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(54) Title: POST FOR A SHAFT SCAFFOLD OF AN ELEVATOR SYSTEM

(54) Bezeichnung : PFOSTEN FÜR EIN SCHACHTGERÜST EINER AUFZUGSANLAGE

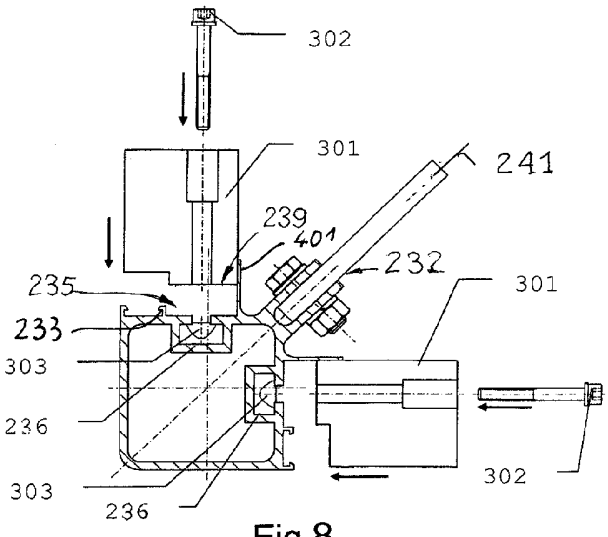

Fig.8

(57) Abstract: The invention relates to a post (129) for a shaft scaffold (102) of an elevator system (103), said post comprising at least two supports (236) on its exterior sides which extend approximately parallel to the longitudinal axis of the shaft scaffold (102), to which at least one traverse strut (201) can be connected. The aim of the invention is to produce and design the device, the post and/or the associated connecting elements of the post for a shaft scaffold of an elevator system in such a cost-effective manner that an easy and rapid assembly of a shaft scaffold can be ensured. According to the invention, said aim is achieved by providing, apart from the two supports (236), at least one additional support (236) for the connection of at least one guide element (220).

(57) Zusammenfassung: Pfosten (129) für ein Schachtgerüst (102) einer Aufzugsanlage (103), der an seinen sich in etwa parallel zur Längsachse des Schachtgerüsts (102) erstreckenden Außenseiten mindestens zwei Aufnahmen (236) aufweist, an die zumindest eine Querstrebe (201) angeschlossen werden kann. Der Erfindung liegt die Aufgabe zugrunde, die Vorrichtung, die Pfosten und/oder die zugehörigen Anschlusselemente des Pfostens für ein Schachtgerüst einer Aufzugsanlage derart kosten-

günstig herzustellen und auszubilden, dass eine leichte,

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schnelle Montage eines Schachtgerüsts möglich ist. Die Aufgabe wird erfindungsgemäß dadurch gelöst, dass neben den beiden Aufnahmen (236) mindestens eine weitere Aufnahme (236) zum Anschluss mindestens eines Führungselements (220) vorgesehen ist.

Stanchion for a well carcass of an elevator installation

[01] The invention relates to a stanchion for a well carcass of an elevator installation, which stanchion has in each case one receptacle on its outer sides which extend approximately parallel to the longitudinal axis of the well carcass, which receptacles serve to connect in each case one cross strut and/or well linings of the well carcass which are oriented approximately at right angles to one another.

It is already generally known to provide elevator installations, in particular platform elevators for the disabled or elevators for goods transport, which are equipped with a preassembled well carcass.

Said well carcass can be mounted as a loadbearing or self-supporting well carcass in the inner region or in the outer region. The loadbearing well carcass construction consists of stanchions and cross transoms in the form of carcass profiles, in particular steel hollow profiles. In order that a protection means can be produced which is closed at least over the displacement path, well carcasses are frequently lined with glass, facing tiles or another material. In addition to the static function and to receiving the carcass lining, the well carcass also serves to guide the load suspension means. The load suspension means can be moved over a predefined path, what is known as the conveying height. The load suspension means can be an elevator cabin or else only an elevator platform.

The guide rails which are fastened in the region between the load suspension means and the inner boundary of the well, in the concrete case to the well carcass, belong to the essential components of the guide of the load suspension means. At least one guide rail, but two in the normal case, is/are required to guide the load suspension means. Steel rails in the form of T profiles are used as guide rails.

Furthermore, a well carcass of an elevator installation with connections which are provided in the corner region of the well carcass is known

(JP 2005 314013 A). In each case one receptacle is provided on the outer sides of a stanchion which extend approximately parallel to the longitudinal axis of the well carcass, which receptacle serves to connect in each case one cross strut and/or well linings of the well carcass. The well linings are oriented approximately at right angles to one another.

SUMMARY OF THE INVENTION

The present invention provides a stanchion for an elevator installation, in which the stanchion has two respective receptacles on the stanchion outer sides which extend approximately parallel to a longitudinal axis of the elevator installation, which receptacles serve to connect a respective cross strut and/or well linings of the elevator installation which are oriented approximately at right angles to one another, wherein a third receptacle is a central receptacle and the longitudinal center axis thereof is oriented in such a way that a further stanchion is placed diagonally opposite in the elevator installation, the receptacles which lie opposite one another serving to indirectly or directly connect a drive shaft and/or a crossmember.

The stanchion wherein the third receptacle for connecting at least one guide element is provided between the two receptacles or the third or the central receptacle which is provided on the stanchion is configured as a guide groove.

The stanchion wherein one or more grooves which are configured as receptacles project to the outside on a wall of the stanchion or are placed on the wall and/or are provided within a profile of a hollow configuration of the stanchion.

The stanchion wherein the guide element is let at least into a central groove which is connected to at least one wall of the stanchion and is provided between the two grooves which are configured as receptacles, which guide element interacts with a guide which is provided on the elevator installation

and/or on a carrying frame or side element of a load suspension means, being a travel platform.

The stanchion wherein a cross section of the profile of the stanchion is configured to be at least one of round, oval, polygonal, and rectangular; the stanchion being manufactured from an extruded aluminum hollow profile.

The stanchion wherein all the grooves are open to one side and the central groove which is provided between the two grooves lying on the outside serves to receive a guide rail.

The stanchion wherein the guide rail is connected integrally to or forms one structural unit with the stanchion.

The stanchion wherein sliding blocks and/or clamping pieces which are fixed with the aid of fastening elements, in particular threaded bolts, and serve to connect the cross struts or transoms are inserted into one or more grooves.

The stanchion wherein at least one further receptacle, being a groove, is provided on the stanchion and/or the cross strut or the transom for connecting wall parts of the elevator installation and/or clamping parts and/or sealing elements.

The stanchion wherein a further receptacle, being a groove, is formed with the aid of two side elements which extend in parallel, stand upright on the wall of the stanchion and/or on the wall of the cross strut or the transom into which receptacle at least one clamping part is inserted, and in that, in addition to the further receptacle, being a groove, an additional receptacle for connecting the wall part and/or at least one sealing element, in particular a dry seal, of the elevator installation and/or for connecting a connection piece for the cross strut or the transom is provided.

The stanchion wherein the additional receptacle on the stanchion and/or on the cross strut or the transom is formed by a side element of the further receptacle and an upright wall part which is arranged on the stanchion and/or on the cross strut or the transom.

The stanchion wherein at one end of the stanchion, the connection piece for connecting the cross strut or the transom has a projection which is inserted into the additional receptacle with a substantially accurate fit and is fastened to the stanchion with the aid of the clamping piece, being the sliding block, and/or threaded bolts.

The stanchion further including the following features: a) the walls extend parallel to a longitudinal center axis of the stanchion and/or the elevator installation; b) the respective receptacle which serves to connect the cross struts and/or to connect the well linings of the elevator installation is provided on the two walls which extend at an angle α being at least one of between 45° and 145° and at an approximate right angle.

The stanchion wherein the stanchions of the elevator installation are connected to one another with the aid of the cross struts or the transoms, the guide rail being made from steel, being inserted into a first groove or the central groove during an extrusion operation and forming a structurally fixed unit with the stanchion, at least the two outer grooves having an approximately identical cross section.

The stanchion wherein the outer sides of the stanchion which extend approximately at a right angle to each other.

The invention also provides a stanchion substantially as described herein.

The invention can also be based on the object of producing and configuring the stanchions and/or the associated connecting elements of the stanchion for a well carcass of an elevator installation inexpensively in such a way that easy,

quick mounting of a well carcass and reliable guidance, which is inexpensive to install, for the elevator cage are possible and ensured.

According to the invention, the object is achieved by virtue of the fact that at least one third receptacle is provided for connecting a guide; or the guide is oriented approximately centrally between the two receptacles. The advantageously configured stanchions, together with the corresponding cross transoms which match them, make a well lining possible which is arranged linearly on all sides.

Since the receptacles of the grooves are open to one side and the central receptacle between the two mounting fastening means lying on the outside is advantageously likewise configured as a groove, the guide rail which is also accessible from outside can be mounted easily. As a result, the installation can be designed to be less expensive overall and at the same time more operationally reliable. This is possible, in particular, since the stanchion can be produced from a single workpiece, so that storage costs can also be saved as a result. The guide rails which are fastened in the region between the load suspension means and the inner boundary of the well, in the concrete case to the well carcass, belong to the essential components of the guide of the load suspension means. At least one guide rail, but two in the normal case, is/are required to guide the load suspension means. Steel rails in the form of T profiles are used as guide rails.

The advantageously configured and arranged guide elements are missing in the other known devices (JP 04 049 179 und US 6 035 974).

As an alternative, it is also advantageous if the guide rail is directly connected integrally to the stanchion.

According to another feature of the invention, in order to fasten the well lining, cross struts or cross transoms can also advantageously be used to fasten the well lining. As a result, lining elements, such as glass panes, can be readily

installed in a simple way into a well carcass in conjunction with the advantageously configured seals.

