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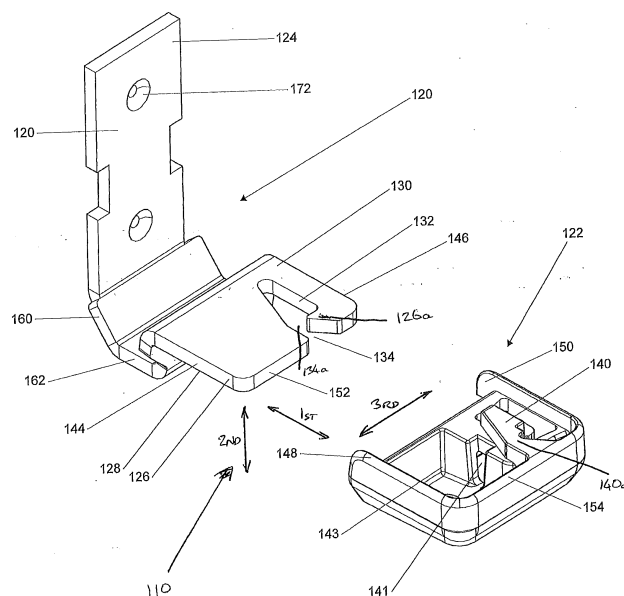
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(54) **CORD MOUNTING**

(57) A cord mounting for a tension cord of an architectural covering. The cord mounting includes a mounting base configured for mounting adjacent an architectural structure, and a cord holder configured to engage at least one cord. The mounting base includes a mounting part configured to be mounted adjacent an outside edge of the architectural structure. The mounting base includes a holder part extending in a first direction, the holder part having first and second sides opposite each other with

respect to a second direction substantially perpendicular to the first direction, and defining a through hole extending between the first and second sides for passage of at least one cord therethrough. The cord holder and the holder part are configured to engage with each other with the cord holder adjacent said first side such that at least one cord may extend from the cord holder through the through hole from said first side to said second side.

Fig. 4



Description

[0001] The following relates to a cord mounting, in particular for mounting a tension cord of a blind or shades or other architectural coverings to be held in place with respect to an outside edge of an architectural structure.

[0002] A variety of different blinds or architectural coverings are known having shades which may be extended across an architectural structure. Many of these arrangements require cords to be extended across the architectural structure and secured at a periphery of the architectural structure.

[0003] EP 1 526 246 A describes a mounting device for a guide cord. Two such mounting devices are used on opposite respective sides of a lower periphery of an architectural structure to secure the cords used for the downwardly extending blind or architectural covering.

[0004] As described here, there is provided a cord mounting for a tension cord of a blind, such as an architectural covering. The cord mounting may include a mounting base for mounting adjacent an architectural structure and a cord holder configured to engage at least one cord. The mounting base may include a mounting part configured to be mounted adjacent an outside edge of the architectural structure. The mounting base may include a holder part extending in a first direction. The holder part may have first and second sides opposite each other with respect to a second direction substantially perpendicular to the first direction and may define a through hole extending between the first and second sides for passage of at least one cord therethrough. The cord holder and the holder part may be configured to engage with each other with the cord holder adjacent said first side such that the at least one cord may extend from the cord holder through the through hole from said first side to said second side.

[0005] As described here, there is also provided a blind or architectural covering assembly for mounting to an architectural structure, the blind assembly including at least one said cord mounting.

[0006] As described here, there may also be provided a method of mounting a tension cord of a blind, such as an architectural covering, adjacent an architectural structure using a mounting base for mounting adjacent an architectural structure and a cord holder configured to engage at least one cord. The method may include providing the mounting base with a mounting part configured to be mounted adjacent the outside edge of the architectural structure. The method may include providing the mounting base with a holder part extending in a first direction and having first and second sides opposite to each other with respect to a second direction substantially perpendicular to the first direction. The method may include defining a through hole extending between the first and second sides for passage of at least one cord therethrough. The method may include configuring the cord holder and the holder part to engage with each other with the cord holder adjacent the first side such that the

at least one cord may extend from the cord holder through the through hole from the first side to the second side.

[0007] There is provided a cord mounting for a tension cord of a blind, such as an architectural covering (hereinafter, simply architectural covering for the sake of convenience without intent to limit). The cord mounting may include a mounting base configured for mounting adjacent an architectural structure and a cord holder configured to engage at least one cord. The mounting base may include a mounting part configured to be mounted adjacent an outside edge of the architectural structure. The mounting base may include a holder part extending in a first direction. The holder part may have first and second sides opposite each other with respect to a second direction substantially perpendicular to the first direction and may define a through hole extending between the first and second sides for passage of at least one cord therethrough. The cord holder and the holder part may be configured to engage with each other with the cord holder adjacent said first side such that the at least one cord may extend from the cord holder through the through hole from said first side to said second side.

[0008] The mounting base in order to be suitable for being mounted to an adjacent architectural structure may include a piece of material with holes through which screws or other fasteners may pass to mount the mounting base to an architectural structure such as a window frame. Alternatively the mounting base may include a piece of material that is has a flat surface that may be glued to an architectural structure or otherwise fastened by a suitable adhesive. An alternative embodiment of the mounting base is described in relation to figure 12 where the mounting base includes a flat, rectangular structure which may be inserted into a side rail, and the mounting base may optionally include protrusions 170 to improve the resilient interference fit between the base and the rail. The mounting base thus may be formed from a metal plate, may be a metal casting or may be from a suitable plastic material as long as it is structurally strong enough to withstand the forces of the tensioned cords when it is used in an installed blind.

[0009] In this way, when the cord mounting is used with a cord and tension is applied to the cord, the cord will act to bias the cord holder towards the first side of the holder part, thereby reinforcing engagement between the cord holder and the holder part. This is highly advantageous in comparison with previous arrangements in which particular additional features are required to ensure a secure engagement between a cord holding part and a mounting part.

[0010] As will be apparent from the following description, the through hole and additional such through holes may be defined not only by the holder part, but also the cord holder when engaged with the holder part.

[0011] Although the tension of a cord will act to engage the cord holder with the first side of the holder part, it may be desirable to provide other features on the cord holder and holder part interacting with each other so as to fix

positionally the cord holder with respect to the holder part. For example, the first side of the holder part may be recessed so as to receive the cord holder and thereby secure the cord holder against relative lateral movement. The outer periphery of the first side of the holder part could include lips extending at least in the second direction for securing the cord holder therebetween.

[0012] In one arrangement, the holder part may further include two opposite side edges extending substantially in the first direction, each side edge respectively extending between the first and second sides. The cord holder may include two opposite side lips which, with the cord holder engaged with the holder part, extend respectively along the two opposite side edges from the first side to the second side. In this way, with the side edges of the holder part between the side lips of the cord holder, the cord holder is restricted from moving relative to the holder part substantially perpendicular to the two opposite side edges. During installation, the cord holder may be positioned near the holder part on the first side of the holder part and then engaged with the first side of the holder part. As part of this installation process, it is possible for part of the cord holder, in particular that part closest to the mounting part to slide in the first direction next to the holder part, with the side lips on either side of the side edges.

[0013] By avoiding more complex forms for the mounting base, in particular providing the holder part before manufacture as a planar form, it becomes possible to manufacture the mounting base from a bent, relatively strong material, such as sheet metal. Features for engaging the cord holder with the holder part may be formed in the cord holder as a moulding, for example of plastics material.

[0014] Although side edges extending obliquely would be possible, there is proposed an arrangement with two opposite side edges which extend substantially orthogonal to the mounting part of the mounting base.

[0015] The cord holder may be restrained from moving in the first direction towards the mounting part of the base merely as a result of an end part of the cord holder abutting a part of the mounting base, for instance the mounting part.

[0016] The holder part may include an end edge opposite to the mounting part, the end edge extending between the first and second sides. In one arrangement, the cord holder may include an end lip which, with the cord holder engaged with the holder part, extends along the end edge from the first side to the second side.

[0017] This arrangement may provide a neat finish for the assembled cord holder and mounting base, particularly when provided in conjunction with the two opposite side lips discussed above. However, the end lip also provides the functional feature of preventing the cord holder moving further in the first direction towards the mounting part and defines an engaged relative position between the cord holder and the mounting base.

[0018] In some arrangements, the end edge may ex-

tend obliquely relative to the plane of the mounting part, in particular angled towards the second direction. However, in some arrangements, the end edge may extend substantially perpendicular to the first direction and in some arrangements, additionally the second direction.

[0019] The mounting part may be mounted to or adjacent an outside edge of an architectural structure in a variety of different ways, including a variety of different types of engagement. In some arrangements, the mounting part may include at least one feature configured to secure the mounting part to the outside edge of the architectural structure. In one arrangement, the mounting part may extend away from the holder part and beyond the second side of the holder part. In this respect, the at least one feature may be located, in at least the second direction, to the same side of the holder part as the second side.

[0020] In this way, when the cord mounting is used with a cord extending from the second side of the holder part, torsional forces act to press the mounting part towards the outside edge of the architectural structure. Alternatively, it would be possible to provide a base having a mounting part which extends alternatively or additionally away from the holder part and beyond the first side of the holder part. In this arrangement, when tension is applied to a cord, a torsional force will exist to pull that mounting part away from the outside edge of the architectural structure.

[0021] The mounting part may be configured to mount directly to an outside edge of an architectural structure or to be mounted within a channel of a side rail which is mounted to the outside of the architectural structure. Indeed, the mounting part may be configured for both such uses. Hence, the at least one feature may include an aperture configured to accept passage of a fastener for mounting the mounting part directly to an outside edge of an architectural structure. The at least one feature may alternatively or additionally be a protrusion for resiliently engaging the mounting part within a channel of a side rail to be mounted to the outside edge of the architectural structure. For example, the extent of the protrusion, together with the depth of the mounting part, may be substantially the same as, or slightly greater than, the depth of the channel of the side rail in which the mounting part is to be mounted. The mounted part has an elongate extent to be inserted into the channel of the side rail and the protrusion may extend transversely with respect to that extent, for example towards or away from the holder part.

