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(71) Applicant: **DART CANYON VENTURES, INC.**
[US/US]; 150 North 600 East, American Forks, Utah
84003 (US).

(72) Inventors: **WHITE, Elizabeth**; 1500 North 600 East,
American Forks, Utah 84003 (US). **ROSEVELL, An-**
drew, Michael; 147 Wymont Terrace, Provo, Utah 84604
(US). **DEMARTIN, Stefano**; 673 North 800 East, Provo
Utah 84604 (US). **OLDHAM, Joshua, Robert**; 972 North
1200 East, Provo, Utah 84604 (US). **SLIVENIS, Jason,**
Thomas; 962 West 2000 North, Provo, Utah 84604 (US).

LARSEN, Gerrit, Tennyson; 1960 North Canyon Road,
Provo, Utah 8406 (US). **NICHOLSON, Bret, David**; 430
North 1220 West, Provo, Utah 84604 (US).

(74) Agent: **PLAGER, Mark**; Plager Law Offices, PC, 16152
Beach Boulevard, Suite 207, Huntington Beach, CA 92647
(US).

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(54) Title: PATIENT POSITIONING APPARATUS

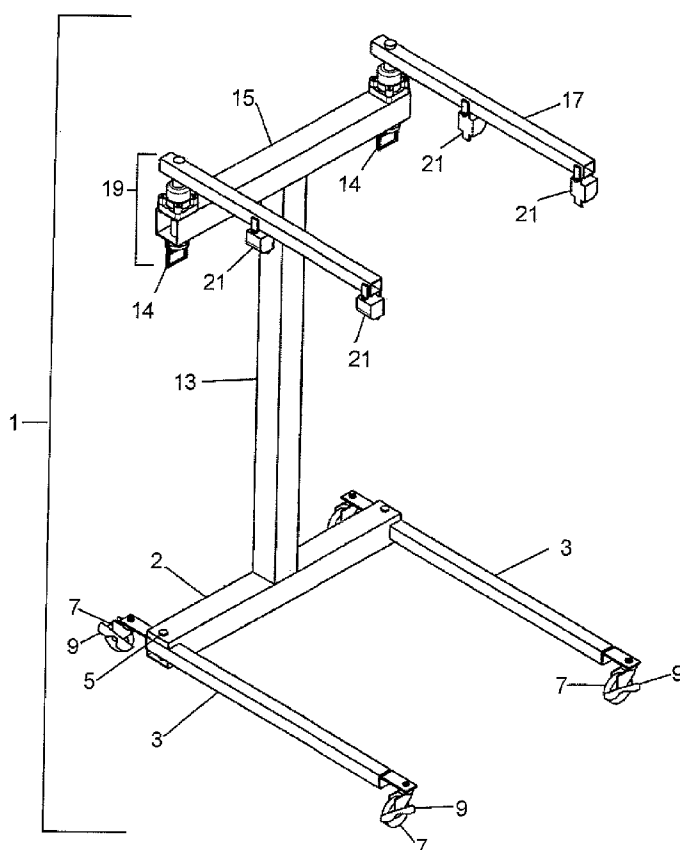


Figure 1

(57) Abstract: A patient positioning apparatus comprising a base, a support column, at least one positioning arm on the support column capable of being positioned over a bed and having a buckle and strap capable of securing to a patient support with a receiving buckle so that a patient can be partially or totally suspended when an adjustable bed is lowered. The apparatus further comprising a telescoping support column and horizontal support for holding a first and second positioning arm. The positioning arms further comprising locking pivots for extending and retracting. Patient repositioning is effectuated by positioning the arms over a patient, extending straps with buckle inserts into receiving buckles on a fabric gripper [that] secured to bed linens. A patient positioning apparatus can further be mounted to either a ceiling or a wall or can comprise a swiveling support column.

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PATENT APPLICATION

OF

ELIZABETH WHITE

FOR

PATIENT POSITIONING APPARATUS

TO WHOM IT MAY CONCERN:

Be it known that Elizabeth White, a *citizen of the United States of America*, has invented a new and useful apparatus for positioning a bedridden patient, of which the following is a specification:

CROSS REFERENCE TO RELATED APPLICATIONS:

United States Patent Application No. 11/170,605 "Patient Mobility Apparatus"

FEDERALLY SPONSORED RESEARCH:

Not Applicable

SEQUENCE LISTING OR PROGRAM:

Not Applicable.

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to an apparatus for assisting a caregiver when transferring, rotating, or otherwise repositioning a bedridden person. More particularly, the present invention comprises a single collapsible unit possessing arms for repositioning a bedridden patient by utilizing existing lift technology on a hospital bed to create suspension or patient movement.

Description of Related Prior Art

Immobility of a patient contributes greatly to the deterioration of patient health. Immobile patients are prone to bedsores and pneumonia. A bed sore can take months or years to heal depending on the severity and location of the sore. Pneumonia occurs in immobile patients because secretions pool in the lungs fostering bacterial growth. Generally side-to-side turns of such patients, approximately every two hours, can prevent many occurrences of bedsores and pneumonia. Additionally, side-to-side turns are necessary to accomplish examinations of the patient. However, turns of this nature are generally the responsibility of hospital nurses, orderlies, or other staff in similar types of facilities.

Additionally, patients require the head of the bed to be raised to facilitate breathing and increase comfort. As a result of this incline, patients tend to slide toward the foot

of the bed, impeding a patient's normal breathing and digestive functions and resulting in patient discomfort.

When a patient is obese or larger than the staff member, the force required to properly reposition the patient is considerable. Consequently, multiple staff members are required to reposition the patient manually. Moreover, if additional staff members are unavailable, the lone staff member is susceptible to injuries while attempting to transfer or reposition the patient without either mechanical assistance or, additional staff labor.

Back injury is a common work injury of nurses and hospital staff generally as a result of moving overweight, obese or patients who are significantly larger than the staff member. The act of turning a patient from side to side precludes proper body mechanics for lifting. In addition, obesity in the United States is increasing in marked amounts. Patient weight increases will only exacerbate the rate of back injuries among nurses, and increase the number of workers compensation claims filed as a result of such injuries as well as reduce the number of able body hospital staff. Consequently, assistance is necessarily required to accomplish necessary patient movement as well as protect hospital staff members against injury proximately resulting from patient repositioning, turning and transference.

Moreover, the task of patient repositioning is labor intensive and time consuming. Generally, patient movement

requires at least two staff members. Generally nurses are female and significantly smaller in stature and weight than the patients they are assigned to care for. Furthermore, hospitals and skilled nursing facilities are homes to patients weighing in excess of 250 pounds. Consequently, at least three staff members are sometimes required to reposition a patient of this size. With the increase of nursing and staffing shortages, it is frequently impossible to gather enough staff members to move a large or oversized patient. Thus, either patient care suffers or the risk of injury to staff members is greatly increased.

Another problem is money. Devices that incorporate machines, motors, and other complicated machinations to effectuate lift and other movement cost much more money than those that don't as well as incur more potential for civil liability should one of those machinations fail. Further, existing devices do not have a simple and effective means of gripping fabric, draw sheets, or standard hospital bed linens on which a patient is lying. Typically, devices such as that found in United States Patent # 5,890,238 to Votel are meant for patient transfer only and because of the gripping design are not easy for a caregiver to attach to linens.

Therefore a need exists for a functional, yet simple to operate, patient repositioning apparatus. Such an apparatus must be operational by one staff member without compromising

patient safety and staff member safety; easy to install and operate as well as not consume scarce space in hospital or skilled nursing facility; must not compromise patient safety when effectuating the tasks of patient repositioning; can be used by a single caregiver to reposition a patient; is capable of easy attachment to linens for suspension of a person; and does not require expensive internal machinations to accomplish patient lift but uses existing lift technology on beds to accomplish suspension or movement of a patient.

SUMMARY OF THE INVENTION

Accordingly, one object of the present invention is to provide an apparatus capable of being operated by one person to reposition a patient longitudinally in a bed, reposition a patient laterally within the bed, turning a patient on their side, or lifting a patient.

A second object of the invention is an apparatus that easily integrates with standard hospital beds during usage.

A third object of the invention is to provide an apparatus which repositions a patient without injuring either the patient or staff member.

A fourth object of the invention is to provide an apparatus that does not consume precious space in skilled care facilities, hospitals or patient homes, and is easily stored when not in service.

A fifth object of the invention is to provide an apparatus which is inexpensive to produce and thus easily purchased by medical care facilities and family members faced with caring for immobile loved-ones in their home.

A sixth object of the invention is to reposition a patient to facilitate normal respiratory and digestive function.

An eighth object of the invention is to reduce patient feelings of patient isolation because the apparatus is less obtrusive than the prior art.

A ninth object of the present invention is to provide a repositioning apparatus that is able to use the lift of a hospital bed to reposition a patient through suspension when the bed is lowered.

A tenth object of the present invention is to provide a simple attachment device that will easily secure to linens.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is an elevated perspective view of a patient positioning apparatus with positioning arms in an extended position.

Fig. 2 is an elevated perspective view of a patient positioning apparatus with positioning arms in a retracted position.

Fig. 3 is an elevated perspective view of a patient positioning apparatus positioned over a standard hospital bed with adjustable straps secured to a support sheet.

Fig. 4 is an elevated perspective view of a patient positioning apparatus positioned over a standard hospital bed with two adjustable straps secured to a support sheet and moving a person lying on the support sheet a quarter turn.

Fig. 5 is a side view of a patient positioning apparatus positioned over a standard hospital bed with adjustable straps secured to a support sheet and suspending a person lying on the support sheet.

Fig. 6 is an elevated perspective view of a baseless patient positioning apparatus secured to a wall and positioned over a hospital bed.

Fig 6a is an elevated perspective view of a baseless patient positioning apparatus secured to a wall.

Fig. 7 is an elevated perspective view of a ceiling mounted embodiment of a patient positioning apparatus.

Fig. 8 shows a hook and rod arrangement fastened to a support sheet.

Fig. 8a shows a detailed view of a hook and rod arrangement fastened to a support sheet.

Fig. 9 is an exploded view of a patient positioning apparatus with retractable positioning arms.

Fig. 10 is an elevated front perspective view of a fabric gripper incorporating interlocking serrated teeth for gripping fabric.

Fig. 10a is an elevated front perspective view of a fabric gripper closed with wedges visible.

Fig. 11 is an elevated rear perspective view of a fabric gripper incorporating interlocking serrated teeth for gripping fabric.

Fig. 12 is a side view of a fabric gripper incorporating interlocking serrated teeth for gripping fabric.

Fig. 13 is an elevated front perspective view of a fabric gripper incorporating interlocking serrated teeth for gripping fabric in an open position.

Fig. 14 is an elevated rear perspective view of a fabric gripper incorporating interlocking serrated teeth for gripping fabric in an open position.

DETAILED DESCRIPTION OF THE DRAWINGS AND PREFERRED EMBODIMENTS

A complete understanding of this invention can be gained through reference to the drawings in conjunction with a thorough review of the disclosure herein. To facilitate this understanding, a table of commonly used reference numerals is provided.

