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(54) **PIVOTAL SUPPORT AND FOLDAWAY WINGS**

SCHWENKBARE TRAGEEINRICHTUNG UND ENTFALTBARE PANELE

SUPPORT ARTICULE ET PANNEAUX DEPLIABLES

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Description

[0001] THIS INVENTION relates to a hinge mechanism applicable to angularly movable wings such as a foldaway ironing board assembly and to assemblies employing the hinge mechanism such as a foldaway ironing board assembly mounted to a support structure such as a wall, kitchen unit, cupboard bench support, mobile cabinet or drawer.

BACKGROUND ART

[0002] Many different mechanisms are employed in establishing items such as foldaway ironing board assemblies which save space and offer advantages over more conventional portable ironing boards which are supported from the ground by scissor action legs. These conventional portable ironing boards are not always easy to erect and stow and they are therefore considered inconvenient. In contrast foldaway ironing board assemblies mounted to a support structure are usually more convenient than portable ironing boards. They can be easier to move from a stored position to an operative position depending on the nature of the mechanism by which they are mounted.

[0003] When in a stored position the above foldaway ironing board assemblies are located against, for example, a wall in which the longitudinal axis of the board is positioned vertically. When moved between the stored and an operative position the longitudinal axis pivots about a vertical axis and therefore the length of the ironing board protrudes out into a room. This therefore limits the type of room such foldaway ironing boards can be practically used in. Furthermore, the protruding tapered end of the ironing board is substantially unsupported and excessive pressure on this end may damage supporting struts extending from the wall to the underside of the ironing board.

[0004] US 5369898 (Sorensen) is a wall mounted board, pivoted down from a vertical storage position to a working disposition whereat the board rests on a bracket acting against further downward angular movement.

[0005] GB 2271360 (Burke) is a similar board to that of Sorensen above, mounted inside a cabinet with a height adjustment. These styles are hinged at their end and extend outwardly perpendicularly from the wall behind them.

[0006] US 4961388 (Simpson) provides its board on a mechanism which pivots and rotates out of its storage position.

[0007] US 4480556 (Wilson et al) provides its board with a mechanism for swivelling the board between two horizontal positions at different heights on a turntable mounting locked by a ratchet.

[0008] US 2298002 (Fay) provides its board on a mechanism which pivots out of its storage position. The mechanism includes two linkages, one of which engag-

es the board so as to prevent it moving past its working position.

OBJECTS OF THE INVENTION

[0009] It is an object of the present invention to provide a mechanism for pivoting a member which mechanism shifts the centre of angular movement of the member off the support to the member enabling more compact structures.

[0010] It is a further object of the invention to enable the pivoting of wings out of storage compartments which are more compact than has hitherto for been possible.

[0011] It is a still further object of the invention to provide an ironing board able to be folded out of a compact storage space into a working disposition.

DISCLOSURE OF THE INVENTION

[0012] A mounting assembly for a member by which the member is angularly movable from a storage position to a working position comprising:

a first link arranged, in use, to be pivotally mounted to a support at a first end of said first link at a connection point thereof, and to be pivotally mounted to said member at a second end of said first link; and a second link arranged, in use, to be pivotally mounted to the support at a first end of the second link, at a point on the support spaced apart from the connection point of the first link, and to be pivotally mounted to said member at a second end of the second link; characterised in that said second link is abutted, in use, at the working position of the member against a stop means or limit means on said first link to prevent angular movement of the member past the working position; and in use, at the working position of the member, the second end of the first link and the second end of the second link are both intermediate the first end of the first link and the first end of the second link.

[0013] In a particular variation of the mounting assembly it is associated with an intermediate pivotal plate interconnected with the links and the member via a slotted plate introducing an extra degree of relative angular movement of the member.

[0014] Advantageously two of the above defined mounting assemblies are used to mount on angularly movable wing to a supporting surface enabling the wing to move between a storage and working position. The wing may support an angularly movable planar element thereover providing a working surface at the working position. Ideally the planar element might be in two hinged parts able to be folded together to reduce their area in a storage means.

[0015] Ideally the above described angularly movable wing is an ironing board. The board may be stored ver-

tically and lowered angularly to a horizontal disposition. The board may be stored vertically on the side of a linearly translatable frame, being raised thereover to its working position. The board may be stored collapsed into a flat pack in a drawer unit, able to be drawn therefrom and extended horizontally outwardly. By these means the board may be mounted into a wall cabinet, which can be vertically adjustable; a cupboard from which the board can be drawn and then rotated upwardly; or located in a drawer unit of a cabinet, cupboard, or the like.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] In order that the invention may be readily understood and put into practical effect, references will now be made to preferred embodiments shown in the accompanying drawings in which:

FIG 1 is an exploded perspective view of a support means;

FIG. 2 is a side view of the support means of FIG. 1 when in a stored position;

FIGS. 3 to 6 are perspective views of a foldaway ironing board assembly including the support means of FIGS. 1 and 2;

FIGS. 7 to 10 are perspective views of a second preferred embodiment of the invention;

FIG. 11 is an exploded perspective view of another preferred embodiment of a support means;

FIGS. 12 and 13 are side views of the support means of FIG. 11 when rotated from the position of FIG. 11 through 90° and 180° respectively;

FIGS. 14 to 18 are perspective views of a third embodiment of the invention including the support means of FIGS. 11 to 13;

FIG. 19 is a perspective view of a hinge used to fold an ironing board member as used in the invention; FIGS. 20 to 22 illustrates a pivot means which can be used in the invention;

FIG. 23 illustrates a perspective view of a height adjustment means; and

FIG. 24 is a perspective view of an adjustable mount.

PREFERRED EMBODIMENTS

[0017] Referring to FIGS. 1 and 2, there is illustrated a mounting assembly or cantilevered support means 1 having a first link or support member 2, second link or support member 8, and movable member 13.

[0018] First link or support member 2 can be pivotally mounted to an upright support structure in the form of a mounting plate 3, pivoted about a first horizontal axis A. A pivot pin 4 can be inserted through apertures 6, 7 and washer 5 to provide the pivotal mounting of the first link at a first end thereof about horizontal axis A.

[0019] Second link or support member 8 can be piv-

otally mounted to plate 3 about a second horizontal axis B. A pivot pin 9 can be inserted through apertures 11, 12 and washer 10 to provide the pivotal mounting of the second link at a first end thereof about horizontal axis B.

[0020] Angularly movable member 13 can be pivotally mounted to first support member 2 at a second end thereof about a third horizontal axis C. Again a pivot pin 14 can be inserted through apertures 16, 17 and a washer 15 can provide a pivotal mounting about horizontal axis C. Member 13 can be pivotally mounted to second support member 8 at a second end thereof about a horizontal axis D by a pivot pin 18 inserted through apertures 20, 21 and washer 19.

[0021] When pins 4, 9, 14 and 18 have been inserted as described above they may be fixed against being removed by their inserted ends being peened by any known method.

[0022] First support member 2 may have a heel portion as shown which can provide a female engagement means or concavity 29 which can be engageable with an end of second support member 8 which provides a complementary male engagement means or convex end 30.

[0023] Plate 3 may be provided with slotted apertures 22 for mounting to a wall or other support structure. When disposed as in FIG. 1 the member 13 is in an operative or working position in which the lock, limit, stop or engagement means 29 and 30 may engage with each other. FIG. 2 illustrates the disposition of the support member 2 when in a stored position in which engagement means 29 and 30 are dis-engaged.

[0024] Referring to FIGS. 3 to 6 there is illustrated a foldaway ironing board assembly 23 which is supported from an upright support structure such as a wall to which plate 3 is mounted by screws passing through slotted apertures 22. Foldaway ironing board assembly 23 can include an elongate ironing board member 24, mounted to a generally U-shaped bent tubular bar whose arms can provide two spaced apart angularly movable members 13 of two support means 1 each of which can be mounted to opposite ends of plate 3 as described above. Ironing board member 24 preferably includes a frame 25 and a planar ironing surface, ideally formed from an expanded metal grid 26. Ironing board member 24 is ideally foldable about at least one transverse axis T1 and preferably a cushioned cover 27 may cover grid 26. A storage cover 28 can also be provided and is preferably pivotally mounted to one end of parallel arms 31, the other end of arms 31 being pivotally mounted to plate 3.

[0025] When in a stored position, shown in FIG. 3, foldaway ironing board assembly 23 is covered by storage cover 28 which may have a magnetic catch (not shown). When foldaway ironing board assembly 23 is desired to be used, storage cover 28 is moved to the position as shown in FIGS. 4 to 6. Ironing board member 23 is then pulled down from a vertical stored position shown in FIG. 4 to a horizontal position as shown in FIG.

5. In this regard both support means 1 move from the position as shown in FIG 2 to the position shown in FIG. 1 and thereby engagement means 29 and 30 become engaged thereby restraining movement of support means 1. Ironing board member 24 may then be unfolded about pivotal axis T1 to an operative position in which a longitudinal edge 32 is in close proximity to plate 3 and a portion of support means 1 extends between longitudinal edge 32 and the plate 3. When ironing board assembly 23 is no longer required to be used it can be stored by a reverse operation to that as described above.

[0026] Referring to FIGS. 7 to 10 there is illustrated a second embodiment of a foldaway ironing board assembly 32. To avoid repetition the only differences between the above first embodiment will be described.

[0027] A retractable cantilevered support means 34 can include support members 2,8 and plate 35 preferably mounted at unsupported ends of two telescopic arms 36 slidably mounted to respective runners 37 ideally located inside a support structure, which in this embodiment is an upright wall 39 of a storage area under a bench top 38. A further plate 35 can be mounted intermediate the ends of arms 36 and they are preferably pivotally mounted to each plate 35 on pairs of links or support members 2, 8. Member 40 of support means 34 is pivotally mounted to links 2,8. Also ideally mounted to the outermost angularly movable support member 40 is a threaded locking pin 41 for releasable engagement with a threaded aperture 42 on outer plate 35.