The cross section or the outline of the well carcass is advantageously configured to be square. However, the outline can also be configured to be oval, round or polygonal, the refinement according to the invention of the stanchion making it possible to readily connect in each case the stanchions which are arranged opposite one another to one another diagonally via the crossmember and the drive shaft which extends transversely with respect thereto. If, for example, the well carcass has four stanchions, the drive shaft of the load suspension means and the crossmember can be arranged at right angles to one another.

To this end, it is advantageous that the further receptacle for connecting at least the one guide element is provided between the two receptacles or the central receptacle which is provided on the stanchion is configured as a guide groove, and that one or more grooves which are configured as receptacles projects/project to the outside on a wall of the stanchion or is/are placed on the wall or integrally formed with the wall and/or is/are provided within the profile of hollow configuration of the stanchion. As a result, weight can be saved and the well carcass can be produced less expensively.

According to one development of the invention, a further possibility is that the guide element is let at least into the central groove which is connected to the walls of the stanchion and is provided between the two grooves which are configured as receptacles, which guide element interacts with a guide which is provided on the elevation installation and/or on a carrying frame or side element of the load suspension means, in particular travel platform.

Furthermore, it is advantageous that the cross section of the profile of the stanchion is configured to be round, oval, polygonal, in particular rectangular, the stanchion being manufactured from an extruded aluminum hollow profile, and the two receptacles which serve to connect a cross strut and/or to connect

well linings of the well carcass being provided on the wall or the two sides, in particular the sides of the stanchion which converge approximately at right angles.

It is also advantageous that all the grooves are open to one side and the central groove which is provided between the two grooves lying on the outside serves to receive the guide rail which is accessible from outside. As a result, the mounting of the well carcass is likewise facilitated.

It is advantageous that the guide rail is connected integrally to or forms one structural unit with the stanchion.

It is of particular significance for the present invention that sliding blocks and/or clamping pieces which can be fixed with the aid of fastening elements, in particular threaded bolts, and serve to connect the cross struts or transoms are inserted into one or more grooves.

It is also advantageous that at least one further receptacle, in particular groove, is provided on the stanchion and/or the cross strut or the transom for connecting wall parts of the well carcass and/or clamping parts and/or sealing elements, which further receptacle is arranged on the side wall of the stanchion and/or the cross strut or the transom and serves to receive clamping parts and/or wall parts of the well carcass.

Furthermore, it is advantageous that a further receptacle, in particular groove, is formed with the aid of two side elements which extend in parallel, stand upright on the wall of the stanchion and/or on the wall of the cross strut or the transom, into which receptacle at least one clamping part is inserted, and that, in addition to the further receptacle, in particular groove, an additional receptacle for connecting the wall part and/or at least one sealing element, in particular dry seal, of the well carcass and/or for connecting a connection piece for the cross strut or the transom are/is provided.

It is also advantageous that the additional receptacle on the stanchion and/or on the cross strut or the transom is formed by a side element of the further receptacle and an upright wall part which is arranged on the stanchion and/or on the cross strut or the transom.

Furthermore, it is advantageous that, at its one end, the connection piece for connecting the cross strut or the transom has a projection which is inserted into the additional receptacle with an accurate fit and is fastened to the stanchion with the aid of the clamping piece, in particular sliding block, and/or threaded bolts.

According to one development of the invention, an additional possibility is ~~is~~ characterized by the following features:

a) the stanchion has at least two walls which are arranged at an approximate right angle,

b) the walls extend parallel to a longitudinal center axis of the stanchion and/or of the well carcass,

c) in each case one receptacle which serves to connect the cross struts and/or to connect the well linings of the well carcass is provided on the two walls which extend at an angle between 450° and 145° or at an approximate right angle,

d) a third receptacle, for connecting the guide, or the guide is oriented centrally and is provided between the two outer receptacles,

e) a longitudinal center axis of the central receptacle is oriented in such a way that a further stanchion can be placed diagonally opposite in the well carcass, the receptacles which lie opposite one another serving to indirectly or directly connect a drive shaft and/or a crossmember.

Furthermore, it is advantageous that the stanchions of the well carcass are connected to one another with the aid of the cross struts or transoms, the guide rail which is made from steel being inserted into the first or central groove during the extrusion operation and forming a structurally fixed unit with the stanchion and being adhesively bonded into the first groove, at least the two outer grooves having an approximately identical cross section.

Furthermore, it is advantageous that the guide rail is composed of steel, is inserted into the first or central groove during the extrusion operation and forms a structurally fixed unit with the stanchion.

It is also advantageous that the guide rail is adhesively bonded into the first groove and at least the two outer grooves have an approximately identical cross section.

Further advantages and details of the invention are explained in the patent claims and in the description and are shown in the figures, in which:

fig. 1 shows a perspective part view of the upper part of the well carcass for an elevator installation, which well carcass can be arranged so as to stand free and/or in an elevator well;

fig. 2 shows a diagrammatic perspective illustration of the well carcass;;

fig. 3 shows a diagrammatic illustration of the cable traction device which can be installed into the well carcass according to fig. 1;

fig. 4 shows a perspective illustration of the travel platform with side parts which are arranged so as to lie opposite one another;

fig. 5 shows a view of the well carcass with drive device in the view from above according to fig. 1;

fig. 6 to fig. 11

show a sectional illustration of the stanchion with the associated attachment parts, and individual mounting steps for connecting the cross strut or the transom and the wall parts of the elevator installation;

fig. 12 shows a sectional illustration of a further exemplary embodiment of the stanchion with an integrally attached guide rail;

fig. 13 shows a sectional illustration of a mounted cross piece or transom
and the stanchion and a part of the wall lining
for the well carcass;

fig. 14 and fig. 15
show the installation phases of the walls for the well carcass 102.

The drawing according to figs. 1 and 2 shows a well carcass 102 for an elevator installation 103 which well carcass can be arranged to be free-standing or in an elevator well 100. In the elevator well 100, the well carcass 102 can be arranged to be free-standing or can be supported with the aid of connecting elements on side walls (not shown in the drawing) of the elevator well 100.

According to fig. 2, a storey ceiling 116 is supported on a lower section 104 of the well carcass 102. To this end, an opening 118 is situated in the storey ceiling 116, through which opening 118 the load suspension means, in particular a travel platform 200 (fig. 4), is moved vertically up and down with the aid of carrying means 208 (fig. 4). The lower section 104 of the well carcass 102 stands with the aid of mount feet in a wellpit 114.

An upper section 106 of the well carcass 102 is situated above the storey ceiling 116 and is called a wellhead 124. In this section according to the exemplary embodiment shown in fig. 2, the drive arrangement is shown with a drive motor 126 and a gear, in particular worm gear 125. The drive motor 126 with a drive shaft 204 can be arranged in the wellhead 124 of the well carcass 102 or in the wellpit 114.

The upper section 106 of the elevator well carcass 102 is arranged on the storey ceiling 116. In this way, the well carcass 102 can be arranged from floor to floor or, in the case of a correspondingly large opening, as a continuous

construction. An entire well carcass height 120 can span a plurality of floors, it also being possible for a conveying height 122 to be more than three meters.

According to fig. 1, the load suspension means, in particular the travel platform 200, is arranged in the well carcass 102 such that it can be moved vertically. The cross section of the well carcass 102 and/or of the load suspension means, in particular the travel platform 200, is configured to be round, oval or polygonal, preferably square.

At least in the end edge region and/or in a corner region 105 of the travel platform 200, the load suspension means 200 or the travel platform which is configured to be square in the exemplary embodiment has two upright side elements 202 which lie diagonally opposite one another and are connected to the carrying means 208. The carrying means 208 can be a cable traction device or a cable traction device which operates according to the principle of a pulley block 209.

The magnitude of the force to be applied, for example in order to move the elevator load, can be reduced with the aid of the pulley block 209. The pulley block consists of fixed and/or loose deflecting pulleys or rollers and a drawing means or a cable. The toothed belt assembly follows the same principle, except that a toothed belt is used here instead of a cable. In the cable assembly or pulley block 209 used here, two stationary anchorings 216 and 218 are used according to the invention. However, the number of loadbearing cables, to which the load is distributed, is always decisive for the tensile force. In the depicted basic form of the pulley block, the tension σ is identical at every point of the cable. The weight force F_L of the mass is therefore distributed uniformly to all n connections between the lower and the upper rollers and the loadbearing cables. The tensile force at the end of the cable is proportional to the tension in the cable and therefore the following applies: $F_z = F_l/n = mg/n$.

The pulley block 209 according to the invention can have a step-up ratio of 1:1, 2:1, 3:1, 4:1, 5:1 or greater. In this way, a counterweight can be dispensed with, inter alia.

The two side elements 202 which lie diagonally opposite one another are connected to one another at their upper end via an upper cross piece 203. Apart from the two side elements 202 which lie diagonally opposite one another, the load suspension means, in particular the travel platform 200, does not have any further side parts. In this way, four free access openings 128 are obtained which can also be closed with the aid of a door 123. According to another embodiment in accordance with fig. 6, in addition to the two side elements 202, the travel platform can have additional side walls which are formed, for example, from glass, metal or from a plastic material.

The drawing means device 208 operates according to the principle of a pulley block and is therefore called a pulley block 209 in the following text. It has one or more deflecting pulleys 206, 212, 214, 219.

The load suspension means, in particular the travel platform 200, is guided vertically in the well carcass 102 with the aid of at least one guide, in particular a guide rail 220 which is arranged on the well carcass (fig. 3). The guide is arranged at least in the corner region 105 (fig. 5) of the well carcass 102 and/or in the immediate vicinity of the carrying means 208, in particular the pulley block 209.