1 - positioning apparatus	33 - support sheet
2 - base support	31 - clamps
3 - leg	36 - wall mounted device
4 - pivot shaft	37 - wall mount bracket

5 - base rivets	38 - wall board
6 - flange bearing	39 - wall stud
7 - wheels	40 - ceiling mounted device
8 - bearing extension plate	41 - bracket bolt
9 - wheel locks	42 - overhead positioning arm support
10 - hole stiffener	45 - hook
11 - sleeve	46 - support sheet fabric
12 - top washer	47 - rod
13 - support column	49 - hole in support sheet
14 - washer handle	111 - top bar
15 - horizontal support	113 - bottom bar
16 - belt support tabs	114 - hinge
17 - positioning arm	115 - serrated teeth
18 - bottom washer	117 - clamp support
19 - arm pivot assembly	119 - clamp handle
20 - spacer	121 - wedge
21 - retractable belt assembly	125 - pivot pin
23 - straps	
24 - buckle inserts	
25 - bed	
26 - person	
27 - support sheet pocket	
29 - receiving buckle	

Figure 1 is illustrative of a preferred embodiment for repositioning a person in a standard hospital bed. As used in

this patent, suspended or suspend would also include partially suspended or partially suspend where the bed or some other member also assists in supporting the patient. In this embodiment a positioning apparatus **1** is composed of a moveable base with wheels **7**; a vertical support column **13**; and having one or more positioning arms **17** on the top of the device **1** containing straps **23** and retractable belts **21** that extend downward and secure to a patient support sheet **33**. (Shown in Figures 3 & 4) As shown in Figures 3 and 4 a patient on a bed can be repositioned by using the vertical movement of a standard hospital bed. (e.g., electrical, crank actuated, other mechanical motion, and etc) A bed **25** is raised upward towards the positioning arms **17** thereby giving slack to gripping straps **23** with retractable belt assembly **21** on the arms **17**. Once there is slack in the straps **23** a buckle **24** on the ends of the straps can be inserted and locked into a buckle latch **29** on a patient support sheet **33**. Once the buckles **24** are locked the bed **25** can be lowered and therefore a person is lifted by being suspended when the bed **25** is lowered thereby creating a sling.

An exemplary embodiment of a base portion incorporates one or more legs **3** capable of extending in opposite directions from either the anterior or posterior of the apparatus. It is a preferred embodiment that these legs **3** telescope, as in Figures 1 and 2, thereby allowing them to extend under a bed or retract when the apparatus is not in use thus, minimizing

the space necessary to store the apparatus and to account for size differences in beds. Available means for forming a base with legs, wheels, swivels, and their various embodiments including locking and clamping mechanisms are described in related United States Patent Application No. 11/170,605 "Patient Mobility Apparatus" to White disclosed above.

However, in an alternate embodiment, the base can be folded, or otherwise extended, collapsed, or legs locked for easy maneuverability and for providing sufficient stability.

Figures 1 and 2 also show a support column **13** that coupled to a base using known means. In a preferred embodiment, a support column **13** is fixed and is capable of supporting a repositioning structure comprised of a horizontal support **15** having one or more positioning arms **17**. The repositioning structure is typically fixed using known means such as common welding techniques or being inserted and fastened to a groove in the support column **13** as is shown in Figures 1 and 2 to the upper portion of the support column **13**. However, the repositioning structure can also be fixed to any place on the support column **13** so long as it is capable of being positioned over a bedridden person for repositioning.

The support column **13** of the preferred embodiment is constructed of powder-coated steel and is 4 inches square which has been proven to withstand the weight of a person **26** - even those of substantial weight - suspended by arms **17**.

In an alternate exemplary embodiment, (not shown) an outer column of the support column can swivel around an inner column with apertures. The outer column support, also having apertures, is capable of aligning with those of the inner column by inserting the outer column over the inner column. In this way the swivel can be locked by inserting a locking pin through each of the inner and outer column support apertures. Other known means for creating a swiveling column will be immediately recognized by those skilled in the art.

Most hospital beds are of a standard height. Because of the uniform height of beds, a fixed height support column **13** will prove to be an effective embodiment of the present invention. However, because some beds will vary in height and will vary in the levels of vertical movement it is sometimes preferable to have an embodiment of the present invention that can also accommodate vertical movement.

To effectuate vertical movement for the present invention to account for the differences in bed sizes, a crank assembly or an hydraulic assembly described in related United States Patent Application No. 11/170,605 "Patient Mobility Apparatus" to White disclosed above may be incorporated into the present invention.

The repositioning structure atop the support column **13** is used for repositioning a patient **26** in a standard hospital bed **25**. The position of the repositioning structure and its associated structures such as its arms **17** relative to the

hospital bed **25** and the motor incorporated in to the hospital bed **25** is used as the means for repositioning a patient **26**. Standard hospital beds typically come with an electric motor or other adjustable beds used to raise, lower, or otherwise place the bed **25** in various positions. Taking advantage of this standard lifting technology [motor] relative to the present invention allows for one caregiver to easily reposition a patient **26** using the various embodiments of the present invention.

Figures 3 and 4 illustrate repositioning movement using a preferred embodiment of the present invention. In Figure 3 a person **26** is laid flat on a patient support sheet **33** that has pockets **27** capable of receiving a rod **47** making them rigid and also having receiving buckles **29** for receiving straps **23** with buckle inserts **24**. A caregiver then positions the bed to an appropriate distance below the arms **17** such that the straps **23** are slack and the buckle inserts **24** can be inserted into the receiving buckles **29**. Once the buckle inserts **24** are inserted into the receiving buckles **29** a caregiver then can either take out the slack in the straps **23** through adjustment of the straps **23** through automatic adjustment using known automatic retraction in the retractable belt assembly **21** or through manual adjustments methods. Any remaining slack, if any, can be taken out by lowering the bed and, once completely taken out, the patient **26** will be suspended on the support sheets **33**. Once the patient **26** is suspended a caregiver can change

bed sheets or perform other various tasks related to caring for a patient.

Retractable belt assemblies **21** can be coupled to the positioning arms **17** using support tabs **16** (See, Figure 9) whereby a rivet (not shown) can be inserted through the tab and through a positioning arm **17**. Equivalent methods in the art will be immediately recognizable for securing similar assemblies to metal structures such as those disclosed.

For example, Figure 4 demonstrates how one embodiment of the present invention can be used to turn a patient a quarter turn by only inserting the buckle inserts **24** into the receiving buckles **29** on one side of a patient support sheet **33**. In this way, once the bed is lowered so that slack is taken out of the straps **23**, a patient can be partially turned from side to side.

To change patients' bed linens, a bottom support sheet **33** is placed underneath the bed linens. A bed **25** is then raised enough to allow for the insertion of the buckle inserts **24** into receiving buckles **29** onto one side of a support sheet **33**. The bed linens are then loosened onto one side of the bed **25**. By then lowering the bed **25**, the person will roll to one side of the bed **25**. The bed **25** is then raised and the buckle inserts **24** are removed from the receiving buckles **29** and a support sheet **33** is spread back onto the bed mattress. Once the dirty bed linens are rolled next to the patient **26** the clean linen is spread on one side of the mattress and the

other half is rolled up next to the patient **26**. On the other side of the bed **25**, loosen the dirty linen and attach the buckle inserts **24** into the receiving buckles **29** on that side of the support sheet **33**. The bed **25** is then lowered whereby the patient **26** rolls onto the clean linen. The bed is then raised and the buckle inserts are removed from the support sheet **33**. Therefore, the dirty linen may be removed and the clean linen can be pulled out from underneath the patient **26** and spread uniformly over the mattress.

In their simplest form, the arms **17** of the present invention used for lifting and repositioning remain fixed and extend outward of the support column **13** thereby allowing them to be positioned over a patient **26** in a bed **25**. This will allow the utility of the present invention to be realized since it can easily be moved around to any position over a bed **25**. This is especially so if there is a base that incorporates locking wheels **7** with telescoping or otherwise adjustable legs.

In a preferred embodiment, shown in Figure 1 and in an exploded view in Figure 9, arms **17** are joined to a horizontal support **15** through locking arm pivots **19** that allow the arms **17** to extend outward when in use and to retract inward toward the support column **13** when not in use. The pivot pin arrangement incorporates pivot shafts **4** placed inside a flange bearing **6** and bearing extension plate **8** allowing the shaft **4** to rotate. The shaft **4**, bearing **6**, and extension plate **8** are

then situated over an aperture on both the top and bottom of the arm **17**. On the bottom of the arm **17** is a hole stiffener **10** and sleeve **11** into which the shaft **4** can be inserted and over on which are inserted a top **12** and bottom **22** washer and spring loaded handle **14** capable of engaging and disengaging the washers **12 22** thereby allowing the arms **17** to rotate. When the handle is released, the washers **12 22** will engage to lock the arm **17** in place. Alternatively, a simple pivot mechanism would also work. The advantage of the washer assembly is that it allows both arms to retract and extend at an equal height.

Although the above-described embodiment is the preferred method for extending and retracting arms, there are other exemplary assemblies known in the art that can also provide movement acceptable for purposes of achieving the objects of the present invention.

Once an arm **17** is positioned over a patient **26**, it is secured to a support sheet **33** through the preferred use of a buckle assembly and capable of supporting a patient **26**. Because patients can oftentimes be overweight, retractable straps with buckles using heavy duty nylon or canvas or other similar materials can be used to account for extra weight. Acceptable retractable devices can be found in standard off-the-shelf seat belt units [such] incorporating heavy duty nylon webbing capable of supporting a person suspended by the arms **17**. McMaster-Carr retractable assemblies have been found to meet acceptable standards of load to lift ratios. Seat

belts of this type with release buttons on the buckle inserts similar to those used in automobiles and which can withstand inertial unlatching are common. (See, for example, United States Patent No. 6,725,509 to Lee and its related references) Further, the receiving mechanism for the buckles can be attached to the support sheet, a gripper or other mechanism secured to the support sheet or in other embodiments those skilled in the art will immediately appreciate.

A preferred embodiment for securing to a support sheet is to use a detachable fabric gripper as is shown in Figures 10-14 that may be attached to linens found in hospitals and other patient care facilities. A fabric gripper is comprised of an upper bar **111** and lower bar **113** which are hinged **114** along an edge joining the upper **111** and lower **113** bars. On the inside of each bar **111 113** that contacts the other are interlocking serrated teeth **115** used to securely grab fabric. It is preferred that the teeth **115** are lined with a non-slip material, such as rubber or other similar coating to prevent linen slippage. In another exemplary embodiment, non-serrated bars also have been shown to be effective and will generally support patients in excess of 200 lbs. Figures 13 and 14 shows a fabric gripper in an open and in a closed position.

A bottom bar **113** has a clamp support **117**, which attaches to the lower bar **113**, and then extends towards the top bar **111** where it provides support for a receiving buckle **9** and a clamp handle **119**. The handle **119** pivots on a pin **125** that pivotally

mounts it to the clamp support **117** and the receiving buckle **9**. When closed, the handle **119** extends over the top bar, and engages a wedge **121** thereby sealing the bars **111 113** together. Wedges **121** on the bars (beneath the handle flanges) ensure a tight grip when the handle is closed. A slick material on the wedge **121** (e.g., Teflon) can be used to facilitate the closing of the handle **119**. Preferably, the handle **119** is long enough to provide sufficient leverage to wedge the bars **111 113** closed.

On the pivot pins **125** which support the handles **119** support clamps **117**, are mounted receiving buckles **9**, similar to seat belt latches as described above, to receive buckle inserts **24** at the end of the retractable straps **23** on a patient mobility apparatus **1**. In use, a caregiver would fold a draw sheet of a hospital bed to a desired position. A fabric gripper would be placed open on a bed next to the fold of the draw sheet. The fold of fabric is then tucked into the gripper, which is then closed. The handles **119** are then moved to the closed position against the wedge **121** to firmly grip the fabric in place.