[0022] As noted above, in some arrangements, the mounting part may extend to the first side of the holder part for the purposes of mounting the base to an architectural structure. However, in another arrangement, the mounting part may extend away from the holder part and beyond the first side of the holder part by an amount substantially equal to a height of the cord holder. The height H may be measured as the distance that the cord holder extends, from the first side of mounting part, at

least for that part of the cord holder closest to the mounting part.

[0023] In this way, when the cord holder is engaged with the holder part of the mounting base, the extent of the mounting base, in particular by virtue of the mounting part, to the first side of the holder part will be substantially equal to the extent/height of the cord holder to the first side of the holder part. The mounting base and cord holder can thus together form a structure having an outer extent on the first side of the holder part which is suitable for mounting against another outside edge of the architectural structure, for example, in some arrangements, perpendicular to the outside edge against which the mounting part is mounted.

[0024] The cord holder has a proximate side facing the first side of the holder part and an opposite distal side facing away from the first side. The distal side may be inclined relative to the proximate side such that the height of the cord holder is less for that part of the cord holder furthest from the mounting part. In this way, during installation, the cord holder can be located adjacent the holder part with the proximate side closest to the mounting part immediately adjacent the first side and the proximate side furthest from the mounting part spaced apart from the first side. The cord holder can then be moved, especially at that part furthest from the mounting part, towards and into engagement with a holder part.

[0025] At the furthest extent of the mounting part away from the holder part to the first side of the holder part, the mounting part may include an end stop. The end stop may extend substantially perpendicular to the elongate extent of the mounting part and in at least the first direction on the same side of the mounting part as the holder part.

[0026] The end stop may provide guidance to an installer for correctly positioning the mounting base with respect to the architectural structure. The end stop may be located against one outside edge, allowing the mounting part to be correctly mounted adjacent another, preferably perpendicular, outside edge. With the end stop being at the furthest extent of the mounting part and this being substantially equal to the height of the cord holder (at least at that part closest to the mounting part), this arrangement ensures that the mounting part of the mounting base is at an appropriate height for allowing the cord holder to be engaged against the first side of the holder part between that first side of the holder part and the outside edge of the architectural structure against which the end stop abuts.

[0027] In one arrangement, the mounting base may be formed as a substantially planar mounting part having the holder part extending therefrom at an intermediate position along its length and the end stop extending therefrom at one end of its length. However, in an arrangement in accordance with the following description, it is also possible to form the mounting base by including a feature extending from the end stop generally parallel with the plane of the mounting part and providing the holder part

on this feature. In this way, it becomes possible to form the mounting base from a single bent piece of material, such as sheet metal.

[0028] In many situations, it will be desirable for the mounting part to extend substantially in the second direction, for example, when installed and in use, parallel with the cords. However, some architectural structures may include outside edges with inclined surfaces against which the cord is to be mounted. Hence, the mounting part may extend at an angle inclined with respect to the second direction.

[0029] Often the angle will be a relatively standard angle, such as substantially 30°, 45° or 60°. However, it is possible to provide a cord mounting having the mounting part provided at any appropriate angle acquired for installation. Hence, a lower value of the angle may be any one of 5°, 10°, 15°, 20°, 35°, 30°, 35° and 40°. The upper value may be any one of 85°, 80°, 75°, 70°, 65°, 60°, 55° and 50°.

[0030] As noted above, it is possible for the mounting part to extend either to the first side of the holder part or to the second side of the holder part. In other words, in an installed condition with vertically extending cords, it may be more appropriate for the mounting part to extend either downwardly or upwardly. Hence, the mounting part may extend in one of: a direction away from the holder part and the first side; and a direction away from the holder part and the second side.

[0031] Various features, such as lips, were discussed above for helping to secure the cord holder relative to the holder part of the base. It is possible to provide additional features which can additionally resist movement of the cord holder away from the mounting part of the base. In this respect, the holder part and the cord holder may include respective cooperating features extending in the second direction which, with the cord holder engaged with the holder part, resist movement of the cord holder at least away from the mounting part.

[0032] A variety of cooperating features could be provided, such as a protrusion extending from the first side of the holder part into an opening or recess in the facing surface of the cord holder. However, in one arrangement, the cooperating feature of the holder part is an opening extending between the first side and the second side, and the cooperating feature of the cord holder is a protrusion configured to extend into the opening.

[0033] The opening may additionally include or form the through hole through which the at least one cord may extend. This provides a convenient arrangement by which the cord holder may be secured with respect to the holder part and the through hole may be provided.

[0034] The through hole may be two or more through holes for respective cords.

[0035] In one arrangement, the protrusion may fill only a part of the opening so as to define the one or more through holes. For example, a through hole may be defined on opposite sides of the protrusion between the protrusion and the holder part.

[0036] In one arrangement, the opening may be provided as an open slot. In other words, the opening need not be bounded on all sides, but instead include a pathway through to an edge of the cord holder.

[0037] In this way, one or more cords may be secured to the cord holder and then the cord holder presented to the first side of the holder part with the one or more cords passing along the pathway presented by the open slot to the in-use position or positions in the through hole or through holes. In one arrangement, the open slot provides a pathway to and opens at the edge of the holder part distal from the mounting part.

[0038] The cord holder has an extent/height in the second direction and attachment of one or more cords to the cord holder may be achieved within that extent/height. In this respect, the cord holder may include a recess which, with the cord holder engaged with the holder part, is behind the protrusion opposite the holder part. In other words, with the cord holder having two opposite sides, a first side to face towards the holder part and a second side to face away from the holder part, the recess is formed in the cord holder on the side to face away from the holder part. For a cord mounting mounted at the bottom of an architectural structure with one or more cords extending upwardly, the recess will thus be beneath the protrusion and, for a cord mounted at the top of an architectural structure with one or more cords extending downwardly, the recess will be above the protrusion.

[0039] The recess may enable a cord or cords to be secured to the cord holder at an opposite side of the cord holder. In one arrangement, the protrusion may be configured to receive a cord or cords looping around the underside of the protrusion at the opposite side of the cord holder. With the protrusion filling the part of the opening to define through holes on opposite sides of the protrusion, the cord or cords pass in and out of the respective through holes and are secured by looping under the protrusion.

[0040] There is also provided an architectural covering assembly for mounting to an architectural structure, the architectural covering assembly including at least one cord mounting as described above.

[0041] The architectural covering assembly may include at least one side rail defining an elongate channel extending inwardly from one end of the side rail along the longitudinal extent of the side rail. The elongate channel and the mounting part may be configured for the mounting part to be resiliently engaged in said one end of the side rail. Of course, an elongate channel may also be provided at the other end, and may extend along the entire length of the side rail, and an additional cord mounting may be provided to be resiliently engaged in the other end. Two such side rails may be provided, together with one or more additional cord mountings. Of course, the architectural covering assembly may additionally include one or more cords to be engaged by a cord holder. The architectural covering assembly may also include other features such as a covering and/or slats for extending

across the architectural structure.

[0042] There is also provided a method of mounting a tension cord of an architectural covering adjacent an architectural structure using a mounting base for mounting adjacent an architectural structure and a cord holder configured to engage at least one cord. The method may include providing the mounting base with a mounting part configured to be mounted adjacent the outside edge of the architectural structure. The method may include providing the mounting base with a holder part extending in a first direction and having first and second sides opposite to each other with respect to a second direction substantially perpendicular to the first direction. The method may include defining a through hole extending between the first and second sides for passage of at least one cord therethrough. The method may include configuring the cord holder and the holder part to engage with each other with the cord holder adjacent the first side such that the at least one cord may extend from the cord holder through the through hole from the first side to the second side.

[0043] There is also provided a cord mounting for a tension cord of an architectural covering, said cord mounting comprising: a stamped sheet of material bent to define a base part and a holder part extending transversely with respect to said base part; and a cord holder configured to be coupled to said holder; wherein: a cord is coupled to said cord holder and extended through a through hole defined in said base part; the cord is extended in a direction of said base part thereby retaining said cord holder in engagement with said holder part.

[0044] The cord may bias the cord holder against said holder part.

[0045] The cord holder may be mounted on said holder part by sliding said cord holder with respect to said holder part.

[0046] The through hole may have an open side, and the cord may be inserted through the open side of the through hole in a direction transverse to the axis of the through hole.

[0047] Embodiments will be more clearly understood from the following description, given by way of example only, with reference to the accompanying drawings, in which:

Figure 1 illustrates a blind or architectural covering assembly which may be installed with respect to an architectural structure;

Figure 2 illustrates another blind or architectural covering assembly which may be installed with respect to an architectural structure;

Figure 3 illustrates an arrangement of a cord mounting;

Figure 4 illustrates the cord mounting of Figure 3 separated into parts;

Figure 5 illustrates the underside of the cord holder of Figure 3;

Figure 6 illustrates the top side of the cord holder of Figure 3;

Figure 7 illustrates a side profile of a cord mounting to be assembled;

Figure 8 illustrates the cord mounting schematically in the corner of an architectural structure;

Figure 9 illustrates a cord holder with an alternative mounting base having a downwardly extending base;

Figure 10 illustrates a cord holder with an alternative mounting base having an upwardly extending base;

Figure 11 illustrates an alternative mounting arrangement;

Figure 12 illustrates an alternative mounting arrangement;

Figure 13 illustrates a mounting base for use in an arrangement such as illustrated in Figure 2; and

Figure 14 illustrates the mounting base of Figure 11 to be inserted in a rail.

[0048] The cord mounting may be embodied in a blind or architectural covering for example as illustrated schematically in Fig. 1.