The carrying means 208 which are arranged on both sides of the travel platform 200 run from the end suspension or anchoring 216 which is provided in the wellhead 124 and is connected to the wall of the elevator well 100 or to the well carcass 102, via the deflecting pulley 212 to the drive pulley 206, and from there via the deflecting pulley 219 which is situated in the wellpit 114 or is connected fixedly to the wall of the elevator well 100 or to the well carcass 102 with the aid of the anchoring 218. From there, the carrying means 208 runs further via the deflecting pulley 214 which is arranged on the side element or carrying frame

202 to the end suspension or anchoring 218 which is either fastened to the well carcass 102 or in the wellpit 114.

To this end, the carrying frame 202 is equipped with guides 222 which extend in the vertical direction, have depressions and are guided on the guide rail 220 which is arranged on the carrying frame 202 or on the side element 202 (fig. 3). If the carrying means 208 or the drive axle breaks, an emergency braking device 224 which is arranged fixedly on the carrying frame 202 (fig. 3) is activated automatically.

As is apparent from figs. 1 and 5, the drive motor 126 is arranged on a crossmember 127 which is situated in the upper wellhead 124. The crossmember 127 is arranged between the two corner regions 105 of the well carcass 102, which lie diagonally opposite one another, and is connected to said well carcass 102. However, it is also possible to connect the crossmember 127 fixedly to the corner regions 105 of the wall elements of the elevator well 100. One or else two horizontally extending drive shafts 204 is/are connected to the drive motor 126 with the aid of the worm gear 125. One or two drive shafts 204 which is/are oriented coaxially with respect to one another and is/are operatively connected to the drive motor 126 can extend between the corner regions 105 of the well carcass 102 which lie opposite one another. Furthermore, it is possible that each drive shaft is operatively connected to in each case one drive motor. The drive motor can also be arranged at any other angle with respect to the drive axle or the drive axles or at a spacing from the drive axle.

The crossmember 127 and the drive shaft 204 cross one another at right angles and therefore extend in each case into the corner regions 105 which lie opposite one another. As has already been mentioned, they are connected fixedly to the well carcass 102 or to a wall of the elevator well 100 or are mounted there. The torsional rigidity of the well carcass 102 is improved substantially by the connection of the crossmember 127 and the drive shaft 204 to the well carcass 102.

The drive motor 126 has an output shaft, the rotational axis 117 of which is arranged approximately at right angles to a rotational axis 119 of the drive shaft 204 of the carrying means, in particular drawing means device 208.

The well carcass 102 consists of four longitudinal sides 109, 111, 113 and 115 which are oriented at right angles to one another and extend vertically. Each longitudinal side 109, 111, 113 und 115 consists of a rectangular frame with stanchions or longitudinal struts 129 which can be connected fixedly to one another via a plurality of cross struts or transoms 201. The central cross strut 201 can be dispensed with depending on the embodiment, with the result that each longitudinal side 109, 111, 113 and 115 also has a free access opening 128 to the load suspension means, in particular to the travel platform.

The carrying means 208 which are assigned to the ends of the drive shafts 204 extend in the immediate vicinity of and parallel to the vertically extending longitudinal sides 109, 111, 113, 115 of the well carcass 102 which form the corner regions and/or to a longitudinal center axis 107.

Furthermore, in each case one carrying means 208 is arranged in a space saving manner in the two corner regions 105 which lie diagonally opposite one another. The carrying means 208 are provided in each case between a side element 202 of the travel platform 200 and longitudinal sides 109, 111, 113, 115 of the well carcass 102, which form the corner region 105 of approximately triangular configuration, or the walls of the elevator shaft 100.

Figs. 6 to 15 show the stanchions 129 and the cross strut or the transom 201 for the well carcass 102 of the elevator installation 103 in detail.

The stanchion 129 has outer sides or walls 205, which extend in parallel to its longitudinal center axis 240 and to the longitudinal center axis 107 of the well carcass 102, and at least two outer receptacles 236, to which at least one cross strut 201 can be connected.

The cross section of the profile of the stanchion 129 can be configured to be round, oval, polygonal, rectangular, in particular square, and the two outer receptacles 236 which, as mentioned, serve to connect the cross strut 201 (figs. 6 to 9) can be provided on its two sides or walls 205 which converge at right angles.

The two walls 205 of the stanchion 129 extend at an approximate right angle or else at an angle α between 54° and 145°.

In addition to the two receptacles 236, at least one further receptacle 232 is provided for connecting a guide element 220. The guide element 220 is connected centrally between the two cross struts or transoms 201 to the two walls 205 which extend at an approximate right angle α. The guide element 220 interacts with a guide 222 which is provided on the elevator installation 103 and/or on the carrying frame or side element 202 of the load suspension means, in particular travel platform 200 (fig. 3).

According to fig. 12, the guide rail 220 can be connected integrally to or manufactured as one component with the stanchion 129. The two outer grooves 236 at least have an approximately identical cross section.

One or more grooves 232, 236, 238 configured as receptacles can project to the outside, that is to say can also be placed, on the wall 205 of the stanchion 129 and/or can be provided within the profile of hollow configuration of the stanchion 129. All the receptacles 232, 236, 238 can also be configured as a T groove.

All the grooves 232, 235, 236, 238 and 502 are open toward one side, the groove 232 which is provided between the two grooves 236 lying on the outside serving, as already mentioned, to receive the guide rail 220 which is accessible from outside.

As is apparent from figures 6 to 8, sliding blocks and/or clamping pieces 303 which can be fixed with the aid of fastening elements, in particular threaded bolts 302, and serve to connect the cross struts or transoms 201 are inserted into one or more grooves 235.

The further receptacles, in particular grooves 238, 502, (fig. 8 and fig. 13) are formed with the aid of a side element 233, which stands upright on the wall 205 of the stanchion 129 and/or on the wall of the cross strut or the transom 201, and a wall extending in parallel or a stop edge 403.

According to figs. 8 and 13, a connection piece 301 for connection for the cross strut or the transom 201 can be attached to the groove 236 which is provided on the stanchion 129. The connection piece 301 (fig. 13) is fastened releasably to the groove 236 with the aid of the clamping piece or sliding block 303, which is provided in the groove 236, and a threaded bolt 302.

The connection piece 301 (fig. 8) has, at its one end, a projection 239 for connecting the cross strut or the transom 201, which projection 239 is inserted into the additional receptacle 235 with an accurate fit and is secured with the aid of the clamping piece, in particular sliding block 303, and/or the threaded bolt 302 on the stanchion 129.

As, furthermore, is apparent from fig. 13, the receptacles and the clamping groove 502 and the additional groove 235 are provided on the two walls 205 of the cross strut or the transom 201 which lie opposite one another. As a result, a wall part or the well lining 401 and two seals 402, 405 and a clamping part 404 can be inserted into the grooves 235 and 502 and can be clamped fixedly.

Furthermore, it is apparent from fig. 13 that the clamping part 404 is inserted into the additional receptacle 502 and then presses against the seal 405 which is applied on the wall part 401 and bears against one side of the wall part 401, while the second seal 402 is provided between the other side of the wall part 401 and the wall part 403 and fulfills the sealing function there.

The additional receptacle 235 (fig. 8) on the stanchion 129 and the cross strut or the transom 201 is formed by a side element 233 and an upright wall part 401.

The connection piece 301 (figs. 8, 10, 13) is clamped against the stanchion 129 with the aid of the threaded bolt 302 and the sliding block 303. After this, the cross strut or the transom 201 is pushed onto the connection piece 301 and fastened with the aid of a threaded bolt 305 (fig. 13) which to this end is screwed into a threaded hole which is provided in the connection piece 301.

A further receptacle 238 (fig. 14) is arranged on the stanchion 129 and is formed by the side elements 233. A receptacle 503 is situated next to this, which receptacle 503 consists of a side element 233 and a wall part 403 which is provided on the stanchion 129. The clamping part 404 is inserted into the receptacle 238 and the wall part 401 is inserted into the receptacle 503 sealingly with the sealing elements 402 and 405.

The stanchions 129 and the cross strut or the transom 201 can be manufactured from an extruded aluminum hollow profile. The guide rail 220 can be formed from steel. Said guide rail 220 is inserted into the groove (fig. 6) and is fixed with the aid of a threaded bolt 231 and a nut.

According to the exemplary embodiment in accordance with fig. 12, the guide element, in particular the guide rail 220, can form one structurally fixed unit with the stanchion (129).

A longitudinal center axis 241 (fig. 8) of the central receptacle 232 is oriented in such a way that a further stanchion 129 can be placed diagonally opposite in the well carcass 102, the receptacles 232 which lie opposite one another serving to indirectly or directly connect the drive shaft 204 and/or the crossmember 127.

It will further be understood that any reference herein to known prior art does not, unless the contrary indication appears, constitute an admission that such prior art is commonly known by those skilled in the art to which the invention relates.

Where ever it is used, the word "comprising" is to be understood in its "open" sense, that is, in the sense of "including", and thus not limited to its "closed" sense, that is the sense of "consisting only of". A corresponding meaning is to be attributed to the corresponding words "comprise", "comprised" and "comprises" where they appear.

It will be understood that the invention disclosed and defined herein extends to all alternative combinations of two or more of the individual features mentioned or evident from the text. All of these different combinations constitute various alternative aspects of the invention.

While particular embodiments of this invention have been described, it will be evident to those skilled in the art that the present invention may be embodied in other specific forms without departing from the essential characteristics thereof. The present embodiments and examples are therefore to be considered in all respects as illustrative and not restrictive, and all modifications which would be obvious to those skilled in the art are therefore intended to be embraced therein.

