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(54) **Mounting arrangement for a temporary edge protection system**

Montageanordnung für ein temporäres Kantenschutzsystem

Agencement de montage pour système de protection de bord temporaire

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Description

FIELD OF THE INVENTION

[0001] The present invention relates to a mounting arrangement for a temporary edge protection system comprising posts and edge protection members mountable at the posts, wherein the mounting arrangement comprises a holder for edge protection members.

BACKGROUND OF THE INVENTION

[0002] Temporary edge protection systems are used for protecting workers on buildings under construction or renovation from falling off or within the building. There are many different temporary edge protection systems in use today. A temporary edge protection system generally comprises edge protection members, such as barrier panels, or rails, posts, post holders to arrange the posts on the base, such as a floor, a concrete slab, or some other structure of the building, and holders for edge protection members, which below will also be called panel holders, although they can be arranged for holding other kinds of edge protection members than panels.

[0003] When mounting a temporary edge protection system at a building it is often desirable to use different kinds of edge protection members at different locations of the building. For instance barrier panels at the edges of floors, rails in stairs, and at low heights, etc. In the present systems the holders for the edge protection members are tailor made for a special kind of edge protection member, and therefore, several different types of holders are needed. The same is generally true for other parts of the systems, i.e. they only work with a particular type of connectible device. Alternatively, the holders for edge protection members are most simple, such as open L-shaped hooks. It is true that such a hook, made with a wide enough opening, can receive different kinds of edge protection members, but it is a disadvantage that they are not being fixed but are just loosely supported.

[0004] GB 2 336 391 A discloses a mounting arrangement according to the preamble of claim 1.

SUMMARY OF THE INVENTION

[0005] It would be advantageous to provide an adaptable temporary edge protection system.

[0006] To better address this concern, in a first aspect of the invention there is presented an arrangement for a temporary edge protection system , as defined in claim 1, comprising posts and edge protection members mountable at the posts, the arrangement comprising a panel holder comprising an elongated post slider, movably arrangeable at a post to extend in parallel with the post, and two panel supports, attached to the post slider at a distance from each other. Each panel support comprises a horizontal elongated support portion, defining a longitudinal direction, on which the edge protection members are to rest, an adjustable clamping element comprising a vertical tongue portion arranged to clamp the edge protection members against a clamp surface of the post slider and an adjustment element arranged to change the distance between the clamping element and the post slider in the longitudinal direction of said support portion, thereby providing clamping of the edge protection members against the clamp surface of the post slider. By means of this adjustable panel holder the system becomes more flexible than the prior art systems having fixed or specially shaped panel holders, such as fixed hooks, loops, clamps, or the like, which are adapted to hold a particularly shaped panel, rail, etc.

[0007] In accordance with an embodiment of the arrangement the post slider comprises an elongated guide portion, and upper and lower post engagement portions respectively arranged at top and bottom end portions of the guide portion.

[0008] In accordance with an embodiment the support portion is comprised in the clamping element, the tongue portion is attached to the support portion , and the support portion is longitudinally displaceably connected with the post engagement portion.

[0009] In accordance with an embodiment of the arrangement, the support portion is channel shaped, having its opening turned sideways towards a wall of the post engagement portion, wherein the post engagement portion comprises an adjustment element holder, which is attached to said wall and received in the support portion, wherein the adjustment element is engaged with the adjustment element holder such that the adjustment element displaces the support portion relative to the adjustment element holder when operated.

[0010] In accordance with an embodiment of the arrangement, the adjustment element is a screw and the adjustment element holder is a sleeve being in threaded engagement with the screw.

[0011] In accordance with an embodiment of the arrangement the support portion comprises an elongated, generally U-shaped bracket, which is attached to the post slider at the open end of the bracket, wherein the bracket protrudes from the post slider, the legs of the bracket being substantially longer than its width.

[0012] In accordance with an embodiment of the arrangement the adjustment element is a screw extending within the bracket, wherein the screw is rotatable and has a fixed longitudinal position. The clamping element is engaged with threads of the screw, and is prevented from rotating by the legs of the bracket, thereby moving along the screw when the screw is rotated. Thereby many different kinds of edge protection members, and combinations thereof can be clamped by means of the clamping device.

[0013] In accordance with an embodiment of the mounting arrangement it further comprises a post holder arranged to be provided on a base, wherein the post holder comprises a post tightening assembly. It should be noted that typically a post has some kind of snap lock,

which prevents it from being demounted from the post holder by simply pulling it upwards. However, a certain play is typically at hand between the post and the post holder, in order to make it easy to mount and demount the post. The post tightening assembly removes that play.

[0014] In accordance with an embodiment of the arrangement the post tightening assembly comprises a movable element and a fixed element, wherein the movable element is arranged to exert a tightening force on a surface of the post when moved to a tightening position, wherein the movable element constitutes a filling piece between the fixed element and the surface, and wherein at least one of the movable element and the fixed element comprises a guide surface, which is inclined relative to the surface of the post.

[0015] In accordance with an embodiment of the mounting arrangement the post holder comprises an elongated vertical post retaining portion, and a base support portion protruding laterally from the post retaining portion, wherein the post retaining portion comprises a post reception channel defined by a bottom wall, and opposite side walls raising from the bottom walls, the side walls having an J-shaped cross-section.

[0016] In accordance with an embodiment of the mounting arrangement the fixed element comprises an inclined portion extending inside of the channel at a top end portion thereof.

[0017] In accordance with an embodiment of the mounting arrangement the guide portion is plate shaped and arranged to be received in a groove of the post.

[0018] In accordance with an aspect of the present invention, there is provided a temporary edge protection system comprising edge protection members, posts, and the above-described mounting arrangement.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] The invention will now be described in more detail and with reference to the appended drawings in which:

Figs. 1 and 2 are perspective views of an embodiment of the temporary edge protection system according to the present invention, in an assembled state;

Fig. 3 shows enlarged details of the edge protection system of Fig. 1;

Figs. 4 and 5 are perspective views of an embodiment of a panel holder according to this invention;

Fig. 6 is a partly cut-away view of a part of the panel holder of Fig. 4;

Figs. 7 and 8 are perspective views of an embodiment of a post holder according to this invention;

Fig. 9 is a longitudinally sectional view of the post holder in Fig. 7;

Fig. 10 is a perspective view of the panel holder in Fig. 4 in a mounted state; and

Fig. 11 is a perspective view of another embodiment of a panel holder according to this invention.

DESCRIPTION OF EMBODIMENTS

[0020] According to an embodiment of the temporary edge protection system 1, as shown in Figs. 1, 2 and 3 it comprises barrier panels 2, 3, 4, posts 5, panel holders 6 adjustably mountable on the posts 5, and post holders 7. The post holders 7 are arranged on a base 8, such as a floor, a concrete slab, or some other structure of a building. The temporary edge protection system 1 is arranged close to the edge of the base, often several floors up, i. e. tens of meters above ground. There are different standards stating the requirements that the edge protection system must fulfill in order to be allowed for a particular use. For flat surfaces, and/or close to the ground, the requirements are of course lower than for sloping bases and/or high heights. Other parameters have an influence as well. The present edge protection system 1 is easily adaptable to the requirement of different standards due to its flexibility. For the users the weight of the system parts is an important factor, since they often assemble several hundreds of system parts during a working day. Therefore it is not optimal to provide one single embodiment which qualifies for the highest standard, since it becomes unnecessarily heavy for use in large volumes of lower standard applications.

[0021] According to the illustrated embodiment, the barrier panels 2-4, which are most cumbersome to handle, and the weight of which is particularly important, are made flexible to be easily adaptable to different standards, and applications. Furthermore, aluminum has been applied to a high extent for manufacturing different parts of the system. However, even plastics has been found usable to some extent, such as for toe boards 28. In addition to barrier panels 2-4, rails 9, such as wooden boards, are used.

[0022] In order to support the flexibility of the system while keeping the number of parts down, according to this invention adjustable panel supports 6 are provided. One embodiment thereof is shown in Figs. 4-6, and another embodiment thereof is shown in Fig. 10. The panel holder 6 is capable of supporting many different kinds of edge protection members, such as the barrier panels 2-4, more particularly horizontal aluminum bars 10, 12 thereof, the rails 9, and any combination of them, from a single bar 10, 12, which is the thinnest alternative, to two rails 9, which is the thickest alternative of these edge protection members. Hence, the first embodiment of the panel holder 6 comprises a post slider 40, movably arrangeable at a post 5 to extend in parallel with the post, and arranged to be locked in an arbitrary position along the post 5. The post slider 40 comprises an elongated guide portion 41, and upper and lower post engagement portions 43, 44, respectively arranged at top and bottom end portions 45, 46 of the guide portion 41. The guide portion 41 is plate shaped and is arranged to be received in a groove 85,

which extends along the length of the post 5 at one side thereof. More particularly, the post 5 is rectangular in cross-section and has a longitudinal flange 86 at each of its corners, see Fig. 10. The flanges 86 are arranged in pairs at opposite sides of the post 5, and protrude from a base surface 87 of the post, thereby defining the groove 85 between them. In other words the post 5 has two opposite grooves 85, at opposite sides of the post 5.

