



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
24.07.2013 Bulletin 2013/30

(51) Int Cl.:
A47B 53/00 (2006.01) **E01B 11/00** (2006.01)
A63H 19/00 (2006.01) **B65G 1/00** (2006.01)

(21) Application number: **13001791.6**

(22) Date of filing: **18.08.2008**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

(30) Priority: **17.08.2007 AU 2007904484 P**

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
08782950.3 / 2 185 033

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Remarks:

This application was filed on 08-04-2013 as a divisional application to the application mentioned under INID code 62.

(54) **A track assembly for mobile shelving**

(57) A track assembly for a mobile shelving unit, the track assembly comprising a longitudinal track body (12) including a central longitudinally extending channel (80) and opposed, longitudinally extending recesses (84) disposed above, alongside, and substantially perpendicularly to the channel (80) such that the recesses (84) are symmetrical about a vertical axis through the channel

(80) and a runner (14) adapted to slideably engage the central longitudinal channel (80) and support the shelving unit thereabove, characterised in that the runner (14) includes at least one removable end bracket (38) having a suspended portion with opposed, outwardly extending shoulders (64) adapted to engage the symmetrical recesses (84) and thereby prevent the shelving unit from tilting about a transverse axis.

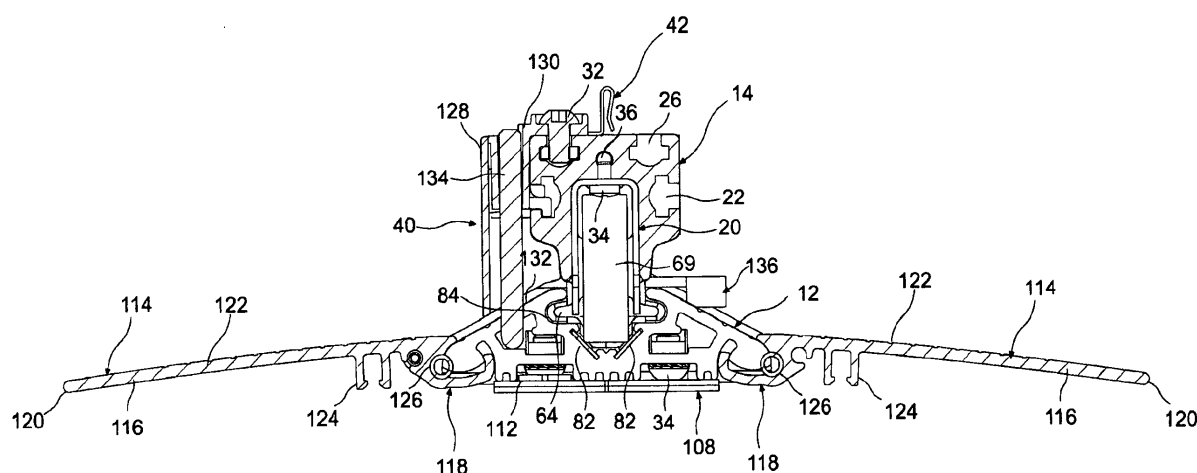


Fig 10

Description

[0001] The present invention relates to a track assembly for mobile shelving units and, in particular, to a hollow profile track assembly having superior stiffness characteristics and improved levelling and anti-tilt means associated therewith.

BACKGROUND OF THE INVENTION

[0002] Mobile shelving systems typically comprise a plurality of shelving units which are equipped with rollers to traverse along spaced apart tracks, each individual shelf unit being a tall and narrow structure having an array of horizontal shelves.

[0003] The overall design and configuration of existing track extrusions is fraught with problems. Firstly, such tracks typically include a plurality of exposed external edges and protrusions which pose a safety risk in the form of a tripping hazard to persons stepping over the track. Such protrusions are also visually unappealing. These problems are exacerbated when side ramps are not installed. Secondly, the strength and stiffness characteristics of existing tracks are often not desirable, particularly when the shelving units supported there above are of a significant weight. Thirdly, existing track extrusions are not well designed as they involve external joining methods which often require glue and fit fasteners to be used with high precision. Significant amounts of material are also used in their manufacture, resulting in significant expense.

[0004] There exist fixed mobile shelf covers for addressing some of these issues, however, they typically require the track to be fixed to the floor. Fixed mobile shelving tracks have a number of inherent problems, including damage caused to the floor, the inability to reuse or re-locate the tracks, as well as further disadvantages in respect of additional costs and additional installation time.

[0005] A further known problem with existing shelving, and their engagement with the tracks, is that when heavy items are placed on the higher shelves the structure becomes unstable. This instability, combined with the shelving unit being subjected to uneven lateral forces whilst being moved, can result in them toppling over in the direction of movement. Such occurrences can result in extensive damage to the shelf and surrounding property, as well as harm to persons located within the vicinity of the shelf. Anti-tilt devices have been implemented and used on mobile shelving systems to prevent shelving units from toppling over. However, prior art devices known to the present inventor present a number of problems. One such problem is that they are often mounted above the shelving units, or on or near the track, in a visually unappealing, and again, obtrusive manner.

[0006] Finally, existing means of adjusting the height of mobile shelving tracks is cumbersome and often not practical. Traditionally, track height adjustment means in

the form of stackable shims are visually unappealing, and difficult and laborious to install. This is because the tracks need to be raised for the correct number of shims to be placed there under. Furthermore, the installation of mobile shelving systems requires that the tracks are laid and adjusted before the mobile shelving units are installed. After this installation set up, the tracks often require re-adjustment. The prior art methods of adjustment do not allow for quick and simple re-adjustment.

[0007] There is therefore a need for an improved track assembly for mobile shelving systems which is relatively cheap to manufacture and assemble, is unobtrusive whilst maintaining a superior stiffness, and which has an improved levelling and anti-tilt means.

[0008] It is therefore an object of the present invention to overcome at least some of the aforementioned problems or to provide the public with a useful alternative.

SUMMARY OF THE INVENTION

[0009] According to the present invention, there is provided a track assembly for a mobile shelving unit, said track assembly comprising a longitudinal track body including a central longitudinally extending channel and opposed, longitudinally extending recesses disposed above, alongside, and substantially perpendicularly to said channel such that said recesses are symmetrical about a vertical axis through said channel and a runner adapted to slideably engage said central longitudinal channel and support said shelving unit thereabove, **characterised in that** said runner includes at least one removable end bracket having a suspended portion with opposed, outwardly extending shoulders adapted to engage said symmetrical recesses and thereby prevent said shelving unit from tilting about a transverse axis.

[0010] The means of preventing tilt of the supported shelving unit is therefore located inside the track body minimising tripping hazards.

[0011] In preference said runner suspended portion includes two oppositely and outwardly extending shoulders adapted to engage two longitudinal recesses disposed above and on opposed transverse sides of said central longitudinally extending channel.

[0012] Preferably said runner suspended portion forms part of a runner end bracket.

[0013] In preference said runner includes two end brackets each having integrally formed suspended portions including shoulders adapted to engage the track longitudinal recesses. Preferably said track central channel is substantially V-shaped and adapted to support rollers associated with said runner thereabove, whereby opposed outer edges of each roller contacts an opposed surface of the V-shaped channel.

[0014] Preferably, there is a track extrusion for mobile shelving, said track extrusion characterised by a longitudinally extending hollow region inside the track extrusion configured to receive a joining means at a longitudinal end thereof and thereby facilitate the unobtrusive joining

of said track extrusion with a further mobile shelving component. The track hollow profile provides for increased strength and stiffness characteristics as well as allowing for robust yet unobtrusive track joining.