[0049] The architectural covering may be fitted to an architectural structure 101 including at least one movable rail. As illustrated, the architectural covering includes an upper moveable rail 102 and a lower moveable rail 104. A shade 106 of any appropriate form extends between the upper moveable rail 102 and the lower moveable rail 104. The shade 106 may take the form of a roman shade, a venetian blind, a cellular structure etc. Each of the upper moveable rail 102 and lower moveable rail 104 is movable across the architectural structure 101 towards and away from a respective outside edge. As illustrated, the respective outside edges (101a, 101b) are horizontal and at the top and bottom of the architectural structure. However, any orientation is possible, for example with the shade extending between vertical outside edges (101a, 101d) at opposite respective sides.

[0050] As the upper moveable rail 102 and lower moveable rail 104 move towards each other, the shade 106 is retracted, for example by concertina, stacking or rolling action. When the upper moveable rail 102 and lower moveable rail 104 are moved apart, the shade 106 is extended across the architectural structure 101.

[0051] So that the moveable rails 102 and 104 are retained at the position where they are placed (by a user), a known cord tensioning system may be provided. For example, as illustrated, cords 108 extend parallel to the side outside edges of the architectural structure 101 and along the respective moveable rails 102, 104.

[0052] The cords 108 are coupled to the outside edges of the architectural opening, for instance adjacent the upper and lower edges as illustrated, by means of cord mountings 110.

[0053] In the schematically illustrated embodiment of Fig. 1, the cord mountings 110 are mounted directly to the side outside edges of the architectural structure. The cord mountings could be mounted to the top and/or bottom outside edges of the architectural structure. Alterna-

tively, as illustrated schematically in Fig. 2, the cord mountings 110 may be mounted to the ends of side rails 112 and the side rails 112 attached to the outside edges of the architectural opening.

[0054] An example of a cord mounting 110 is illustrated in Fig. 3.

[0055] As illustrated in Fig 3, cord mounting 110 includes a mounting base 120 to be mounted or secured to an outside edge of an architectural structure and a cord holder 122 configured to engage a cord. The outside edge could be any part around the architectural opening, such as a wall, ceiling or floor member or could be part of a frame surrounding or at least along the edge of the architectural opening. As illustrated, the cord holder 122 and mounting base 120 may engage with each other so that one or more cords engaged to the cord holder 122 are fixed relative to the architectural structure.

[0056] Fig. 4 illustrates the mounting base 120 and cord holder 122 of Fig. 3 in a separated condition. Here, it is more clearly seen that the mounting base 120 includes a mounting part 124 and a holder part 126.

[0057] The mounting part 124 is configured to be mounted to an outside edge of an architectural structure and extends in a direction to be parallel with that outside edge. As illustrated, that direction is shown as a vertical direction. In other arrangements to be described below, such mounting parts may be configured to be mounted in a sloping or angled direction. Similarly, they may be configured to be mounted in a horizontal direction.

[0058] The holder part 126 extends away from the mounting part 124 in what is illustrated as a horizontal direction. This will be described as a first direction and, as illustrated, is, transverse to, such as substantially perpendicular to, a second direction, for example the vertical direction of the mounting part 124 as illustrated in Fig 3.

[0059] The cord holder 122 engages with the mounting base 120 by engaging with the holder part 126. In particular, as illustrated, the cord holder 122 engages with an underside, described herein as the first side 128, of the holder part 126.

[0060] The holder part 126 also includes a second side 130 opposite the first side 128. In particular, in the illustrated arrangement, the first and second sides 128, 130 form opposite sides of the holder part 126 and can be considered to be stacked, parallel with each other, in the second direction.

[0061] As illustrated, a through hole 132 is defined in the holder part 126. In particular, the through hole 132 extends between the first and second sides 128, 130.

[0062] With one or more cords 108 engaged with the cord holder 122, that or those cords 108 may extend away from the cord holder 122 through the through hole 132 and along the outside edge of the architectural structure adjacent which the cord mounting 110 is mounted. In this respect, it will be noted that any tension in the cord or cords will have the effect of biasing the cord holder 122 against the first side 128 of the holder part 126 of the base 120. In other words, tension in the cord or cords act

to secure the cord holder 122 in place, because the cord or cords extend from an opposite side of the holder part 126 to the location of the cord holder 122.

[0063] Although it would be possible to use one or more through holes which are fully bounded by respective walls, as illustrated in Fig. 3 and 4, the through hole 132 is formed from an open slot opening 134 extending from an edge of the holder part 126.

[0064] When using arrangements with fully bounded through holes, it is necessary to thread the cords through respective through holes. However, with the illustrated arrangement, one or more cords may be attached to the cord holder 122. The cords may then be passed laterally (with respect to their length, or transverse to the axis of the through hole 132) through the passageway formed by the slotted opening 134. Hence, it is not necessary to thread a cord axially through a respective through hole.

[0065] As illustrated, the cord holder 122 includes a protrusion 140 which extends upwardly into the opening 134. In particular, it extends in the second direction so as to partially fill the opening 134 and thereby define two respective through holes 132 as illustrated in Fig. 3. In other arrangements, the protrusion 140 could be configured to form only one through hole 132 or three or more respective through holes 132. It is proposed that a cord can extend from each respective through hole 132, but it is also possible to provide arrangements where two or more cords extend from the same through hole 132.

[0066] The cord holder 122 has two opposite sides, a first side 122a to face towards the holder part 126 and a second side 122b to face away from the holder part 126. A recess 142 may be formed in the second side 122b of the cord holder 122 behind the protrusion 140. As illustrated in Fig 5, the recess 142 will be beneath or below the protrusion 140. However, where the cord mounting is mounted in the opposite orientation at the top of an architectural structure, the recess will be above the protrusion 140. Within this recess 142, a cord may be looped or two cords may be tied around a cord holding protrusion 149 so that respective cord lengths extend out of the through holes 132 defined on either side of the protrusion 140. The protrusion 140 and cord holding protrusion 149 can be separate components or, as illustrated, a single/integral component.

[0067] As illustrated in Fig. 6, a second recess 143 may be formed at an opposite side of the cord holder 122 to face the first side 128 of the holder part 126 and adjacent protrusion 140. In addition, a communicating hole or passageway 141 may be formed in the cord holder 122 between the first recess 142 and the second recess 143. A feature, such as a knot, a crimped sleeve or thickened portion or a button threaded onto the end of a cord or a knot, a connector, a crimped connection sleeve, or a button connecting two ends of one or two cords as illustrated in Figure 6 may be housed in the second recess 143 with the cord or cords passing through the passageway 141 and out of the connector passing the protrusion 140. With the feature having a larger cross-section than

the cross-section of the passageway 141 thus preventing the feature from passing through the passageway, the cord or cords may be secured to the cord holder 122.

[0068] As illustrated, the protrusion 140 also fills the passageway formed by the slotted opening 134 from the edge of the holder part 126. This further improves the engagement between the cord holder 122 and holder part 126 and also assists in ensuring that cords 108 remain engaged with the cord holder 122.

[0069] Although the action of the cord or cords pull the cord holder 122 securely against the first side 128 of the holder part 126 of the base 120, it may be desirable to inhibit lateral movement of the cord holder 122 with respect to the holder part 126, in particular within the plane perpendicular to the second direction and including the first direction. For arrangements, such as described above, having a protrusion 140 extending into an opening in the holder part 126, interaction between the protrusion 140 and the opening may assist in such location. The opening 134 extends longitudinally at least partly in the first direction and has a lateral width in a third direction (perpendicular to the first and second directions). With the protrusion 140 extending across that lateral width, the cord holder 122 is prevented from moving laterally with respect to the base 120. Similarly, where the opening is closed/bounded longitudinally (not as illustrated) and the protrusion fills that longitudinal extent, the cord holder 122 will be prevented from moving longitudinally in the first direction with respect to the base. Additional or alternative features may also be provided. The holder part 126 may be provided with protrusions and/or recesses facing the cord holder 122 for engaging with the cord holder 122 and inhibiting relative lateral movement in at least the first direction between the cord holder 122 and the holder part 126. In one arrangement, the holder part 126 could include outer lips facing downwardly away from the first side 128 so as to hold a cord holder 122 within those lips.

[0070] As illustrated, the holder part 126 may be manufactured from a part which is substantially planar. As will be described below, this is advantageous in allowing the entire mounting base 120 to be constructed from a bent metal part. The holder part 126 is of substantially uniform thickness with few, if any, complex surface features. The cord holder 122, on the other hand, may be a moulded part including more complex three dimensional features.

[0071] Referring to Fig. 4, the holder part 126 includes opposite side edges 144, 146. The side edges 144, 146 extend in the first direction and between the first and second sides 128, 130. The cord holder 122 is provided with corresponding side lips 148, 150 which are arranged similarly to extend in the first direction. As illustrated in Fig. 3, with the cord holder 122 mounted against the first side 128 of the holder part 126, the lips 148, 150 extend respectively along the two opposite side edges 144, 146 of the holder part 126. In this way, the lips 148, 150 interacting with the side edges 144, 146 prevent the cord

holder 122 from moving laterally in the third direction (perpendicular to the first and second directions, such as along a plane of cord holder 122 perpendicular to the second direction). For arrangements where the opening 134 is formed from a slotted opening 134 opening at an end edge 152 of the holder part 126, it becomes convenient for an installer to move the cord holder 122 in the first direction towards the mounting part 124 of the mounting base 120, (under, as illustrated, the holder part 126). During this process, it is possible for the ends of the lips 148, 150 closest to the mounting part 124 to slide either side of the side edges 144, 146 and with the cord or cords 108 coupled to the cord holder 122 passing through the passage formed by the slotted opening 134. The cord holder 122 is finally engaged to the mounting part 124 by moving the cord holder 122 (especially the part furthest from the mounting part 124) towards (upwards as illustrated) the first side 128 of the holder part 126.

[0072] As illustrated, the end edge 152 of the holder part 126 is at a location distal from the mounting part 124. The cord holder 122 includes a corresponding lip 154. With the cord holder 122 engaged with the holder part 126 as illustrated in Fig. 3, the end edge 152 engages an inner surface of the lip 154 so that the cord holder 154 is held in place and prevented from moving further in the first direction towards the mounting part 124.