[0028] Ironing board member 24 can be mounted to each angularly movable member 40 such that when in the operative position shown in FIG. 10, longitudinal edge 32 is in close proximity to the support structure upright wall 39 and a portion of support means 34 (i.e. a portion of arms 36) extends between upright wall 39 and longitudinal edge 32. When the board which is shown in FIG. 7 is desired to be used, the foldaway ironing board assembly 32 and the telescopic arms 36 are extended as shown in FIG. 8. Ironing board member 24 is then rotated to through 90° as shown in FIG. 9 in which engagement means 29, 30 move from a disengaged relationship to an engaging relationship. Locking pin 41 may then be screwed into aperture 42 to provide a positive locking of ironing board assembly 32. The ironing board member 24 can be unfolded ready for use. When it is no longer required to be used assembly 33 can be stored by a reverse operation to that as described.

[0029] Referring to FIG. 11, there is illustrated a further embodiment of a support means 50 which can include a first support member 51, second support member 57, third support member 63, movable member 62 and a retractable telescopic arm 52.

[0030] First support member 51 is preferably pivotally mounted to retractable telescopic arm 52 about a first horizontal pivotal axis F. Pivot pin 53 inserted through apertures 55, 56 and washer 54 provides the pivotal mounting about horizontal axis F. Second support mem-

ber 57 can be pivotally mounted to arm 52 about a second horizontal axis G. Pivot pin 58, inserted through apertures 60, 61 and washer 59 provide the pivotal mounting about horizontal axis G. First and third support members 51, 63 and movable member 62 are ideally pivotally mounted about a common horizontal axis H by pivot pin 64 inserted through apertures, 65, 66, 67 and washers 68. Further third support member 63 is ideally pivotally mounted to second support member 57 about a horizontal axis I by pivot pin 69 inserted through apertures 70, 71 and washer 72. When pivot pins 53, 58, 63, 69 have been inserted as described, they may be fixed against being removed when their ends are peened.

[0031] Third support member 63 has an arcuate slot 73 which can receive a pin 74 protruding from movable member 62. Furthermore first support member 51 can have a female engagement means 75 for engagement with a male engagement means 76 located at one end of second support member 57.

[0032] FIG. 11 shows the assembly in an operative position in which pin 74 limits movement of movable member 62 by abutting end of arcuate track 73. Referring to FIG. 12, moveable member has been rotated through 90° and therefore pin 74 has moved along arcuate track 73 to its end 73b. Accordingly, further rotation of third support member dis-engages engagement means 75, 76 as shown in FIG. 13 which thereby allows third support member to be rotated through another 90° resulting in 180° rotation in total.

[0033] Referring to FIGS. 14 to 18, there is illustrated a further embodiment of a foldaway ironing board assembly 77 which can be supported from a support structure such as supporting walls 78 of a sliding drawer assembly. Two retractable telescopic arms 52 of a respective cantilevered support means 50 are ideally slidably mounted to runners associated with a respective upright supporting wall 78.

[0034] Foldaway ironing board assembly 77 can include an ironing board member 80 identical to that of FIGS. 3 to 6 and therefore to avoid repetition is not described again. Ironing board member 80 can be mounted to a wing comprising a bent tubular bar 81 with a handle 82 mounted thereto. Tubular bar 81 can be used to provide two third support members 62. Accordingly, foldaway ironing board assembly 77 has two support means 50 as described in FIGS. 11 to 13. When foldaway ironing board assembly 77 is desired to be used a handle 83 mounted to front drawer wall 84 which is mounted to ends of telescopic arms 52 is used to pull arms 52 to the extended position shown in FIG. 14 when in this position each of support means 50 is in the position shown in FIG. 13. Handle 82 may then be used to rotate board member through 180° as shown in FIGS. 15, 16 and 17 in which 90° corresponds to the position shown in FIG. 12. Due to the arrangement of support means 50, lifting of board member 80 causes it to be raised to clear drawer wall 84. After board member 80 has been pivoted through 180° it is unfolded into an op-

erative position ready for use as illustrated in FIG. 18. When in this position a longitudinal edge 32 is in close proximity of support structure 85. When it is no longer required to be used, assembly 77 can be stored by a reverse operation to that as described.

[0035] Referring to FIG. 19, a double hinge 90 is illustrated which can be mounted to board member 24 to provide pivotal movement about adjacent transverse axes T1 and T2. This therefore allows a space 91 to accommodate a cushioned cover 28 (not shown in FIG. 19) when sandwiched by board member 24 when in the folded position as shown. Further, there are tabs 92 protruding from frame 25 for engaging and holding cushioned cover 28 and protrusions 93 ensure a planar ironing surface is provided when board member 24 is unfolded to the operative position.

[0036] Referring to FIGS. 20 to 22, there is illustrated a pivot means 95 for selectively allowing limited rotation of board member 24 about a vertical axis J. Therefore board member 24 can be selectively rotated as illustrated by the arcuate arrowed line to positions other than edge 32 being parallel to support structure 96. The pivot means as includes ball bearings 97 biased by springs 98 mounted in an arcuate track 99 which is part of a base plate 100 mounted to, for example, the links of the above described mounting mechanism. Pivotaly attached about vertical axis J is a rotatable plate 101 with an arcuate track 102 having apertures 103 therein for engagement with ball bearings 97. Bolts 104 allow for mounting of ironing board member 24 (of FIG. 19) to rotatable plate 101 and selective positioning about vertical axis J of board member 24 is provided by rotation of plate 101 relative to base plate 100. During this rotation ball bearings 97 engage apertures 103 to restrict pivotal movement when a desired position has been obtained.

[0037] Referring to FIG. 23, there is illustrated a height adjustment means 105 comprising a mounting plate 106 with a slot 107 punched therein. Along one longitudinal edge of slot 107 are a plurality of female engagement means in the form of recesses 109.

[0038] Height adjustment means 105 can also include a moveable plate 110 which is held captive in slot 107 by tabs 111. At a lower end of plate 110 is a male engagement means in the form of protrusion 112 for engaging with one of recesses 109. Height adjustment means 105 can replace, for example, plate 3 as described in FIG. 1. Accordingly, first support member 2 and second support member 8 are pivotally mounted to plate 110 and height adjustment is effected by selective engagement of protrusion 112 with one of recesses 109. Once engaged the weight of ironing board member 24 assists in maintaining engagement of protrusion 112 in one of recesses 109.

[0039] Referring to FIG. 24, there is illustrated an adjustable mount 115 for the foldaway ironing board assembly 23 illustrated in FIGS. 3 to 6. Mount 115 includes wall mounting means in the form of two pairs of spaced

apertured plates 116 and two parallel upright tracks 117 each being mounted at its ends to one of plates 116. Mount 115 also includes an ironing board mounting means in the form of an apertured frame 118 slidably mounted to tracks 117. To selectively limit movement of frame 118 relative to tracks 117 a lock 119 is pivotally mounted to frame 118. Lock 119 has a handle 120 biased by spring 121 to a locked position in which lock 119 grips tracks 117. To release frame 118 from the locked position handle 120 is pushed downwards and allows frame 118 to slide along tracks 117 to provide height adjustment of foldaway ironing board assembly 23 when mounted to frame 118. Collars 122 are fixed to respective tracks 117 and between an upper slidable frame mount 123 and a respective collar 122 there is mounted a spring 124 for biasing frame 118 to upper ends of tracks 117. In use, mount 115 allows height adjustment of a mounted foldaway ironing board assembly 23 which is beneficial for a household of people with different heights in which one or more of the people may be confined to a wheelchair.

[0040] Although the invention has been described with reference to preferred embodiments it is to be understood that the invention is not limited to the specific embodiments described herein.

Claims

1. A mounting assembly (1, 50) for a member (13, 62) by which the member is angularly movable from a storage position to a working position, comprising:

a first link (2, 51) arranged, in use, to be pivotally mounted to a support (3, 53, 52) at a first end of said first link (2, 51) at a connection point thereof, and to be pivotally mounted to said member (13, 62) at a second end of said first link (2, 51); and

a second link (8, 57) arranged, in use, to be pivotally mounted to the support (3, 36, 52) at a first end of the second link, at a point on the support (3, 36, 52) spaced apart from the connection point of the first link (2, 51), and to be pivotally mounted to said member (13, 62) at a second end of the second link; **characterised in that:**

said second link (8, 57) is abutted, in use, at the working position of the member (13, 62), against a stop means or limit means (29, 75) on said first link (2, 51) to prevent angular movement of the member (13, 62) past the working position; and
in use, at the working position of the member (13, 62), the second end of the first link (2, 51) and the second end of the second link (8, 57) are both intermediate the first

end of the first link (2,51) and the first end of the second link (8,57).