[0015] Preferably said track extrusion is substantially triangular in cross section and has a central upper channel extending between two diagonally extending external walls, and two hollow regions disposed on transverse sides of said central channel and below the external walls, said two hollow regions adapted to receive two joining means.

[0016] Preferably said further mobile shelving component is in the form of a second track extrusion, and said joining means is in the form of an elongate joining pin having a first end adapted to be received and locked in the hollow region of said track extrusion, and a second end adapted to extend longitudinally outwardly from said track extrusion to be received in the hollow region of said second track extrusion.

[0017] In preference each joining pin is lockable in each track extrusion hollow region using at least one locking bolt adapted to engage coaxially aligned apertures extending through the joining pin and a lowermost surface associated with the hollow region, from the underside of the track extrusion.

[0018] Preferably said locking pin apertures are positioned such that when two track extrusions are joined together, they abut at their ends and thereby form flush diagonally extending external walls.

[0019] In preference said track assembly further includes one or more packers adapted to sit beneath the joint between the first and second track extrusions, wherein the height of the joint is determined by the number of packers therebeneath.

[0020] Preferably each packer is rectangular and is adapted to sit longitudinally beneath said joint.

[0021] In preference said track extrusion includes an outwardly extending body on one side thereof for supporting further mobile shelving components, in which case said packer is rectangular and adapted to sit transversely beneath the joint.

[0022] Preferably each packer includes a 3x2 matrix of apertures, and a means of engaging an adjacently stacked packer. In preference the apertures of an uppermost packer are positioned and configured to accommodate head portions of said locking bolts.

[0023] The mobile shelving component is preferably in the form of an end bracket, and said joining means is in the form of at least one elongate joining pin integrally formed with said end bracket and adapted to be received and locked in the hollow region of said track extrusion.

[0024] Preferably each joining pin is lockable in each track extrusion hollow region using at least one locking bolt adapted to engage coaxially aligned apertures extending through the joining pin and a lowermost surface associated with the hollow region, from the underside of the track extrusion. In preference said locking pin apertures are positioned such that when the end bracket is

joined to the track extrusion, it abuts with the track extrusion end.

[0025] In preference said track assembly further includes one or more packers adapted to sit beneath the end of the track, wherein the height of the joint is determined by the number of packers therebeneath.

[0026] Preferably each packer is rectangular and is adapted to sit longitudinally beneath the track end.

[0027] Preferably each packer includes a 3x2 matrix of apertures, and a means of engaging an adjacently stacked packer.

[0028] In preference the apertures of an uppermost packer are positioned and configured to accommodate head portions of said locking bolts.

BRIEF DESCRIPTION OF THE DRAWINGS

[0029] The accompanying drawings, which are incorporated in and constitute a part of this specification, illustrate several implementations of the invention and, together with the description, serve to explain the advantages and principles of the invention. In the drawings:

Figure 1 illustrates a top perspective view of a mobile shelving track and runner assembly, in accordance with the present invention;

Figure 2 illustrates an underside perspective view of the mobile shelving track and runner assembly of Figure 1;

Figure 3 illustrates a top view of the mobile shelving track and runner assembly of Figure 1;

Figure 4 illustrates a side view of the mobile shelving track and runner assembly of Figure 1;

Figure 5 illustrates a top perspective view of the runner and cross members forming part of the mobile shelving track and runner assembly of Figure 1;

Figure 6 illustrates an exploded perspective view of the runner and cross members shown in Figure 5;

Figure 7 illustrates a cross-sectional view of the track forming part of the mobile shelving track and runner assembly of Figure 1;

Figure 8 illustrates an exploded perspective view of the track shown in Figure 7;

Figure 9 illustrates a perspective view of a track end stop bracket forming part of the mobile shelving track and runner assembly of Figure 1;

Figure 10 illustrates a cross sectional view of the mobile shelving track and runner assembly of Figure 1, without the cross members attached; and

Figure 11 illustrates the cross sectional view of Figure 10 showing the way in which the ramp section is mounted to the track.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0030] The following detailed description of the invention refers to the accompanying drawings. Although the description includes exemplary embodiments, other embodiments are possible, and changes may be made to the embodiments described without departing from the spirit and scope of the invention. Wherever possible, the same reference numbers will be used throughout the drawings and the following description to refer to the same and like parts.

[0031] Whilst the present invention is directed specifically towards a track assembly for mobile shelving, other components which form part of a complete mobile shelving system according to a preferred embodiment of the invention are also described.

[0032] A track and runner assembly 10 for mobile shelving is shown in Figures 1-4. The assembly 10 comprises one or more longitudinal tracks 12 according to the present invention, a longitudinal runner 14 configured to slideably engage each track 12 and to support a shelving unit (not shown), otherwise known as a compactus, thereabove, and transverse cross members 16 for connecting two or more runners 14 together. A typical shelving unit is adapted to be mounted above two runners 14 slideable along two tracks 12 which are spaced apart by a distance corresponding approximately with the length of the shelving unit.

[0033] The runner 14 is shown most clearly in Figures 5-6. The runner 14 is substantially in the form of an inverted U-shaped extrusion, having a primary channel 18 extending there along adapted to accommodate one or more roller cartridges 20, and four slots 22, 24, 26 and 28 extending along right, left and top sides thereof. In particular, slot 22 extends along the left side of the runner 14, slot 24 extends along the right side, and slots 26 and 28 extend along the upper side of the runner 14. The slots 22, 24, 26 and 28 are preferably in the form of T-slots, shaped like so to accommodate square nuts 30 having internal threads. This provides for fast, versatile construction because the nut 30 provides an anchor point for external items at any point along the runner 14.

[0034] Once the nut 30 is moved to a desired position, the item, which typically includes a mounting aperture 32, is moved into position so that the aperture 32 and nut 30 become coaxially aligned. A screw 34 is used to extend through the aperture 32, through the slot 22, 24, 26 or 28, and into the nut 30 for threaded engagement therewith. Extending centrally along the top of the primary channel 18 is a further slot 36 providing a further mounting means for the roller cartridges 20 and end brackets 38, as will become apparent.

[0035] The runner 14 has been designed so that no additional post-processing of the extrusion is required

after it has been cut, i.e. no drilling, slotting, etc.

[0036] The description in the following paragraphs relate to examples of items which are mountable to the runner 14. Some of these are necessary items, for example, the transverse cross members 16, but others are not necessarily essential, such as a locking bracket 40 for example. It is to be understood that other items which are not shown and described herein, could also be mounted to the runner 14, for example, sensors (not shown), motors (not shown), mechanical drive devices, and the like.

[0037] Mounted above the runner 14 are one or more clips 42 configured for engagement with a corresponding receiving means located beneath the shelving unit, such as a correspondingly shaped aperture (not shown), for example. Clip 42 includes a mounting portion 44 having a mounting aperture 46 extending there through, and a second portion 48 upstanding from the mounting portion 44 and doubled over for engagement with the corresponding receiving means. The clips 42 are fixed to the runner 14 using a bolt 34 adapted to extend through aperture 32 to thereby engage a nut 30 located within slot 28, as described above. In the embodiment shown, there are two spaced apart clips 42 for each runner 14.

[0038] Two cross members 16 are adapted to extend between runners 14 on spaced apart tracks 12 to provide the required support for each shelving unit. The cross members 16 are in the form of substantially I-shaped extrusions having slots 50, 52 and 54 on left side, right side and top sides thereof, respectively. In preference the slots 50, 52 and 54 are also substantially in the form of T-slots engageable by bolt/nut connections as described above, when mounting external items thereto.