[0073] In the arrangement as illustrated, the relative heights of the lips 148, 150, 154 and the depth of the holder part 126 in the second direction are such that a smooth interface may be created where the second side 130 of the holder part 126 meets with the lips 148, 150, 154 of the cord holder 122. As illustrated, inner parts of the cord holder 122 may be arranged to terminate at a common plane which meets with the first side 128 of the holder part 126 when the cord holder 122 is engaged with the holder part 126 as illustrated in Fig. 3.

[0074] It may be desirable to provide features for resisting movement of the cord holder 122 in the first direction away from the mounting part 124 of the mounting base 120.

[0075] As illustrated, the protrusion 140 and the slotted opening 134 include respective narrowed sections 140a, 134a. Interaction between the protrusion 140 and the slotted opening 134 will assist in preventing movement of the cord holder 122 away from the mounting part 124. These respective narrowed sections 140a, 134a prevent the protrusion 140 from moving longitudinally in the first direction with respect to the slotted opening 134 and hence locate securely the cord holder 122 with respect to the base 120 in the first direction. To attach or detach the cord holder 122 to/from the holder part 126, the protrusion 140 must be moved in the second direction with respect to the slotted opening 134. Preferably, as illustrated, the narrowed section 134a of the slotted opening 134 is formed from a hook 126a in the walls of the holder part 126 defining the slotted opening 134. The hook 126a includes a sloping wall sloping inwardly towards the mounting part 124 and, inward of the sloping wall, a lo-

cating wall substantially perpendicular to the first direction. With the locating wall substantially perpendicular to the first direction, it is especially effective in locating the cord holder 122 with respect to the base 120 in the first direction. Also, during assembly, the sloping wall will assist in guiding the cord or cords 108 along the slotted opening 134 whilst the locating wall will assist in retaining the cord or cords 108 in the slotted opening during assembly, but before the cord holder 122 is completely engaged with the holder part 126. Alternatively, or in addition, other features may be provided to resist this movement in the first direction, for example protrusions and/or recesses in the side edges 144, 146 and lips 148, 150 for interacting with each other to locate the cord holder 122 in an engaged state.

[0076] As illustrated in Fig 4, the mounting part 124 of the mounting base 120 extends away from the holder part 126. Also as illustrated, the mounting part 124 extends beyond the second side 130 of the holder part 126, in other words in the same direction as that in which cords 108 extend from the cord mounting 110. This is mostly advantageous with regard to the locations in which the cord mounting 110 can then be mounted. For example, the cord mounting 110 can be mounted in the corner of an opening in an architectural structure, in particular where two outside edges meet. In this arrangement, tension in the cords 108 extending from the cord mounting 110 tend to press the mounting part 124 (at least at its further extent) into its mounting location.

[0077] Alternative arrangements are possible where a mounting part instead extends away from the first side 128 of the holder part 126, in other words in the second direction, but opposite to that in which the cords 108 extend from the cord mounting 110. Indeed, it is possible for the mounting part to extend in the second direction both away from the first side 128 and away from the second side 130 of the holder part 126, with both extensions being provided for the purpose of mounting the mounting part.

[0078] As illustrated in Fig 7 and Fig 8, the mounting part 124 does additionally extend away from the first side 128 of the holder part 126, but not for the purpose of mounting the mounting base 120. Instead, this extension 160 of the mounting part 124 is provided to match the height of the cord holder 122. As illustrated, the extension 160 is angled partially toward the first direction. This facilitates manufacture of the base 120 by providing two relatively small bends, rather than one relatively large bend (of substantially 90° for the illustrated arrangement). Furthermore, it facilitates installation of the cord mounting 110 into the corner of an opening of an architectural structure where the apex of that corner might have imperfections hindering installation of a component into the very apex of the corner.

[0079] As illustrated, an end stop 162 is provided extending from the extension 160 and extending in the first direction generally parallel with the first side 128 of the holder part 126. The end stop 162 is provided beneath

the holder part 126 (opposite to the direction in which cords will extend) matching a height of the cord holder 122. This is illustrated in Fig. 7 and Fig. 8.

[0080] The mounting base 120 may be mounted adjacent an outside edge of an architectural structure, such as the vertical edge 163 illustrated in Fig. 8, with the end stop 162 against another substantially perpendicular outside edge 165 of the architectural structure. With the mounting base 120 so mounted, the holder part 126 is necessarily correctly positioned for the cord holder 122 to be engaged with the holder part 126 whilst being neatly positioned immediately adjacent the other (horizontal as illustrated) outside edge of the architectural structure.

[0081] In Figure 8, the vertical edge 163 can correspond to either of the outside edges 101a, 101b illustrated in Figure 1. The perpendicular/horizontal edge 165 of Figure 8 can similarly correspond to either of the outside edges 101c, 101d illustrated in Figure 1. However, it should be noted that the edge 165 of Figure 8 can be the surface extending between opposite vertical edges 101a, 101b or instead be the surface extending away from the opening of the architectural structure.

[0082] Although arrangements are possible where the holder part 126 extends directly from the mounting part 124, as illustrated, a further extension 164 extends upwardly in the second direction from the end stop 162 to the holder part 126 and the holder part 126 extends in the first direction from this further extension 164. In this way, the entire mounting base 120 may easily be formed from bending one single sheet material.

[0083] As described above, the mounting part extends substantially in the second direction. For example, for arrangements with the cord mounting installed with vertically extending cords, the mounting part extends vertically for mounting adjacent a corresponding part of an architectural structure. However, for some architectural structures, it will be more convenient to mount the cord mounting to a part the architectural structure which is horizontal or inclined at an angle between horizontal and vertical.

[0084] Fig 9 and Fig 10 illustrate arrangements of a cord mounting mounted to an inclined surface 265, 365 of an architectural structure. For example, this surface 265, 365 could be a surface extending away from (and down from as illustrated) the opening of the architectural structure.

[0085] As illustrated in Fig 9, the mounting part 224 of the base 220 extends downwardly, in other words in a direction away from the first side of the holder part (concealed behind the cord holder 122 as illustrated). On the other hand, Fig 10 illustrates an arrangement in which the mounting part 324 of the base 320 extends upwardly, in other words in a direction away from the second side of the holder part (concealed behind the cord holder 122 as illustrated). In the arrangements illustrated in Fig 9 and Fig 10, the surface 265, 365 of the architectural structure and the mounting parts 224, 324 extend at an angle of approximately 45° with respect to the second direction.

However, it will be appreciated that alternative arrangements are possible with angles of inclination anywhere between 0 and 90°.

[0086] It will be appreciated that throughout the present specification, the first and second directions are defined with reference to the general plane of the holder part 126. An arrangement was described with the mounting part perpendicular to the holder part and, hence, extending in the second direction. Also, as described with reference to Fig. 9 and Fig. 10, arrangements are possible where the mounting part extends at a different angle (not in the second direction). However, in all of the above described arrangements, it is expected that the cords will extend in the second direction. Thus, for the above described arrangements, with a vertically extending architectural structure and vertically extending cords for the architectural covering, the mounting part (and the first direction) extends horizontally.

[0087] It should be appreciated that the cord mounting can also be used when mounted with the mounting part (and the first direction) extending in a non-horizontal direction. In this respect, more particularly, the cord mounting may be used with cords that extend in a direction different to the second direction.

[0088] Fig. 11 illustrates an arrangement with a mounting part 424 intended to be mounted vertically to an architectural structure in a manner similar to that described with reference to Figs. 3 and 4, but having a holder part 426 which extends downwardly with respect to the horizontal. Thus, the mounting part 434 does not extend in the second direction and, more particularly, the cord extending direction (labelled C in Fig. 11) does not extend in the second direction.

[0089] Fig. 12 illustrates an arrangement equivalent to that of Fig. 9 with a mounting part 524 for mounting to an inclined surface of an architectural structure, but like the arrangement of Fig. 11, having a holder part 526 which is inclined downwardly with respect to the horizontal. Thus, once again, the cord extending direction (labelled C in Fig. 12) is not in the second direction.

[0090] It will be appreciated that arrangements are also possible equivalent to that of Fig. 10 with a mounting part which is inclined upwardly.

[0091] In the arrangements described with reference to Fig. 11 and Fig. 12, the holder parts 426, 526, are intended to be inclined downwardly with respect to the cord extending direction. This has the advantage that any tension in the cords will act to pull the cord holder into further and more securing engagement with the holder part 426, 526. However, it is also possible for the holder part to be inclined at least partially upwardly where appropriate securing features are provided between the cord holder and the holder part.

[0092] As mentioned above, with reference to Fig. 1, it is possible for the mounting base 120 to be mounted directly to an outside edge of an architectural structure. For example, the mounting part 124 may be provided with one or more holes through which fasteners, such as

screws, may extend so as to mount the mounting part 124 onto the outside edge of the architectural structure.

[0093] Alternatively, as mentioned with reference to Fig. 2, the cord mounting 110 may be mounted to the end of a side rail 112.

[0094] As illustrated in Fig. 13, the mounting part 124 is provided with protrusions 170 extending perpendicular to the extent and surface of the mounting part 124. Such protrusions 170 are illustrated as extending away from the side of the mounting part 124 furthest from the holder part 126. However, such protrusions could be provided alternatively or additionally on the side of the mounting part 124 facing the holding part 126. As illustrated, they may be formed by pressing or stamping the sheet material of the base, thereby forming corresponding recesses 172 on the opposite side of the mounting part 124.

[0095] As illustrated in Fig. 14, the mounting part 124 may be inserted longitudinally into an end of the side rail 112. The side rail 112 defines an elongate channel 174 extending inwardly from one end along a longitudinal extent of the side rail 112. The elongate channel 174 and the outer dimensions of the mounting part 124 are matched so that the mounting part 124, when inserted into the elongate channel 174, is securely held. Such an arrangement may be achieved without the use of the protrusions 170, but protrusions 170 may improve the resilient interference fit between the mounting part 124 and the end of the side rail 112.

