June 29, 1971 LE ROY C. BLOMBERG 3,588,929

ADJUSTABLE TILTING DEVICE FOR USE WITH BEDS OR THE LIKE

Filed April 18, 1969 3 Sheets-Sheet 1

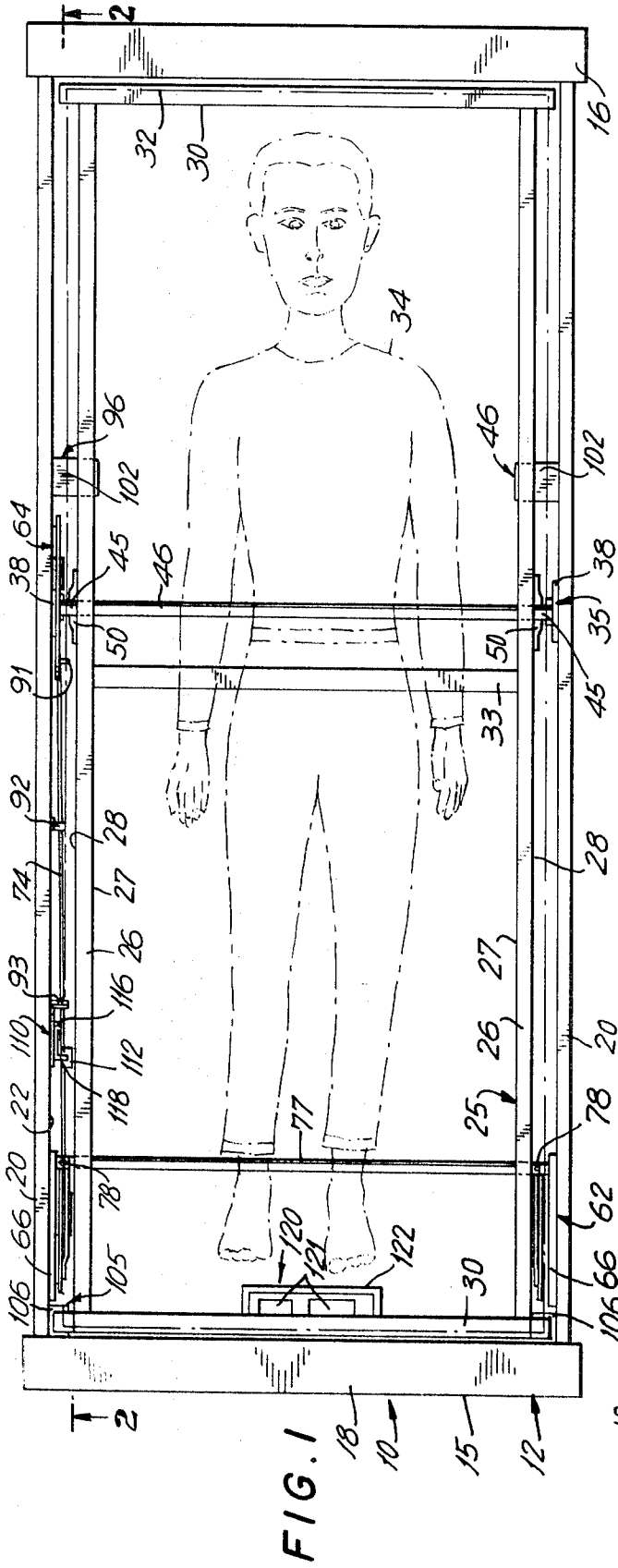


FIG. 1

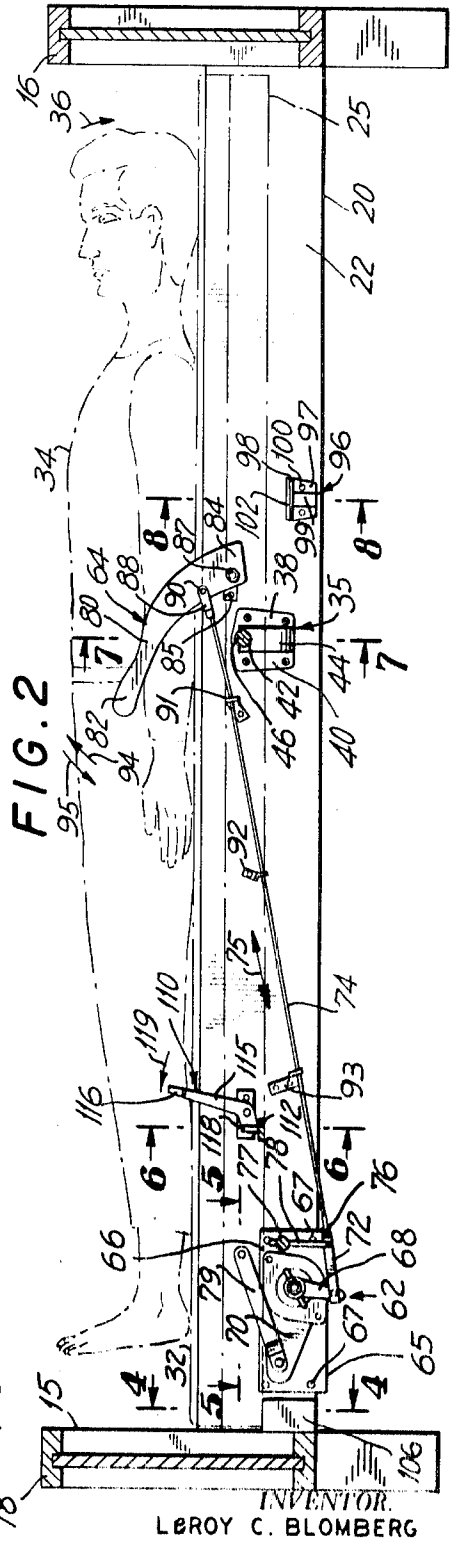


FIG. 2

INVENTOR.
LEROY C. BLOMBERG

BY

Leonard W. Ansoff

ATTORNEY

June 29, 1971 LE ROY C. BLOMBERG 3,588,929

ADJUSTABLE TILTING DEVICE FOR USE WITH BEDS OR THE LIKE

Filed April 18, 1969 3 Sheets-Sheet 2

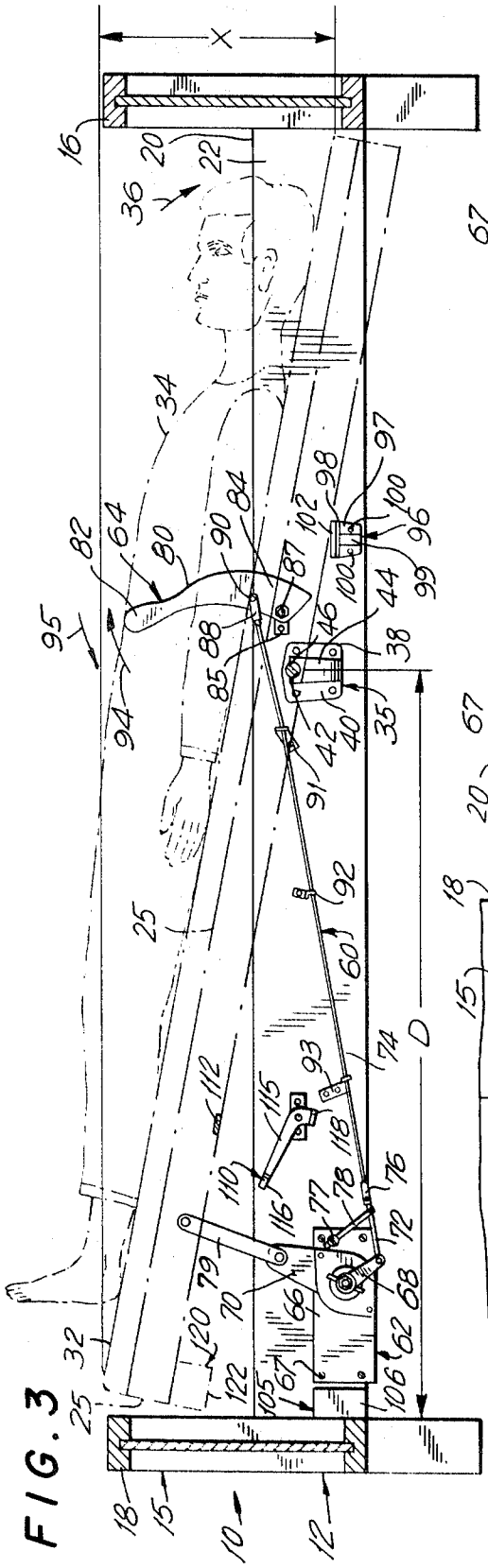


FIG. 3

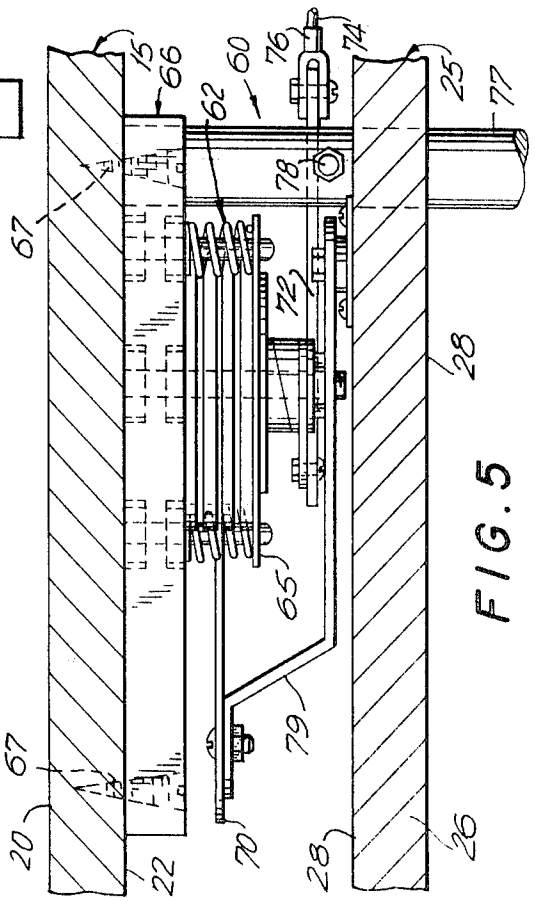


FIG. 5

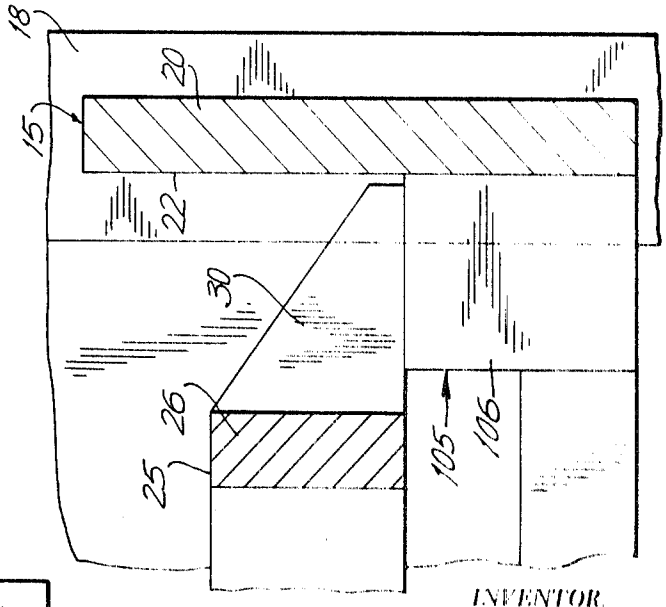


FIG. 4

INVENTOR.
LEROY C. BLOMBERG

BY

Leonard W. Sanoff
ATTORNEY

June 29, 1971 LE ROY C. BLOMBERG 3,588,929

ADJUSTABLE TILTING DEVICE FOR USE WITH BEDS OR THE LIKE

Filed April 18, 1969 3 Sheets-Sheet 3

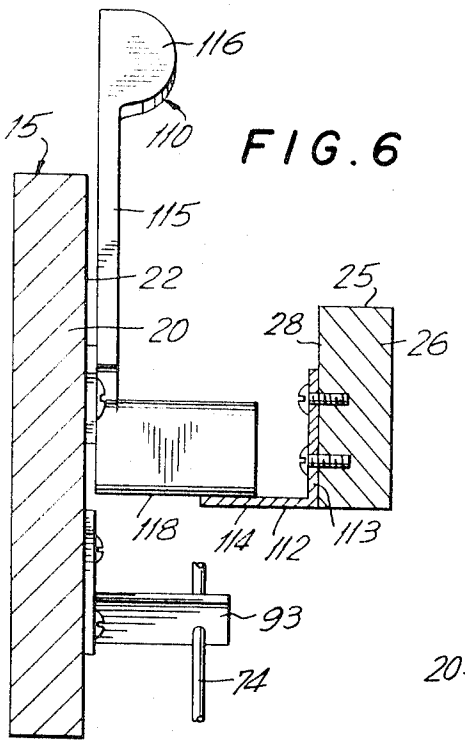


FIG. 6

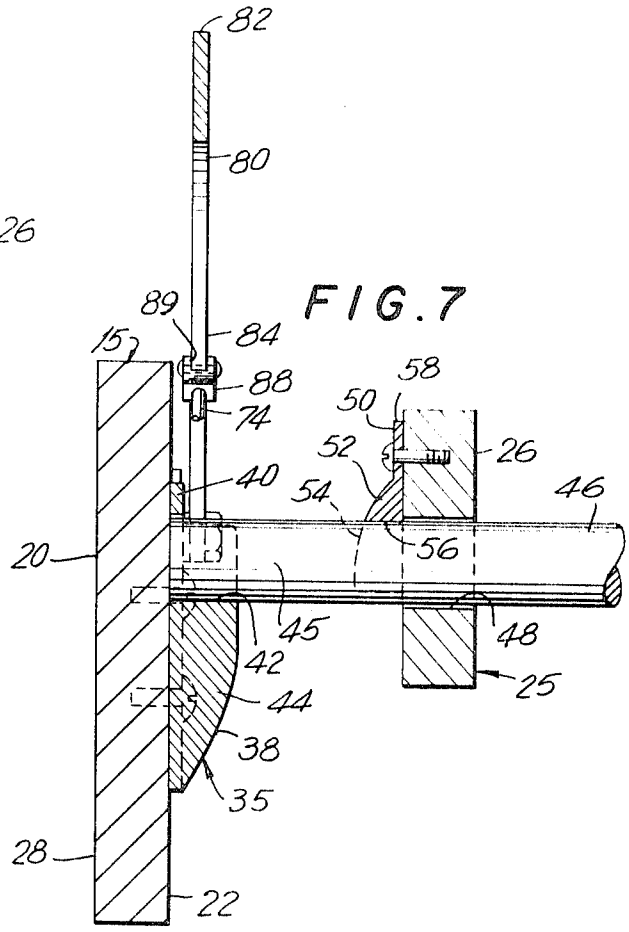


FIG. 7

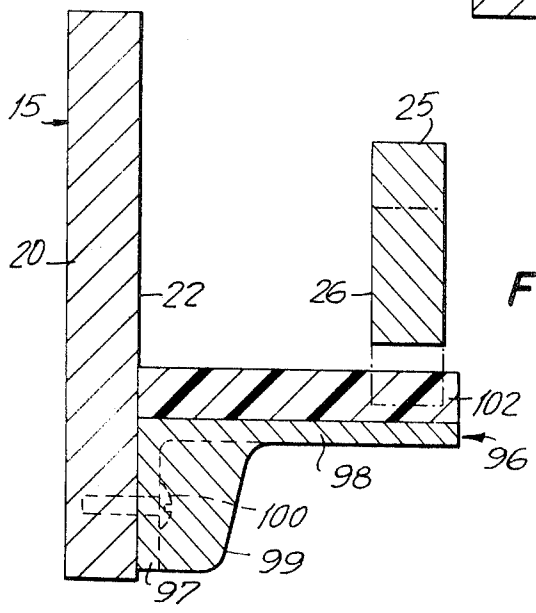


FIG. 8

INVENTOR
LEROY C. BLOMBERG

BY

Leonard W. Suroff

ATTORNEY

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3,588,929

ADJUSTABLE TILTING DEVICE FOR USE WITH BEDS OR THE LIKE

Le Roy C. Blomberg, 101 Sherman Ave., New York, N.Y. 10034

Filed Apr. 18, 1969, Ser. No. 817,415
Int. Cl. A61g 7/10
U.S. Cl. 5—62 10 Claims

ABSTRACT OF THE DISCLOSURE

The invention is directed to an adjustable tilting assembly for use with beds or the like having an outer frame with the inner frame contained therein for supporting the user of the device between a normal level position and an inclined position, which positions may be reached while the user remains on the bed with a minimal of effort on his part. Means is provided for