List of Designations

100	Elevator well
102	Well carcass
103	Elevator installation
104	Lower section
105	Corner region
106	Upper section
107	Longitudinal center axis
109	Longitudinal side
111	Longitudinal side
113	Longitudinal side
114	Wellpit
115	Longitudinal side
116	Storey ceiling
117	Rotational axis of the drive motor
118	Opening
119	Rotational axis of the drive shaft
120	Well carcass height
122	Conveying height
123	Door
124	Wellhead
125	Gear, worm gear
126	Drive motor
127	Crossmember
128	Access opening
129	Stanchion, longitudinal strut
200	Load suspension means, travel platform
201	Cross strut, transom
202	Carrying frame, side element
203	Cross piece
204	Drive shaft

205	Wall, side wall of the stanchion 129
206	Deflecting pulley, drive pulley
208	Carrying means, in particular drawing means device, preferably cable traction device for a pulley block 209, in particular factor pulley block
209	Pulley block
212	Deflecting pulley
214	Deflecting pulley
216	Anchoring, upper end suspension
218	Anchoring, lower end suspension
219	Deflecting pulley
220	Guide element, guide rail on the well carcass 102
222	Guide on the travel frame, stanchion
224	Emergency braking device
231	Screw, threaded bolt
232	Receptacle, guide groove
233	Side element
235	Additional receptacle for 301, groove
236	Receptacle for transom, guide groove, outer groove
238	Further receptacle, guide groove, clamping groove
239	Projection
240	Longitudinal center axis
241	Longitudinal center axis
301	Connection piece
302	Threaded bolt
303	Clamping piece, sliding block
305	Threaded bolt
401	Wall part, well lining
402	Sealing element, dry seal
404	Clamping part
403	Wall or stop edge
405	Sealing element, dry seal
502	Groove

503	Receptacle
α	Angle

CLAIMS:

1. A stanchion for an elevator installation, in which the stanchion has two respective receptacles on the stanchion outer sides which extend approximately parallel to a longitudinal axis of the elevator installation, which receptacles serve to connect a respective cross strut and/or well linings of the elevator installation which are oriented approximately at right angles to one another,
wherein a third receptacle is a central receptacle and the longitudinal center axis thereof is oriented in such a way that a further stanchion is placed diagonally opposite in the elevator installation, the receptacles which lie opposite one another serving to indirectly or directly connect a drive shaft and/or a crossmember.

2. The stanchion as claimed in claim 1,
wherein the third receptacle for connecting at least one guide element is provided between the two receptacles or the third or the central receptacle which is provided on the stanchion is configured as a guide groove.

3. The stanchion as claimed in claim 1 or 2,
wherein one or more grooves which are configured as receptacles project to the outside
on a wall of the stanchion or are placed on the wall and/or are provided within a profile of a hollow configuration of the stanchion.

4. The stanchion as claimed in any one of the preceding claims,
wherein the guide element is let at least into a central groove which is connected to at least one wall of the stanchion and is provided between the two grooves which are configured as receptacles, which guide element interacts with a guide which is provided on the elevator installation and/or on a carrying frame or side element of a load suspension means, being a travel platform.

5. The stanchion as claimed in any one of the preceding claims,

wherein a cross section of the profile of the stanchion is configured to be at least one of round, oval, polygonal, and rectangular; the stanchion being manufactured from an extruded aluminum hollow profile.

6. The stanchion as claimed in any one of the preceding claims, wherein all the grooves are open to one side and the central groove which is provided between the two grooves lying on the outside serves to receive a guide rail.

7. The stanchion as claimed in any one of the preceding claims wherein the guide rail is connected integrally to or forms one structural unit with the stanchion.

8. The stanchion as claimed in any one of the preceding claims, wherein sliding blocks and/or clamping pieces which are fixed with the aid of fastening elements, in particular threaded bolts, and serve to connect the cross struts or transoms are inserted into one or more grooves.

9. The stanchion as claimed in any one of the preceding claims, wherein at least one further receptacle, being a groove, is provided on the stanchion
and/or the cross strut or the transom for connecting wall parts of the elevator installation and/or clamping parts and/or sealing elements.

10. The stanchion as claimed in any one of the preceding claims, wherein a further receptacle, being a groove, is formed with the aid of two side elements which extend in parallel, stand upright on the wall of the stanchion and/or on the wall of the cross strut or the transom into which receptacle at least one clamping part is inserted, and in that, in addition to the further receptacle, being a groove, an additional receptacle for connecting the wall part and/or at least one sealing element, in particular a dry seal, of the elevator installation and/or for connecting a connection piece for the cross strut or the transom is provided.

11. The stanchion as claimed in any one of the preceding claims, wherein the additional receptacle on the stanchion and/or on the cross strut or the transom is formed by a side element of the further receptacle and an upright wall part which is arranged on the stanchion and/or on the cross strut or the transom.

12. The stanchion as claimed in any one of the preceding claims, wherein at one end of the stanchion, the connection piece for connecting the cross strut or the transom has a projection which is inserted into the additional receptacle with a substantially accurate fit and is fastened to the stanchion with the aid of the clamping piece, being the sliding block, and/or threaded bolts.

13. The stanchion as claimed in any one of the preceding claims, further including the following features:

a) the walls extend parallel to a longitudinal center axis of the stanchion and/or the
elevator installation;

b) the respective receptacle which serves to connect the cross struts and/or to connect the well linings of the elevator installation is provided on the two walls which extend at an angle α being at least one of between 45° and 145° and at an approximate right angle.

14. The stanchion as claimed in any one of the preceding claims, wherein the stanchions of the elevator installation are connected to one another with the aid of the cross struts or the transoms, the guide rail being made from steel, being inserted into a first groove or the central groove during an extrusion operation and forming a structurally fixed unit with the stanchion, at least the two outer grooves having an approximately identical cross section.

15. The stanchion as claimed in any one of the preceding claims, wherein the outer sides of the stanchion which extend approximately at a right angle to each other.

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16. A stanchion substantially as described herein.

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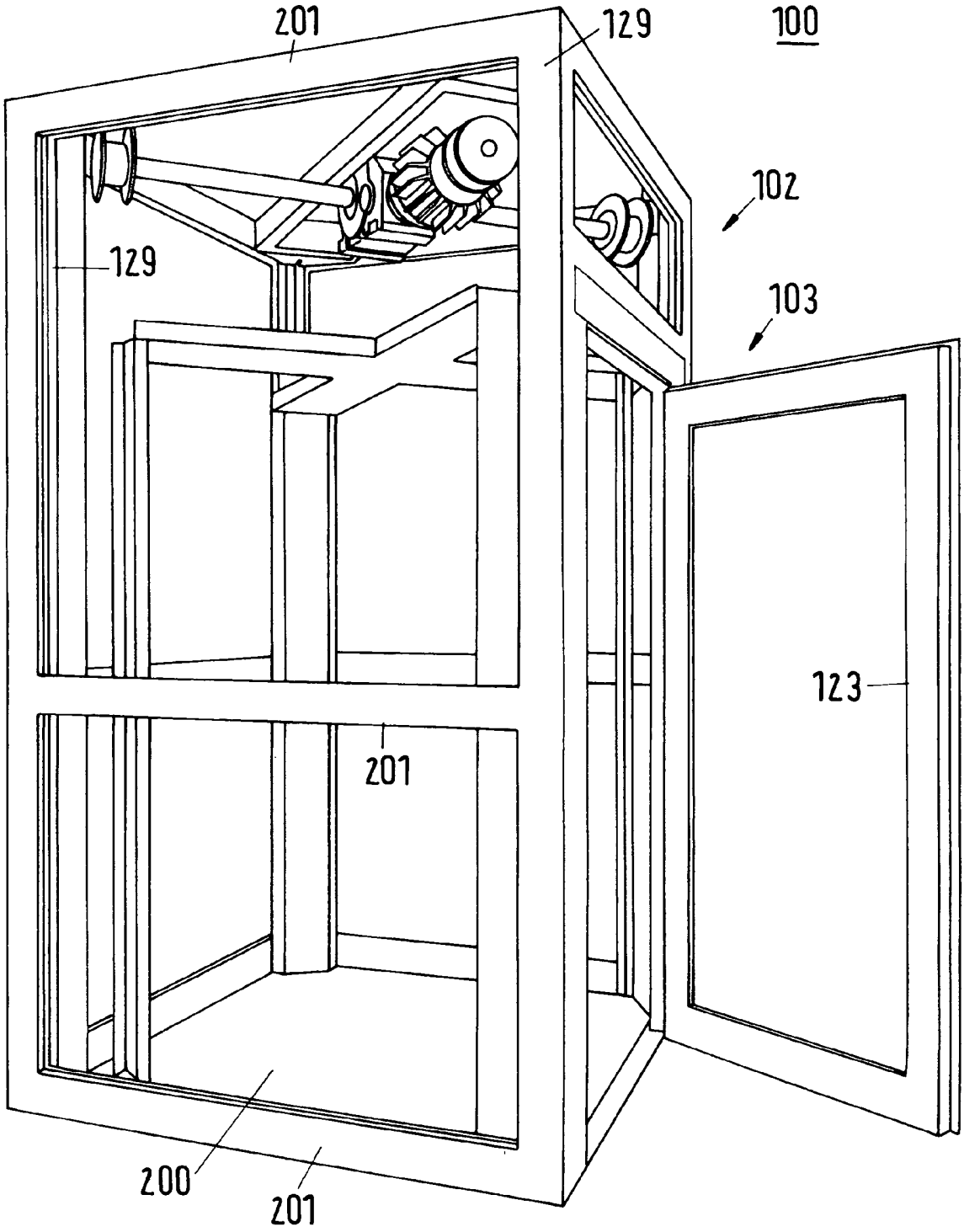