[0096] The illustrated side rail includes a partially open elongate channel 174. It is also possible to use side rails 112 with closed elongate channels and elongate channels having alternative openings.

[0097] These and other features and advantages of the present disclosure will be readily apparent from the detailed description, the scope of the invention being set out in the appended claims.

[0098] The present disclosure is set forth in various levels of detail in this application and no limitation as to the scope of the claimed subject matter is intended by either the inclusion or non-inclusion of elements, components, or the like in the summary. In certain instances, details that are not necessary for an understanding of the disclosure or that render other details difficult to perceive may have been omitted. It should be understood that the claimed subject matter is not necessarily limited to the particular embodiments or arrangements illustrated herein.

[0099] The accompanying drawings are provided for purposes of illustration only, and the dimensions, positions, order, and relative sizes reflected in the drawings attached hereto may vary. The detailed description will be better understood in conjunction with the accompanying drawings, with reference made in detail to embodiments of the present subject matter, one or more examples of which are illustrated in the drawings. Each example is provided by way of explanation of the present subject matter, not limitation of the present subject matter. In fact, it will be apparent to those skilled in the art that

various modifications and variations can be made in the present disclosure without departing from the scope or spirit of the present subject matter. Thus, it is intended that the present subject matter covers such modifications and variations as come within the scope of the appended claims and their equivalents.

[0100] In the foregoing description, it will be appreciated that the phrases "at least one", "one or more", and "and/or", as used herein, are open-ended expressions that are both conjunctive and disjunctive in operation. The term "a" or "an" entity, as used herein, refers to one or more of that entity. As such, the terms "a" (or "an"), "one or more" and "at least one" can be used interchangeably herein. All directional references (e.g., proximal, distal, upper, lower, upward, downward, left, right, lateral, longitudinal, front, back, top, bottom, above, below, vertical, horizontal, radial, axial, clockwise, counterclockwise, and/or the like) are only used for identification purposes to aid the reader's understanding of the present disclosure, and / or serve to distinguish regions of the associated elements from one another, and do not limit the associated element, particularly as to the position, orientation, or use of this disclosure.

Claims

1. A cord mounting for a tension cord of an architectural covering, the cord mounting including:

- a mounting base configured for mounting adjacent an architectural structure; and
- a cord holder configured to engage at least one cord;

wherein

the mounting base includes a mounting part configured to be mounted adjacent an outside edge of the architectural structure;

the mounting base includes a holder part extending in a first direction, the holder part having first and second sides opposite each other with respect to a second direction substantially perpendicular to the first direction, and defining a through hole extending between the first and second sides for passage of at least one cord therethrough; and

the cord holder and the holder part are configured to engage with each other with the cord holder adjacent said first side such that at least one cord may extend from the cord holder through the through hole from said first side to said second side.

2. A cord mounting according to claim 1 wherein:

- the holder part includes two opposite side edges extending substantially in the first direction, each side edge respectively extending between the first and second sides; and

- the cord holder includes two opposite side lips which, with the cord holder engaged with the holder part, extend respectively along the two opposite side edges from the first side to the second side so as to restrict relative movement of the holder part and the cord holder substantially perpendicular to the two opposite side edges, wherein the two opposite side edges may extend substantially orthogonal to the mounting part.
3. A cord mounting according to claim 1 or 2 wherein:
- the holder part includes an end edge opposite to the mounting part, the end edge extending between the first and second sides; and the cord holder includes an end lip which, with the cord holder engaged with the holder part, extends along the end edge from the first side to the second side, wherein the end edge may extend substantially perpendicular to the first direction.
4. A cord mounting according to any preceding claim wherein the mounting part includes at least one feature configured to secure the mounting part with respect to the outside edge of the architectural structure wherein the at least one feature is one of: an aperture configured to accept passage of a fastener for mounting the mounting part directly to an outside edge of an architectural structure; and a protrusion extending transversely to an elongate extent of the mounting part and configured to resiliently engage the mounting part within a channel of a side rail to be mounted to the outside edge of the architectural structure.
5. A cord mounting according to any preceding claim when the mounting part extends away from the holder part, wherein the mounting part may extend beyond the first side of the holder part by an amount substantially equal to a height of the cord holder, and wherein, at the furthest extent of the mounting part on the first side of the holder part, the mounting part may include an end stop extending in the first direction on the same side of the mounting part as the holder part.
6. A cord mounting according to any one of claims 1 to 4 wherein the mounting part extends at an angle inclined with respect to the second direction, wherein the angle may be between a lower value of one of 5°, 10°, 15°, 20°, 25°, 30°, 35° and 40° and an upper value of one of 85°, 80°, 75°, 70°, 65°, 60°, 55° and 50°, and may be substantially 45°.
7. A cord mounting according to claim 6 wherein the mounting part extends in one of: a direction away from the holder part and the first side; and a direction away from the holder part and the second side.
8. A cord mounting according to any preceding claim wherein the holder part and the cord holder include respective cooperating features extending in the second direction which, with the cord holder engaged with the holder part, resist movement of the cord holder at least away from the mounting part.
9. A cord mounting according to claim 8 wherein the respective cooperating feature of the holder part is an opening extending between the first side and the second side, and the respective cooperating feature of the cord holder is a protrusion configured to extend into the opening.
10. A cord mounting according to claim 9 wherein the opening additionally includes said through hole, wherein the opening may be an open slot.
11. A cord mounting according to claim 9 or 10 wherein the protrusion fills only a part of the opening so as to define said through hole on opposite sides of the opening between the protrusion and the holder part.
12. A cord mounting according to claim 9 wherein the cord holder includes a recess which, with the cord holder engaged with the holder part, is on a side of the protrusion opposite from the side facing the holder part when engaged, the recess enabling a cord to be secured to the cord holder at an opposite side of the cord holder.
13. An architectural covering assembly for mounting to an architectural structure, the architectural covering assembly including at least one cord mounting according to any preceding claim.
14. An architectural covering assembly according to claim 13 further including at least one side rail defining an elongate channel extending inwardly from one end of the side rail along a longitudinal extent of the side rail, wherein the elongate channel and the mounting part are configured for the mounting part to be resiliently engaged in the channel at said one end of the side rail.
15. A method of mounting a tension cord of an architectural covering adjacent an architectural structure using a mounting base configured for mounting adjacent the architectural structure and a cord holder configured to engage at least one cord, the method including:
- providing the mounting base with a mounting part configured to be mounted adjacent the outside edge of the architectural structure;

providing the mounting base with a holder part
extending in a first direction and having first and
second sides opposite to each other with respect
to a second direction substantially perpendicular
to the first direction,

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defining a through hole extending between the
first and second sides for passage of at least
one cord therethrough; and

configuring the cord holder and the holder part
to engage with each other with the cord holder
adjacent the first side such that at least one cord
may extend from the cord holder through the
through hole from the first side to the second
side.

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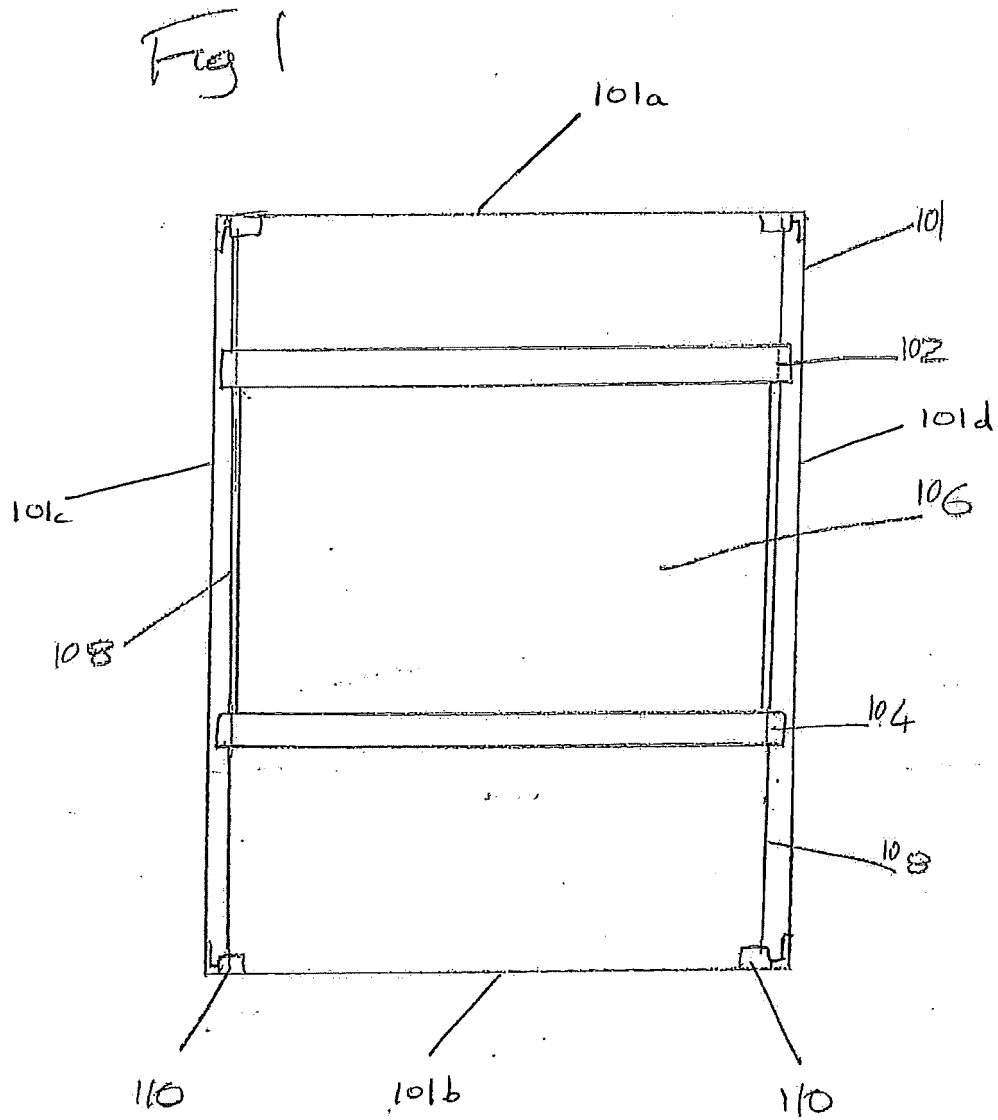