tiltably supporting the inner frame on a transverse axis for angular movement with control means coupled to the outer frame and operatively associated with the inner frame for regulating the extent of the angular position. Means for maintaining the inner frame in its normal position as well as limiting the degree of angular motion is also provided.

BACKGROUND OF THE INVENTION

(a) Field of the invention

This invention relates to an adjustable device suitable for use in beds, chairs or the like in which the support portion of the assembly is controlled as to the degree of angular motion, and more particularly to a device which the user may control while situated thereon.

The present invention is capable of being used with furniture such as beds, chairs, or the like for retaining parts thereof in adjusted positions, and since it is particularly suited for beds it will be so illustrated and described.

There are many medical reasons why the use of a tilting device in which the head is lower than the rest of the body produces beneficial effects. The principal reason is, that while standing or sitting, the gravitational pull on our bodies tends to prolapse and thereby enervate the internal organs as well as the whole structure of our physical makeup. It is only when we lie with our head lower than the heart, and the body in the inclined position that a genuine relaxation seems to be brought about. In such position there is a calmness and a sense of security and total rest that creeps over us, permeating every fibre and cell of the body, enabling nature to catch up with its work of repair. Tension is relieved, aches and pains and other minor indispositions, attributed to modern high-tension civilization, are relieved to an amazing degree. The normal appendix appears to drain out any residue, bringing the colon more into place, stepping up the functions of elimination, letting gravity help do the work of rebuilding instead of off-setting it and tearing it down, draining the lymphatic glands, aiding in cases of dropsy and varicose veins and relieving pressure on the pelvis. By use of a tilting device in which the head is lower than the rest of the body, the blood circulation in the brain "irrigates" to a better advantage and "washes out" and clears up deposits to renew its normal functions, definitely a safeguard against strokes and brain ruptures by tending to keep the head arteries and blood vessels resilient and more normal.

(b) Discussion of the prior art

Various tilting devices have been proposed and disclosed in the prior art. A representative construction of these devices is disclosed in U.S. Pat. 53,706; 503,196; 771,039; 3,402,408 and Re. 26,411. These prior art devices may be categorized as those in which manual means are provided to obtain the degree of inclination and those in which electrical power means is contemplated.

Since a tilting device may be used by people who are bedridden for one reason or another for medical reasons, or simply just relaxing, it is of great advantage and convenience to be able to adjust the device to a desired angular position without having to leave the bed. The prior art devices that are manually controlled are deficient in this respect, and the power driven devices are sufficiently expensive so that their installation is not always practicable for the home or even hospital use.

OBJECTS OF THE INVENTION

Objects of the invention

An object of the invention is to provide an improved reclining device for tilting beds, chairs and the like to incline the head or feet in desired, adjusted, angular positions to provide relaxed and healthful rest.

Another object of the present invention is to provide an improved suspension device adapted to fit any size of bed or chair and provide body balance and permit the body to be restfully inclined in a straight line.

Another object of the present invention is to provide an improved suspension device having an inner frame supported on a pivot having a predetermined axis that permits it to operate by balance while the user is contained thereon.

Other objects and advantages of the present invention will obvious as the disclosure proceeds.

SUMMARY OF THE INVENTION

The inclinator unit of the present invention is of a design and construction permitting it to be installed in most beds having an outer frame and an inner shorter frame for supporting the spring and mattress. If desired the bed or chair may be manufactured initially incorporating the device of the present invention. The inclinator unit permits the spring, mattress, and inner frame to tilt within the outer frame of the bed up to approximately fourteen inches by essentially the mere shifting of the body weight of the user, such that it operates by body balance with no complex, or electrical equipment. Because it is so convenient and easy to use, it can be used more consistently and thereby insure better results for everyone such as the aged and invalid in homes, hospitals, rest homes and sanitariums.

