

(19)



(11)

EP 4 682 333 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
21.01.2026 Bulletin 2026/04

(51) International Patent Classification (IPC):
E04H 15/58^(2006.01)

(21) Application number: **25188829.3**

(52) Cooperative Patent Classification (CPC):
E04H 15/58

(22) Date of filing: **10.07.2025**

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL
NO PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA
Designated Validation States:
GE KH LA MA MD TN

(72) Inventors:
• **BETTEGA, Andrea**
I-36053 Gambellara, VICENZA (IT)
• **BETTEGA, Marco**
I-36053 Gambellara, VICENZA (IT)

(74) Representative: **Zanettin, Gianluigi et al**
Jacobacci & Partners S.p.A.
Piazza Mario Saggin, 2
35131 Padova (IT)

(30) Priority: **18.07.2024 IT 202400016693**

(71) Applicant: **Bega S.r.l. Società Benefit**
36053 Gambellara (VI) (IT)

(54) **FIXED SHADE SAIL**

(57) The present invention relates to a fixed shade sail (1) comprising: - a tarpaulin (10) on which a lower face (10') and an upper face (10'') are identified; - a plurality of anchoring bodies (11, 12, 13, 14) connected to the tarpaulin along the peripheral edge of the tarpaulin itself; - a plurality of main tie-rods (21, 22, 23, 24) which are connectable to said anchoring bodies (11, 12, 13, 14) for tensioning, in use, said tarpaulin between a plurality of supports (50) either directly or indirectly anchored to the ground. The sail (1) comprises at least one secondary tie-rod (30) of flexible type which is arranged at the lower face

(10') of the tarpaulin and can be either directly or indirectly anchored to the tarpaulin itself close to or at its two ends (30', 30''). The length (L) of said secondary tie-rod (30) between the points of direct or indirect connection with the tarpaulin (10) is adjustable through tensioning means (40) so that said secondary tie-rod can be taut between two different portions of the tarpaulin until it adheres to the lower face (10') of the tarpaulin (10), which portions are chosen so that the tie-rod passes at least close to the central area of the tarpaulin and acts as a support element for the tarpaulin itself.

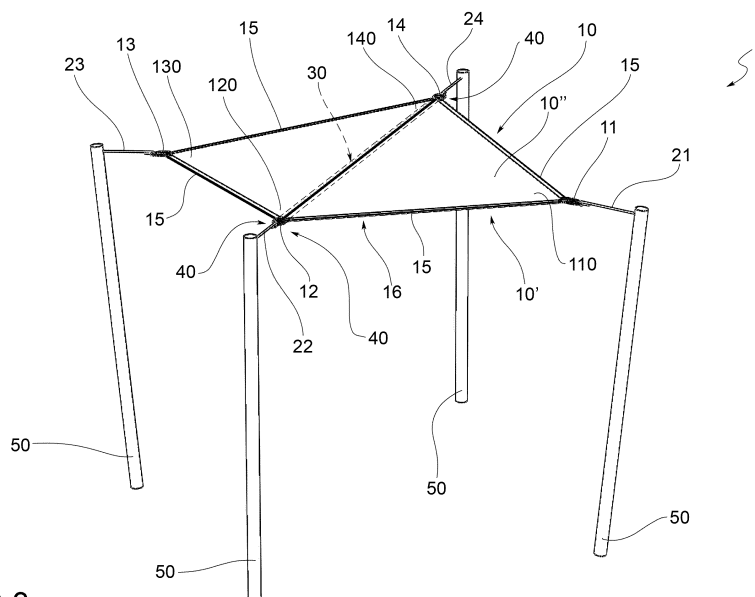


FIG.3

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Description

Field of application

[0001] The present invention relates to a fixed shade sail.

Background art

[0002] As shown in Figures 1 and 2, a fixed shade sail V (also referred to as a static sail in contrast to a retractable sail) comprises a tarpaulin T which, in the mounted condition, is supported in place by means of anchoring tie-rods R.

[0003] In more detail, the tarpaulin, usually of polygonal shape, is anchored to support poles P and/or building walls by means of the aforesaid tie-rods R which, once hooked to the corners A of the tarpaulin and tensioned, tension in turn the tarpaulin itself.

[0004] This mounting mode allows the tarpaulin to stretch perfectly across its entire surface.

[0005] Unlike retractable shade sails, fixed shade sails are intended to remain stably in an extended condition, exposed to atmospheric agents.

[0006] In order to avoid water stagnation from forming in the centre of the tarpaulin in the event of rain, the tarpaulin itself is generally installed with a predefined inclination, so as to allow natural water drainage.

[0007] In some cases, the problem of water stagnation is solved by equipping the tarpaulin with rigid support elements that are inserted into special tubular seats created on the tarpaulin itself and pass therethrough. The tarpaulin is thus stiffened, especially in the central area, preventing the tarpaulin itself from sagging under the weight of the water, instead promoting drainage thereof without needing to incline the tarpaulin.

[0008] An example of such a solution is described in German utility model application DE202015100767.

[0009] Such a technical solution necessarily requires providing tubular seats on the tarpaulin, as well as a plurality of rigid support elements. However, this results in increased production costs, as well as greater installation complexity.

[0010] In the field of shade sails, a need is thus felt to provide a fixed shade sail adapted to allow water drainage without being mounted with inclination while not requiring rigid support elements, so as to be less costly to manufacture and easier to install.

Overview of the invention

[0011] Therefore, it is the main object of the present invention to eliminate, in whole or in part, the drawbacks of the above-mentioned prior art by providing a fixed shade sail which allows for the water drainage without being mounted with inclination while not requiring rigid support elements.

[0012] It is a further object of the present invention to

provide a fixed shade sail which is simple and inexpensive to manufacture.

[0013] It is a further object of the present invention to provide a fixed shade sail which is simple and easy to install.

Brief description of the drawings

[0014] The technical features of the invention, according to the aforesaid objects, are clearly discernible from the content of the claims set forth below, and the advantages thereof will become more apparent in the following detailed description, made with reference to the accompanying drawings, which show one or more embodiments thereof merely given by way of nonlimiting example, in which:

- Figures 1 and 2 show two perspective views of a fixed shade sail of the known type;
- Figure 3 shows a top perspective view of a fixed shade sail according to a first preferred embodiment of the invention, shown in the assembled configuration with some parts shown in transparency to better show others;
- Figure 4 shows a bottom perspective view of the fixed shade sail in Figure 3;
- Figure 5 shows an enlarged perspective view of a detail of the fixed shade sail in Figure 4, relating to a secondary tie-rod consisting of a webbing made of textile material;
- Figure 6 shows a further enlarged perspective view of a detail of the fixed shade sail in Figure 4, relating to tensioning means for said secondary tie-rod;
- Figure 7 shows a top perspective view of the tensioning means associated with said secondary tie-rod shown in Figure 6;
- Figure 8a shows a partially exploded perspective view of the sail in Figure 3;
- Figure 8b shows an orthogonal plan view of a component of the sail in Figure 8a relating to a buckle that acts as an anchor for a main tie-rod and as a tensioning device for a secondary tie-rod;
- Figure 9 shows a bottom perspective view of a fixed shade sail according to a second preferred embodiment of the invention, shown in an assembled configuration;
- Figure 10 shows an enlarged perspective view of a detail of the fixed shade sail in Figure 9, relating to a secondary tie-rod consisting of a cable and the related tensioning means for said secondary tie-rod;
- Figure 11 shows a partially exploded perspective view of the components shown in Figure 10;
- Figure 12 shows a bottom perspective view of a fixed shade sail according to a third preferred embodiment of the invention, shown in an assembled configuration;
- Figures 13a and 13b show two enlarged details of the sail in Figure 12;

- Figure 14 shows a bottom perspective view of a fixed shade sail according to a fourth preferred embodiment of the invention, shown in an assembled configuration;
- Figures 15a, 15b, and 15c show three enlarged details of the sail in Figure 14;
- Figures 16, 17, and 18 diagrammatically show three different modes of connecting a secondary tie-rod to the tarpaulin of a sail according to the invention.

Detailed description

[0015] The fixed shade sail according to the invention is indicated as a whole by numeral 1 in the accompanying Figures.

[0016] Here and in the following description and claims, reference will be made to the fixed shade sail 1 in conditions of use. Any references to a lower or upper position, or to a horizontal or vertical orientation, should thus be interpreted in this sense.

[0017] According to a general embodiment of the invention, the fixed shade sail 1 comprises a tarpaulin 10 on which there are identified:

- a lower face 10', which in use is the tarpaulin face facing downwards; and
- an upper face 10", which in use is the tarpaulin face facing upwards.
- In particular, the tarpaulin 10 can be made of textile material, in particular polyester, polypropylene, polyethylene, or acrylic fabric.