[0023] Each one of the upper and lower post engagement portions 43, 44 extends around the post when mounted, and comprises a respective channel portion 55, 56 generally U-shaped in cross-section, which is for instance obtained by bending a plate. Thus, referring to the upper channel portion 55, it has three walls; a base wall 57, and first and second side walls 58, 59, which are opposite to each other. Furthermore, it comprises a locking element 60, which is engaged with the side walls 58, 59, and is arranged to clamp them towards each other, and thus clamp the post 5 between them, to thereby lock the panel holder 6 in the chosen position. Like in this embodiment the locking element 60 can simply be a screw extending through holes of the first and second side walls 58, 59 and through a nut 66 attached to the second wall 59 in alignment with the hole. The lower channel portion 56 is similar to the upper channel portion 55, having a base wall 61 and side walls 62, 63, but instead of having a locking element connecting the side walls 62, 63, it has a general connection element 64 just closing the opening between the side walls 62, 63, since it has appeared that the upper locking element generates enough locking force to prevent the panel holder 6 from moving unintentionally.

[0024] The top and bottom end portions 45, 46 of the guide portion 41 are attached to the inner side of the respective first side wall 58, 59 of the upper and lower channel portions 55, 56.

[0025] Two panel supports 47, 48 are connected with the post slider 40 at a distance from each other. More particularly, the panel supports 47, 48 are connected with the upper and lower post engagement portions 43, 44, respectively. Each panel support 47, 48 comprises an adjustable clamping element 49, 50 and an adjustment element 51, 52 arranged to change the distance between the clamping element 49, 50 and the post slider 40. Each clamping element 49, 50 comprises a horizontal elongated support portion 91, 92, on which the barrier panels/rails 2-4, 9 are to rest, and a vertical tongue portion 93, 94 arranged to clamp the barrier panels/rails against the post slider 40. The vertical tongue 93, 94 is attached to one end of the support portion 91, 92. The support portion 91, 92 is longitudinally displaceably connected with the post engagement portion 43, 44. The support portion 91, 92 is channel shaped, having its opening turned sideways towards the first wall 58, 62 of the channel portion 55, 56. Each one of the upper and lower post engagement portions 43, 44 comprises a panel clamping surface 53, 54 positioned opposite of the tongue portion 93, 94 of the clamping element 49, 50, and the barrier panels/rails are clamped between them by operating the adjustment element 51, 52 for displacing the clamping element 49, 50 relative to the post engagement portion 43, 44.

[0026] In this embodiment, the adjustment element of each panel support 47, 48 is a screw, which is rotationally connected with the support portion 91, 92, and is in threaded engagement with a sleeve 95, 96 which is comprised in the post engagement portion 43, 44. The post engagement portion 43, 44 comprises an angle bar 97, 98 attached to the first side wall 58, 62 at the outside thereof. The angle bar 97, 98 includes a vertical wall portion containing the clamp surface 53, 54, which is placed adjacent to the base wall 57, 61 and extends in the same plane as the base wall, and a bottom plate portion 99, 100 extending perpendicular to the clamp surface 53, 54. The sleeve 95 is attached to the outside of the first wall 58, 62, and the support portion 91, 92 extends adjacent to and in parallel with the first side wall 58, 62. The sleeve 95, 96 is received in the groove formed by the walls of the support portion 91, 92. The screw 51, 52 is longitudinally fixed relative to the support portion 91, 92, and extends along the full length of the support portion 91, 92. Thus, when the screw 51, 52 is operated it brings the clamping element 49, 50 along with it, while the support portion 91, 92 is displaced relative to the sleeve 95, 96. The support portion 91, 92 can be regarded to slide along the sleeve 95, 96. Thereby the distance between the tongue portion 93, 94 and the clamp surface 53, 54 of the post engagement portion 43, 44 is adjusted.

[0027] Thus, when mounting the temporary edge protection, the panel holder 6 is mounted on a post 5 by slipping the post engagement portions 43, 44 onto the post 5 from one end thereof, such that the guide element 41 is received in a corresponding groove 85 extending along the post 5. Then the panel holder 6 is moved to the desired position along the post 5, and the locking element 60 is tightened. The barrier panel(s) and/or rail(s) are placed on the panel supports 47, 48, i.e. they are received in the space between the clamping elements 49, 50 and the panel clamping surfaces 53, 54. Then the adjustment elements 51, 52 are operated to fix the barrier panels/rails by reducing the space and thus clamp the barrier panels/rails between the clamping elements 49, 50 and the post slider 40.

[0028] According to another embodiment of the panel holder 110, as shown in Fig. 11, similar to the above embodiment, it comprises a post slider 111, having an elongated guide portion 112 and upper and lower post engagement portions 113, 114 arranged at end portions of the guide portion 112; and upper and lower panel supports 115, 116 connected with a respective one of the post engagement portions 113, 114. However, each panel support 115, 116 has a support portion that comprises a bracket 117, 118, on which the barrier panels/rails are to rest. The bracket 117, 118 is attached to and protrudes from the base wall 119, 120 of the channel portion 121, 122 of the post engagement portion 113, 114. In other

words, the panel supports 115, 116 are in line with the channel portions 121, 122, instead of beside them like in the above embodiment. Thereby the panel holder 110 becomes narrower. On the other hand, in the above embodiment of the panel holder 6, the protrusion inwards of the temporary edge protection system, counted from the inner most surface of the barrier panels, is minimized, since the clamping element, which includes the support portion in that embodiment, is displaced when clamping, while in this alternative embodiment the fixed bracket 117, 118 of the support portion will protrude more if the barrier panels are thin than if they are thick. The legs of the bracket 117, 118 are substantially longer than its width. The panel holder comprises an adjustment element 123, 124, which is a screw extending within the bracket 117, 118. The screw 123, 124 is rotatable and has a fixed longitudinal position, by extending through a hole of the bracket portion 125, 126 joining the legs at the outer ends thereof, and a hole of an opposite cross wall 127, 128 extending between the legs close to the base wall 119, 120 of the post slider 112, and having a screw head and a fixed nut at its respective ends. The adjustable clamping element 129, 130 constitutes a vertical tongue portion arranged within the bracket 117, 118 and engaged with the threads of the screw 123, 124. The clamping element 129, 130 is prevented from rotating by the legs of the bracket 117, 118, thereby moving along the screw 123, 124 when the screw is rotated. The barrier panels/rails are clamped between the clamping element 129, 130 and the base wall 119, 120, providing a clamp surface.

[0029] In accordance with an embodiment of the mounting arrangement it further comprises a post holder 7 arranged to be provided on the base 8. The post holder 7 comprises an elongated vertical post retaining portion 67, and a base support portion 68 protruding horizontally from the post retaining portion 67, and arranged to rest on the base 8. The post retaining portion 67 is generally channel-shaped and has a bottom wall 80, and opposite side walls 81 raising from the bottom wall 80, the side walls 81 having a J-shaped cross-section. Thus, when the post 5 is in a mounted state, the edges of the side walls 81 are engaged with two flanges 86, a portion of the post 5 thus extending through the post retaining portion 67. The post 5 has a snap lock device 71, which comprises a spring biased locking pin 72, which is received in a recess 73 of the post holder when the post 5 is in the mounted state.

[0030] This kind of post shape and connection of the post holder 7 and the post 5 is advantageous in that the opposite side of the post, having a similar groove shape, is free to use in the full length of the post for connecting other parts.

[0031] Furthermore, the post holder 7 comprises a post tightening assembly 70. The post tightening assembly 70 comprises a movable element 74 and a fixed element 75, wherein the movable element 74 is arranged to exert a tightening force on a surface 76 of the post 5 when moved to a tightening position. The surface 76 extends between the flanges 86 that the side wall edges of the post holder 7 are engaged with. It should be noted that this post surface 76 is typically opposite to the above mentioned post surface 63 facing the panel holder 6. That is, the post holder 7 and the panel holder 6 are mounted on opposite sides of the post 5. The movable element 74 constitutes a filling piece between the fixed element 75 and the surface 76 of the post 5. The fixed element 75 is arranged within the post retaining portion 67. The fixed element 75 comprises a guide surface 84, which is inclined relative to the surface 76 of the post, and relative to the bottom wall 80. The movable element 74 is vertically adjusted by means of a tightening screw 82, which is arranged in a fixed nut element 83, and which is loosely connected with the movable element 74. The nut element is arranged at an outside of the post retaining portion 67, and the movable element 74, constituted by a bent plate, extends into the retaining portion 67 from an upper end thereof, and abuts against the guide surface 84 of the fixed element 75. When tightening the tightening screw 82, the movable element 74 is forced downwards between the guide surface 84 and the surface 76 of the post 5 like a wedge. Thereby the post 5, and more particularly the flanges 86 thereof, is pushed against the edges of the side walls 81 of the post retaining portion 67.

[0032] This kind of post shape and connection of the post holder 7 and the post 5 is advantageous in that the opposite side of the post, having a similar groove shape, is free to use in the full length of the post for connecting other parts.