[0039] Each cross member 16 is coupled to the runner 14 using hollow, triangular shaped brackets 56 at the junction therebetween. The perpendicular walls of the bracket 56 include outwardly extending projections 58 being shaped to fit snugly within the side slots 52 and 22 of both the cross member 16 and the runner 14 respectively. The projections 58 are ribbed to facilitate insertion through the slots and so that any impact loads on the bracket 56 are reduced. Also located on the perpendicular walls of the bracket 56 are mounting apertures 32. The mounting apertures 32 on the bracket 56 are positioned to fix the cross member 56 in a perpendicular arrangement relative to the runner 14, that is, each perpendicular wall of the bracket 56 is mounted to the cross member 16 and runner 14 respectively. Again, nuts 30 and screws 34 are preferably used for connecting the respective components.

[0040] In order for the runner 14 and hence the shelving unit to be slideable along the track 12, the runner 14 must also include means of housing the roller cartridges 20 mentioned above. The present invention provides that the primary channel 18 of the runner 14 accommodates one or more roller cartridges 20.

[0041] Each roller cartridge 20 is also of an inverted U-shaped configuration and of a size to fit inside the run-

ner primary channel 18. The top side of the cartridge 20 includes two spaced apart mounting apertures 32, so that when the cartridge 20 is positioned in a desired location along the channel 18, it can be secured using self-tapping screws 34 extending through the apertures 32 and into slot 36. Such a configuration means that the rollers may be fitted to the runner 14 without the need for drilling. Typically, each shelving unit will include a roller at longitudinal ends of each runner 14, however, there may be circumstances where more are required, and the runner channel 18 may accommodate for this.

[0042] The roller cartridge 20 includes larger, co-axially aligned apertures 60 extending through its side walls. A pin 62 which extends through the apertures is used to maintain a roller 64 inside the cartridge 20. The roller 64 is rotatable about the pin 64 and allows the runner 14 and hence the shelving unit to move relative to the track 12, as will become apparent.

[0043] Also mountable to the runner 14 are end brackets 38 as mentioned. Not only are the end brackets 38 used to cap off the ends of the runner 14, they are configured to prevent the shelving unit from tilting. Each end bracket 38 is in the form of a rigid housing having an internal structure which corresponds substantially in shape with the cross section of the runner extrusion, so that it may engage an end thereof. A self-tapping screw 34 is used to fix the end bracket 38 in place, the screw 34 extending through an uppermost aperture 32 of the bracket 38, and into the runner slot 36. At the base of the end bracket 38 are two transversely extending shoulders 64 which when engaged with the track (as described below), are designed to prevent the shelving unit from toppling over. The end bracket 38 therefore constitutes the anti-tilt means of the assembly 10. The track 12 of the present invention is shown in Figures 7-8 in particular. It can be seen that the track 12 is also made up of an extruded length of metal and includes a hollow profile. The track 12 comprises generally a base 66, internal walls 68, 70, 72 and 74, and external walls 76 and 78 which are each integrally formed. The external walls 76 and 78 at upper ends of the track 12 extend a short distance inwardly, past internal walls 70 and 72. The base 66 and the external walls 76 and 78 form a substantially triangular cross-sectional shape, however, because the external walls fall short of meeting at an apex, they define a central channel 80 extending along the track 12.

[0044] The internal geometry of the track 12, in particular the high, hollow profile, allows for robust but unobtrusive track joining, and should remove the need for installers to use glue and fit fasteners with high precision, as will become apparent.

[0045] The inside surface of internal walls 76 and 78 are shaped to perform two functions. Firstly, at a lowermost region of the channel 80, the internal walls 76 and 78 define a V-shaped guide 82, which is the surface upon which the rollers 64 are supported. The rollers 64 engage the guide 82 centrally with both edges of the roller 64 contacting the guide. The weight of the shelving unit on

the roller retains it in the desired position, and allows sufficient friction for it to rotate smoothly across the guide. In order to prevent wear, and to strengthen the guide, retaining beads (not shown) retain crinoline strips, generally made of steel, along the V-shaped guide 82.

[0046] Secondly, disposed above the V-shaped guide 82 are opposed recesses 84 for accommodating shoulders 64 associated with the end bracket 38. Those skilled in the art would realise that when the assembled runner 14 is positioned above the track 12, with the shelving unit supported thereabove, any lateral movement of the shelving unit would be restricted by the shoulders 64, because they are prevented from upward movement by the upper ends of the external walls 76 and 78. Accordingly, tilting of the shelving units is prevented. This is particularly important when the shelving units have significant weight on the top shelves making them prone to such movement.

[0047] Between internal walls 68 and 70, and internal walls 72 and 74, hollow regions 86 are defined. The hollow regions 86 are adapted to accommodate joining pins 88 which are used to join two track ends together. The hollow regions 86 also accommodates pins 90 associated with an end stop bracket 92 of the track 12. Therefore, the end stop bracket 92 is mounted to the end of the track 12 using two joining pins 90 associated therewith, while for joining two segments of track 12 together, individual joining pins 88 are used, as shown in Figure 1.

[0048] In both cases, the joining pins 88 and 90 include a plurality of apertures 94 spaced apart there along, and are adapted to be inserted into the hollow regions 86 of the track 12 until they are in co-axial alignment with apertures 96 extending through the base 66 of the track 12. Self-tapping screws 34 are once again used to engage the coaxial apertures and thereby secure the components together.

[0049] The end stop bracket 92, as its name suggests, is adapted to be mounted to the end of a track 12. For example, there could be three or four track segments joined to form a single track, wherein the two endmost track segments include end stop brackets 92 for preventing the runner 14 from travelling beyond the tracks. An enlarged view of the end stop bracket 92 is shown in Figure 9 and it can be seen that it comprises a substantially triangular shaped housing 98, joining pins 90 extending outwardly from an internal bracket plate 100, and a stop portion 102 extending between the pins 90 and into channel 80 when the bracket 92 is mounted to the track 12.

[0050] The stop portion 102 includes a plurality of ribs 104 which provide an elastomeric buffer for reducing impact loads. Shelving units when moved generate a significant amount of force due to their weight and therefore require that the track end stops be robust enough to dampen such force upon impact. The end stop bracket 92 also includes anti-tilt shoulders 106 as per the runner end brackets 38.

[0051] The height of the track 12 also needs to be maintained level along its length. It is also preferable for the

height of the track 12 to also be easily adjustable even after assembly. One or more packers 108 shown most clearly in Figure 2 and the cross sectional views, are used to achieve this. Each packer 108 is substantially rectangular in shape and includes a 3x2 matrix of apertures 110 extending there through. One row of three apertures 110 on the packer 108 includes elevated square surrounding portions 112. The adjacent row of three apertures 110 include locating means 111 for engaging the elevated square surrounding portions 112 of a second packer 108 positioned therebeneath. Each adjacently stacked packer 108 is rotated by 180 degrees relative to the other.

[0052] One or more packers 108 (depending on the desired height) are adapted to sit beneath the joining pins 90 at the ends of the track 12, as well as beneath the joining pins 88 at one or more joints between track segments. The apertures 110 are designed to accommodate the head portions of the self-tapping screws 34 which engage the joining pins 88 and 90. Those skilled in the art would realise that any number of stacked packers 108 could be added or removed to increase or decrease height of a particular section of track 12.

[0053] A further advantage to the improved stiffness characteristics of the track extrusion is that it allows for wider spacing of the packers 108 along the track 12.

[0054] The assembly 10 includes a plurality of optionally attachable ramp sections 114. These are used to provide a smooth surface over the track 12 and prevent the track 12 from forming a tripping hazard. Each ramp section 114 includes a substantially rectangular body 116 having a hook section 118 at one end thereof, and a straight edge 120 at the opposed end adapted to lie substantially flush with the ground when assembled. The ramp section body 116 includes a plurality of ribs 122 on its upper surface for gripping purposes. There are reinforcing members 124 positioned below the body 116 which are advantageous because they reduce the overall weight of the ramp section and maintain strength. The hook section 118 extends downwardly from the body 116, then inwardly and upwardly with respect to the track 12.