Fig 2

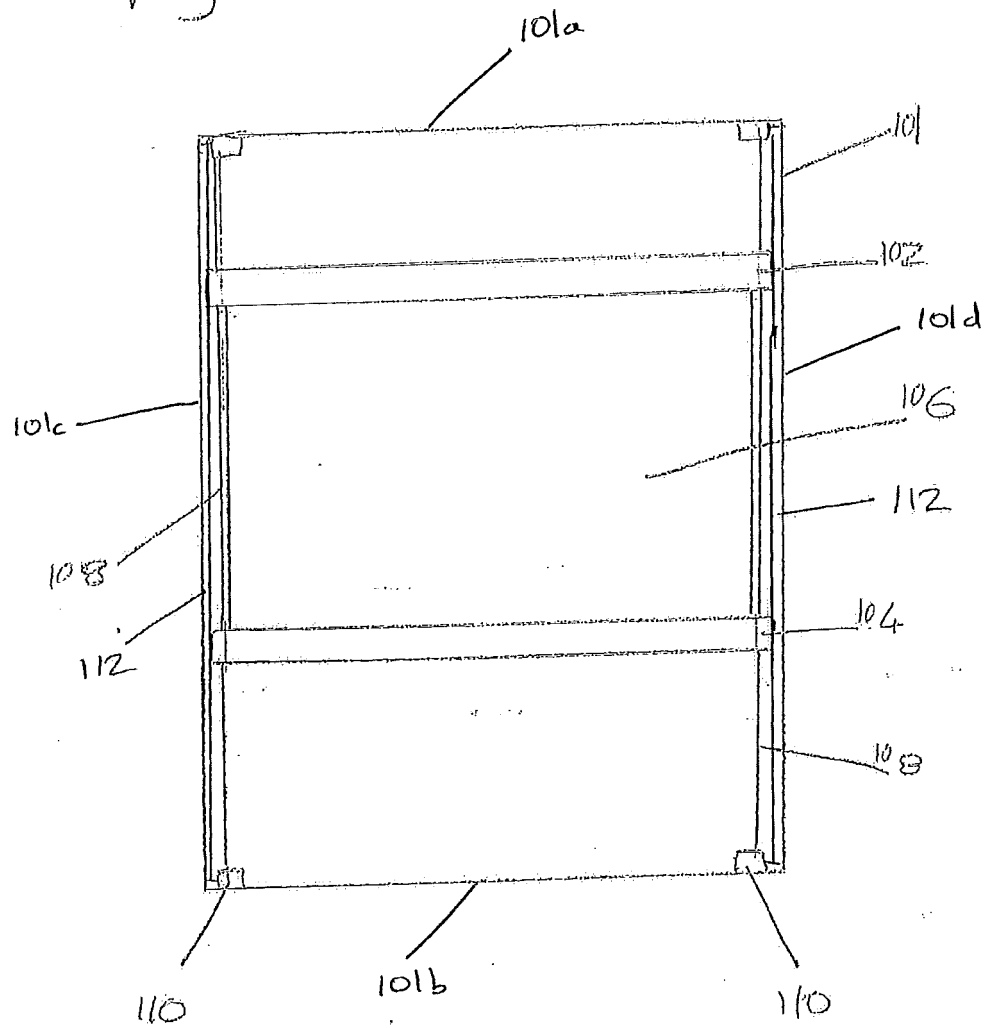


Fig. 3

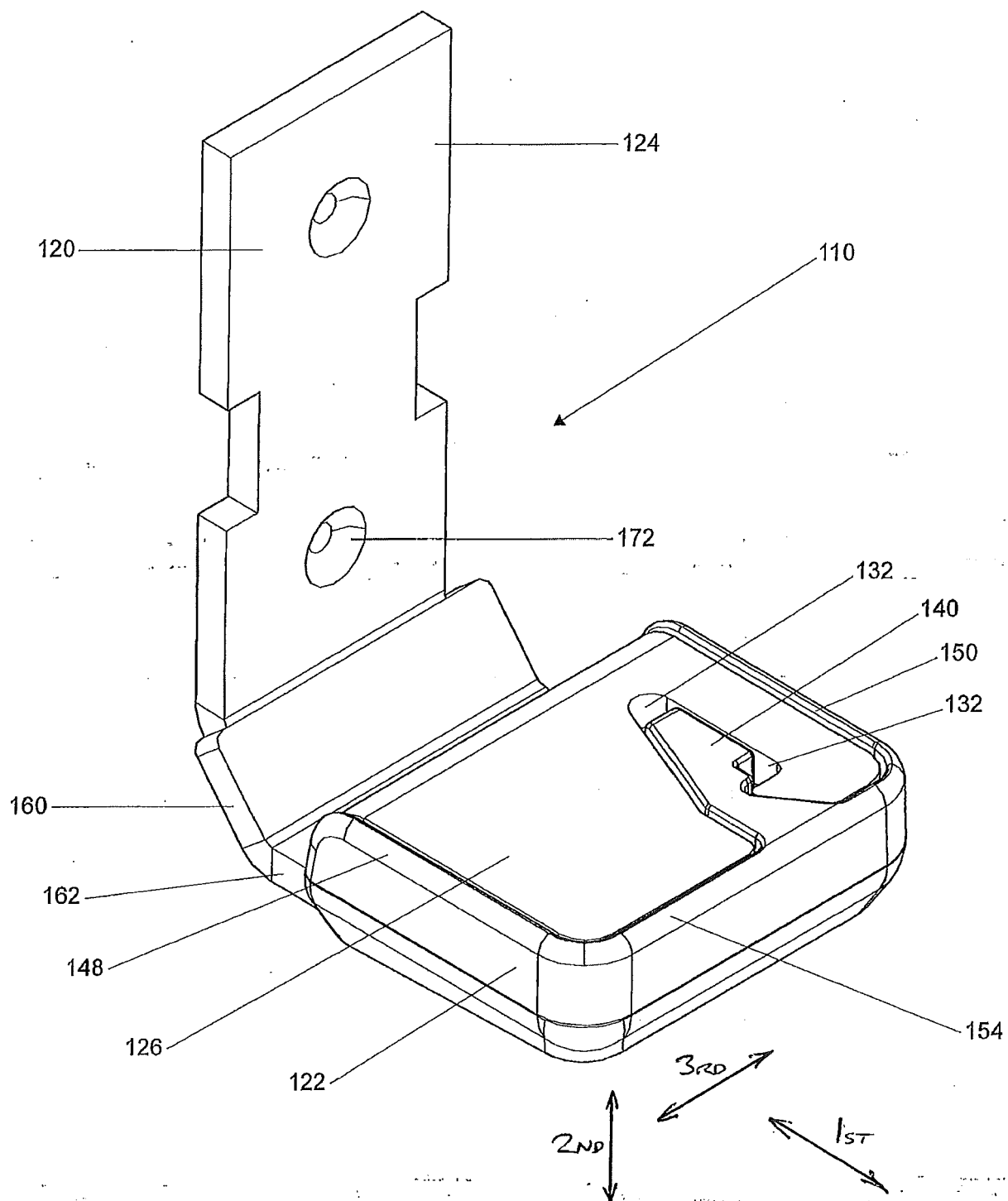


Fig. 4

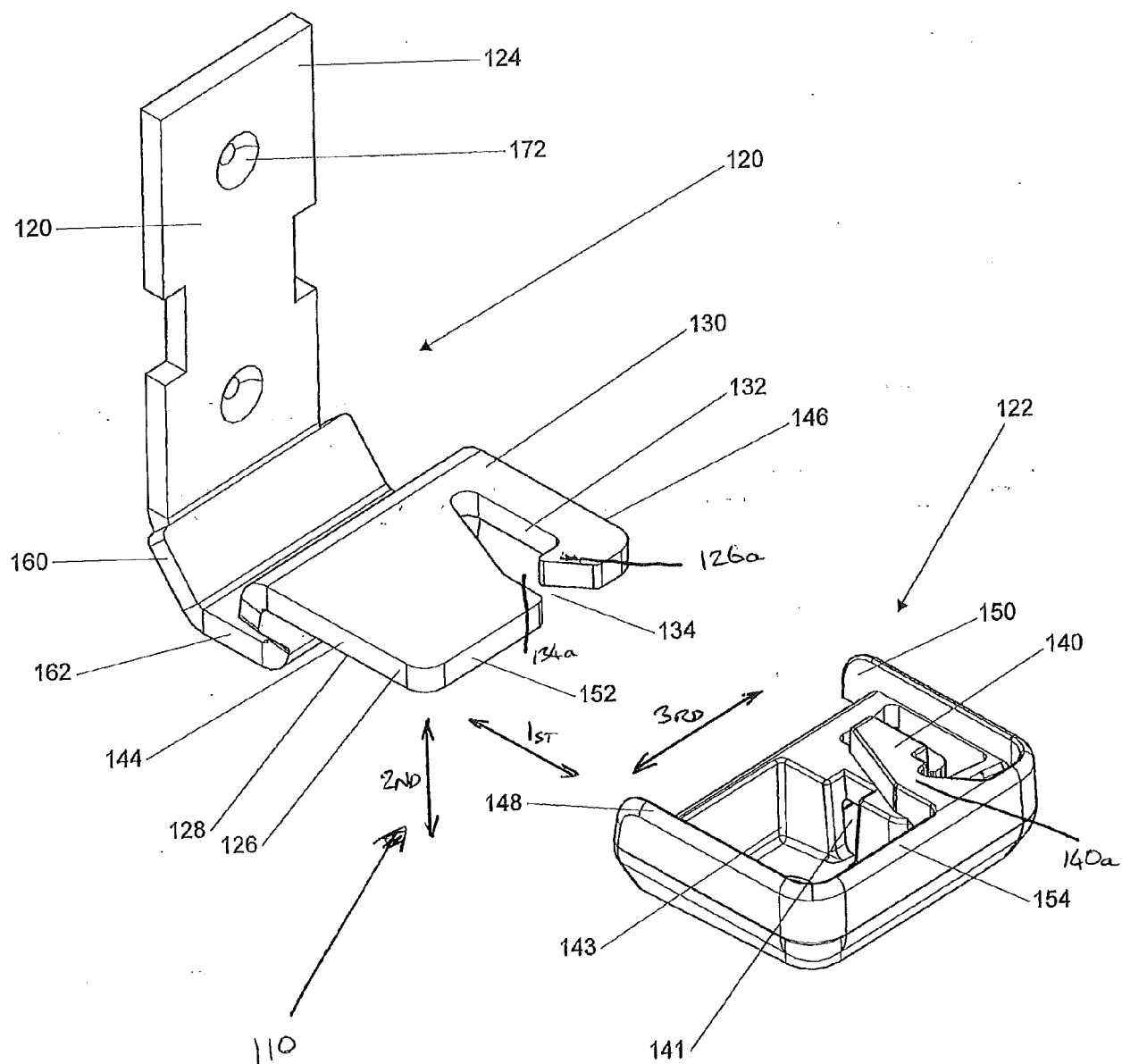


Fig. 5

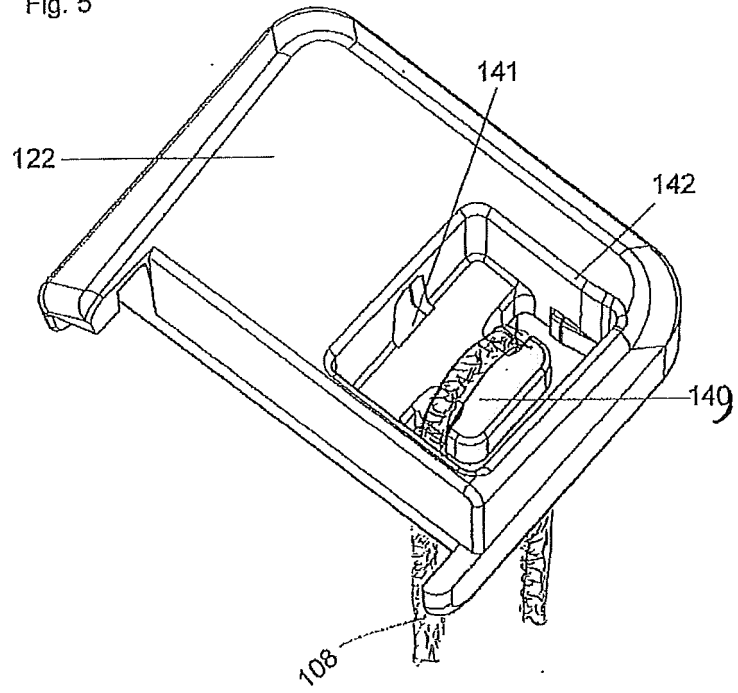


Fig. 6

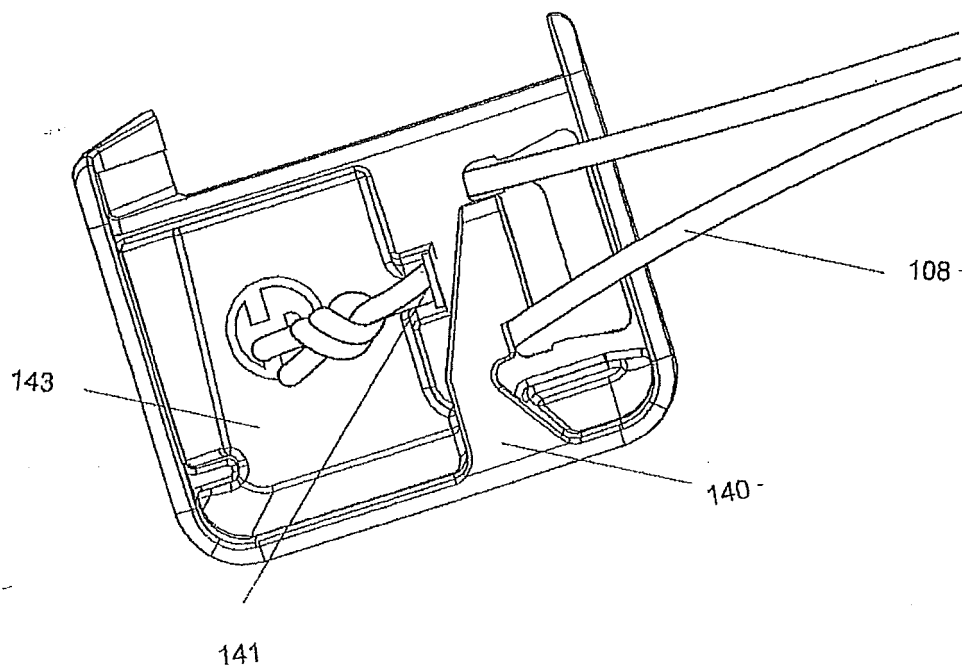


Fig. 7

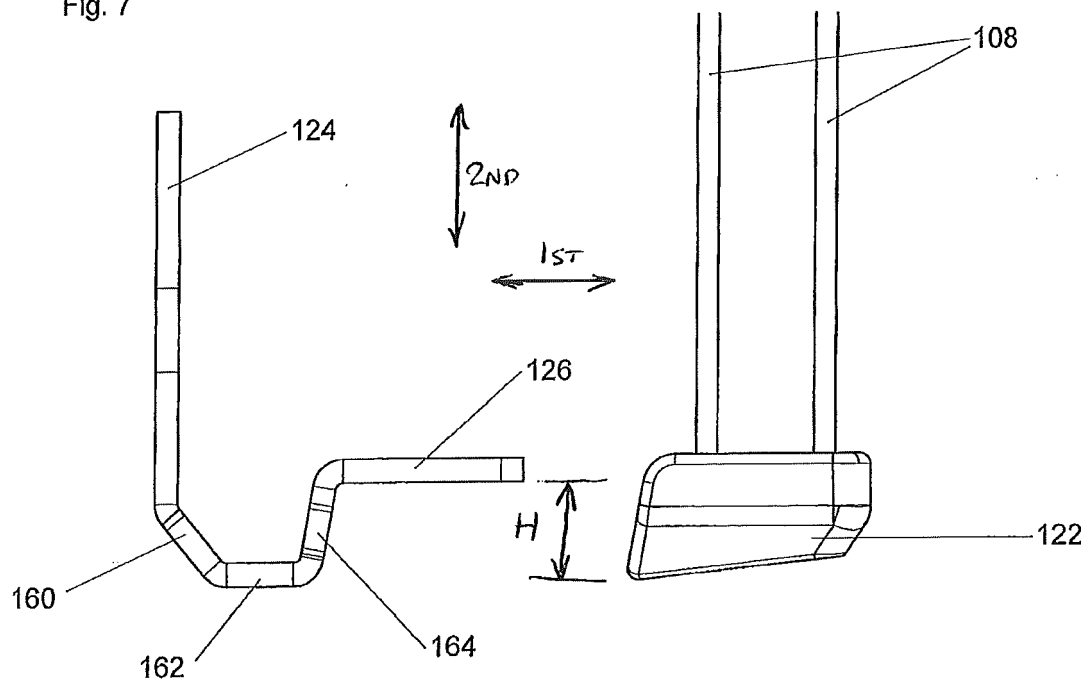


Fig. 8

