to the frame.

[0013] Locking the bed surface into the flat, horizontal position by locking up a projecting member in a recess via a horizontal/linear movement of a closing member allows for developing a simple closure mechanism that can advantageously be provided at an ergonomic position of the lounger. The locking and unlocking of the bed surface in the flat position can thus be operated from a recumbent position without the user having to stand up. Loungers according to aspects of the invention are thus user-friendly.

[0014] Simplicity and user convenience may additionally or alternatively be obtained by attaching the torso segment to the frame via a fixed pivot point and by providing either the projecting member or the corresponding recess on the torso segment, at an advantageously fixed distance from the fixed pivot point. By so doing, this element (the projecting member or the corresponding recess) carries out a rotation in a vertical plane about the fixed pivot point whilst the bed surface is tilted. Furthermore, the recess is configured, e.g. by appropriate design and/or orientation, such that the recess is accessible to the projecting member, e.g., in that the projecting member can enter the recess and exit the recess by simply performing the rotation, in particular by a rotation about the flat (horizontal) position of the bed surface. This allows the projecting member to be located in the recess

in the flat position of the bed surface only whilst not being located in the recess in the tilt positions of the lounger. This considerably simplifies the closure mechanism.

[0015] Additional advantageous embodiments are described in the attached dependent claims.

[0016] Thus, a lounger is provided, comprising:

- a frame,
- a bed surface that is divided into at least three parts, including a torso segment, a middle segment, and a foot segment, wherein the three parts are hingedly connected to one another and wherein the torso segment is hingedly connected to the frame, and
- means for locking the bed surface in one or more tilt positions relative to the frame,

wherein the bed surface and the frame comprise a co-operating combination of an member projecting transversely to a longitudinal direction of the lounger and a corresponding recess, wherein the recess is configured to receive the projecting member when the bed surface is in a completely horizontal position, wherein the recess is provided with a closure in the form of a movable closing member, wherein a movement of the closing member allows for opening and closing the recess, thus allowing the projecting member to be locked up in the recess when the bed surface is in the horizontal position, in order to lock the bed surface relative to the frame.

[0017] Lounger according to paragraph 16, wherein the torso segment is attached to the frame via a fixed pivot point and the projecting member or the corresponding recess is fixedly provided on the torso segment, at a distance from the fixed pivot point, such that the projecting member or the corresponding recess carries out a rotation in a vertical plane about the fixed pivot point whilst the bed surface is tilted, wherein the recess is arranged such that the recess is accessible to the projecting member by simply carrying out the rotation.

[0018] Lounger according to paragraph 17, wherein, when the bed surface is in the completely horizontal position, the projecting member and the corresponding recess are arranged between the fixed pivot point of the torso segment and an end of the torso segment that is pivotally connected to the middle segment.

[0019] Lounger according to paragraph 17 or 18, wherein the projecting member is configured to be received in the recess exclusively when the bed surface is in the horizontal position.

[0020] Lounger according to any one of paragraphs 16 to 19, wherein the locking means comprise a lever arranged to adjust a tilt position, wherein the lever is arranged pivotally on a horizontal axle arranged transversely to a longitudinal direction of the lounger, wherein the lever is operatively coupled to the closing member, such that an adjustment of the lever causes the closing member to move between an open position and a closed position.

[0021] Lounger according to paragraph 20, wherein the horizontal axle arranged transversely to the longitudinal direction of the lounger forms a fixed pivot point for the lever relative to the frame.

[0022] Lounger according to paragraph 19 or 21, wherein the closing member is shaped as a plate that can be displaced in a horizontally extending recess in the frame, and wherein the lever engages with the plate.

[0023] Lounger according to paragraph 22, wherein the closing member is configured so as to move in a longitudinal direction of the lounger into the horizontally extending recess.

[0024] Lounger according to any one of paragraphs 16 to 23, wherein the bed surface comprises the projecting member and wherein the recess is provided in the frame.

[0025] Lounger according to any one of paragraphs 16 to 24, wherein the recess is accessible via an opening along an upper side or lower side of the lounger, which opening can be closed by the closing member.

[0026] Lounger according to any one of paragraphs 16 to 25, wherein the locking means comprise an assembly having a first end attached to the frame and a second end attached to the bed surface, wherein the distance between the first end and the second end can be set to an adjustable value.

[0027] Lounger according to paragraph 26, wherein a straight line through the first end and the second end runs in a direction that is substantially parallel to a longitudinal direction of the lounger.

[0028] Lounger according to paragraph 26 or 27, wherein the assembly comprises an energy storage device configured for providing a force in order to change the distance between the first end and the second end.

[0029] Lounger according to paragraph 28, wherein the force is provided in a direction that is substantially parallel to a longitudinal direction of the lounger.

[0030] Lounger according to paragraph 28 or 29, wherein the energy storage device comprises a gas spring.

[0031] Lounger according to any one of paragraphs 26 to 30, comprising the pivoting lever according to any one of paragraphs 20 to 23, wherein the pivoting lever and the assembly are configured to co-operate, such that, by pivoting the lever, the distance between the first end and the second end can be adjusted.

[0032] Lounger according to paragraph 31, wherein the assembly comprises the gas spring according to paragraph 30, wherein the pivoting lever is configured to operate the gas spring.

[0033] Lounger according to any one of paragraphs 26 to 32, wherein the second end is attached to the foot segment.

[0034] Lounger according to any one of paragraphs 16 to 33, wherein the closing member is horizontally linearly movable and, during horizontal linear movement, crosses the recess in order to open and close the recess.

[0035] Lounger according to any one of paragraphs 16 to 34, wherein the foot segment is configured to remain horizontal and to carry out a linear movement relative to

the frame.

[0036] Aspects of the invention will be described below by reference to the following drawings, which are provided without being exhaustive.