[0055] The track extrusion is also designed to accommodate the ramp sections 114. Turning now to Figures 10-11, between the lower end of the external walls 76 and 78, and the internal walls 68 and 74 respectively, there are defined receiving channels 82 for engaging the hook section 118 of each ramp section 114. In particular, each ramp section 114 is configured to engage the receiving channels 82 by way of a rotatable snap-fit. Figure 12 illustrates this process, whereby the hook section 118 is inserted into the receiving channel 82 and then urged upwardly while rotating edge 120 of the body downwardly until the hook section 118 is snap-fit in place. This ramp pivot geometry is designed to allow removal and refitting of ramps (for re-levelling purposes) without having to lift up or up-end the track 12.

[0056] A rubber tube 126 is also inserted between the rounded end of the external walls 76 and 78 and the

junction between the downwardly and inwardly extending surfaces of the hook section 118. The tube 126 provides a down- force and minimises ramp "kick-up" which could create a tripping hazard. A further advantage to the rubber tube 126 is that it also acts as a flexible joiner, assisting in handling and simultaneous fitting of multiple ramp sections to the track 12.

[0057] The ramps are optional as the track extrusion has been designed to be aesthetic and safe even if used without ramps 114. Finally, the runner 14 is able to be locked at different positions along the track 12. A locking bracket 40 is shown in the drawings which is also engageable to an upper slot 28 of the runner 14, as well as the side slots, by means described above. The locking bracket 40 includes a housing 128 mounted to the runner 14, the housing 128 defining a vertical chamber extending downwardly alongside the runner 14 to the track 12. The chamber includes a vertical aperture 130. When the shelving unit is to be locked, the runner is moved along the track 12 until the vertical aperture 130 becomes coaxially aligned with an aperture 132 that has been pre-drilled into the track 12. Once aligned, a locking pin 134 can be inserted through the co-axially aligned apertures 130 and 132, into the hollow region 86 where it rests on the base 66, thereby locking the runner 14 to the track 12.

[0058] A jig 136 is provided for forming the pre-drilled apertures 132 in the track 12. The jig 136 is an elongate structure mountable to the track 12 in a transverse arrangement as shown in Figure 1. The jig 136 includes a downwardly extending section 138 at its centre which extends inside channel 80, as well as downwardly extending sections 140 at ends thereof which abut with the external walls 76 and 78 of the track 12. On opposed ends of the jig 136 are apertures 144 and 146.

[0059] The jig 136 is first adapted to be mounted to the track 12 so that aperture 144 is positioned over a desired point to be drilled. The purpose of this smaller aperture 144 is to mark the track 12 with a suitable tool (not shown), the mark acting as a locating guide for a drill bit or the like used to drill a hole through the track 12. The jig 136 is then demounted from the track 12, rotated by 180 degrees, and mounted to the track 12 again so that the larger aperture 146 extends over the marked point. A drill (not shown) can then be used to drill a hole through the track 12 where marked.

[0060] It is to be understood that the design of some of the components shown and described could change where necessary. For example, where there is a mechanical driving means associated with the runner, one of the track external walls 78 would extend a greater distance outwards from the channel 80 and include a flat upper surface (not shown) for accommodating a drive wheel (not shown). Such a track would therefore include a further hollow region 86. In such circumstances, the same packers 108 could be used but simply rotated by 90 degrees so that instead of extending longitudinally relative to the track 12, it would extend transversely. Further advantages and improvements may very well be made to

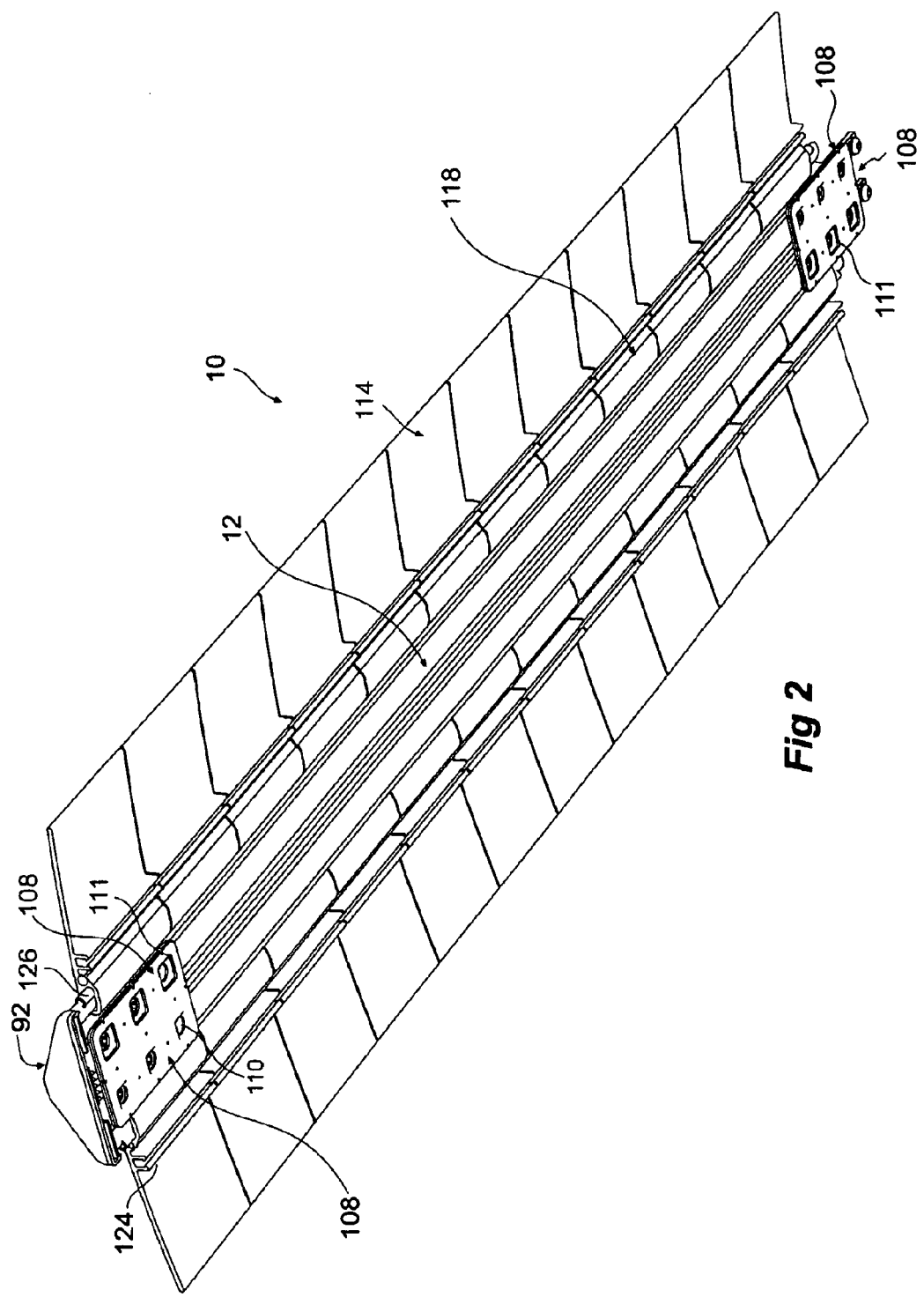
the present invention without deviating from its scope. Although the invention has been shown and described in what is conceived to be the most practical and preferred embodiment, it is recognized that departures may be made therefrom within the scope and spirit of the invention, which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent devices and apparatus.