A handle **119** and wedge **121** arrangements is a simple, cost-effective gripping assembly although, other arrangements can be used. (e.g., spring biased mechanisms, manually locking mechanisms, toggle clamps, and etc. can also be used). For example, using the same bar arrangement as described above, toggle clamps can be used to allow for hinging, opening,

closing, and locking the bars securely shut after a fabric sheet is placed between the two bars.

As an alternative embodiment, straps of any durable material can be fixed, permanent or removable, to either the retractable belts **21** or the receiving buckles **29** that incorporate a traditional belt and buckle arrangement. Using this arrangement, straps **23** can be cinched to a desired length and tension. When not in use they can then be placed to the side of the bed. Furthermore, attachments to the patient support sheet need not be flexible straps but may also be of a more rigid construction.

Support sheets **33** are preferred for the present invention to provide a stable, lifting, flexible platform on which to lift patients. Exemplary support sheets **33** proven to be acceptable for supporting patients of varying weights can be made of known vinyl, nylon, canvas or other comparable materials. Further, harnesses, or other known suspension supports have also been shown to be effective when used in accordance with the designs of the present invention. In addition, normal weight hospital sheets have been shown to work without problems. Support sheets **33** can also incorporate buckles fastened to them using known means such as sewing heavy duty buckle ends to reinforced material and stitching onto the fabric **46**. Other means for fastening buckles and other attachments to the fabric **46** will be immediately identifiable to those skilled in the art. Figure 8 and 8a

shows a support sheet commonly used in hospitals having pockets **27** along the sides capable of receiving a sturdy rod **47**, as well as holes **49** that can be reinforced for inserting hooks such as carabiner hooks **45** secured to the end of the straps **23**. Other hook arrangements will also be sufficient such as "c", "j", or other known hooks.

There are various ways in which the present invention can be mounted that will not sacrifice its utility or overall design. For example, Figures 6 and 6a illustrate a wall mounted device **36** that is secured to a wall through the use of one or more wall brackets **37**. Typically, the brackets **37** are made from steel or other heavy duty metal secured to a wall **38**. Brackets **37** are secured through heavy duty bolts **41** to studs **39** in a wall **38**. Additionally, Figure 7 illustrates an embodiment of the present invention **40** capable of being mounted to a ceiling through the use of one or more ceiling mounts **42**. Standard mounting brackets in the art that can support the weight of a patient have proven to be effective. For example, brackets as in the wall mounted embodiment can be mounted to studs in the ceiling and incorporate known fastening means for securing the ceiling mounts **42**. In this way, the overall shape of the present invention can be altered to accommodate various designs. For example, in a slight modification to the embodiments shown in the Figures, the support column of the body can be jogged to account for bed widths and other spacing issues.

CONCLUSION, RAMIFICATIONS, AND SCOPE

While the above description contains various preferred, exemplary, and other specific embodiments, these should not be construed as limitations on the scope of the invention, but as exemplifications of the presently preferred embodiments thereof. Many other ramifications and variations are possible within the teaching of the invention.

Thus the scope of the invention should be determined by the appended claims and their legal equivalents, and not solely by the examples given.

CLAIMS

Claims:

1. A patient positioning apparatus comprising:
 - a base;
 - a body coupled to said base;
 - one or more positioning arms extending from said body capable of being positioned over a patient in an adjustable bed; and
 - said one or more positioning arms capable of operatively engaging one or more suspension members and said one or more suspension members capable of operatively engaging a patient support to partially or totally suspend a patient when the bed is adjusted away from said patient.
2. The patient positioning apparatus of claim 1 wherein:
 - said one or more suspension members engages one or more members capable of extending and fixing in position relative to said one or more positioning arms while engaging said patient support.
3. The patient positioning apparatus of claim 1 wherein:
 - said one or more suspension members are capable of fixing in position relative to said positioning arms through a buckle on said members operatively engaging one or more buckle locks on said patient support.
4. The patient positioning apparatus of claim 1 wherein:
 - said one or more suspension members are adjustable.
5. The patient positioning apparatus of claim 1 wherein:
 - said one or more suspension members are capable of fixing in position relative to said positioning arms through a buckle on said members operatively engaging one or more buckle locks on said one or more positioning arms.
6. The patient positioning apparatus of claim 1 wherein:
 - said one or more positioning arms are retractable.

7. The patient positioning apparatus of claim 1 wherein:
said base folds.
8. A patient positioning apparatus comprising:
a support body;
one or more positioning arms secured to said support
body; and
said one or more positioning arms are capable of
operatively engaging one or more suspension members
capable of operatively engaging a patient support
partially or totally suspending a patient when an
adjustable bed is appropriately positioned relative to
the support body and adjusted away from said patient.
9. The patient positioning apparatus of claim 8 wherein
said support body further comprises a mount for
securing to a ceiling or other structure overhanging
said base.
10. The patient positioning apparatus of claim 8 wherein
said support body further comprises a mount for
securing to a wall or other vertical structure.
11. The patient positioning apparatus of claim 8 wherein
said one or more positioning arms are retractable.
12. The patient positioning apparatus of claim 1 wherein:
said body further comprises an arm housing for storing
a first and second retractable positioning arm when
said arms are in their retracted position.
13. The patient positioning apparatus of claim 1 wherein:
said body further comprises locking swivel means.
14. The patient positioning apparatus of claim 1 wherein
said one or more suspension members operatively engage
one or more grippers releasably secured to said patient
support.
15. A fabric gripper comprising:
a hinge affixed between upper and lower bars; and

said upper and lower bars having a clamp that presses said upper and lower bars together so as to securely grip a patient support.

16. The fabric gripper of claim 15 wherein said clamp and hinge comprises at least one toggle clamp.
17. The fabric gripper of claim 15 wherein said upper and lower bars further comprise interlocking teeth for securing said patient support.
18. The patient positioning apparatus of claim 15 wherein said upper and lower bars further comprise interlocking teeth with a friction coating for securing said patient support.
19. The patient positioning apparatus of claim 15 wherein said upper and lower bars further comprise interlocking teeth for securing a flexible support member.
20. A method for repositioning a patient on an adjustable bed comprising:
 - placing a positioning apparatus generally above a patient lying on a patient support placed on an adjustable bed, whereby said positioning apparatus comprises a base, a body coupled to said base, one or more positioning arms on said body capable of operatively engaging one or more suspension members, and said one or more suspension members operatively engaging said patient support; and
 - lowering the adjustable bed to actuate partial or total suspension for repositioning of said patient.
21. The method of claim 20 wherein: the patient support is a flexible support sheet.
22. The method of claim 20 further comprising the step of:
 - placing said one or more positioning arms over a desired position on said bed, engaging said one or more suspension members with said support member such that said one or more suspension members are angled toward said patient, and lowering the bed to actuate partial

or total suspension of the person on the patient support whereby the angled suspension members move to a more vertical position relative to said one or more positioning arms when the bed is moved away from the patient.

23. The method of claim 20 wherein:

the one or more suspension members are retractable strap assemblies engaging one or more grippers that are capable of securing to the support member.

24. The method of claim 20 further comprising the steps of:
placing said support member beneath bed linen on said adjustable bed;

Engaging said one or more suspension members with one side of said support member;

Lowering the bed while simultaneously turning the patient on their side creating a first exposed side of the bed;

Removing the one or more suspension members from the support member;

Rolling up the bed linen on the first exposed side;

Placing clean linen on the first exposed side;

Placing the patient onto the clean linen;

Engaging the one or more suspension members with a second side of the support member;

Lowering the bed while simultaneously turning the patient on their side to create a second exposed side;

Raising the bed;

Removing the one or more suspension members from the second side of the support member;

Removing the bed linen from the second exposed side; and

Placing clean linen on the second exposed side.

25. The patient positioning apparatus of claim 1 wherein:
said patient support is a harness.

26. The patient positioning apparatus of claim 1 wherein:
said body comprises telescoping means for vertical
positioning of said apparatus.
27. The apparatus of claim 1 wherein: said one or more
positioning arms comprises one or more locking,
retractable means.
28. The apparatus of claim 1 wherein said base further
comprises one or more locking wheels.
29. The apparatus of claim 1 wherein: said body further
comprises a jogged column.
30. The patient positioning apparatus of claim 1 wherein:
said base further comprises one or more foldable,
locking legs.
31. The apparatus of claim 1 wherein:
said one or more suspension members further comprise
one or more buckle and strap assemblies releasably
connected to said support means; and
said one or more positioning arms are secured to one or
more receiving buckles capable of receiving said one or
more buckles of said one or more buckle and strap
assemblies for suspending a patient.