Fig.1

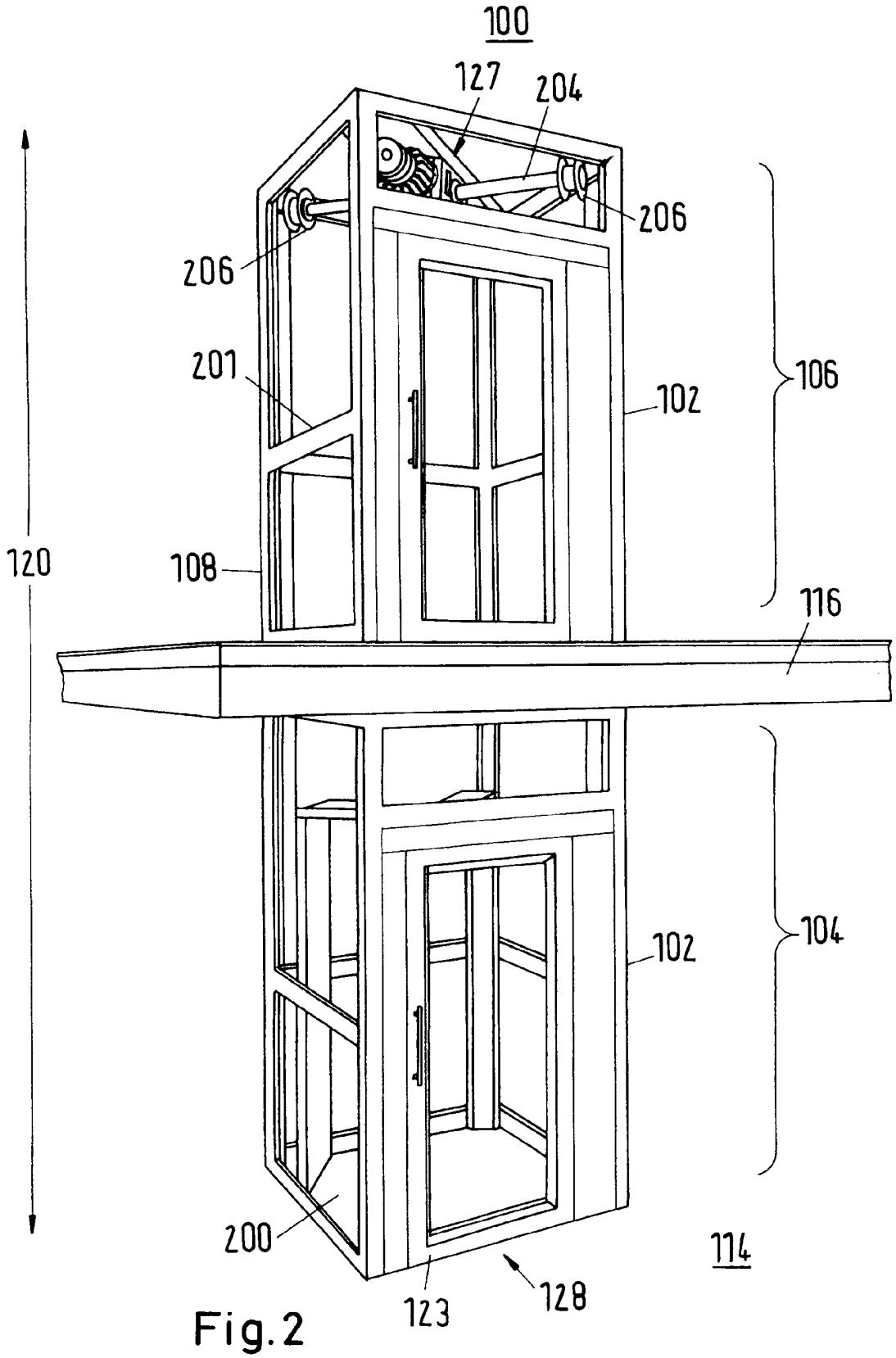
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Fig.2