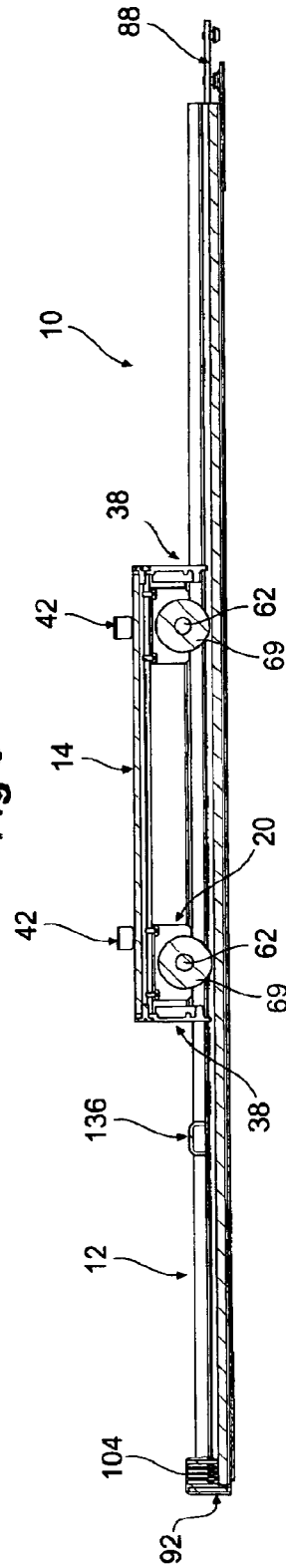
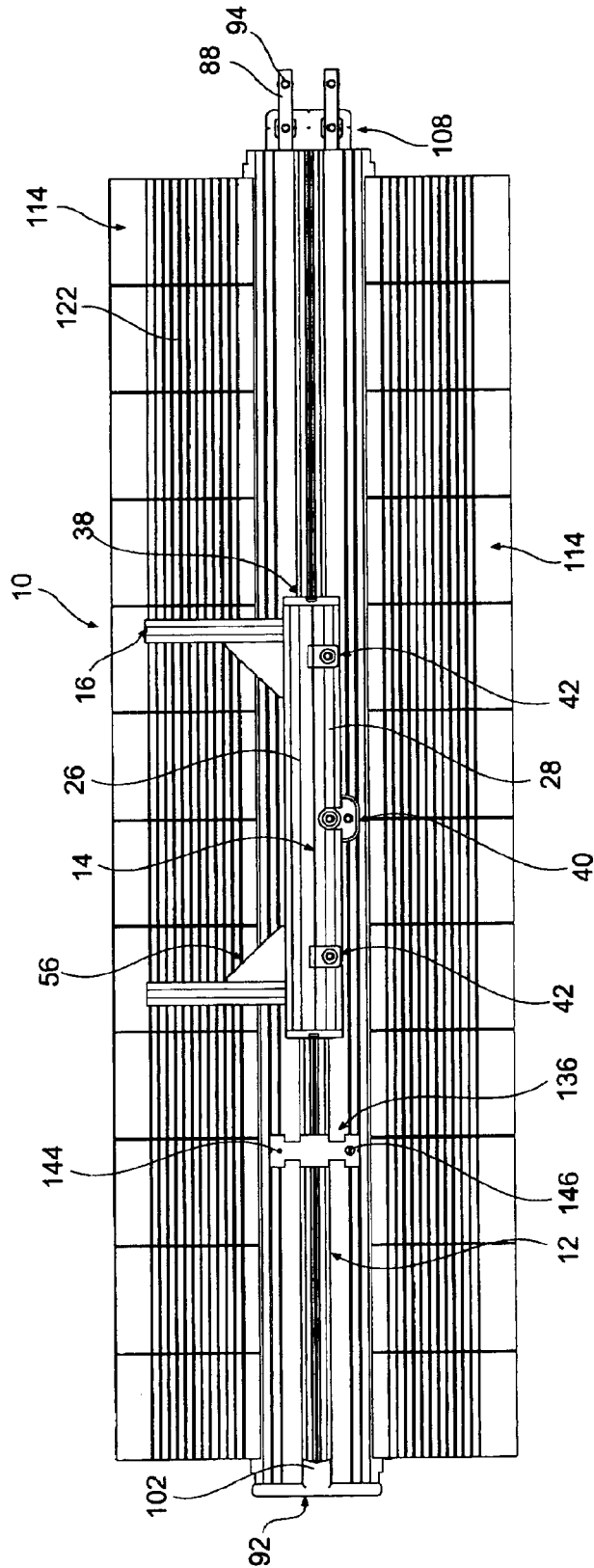
[0061] In any claims that follow and in the summary of the invention, except where the context requires otherwise due to express language or necessary implication, the word "comprising" is used in the sense of "including", i.e. the features specified may be associated with further features in various embodiments of the invention.

5. A track assembly according to claim 4, wherein the V-shaped central channel (80) includes opposed guide portions (82), the rollers engaging the guide portions (82) centrally.

Claims

1. A track assembly for a mobile shelving unit, said track assembly comprising:
 - a longitudinal track body (12) including a central longitudinally extending channel (80) and opposed, longitudinally extending recesses (84) disposed above, alongside, and substantially perpendicularly to said channel (80) such that said recesses (84) are symmetrical about a vertical axis through said channel (80); and
 - a runner (14) adapted to slideably engage said central longitudinal channel (80) and support said shelving unit thereabove, **characterised in that** said runner (14) includes at least one removable end bracket (38) having a suspended portion with opposed, outwardly extending shoulders (64) adapted to engage said symmetrical recesses (84) and thereby prevent said shelving unit from tilting about a transverse axis.
2. A track assembly according to claim 1, wherein said suspended portion includes two oppositely and outwardly extending shoulders (64) serving to engage two longitudinal recesses (84) disposed above and on opposed transverse sides of said central longitudinally extending channel (80).
3. A track assembly according to claim 1 or 2, wherein said runner (14) includes two end brackets (38) each having integrally formed suspended portions including shoulders (64) adapted to engage the track assembly longitudinal recesses (84).
4. A track assembly according to any one of claims 1 to 3, wherein the track central channel (80) is substantially V-shaped and adapted to support rollers associated with said runner (14) thereabove, whereby opposed outer edges of each roller contact an opposed surface of the V-shaped channel (80).