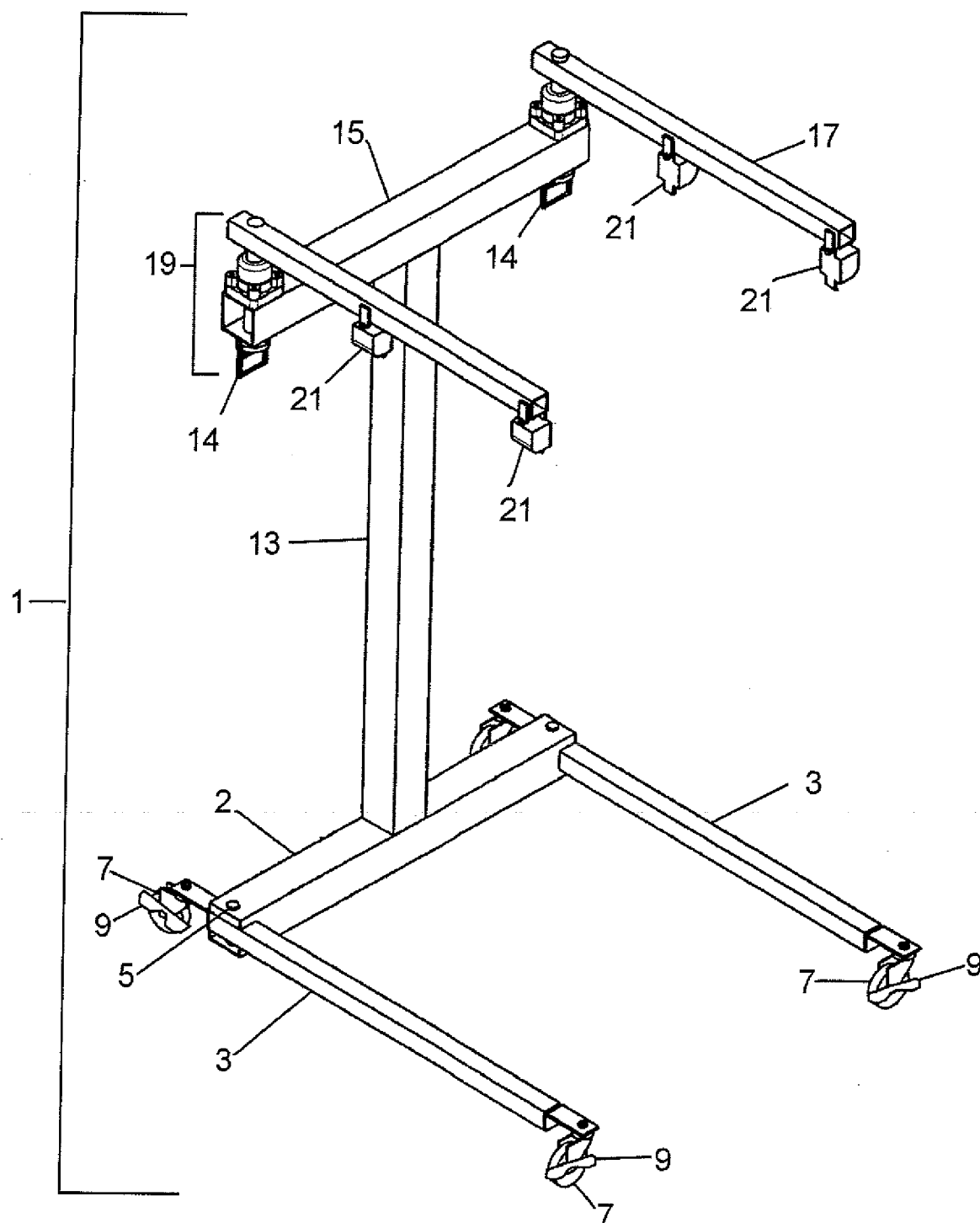


Figure 1

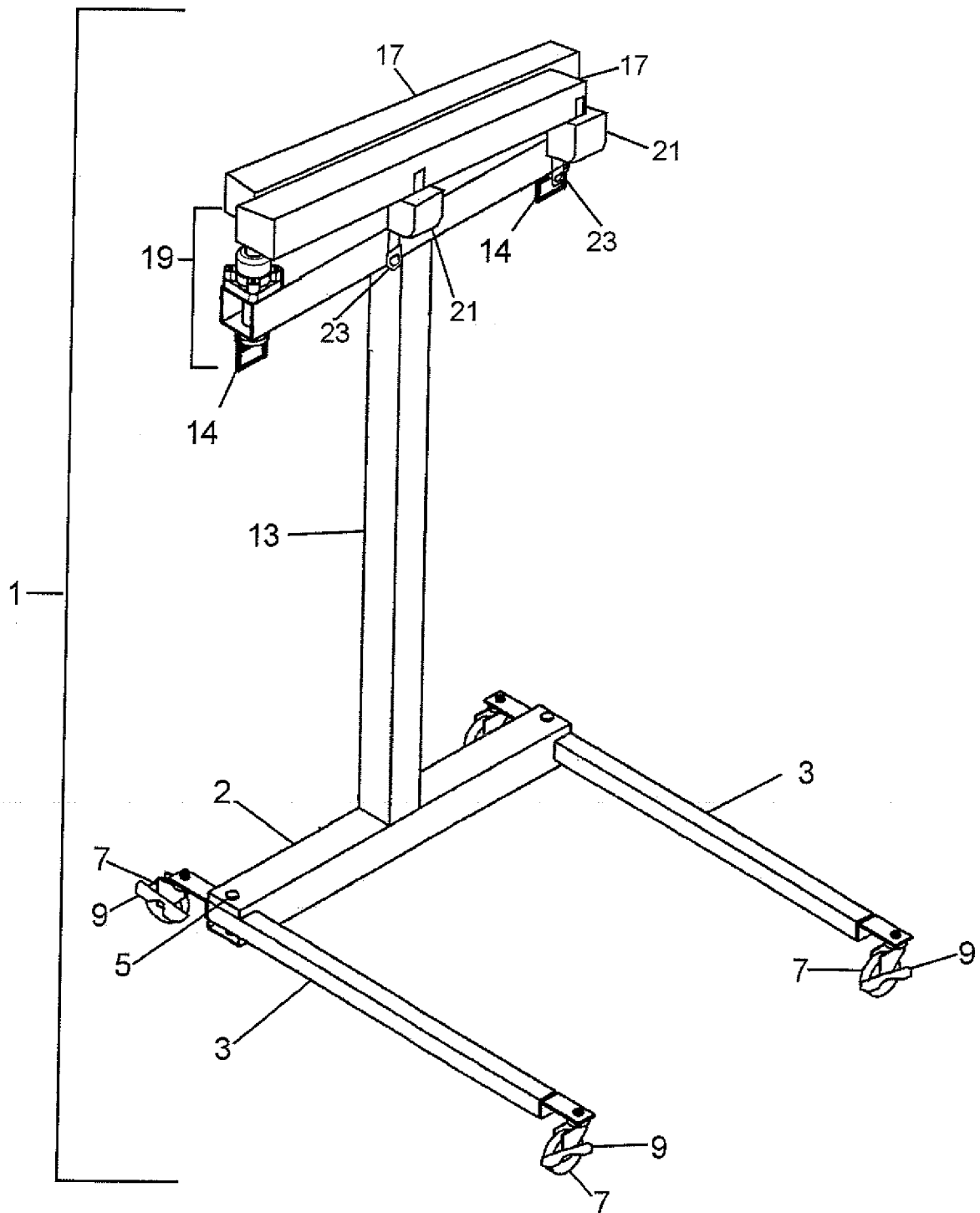


Figure 2

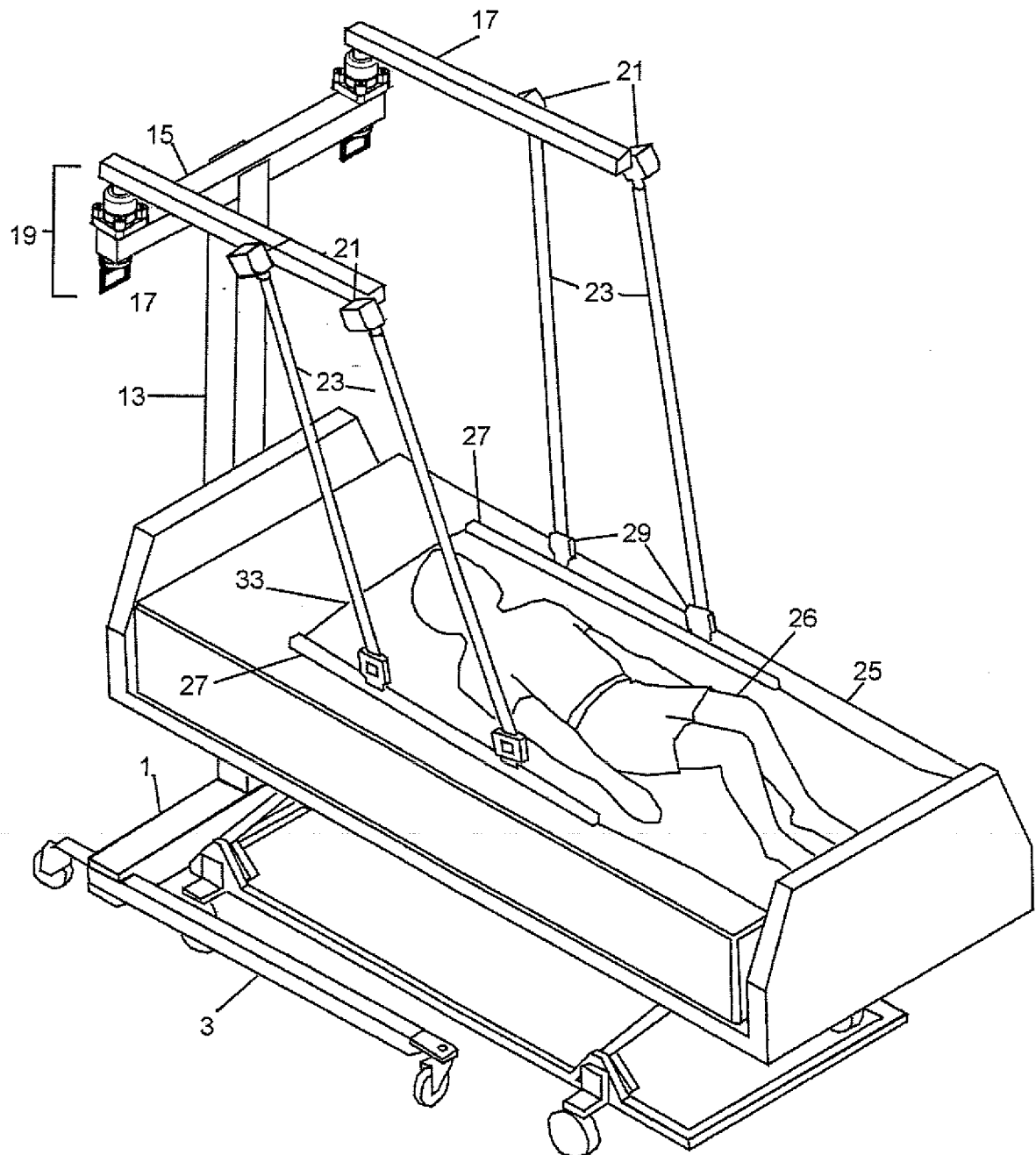
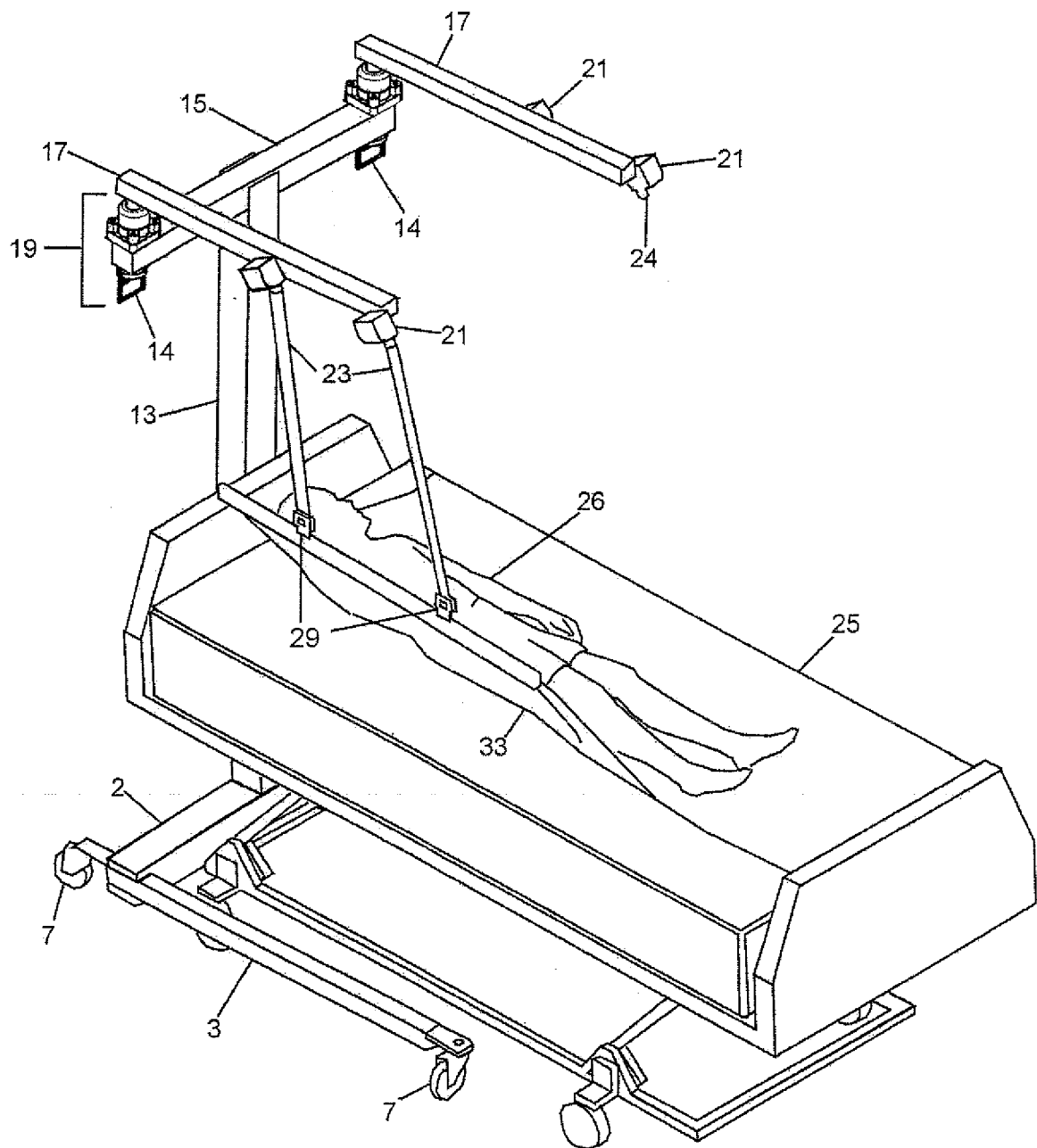