[0018] The fixed shade sail 1 further comprises:

- a plurality of anchoring bodies 11, 12, 13, 14 connected to the tarpaulin along the peripheral edge 16 of the tarpaulin itself; and
- a plurality of main tie-rods 21, 22, 23, 24 which are connectable to the anchoring bodies 11, 12, 13, 14 for tensioning, in use, said tarpaulin between a plurality of supports 50 either directly or indirectly anchored to the ground.

[0019] In particular, the main tie-rods can be metal cables or ropes.

[0020] In the accompanying figures, the supports 50 are poles anchored directly to the ground; these supports can alternatively be masonry works. In general, the supports 50 can be any element capable of stably supporting the sail 1.

[0021] According to the invention, as shown in particular in Figures 4, 5, 9, 10, 12, and 14, the fixed shade sail 1 comprises at least one secondary tie-rod 30 of flexible type.

[0022] Such at least one secondary tie-rod 30 is arranged at the lower face 10' of the tarpaulin 10 (i.e., below the tarpaulin itself), unlike the main tie-rods which extend externally with respect to the tarpaulin.

[0023] The aforesaid secondary tie-rod 30 can be anchored either directly or indirectly to the tarpaulin 10, close to or at its two ends 30', 30".

[0024] The phrase "anchored or anchorable directly to the tarpaulin" means that the connection means act directly between the secondary tie-rod and the tarpaulin.

[0025] The phrase "anchored or anchorable indirectly to the tarpaulin" means that the connection means act between the secondary tie-rod and a further intermediate element which, in turn, is connected to the tarpaulin. Preferably, as will be discussed later, such an intermediate element consists of one of said anchoring bodies 11, 12, 13, 14.

[0026] The length L of said secondary tie-rod 30 between the points of direct or indirect connection with the tarpaulin 10 is adjustable through tensioning means 40 so that the secondary tie-rod 30 can be taut between two different portions of the tarpaulin until it adheres to the lower face 10' of the tarpaulin 10.

[0027] Such two portions of the tarpaulin 10 are chosen so that the secondary tie-rod 30 passes at least close to the central area of the tarpaulin 10 and acts as a support element for the tarpaulin itself.

[0028] Operatively, the secondary tie-rod 10 can serve its support function because it is tensionable below the tarpaulin until it adheres thereto.

[0029] By virtue of the invention, i.e., of the presence of the tensionable secondary tie-rod 30, the fixed shade sail 1 can be provided with a support rib that stiffens the central area of the tarpaulin. The tarpaulin 10 is thus less prone to bending under the weight of rainwater and can thus ensure the drainage of the water itself without necessarily requiring installation with inclination.

[0030] Unlike the prior art, such a result is achieved without the need to use rigid support elements. In fact, the support element is obtained by tensioning a flexible element below the tarpaulin (i.e., the secondary tie-rod), and not by using elongated bodies having intrinsic longitudinal rigidity.

[0031] This also makes the fixed shade sail 1 according to the invention simpler and more cost-effective to manufacture.

[0032] Furthermore, the absence of rigid support elements (such as fiberglass or carbon bars, for example) reduces the minimum size of a possible packaging for the shipment of the disassembled sail. This is advantageous for the simplification of logistics and the reduction of transport costs.

[0033] Moreover, the absence of rigid support elements simplifies and facilitates the operations of installing the fixed shade sail. In fact, a flexible element is easier to move and adapts more easily during the assembly.

[0034] Furthermore, as will become more apparent from the following description, the use of a flexible element (tensionable between two portions of the tarpaulin) does not require the provision of housing seats on the tarpaulin, which are generally necessary for the applica-

tion of rigid support elements to the tarpaulin.

[0035] Preferably, as shown in particular in Figures 6, 7, and 10, each of said anchoring bodies 11, 12, 13, 14 is stably fixed to the tarpaulin 10 and defines a first seat 61 for coupling the respective main tie-rod 21, 22, 23, 24.

[0036] Advantageously, as shown in the accompanying figures, each anchoring body 11, 12, 13, 14 can consist of a shaped plate, preferably made of metal, on which are obtained:

- a first through opening 60a defining the first seat 61 for the passage of the respective tie-rod; and
- a second through opening 60b defining a second seat 62 for the passage of portions of the tarpaulin.

[0037] In more detail, as shown in Figures 6, 7, and 10, the tarpaulin 10 is provided with peripheral reinforcement webbings 15, which in predefined positions along the peripheral edge 16 of the tarpaulin 10 are passed through the second seat 62 of the shaped plates forming the anchoring bodies 11, 12, 13, 14.

[0038] Preferably, the tarpaulin 10 is polygonal in shape and has a plurality of corner portions 110, 120, 130, 140 along its peripheral edge 16.

[0039] For example, the tarpaulin 10 can be triangular or quadrangular in shape (as shown in the accompanying Figures). Other polygonal shapes, either regular or irregular, can also be provided.

[0040] Preferably, as shown in the accompanying Figures, each of said anchoring bodies 11, 12, 13, 14 is connected to the tarpaulin 10 at said corner portions 110, 120, 130, 140. The tarpaulin is thus taut by traction forces applied at the corner portions.

[0041] According to alternative embodiments not shown in the accompanying figures, the shade sail 1 can comprise two or more secondary tie-rods placed below the tarpaulin 10 and adhered thereto. Such two or more tie-rods can intersect each other or not. Reference will be made below to the case of a single secondary tie-rod. It is understood that the description given for a single secondary tie-rod also extends to any secondary tie-rods.

[0042] The secondary tie-rod can be anchored directly to the tarpaulin in any part of the tarpaulin itself. However, the secondary tie-rod is preferably anchored directly to the tarpaulin close to the anchoring bodies 11, 12, 13, 14, as it is a more resistant part of the tarpaulin. Reference will thus be made below to this direct connection only.

[0043] Similarly, the secondary tie-rod can be anchored indirectly to the tarpaulin by means of any intermediate element interposed between the tarpaulin and the tie-rod. However, the secondary tie-rod is preferably anchored indirectly to the tarpaulin at the anchoring bodies 11, 12, 13, 14, as they are a part of the shade sail connected to the tarpaulin in a stable and resistant manner. Reference will thus be made below to such an indirect connection only.

[0044] Advantageously, the aforesaid at least one sec-

ondary tie-rod 30 can be anchored, at both of its two ends:

- directly to the tarpaulin 10 close to two of said anchoring bodies 11, 12, 13, 14 (see Figure 14); or
- indirectly to the tarpaulin 10 at two of said anchoring bodies 11, 12, 13, 14 (see Figures 4 and 9).
- Alternatively, as shown in Figure 12, the secondary tie-rod 30 can be anchored:
- at a first end thereof, directly to the tarpaulin 10 (close to two of said anchoring bodies 11, 12, 13, 14) and
- at a second end thereof, indirectly to the tarpaulin 10 (at two of said anchoring bodies 11, 12, 13, 14).

[0045] Preferably, as shown in particular in Figures 3, 4, 9, 12, 14, and 16- 18, said secondary tie-rod 30 is anchored to the tarpaulin close to or at two of said anchoring bodies 12 and 14, the line of junction of which is substantially aligned with the respective main tie-rods 22 and 24. The tension applied by the secondary tie-rod 30 to the tarpaulin 10 can thus be balanced by the opposite tension applied by the main tie-rods to the tarpaulin itself.

[0046] Said secondary tie-rod 30 is operatively associated with said tensioning means 40 adapted to adjust the length of said tie-rod between two ends 30', 30" of the tie-rod itself.

[0047] As for the secondary tie-rod, two cases can be provided:

- the secondary tie-rod consists of a single body (see Figures 3, 9, 12, 16, and 17); or
- the secondary tie-rod consists of at least two elongated bodies connected to each other (see Figures 14 and 18).

[0048] The case of a secondary tie-rod consisting of a single body is now considered.

[0049] In accordance with the embodiments shown in Figures 3, 9, and 12, the aforesaid secondary tie-rod 30 consists of a single elongated body 300 extending seamlessly between the two tie-rod ends 30', 30" at which it is anchored and/or anchorable either directly or indirectly to the tarpaulin 10.

[0050] Advantageously, as diagrammatically shown in Figure 16, said single elongated body 300 can be anchored or anchorable in an adjustable manner to the tarpaulin 10 at both ends 30', 30" by means of two separate tensioning devices 41, 42 that form said tensioning means 40.