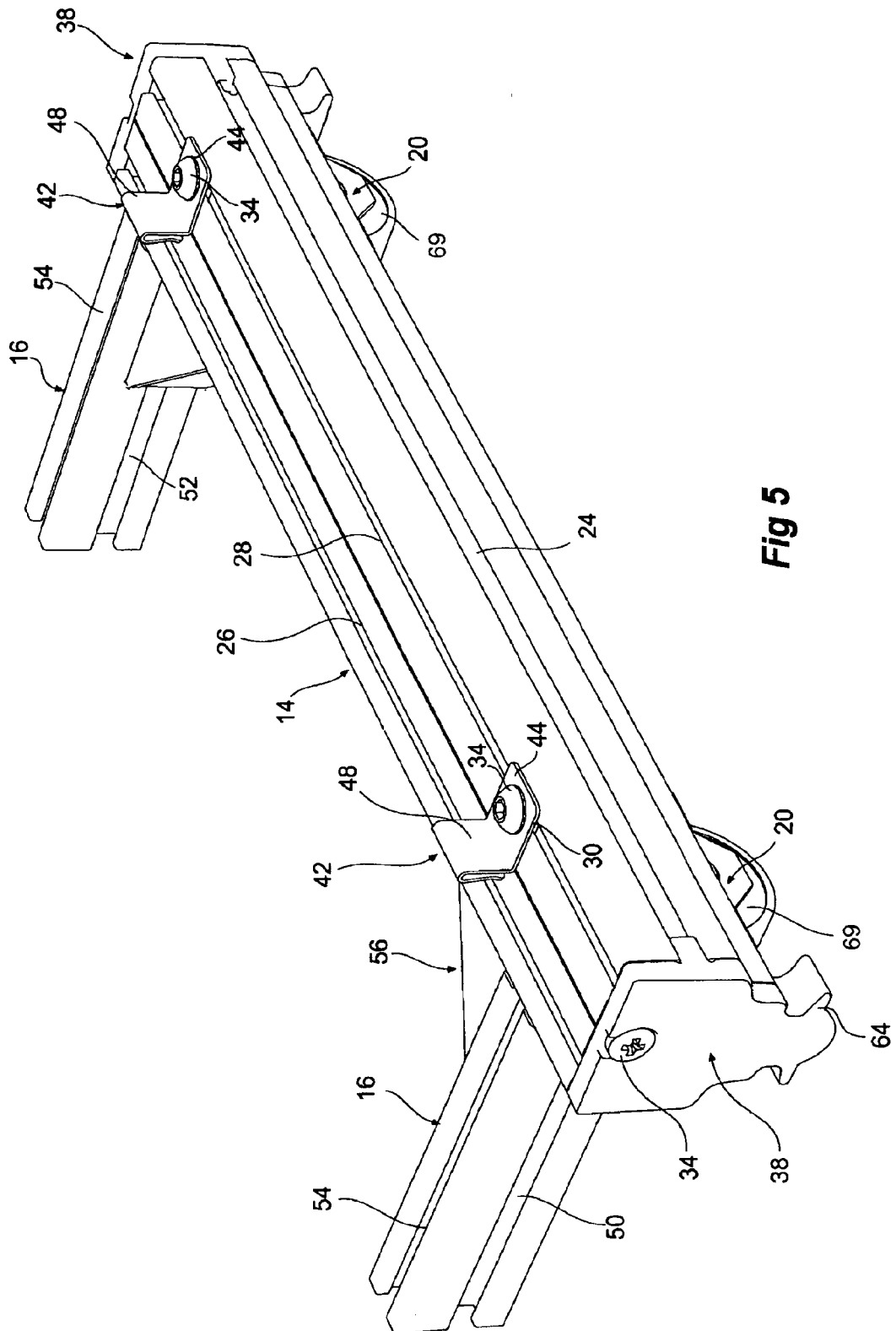


Fig 5

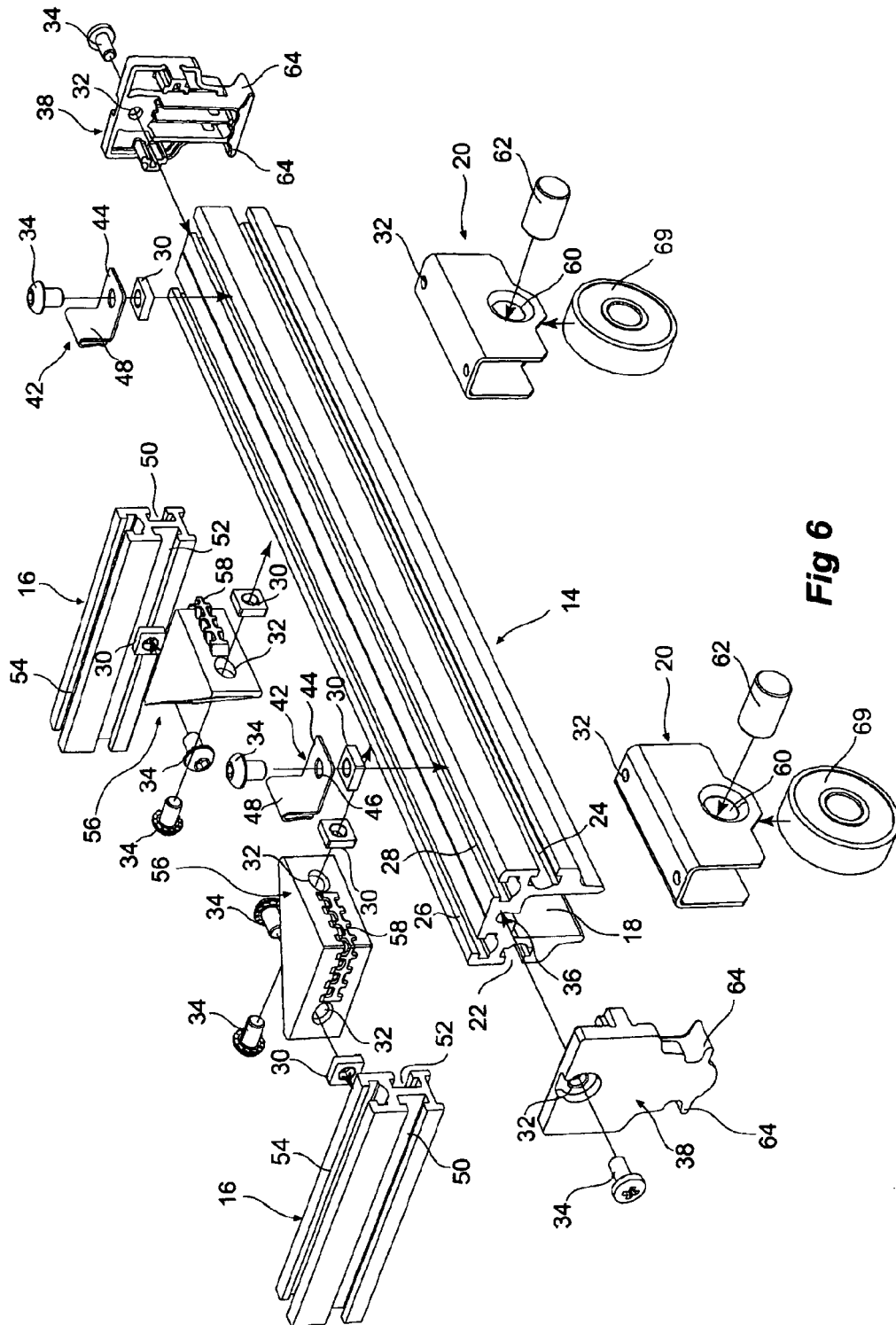


Fig 6

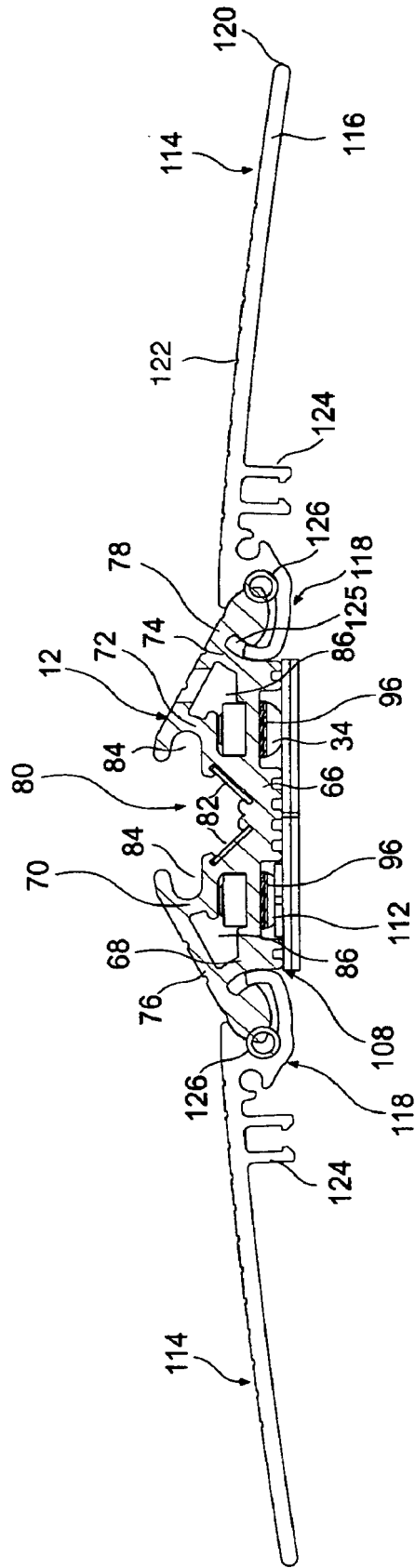


Fig 7

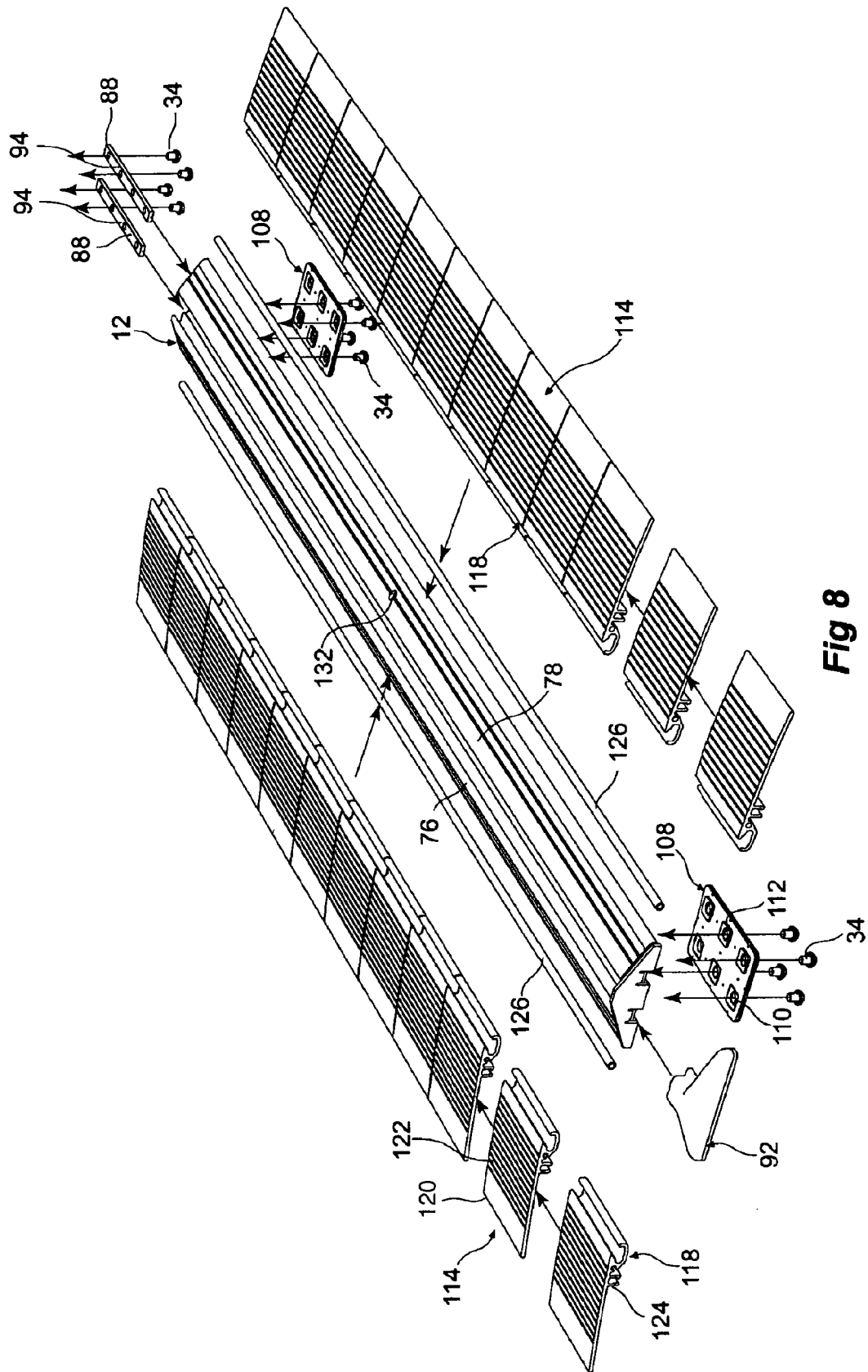