Figure 1 represents a perspective view of a lounger according to the invention with the bed surface in a tilted position (seated position).

Figure 2 represents a side view of the lounger of Fig. 1.

Figure 3 represents a perspective view of the lounger of Fig. 1 with the bed surface in a horizontal or flat position (recumbent position).

Figure 4 represents a side view of the lounger of Fig. 3.

Figure 5 represents an exploded view of the lounger of Fig. 1.

Figure 6 represents an exploded view of the locking mechanism of the lounger of Fig. 5.

Figure 7 represents a longitudinal section through the locking mechanism of Fig. 6.

[0037] With reference to Figs. 1 to 5, a lounger 10 according to aspects of the invention comprises a frame 11 and an adjustable bed surface 12. The frame 11 comprises four legs 111 that support two support beams 112 extending in a longitudinal direction 119 of the lounger. The support beams 112 are arranged horizontally. Two or more crossbeams 113 extend between the support beams 112, connecting them with one another.

[0038] The bed surface 12, i.e. the part of the lounger that supports the body when lying or sitting, is divided into at least three segments: a torso segment 13, a middle segment 14, and a foot segment 15. The torso segment 13 is arranged to support the upper body, including the torso and possibly the head. The middle segment 14 is arranged to support the upper legs, whilst the foot segment 15 is arranged to support the lower legs and possibly the feet. The dimensions of the three segments 13, 14, and 15 are thus advantageously adapted to their respective functions.

[0039] Each of the segments 13, 14, 15 of the bed surface 12 advantageously comprises a pair of support strips, 131, 141, 151, extending in a longitudinal direction of the lounger. Transverse strips 132, 142, 152 advantageously extend between each pair of support strips, thus connecting the corresponding support strips with one another.

[0040] The segments 13, 14, 15 of the bed surface 12 are hingedly attached to one another. The torso segment 13 is thus connected to the middle segment 14 by means of hinges 121. Hinges 121 advantageously connect the support strips 131 and 141 with one another. Likewise, the middle segment 14 is connected to the foot segment 15 by means of hinges 122. Hinges 122 advantageously connect the support strips 141 and 151 with one another. The pivoting axes of the hinges 121, 122 extend transversely to the longitudinal direction of the lounger.

[0041] Through the hinged attachment of the segments of the lounger 12 to one another, it can be obtained that the bed surface can adopt various tilt positions, allowing a person to use the lounger both in a recumbent and in a seated position. The attachment of the bed surface 12 to the frame 11 should thus be configured to that end. As best shown in Fig. 5, the torso segment 13 comprises a pair of hinges 133 configured to be attached in a hinge sleeve 115 of the frame 11. The hinge 133 may be formed of an axle end attached to each of the support beams 131, and arranged so as to rotate in the sleeve (bearing bush) 115 provided in the support beams 112. By so doing, a hinged connection is obtained between the torso segment 13 and the frame 11, allowing the torso segment 13 to pivot/tilt about a transverse axis 116. Advantageously, the distance between the hinges 133 and the hinges 121 is less than half the length of the torso segment 13 (length of the support strips 131), advantageously less than or equal to one third of this length.

[0042] Advantageously, the hinge combination 133/115 forms a fixed pivot point. In other words, the transverse axis 116 (pivot axis) is fixed both relative to the frame 11 and relative to the torso segment 13. A fixed pivot point is advantageous because it improves the rigidity of the lounger, considering the hinge 133/115 is meant to absorb substantial forces.

[0043] Advantageously, the foot segment 15 remains horizontal regardless of the tilt position of the torso segment 13. In order to allow the torso segment 13 to tilt or pivot relative to the axis 116, the foot segment 15 is configured to carry out an advantageously horizontal linear movement, advantageously in the longitudinal direction of the lounger. Slides 153, e.g., in the form of slide bearings, are attached to the support strips 151 of the foot segment 15. Slides 153 are provided to engage into a guide 114 attached to the support beam 112. Guide 114 is advantageously a linear guide extending parallel to the longitudinal direction of the support beam 112. Guide 114 may be in the form of a strip attached to the support beam 112, and slides 153 may be provided with a groove that engages with the strip of guide 114. Other possible embodiments are known to the person skilled in the art, and are easy to implement, e.g., by ball bearings.

[0044] Alternatively, it is possible to arrange the foot segment 15 in a pivotal manner. In this case, the pivot shaft of the foot segment must be advantageously horizontally linearly movable. The distance between this pivot shaft and the hinges 122 is advantageously smaller than half of the length of the foot segment 15 (length of the support strip 151).

[0045] The hinged attachment of the various segments of the bed surface 12 to one another (via the hinges 121 - 122) allows a tilting of the torso segment 13 about the axis 116 to cause a horizontal displacement of the foot segment 15 in a direction perpendicular to the axis 116 (parallel to the longitudinal direction of the lounger, and thus parallel to the support beams 112). The position of the middle segment 14 and the foot segment 15 is thus

precisely determined by the (tilt) position of the torso segment 13.

[0046] For user comfort, the lounger 10 comprises a locking mechanism 16 for (reversibly) locking the bed surface 12 in specific tilt positions. The locking mechanism 16 may be unilateral, i.e., provided only on one side of the lounger, or bilateral, i.e., provided on both sides of the lounger. In the figures, an identical locking mechanism 16 is provided on both sides of the lounger 10. The locking mechanism 16 advantageously comprises means to fix (lock in), and, when desired, to unlock, a relative position between the frame 11 and the bed surface 12, for several tilt positions of the bed surface.