The tilting device or inclinator unit may be used with beds for moving the bedding supported thereon between a normal level position and an inclined position. The outer main bed frame has a headboard, a footboard and side rails with an open rectangular inner frame contained in the outer frame and being shorter in length to be contained therein. Supporting means is provided to support the inner frame relative to the outer frame on a transverse axis for angular movement with respect thereto between the normal level position and a selected inclined position. Control means is coupled to the outer frame and operatively associated with the inner frame for regulating the degree of angular elevation of the inner frame with respect to the outer frame. The control means includes lever means including a lever member pivotally coupled to the outer frame and manually controllable by the user on the bed. The lever member by a cable is connected to retaining means which forms part of the control means and includes a clutch mechanism or lever lock which may be of the type disclosed in U.S. Pat. 3,082,640, and invented by the applicant of the present invention, and which disclosure is hereby incorporated by reference. The lever lock

is adapted for retaining the respective frames in a desired angular adjusted position. The lever lock of the retaining means when released allows the inner frame or cradle to tilt to a desired angle, and pushing the lever handle forward locks the lever lock in place and holds the inner frame at a desired angle.

Stop means is provided on the outer frame to engage the inner frame when it reaches its level position and locking means is operatively associated with the frames to lock the inner frame in its normal level position.

Accordingly, the invention permits the components of a conventional bed to tilt within the framework of the bed and to permit the occupant of the bed to initiate the tilt and hold it at a desired angle. This may be accomplished while the user is lying in the bed.

The idea of tilting by body balance is based on a formula of measurement. This formula has been determined by experiments with people of average build and height. The length of the mattress determines the location of the pivot point and for a standard mattress 6'3" or 75". The location of the pivot point should be three-fifths of the length of the mattress or 45". For longer mattresses a proportionate amount should be added. This measurement should be taken from the footboard of the bed.

When installed in this manner the inclinator unit can be tilted by a slight pull on the headboard or a handle attached. The unit can also be tilted by bringing the legs part way up to the body, this will shift enough weight to the head of the bed to tilt it down to the limit bumper of the stopping means. When a desired angle is reached it can be locked in place by engaging the locking lever of the bed. The tilting unit can be installed in reverse order if it is desired to raise the head and lower the feet.

BRIEF DESCRIPTION OF THE DRAWINGS

Although the characteristic features of this invention will be particularly pointed out in the claims, the invention itself, and the manner in which it may be made and used, may be better understood by referring to the following description taken in connection with the accompanying drawings forming a part hereof, wherein like reference numerals refer to like parts throughout the several views and in which:

FIG. 1 is a top plan view of a bed incorporating the tilting device made in accordance with this invention;

FIG. 2 is a sectional side elevational view on line 2—2 of FIG. 1;

FIG. 3 is a view similar to FIG. 2, showing the tilting device in its angular position;

FIG. 4 is a partial enlarged sectional view on line 4—4 of FIG. 2, showing the support for the inner frame in its normal position;

FIG. 5 is a partial enlarged sectional view on line 5—5 of FIG. 2, illustrating the retaining means for holding the inner frame in a selected angular position;

FIG. 6 is a partial enlarged sectional view on line 6—6 of FIG. 2, illustrating the means for locking the inner frame in its normal position;

FIG. 7 is a partial enlarged sectional view on line 7—7 of FIG. 2, illustrating the means for mounting the inner frame relative to the outer frame of the assembly; and

FIG. 8 is a partial enlarged sectional view on line 8—8 of FIG. 2, illustrating the means for limiting the angular position of the inner frame of the assembly.

PREFERRED EMBODIMENT

Referring now to the drawings and particularly to FIGS. 1–3 thereof, we have illustrated an adjustable tilting device generally indicated by the reference numeral **10**, and that may be used in conjunction with a bed assembly **12**, which includes a main or outer bed frame **15** of more or less standard construction having the customary headboard **16** and footboard **18** connected by the usual pair of connecting side rails **20** having an inner face **22**. An open inner rectangular frame **25** is provided consisting of a pair of side rails or members **26** having an inner surface **27** and outer surface **28**, and transversely extending end members **30** conventionally secured together. The length of the inner frame **25** being shorter than the outer frame **15** and adapted to support the bedding **32** thereon in the usual manner. For additional support one or more transverse members **33** extending between the side members **26** of the inner frame **25** may be provided (one being shown).

MOUNTING MEANS

To permit the components of the bed assembly **12**, namely the inner frame **25** to tilt within the framework of the outer frame **15** and to permit the occupant **34** of the bed **12** to initiate the tilt and even hold it at a desired inclined angle, supporting or mounting means **35** is provided between the outer frame **15** and inner frame **25** on a transverse axis for angular movement between a normal position as seen in FIG. 1, wherein the inner frame **25** is in a substantially horizontal plane, to an inclined position as seen in FIG. 3 wherein the portion near the headboard **16** is lower than the foot portion.

The mounting means **35** is so located and designed that it is possible by body balance alone to initiate the angular movement of the inner frame **25**, and this is based on a formula of measurement resulting from experiments with people of average build and height. The length of the mattress determines the location of the pivot point and for a standard mattress 75 inches in length the location of the pivot point from the footboard **18** or the front of the bedding **32**, as represented by the dimension D, should be in the range of from 40% to 80% of the length of the bedding **32** and preferably 60% of the length of the bedding **32** or approximately 45 inches. For a larger mattress a proportionate amount should be added and this measurement should be taken from the footboard **18** of the bed **12**, since the bedding **32** is usually adjacent to it. When installed in this manner the inclinator device **10** can be tilted relative to its transverse axis by a slight pull on the headboard **16** or a handle attached thereto. Due to the location of the mounting means **35** the inner frame **25** can be tilted in the direction of arrow **36** to the position shown in FIG. 3, by the user **34** bringing his legs part way up to his body, this will shift enough weight to the head of the bed to initiate the movement in the direction of arrow **36**.