2. A mounting assembly as claimed in claim 1, wherein, in use, at the working position of the member (13, 62), the second ends of the first (2,51) and second links (8,57) are vertically intermediate the first ends of the first (2,51) and second links (8,57). 5
3. A mounting assembly as claimed in claim 1, wherein, in use, at the working position of the member (13,62), the second ends of the first (2,51) and second links (8,57) are horizontally intermediate the first ends of the first (2,51) and second links (8,57). 10
4. A mounting assembly for a member as claimed in any preceding claim wherein said first link (51) is pivoted together with a plate (63) at its second end, said plate (63) having an arcuate slot (73) therein concentric with the pivot at the second end of the first link (51), the second link (57) being pivotally connected at its second end with said plate (63) at a point adjoining the end of said slot (73), said member (62) being fitted with pin (74) captured in said slot (73). 15
5. A wing with an edge about which it pivots, said wing being mounted at respective ends of said edge by a pair of mounting assemblies (1, 50) as claimed in claim 1. 20
6. A wing as claimed in claim 5 wherein the support (35) to the pair of mounting assemblies (1, 50) is mounted on sliding tracks for translation from a storage position prior to rotation into the working position. 25
7. A wing as claimed in claim 5 or claim 6 wherein the wing supports thereon a rotatably mounted planar element (80) . 30
8. A wing as claimed in claim 7 wherein the planar element (80) is in two segments one hinged to the other for movement from a folded position to a coplanar disposition. 35
9. An ironing board comprising: 40
 - a planar element (24, 80) adapted to provide an ironing surface; 45
 - mounting means (1,50) by which the planar element (24,80) is able to be moved from a storage position to a working position;
 - said mounting means (1, 50) comprising a pair of spaced apart mounting assemblies, each mounting assembly of said pair having first (2, 51) and second (8, 57) links connected at re-

spective spaced apart first ends to a support (3, 35, 52) and respective spaced apart second ends to the planar element (24, 80); **characterised in that**, in each of said mounting assemblies:

said second link (8, 57) engages a stop means or limit means (29, 75) located on the first link (2, 51) restricting angular movement of the ironing surface past the working position; and
in use, at the working position of the ironing surface, the second end of the first and the second end of the second links are both intermediate the first end of the first link (2,51) and the first end of the second link (8,57).

10. An ironing board as claimed in claim 9, wherein, in each of the mounting assemblies, the second ends of the first (2,51) and second links (8,57) are, in use, at the working position of the ironing surface, vertically intermediate the first ends of the first (2,51) and second links (8,57). 25
11. An ironing board as claimed in claim 9, wherein, in each of the mounting assemblies, the second ends of the first (2,51) and second links (8,57) are, in use, at the working position of the ironing surface, horizontally intermediate the first ends of the first (2,51) and second links (8,57). 30
12. An ironing board as claimed in claim 9 wherein, in each of the mounting assemblies, the stop or limit means (29, 75) is mounted to the first link (2, 51) and engages at the working position with the first end of the second link (8, 57), said engagement involving a convex surface (30, 76) nested in a complementary concavity (29, 75) on the respective engaging parts. 35
13. An ironing board as claimed in any of claims 9, 10 or 12 wherein the storage position of the planar element is vertically in a wall mounted cabinet, the first (2) and second (8) links extend from the back of the cabinet standing the planar element (24, 80) thereof, the first and second links enabling angular movement to a generally horizontal working disposition projected forwardly of the cabinet. 40
14. An ironing board as claimed in any of claims 9, 10 or 12 wherein the storage position is in a cabinet where the support (35) is a frame on tracks (37), arranged to be drawn from within the cabinet to a position whereat the board can be moved angularly to the working position. 45
15. An ironing board as claimed in claim 14 wherein the

ironing surface is stored off the links on support arms (36) permitting the ironing surface to be moved over the frame to a generally vertical storage position at the rear thereof.

16. An ironing board as claimed in either of claims 9 or 11 wherein the storage position is in a drawer unit and the planar element (80) is mounted to the floor thereof via said first (51) and second (57) links and an intermediate pivotal plate (63) pivotally connected with the second end of the first link (51) at the planar element (80) with an arcuate slot (73) therein concentric therewith, said plate (63) being pivotally connected with the second end of the second link (57) and said planar element (80) having a pin (74) thereon engaged in said slot (63) whereby to enable the planar element (80) to lie in a storage position in said drawer unit and be drawn upwardly therefrom to a working position extending outwardly of the drawer unit.

17. An ironing board as claimed in claim 16 wherein the planar element (24) is fitted with a turntable (95) on which is disposed a two part hinged together board adapted to form the ironing surface being foldable to collapse into said drawer unit when being stored.

Patentansprüche

1. Montageanordnung (1, 50) für ein Glied (13, 62), durch die das Glied winkelförmig aus einer Lagerungsstellung in eine Arbeitsstellung bewegt werden kann, mit Folgendem:

einem ersten Verbindungsglied (2, 51), das im Gebrauch so angeordnet ist, dass es an seinem ersten Ende an einem Verbindungspunkt davon schwenkbar an einer Stütze (3, 53, 52) und an seinem zweiten Ende schwenkbar an dem Glied (13, 62) angebracht werden soll, und einem zweiten Verbindungsglied (8, 57), das im Gebrauch so angeordnet ist, dass es an seinem ersten Ende an einem von dem Verbindungspunkt des ersten Verbindungsglieds (2, 51) beabstandeten Punkt an der Stütze (3, 36, 52) schwenkbar an der Stütze (3, 36, 52) und an seinem zweiten Ende schwenkbar an dem Glied (13, 62) angebracht werden soll, **dadurch gekennzeichnet, dass**

das zweite Verbindungsglied (8, 57) im Gebrauch in der Arbeitsstellung des Glieds (13, 62) an einem Anschlag- oder Begrenzungsmitel (29, 75) an dem ersten Verbindungsglied (2, 51) zur Anlage kommt, um eine winkelförmige Bewegung des Glieds (13, 62) an der Arbeitsstellung vorbei zu verhindern, und im Gebrauch in der Arbeitsstellung des Glieds

(13, 62) sowohl das zweite Ende des ersten Verbindungsglieds (2, 51) als auch das zweite Ende des zweiten Verbindungsglieds (8, 57) zwischen dem ersten Ende des ersten Verbindungsglieds (2, 51) und dem ersten Ende des zweiten Verbindungsglieds (8, 57) liegen.

2. Montageanordnung nach Anspruch 1, bei der die zweiten Enden des ersten (2, 51) und des zweiten Verbindungsglieds (8, 57) im Gebrauch in der Arbeitsstellung des Glieds (13, 62) vertikal zwischen den ersten Enden des ersten (2, 51) und zweiten Verbindungsglieds (8, 57) liegen.

3. Montageanordnung nach Anspruch 1, bei der die zweiten Enden des ersten (2, 51) und des zweiten Verbindungsglieds (8, 57) im Gebrauch in der Arbeitsstellung des Glieds (13, 62) horizontal zwischen den ersten Enden des ersten (2, 51) und zweiten Verbindungsglieds (8, 57) liegen.

4. Montageanordnung für ein Glied nach einem vorhergehenden Anspruch, bei der das erste Verbindungsglied (51) an seinem zweiten Ende zusammen mit einer Platte (63) geschwenkt wird, die einen bogenförmigen Schlitz (73) aufweist, der zu dem Drehpunkt am zweiten Ende des ersten Verbindungsglieds (51) konzentrisch ist, wobei das zweite Verbindungsglied (57) an seinem zweiten Ende an einem an das Ende des Schlitzes (73) anschließenden Punkt schwenkbar mit der Platte (63) verbunden ist, wobei das Glied (62) mit einem in dem Schlitz (73) aufgenommenen Stift (74) ausgerüstet ist.

5. Flügel mit einem Rand, um den er schwenkt, wobei der Flügel an jeweiligen Enden des Rands durch ein Paar Montageanordnungen (1, 50) nach Anspruch 1 angebracht ist.

6. Flügel nach Anspruch 5, bei dem die Stütze (35) für das Paar Montageanordnungen (1, 50) auf Gleitschienen angebracht ist, sodass sie vor der Drehung in die Arbeitsstellung eine Translationsbewegung aus einer Lagerungsstellung durchführen kann.

7. Flügel nach Anspruch 5 oder 6, wobei der Flügel ein drehbar angebrachtes planares Element (80) stützt.

8. Flügel nach Anspruch 7, bei dem das planare Element (80) aus zwei Segmenten besteht, wobei das eine über ein Scharnier mit dem anderen verbunden ist, damit eine Bewegung aus einer zusammengeklappten Stellung in eine koplanare Anordnung erfolgen kann.

9. Bügelbrett mit Folgendem:

einem planaren Element (24, 80), das eine Bügelfläche bereitstellen soll; Montagemitteln (1, 50), dank derer das planare Element (24, 80) aus einer Lagerungsstellung in eine Arbeitsstellung bewegt werden kann;

wobei die Montagemittel (1, 50) ein Paar beabstandeter Montageanordnungen umfassen, wobei jede Montageanordnung des Paares ein erstes (2, 51) und ein zweites (8, 57) Verbindungsglied aufweist, die an jeweiligen beabstandeten ersten Enden mit einer Stütze (3, 36, 52) und an jeweiligen beabstandeten zweiten Enden mit dem planaren Element (24, 80) verbunden sind, **dadurch gekennzeichnet, dass** bei jeder der Montageanordnungen das zweite Verbindungsglied (8, 57) ein Anschlag- oder Begrenzungsmittel (29, 75) in Eingriff nimmt, das sich an dem ersten Verbindungsglied (2, 51) befindet und eine winkelförmige Bewegung der Bügelfläche an der Arbeitsstellung vorbei einschränkt, und im Gebrauch in der Arbeitsstellung der Bügelfläche sowohl das zweite Ende des ersten als auch das zweite Ende des zweiten Verbindungsglieds zwischen dem ersten Ende des ersten Verbindungsglieds (2, 51) und dem ersten Ende des zweiten Verbindungsglieds (8, 57) liegen.

10. Bügelbrett nach Anspruch 9, bei dem bei jeder der Montageanordnungen die zweiten Enden des ersten (2, 51) und zweiten Verbindungsglieds (8, 57) im Gebrauch in der Arbeitsstellung der Bügelfläche vertikal zwischen den ersten Enden des ersten (2, 51) und zweiten Verbindungsglieds (8, 57) liegen.