[0047] With reference to Fig. 6 and 7, the locking mechanism 16 comprises an assembly 165 of adjustable length, e.g., telescopic, that extends between a first attachment end 161 and a second attachment end 162. On the first attachment end 161, the assembly 165 is advantageously hingedly attached to the frame 11. On the other, advantageously opposite attachment end 162, the assembly 165 is advantageously hingedly attached to the bed surface 12. Advantageously, the assembly 165 is attached to the foot segment 15 at end 162. The assembly 165 is thus configured to hold an adjustable distance between the two attachment ends 161, 162. Such assemblies are known, e.g., a sliding bar connected to a rack and pinion, which can be clamped into a specific position by means of a pin; another example is described in Fig. 5 and 6 of EP 1243206.

[0048] Advantageously, the locking mechanism comprises an energy storage means able to provide, when unlocked, a force to adjust the length of the assembly. This assists the user in adjusting the tilt position. A known energy storage means is a spring.

[0049] Additionally, the locking mechanism 16 comprises an actuator 164 to lock and unlock the adjustable distance of the assembly 165. The locking mechanism 16 is advantageously operated from the seated or recumbent position. This is advantageous, given that it allows users to use their body weight in order to change the position of the bed surface. This allows for faster adjustment to the desired tilt position.

[0050] Advantageously, the assembly 165 of the locking mechanism 16 is continuously or steplessly adjustable. To this end, the assembly 165 may advantageously take the form of a lockable gas spring 165. The gas spring 165 is provided with a control pin 169 that unlocks the gas spring 165 when pushed so that the tilt position can be adjusted.

[0051] The gas spring 165 is provided with a tow eye 166 on an end 162, by which it is pivotally attached to the bed surface 12 (foot segment 15). To this end, foot segment 15 comprises an axle 154 that extends transverse to the longitudinal direction and engages with eye 166. Alternatively, the locking mechanism 16 may be adapted so that the attachment is to another segment of the bed surface 12.

[0052] Advantageously, the support beams 112 are hollow, such that the gas spring 165 can be housed in the support beam 112. This solution protects the gas spring from environmental influences, and provides the lounger with an aesthetically pleasing design. At the level of axle 154, the support beam 112 is provided with a groove 117 that allows axle 154 to enter the hollow part of the support beam 112.

[0053] Advantageously, control pin 169 is provided on the end 161 of gas spring 165. The control pin 169 is operatively connected to the operating member 164. This operating member acts as a lever by means of which the gas spring 165 can easily be operated.

[0054] A housing 160 is affixed to the frame 11, e.g., within the hollow support beam 112. A slot 163 provided in the housing 160 receives the end of gas spring 165 that is provided with the control pin 169.

[0055] The gas spring 165 is advantageously pivotally attached at this end to the housing 160. Operating member 164 is pivotally attached to housing 160 by means of an advantageously fixed axle 168. Axle 168 is advantageously arranged transverse to the longitudinal direction of the lounger. The length of the operating member 164 is advantageously such that it protrudes from the support beam 112, allowing users to operate the locking mechanism easily. The attachment of the gas spring 165 to the housing 160 may be achieved by attaching a tow eye 167 to the end of gas spring 165. The eye of tow eye 167 is configured such that the operating member 164 protrudes through the eye. Through the pivotal attachment of the operating member 164 to the fixed axle 168 it is obtained that the gas spring 165 is connected to housing 160.

[0056] Control pin 169 advantageously protrudes from the eye of tow eye 167 and is thus operatively connected with the operating member 164. By pivoting member 164 about the axle 168, control pin 169 is pushed in, thus unlocking the gas spring 165. The tilt position of the bed surface 12 can now be changed. In case the gas spring 165 is a compression spring, it assists in tilting into the flat, recumbent position by pushing the foot segment 15 away from the axis 116.

[0057] An advantage of the above locking mechanism, wherein the operating member 164 is attached by means of a fixed pivot point 168 to the frame 11, is that the operating member 164 maintains its position relative to the frame 11. This provides greater user-friendliness in operation than if operating member were to move along with the foot segment 15, and improves the ergonomics of the lounger. It should be noted that the gas spring 165 in such arrangement may be replaced by any mechanism that can be controlled via a pivoting operating member 164 to lock and unlock a relative position, e.g. a rack and pinion arrangement.

[0058] The above locking mechanisms allow the bed surface to be locked, with acceptable rigidity, into a tilted position, wherein the torso segment 13 forms an angle α with the horizontal that is greater than zero. However, when the bed surface 12 is in a completely horizontal or

flat position, i.e. when α is equal to zero, the forces all act in line with one another, thus considerably worsening the rigidity of the lock. Thus, an additional lock is provided for the flat position.

[0059] According to aspects of the invention, this additional lock is provided such that the user can operate it in the recumbent/seated position. Advantageously, the additional lock for the flat position is operated via the same operating member of the locking mechanism for the tilt positions.

[0060] With reference to Fig. 5 to 7, the frame 11, specifically one or both support beams 112, comprises a recess 118 arranged at the level of a transversely protruding pin 134 that is advantageously affixed to the torso segment 13. Pin 134 serves as a locking pin for the bed surface in the flat position. When the torso segment 13 is tilted into the horizontal position (angle α becomes smaller), the pin 134 moves into the recess 118. A same recess 172 is provided in the housing 160 in a position corresponding to recess 118. It will be clear that the respective positions of the locking pin 134 and the recess 118, 172 are interchangeable between the frame and the bed surface (torso segment). It will also be clear that the recess 118, 172 should be open in the direction of approximation of the locking pin 134 towards the recess 118. In the present example, the locking pin 134 carries out a fixed rotation relative to the pivot point 133 in a vertical plane. The recess 118 must thus be accessible to the locking pin via an opening orientated tangentially to the rotation, e.g., to an underside, or - depending on the position of the locking pin 134 relative to the pivot point 133 - upper side of the support beam 112 in order to be able to receive the locking pin 134.