[0033] While the invention has been illustrated and described in detail in the drawings and foregoing description, such illustration and description are to be considered illustrative or exemplary and not restrictive; the invention is not limited to the disclosed embodiments.

[0034] Other variations to the disclosed embodiments can be understood and effected by those skilled in the art in practicing the claimed invention, from a study of the drawings, the disclosure, and the appended claims. In the claims, the word "comprising" does not exclude other elements or steps, and the indefinite article "a" or "an" does not exclude a plurality. The mere fact that certain measures are recited in mutually different dependent claims does not indicate that a combination of these measured cannot be used to advantage. Any reference signs in the claims should not be construed as limiting the scope.

Claims

1. A mounting arrangement for a temporary edge protection system comprising posts (5) and edge protection members (2-4, 9) mountable at the posts, the arrangement comprising:

   a panel holder (6, 110) comprising an elongated

post slider (40, 111), movably arrangeable at a post to extend in parallel with the post, and two panel supports (47, 48, 115, 116), attached to the post slider at a distance from each other, each panel support comprising
a horizontal elongated support portion (91, 92, 117, 118), on which the edge protection members (2-4, 9) are to rest,
defining a longitudinal direction, and an adjustable clamping element (49, 50, 129, 130) comprising a vertical tongue portion (93, 94, 129, 130) arranged to clamp the edge protection members against a clamp surface (53, 54, 119, 120) of the post slider,

whereby the mounting arrangement is **characterized in that** each panel support further comprises

an adjustment element (51, 52, 123, 124) arranged for adjusting the distance between said vertical tongue portion and the post slider in the longitudinal direction of said support portion, thereby providing clamping of the edge protection members against the clamp surface of the post slider.

2. The mounting arrangement according to claim 1, wherein the adjustment element is a screw, which is rotationally connected with the support portion.

3. The mounting arrangement according to claim 1 or 2, wherein the adjustment element is a screw, which is longitudinally fixed relative to the support portion.

4. The mounting arrangement according to any preceding claim, wherein the post slider (40, 111) comprises an elongated guide portion (41, 112), and upper and lower post engagement portions (43, 44, 121, 122) respectively arranged at top and bottom end portions (45, 46) of the guide portion (41, 112).

5. The mounting arrangement according to any preceding claim, wherein the tongue portion (93, 94) is attached to the support portion, and wherein the support portion is longitudinally displaceably connected with the post engagement portion (43, 44).

6. The mounting arrangement according to claim 5, wherein the support portion (91, 92) is channel shaped, having its opening turned sideways towards a wall (58, 62) of the post engagement portion (43, 44), wherein the post engagement portion comprises an adjustment element holder (95, 96), which is attached to said wall and received in the support portion, wherein the adjustment element (51, 52) is engaged with the adjustment element holder such that the adjustment element displaces the support portion relative to the adjustment element holder when operated.

7. The mounting arrangement according to claim 6, wherein the adjustment element (51, 52) is a screw and the adjustment element holder (95, 96) is a sleeve being in threaded engagement with the screw.

8. The mounting arrangement according to any one of the preceding claims, wherein the support portion comprises an elongated, generally U-shaped bracket (117, 118), which is attached to the post slider (111) at the open end of the bracket, wherein the bracket protrudes from the post slider, the legs of the bracket being substantially longer than its width.

9. The mounting arrangement according to claim 8, wherein the adjustment element (123, 124) is a screw extending within the bracket (117, 118), wherein the screw is rotatable and has a fixed longitudinal position, wherein the clamping element (129, 130) is engaged with threads of the screw, and is prevented from rotating by the legs of the bracket, thereby moving along the screw when the screw is rotated.

10. The mounting arrangement according to any one of the preceding claims, comprising a post holder (7) arranged to be provided on a base (8), wherein the post holder comprises a post tightening assembly (70).

11. The mounting arrangement according to claim 10, wherein the post tightening assembly (70) comprises a movable element (74) and a fixed element (75), wherein the movable element is arranged to exert a tightening force on a surface (76) of the post (5) when moved to a tightening position, wherein the movable element constitutes a filling piece between the fixed element and the surface, and wherein at least one of the movable element and the fixed element comprises a guide surface (84), which is inclined relative to the surface of the post.

12. The mounting arrangement according to claim 11, wherein the post holder (7) comprises an elongated vertical post retaining portion (67), and a base support portion (68) protruding horizontally from the post retaining portion, wherein the post retaining portion is channel-shaped and has a bottom wall (80), and opposite side walls (81) raising from the bottom wall, the side walls having a J-shaped cross-section.

13. The mounting arrangement according to any one of claims 4 to 6, wherein the guide portion (41, 112) is plate shaped and arranged to be received in a groove (85) of the post (5).

14. A temporary edge protection system comprising the mounting arrangement according to any one of the preceding claims, and further comprising edge protection members (2-4, 9), and posts (5).

Patentansprüche

1. Montageanordnung für ein temporäres Kantenschutzsystem, das Pfosten (5) und Kantenschutzelemente (2-4, 9) umfasst, die an den Pfosten befestigt werden können, wobei die Anordnung umfasst:

einen Plattenhalter (6, 110), der einen langgestreckten Pfostenschieber (40, 111), der an einem Pfosten beweglich angeordnet werden kann, um sich parallel mit dem Pfosten zu erstrecken, und zwei Plattenträger (47, 48, 115, 116), die an dem Pfostenschieber in einem Abstand voneinander befestigt sind, umfasst,

wobei jeder Plattenträger umfasst:

einen horizontal langgestreckten Trägerabschnitt (91, 92, 117, 118), auf dem die Kantenschutzelemente (2-4, 9) ruhen sollen und der eine Längsrichtung definiert, und ein anpassbares Klemmelement (49, 50, 129, 130), das einen vertikalen Zungenelementabschnitt (93, 94, 129, 130) umfasst, das angeordnet ist, um die Kantenschutzelemente (2-4, 9) gegen eine Klemmoberfläche (53, 54, 119, 120) des Pfostenschiebers zu klemmen,

wobei die Montageanordnung **dadurch gekennzeichnet ist, dass** jeder Plattenträger ferner ein Anpassungselement (51, 52, 123, 124) umfasst, das angeordnet ist, um den Abstand zwischen dem vertikalen Zungenelementabschnitt und dem Pfostenschieber in der Längsrichtung des Trägerabschnitts anzupassen, und um dadurch ein Klemmen der Kantenschutzelemente gegen die Klemmoberfläche des Pfostenschiebers bereitzustellen.

2. Montageanordnung nach Anspruch 1, wobei das Anpassungselement eine Schraube ist, die mit dem Trägerabschnitt drehbar verbunden ist.

3. Montageanordnung nach Anspruch 1 oder 2, wobei das Anpassungselement eine Schraube ist, die in Längsrichtung relativ zu dem Trägerabschnitt fixiert ist.

4. Montageanordnung nach einem vorhergehenden Anspruch, wobei der Pfostenschieber (40, 111) einen langgestreckten Führungsabschnitt (41, 112) und obere bzw. untere Pfosteneingriffsabschnitte (43, 44, 121, 122) umfasst, die an dem oberen bzw. an dem unteren Endabschnitt (45, 46) des Führungsabschnitts (41, 112) angeordnet sind.

5. Montageanordnung nach einem vorhergehenden Anspruch, wobei der Zungenelementabschnitt (93, 94) an dem Trägerabschnitt befestigt ist, und wobei der Trägerabschnitt in Längsrichtung mit dem Pfosteneingriffsabschnitt (43, 44) verschiebbar verbunden ist.

6. Montageanordnung nach Anspruch 5, wobei der Trägerabschnitt (91, 92) kanalförmig ist und seine Öffnung seitwärts in Richtung einer Wand (58, 62) des Pfosteneingriffsabschnitts (43, 44) aufweist, wobei der Pfosteneingriffsabschnitt einen Anpassungselementhalter (95, 96) umfasst, der an der Wand befestigt und in dem Trägerabschnitt aufgenommen ist, wobei das Anpassungselement (51, 52) mit dem Anpassungselementhalter derart im Eingriff ist, dass das Anpassungselement den Trägerabschnitt relativ zu dem Anpassungselementhalter verschiebt, wenn es betrieben wird.

7. Montageanordnung nach Anspruch 6, wobei das Anpassungselement (51, 52) eine Schraube ist und der Anpassungselementhalter (95, 96) eine Muffe ist, die in einem Gewindeeingriff mit der Schraube ist.

8. Montageanordnung nach einem der vorhergehenden Ansprüche, wobei der Trägerabschnitt eine langgestreckte, im Allgemeinen U-förmige Halterung (117, 118) umfasst, die an dem Pfostenschieber (111) an dem offenen Ende der Halterung befestigt ist, wobei die Halterung von dem Pfostenschieber vorsteht, wobei die Beine der Halterung im Wesentlichen länger als ihre Breite ist.