The mounting means **35** includes a pair of mounting brackets **38** secured in spaced apart relation in axial alignment with each other on the inner face **22** of the respective side rails **20**. The flange **40** of the mounting bracket **38** may have fasteners, such as screws, extending therethrough into the side rails **20**. A contoured seat **42** is provided in the body portion **44** of the mounting bracket **38** to accommodate the free end portion **45** of a shaft **46** which is positioned therein and extends across the width of the outer frame **15**. The seat **42** is designed to receive the shaft **46** therein without disassembling the outer frame **15**. The inner frame **25** has an opening **48** in each side member **26** which openings are in axial alignment with each other to permit the shaft **46** to extend therethrough. Since the inner frame **25** is generally of wood it has been found desirable to provide a bearing surface for the shaft **46** to engage. A saddle member **50** is provided having an enlarged portion **52** containing a shaped depression **54** to form the bearing surface **56** and an integrally formed flange portion **58** through which the fasteners extend for securing the saddle member **56** to the inner surface **27**, or the outer surface **28** if desired, of the side members **26**. In this manner the circular shaft **46** is supported between the seats **42** of the mounting brackets **38** and the bearing surfaces **56** of the depression **54** so that all the weight of the inner frame **25**, bedding **32** and user **34** is supported by these surfaces. By the mounting means **35** illustrated, the inner frame **25** is

free to rotate around the transverse axis which coincides with the axis of the shaft **46** with a minimal of force so that it may easily be done manually by one who is even an invalid or by the shifting of body weight.

CONTROL MEANS

To regulate the inner frame **25** for controlled movement and positionment in a selected angular plane relative to the outer frame **15**, control means **60** is provided and coupled to the outer frame **15** and operatively associated with the inner frame **25** for regulating the angular elevation. The control means **60** includes retaining means **62** operatively associated with and mounted between the outer frame **15** and inner frame **25** for maintaining the inner frame **25** in a selected angular position with respect to the outer frame **15**, and lever means **64** for activating the retaining means **62**.

The retaining means **62** includes a lever lock or clutch device **65** which may vary in design, but may be of the type disclosed in U.S. Pat. 3,082,640, referred to above. As seen in FIG. 1, two lever locks **65** are used, and as seen particularly in FIG. 5 it includes a base plate **66** secured to the respective inner face **22** of the side rails **20** as by screws **67**. The lever lock **65**, by their position are in a sense a left handed one and a right handed one, but without any functional differences. The lever lock **65** includes a lever leg **68** and a lever toe **70** secured thereto. The lever lock **65** as described in the referenced patent operates by manually compressing friction means which co-operates with the levers to releasably retain the lever lock **65** in adjusted angular positions. The lever leg **68** at its free end is pivotably connected to connecting member **72** which in turn is connected to a cable **74** by a spacer **76** extending therebetween. Any displacement of the cable **74** in either direction of double headed arrow **75** will be transmitted to and effect angular movement of the lever leg **68**. Since two lever locks **65** are in use this motion must be transmitted to both at the same time and accordingly a motion bar **77** is mounted transversely between and in operative relation with both lever locks **65**. The motion bar **77** may be freeely seated for rotation within apertures (not shown) in each base plate **66** and having a motion arm **78** at each end extending therefrom in fixed relation thereto and pivotably coupled to the connecting member **72** for transmitting the cable movement to the opposite lever locks **65** by the motion arm **78** coupled to a connecting member **72**. In this manner both lever locks may be simultaneously moved between its engaged and disengaged positions. The lever toe is pivotably secured at its other end to a link member **79** which in turn is pivotably connected to the outer surface **28** of the side member **26** and freely rotatable with the angular movement of the inner frame **25**.

The lever means **64** as seen in FIGS. 1–3 and particularly in FIG. 7, includes a lever arm **80** having a curved upper free end **82** adapted to be gripped by the user as hereafter described, with its opposite or lower end **84** pivotably secured to the outer frame **15** by a bracket **85** secured to the inner face **22** of the side rail **20** as by a bolt **86** with a pivot pin extending through the lower end **84** of the lever arm **80** with a nut **87** retaining the lever arm **80** in place. The cable **74** extends from and is connected to the lever arm **80** by a coupling member **88** having a groove **89** so that it overlaps both sides of the lever arm **80** with a rivet **90** or other fastener extending therethrough and permitting angular rotation therewith. The other end of the cable **74** as explained above is connected by connecting member **72** to the lever leg **68**. Individual guide members **91**, **92** and **93** are each secured to the inner face **22** of the side rail **20** and includes an outwardly extending portion thereof having a clearance opening through which the cable **74** extends.

The operation of the control means **60** is such that the movement of the lever arm **80** in the direction of arrow **94** will release the lever lock **65** and allows the inner frame **25** to tilt to a desired angle. Pushing the lever arm **80** forward in the direction of arrow **95** locks the lever lock **65** in place and holds the inner frame **25** and bedding **42** at a desired angle. When the lever lock **65** is in its locked position the lever toe **70** remains in a fixed position preventing any angular motion of the cradle or inner frame **25**. It is appreciated that other angular position control regulating means may be utilized.