[0061] A possible locking mechanism 17 for the flat position comprises a sliding plate 170 that can move into a groove 173 in the frame 11. In the present example, groove 173 is arranged in the housing 160, and advantageously extends in a direction parallel to the longitudinal direction of the lounger.

[0062] Advantageously, groove 173 crosses the recess 172, such that the sliding plate 170, located in the groove 173, closes the recess 172. Sliding plate 170 is provided with a recess 171 that is configured such that, by moving sliding plate 170 along groove 173, recess 171 can be brought into a position corresponding with recess 172, causing it to open and receive or release the locking pin 134.

[0063] The sliding plate 170 advantageously extends from recess 172 to operating member 164. At the level of the operating member 164, a second recess 174 is advantageously provided in the sliding plate 170. The operating member 164 extends through the second recess 174. By pivoting member 164 about axle 168, it is obtained that sliding plate 170 can be moved along groove 173. In other words, operating member 164 allows the recess 172 to be opened and closed. When recess 172 is closed and locking pin 134 is received in the recess, the bed surface 12 is locked into the flat position. The user can thus lock in the flat position from a recumbent position on the lounger, advantageously using the same handle as is used to lock in the tilted positions.

[0064] By pivoting operating member 164 about the fixed axle 168 it is advantageously also obtained that a same action of operating the member 164 allows for locking the bed surface in a tilted position and for locking the bed surface in the flat position. More specifically, pivoting member 164 until abutment against the control pin 169, unlocks the locking mechanism 16, thus allowing a new tilt position to be set. The new tilt position can be locked by tilting member 164 away from the control pin 169. If one wishes to place the bed surface 12 in the completely flat position, it suffices to pivot member 164 about the axle 168 until the recess 171 of sliding plate 170 releases the recess 172 in the housing 160. In this pivot position of member 164, operating member 164 advantageously abuts against control pin 169, allowing the bed surface 12 to be adjusted. The bed surface 12 can then easily be placed in the flat position by moving the locking pin 134 into the recess 172. Next, pivoting member 164 in the advantageously opposite direction will shift the sliding plate 170 along groove 173, such that recess 171 is no longer aligned with recess 172, and the latter is closed, thus locking in the flat position. With member 164 in this tilt position, member 164 does advantageously not abut against control pin 169, thus also locking the locking mechanism 16.

[0065] Locking pin 134 is advantageously arranged between hinge 133 and hinge 121. It may alternatively be arranged on the opposite side of hinge 133 (relative to hinge 121). In the latter case, the recesses 118 and 172 and the sliding plate 170, are moved along.

[0066] A flexible material (not shown), e.g. a fabric, may be streched over the bed surface. It may be clamped to the support bars 131, 141, 151. Alternatively, an additional clamping structure may be provided on each segment. It will be clear that any other material capable of supporting the body may be provided on the bed surface 12 as well, e.g. wooden beams.

Claims

1. Lounger (10), comprising:

- a frame (11),
- a bed surface (12) that is divided into at least three parts, including a torso segment (13), a middle segment (14), and a foot segment (15), wherein the three parts are hingedly connected to one another and wherein the torso segment (13) is hingedly connected to the frame (11),
- means (16) for locking the bed surface (12) in one or more tilt positions (α) relative to the frame (11),

wherein the bed surface (12) and the frame comprise (11) a co-operating combination of a member (134) projecting transversely to a longitudinal direction (119) of the lounger and a corresponding recess (118, 172), wherein the recess is configured to receive the projecting member (134) when the bed surface is in a completely horizontal position,
characterised in that the recess (172) is provided with a closure in the form of a movable closing member (170), wherein a movement of the closing member allows for opening and closing the recess (172), thus allowing the projecting member (134) to be locked up in the recess (172) when the bed surface is in the horizontal position, in order to lock the bed surface relative to the frame.

2. Lounger according to claim 1, wherein the torso segment (13) is attached to the frame via a fixed pivot point (133, 115) and wherein the projecting member (134) or the corresponding recess is fixedly provided on the torso segment, at a distance from the fixed pivot point, such that the projecting member or the corresponding recess carries out a rotation in a vertical plane about the fixed pivot point when the bed surface is tilted, wherein the recess (118, 172) is arranged such that the recess is accessible to the projecting member (134) by simply carrying out the rotation.

3. Lounger (10) according to claim 2, wherein, when the bed surface (12) is in the completely horizontal position, the projecting member (134) and the corresponding recess (172) are arranged between the fixed pivot point (133, 115) of the torso segment (13) and an end of the torso segment that is pivotally connected to the middle segment (14).

4. Lounger (10) according to any one of the preceding claims, wherein the locking means (16) comprise a lever (164) arranged to adjust a tilt position (α), wherein the lever is arranged pivotally on a horizontal axle (168) arranged transversely to a longitudinal direction of the lounger, wherein the lever is operatively coupled to the closing member (170), such that an adjustment of the lever causes the closing member to move between an open position and a closed position.

5. Lounger (10) according to claim 4, wherein the horizontal axle (168) arranged transversely to the longitudinal direction of the lounger (10) forms a fixed pivot point for the lever (164) relative to the frame (11).

6. Lounger (10) according to claim 5, wherein the closing member (170) is shaped as a plate that can be displaced in a horizontally extending recess (173) in the frame (11), and wherein the lever (164) engages the plate (170).

7. Lounger (10) according to any one of the preceding claims, wherein the bed surface comprises the projecting member (134) and wherein the recess (172) of the assembly is provided in the frame (11).

8. Lounger (10) according to any one of the preceding claims, wherein the recess (172) is accessible via an opening along an upper side or a lower side of the lounger, which opening can be closed by the closing member (170).