[0051] Preferably, as shown in Figures 3 and 9, said single elongated body 300 is anchored or anchorable in an adjustable manner indirectly to the tarpaulin 10 at both ends 30', 30" thereof at two of said anchoring bodies. In this case, the aforesaid two separate tensioning devices 41, 42 are integrated or connected to the respective anchoring body 11, 12, 13, 14.

[0052] Alternatively, said single elongated body 300 is anchored or anchorable in an adjustable manner directly

to the tarpaulin 10 at both ends 30', 30" close to two of said anchoring bodies. In such a case, the aforesaid two separate tensioning devices 41, 42 are separate from the respective anchoring body 11, 12, 13, 14.

[0053] Alternatively, as shown in Figure 12 and diagrammatically also in Figure 17, said single elongated body 300:

- can be anchored either directly or indirectly to the tarpaulin 10 in a non-adjustable manner at a first end 30' (e.g., by stitching 47), and
- can be anchored or anchorable either directly or indirectly to the tarpaulin 10 in an adjustable manner at a second end 30" by means of a tensioning device 43 forming said tensioning means 40.

[0054] The case of a secondary tie-rod consisting of at least two elongated bodies connected to each other is now considered.

[0055] According to the embodiment shown in Figure 14 and diagrammatically also in Figure 18, the aforesaid secondary tie-rod 30 consists of two elongated bodies 311, 312 each of which:

- is anchored either directly or indirectly to the tarpaulin 10 in a non-adjustable manner (e.g., by stitching 47) at a first end 311', 312' thereof and
- is connectable to the other elongated body in an adjustable manner at a second end 311", 312" thereof, opposite to the first, by means of a tensioning device 43 forming said tensioning means 40.

[0056] In this latter case, the tensioning device 43 is distinct from the anchoring elements. In particular, as shown in Figure 15a, the tensioning device can be a buckle.

[0057] Preferably, the two elongated bodies 311, 312 are anchored or anchorable either directly or indirectly to the tarpaulin 10 at the respective first end 311', 312' close to or at one of said anchoring bodies 11, 12, 13, 14, respectively.

[0058] According to a particularly preferred embodiment, shown in particular in Figures 3 to 8b, the secondary tie-rod 30 can be a webbing, understood as a band-shaped body.

[0059] Such a solution applies when the secondary tie-rod 30 consists of a single elongated body 300 or consists of two elongated bodies 311, 312.

[0060] Preferably, the webbing (or band-shaped body) is made of textile material. Preferably, the textile material is a polyester fabric that ensures high strength; however, as an alternative, it is possible to use fabrics made of other materials that ensure adequate tensile strength.

[0061] If the secondary tie-rod 30 is a webbing, it is anchored or anchorable directly to the tarpaulin 10 by stitching, Velcro, or buttons.

[0062] In more detail, in the case of anchoring by stitching, the anchoring is not adjustable, whereas it is

adjustable in the case of anchoring by means of Velcro or buttons.

[0063] Again if the secondary tie-rod 30 is a webbing, it is anchored or anchorable indirectly to the tarpaulin 10 by means of buckles, Velcro, or buttons, preferably integrated or connected to said anchoring bodies 11, 12, 13, 14. Such anchoring means (buckles, buttons, and Velcro) allow for adjustable anchoring and also form the tensioning means for the tie-rod.

[0064] According to a completely preferred embodiment shown in Figures 3 to 8b, said tensioning device is a buckle, integrated into an anchoring body 11-14.

[0065] In particular, as shown in Figures 6, 7, and 8b, the buckle is defined by a plurality of through openings 63 (preferably consisting of slots) that are obtained in the shaped plate of the anchoring body and through which the secondary tie-rod 30 in the form of a webbing can be passed, tensioning it and securing it when taut.

[0066] According to an alternative embodiment, shown in particular in Figures 9 to 11, the secondary tie-rod 30 can be a rope, a line, or a metal cable.

[0067] Such a solution applies when the secondary tie-rod 30 consists of a single elongated body 300 or consists of two elongated bodies 311, 312.

[0068] Preferably, as shown in Figure 10, if the secondary tie-rod 30 is a rope, a line, or a metal cable, it is anchored or anchorable indirectly to the tarpaulin 10 at an anchoring body 11-14.

[0069] Operatively, the tensioning of the tie-rod 30 is obtained by passing it through two holes 64, 65 obtained on the shaped plate that forms the anchoring body, and then securing it by means of at least one U-bolt clamp 70.

[0070] Advantageously, the secondary tie-rod 30 in the form of a rope or cable can be provided with an additional tensioning device, consisting of a tensioner, a gas spring, and/or a spring.

[0071] The invention allows achieving several advantages, some of which have already been described.

[0072] The fixed shade sail according to the invention allows for water drainage without being assembled with inclination while not requiring rigid support elements.

[0073] The fixed shade sail according to the invention is simple and inexpensive to manufacture.

[0074] The fixed shade sail according to the invention is simple and easy to install.

[0075] Therefore, the invention thus conceived achieves the preset objects.

[0076] Obviously, in its practical implementation, it can also take different forms and configurations from that disclosed above, without departing from the present scope of protection.

[0077] Furthermore, all details may be replaced by technically equivalent elements, and any size, shape, and material may be used according to needs.

Claims

1. Fixed shade sail (1) comprising:

- a tarpaulin (10) on which a lower face (10') and an upper face (10'') are identified; 5
 - a plurality of anchoring bodies (11, 12, 13, 14) connected to the tarpaulin along the peripheral edge of the tarpaulin itself
 - a plurality of main tie-rods (21, 22, 23, 24) which are connectable to said anchoring bodies (11, 12, 13, 14) for tensioning, in use, said tarpaulin between a plurality of supports (50) directly or indirectly anchored to the ground, **characterised in that** it comprises at least one secondary tie-rod (30) of flexible type which is arranged at the lower face (10') of the tarpaulin and can be directly or indirectly anchored to the tarpaulin itself near or at its two ends (30', 30''), wherein the length (L) of said secondary tie-rod (30) between the points of direct or indirect connection to the tarpaulin (10) is adjustable by tensioning means (40) so that said secondary tie-rod can be taut between two different portions of the tarpaulin until it adheres to the lower face (10') of the tarpaulin (10), being chosen so that the tie-rod passes at least near the central area of the tarpaulin and acts as a support element of the tarpaulin itself. 20

2. Fixed shade sail (1) according to claim 1, wherein each of said anchoring bodies (11, 12, 13, 14) is stably fixed to the tarpaulin (10) and defines a first seat (61) for coupling the respective main tie-rod. 25

3. Fixed shade sail (1) according to claim 1 or 2, wherein the tarpaulin (10) has a polygonal shape and has along its peripheral edge a plurality of corner portions (110, 120, 130, 140) and wherein each of said anchoring bodies (11, 12, 13, 14) are connected to the tarpaulin (10) at said corner portions (110, 120, 130, 140). 30

4. Fixed shade sail (1) according to claim 1, 2 or 3, wherein said secondary tie-rod (30) is anchored directly to the tarpaulin near said anchoring bodies (11, 12, 13, 14) or indirectly to the tarpaulin at two of said anchoring bodies (11, 12, 13, 14). 35

5. Fixed shade sail (1) according to claim 4, wherein said secondary tie-rod (30) is anchored to the tarpaulin near or at two of said anchoring bodies (12, 14) whose line of junction is substantially aligned with the respective main tie-rods (22, 24) so that the tension exerted by the secondary tie-rod (30) on the tarpaulin can be balanced by the opposite tension exerted by the main tie-rods on the tarpaulin itself. 40

6. Fixed shade sail (1) according to any one of the main claims, wherein said secondary tie-rod (30) is operatively associated with said tensioning means (40) suitable to adjust the length of said secondary tie-rod between two ends (30', 30'') of the tie-rod itself. 45

7. Fixed shade sail (1) according to claim 6, wherein said secondary tie-rod (30) comprises a single elongated body (300) extending seamlessly between the two ends (30', 30'') of the tie-rod at which it is and/or can be directly or indirectly anchored to the tarpaulin (10). 50

8. Fixed shade sail (1) according to claim 7, wherein said single elongated body (300) is or can be indirectly anchored to the tarpaulin (10) at both ends (30', 30'') in an adjustable manner by means of two separate tensioning devices (41, 42) forming said tensioning means (40). 55

9. Fixed shade sail (1) according to claim 8, when dependent on claim 4, wherein said single elongated body (300) is or can be indirectly anchored to the tarpaulin (10) at both ends (30', 30'') at two of said anchoring bodies and wherein said two separate tensioning devices (41, 42) are integrated or connected to the respective anchoring body. 60