Figure 3

**Figure 4**

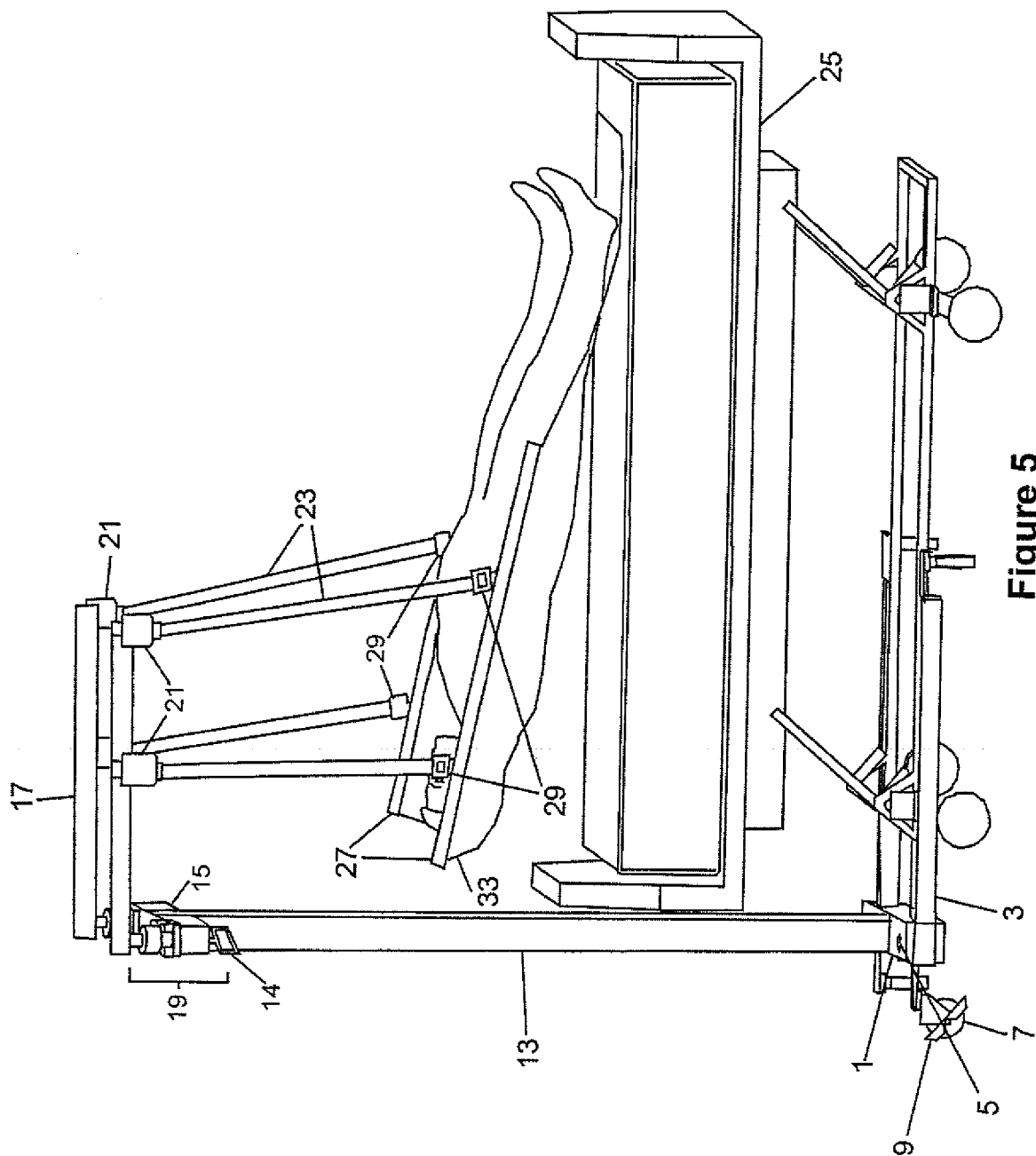


Figure 5

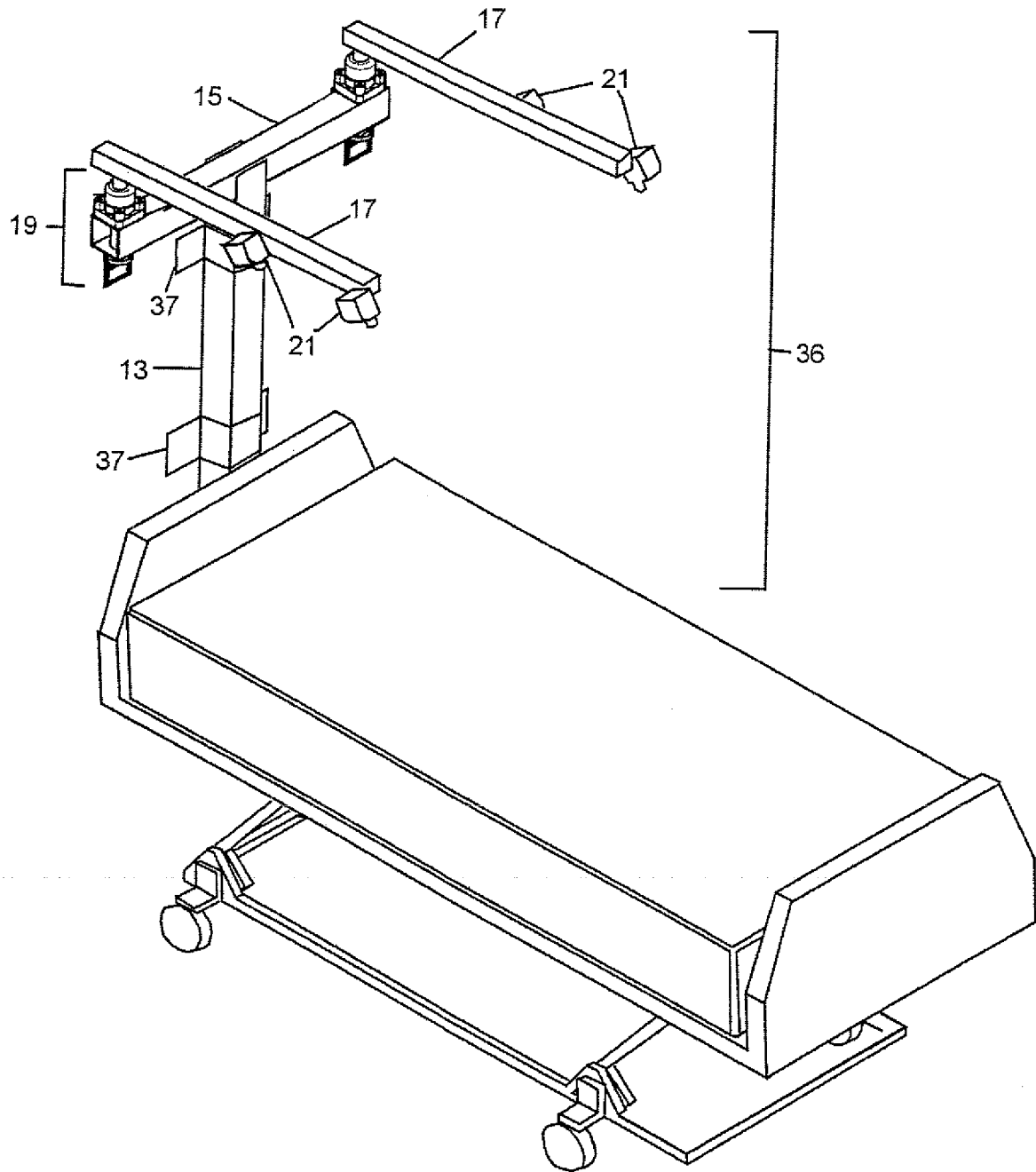


Figure 6

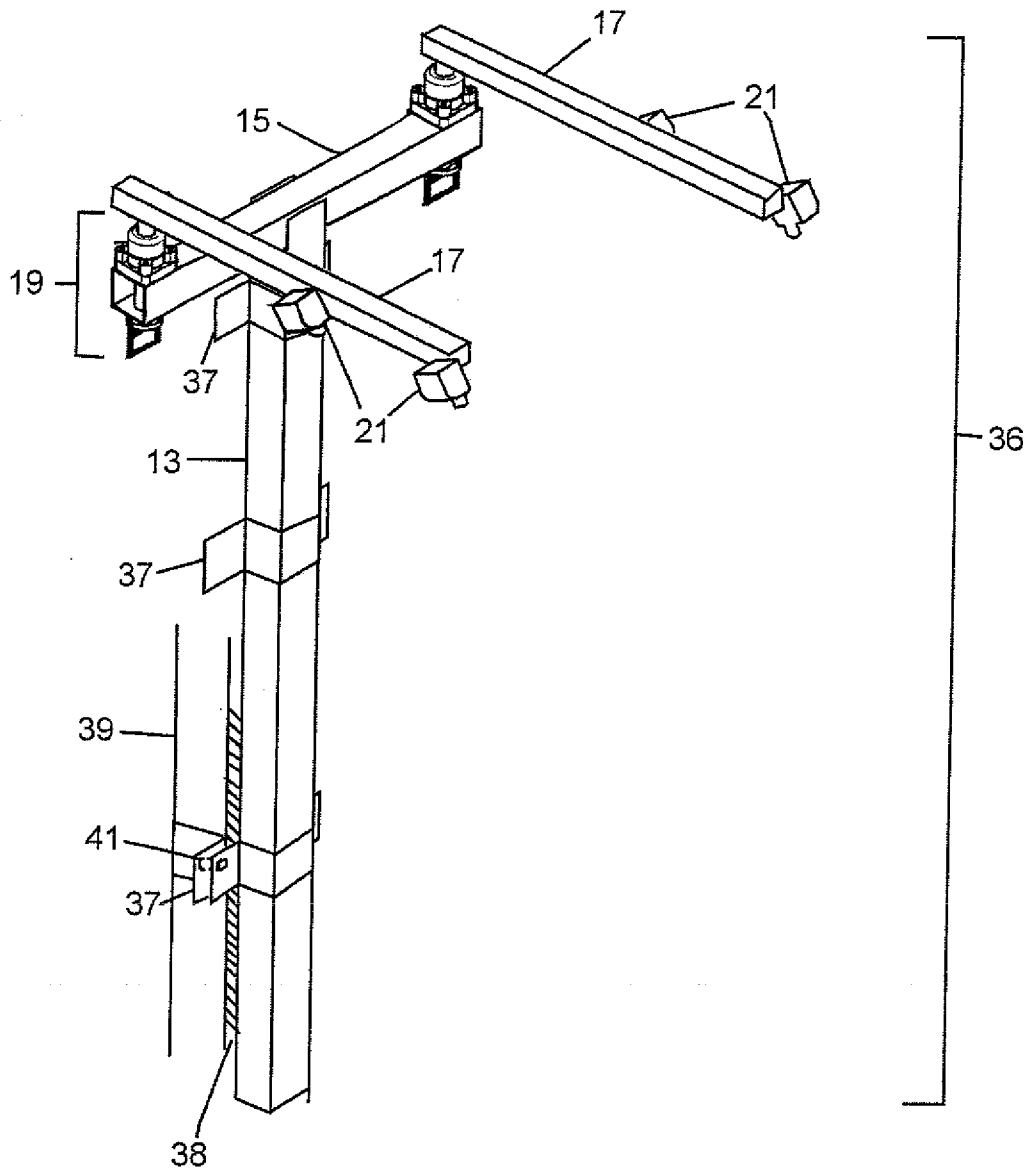


Figure 6a

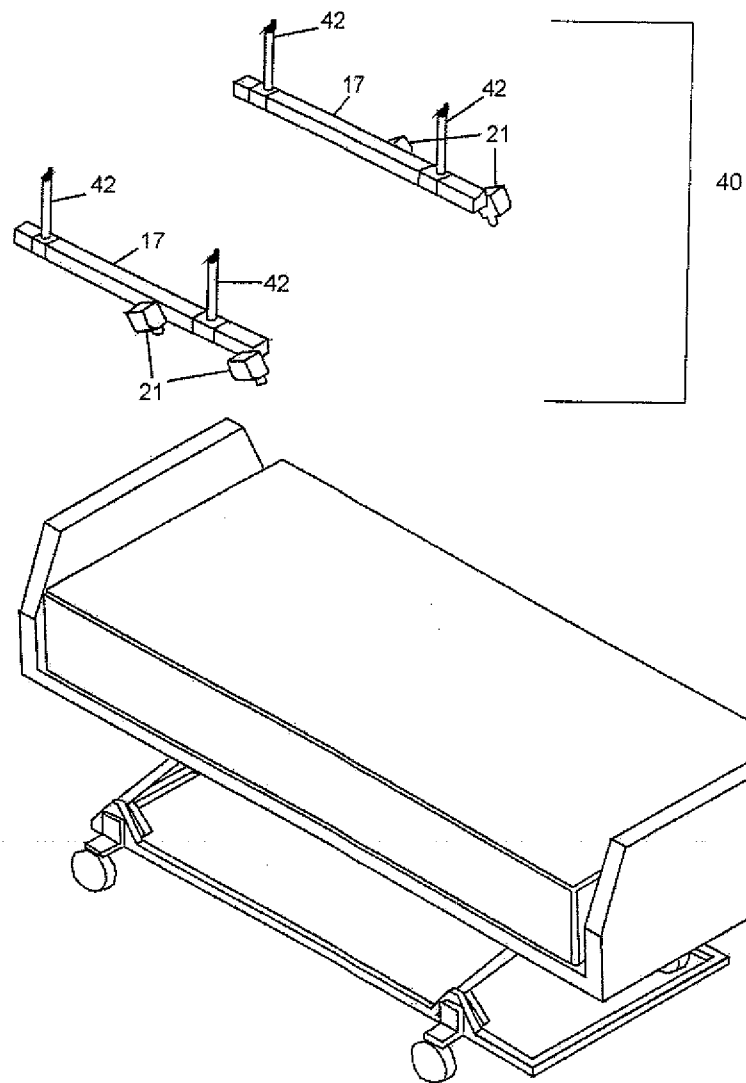


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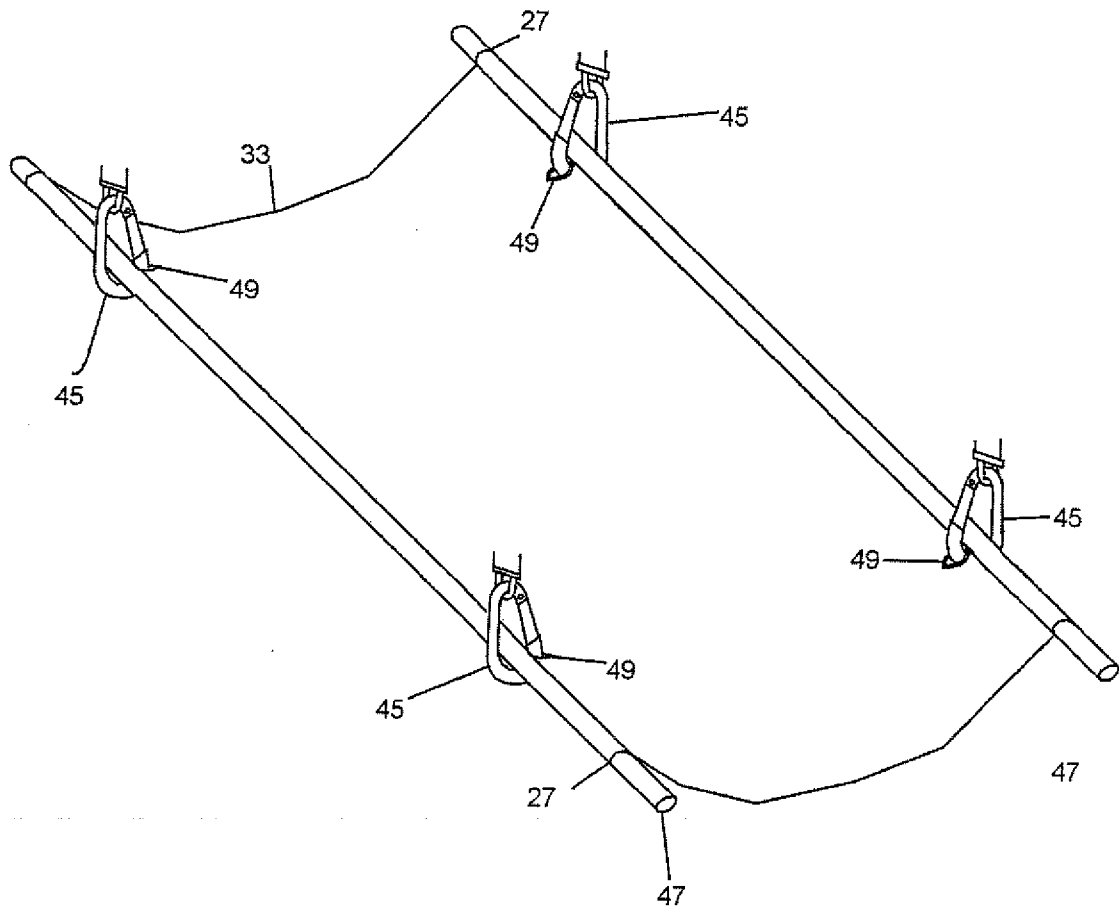