9. Lounger (10) according to any one of the preceding claims, wherein the locking means (16) comprise an assembly (165) having a first end (161) attached to the frame and a second end (162) attached to the bed surface (12), wherein the distance between the first end and the second end can be set to an adjustable value.

10. Lounger (10) according to claim 9, wherein a straight line through the first end (161) and the second end (162) runs in a direction that is substantially parallel to a longitudinal direction of the lounger.

11. Lounger (10) according to claim 9 or 10, wherein the assembly (165) comprises an energy storage device configured for providing a force in order to change the distance between the first end (161) and the second end (162).

12. Lounger (10) according to claim 11, wherein the energy storage device comprises a gas spring (165).

13. Lounger (10) according to any one of claims 9 to 12, comprising the pivoting lever (164) as is described in any one of claims 4 to 6, wherein the pivoting lever (164) and the assembly (165) are configured to cooperate, such that, by pivoting the lever (164), the distance between the first end (161) and the second end (162) can be adjusted.

14. Lounger according to any one of claims 9 to 13, wherein the second end (162) is attached to the foot segment (15).

15. Lounger (10) according to any one of the preceding claims, wherein the foot segment (15) is configured to remain horizontal and to carry out a linear movement relative to the frame (11).

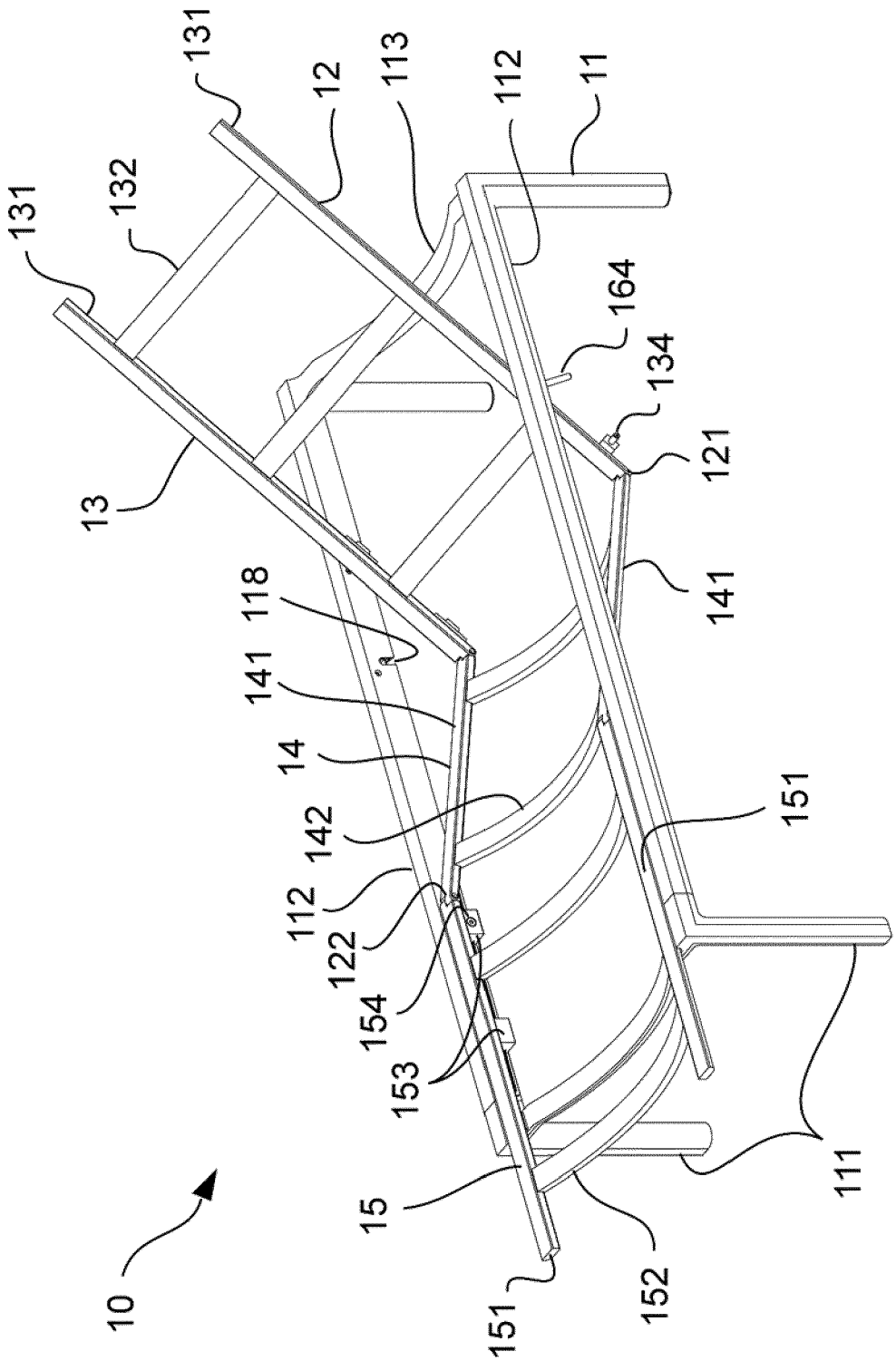
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FIG 1