10. Fixed shade sail (1) according to claim 7, wherein said single elongated body (300) is directly or indirectly anchored to the tarpaulin (10) in a non-adjustable manner at a first end (30'), and is or can be directly or indirectly anchored to the tarpaulin (10) in an adjustable manner at a second end (30'') by means of a tensioning device (43) forming said tensioning means (40). 65

11. Fixed shade sail (1) according to claim 10, when dependent on claim 4, wherein said single elongated body (300) is or can be directly or indirectly anchored to the tarpaulin (10) at said first end (30') respectively near or at one of said anchoring bodies, and wherein said single elongated body (300) is or can be indirectly anchored to the tarpaulin (10) at said second end (30'') near one of said anchoring bodies, said tensioning device (43) being integrated or connected to the respective anchoring body. 70

12. Fixed shade sail (1) according to claim 6, wherein said secondary tie-rod (30) comprises two elongated bodies (311, 312) each of which is directly or indirectly anchored to the tarpaulin (10) in a non-adjustable manner at a first end (311', 312') thereof and is connectable to the other elongated body in an adjustable manner at a second end (311'', 312'') thereof, opposite to the first end, by means of a tensioning device (43) forming said tensioning means (40). 75

13. Fixed shade sail (1) according to claim 12, when dependent on claim 4, wherein said two elongated bodies (311, 312) are or can be directly or indirectly anchored to the tarpaulin (10) at the respective first end (30') respectively near or at one of said anchoring bodies. 5
14. Fixed shade sail (1) according to any one of the preceding claims, wherein said single elongated body (300) or both of said elongated bodies (311, 312) consist of webbing, preferably of textile material. 10
15. Fixed shade sail (1) according to claim 14, wherein said webbing is or can be directly anchored to the tarpaulin (10) by means of stitching, Velcro or buttons. 15
16. Fixed shade web (1) according to claim 14 or 15, wherein said webbing is or can be indirectly anchored to the tarpaulin (10) by means of buckles, Velcro, or buttons, preferably integrated or connected to said anchoring bodies. 20
17. Fixed shade sail (1) according to claim 14, 15 or 16, wherein said tensioning device consists of a buckle. 25
18. Fixed shade sail (1) according to any one of claims 1 to 13, wherein said single elongated body (300) or both of said elongated bodies (311, 312) consist of a rope, a line or a metal cable. 30
19. Fixed shade sail (1) according to claim 18, wherein said rope, line or metal cable is or can be indirectly anchored to the tarpaulin (10) by means of U-bolts, preferably in cooperation with said anchoring bodies. 35
20. Fixed shade sail (1) according to claim 18 or 19, wherein said tensioning device consists of a tensioner, a gas spring, a spring. 40

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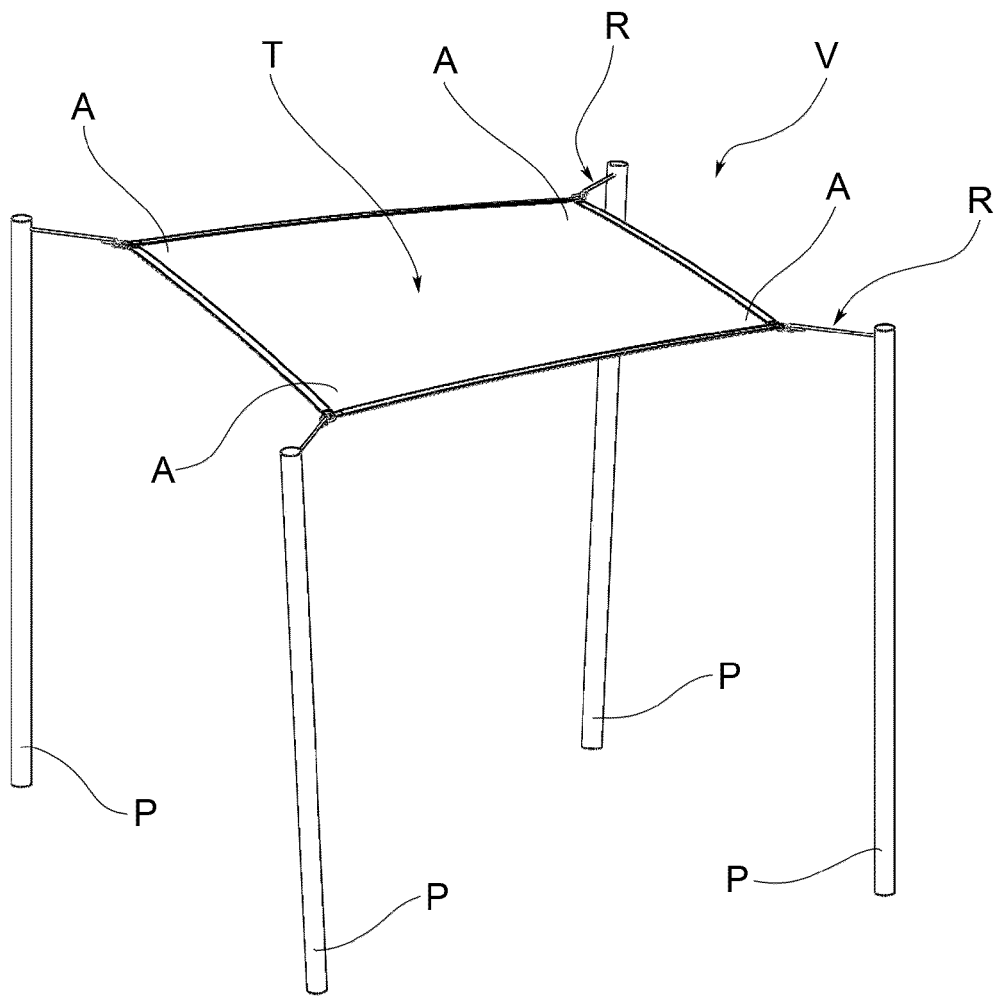