Figure 8

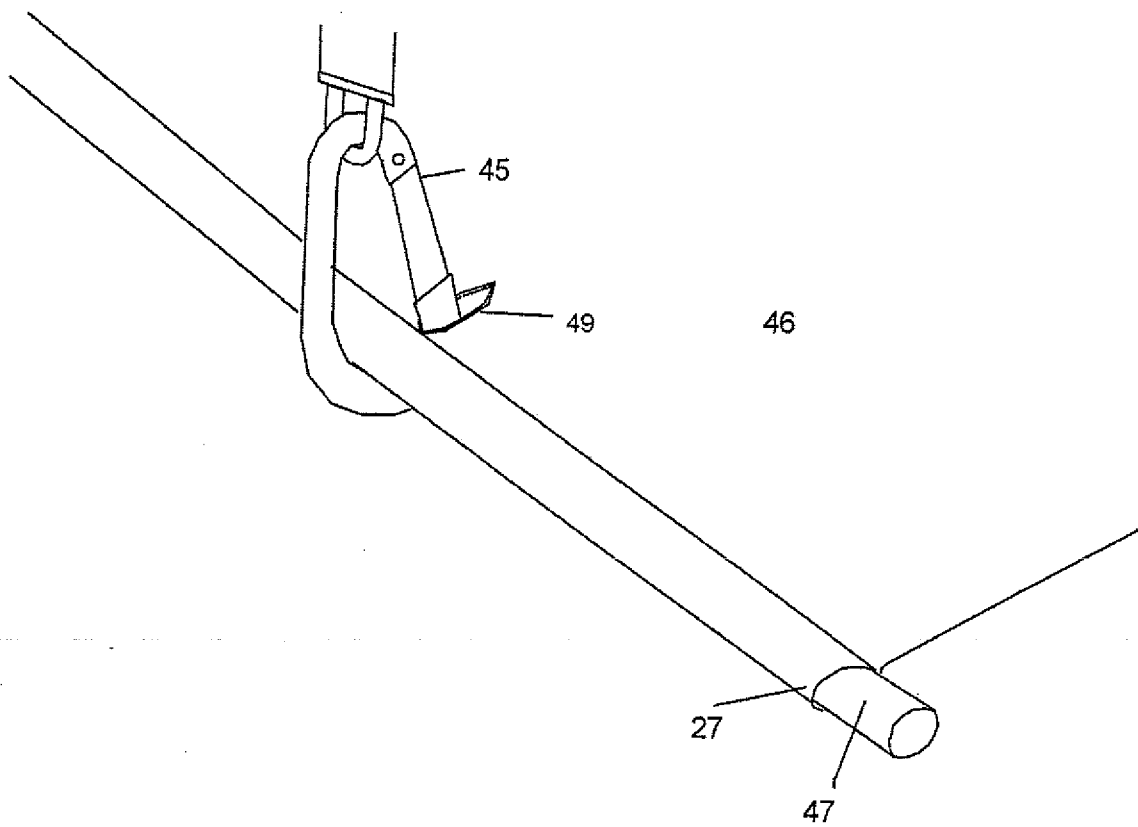


Figure 8a

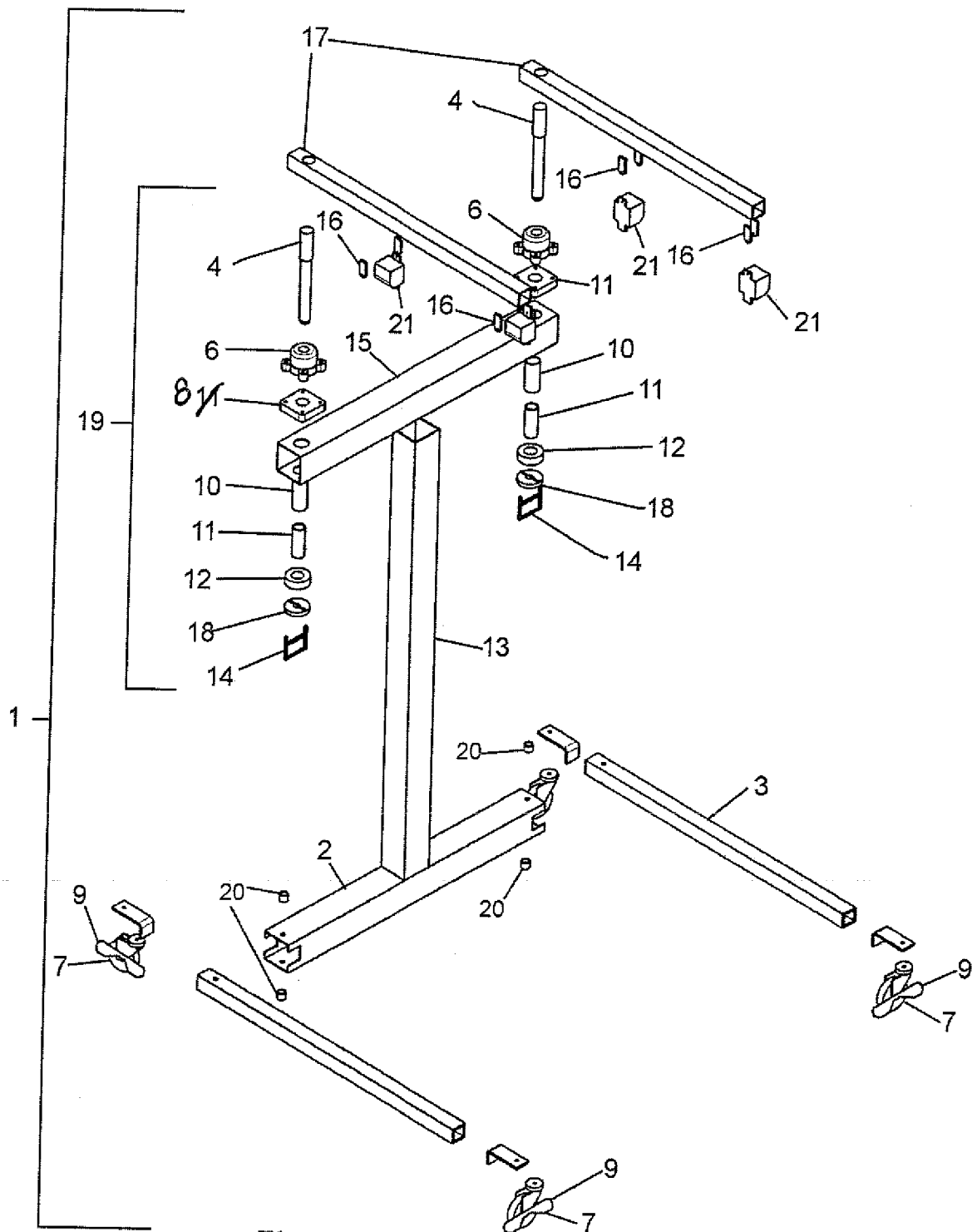
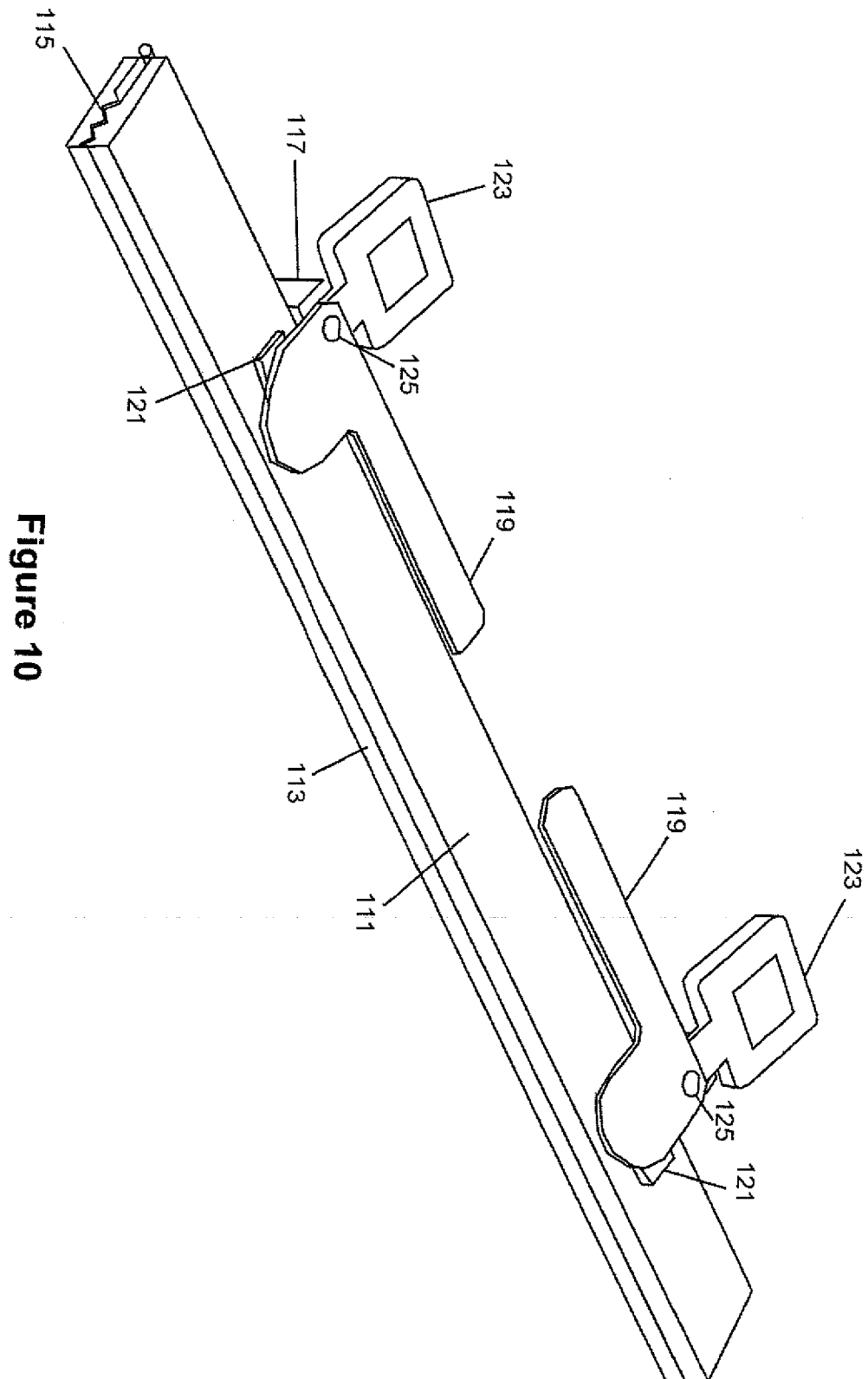