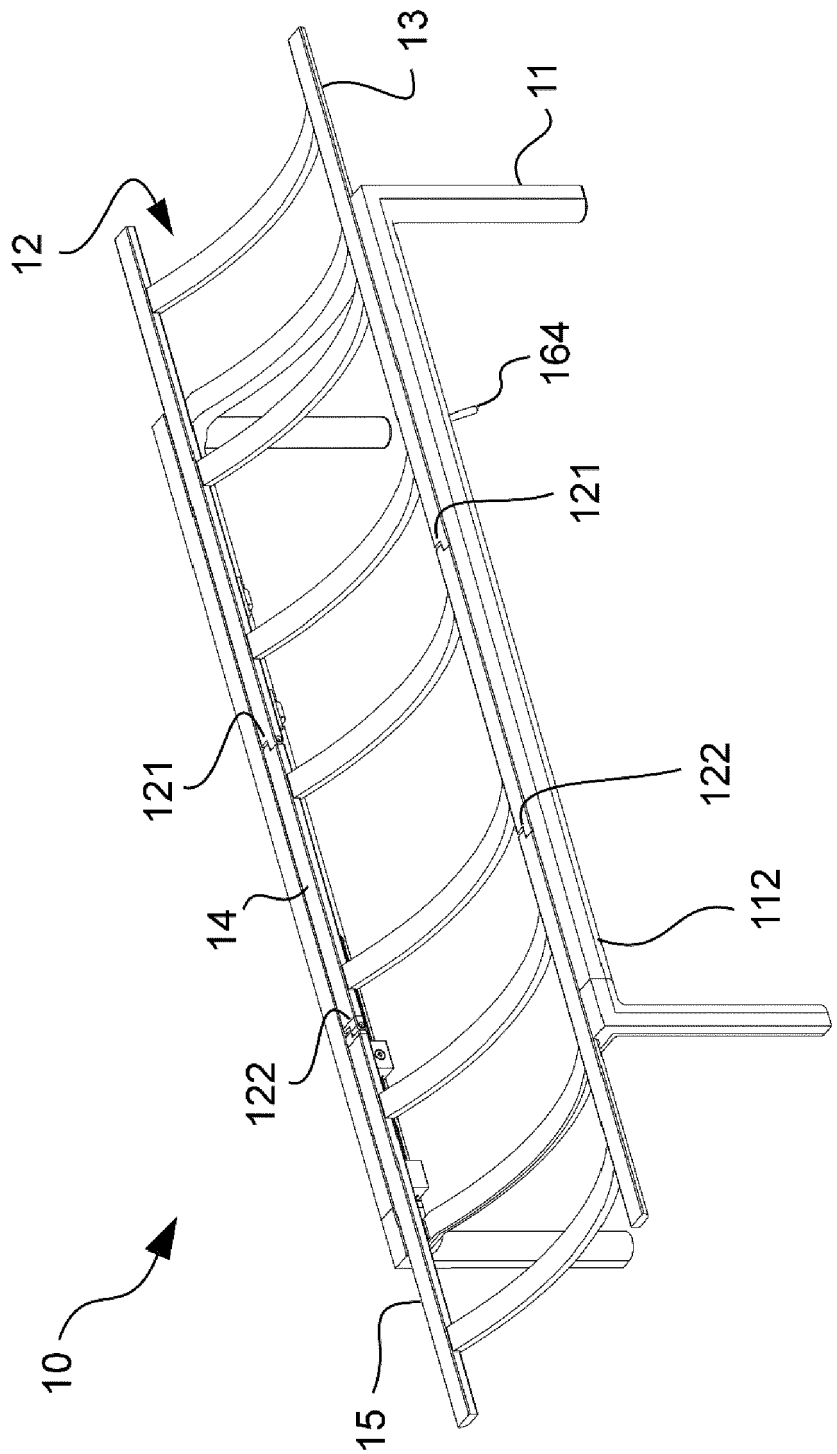

FIG 3

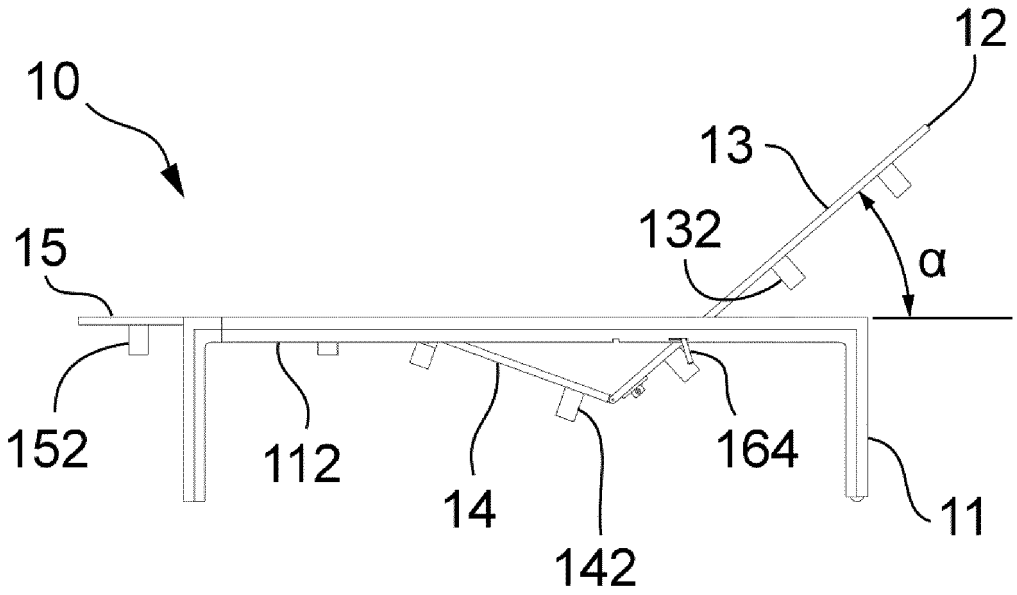

FIG 2

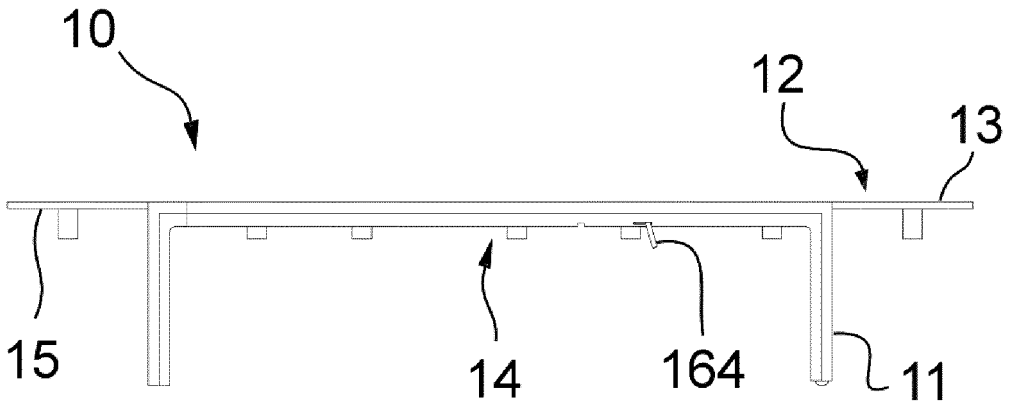