FIG.1

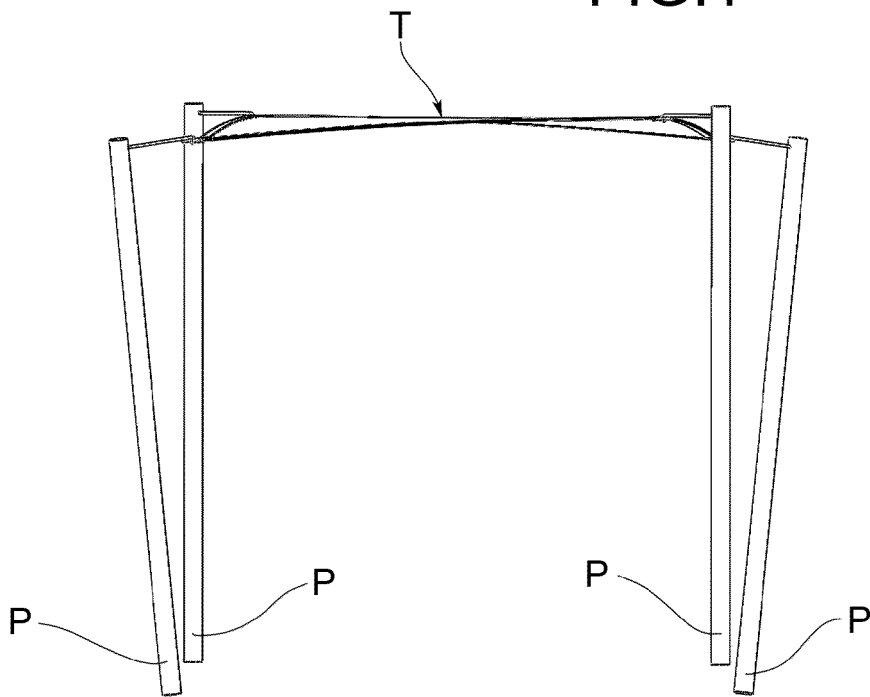


FIG.2

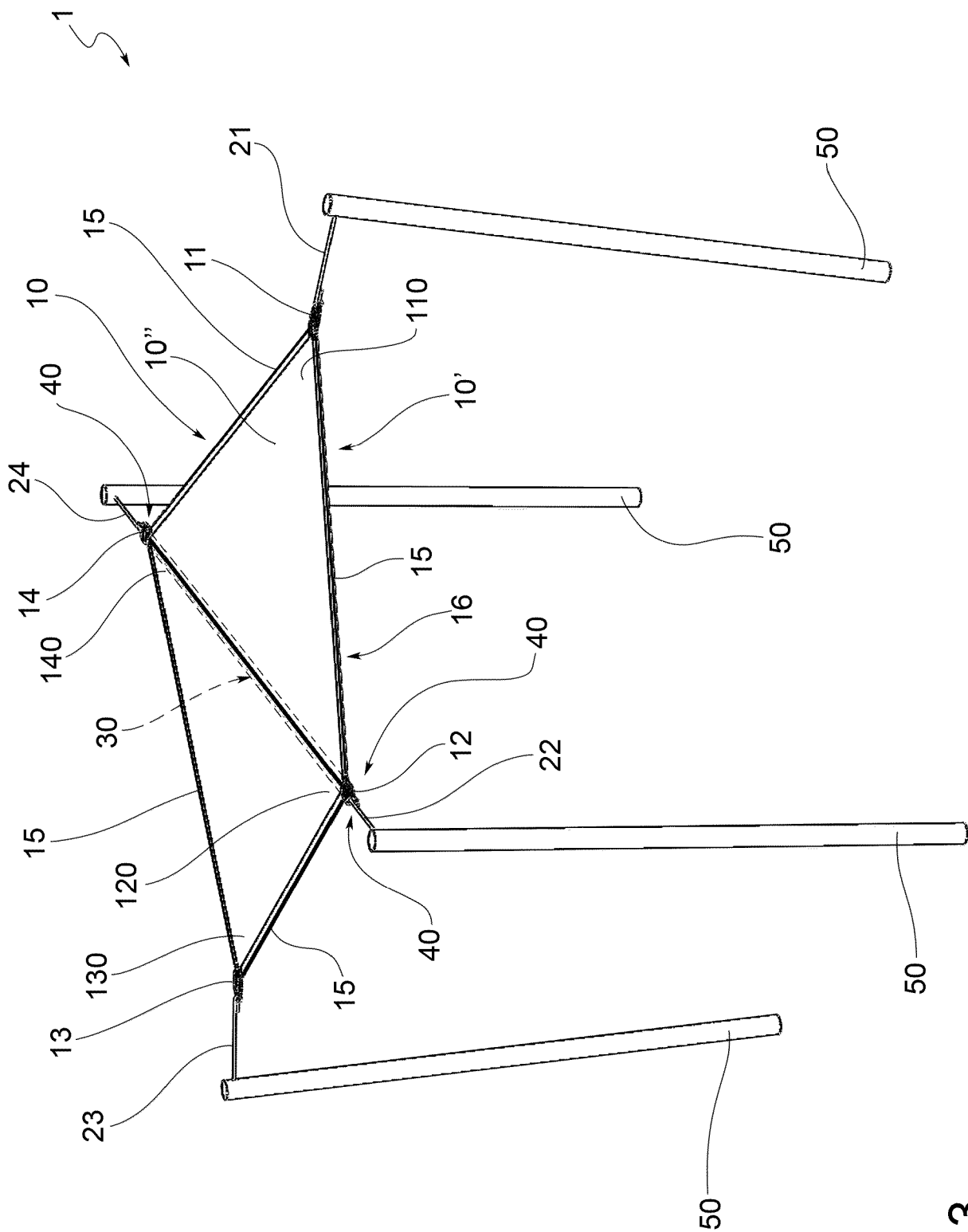
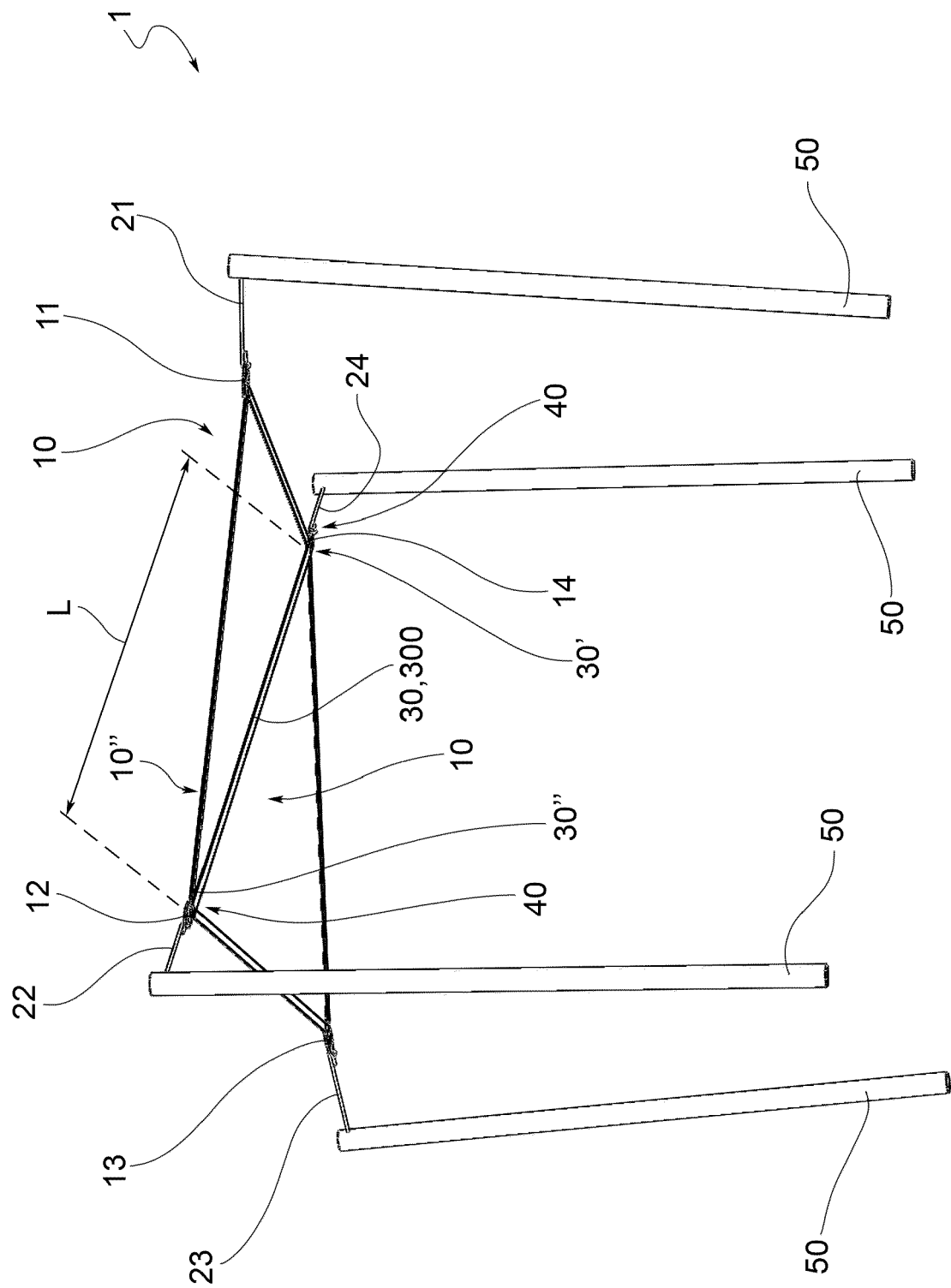