Fig 8

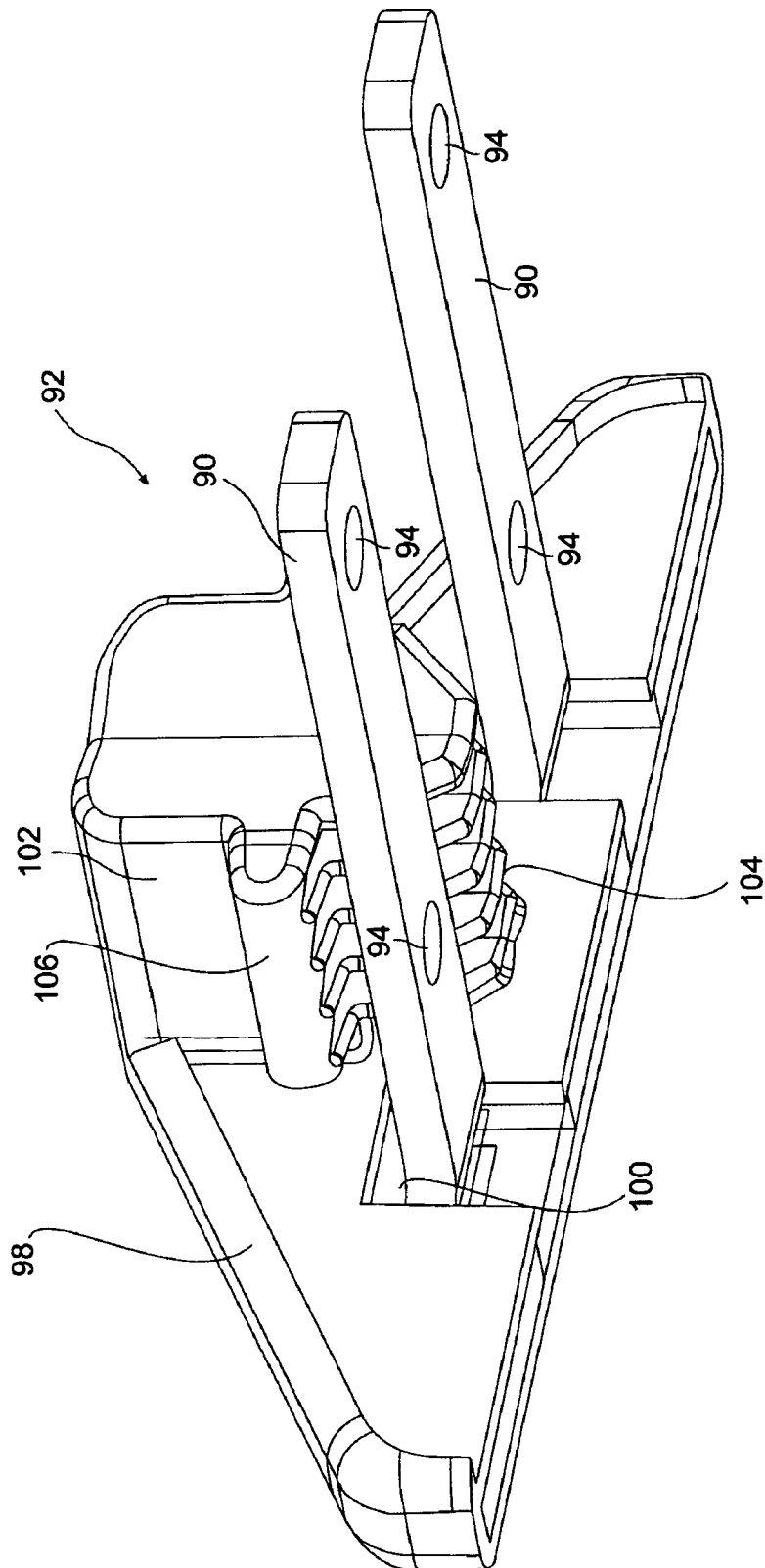


Fig 9

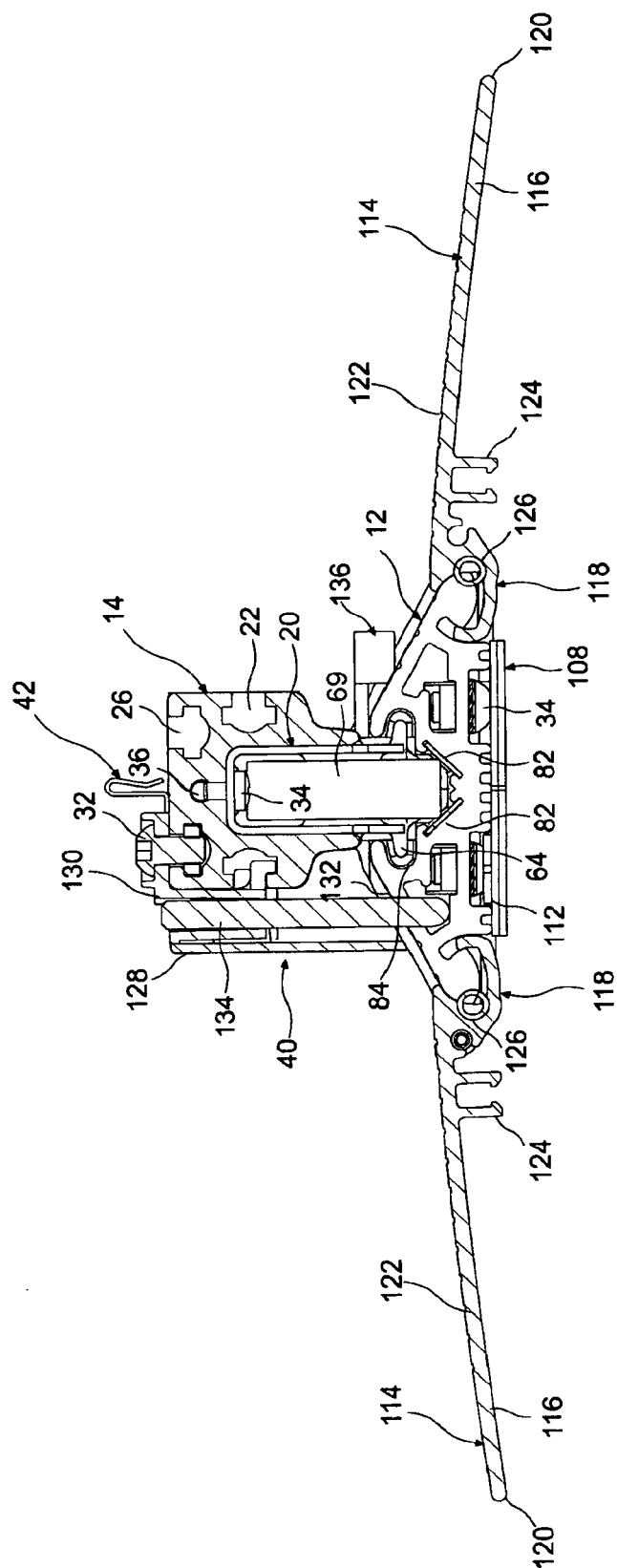


Fig 10

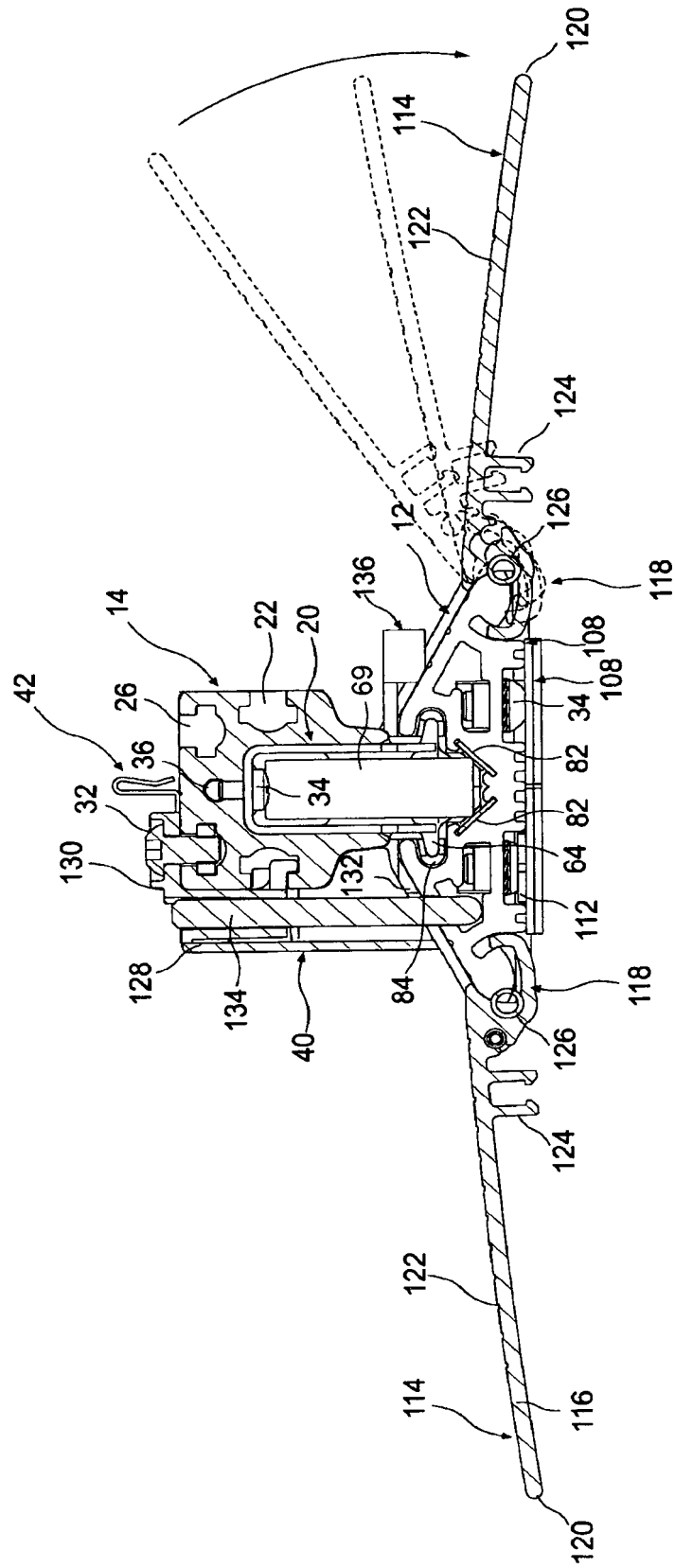


Fig 11



EUROPEAN SEARCH REPORT

Application Number
EP 13 00 1791

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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