11. Bügelbrett nach Anspruch 9, bei dem bei jeder der Montageanordnungen die zweiten Enden des ersten (2, 51) und des zweiten Verbindungsglieds (8, 57) im Gebrauch in der Arbeitsstellung der Bügelfläche horizontal zwischen den ersten Enden des ersten (2, 51) und zweiten Verbindungsglieds (8, 57) liegen.

12. Bügelbrett nach Anspruch 9, bei dem bei jeder der Montageanordnungen das Anschlag- oder Begrenzungsmittel (29, 75) am ersten Verbindungsglied (2, 51) angebracht ist und in der Arbeitsstellung mit dem ersten Ende des zweiten Verbindungsglieds (8, 57) in Eingriff kommt, wobei dieser Eingriff eine in eine komplementäre Höhlung (29, 75) an den entsprechenden in Eingriff kommenden Teilen hineinpassende konvexe Fläche (30, 76) umfasst.

13. Bügelbrett nach einem der Ansprüche 9, 10 oder 12, bei dem sich das planare Element in seiner Lagerungsstellung vertikal in einem an einer Wand an-

gebrachten Schrank befindet und das erste (2) und das zweite (8) Verbindungsglied sich von der Rückseite des Schanks erstrecken und das planare Element (24, 80) davon hochstellen, wobei das erste und zweite Verbindungsglied eine winkelförmige Bewegung in eine allgemein horizontale, aus dem Schrank herausragende Arbeitslage ermöglichen.

14. Bügelbrett nach einem der Ansprüche 9, 10 oder 12, bei dem die Lagerungsstellung in einem Schrank ist, wobei es sich bei der Stütze (35) um einen Rahmen auf Schienen (37) handelt, der so angeordnet ist, dass er aus dem Schrank heraus in eine Stellung gezogen wird, in der das Brett winkelförmig in die Arbeitsstellung bewegt werden kann.

15. Bügelbrett nach Anspruch 14, bei dem die Bügelfläche nicht auf den Verbindungsgliedern, sondern auf Stützarmen (36) gelagert ist, wodurch die Bügelfläche über den Rahmen in eine allgemein vertikale Lagerungsstellung an dessen Hinterseite bewegt werden kann.

16. Bügelbrett nach Anspruch 9 oder 11, bei dem die Lagerungsstellung in einer Schubladeneinheit ist und das planare Element (80) über das erste (51) und zweite (57) Verbindungsglied und eine dazwischen liegende, mit einem bogenförmigen und damit konzentrischen Schlitz (73) versehene Schwenkplatte (63), die an dem planaren Element (80) mit dem zweiten Ende des ersten Verbindungsglieds (51) schwenkbar verbunden ist, an deren Boden angebracht ist, wobei die Platte (63) mit dem zweiten Ende des zweiten Verbindungsglieds (57) schwenkbar verbunden ist und das planare Element (80) einen in den Schlitz (63) eingreifenden Stift (74) aufweist, damit das planare Element (80) in einer Lagerungsstellung in der Schubladeneinheit liegen und daraus nach oben in eine Arbeitsstellung herausgezogen werden kann, in der es sich aus der Schubladeneinheit heraus erstreckt.

17. Bügelbrett nach Anspruch 16, bei dem das planare Element (24) mit einer Drehscheibe (95) versehen ist, an der ein zweiteiliges, mit einem Scharnier verbundenes Brett angeordnet ist, das die Bügelfläche bildet, die zur Lagerung in der Schublade zusammengeklappt werden kann.

Revendications

1. Ensemble de fixation (1, 50), pour un élément (13, 62) par lequel l'élément peut se déplacer de façon angulaire d'une position de rangement à une position de travail, comprenant :

une première articulation (2, 51) agencée, du-

rant l'utilisation, pour être fixée de façon pivotante à un support (3, 53, 52) à une première extrémité de ladite première articulation (2, 51) à un point de raccordement de celle-ci, et être fixée de façon pivotante audit élément (13, 62) à une deuxième extrémité de ladite première articulation (2, 51) ; et
une deuxième articulation (8, 57), agencée, durant l'utilisation, pour être fixée au support (3, 36, 52) à une première extrémité de la deuxième articulation, à un point sur le support (3, 36, 52) séparé par un espace du point de raccordement de la première articulation (2, 51), et être fixée de façon pivotante audit élément (13, 62) à une deuxième extrémité de la deuxième articulation ; **caractérisé en ce que** :

ladite deuxième articulation (8, 57) est contiguë, durant l'utilisation, à la position de travail de l'élément (13, 62), contre un moyen d'arrêt ou un moyen de butée (29, 75) sur ladite première articulation (2, 51) pour empêcher le mouvement angulaire de l'élément (13, 62) au-delà de la position de travail ; et
durant l'utilisation, à la position de travail de l'élément (13, 62), la deuxième extrémité de la première articulation (2, 51) et la deuxième extrémité de la deuxième articulation (8, 57) sont toutes deux à une position intermédiaire par rapport à la première extrémité de la première articulation (2, 51) et la première extrémité de la deuxième articulation (8, 57).

2. Ensemble de fixation selon la revendication 1, dans lequel, durant l'utilisation, à la position de travail de l'élément (13, 62), les deuxièmes extrémités de la première (2, 51) et de la deuxième (8, 57) articulations sont en position verticalement intermédiaire par rapport aux premières extrémités de la première (2, 51) et de la deuxième (8, 57) articulations.
3. Ensemble de fixation selon la revendication 1, dans lequel, durant l'utilisation, à la position de travail de l'élément (13, 62), les deuxièmes extrémités de la première (2, 51) et de la deuxième (8, 57) articulations sont en position horizontalement intermédiaire par rapport aux premières extrémités de la première (2, 51) et de la deuxième (8, 57) articulations.
4. Ensemble de fixation pour un élément selon l'une quelconque des revendications précédentes, dans lequel ladite première articulation (51) pivote avec une plaque (63) à sa deuxième extrémité, ladite plaque (63) comportant sur elle une encoche arquée (73) concentrique avec le pivot à la deuxième extrémité de la première articulation (51), la deuxième

articulation (57) étant connectée de façon pivotante à sa deuxième extrémité avec ladite plaque (63) à un point jouxtant l'extrémité de ladite encoche (73), ledit élément (62) étant doté d'une goupille (74) capturée dans ladite encoche (73).

5. Aile avec un bord autour duquel elle pivote, ladite aile étant fixée aux extrémités respectives dudit bord par une paire d'ensembles de fixation (1, 50) selon la revendication 1.
6. Aile selon la revendication 5, dans laquelle le support (35) de la paire d'ensembles de fixation (1, 50) est monté sur des glissières coulissantes pour le déplacement à partir d'une position de rangement avant la rotation à la position de travail.
7. Aile selon la revendication 5 ou la revendication 6, dans laquelle l'aile porte sur elle un élément plan monté de façon rotative (80).
8. Aile selon la revendication 7, dans laquelle l'élément plan (80) est en deux segments dont l'un est relié à l'autre par charnière pour permettre le mouvement d'une position repliée à une disposition coplanaire.
9. Planche à repasser comprenant :
un élément plan (24, 80) adapté pour fournir une surface de repassage ;
des moyens de fixation (1, 50) par lesquels l'élément plan (24, 80) est apte à être déplacé à partir d'une position de rangement à une position de travail ;
lesdits moyens de fixation (1, 50) comprenant une paire d'ensembles de fixation séparés par un espace, chaque ensemble de fixation de ladite paire ayant une première (2, 51) et une deuxième (8, 57) articulations connectées à des premières extrémités respectives séparées par un espace à un support (3, 35, 52) et à des deuxièmes extrémités respectives séparées par un espace à l'élément, plan (24, 80) ;

caractérisée en ce que, dans chacun desdits ensembles de fixation ;

ladite deuxième articulation (8, 57) s'engage dans un moyen d'arrêt ou dans un moyen de butée (29, 75) situé sur la première articulation (2, 51) limitant le mouvement angulaire de la surface de repassage au-delà de la position de travail ; et