FIG.3



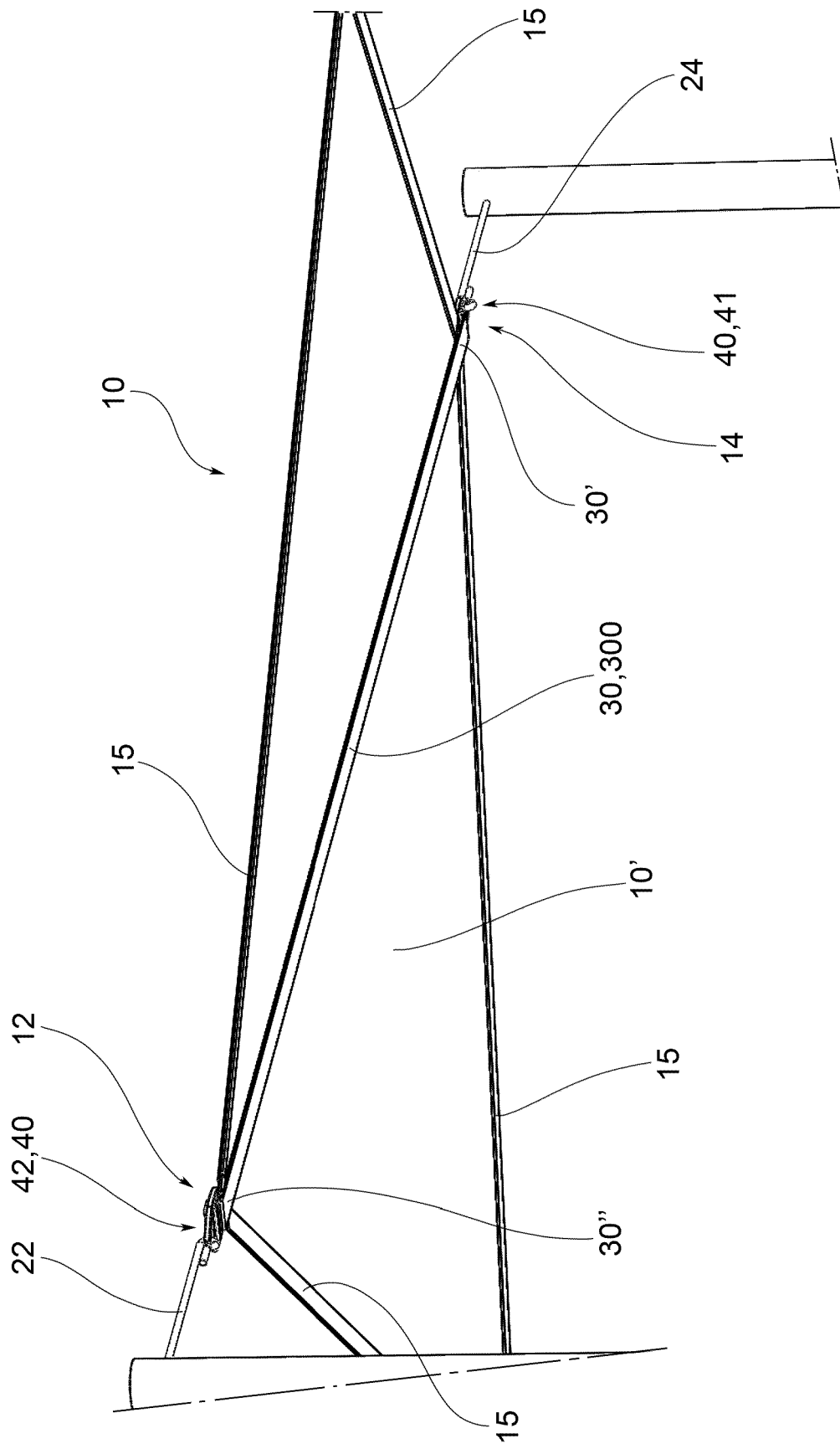
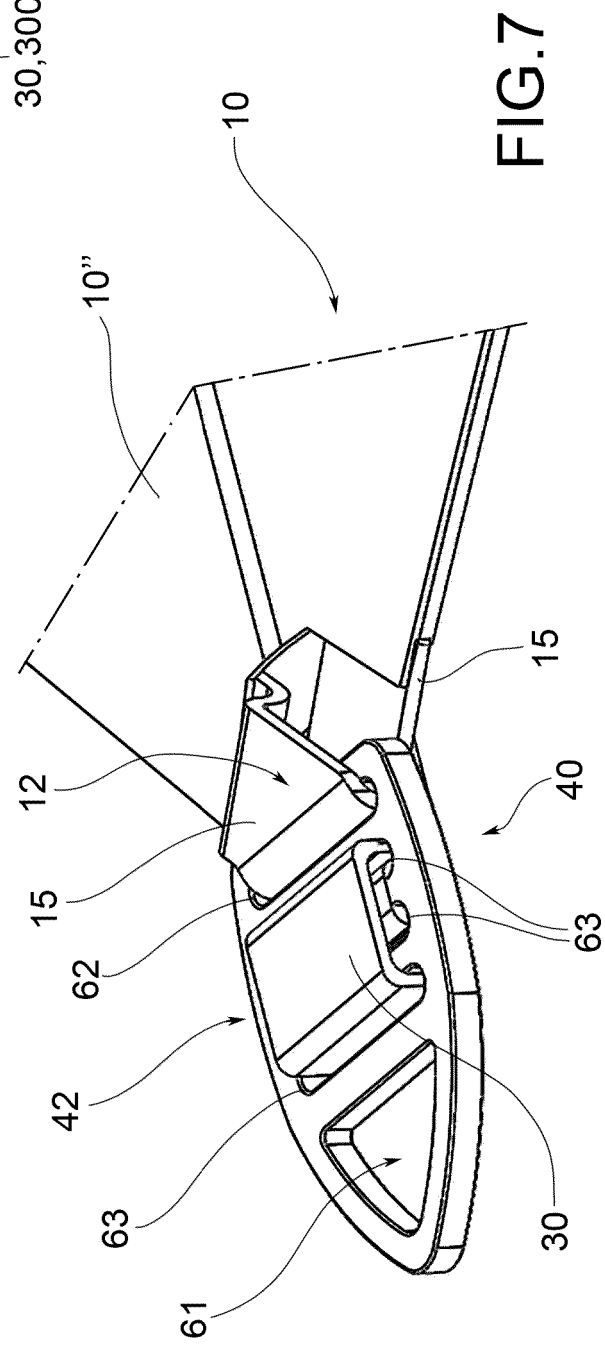
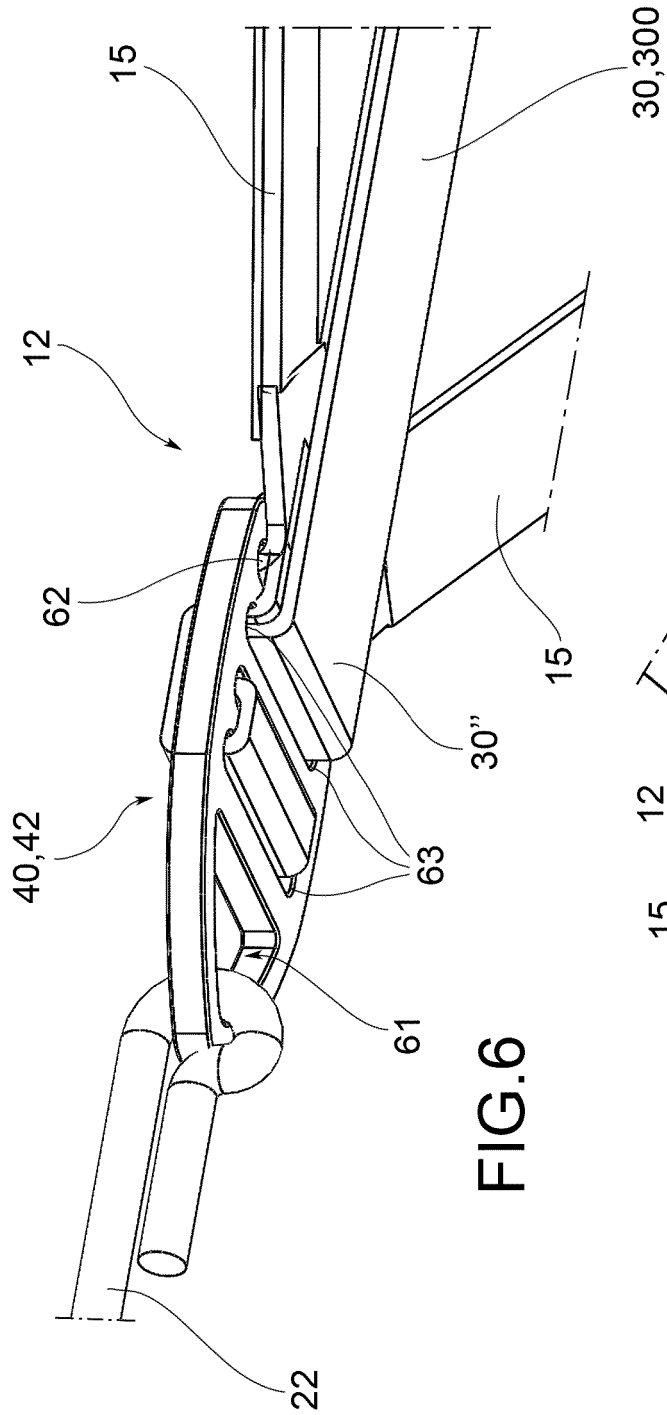