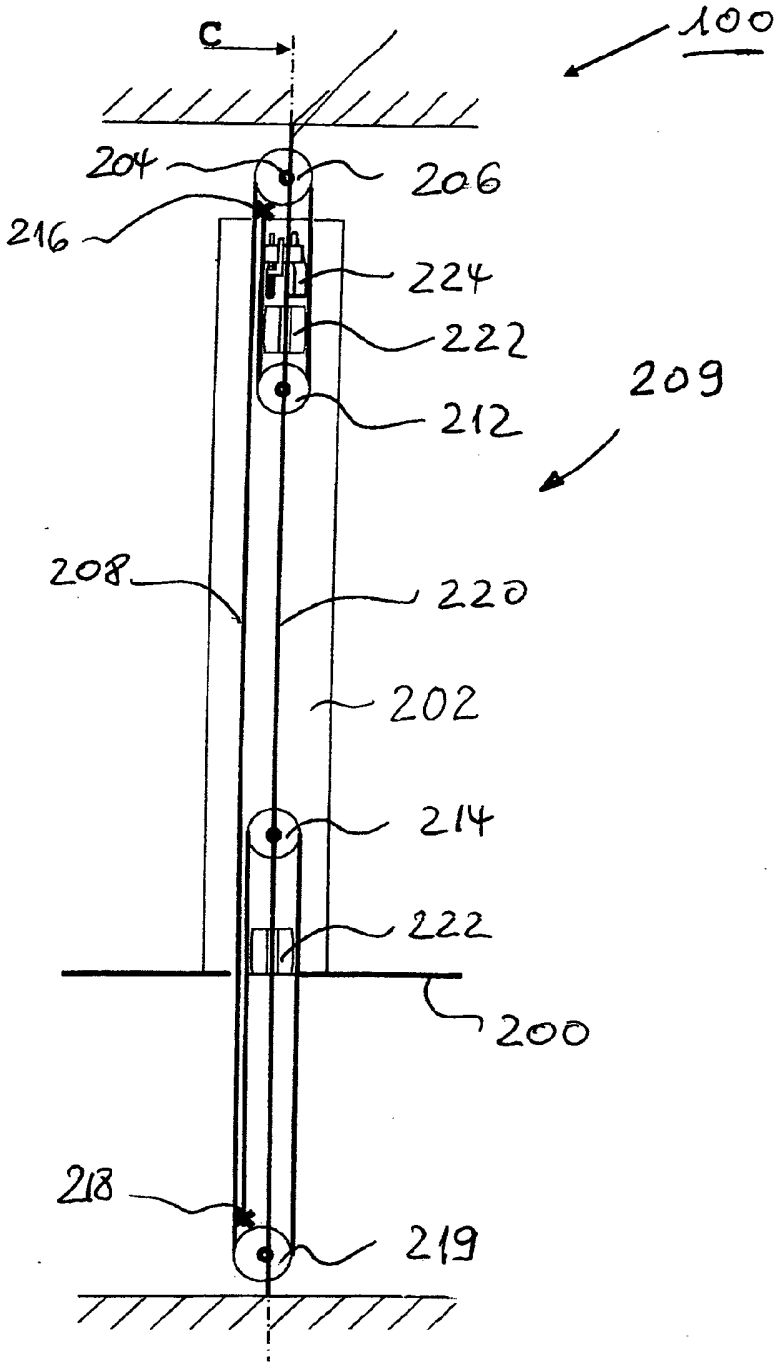

Fig.3

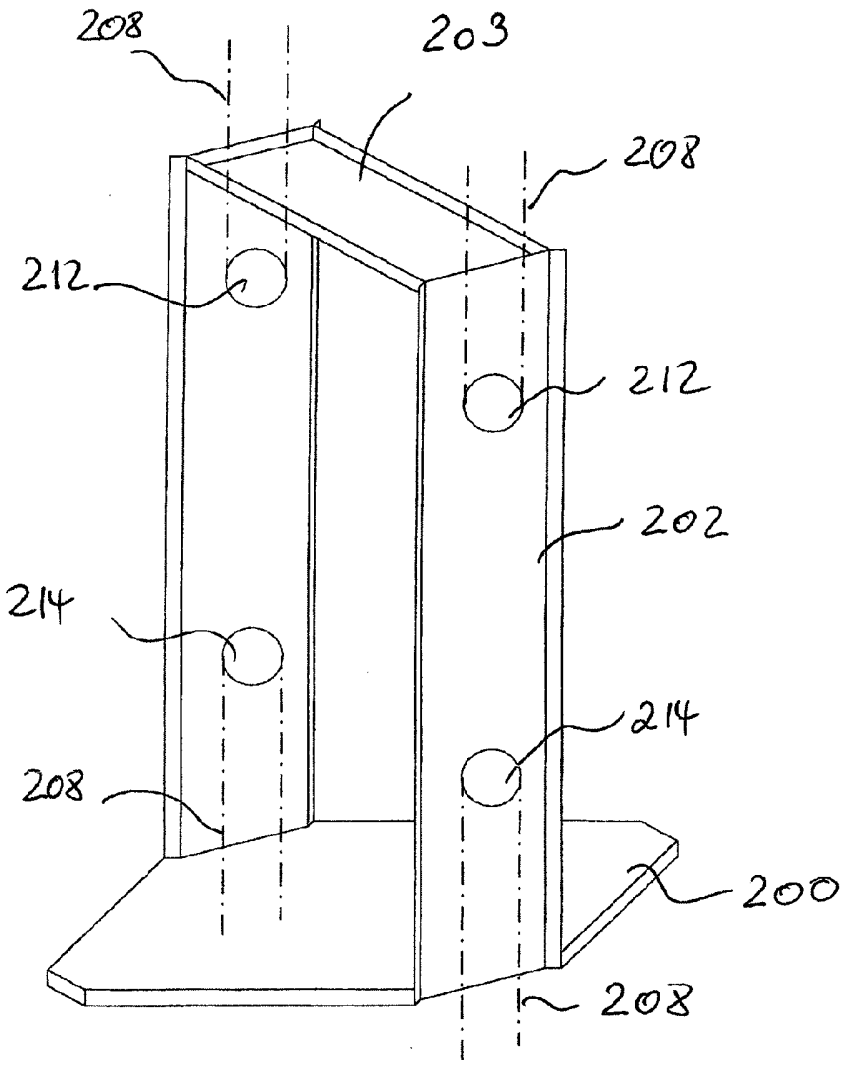

Fig.4

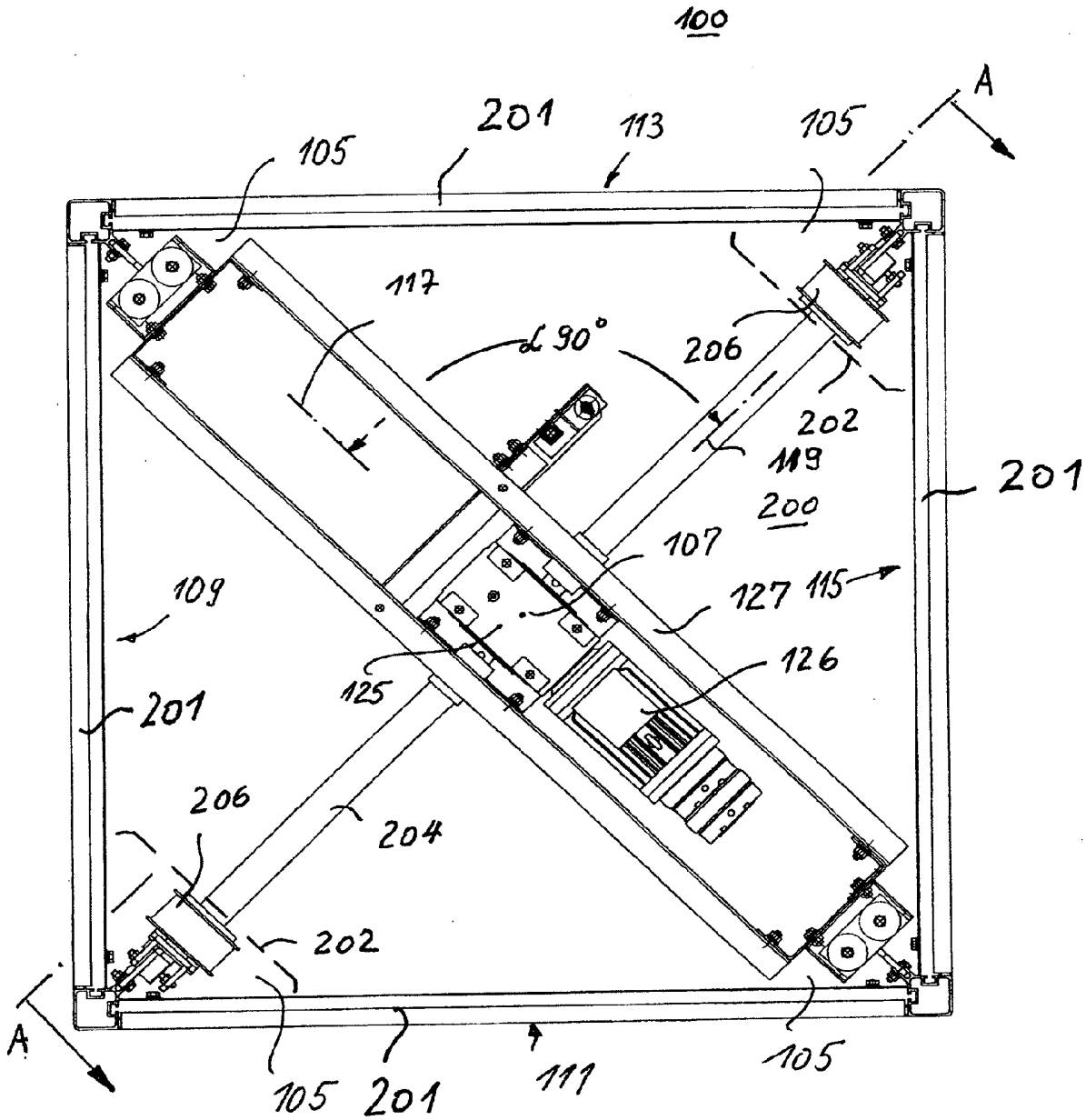
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Fig.5