FIG 4

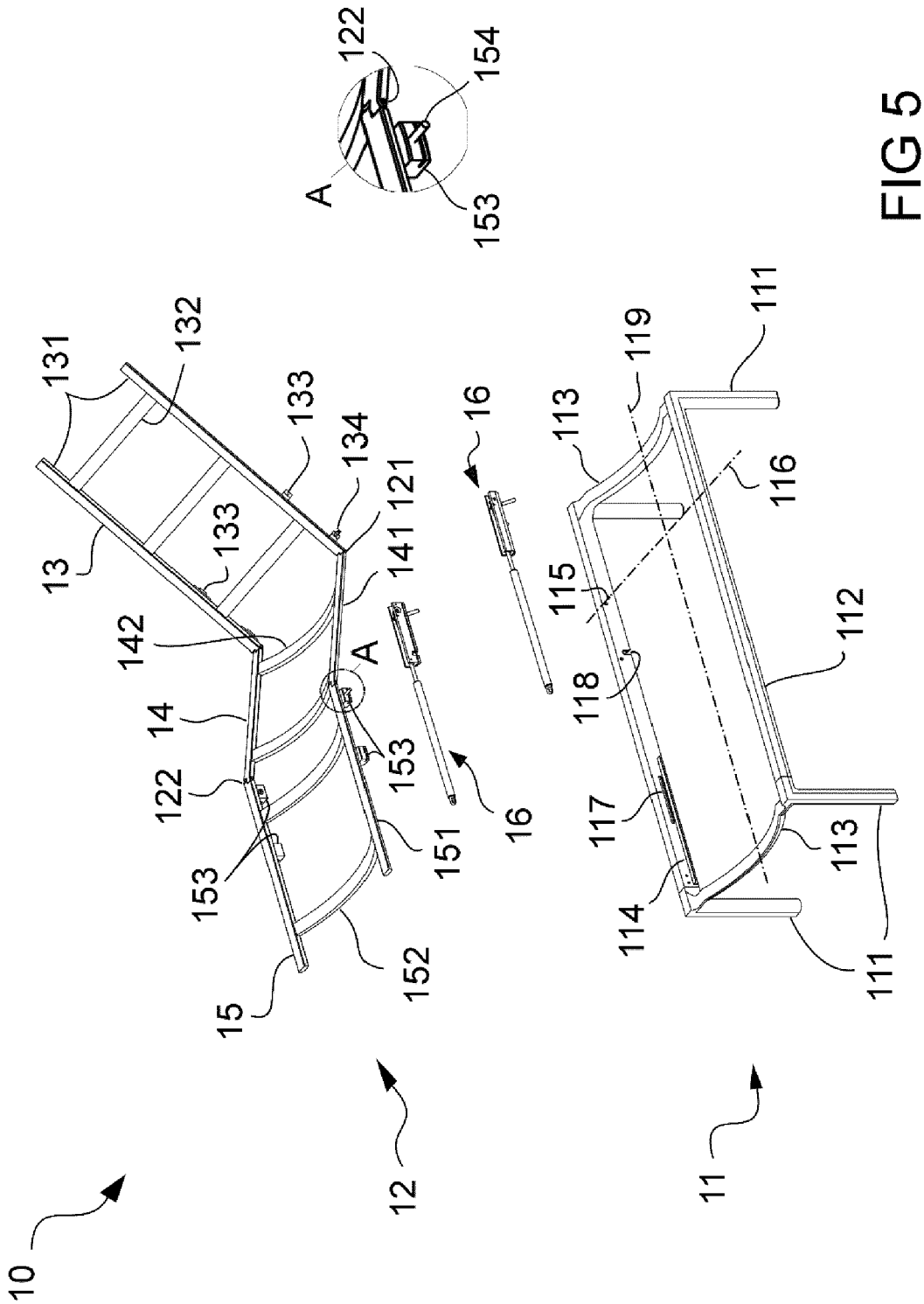
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FIG 5