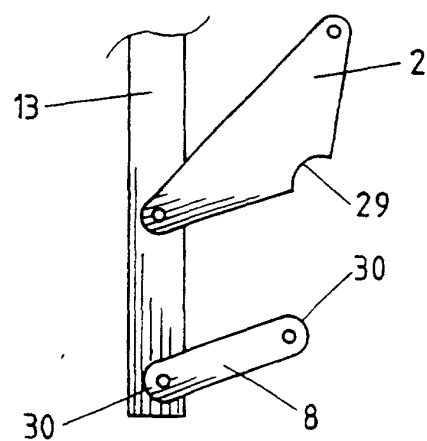
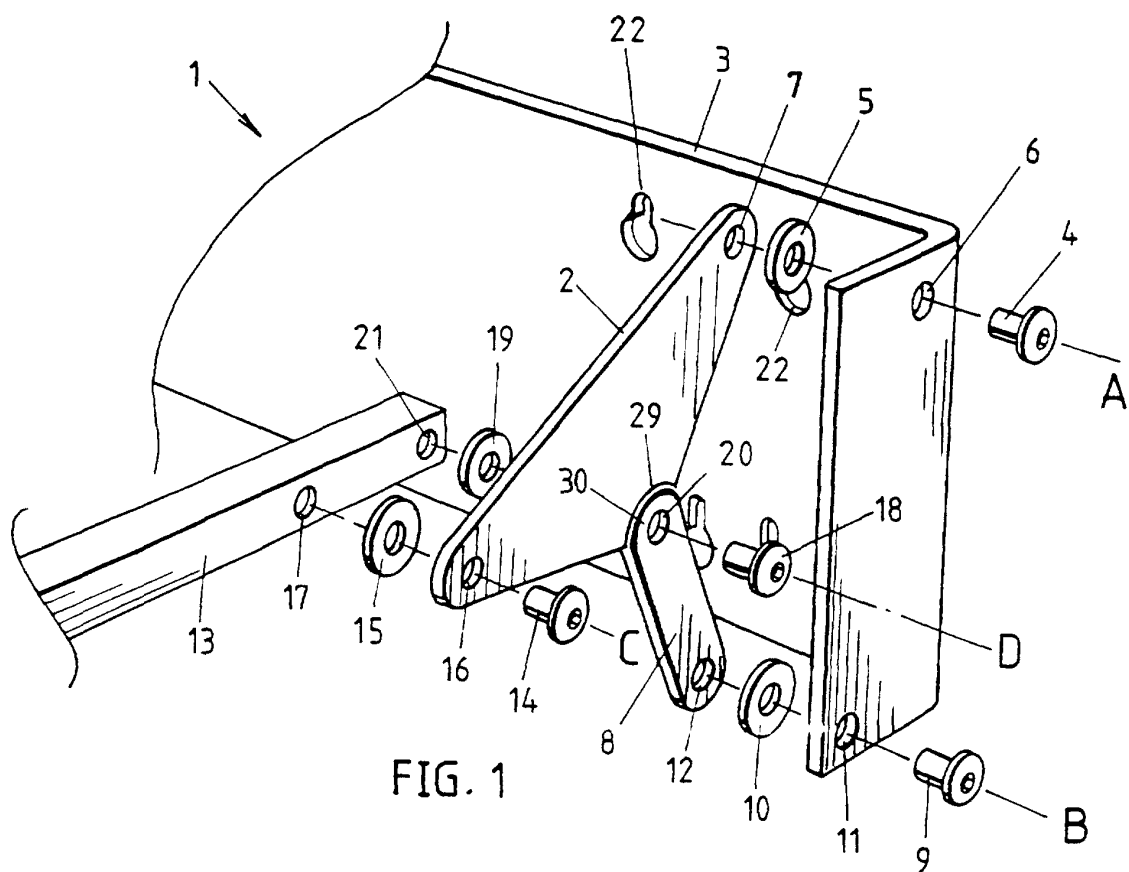
durant l'utilisation, à la position de travail de la surface de repassage, la deuxième extrémité de la première et la deuxième extrémités des deuxièmes articulations sont toutes deux en position intermédiaire par rapport à la première extrémité de la

première articulation (2, 51) et de la première extrémité de la deuxième articulation (8, 57).

10. Planche à repasser selon la revendication 9, dans laquelle, dans chacun des ensembles de fixation, les deuxièmes extrémités de la première (2, 51) et de la deuxième (8, 57) articulations sont, durant l'utilisation, à la position de travail de la surface de repassage, en position verticalement intermédiaire par rapport aux premières extrémités de la première (2, 51) et de la deuxième (8, 57) articulations. 5
11. Planche à repasser selon la revendication 9, dans laquelle, dans chacun des ensembles de fixation, les deuxièmes extrémités de la première (2, 51) et de la deuxième (8, 57) articulations sont, durant l'utilisation, à la position de travail de la surface de repassage, en position horizontalement intermédiaire par rapport aux premières extrémités de la première (2, 51) et de la deuxième (8, 57) articulations. 10
12. Planche à repasser selon la revendication 9, dans laquelle, dans chacun des ensembles de fixation, le moyen d'arrêt ou de butée (29, 75) est monté sur la première articulation (2, 51) et s'engage à la position de travail avec la première extrémité de la deuxième articulation (8, 57), ledit engagement impliquant une surface convexe (30, 76) nichée dans une découpe concave complémentaire (29, 75) prévue sur les parties d'engagement respectives. 15
13. Planche à repasser selon l'une quelconque des revendications 9, 10 ou 12, dans laquelle la position de rangement de l'élément plan est verticalement dans un meuble de rangement à montage mural, la première (2) et la deuxième (8) articulations s'étendent depuis l'arrière du meuble de rangement en dressant l'élément plan (24, 80) de celui-ci, la première et la deuxième articulations permettant le mouvement angulaire à une disposition de travail généralement horizontale étendue vers l'avant du meuble de rangement. 20
14. Planche à repasser selon l'une quelconque des revendications 9, 10 ou 12, dans laquelle la position de rangement est dans un meuble de rangement où le support (35) est un cadre sur des glissières (37), agencé pour être tiré de l'intérieur du meuble de rangement à une position à laquelle la planche peut être déplacée de façon angulaire à la position de travail. 25
15. Planche à repasser selon la revendication 14, dans laquelle la surface de repassage est rangée à l'écart des articulations sur des bras de support (36) permettant à la surface de repassage d'être déplacée au-dessus du cadre à une position de rangement 30

généralement verticale à l'arrière de celui-ci.

16. Planche à repasser selon l'une quelconque des revendications 9 ou 11, dans laquelle la position de rangement est dans une unité de tiroir et l'élément plan (80) est monté sur le plancher de celui-ci par l'intermédiaire desdites première (51) et deuxième (57) articulations et une plaque pivotante intermédiaire (63) connectée de façon pivotante avec la deuxième extrémité de la première articulation (51) à l'élément planaire (80) avec en elle une encoche arquée (73) concentrique avec elle, ladite plaque (63) étant connectée de façon pivotante avec la deuxième extrémité de la deuxième articulation (57) et ledit élément plan (80) ayant sur lui une goupille (74) qui s'engage dans ladite encoche (63) permettant de la sorte que l'élément plan (80) soit couché dans une position de rangement dans ladite unité de tiroir et soit tiré vers le haut à partir de celle-ci dans une position de travail s'étendant à l'extérieur de l'unité de tiroir. 35
17. Planche à repasser selon la revendication 16, dans laquelle l'élément plan (24) est doté d'une table tournante (95) sur laquelle est disposée une planche en deux parties articulées ensemble par charnière et adaptée pour former la surface de repassage qui est pliable pour pouvoir s'escamoter dans ladite unité de tiroir quand elle est rangée. 40