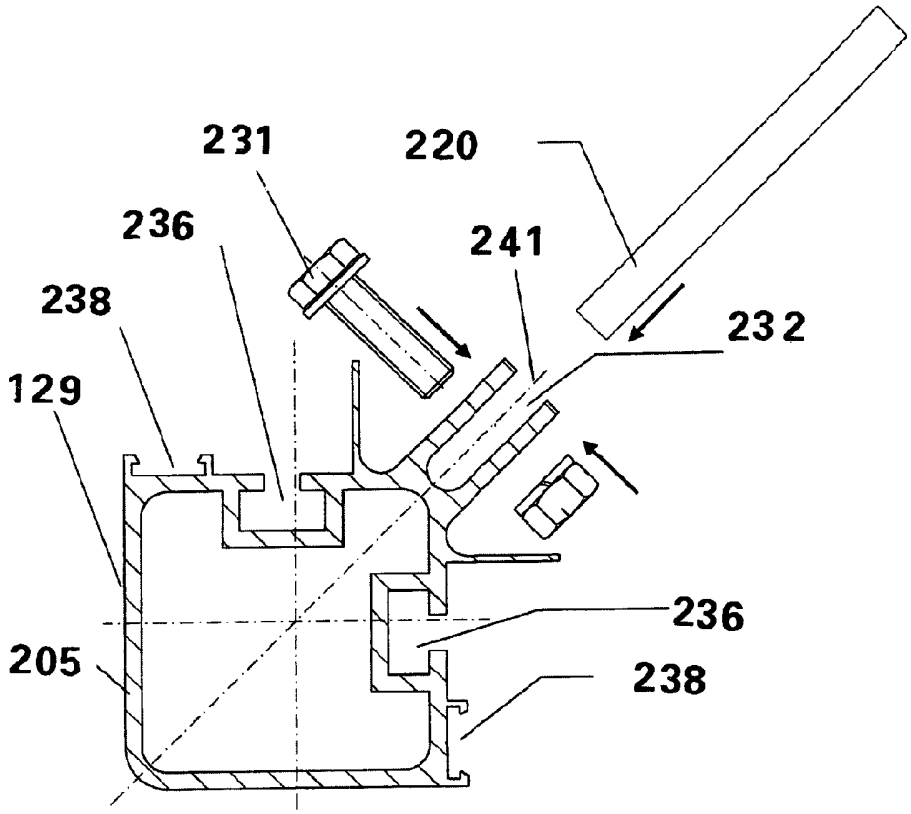

Fig.6

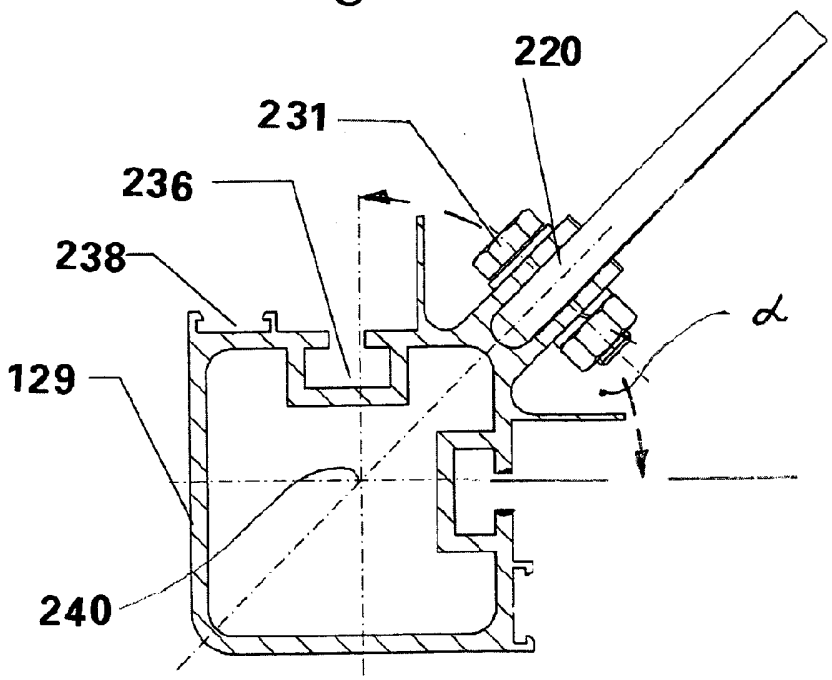

Fig.7

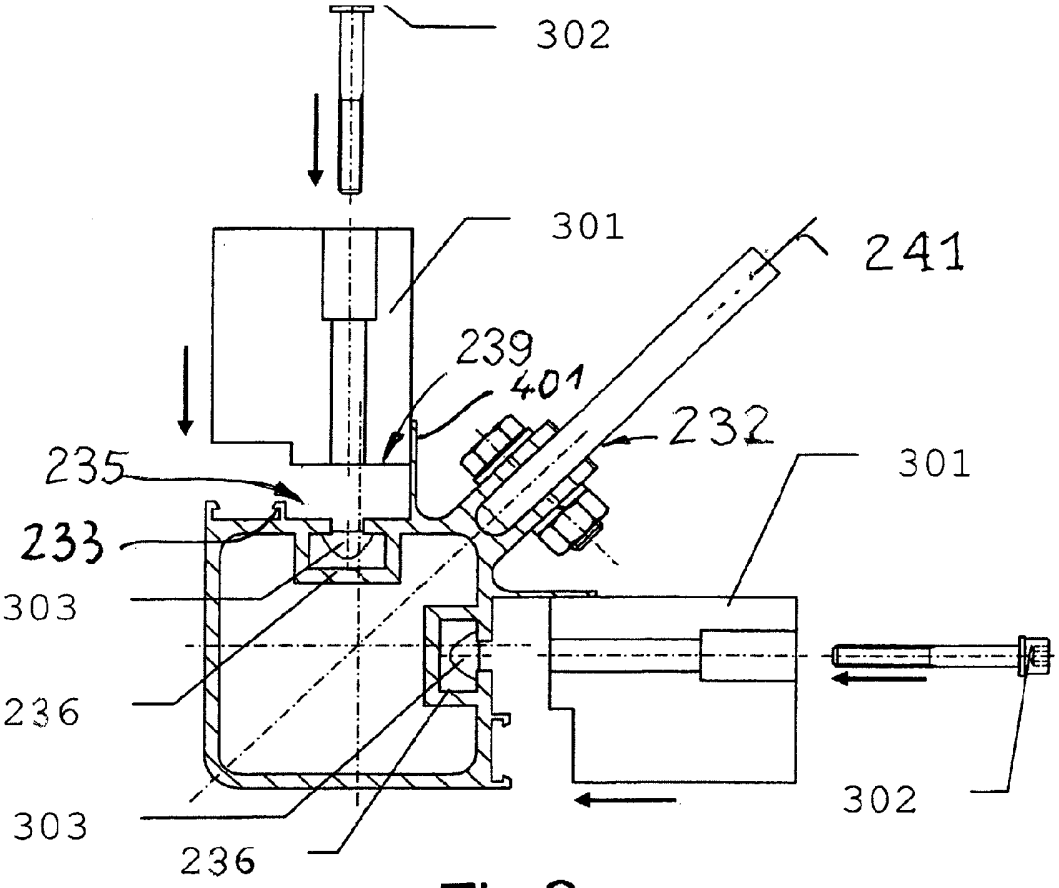
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Fig.8

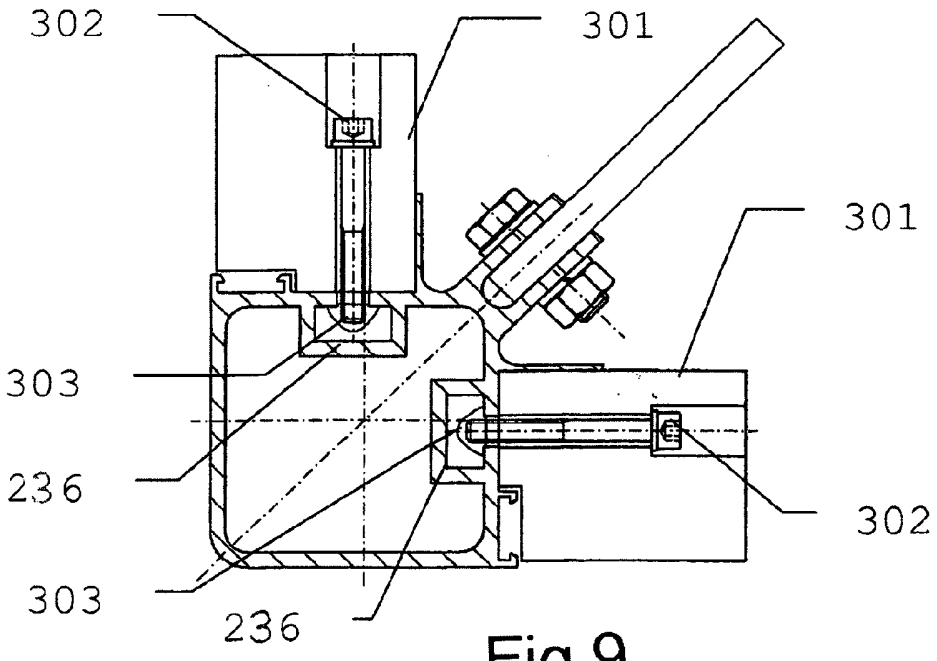
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Fig.9