9. Montageanordnung nach Anspruch 8, wobei das Anpassungselement (123, 124) eine Schraube ist, die sich innerhalb der Halterung (117, 118) erstreckt, wobei die Schraube drehbar ist und eine fixiert Längsposition aufweist, wobei das Klemmelement (129, 130) mit dem Gewinde der Schraube im Eingriff ist und durch die Beine der Halterung an einer Drehung gehindert wird, und sich dadurch entlang der Schraube bewegt, wenn die Schraube gedreht wird.

10. Montageanordnung nach einem der vorhergehenden Ansprüche, wobei ein Pfostenhalter (7) angeordnet ist, um auf einer Basis (8) bereitgestellt zu werden, wobei der Pfostenhalter eine Anziehanordnung (70) des Postens umfasst.

11. Montageanordnung nach Anspruch 10, wobei die Anziehanordnung (70) des Postens ein bewegliches Element (74) und ein festes Element (75) umfasst, wobei das bewegliche Element angeordnet ist, um eine Anziehkraft auf eine Oberfläche (76) des Pfos-

tens (5) auszuüben, wenn es zu einer Anziehposition bewegt wird, wobei das bewegliche Element ein Füllstück zwischen dem festen Element und der Oberflähe festlegt, und wobei das bewegliche Element und/oder das feste Element eine Führungsoberfläche (84) umfasst, die relativ zu der Oberfläche des Pfosten geneigt ist.

12. Montageanordnung nach Anspruch 11, wobei der Pfostenhalter (7) einen langgestreckten vertikalen Pfostenhalteabschnitt (67) und einen Basisträgerabschnitt (68), der horizontal von dem Pfostenhalteabschnitt vorsteht, umfasst, wobei der Pfostenhalteabschnitt kanalförmig ist und eine Basiswand (80) und gegenüberliegene Seitenwände (81), die von der Basiswand aufragen, aufweist, wobei die Seitenwände einen J-förmigen Querschnitt aufweisen.

13. Montageanordnung nach einem der Ansprüche 4 bis 6, wobei der Führungsabschnitt (41, 112) plattenförmig ist und angeordnet ist, um in einem Einschnitt (85) des Pfostens (5) aufgenommen zu werden.

14. Temporäres Kantenschutzsystem, das die Montageanordnung nach einem der vorhergehenden Ansprüche umfasst und das ferner Kantenschutzelemente (2-4, 9) und Pfosten (5) umfasst.

Revendications

1. Agencement de montage pour un système de protection de bordure temporaire comprenant des montants (5) et des éléments de protection de bordure (2-4, 9) pouvant être montés sur les montants, l'agencement comprenant :

un support de panneau (6, 110) comprenant un curseur de montant allongé (40, 111), pouvant être agencé mobile sur un montant pour s'étendre parallèlement au montant, et deux supports de panneaux (47, 48, 115, 116), fixés sur le curseur de montant à distance l'un de l'autre, chaque support de panneau comprenant
une partie de support allongée horizontale (91, 92, 117, 118) sur laquelle les éléments de protection de bordure (2-4, 9) reposent,
définissant une direction longitudinale, et
un élément de serrage réglable (49, 50, 129, 130) comprenant une partie de languette verticale (93, 94, 129, 130) agencée pour serrer les éléments de protection de bordure (2-4, 9) contre sur une surface de serrage (53, 54, 119, 120) du curseur de montant.
ce par quoi l'agencement de montage est **caractérisé en ce que** chaque support de panneau comprend en outre
un élément d'ajustement (51, 52, 123, 124) agencé pour ajuster la distance entre ladite partie de languette verticale et le curseur de montant dans la direction longitudinale de ladite partie de support, fournissant ainsi le serrage des éléments de protection de bordure contre la surface de serrage du curseur de montant.

2. Agencement de montage selon la revendication 1, dans lequel l'élément d'ajustement est une vis qui est reliée de façon rotative à la partie de support.

3. Agencement de montage selon la revendication 1 ou 2, dans lequel l'élément d'ajustement est une vis qui est fixée de façon longitudinale par rapport à la partie de support.

4. Agencement de montage selon une quelconque revendication précédente, dans lequel le curseur de montant (40, 111) comprend une partie de guidage allongée (41, 112) et des parties d'engagement de montant supérieure et inférieure (43, 44, 121, 122) respectivement agencées sur des parties d'extrémité supérieure et inférieure (45, 46) de la partie de guidage (41, 112).

5. Agencement de montage selon une quelconque revendication précédente, dans lequel la partie de languette (93, 94) est fixée sur la partie de support, et dans lequel la partie de support est reliée à la partie d'engagement de montant (43, 44) en pouvant être déplacée de façon longitudinale.

6. Agencement de montage selon la revendication 5, dans lequel la partie de support (91, 92) est en forme de canal, ayant son ouverture tournée latéralement en direction d'une paroi (58, 62) de la partie d'engagement de montant (43, 44), dans lequel la partie d'engagement de montant comprend un support d'élément d'ajustement (95, 96) qui est fixé sur ladite paroi et reçu dans la partie de support, dans lequel l'élément d'ajustement (51, 52) est engagé avec le support d'élément d'ajustement de telle façon que l'élément d'ajustement déplace la partie de support par rapport au support d'élément d'ajustement lorsqu'il est actionné.

7. Agencement de montage selon la revendication 6, dans lequel l'élément d'ajustement (51, 52) est une vis et le support d'élément d'ajustement (95, 96) est un manchon en engagement fileté avec la vis.

8. Agencement de montage selon l'une quelconque des revendications précédentes, dans lequel la partie de support comprend une fixation allongée généralement en U (117, 118) qui est fixée au curseur de montant (111) sur l'extrémité ouverte de la fixation, dans lequel la fixation fait saillie du curseur de mon-

tant, les branches de la fixation étant essentiellement plus longues que sa largeur.

9. Agencement de montage selon la revendication 8, dans lequel l'élément d'ajustement (123, 124) est une vis s'étendant à l'intérieur de la fixation (117, 118), dans lequel la vis est rotative et a une position longitudinale fixe, dans lequel l'élément de serrage (129, 130) est engagé avec des filets de la vis, et est empêché de tourner par les branches de la fixation, se déplaçant ainsi avec la vis lorsque la vis est tournée.

10. Agencement de montage selon l'une quelconque des revendications précédentes, comprenant un support de montant (7) agencé pour être prévu sur une base (8), dans lequel le support de montant comprend un ensemble de serrage de montant (70).

11. Agencement de montage selon la revendication 10, dans lequel l'ensemble de serrage de montant (70) comprend un élément mobile (74) et un élément fixe (75), dans lequel l'élément mobile est agencé pour exercer une force de serrage sur une surface (76) du montant (5) lorsqu'il est déplacé dans une position de serrage, dans lequel l'élément mobile constitue une pièce de remplissage entre l'élément fixe et la surface, et dans lequel au moins un de l'élément mobile et de l'élément fixe comprend une surface de guidage (84) qui est inclinée par rapport à la surface du montant.

12. Agencement de montage selon la revendication 11, dans lequel le support de montant (7) comprend une partie de retenue de montant verticale allongée (67) et une partie de support de base (68) faisant saillie horizontalement de la partie de retenue de montant, dans lequel la partie de retenue de montant est en forme de canal et présente une paroi de fond (80) et des parois latérales opposées (81) s'élevant de la paroi de fond, les parois latérales présentant une section en J.

13. Agencement de montage selon l'une quelconque des revendications 4 à 6, dans lequel la partie de guidage (41, 112) est en forme de plateau et agencée pour être reçue dans une rainure (85) du montant (5).

14. Système de protection de bordure temporaire comprenant l'agencement de montage selon l'une quelconque des revendications précédente, et comprenant en outre des éléments de protection de bordure (2-4, 9) et des montants (5).