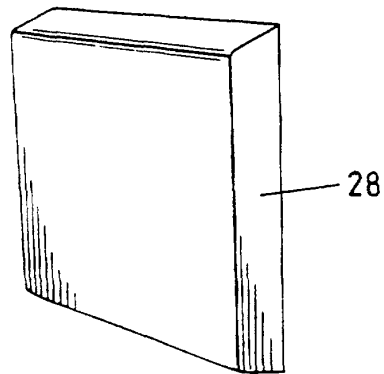


FIG. 3

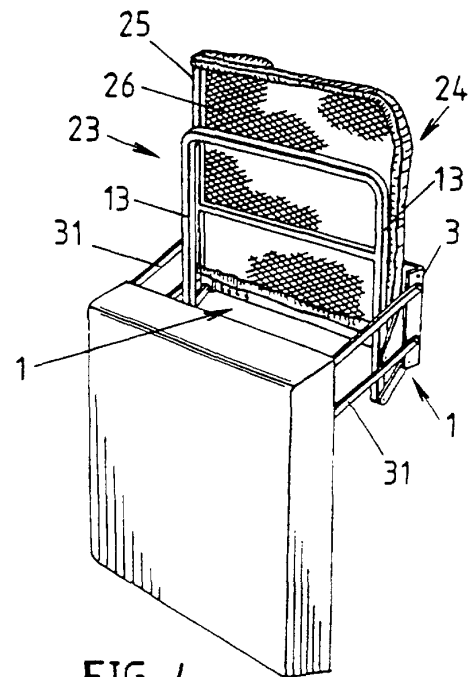


FIG. 4

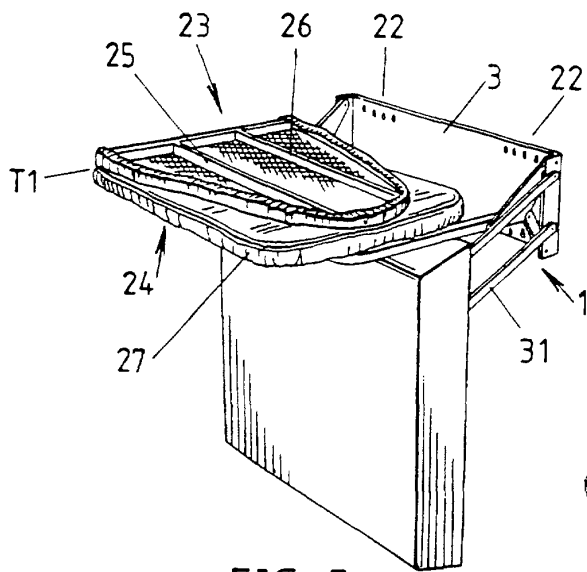


FIG. 5

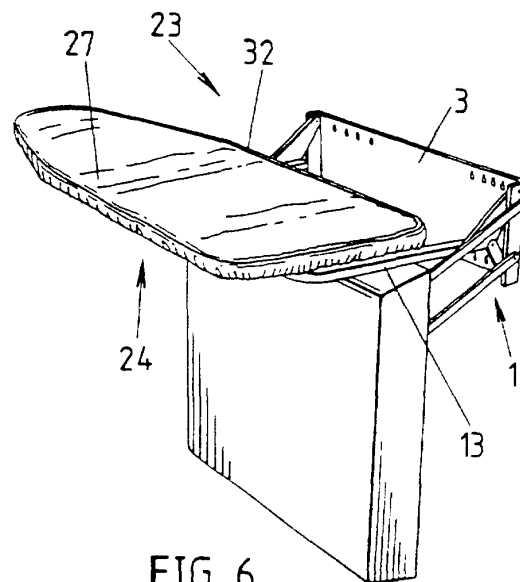


FIG. 6

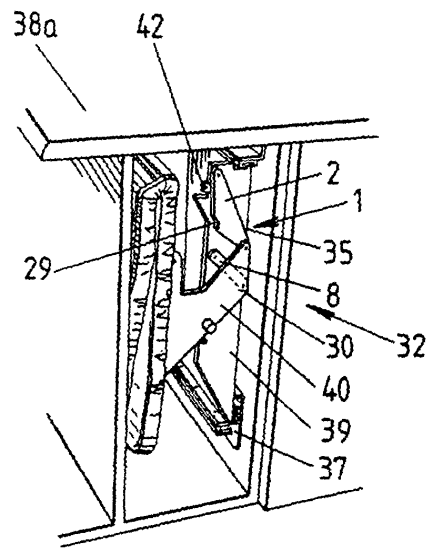


FIG. 7

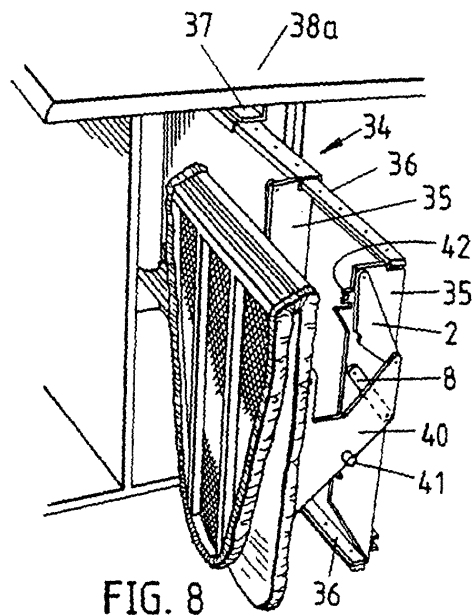


FIG. 8

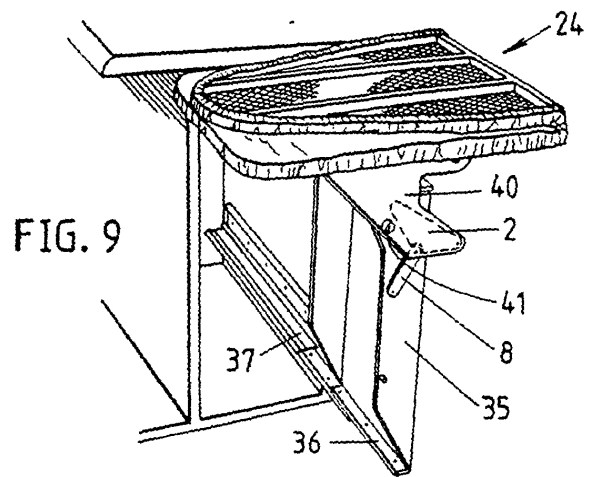


FIG. 9

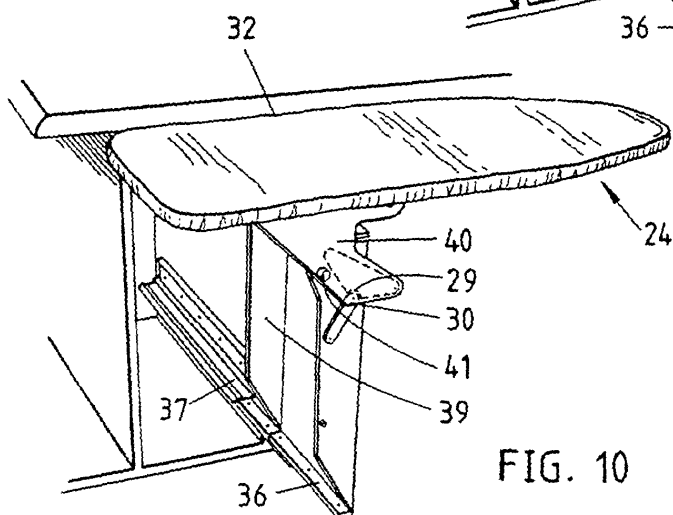


FIG. 10

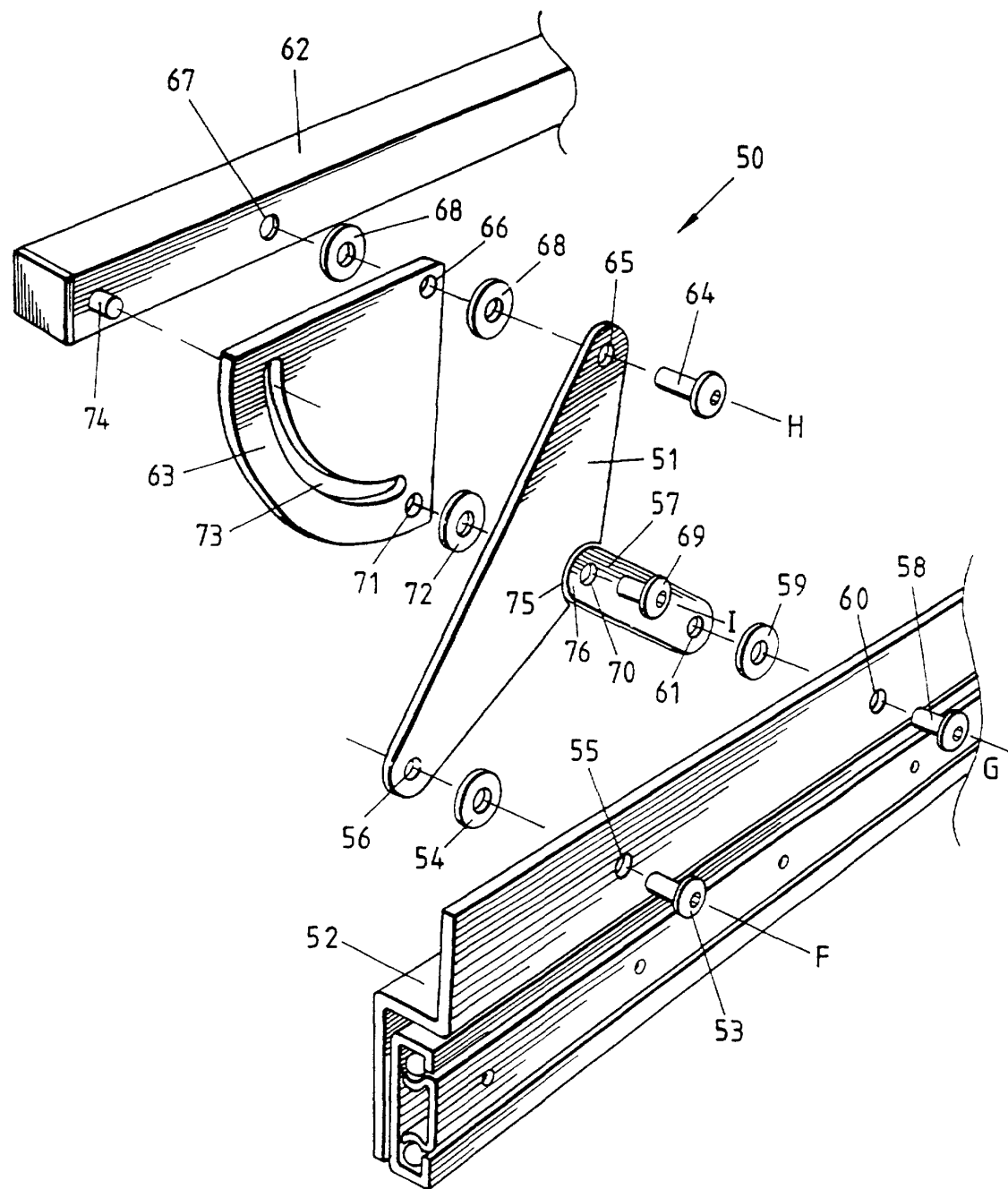


FIG. 11

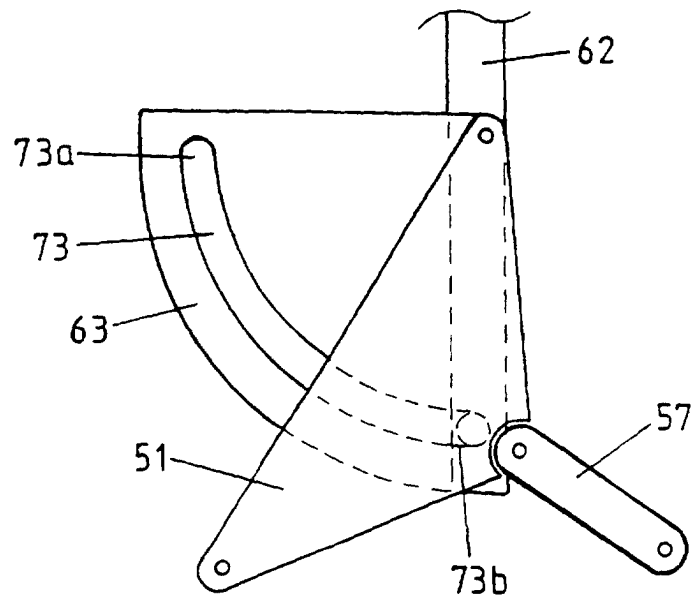