Figure 9



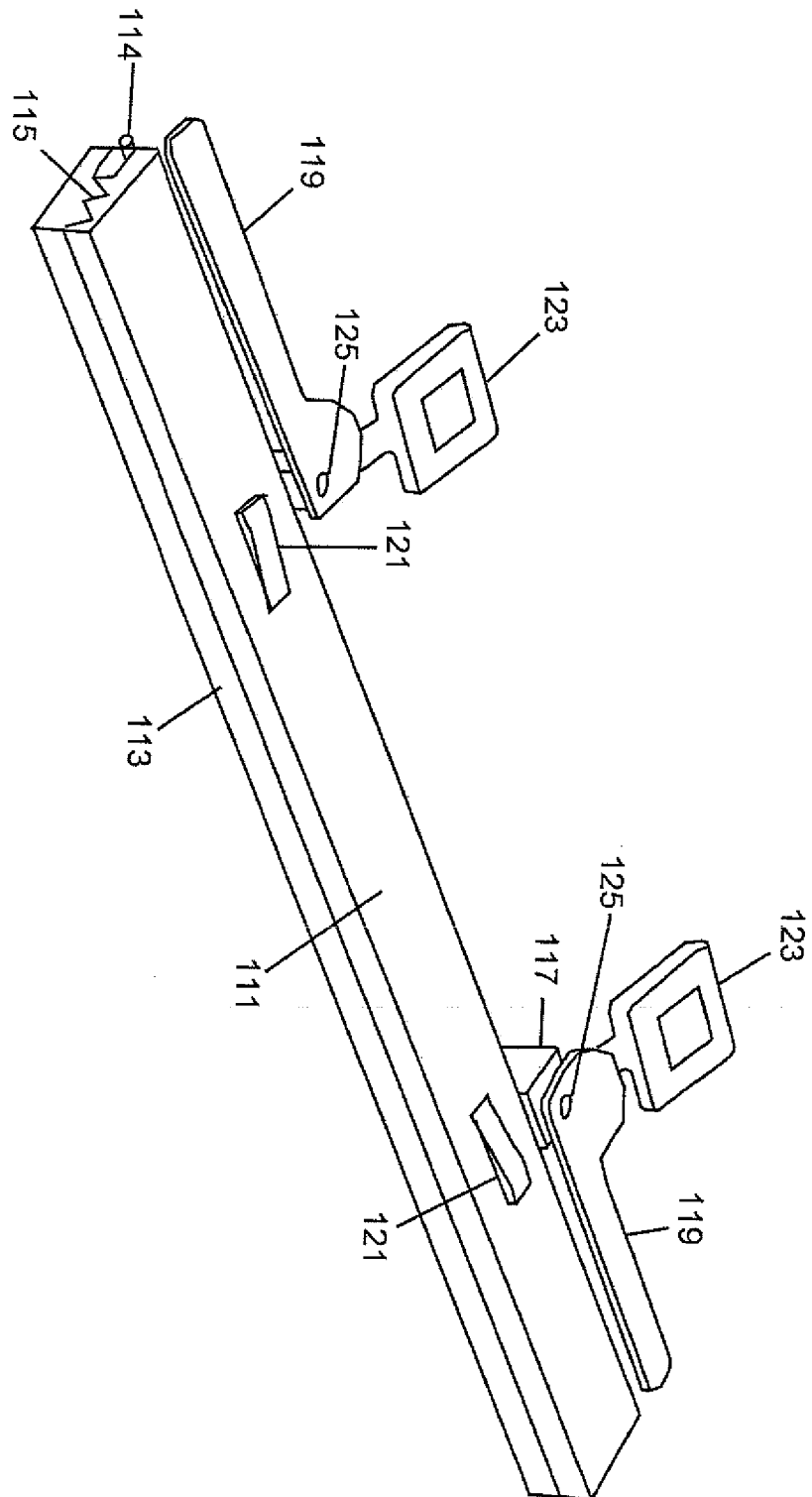


Figure 10a

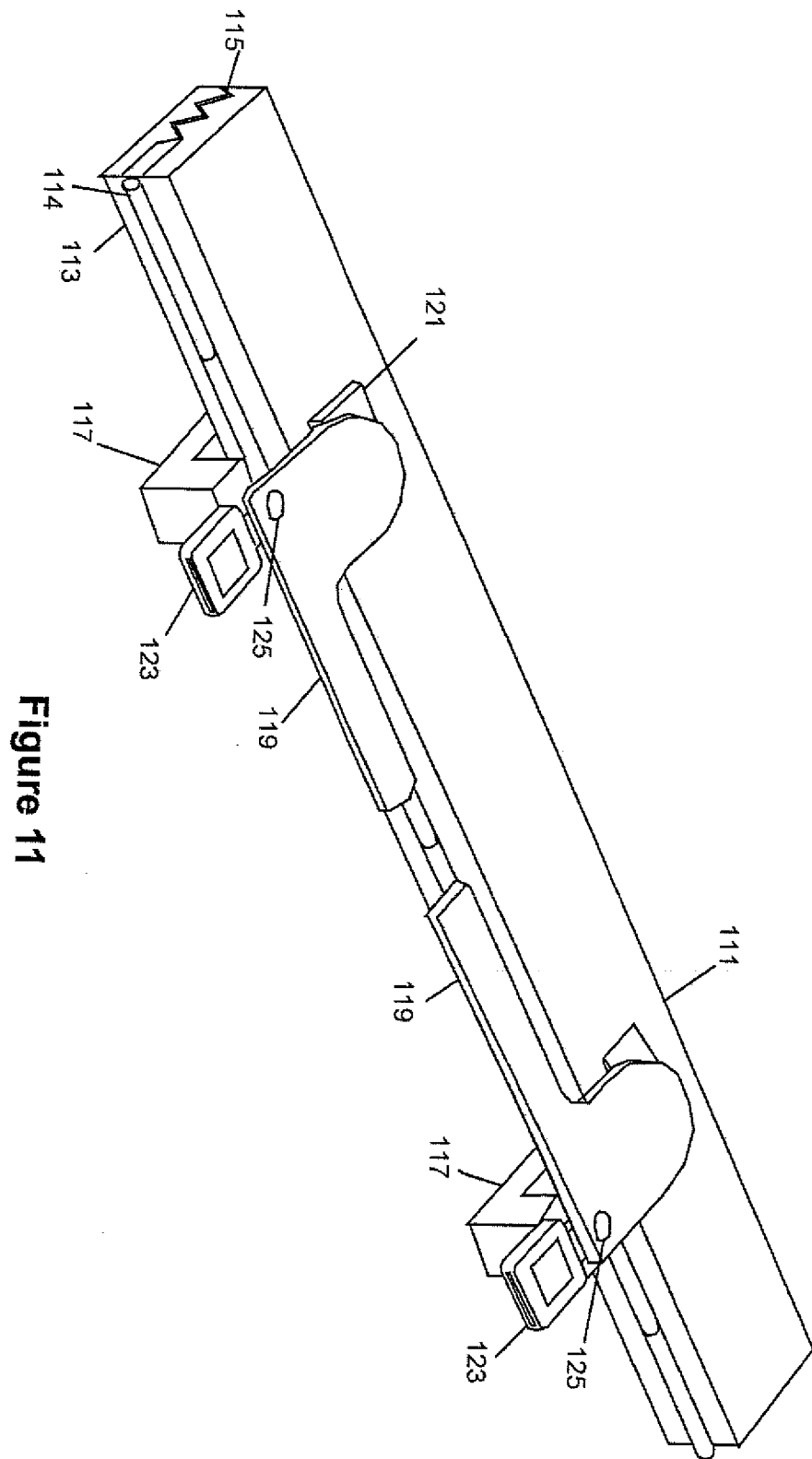


Figure 11