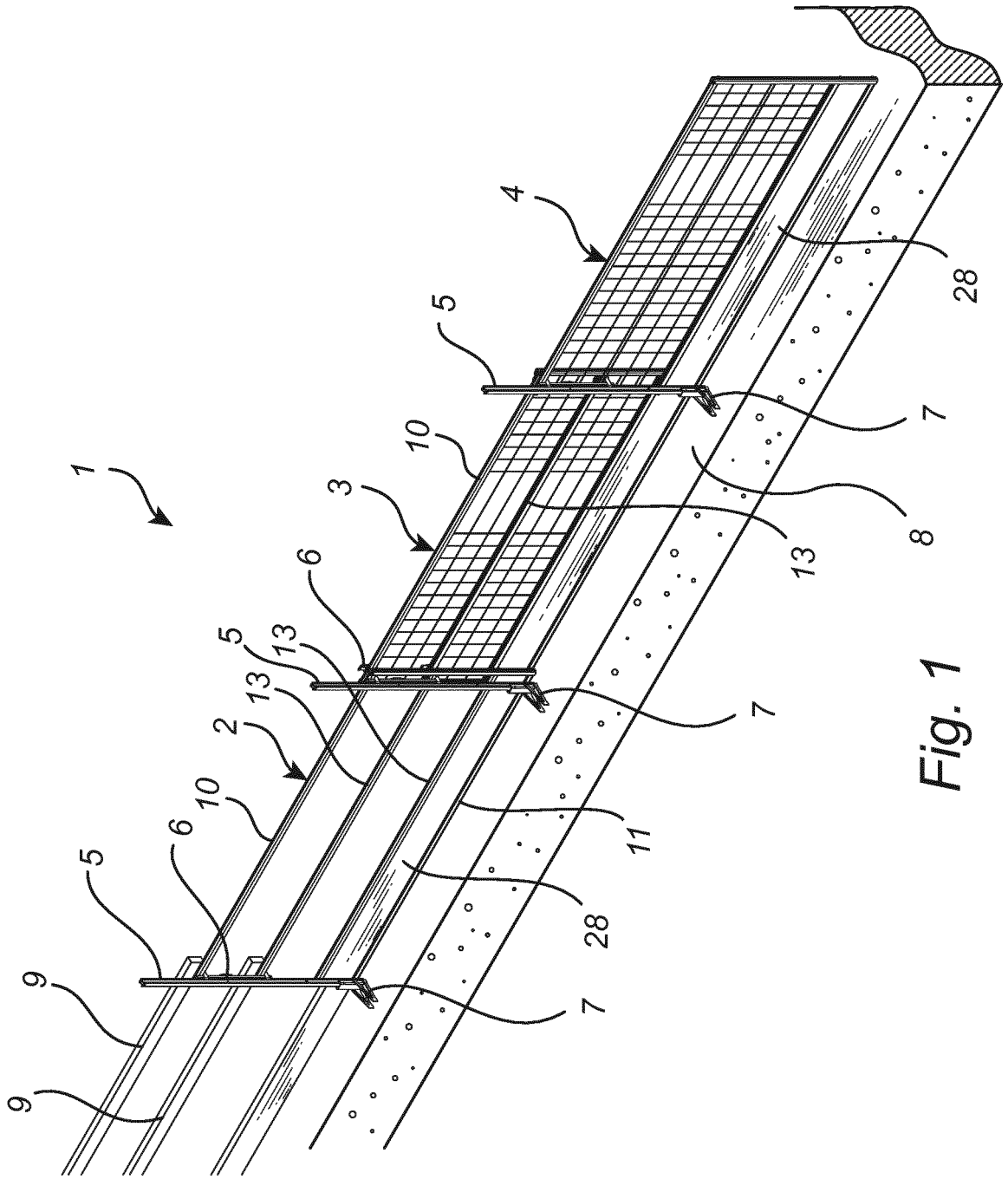

Fig. 1

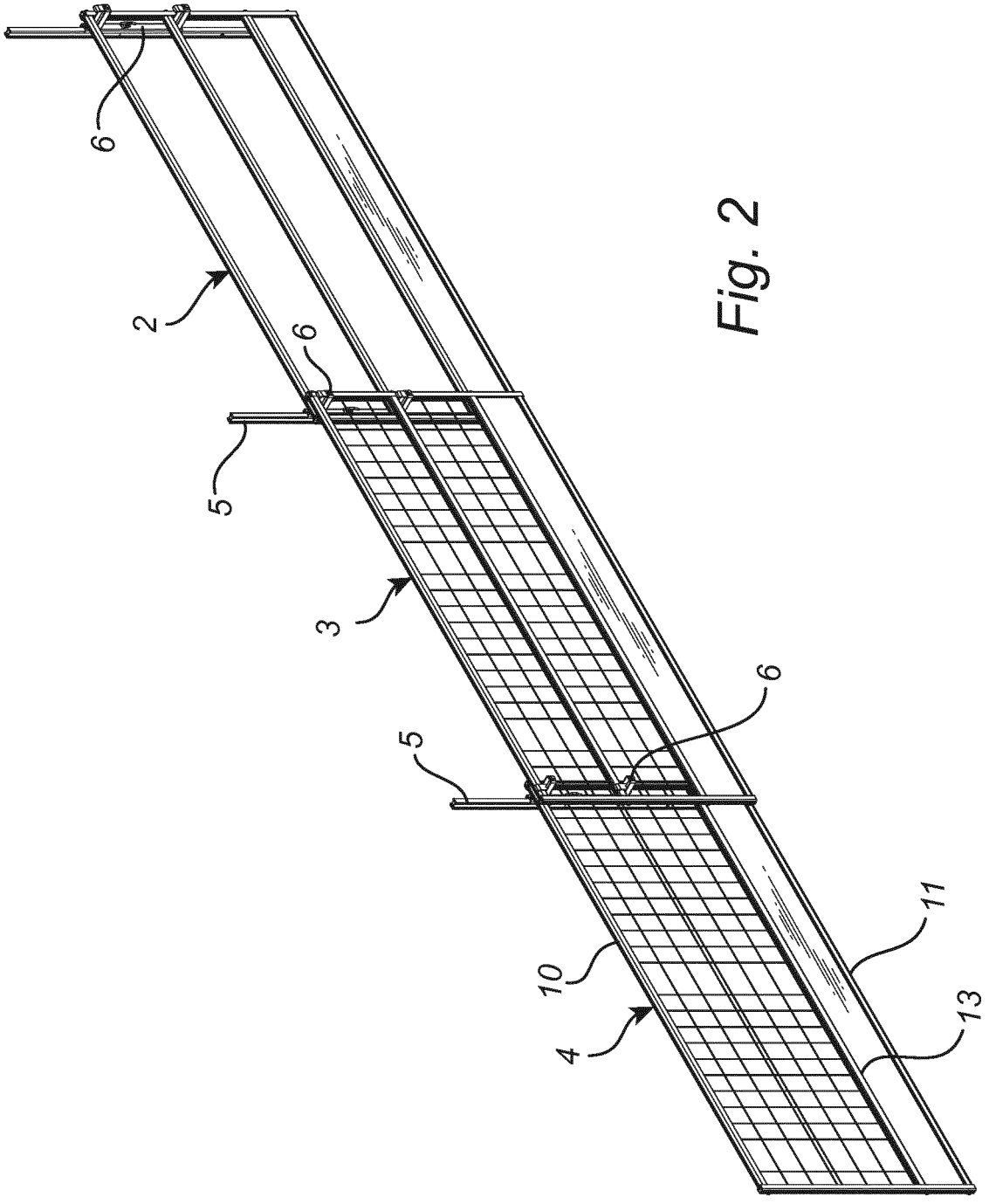

Fig. 2

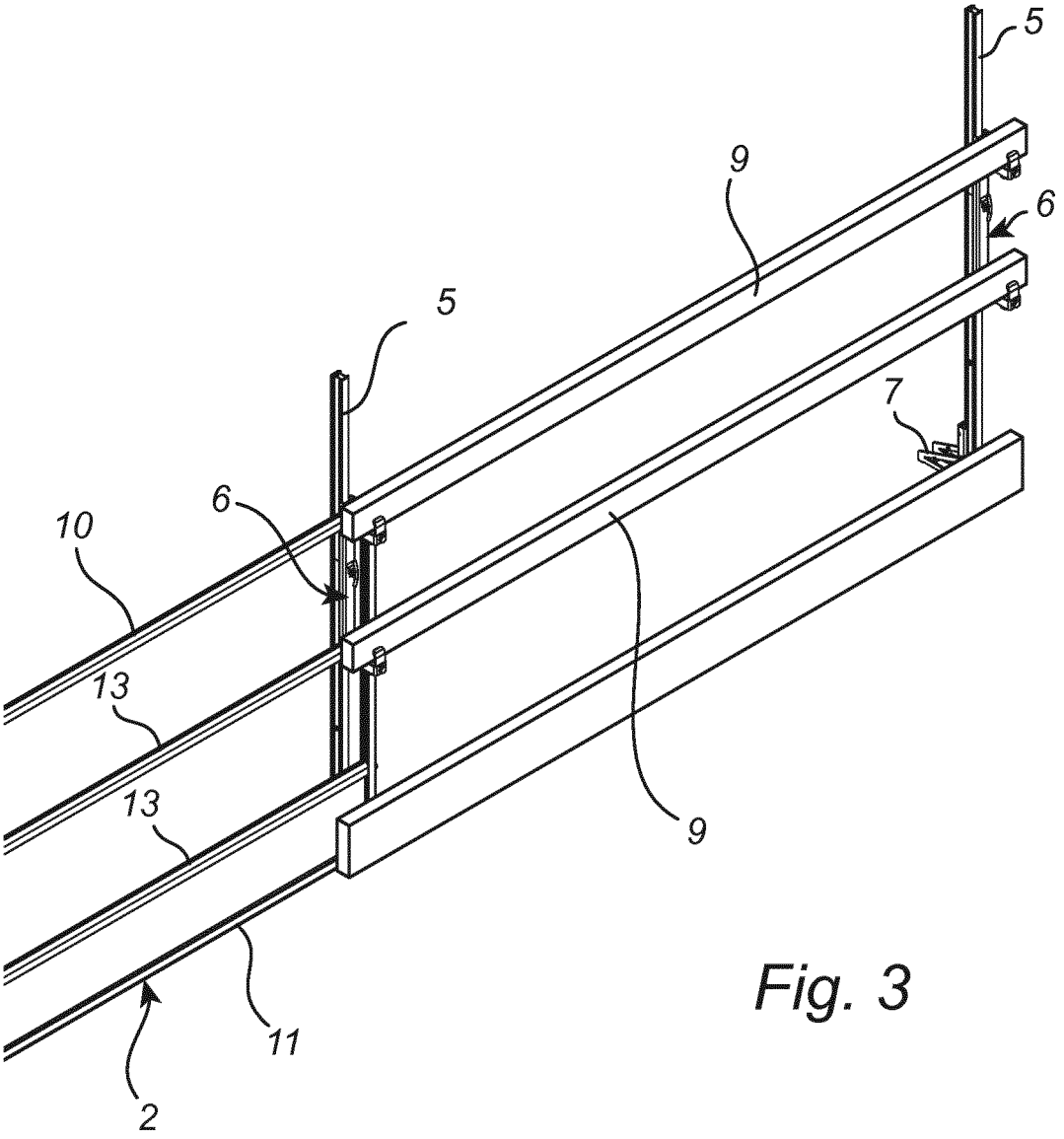