STOP MEANS

From tests conducted it has been found that there exists a limit angle beyond which a discomfort to the user **34** might occur and this angle is defined by a height differential as indicated by the dimension X between the two ends of the bedding **32**. For the average size bed the dimension X generally should not exceed twenty inches and is preferably about fourteen inches. To obtain this angular limitation limit stop means **96** is provided and as seen particularly in FIG. 8, we have a stop member having a side flange **97** with an integrally formed top flange **98** and vertically extending support rib **99** therebetween to provide additional strength. The side flange **97** is secured as by screws **100** to the inner face **22** of the side rails **20** in a selected position to obtain the desired degree of angular limitation. A compressible stopper **102**, made of rubber or similar material, is secured to the upper surface of the top flange **98** to engage the side members **26** of the inner frame **25** since two stop members **96** may be employed. To maintain the inner frame **25** in its normal or horizontal position limit means **105** in the form of bumpers **106** are provided and as particularly seen in FIG. 4, the bumpers **106** are secured to the inner face **22** of the side rails **20** in a conventional manner to engage a portion of the inner frame **25** when the latter is in its normal position.

LOCKING MEANS

Since the bed assembly **12** may also be used in its normal position, locking means **110** is provided to retain same in this position and may include as particularly seen in FIG. 6 a body member **112** having a downwardly extending flange **113** secured to the outer surface **28** of side member **26** and with an outwardly extending bottom rest portion **114**. Pivotably mounted on the inner face **22** of the side rail **20** is a locking arm **115** having at its upper end an enlarged finger engaging portion **116** and at its opposite end an outwardly extending friction portion **118** which is adapted to be compressed against the bottom rest portion **114** when in its locked position as seen in FIG. 2. In its open position, as seen in FIG. 3, the locking arm **115** is free. By mounting the locking arm **115** between its ends on the inner face **22** of the outer frame **15** a friction fit is obtained to obtain the requisite locking of the innner flame in place in its normal position.

BALANCE MEANS

To permit for fine adjustment of the inner frame **25** by the weight of the user alone, which can be accomplished after installation and test by the purchaser, balancing means **120** is provided. The balancing means includes weight **121** removably secured to the inner frame as by a basket **122** secured to the end member **30**. In this manner in case the bed may be used by someone else of different build in the future, the weights **121** can easily be removed or altered. In this way the tilting device would not have to be disassembled to change the pivot point defined by the transverse axis.

OPERATION

The tilting device **10** of the present invention may be incorporated in a bed assembly **12** or other furniture by the purchaser of the various component parts described herein or the manufacturer of the furniture may directly incorporate the tilting device **10** into the bed when initially manufactured. In operation the bed assembly **12** may be in the position shown in FIGS. 1 and 2, and in which case the user **34** may first open the locking means **110** by rotating the locking arm **115** in the direction of arrow

119 to the position seen in FIG. 3, so that the friction portion 118 is out of engagement with the bottom rest portion 114. If the user 34 is in the bed assembly 12 and he wishes to rotate the inner frame 25 and bedding 32 from the normal position in FIG. 2 to the inclined posi- in FIG. 3, then the control means 60 is actuated by engaging the lever arm 80 of the lever means 64 and pulling it in the direction of arrow 94. This angular rotation is transmitted through the cable 74 to the lever leg 68 of the retaining means 62 whereby the lever lock 65 is released. Once this occurs the inner frame 25 is free to move downwardly to the position in FIG. 3, and this is accomplished by the user 34 shifting his body weight such that the center of gravity of his body is past the transverse axis of the shaft 46, thereby causing a gradual descent of the inner frame 25. This descent is stopped by the user 32 engaging the lever arm 80 and pushing it in the direction of arrow 95. This motion is transmitted by cable 74 to the locking lever 65 to re-engage the clutch mechanism and by its coupling to the lever toe 70 and link member 79 it stops and retains the inner frame 25 in any selected angular position. The weight of the used 34 may be shifted by his bringing his legs past his knees or by just gripping the headboard 16 with his hand and balancing the inner frame 25 in any desired angular position and while maintaining this position engaging the lever arm 80 to egage the retaining means 62.

The bed assembly 12 may be so constructed that the frame 25 tilts in the opposite direction than illustrated.

Although illustrative embodiments of the invention have been described in detail herein with reference to the accompanying drawing, it is to be understood that the invention is not limited to those precise embodiments, and that various changes and modifications may be effected therein without departing from the scope or spirit of the invention.

I claim:

1. A tilting device for use with furniture for moving a portion thereof between a normal level position and an inclined position, comprising:

(A) an outer main frame including side rails,

(B) an open rigid rectangular inner frame in said outer frame, said inner frame being shorter than said outer frame and including a pair of spaced apart side members,

(C) mounting means for tiltably supporting said complete inner frame in said outer bed frame on a transverse axis for angular movement with respect to said outer frame between the normal level position and the inclined position, and

(D) control means coupled to said outer frame and operatively associated with said inner frame for regulating the angular elevation of said inner frame with respect to said outer frame, said control means including:

(1) retaining means interconnecting said outer frame and said inner frame for retaining them in selected angular relation to each other, and

(2) lever means in spaced relation to said retaining means and mounted relative to said outer frame and operatively associated with said retaining means for actuating the latter to obtain the desired angular positionment of said inner frame, said lever means including:

(a) a lever arm pivotably mounted on said outer frame and maneuverable by the user of the device when positioned thereon, and

(b) a cable extending between said lever arm and said retaining means for transmitting the movement of said lever arm when engaged by the user,

(E) stop means secured to said outer frame for limiting the travel of said inner frame in its inclined position, said stop means including an outwardly extending top flange adapted to receive said side member

in supporting relation thereto, and secured to said side rail,

(F) locking means operatively associated with said frames for locking said inner frame in its normal level position, said locking means includes:

(1) a body member secured to said inner frame having a rest portion extending therefrom, and

(2) a locking arm pivotably secured to said outer frame having a finger engaging portion at one end thereof for engagement by the user of the device for rotating said locking arm and a friction portion at substantially the other end of said locking arm, said friction portion adapted to engage said rest portion when said inner frame is in its normal position so that it may be retained in said position until said locking means is released, and

(G) limit means operatively associated with said outer frame to support the inner frame in its horizontal position.