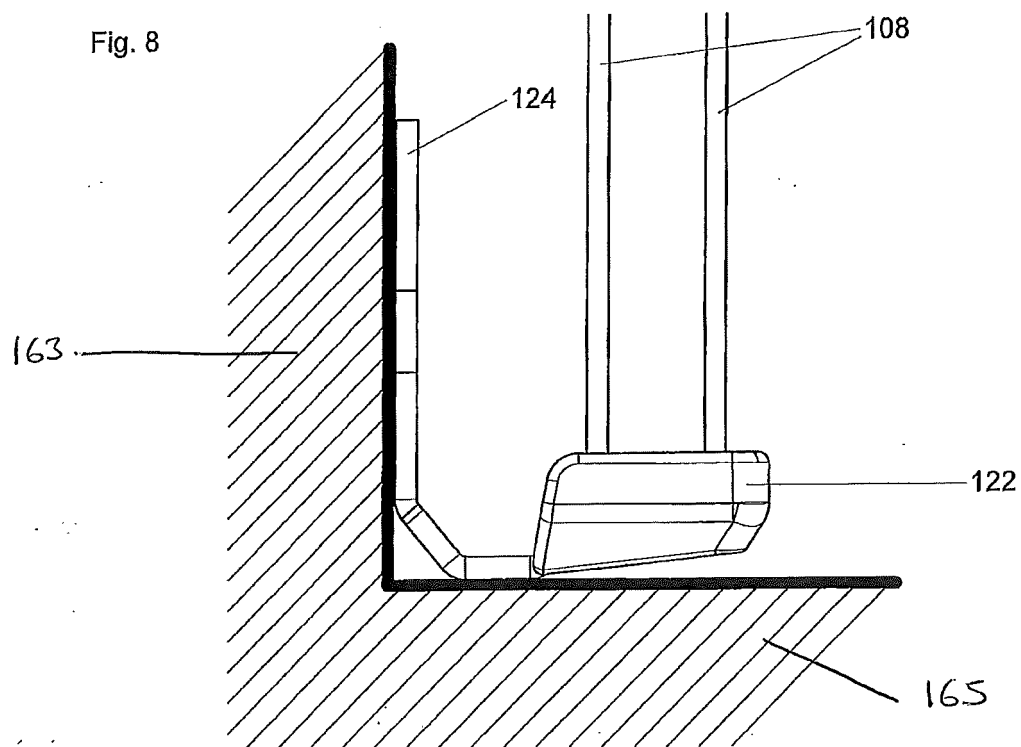


Fig 9

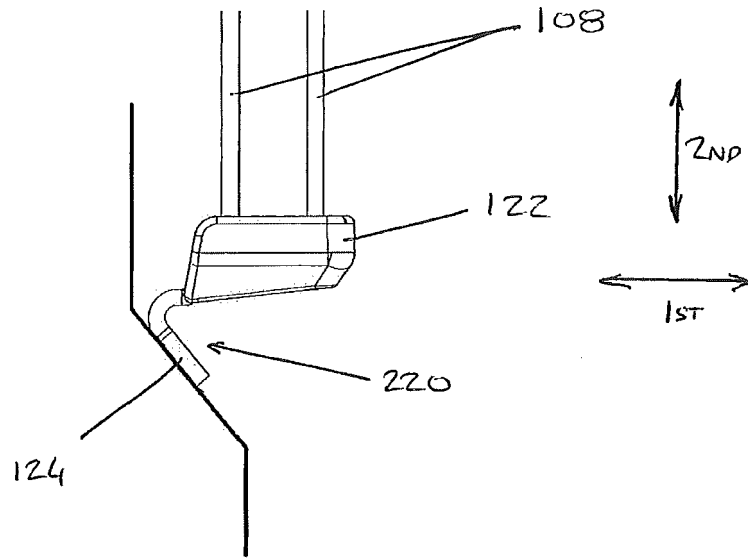


Fig 10

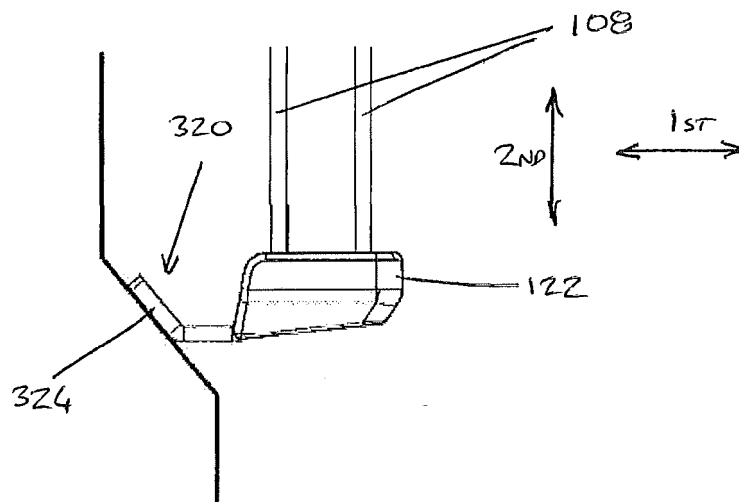


Fig 11

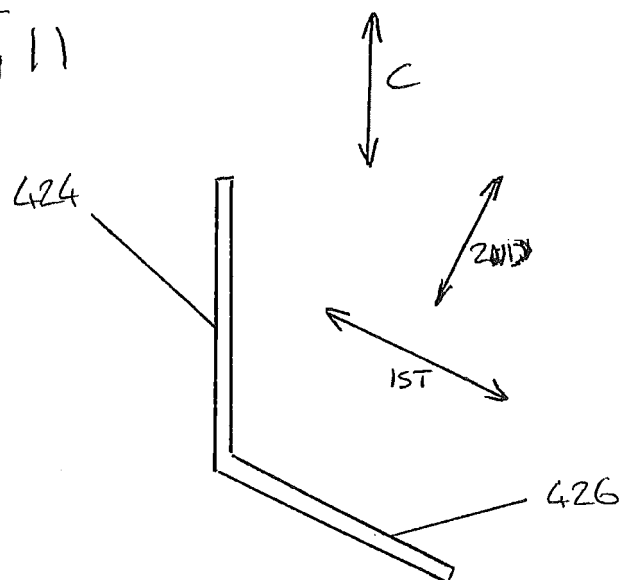


Fig 12

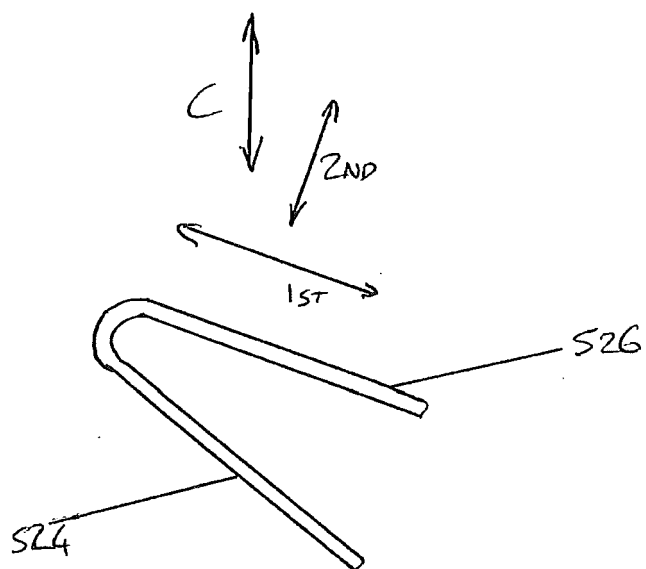


Fig. 13

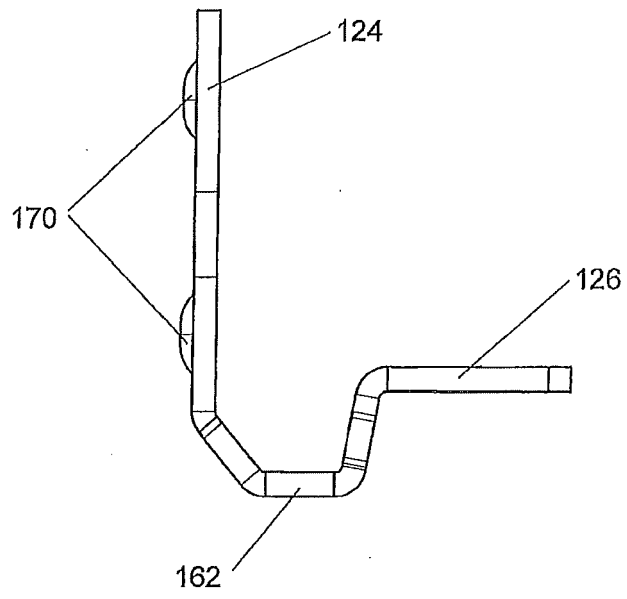
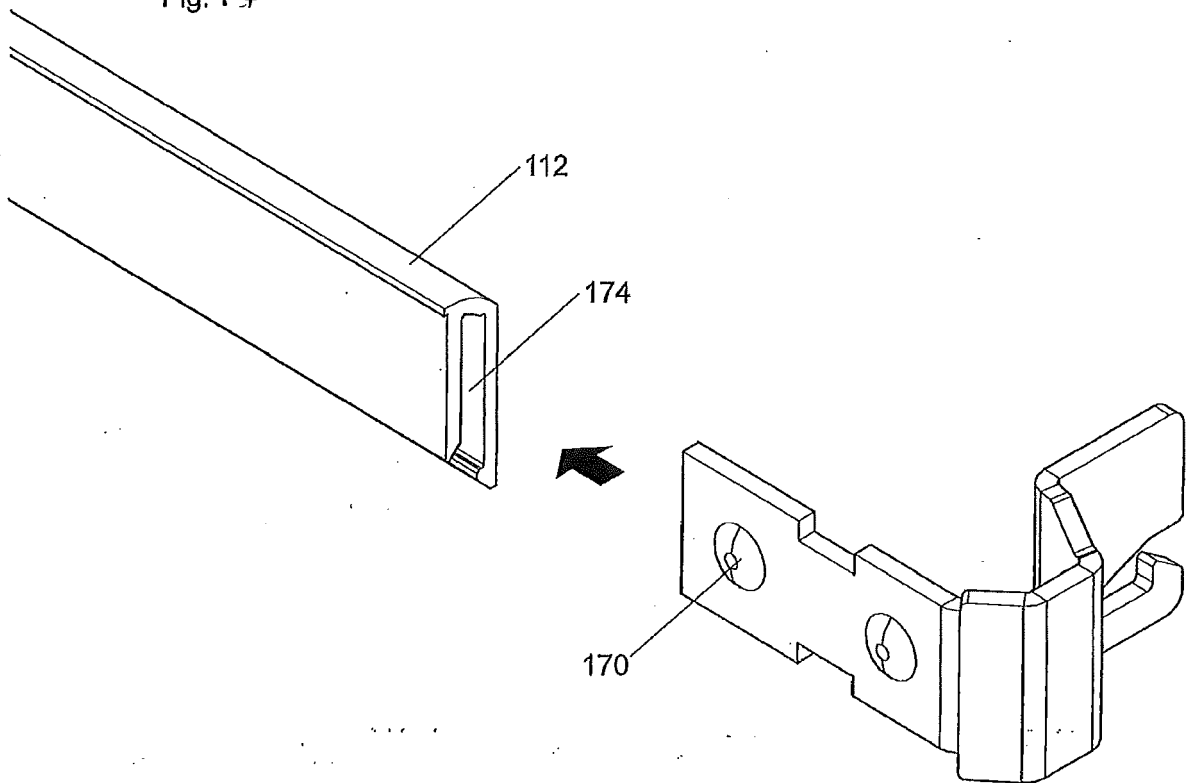


Fig. 14





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Application Number
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			E06B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 15 August 2018	Examiner Tänzler, Ansgar
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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