Fig. 3

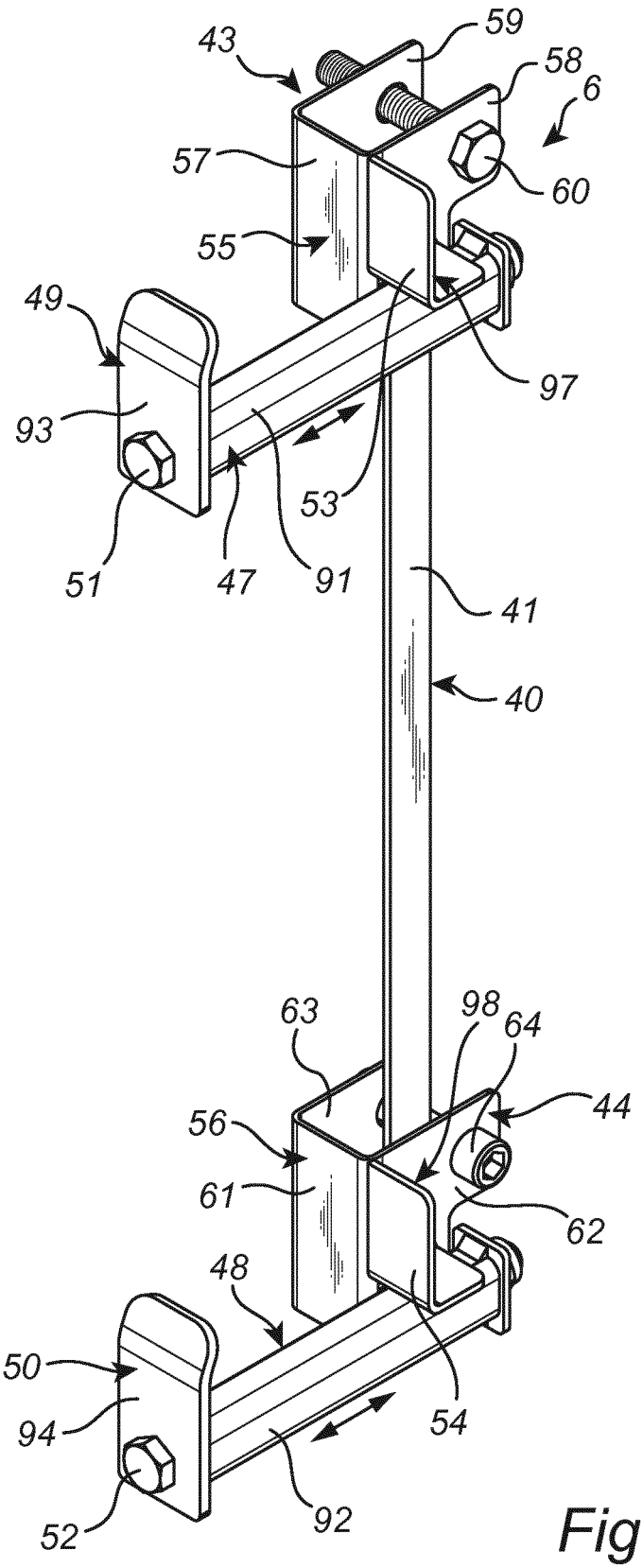
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Fig. 4