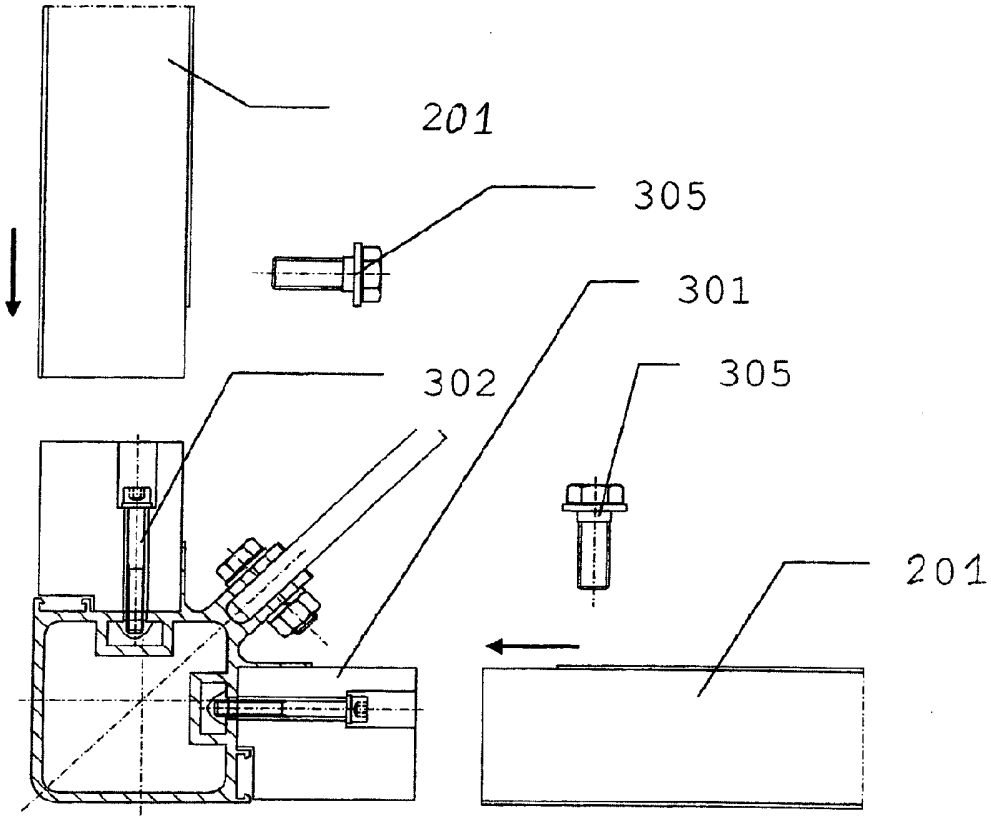

Fig.10

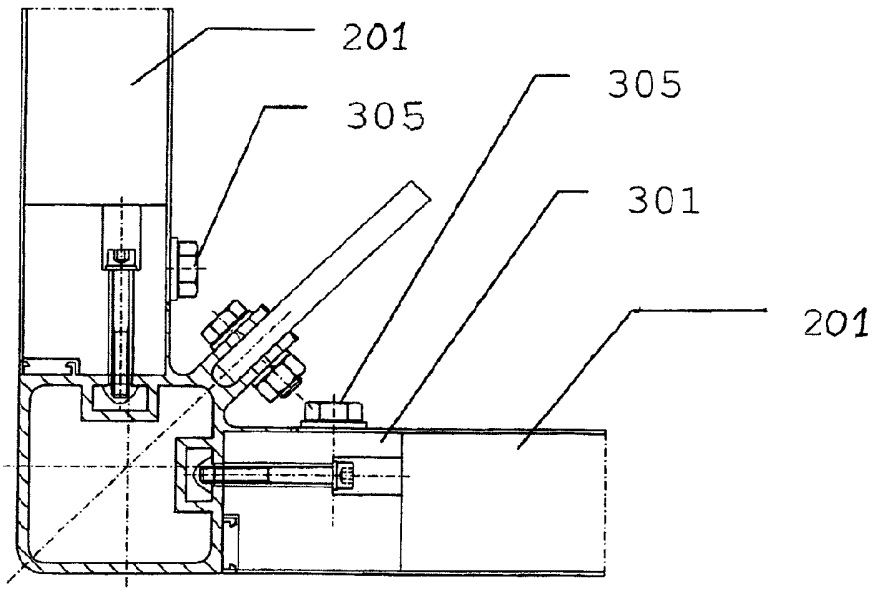

Fig.11

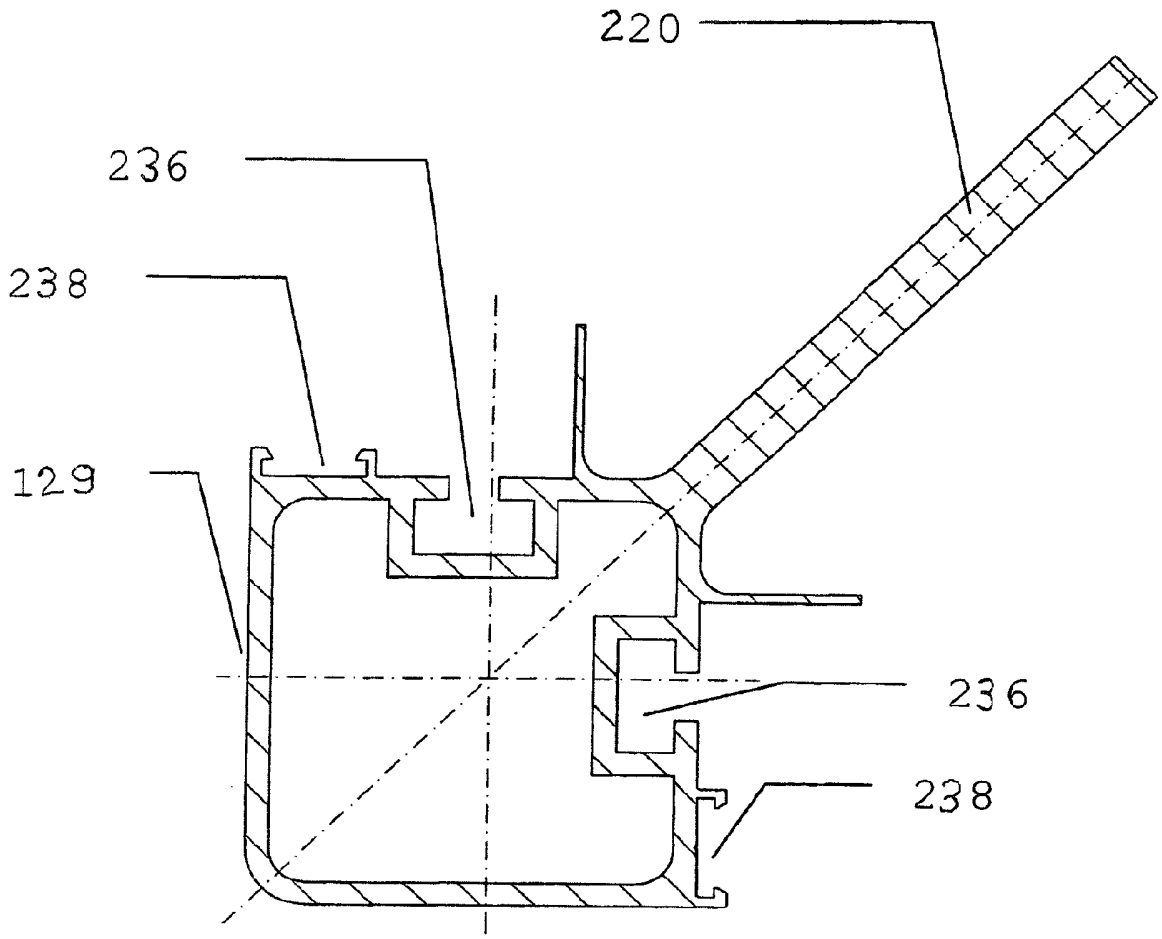

Fig.12

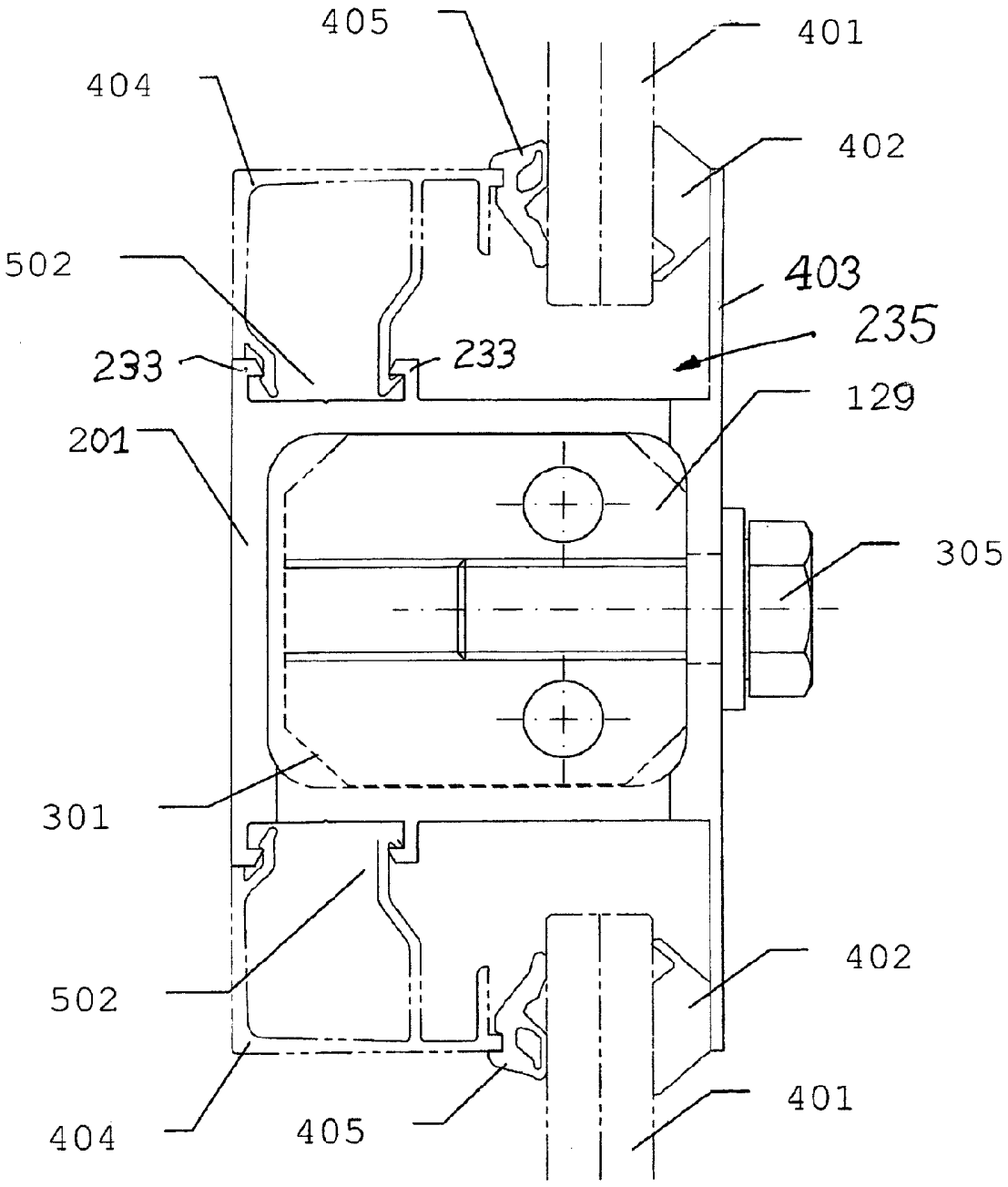
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Fig.13

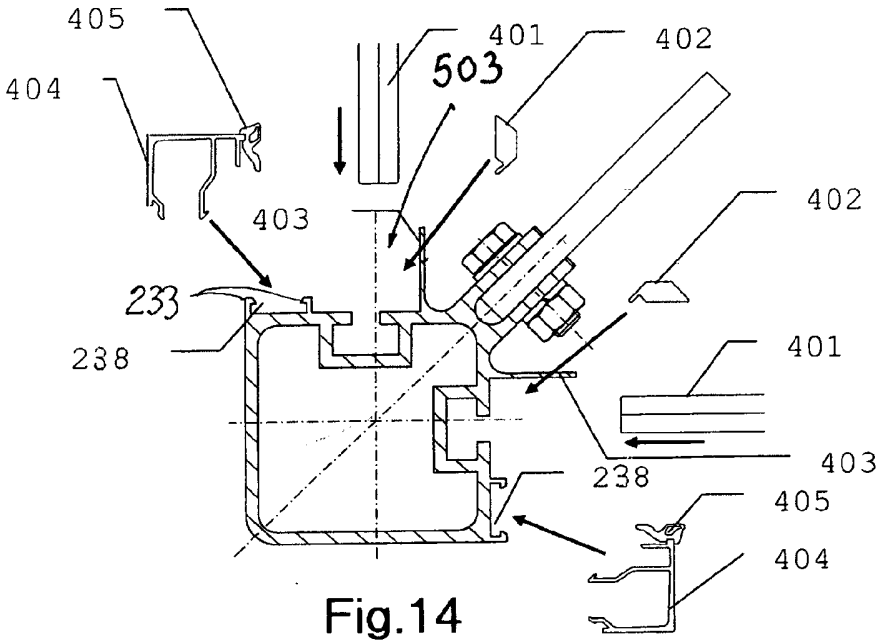
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Fig.14

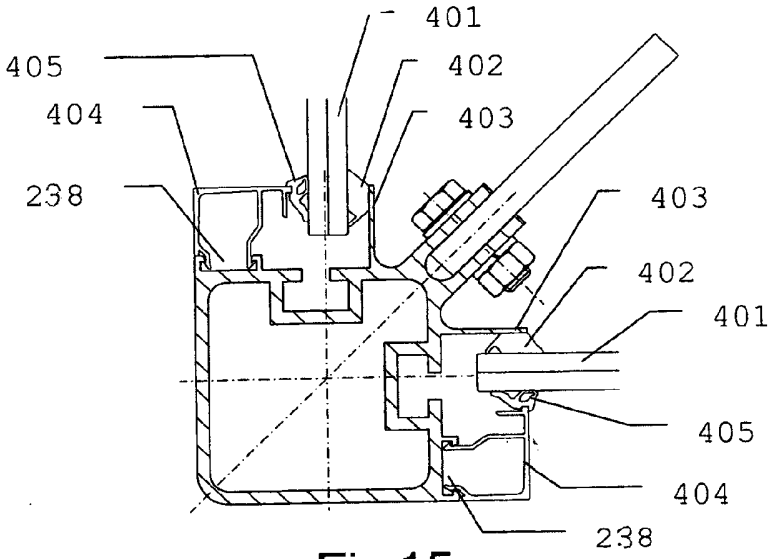
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Fig.15