FIG. 12

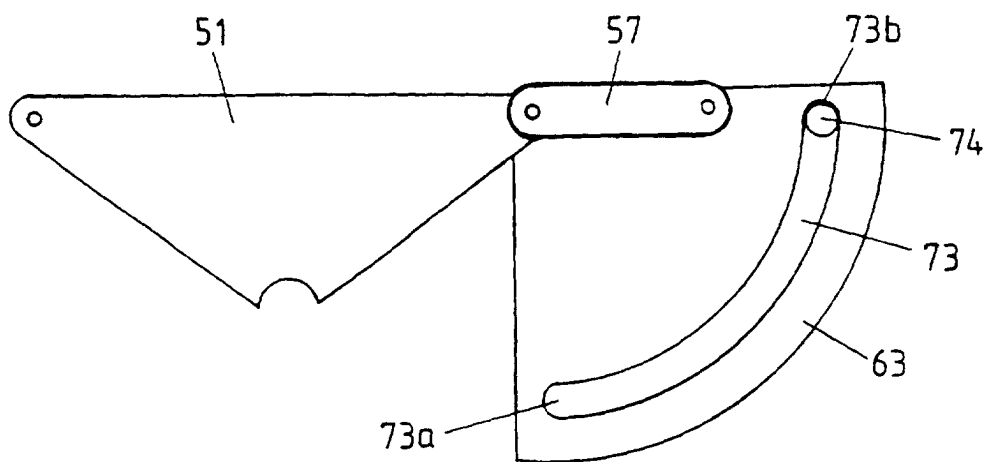


FIG. 13

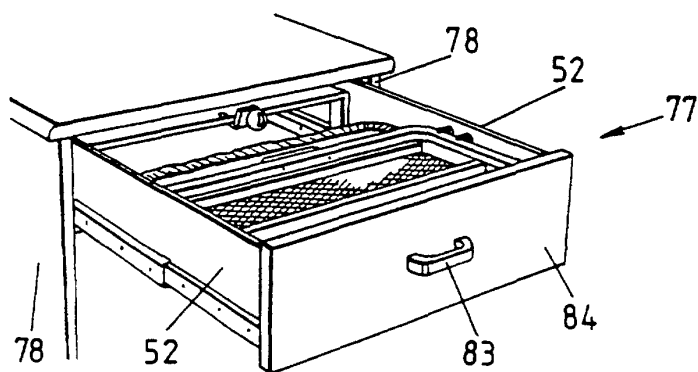


FIG. 14

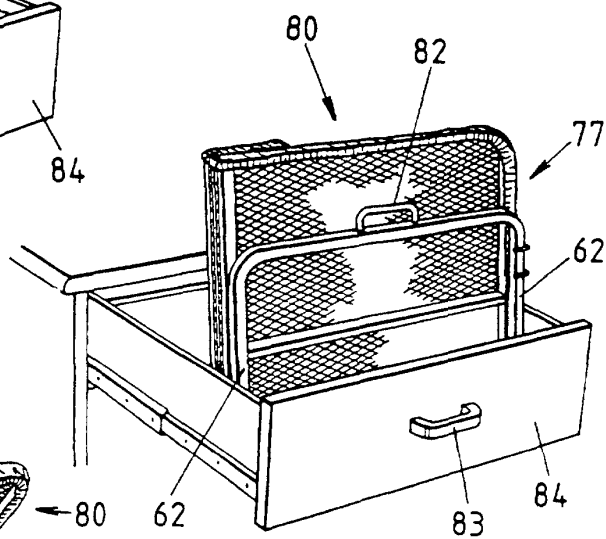


FIG. 15

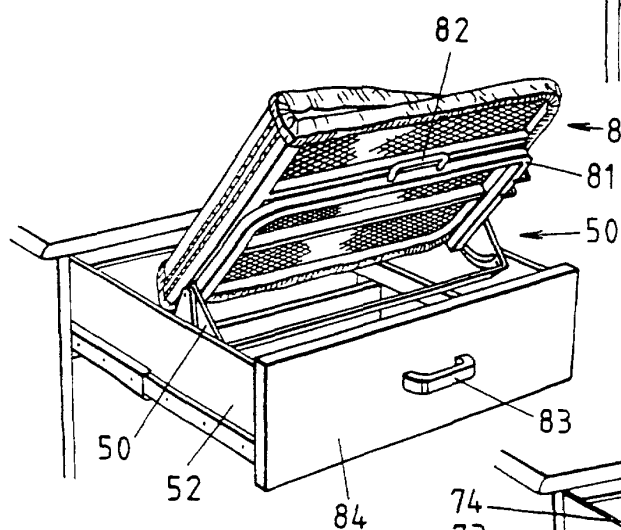


FIG. 16

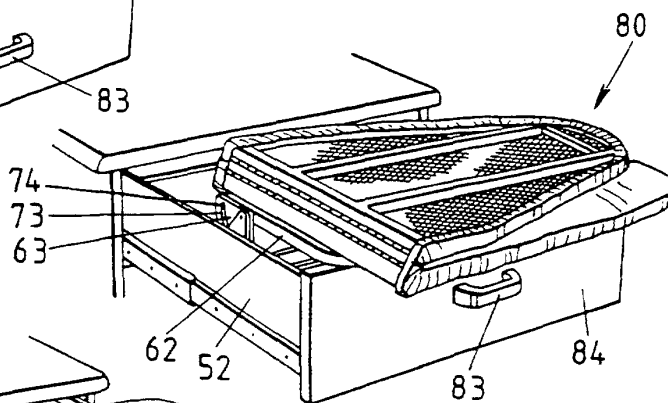


FIG. 17

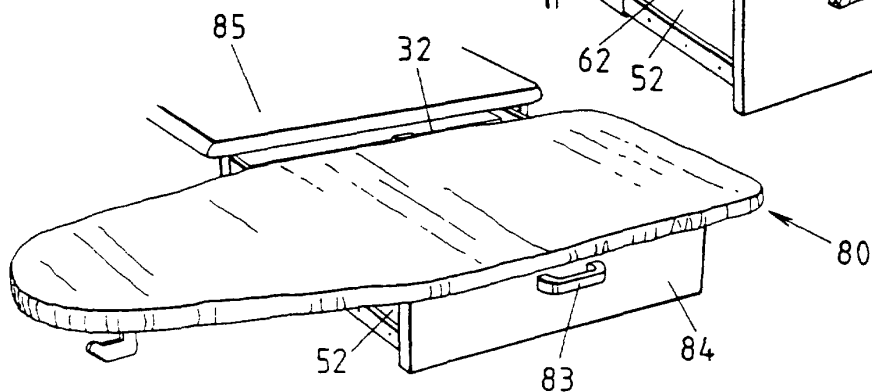
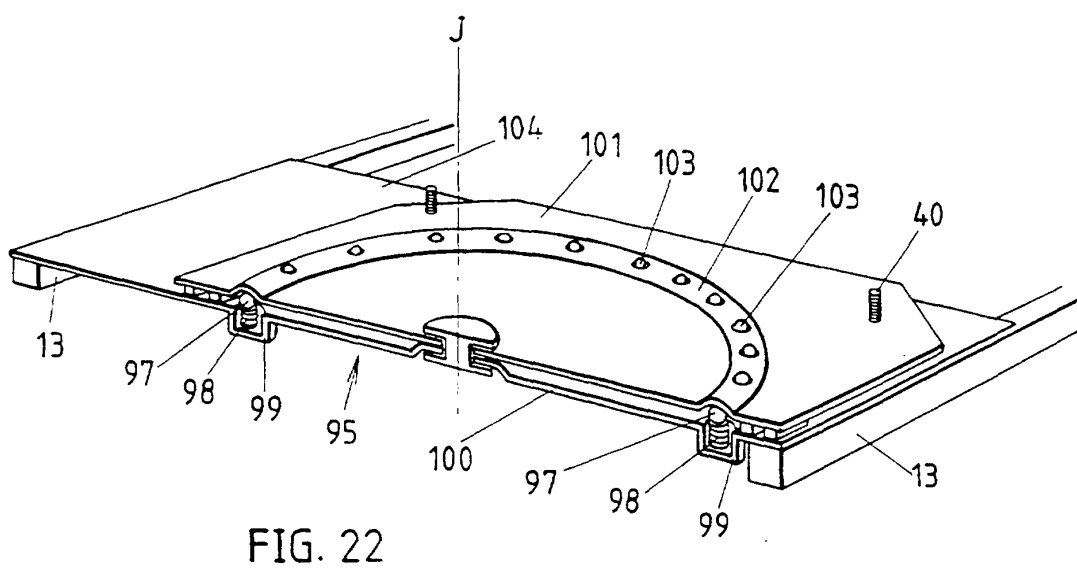
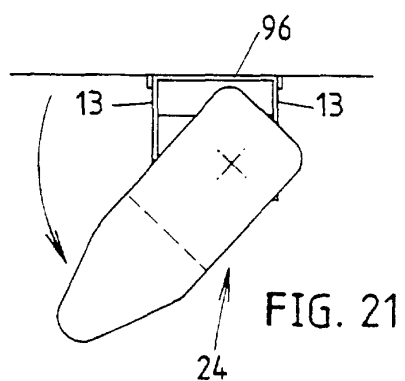
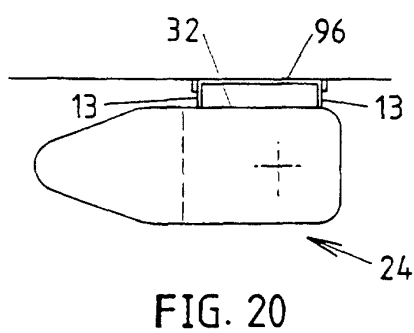
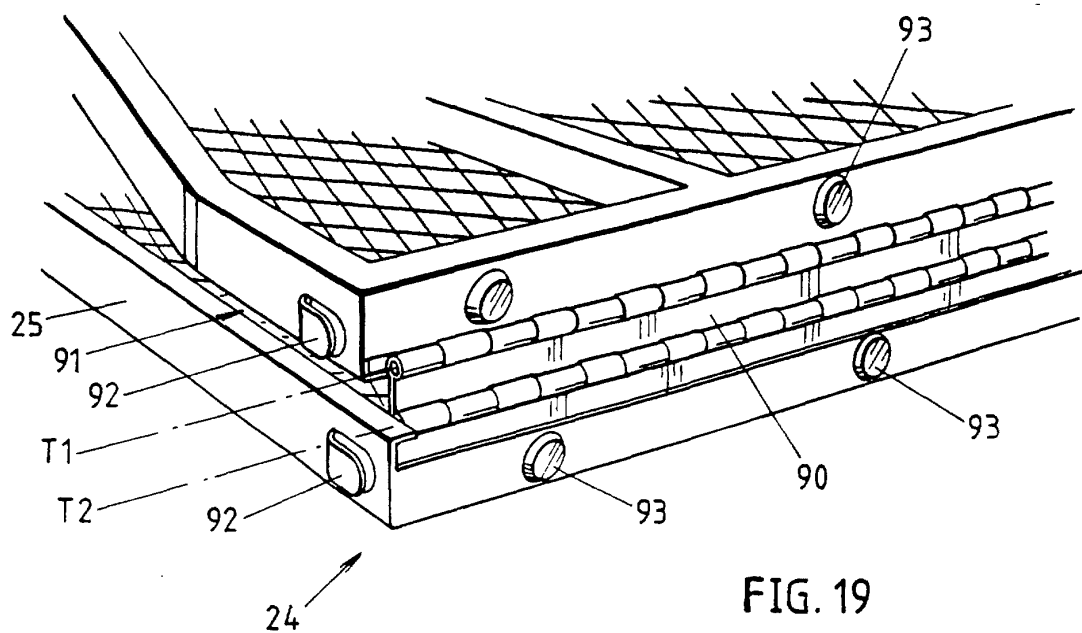