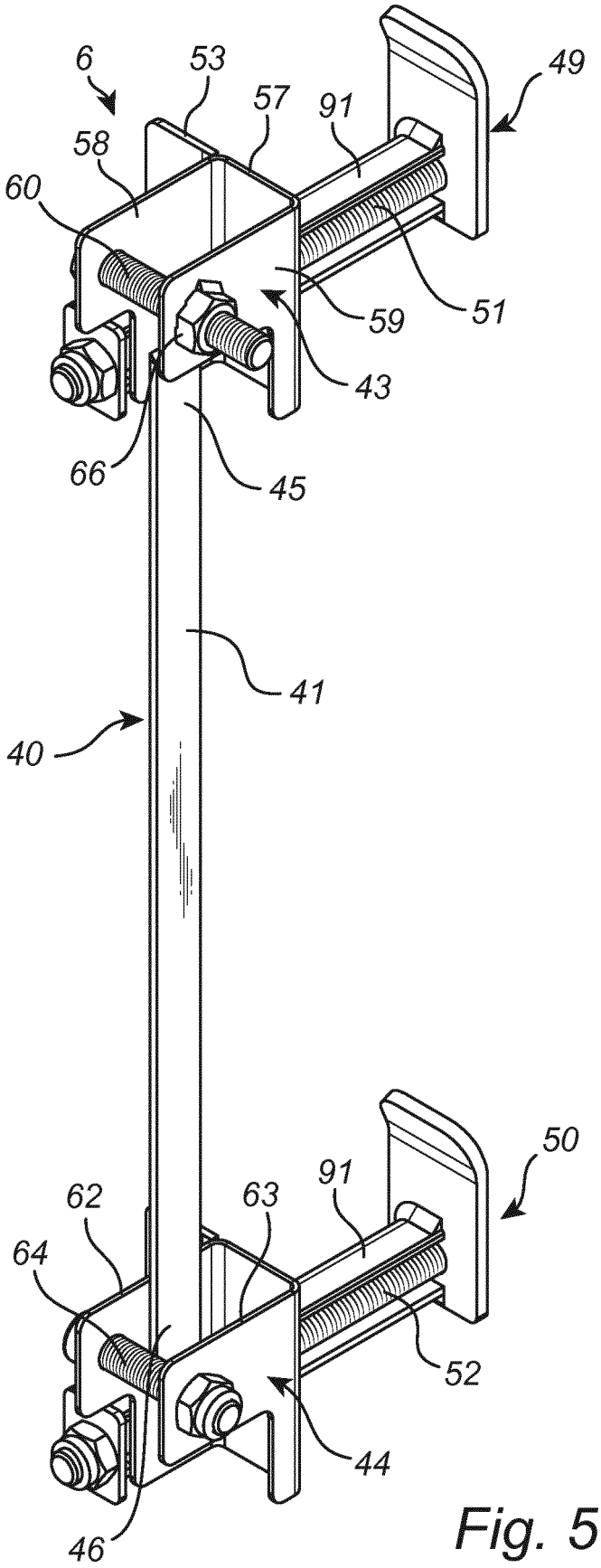

Fig. 5

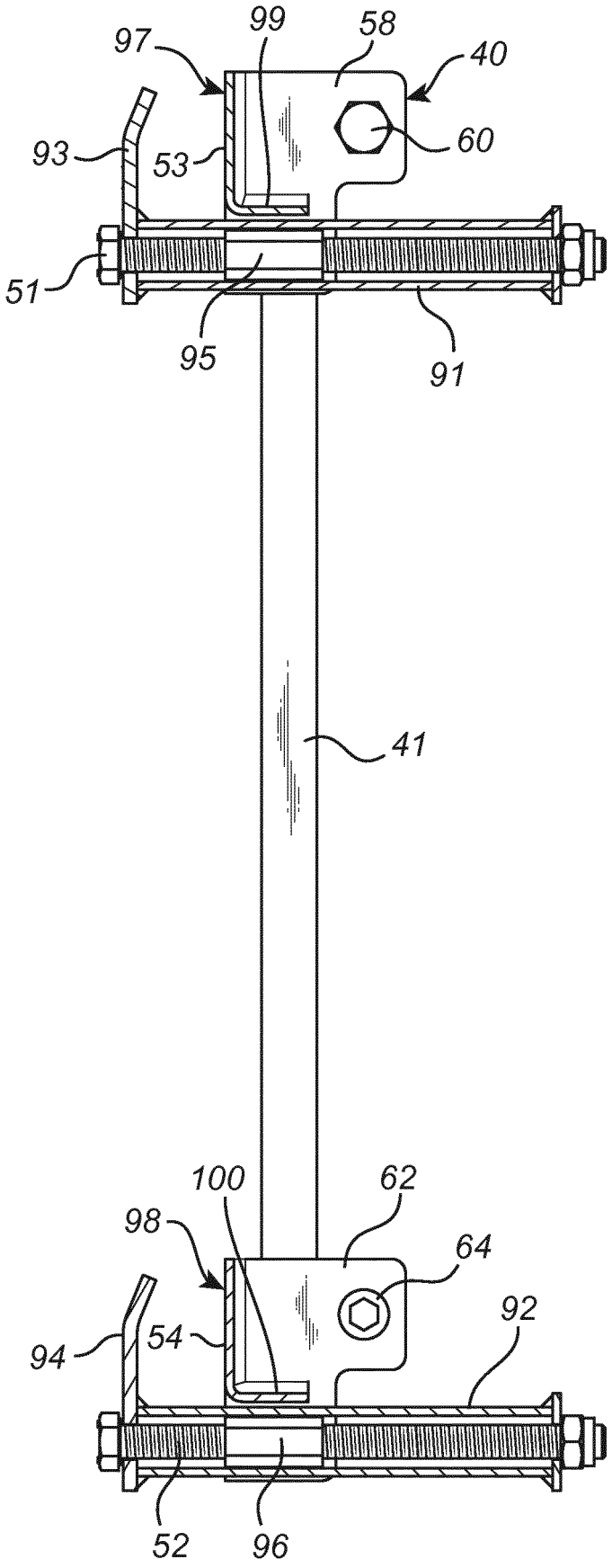

Fig. 6

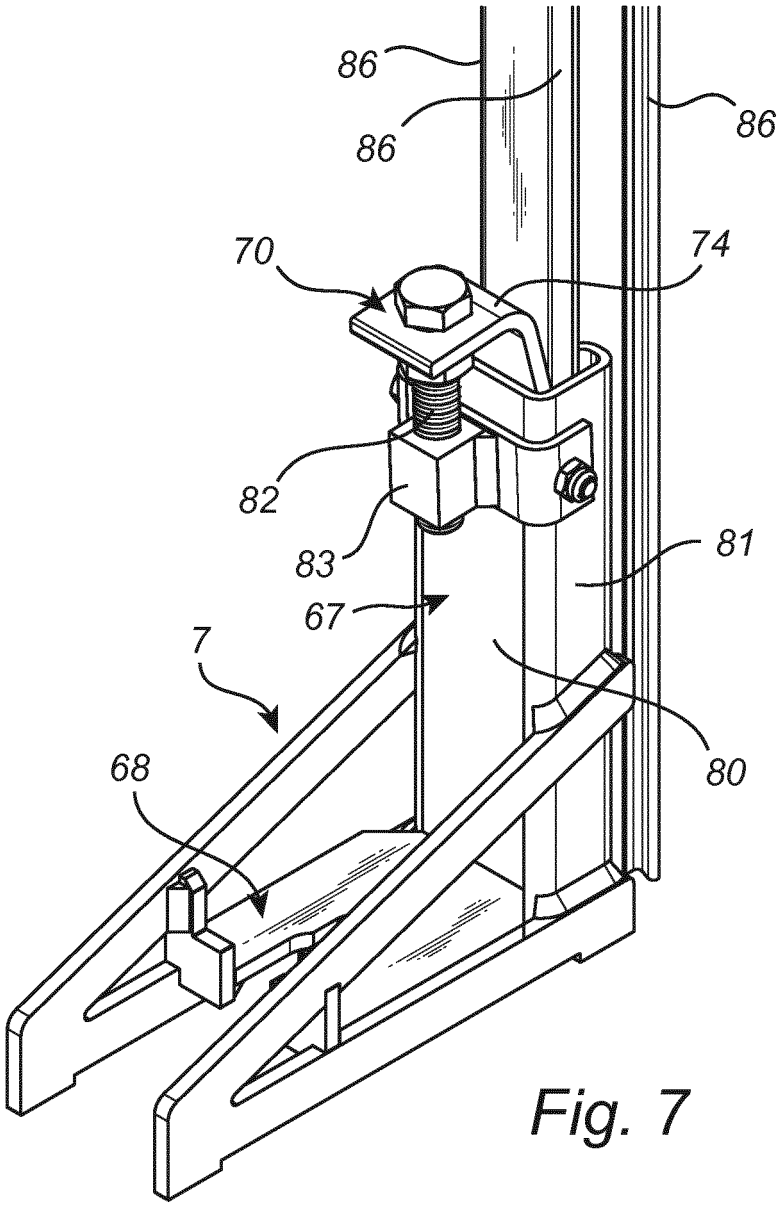

Fig. 7

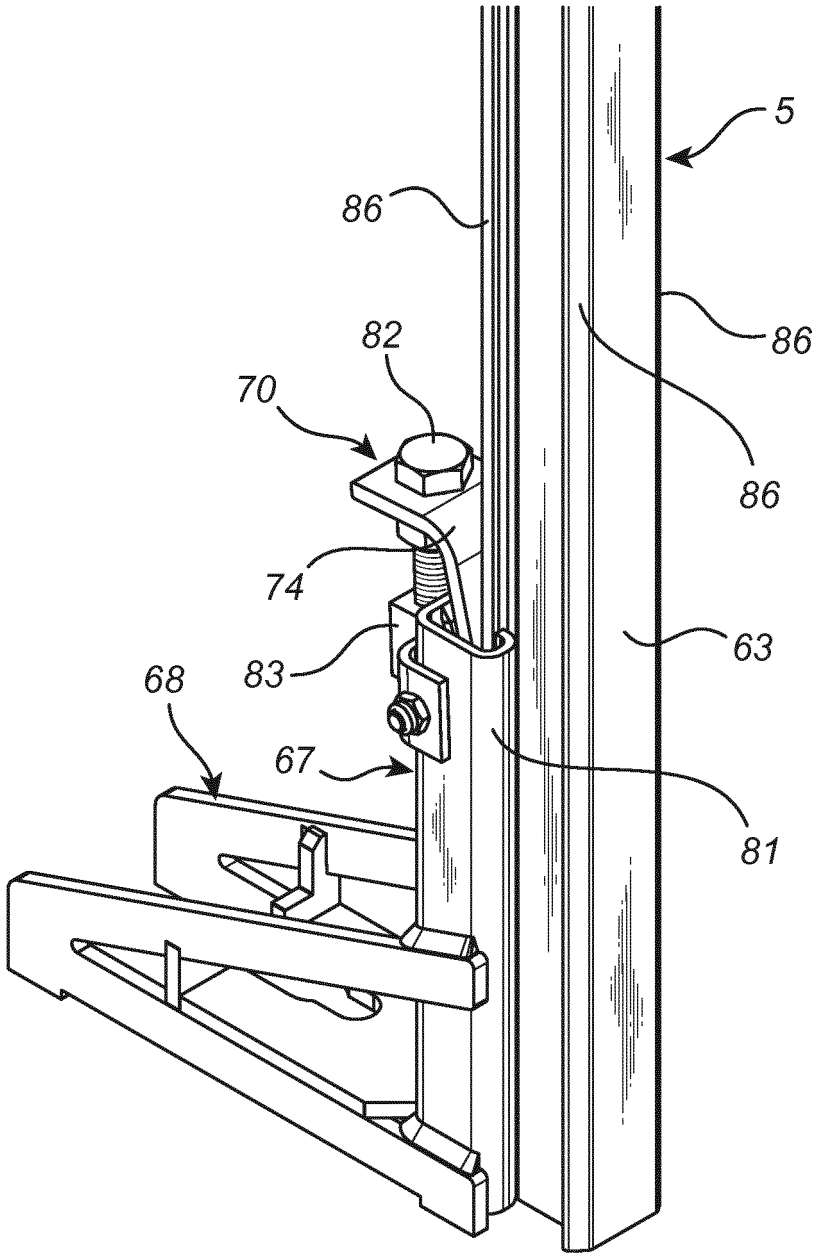

Fig. 8

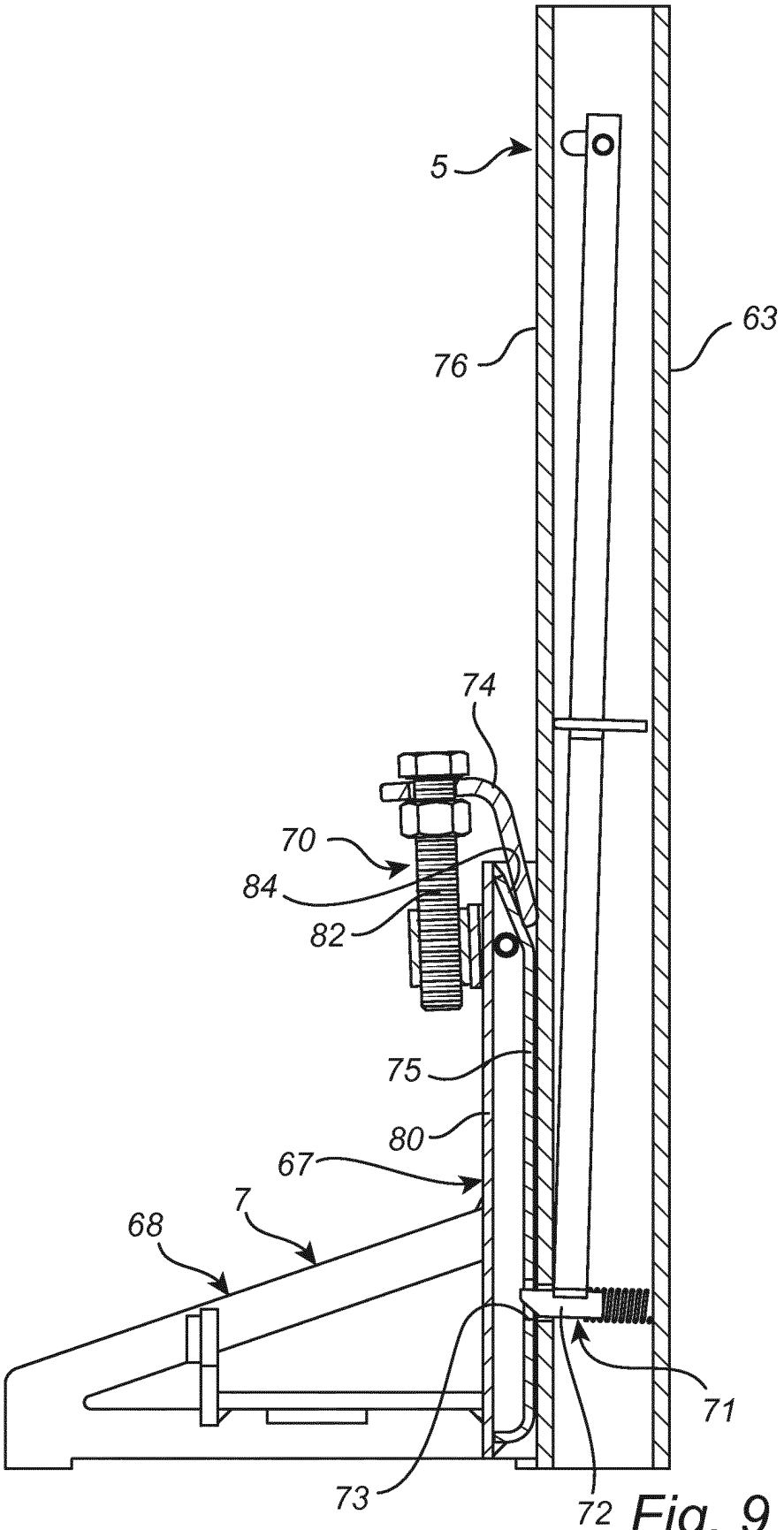

Fig. 9