FIG. 5



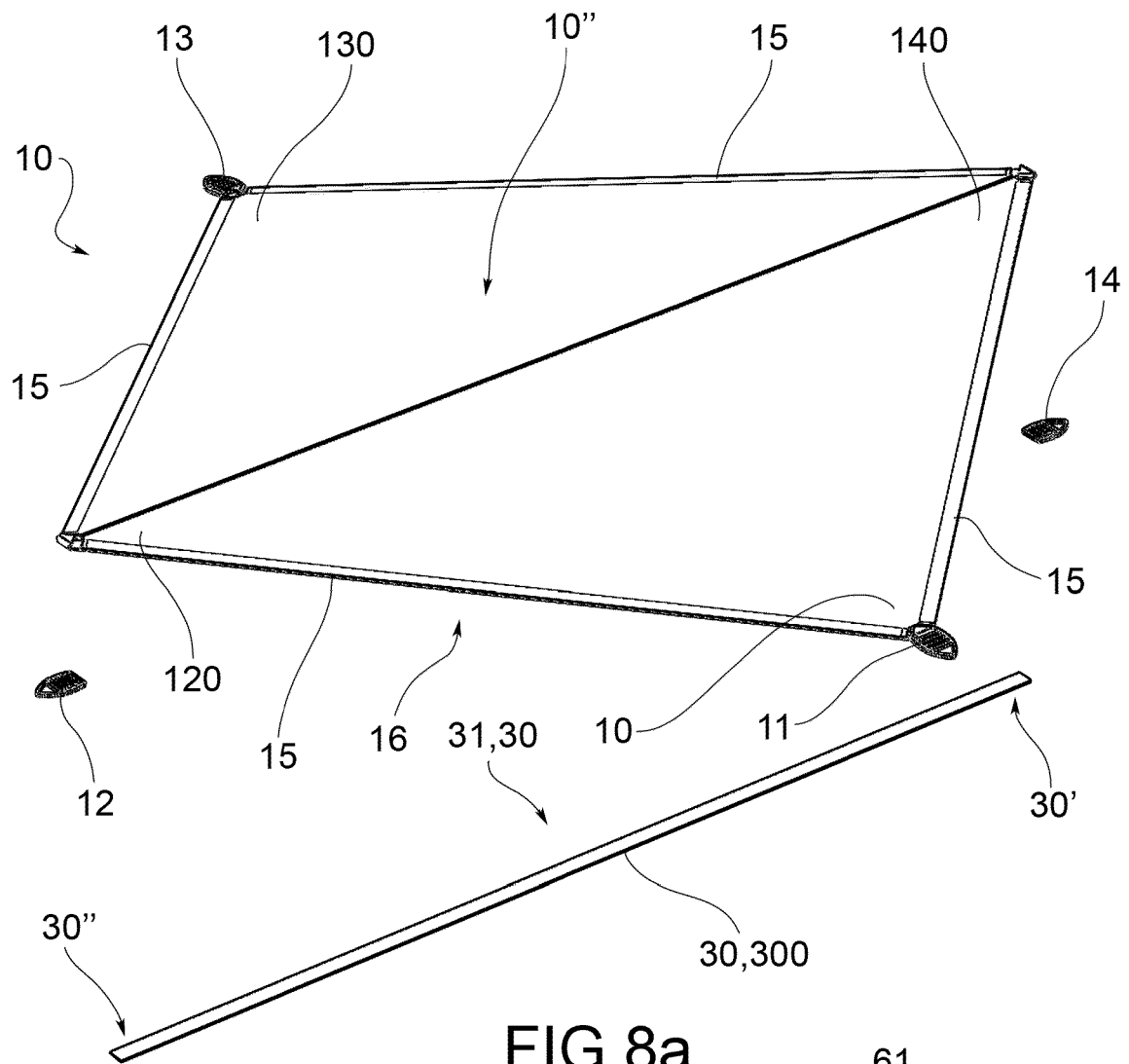


FIG. 8a

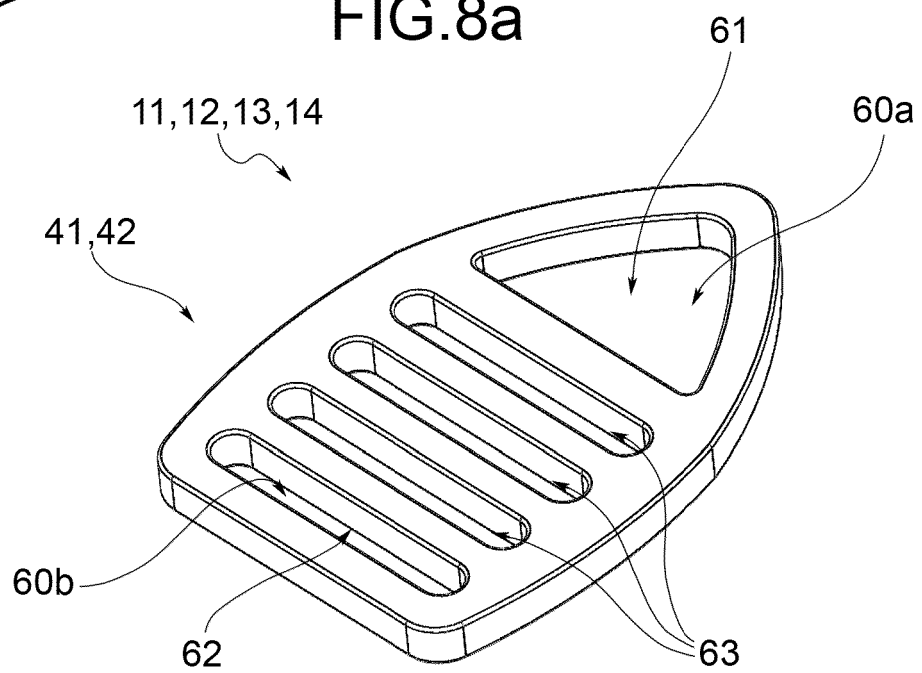


FIG. 8b