FIG. 18



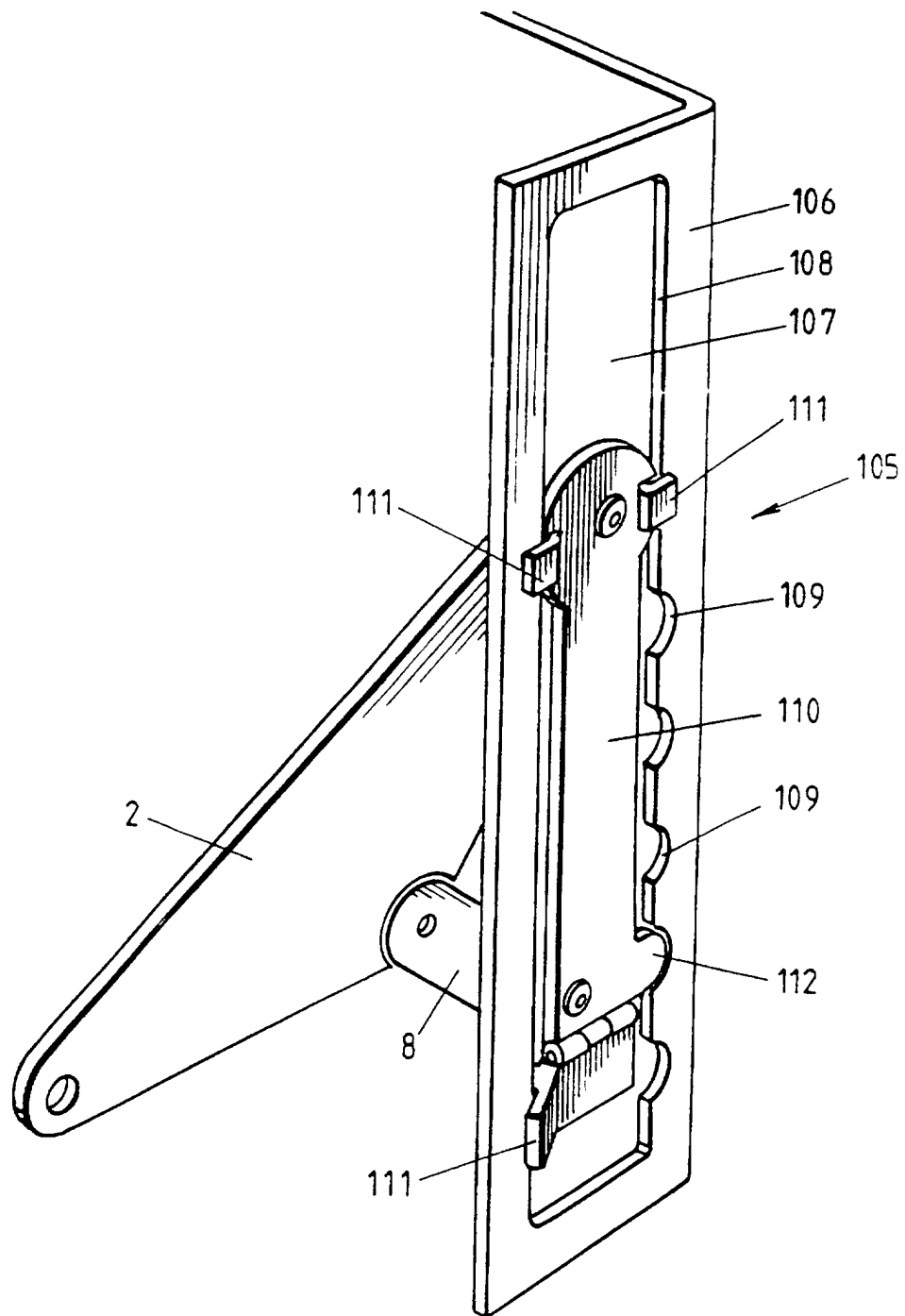


FIG. 23

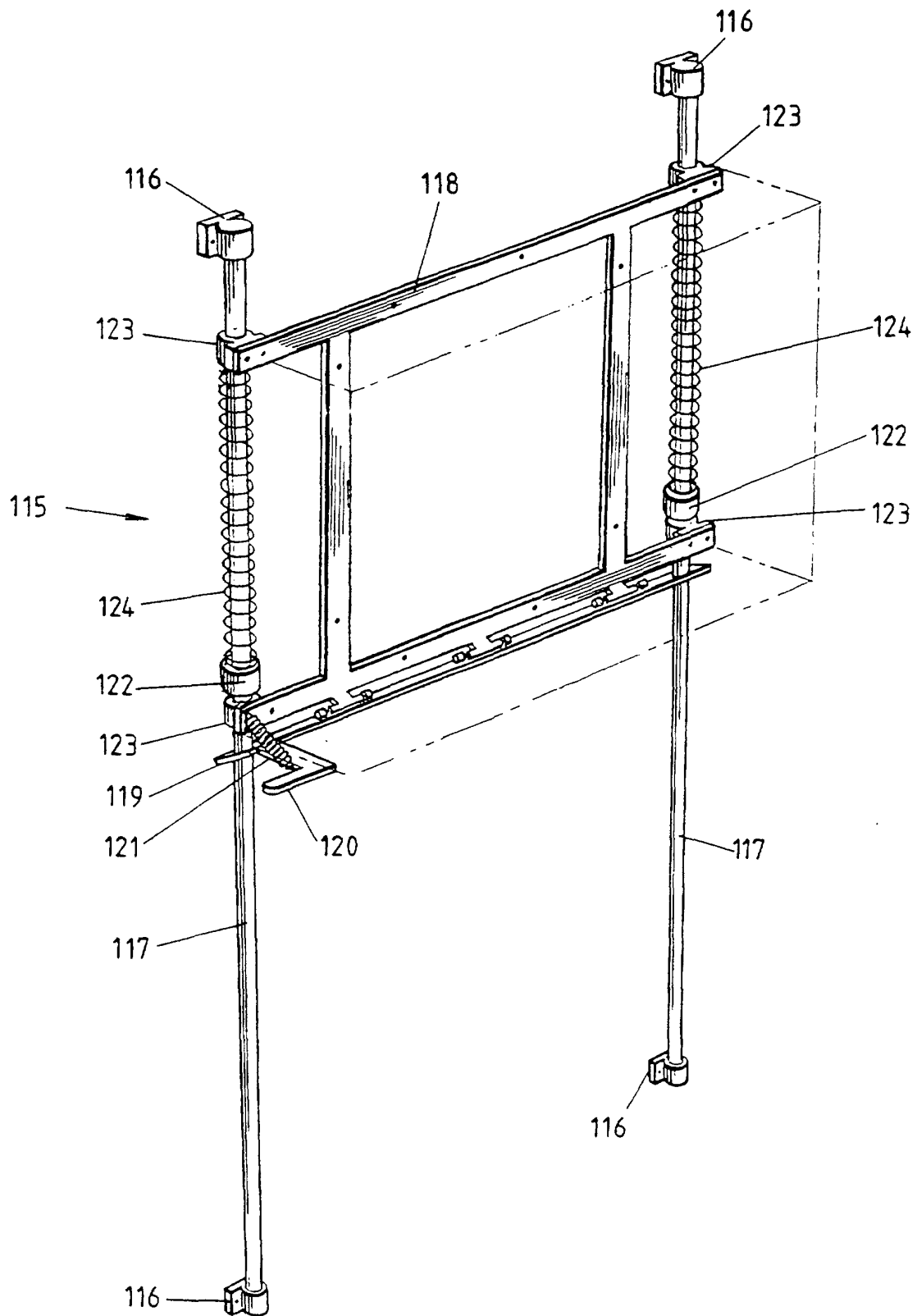


FIG. 24