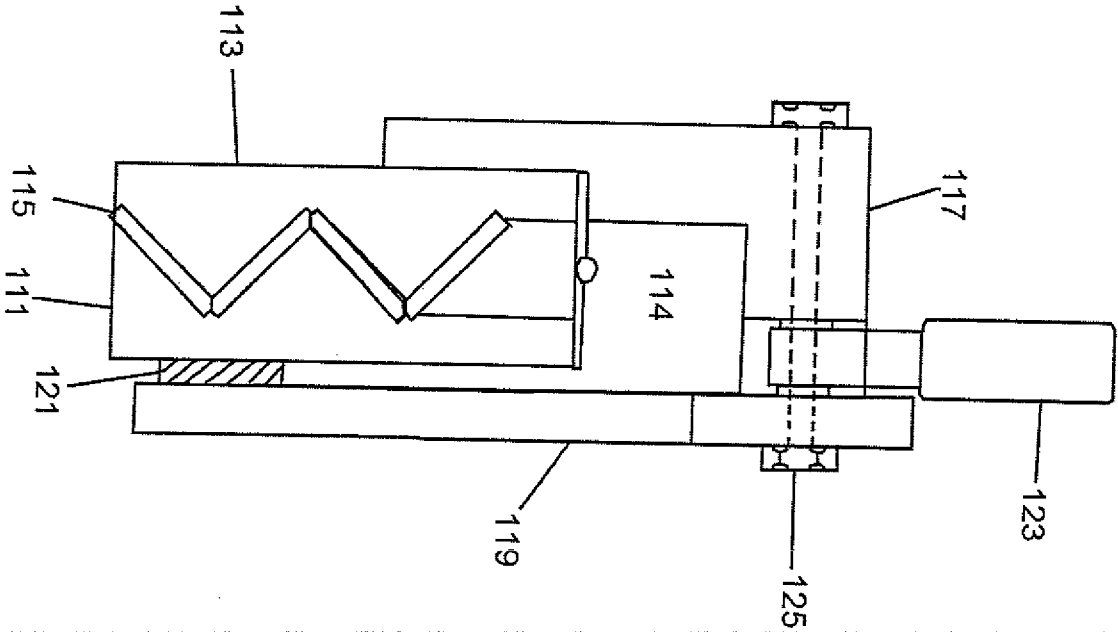
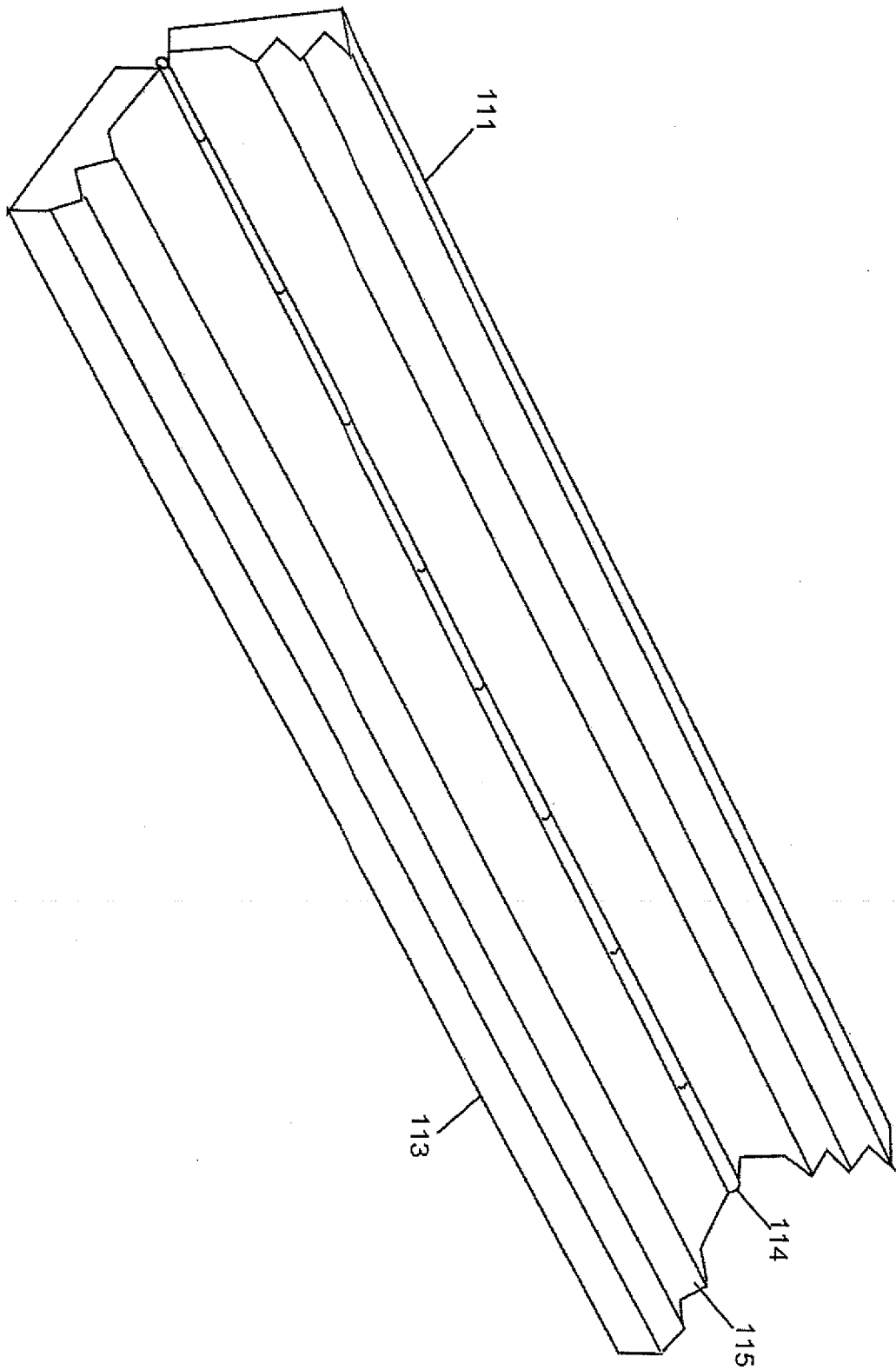


Figure 12

Figure 13



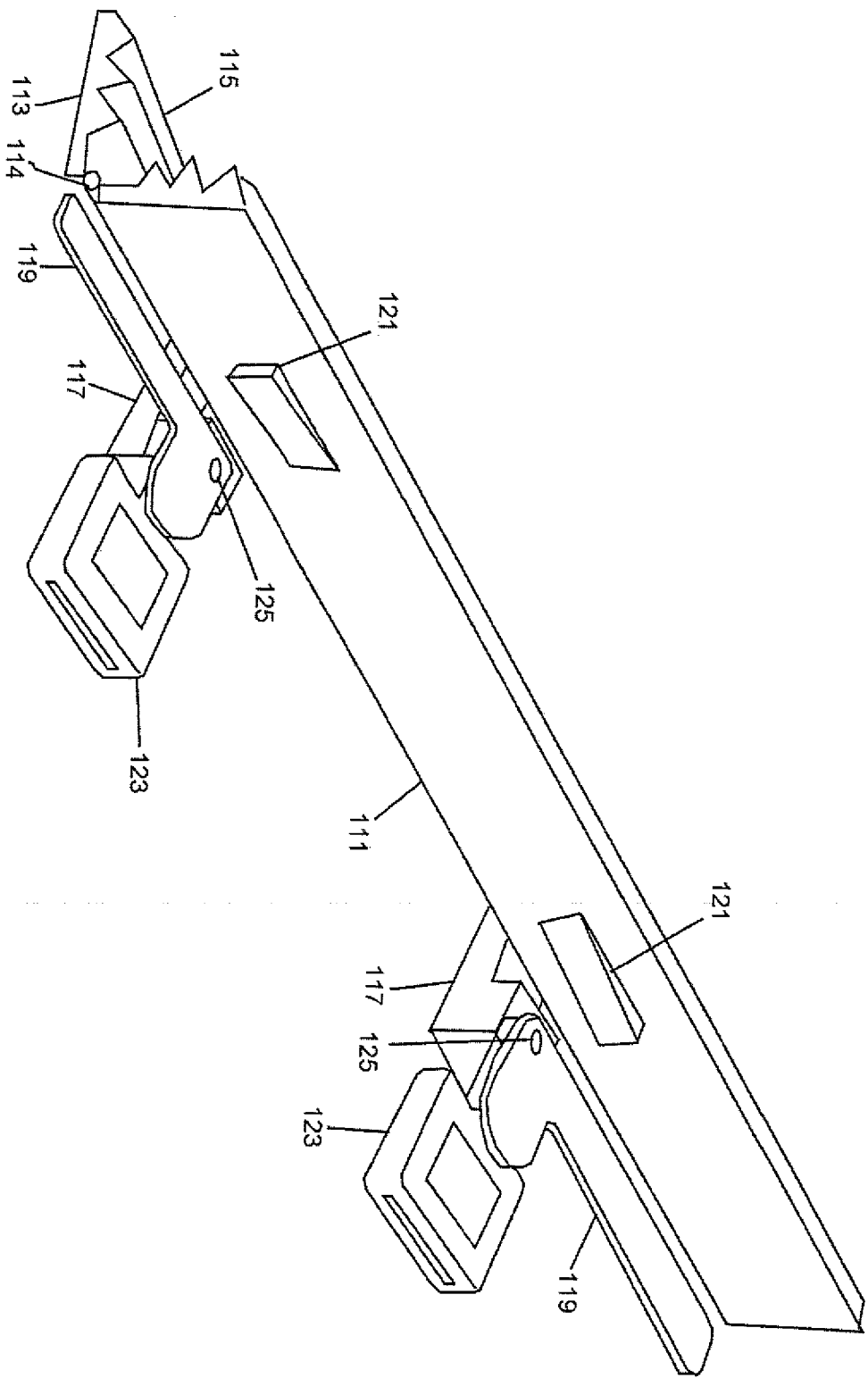


Figure 14