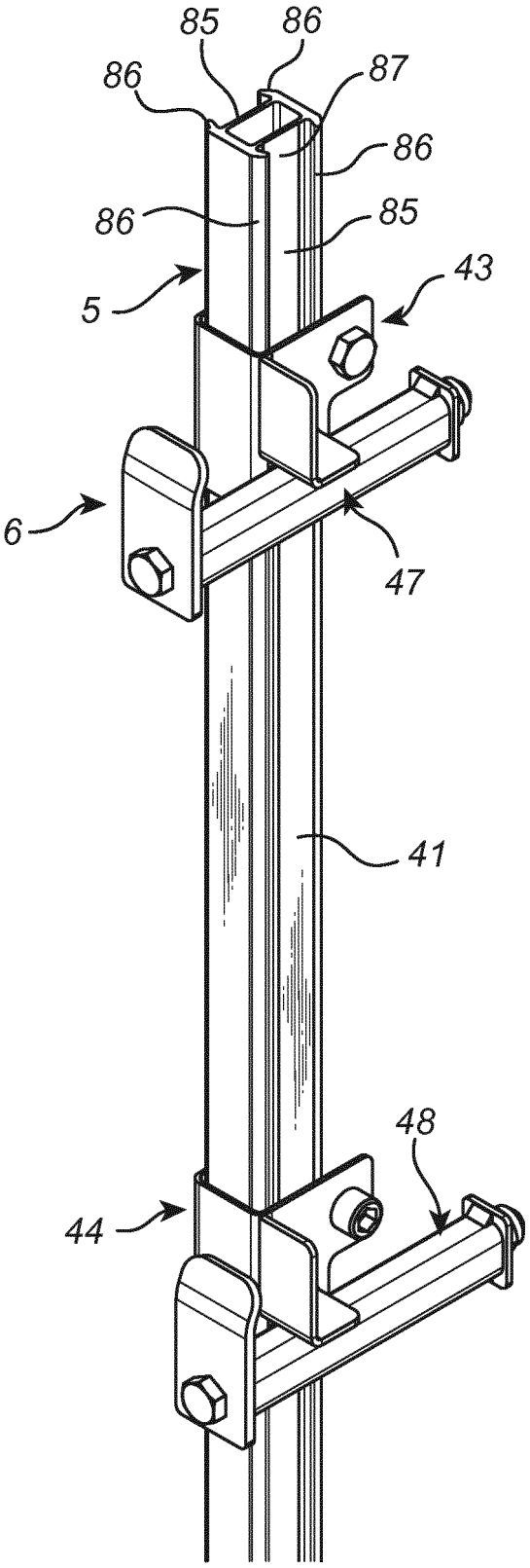

Fig. 10

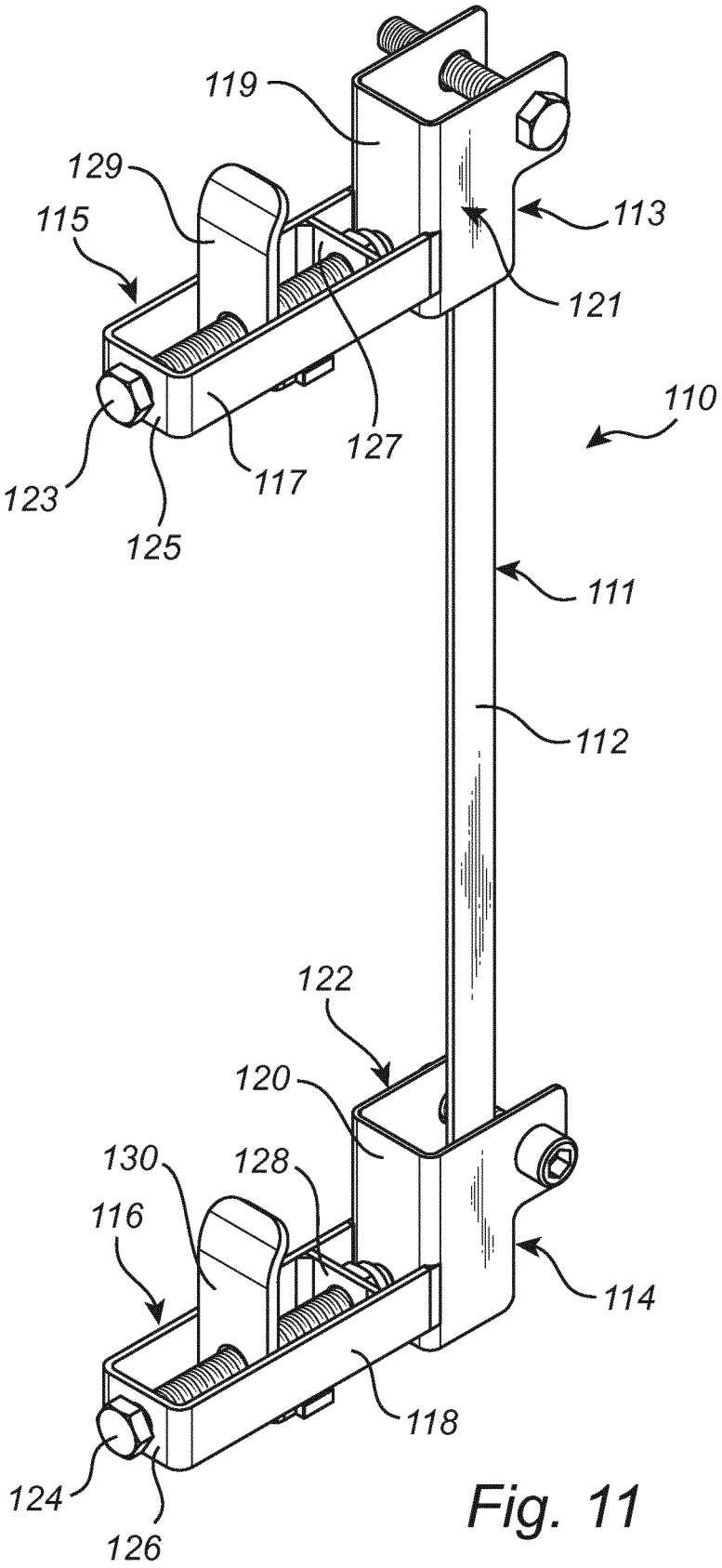
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Fig. 11

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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