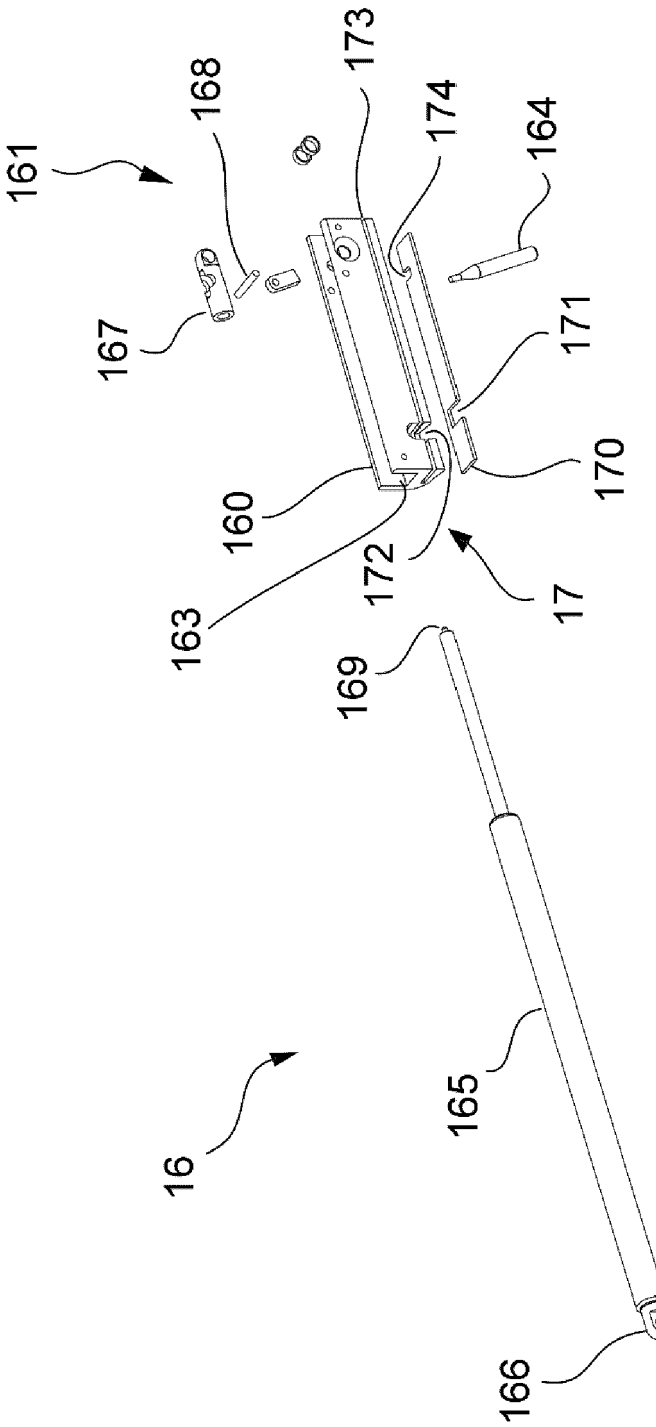

FIG 6

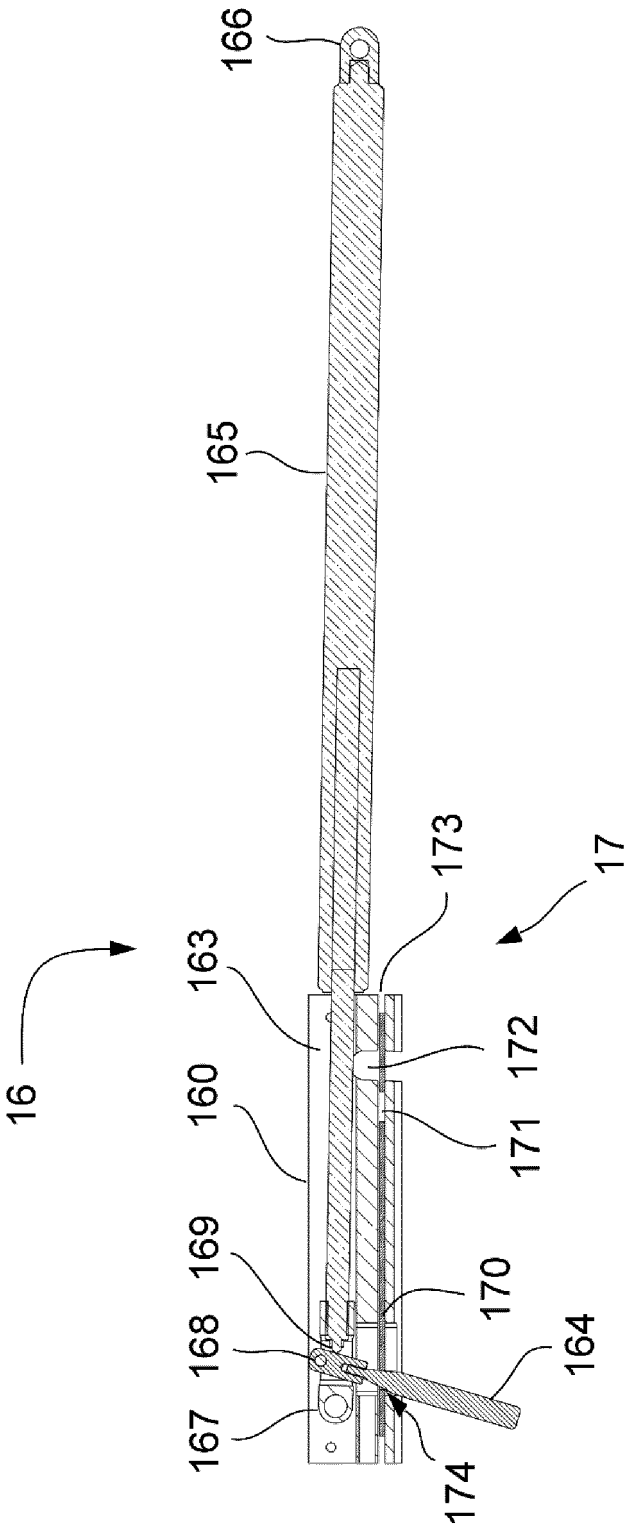

FIG 7

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EUROPEAN SEARCH REPORT

Application Number
EP 16 16 4439

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A	EP 1 243 206 A2 (REICHELT WOLFGANG) 25 September 2002 (2002-09-25) * abstract; figures 1,2,5 * * page 3, paragraphs 13,14 *	1	INV. A47C20/08 A47C1/14
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	10 June 2016	Tempels, Marco

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