2. A tilting device as defined in claim 1,

(a) wherein the user is adapted to regulate said lever means while positioned on said inner frame, to engage and disengage said retaining means, said inner frame being free to move angularly relative to said outer frame when said retaining means is disengaged and retained in fixed position relative to said outer frame when said retaining means is engaged, and

(b) said mounting means extends between said side rails and said side members is positioned from the end of said outer frame removed from the user of said outer frame a distance in the range of 40% to 80% of the length of said inner frame, wherein the user by releasing and retaining means may effect said angular movement of said inner frame by balance alone, so that the user's hand is lower than the user's feet.

3. The device as defined in claim 1, wherein said mounting means includes:

(a) a support shaft extending transversely from said inner frame in supporting relation thereto and extending beyond said side members, and

(b) a mounting bracket secured to each of said side rails in transverse relationship to each other and engagable with the free end portions of said shaft, so as to permit angular rotation of said inner frame about said support shaft with a minimum of applied force.

4. The device as defined in claim 3, wherein said mounting bracket includes a vertically extending seat adapted to receive the free end portion of said shaft which is removable therefrom by vertical movement.

5. The device as defined in claim 4, wherein said mounting means further includes a saddle member, having a bearing surface, secured to each of said side members in axial alignment with said supporting shaft, wherein the latter engages said bearing surface and is supported thereby relative to said inner frame.

6. The device as defined in claim 1, and further including balancing means connected to said inner frame for varying the weight thereof for balancing purposes to facilitate adjustment of the inner frame when the user is contained thereon.

7. The device as defined in claim 6, wherein said balancing means includes a basket secured to said inner frame at substantially one end thereof and a plurality of weights contained in the basket that may be varied to adjust to the weight of the user.

8. An adjustable bed assembly for moving a human thereon between a normal level position and an inclined position, in which the head of the human is lower than his feet in the inclined position, comprising:

(A) an outer main bed frame havin a headboard, a footboard and interconecting side rails,

(B) an open rigid rectangular inner frame in said outer frame, said inner frame adapted to support the bedding and user thereon and being shorter than said outer frame and including a pair of spaced apart side members,

(C) mounting means for tiltably supporting said complete inner frame in said outer bed frame on a transverse axis for angular movement with respect to said outer bed frame between the normal level position and the inclined position with a minimum of applied force, said mounting means including a support shaft extending outwardly from each of said side members and a mounting bracket secured to each of said side rails in transverse relationship to each other and engagable with the free end portions of said shaft, said mounting means extends between said side rails and said side members is positioned from the footboard of said outer frame, a distance in the range of 40% to 80% of the length of said inner frame, wherein the user by releasing said retaining means may effect said angular movement of said inner frame by balance alone so that the user's head is lower than the user's feet,

(D) control means coupled to said outer frame and operatively associated with said inner frame for regulating the angular elevation of said inner frame with respect to said outer frame, said control means including:

(1) retaining means interconnecting said outer frame and said inner frame for retaining them in selected angular relation to each other, and

(2) lever means including a lever arm pivotably mounted on said outer frame and maneuverable by the user when positioned thereon, and operatively associated with said retaining means by a cable extending between said lever arm and said retaining means for transmitting the movement of said lever arm when engaged by the user for actuating said retaining means to obtain desired angular positionment of said inner frame, wherein the user is adapted to regulate said lever arm while positioned on said inner frame to engage and disengage said retaining means, said inner frame being free to move angularly relative to said outer frame when said retaining means is disengaged and retained in fixed position relative to said outer frame when said retaining means is engaged, and

(E) locking means operatively associated with said frames for locking said inner frame in its normal level position, and

(F) stop means secured to said outer frame for limiting the travel of said inner frame in its inclined position.

9. An adjustable bed assembly as defined in claim **8**, wherein said locking means includes:

(a) a body member secured to said inner frame having a rest portion extending therefrom, and

(b) a locking arm pivotably secured to said outer frame having a finger engaging portion at one end thereof for engagement by the user of the device for rotating said locking arm and a friction portion at substantially the other end of said locking arm, said friction portion adapted to engage said rest portion when said inner frame is in its normal position so that it may be retained in said position until said locking means is released.

10. An adjustable bed assembly as defined in claim **8**,

(a) wherein said mounting bracket includes a vertically extending seat adapted to receive the free end portion of said shaft which is removable therefrom by vertical movement, and

(b) wherein said mounting means further includes a saddle member, having a bearing surface, secured to each of said side members in axial alignment with said supporting shaft, wherein the latter engages said bearing surface and is supported thereby relative to said inner frame.

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CASMIR A. NUNBERG, Primary Examiner