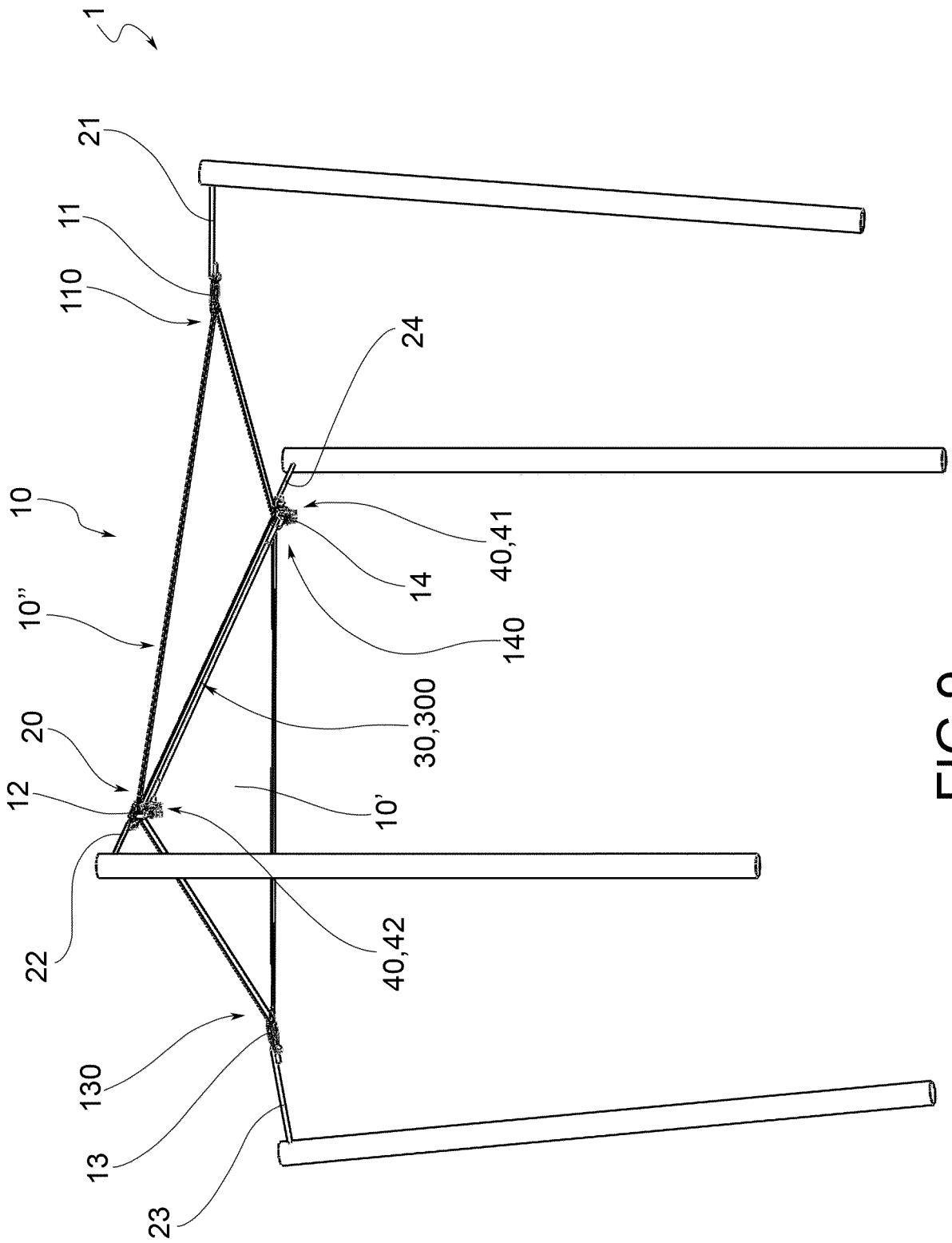


FIG.9

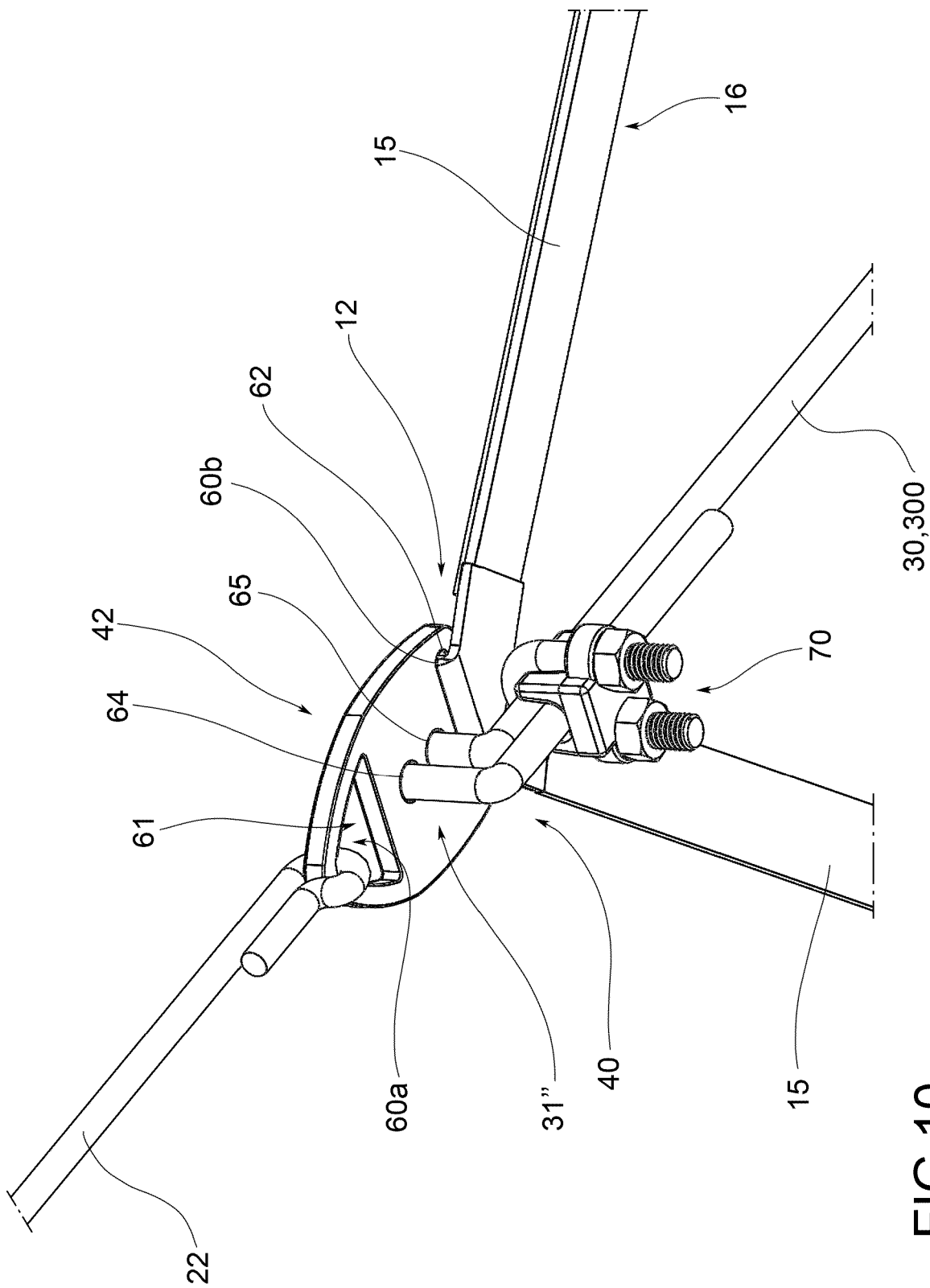


FIG.10

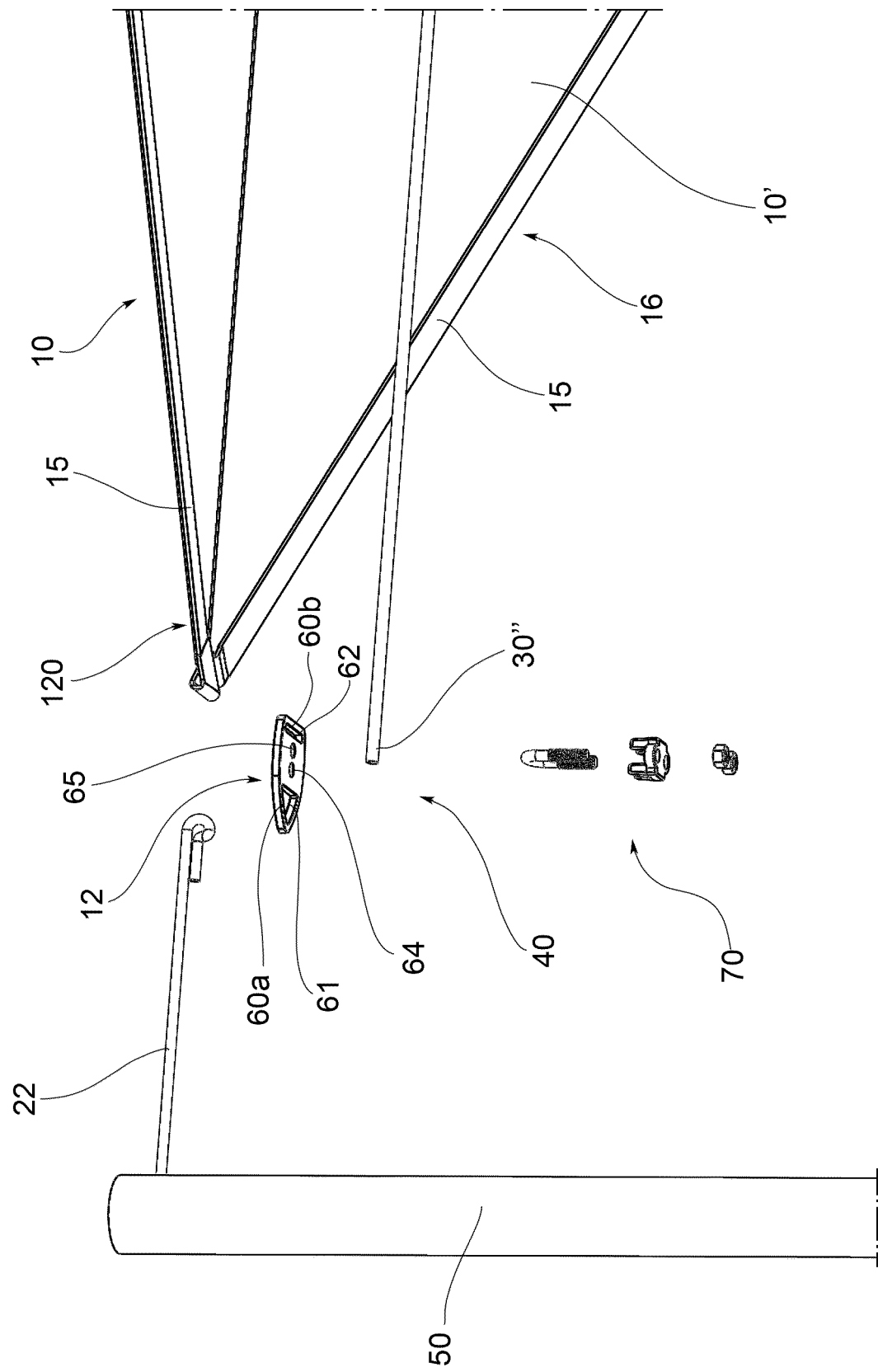


FIG.11

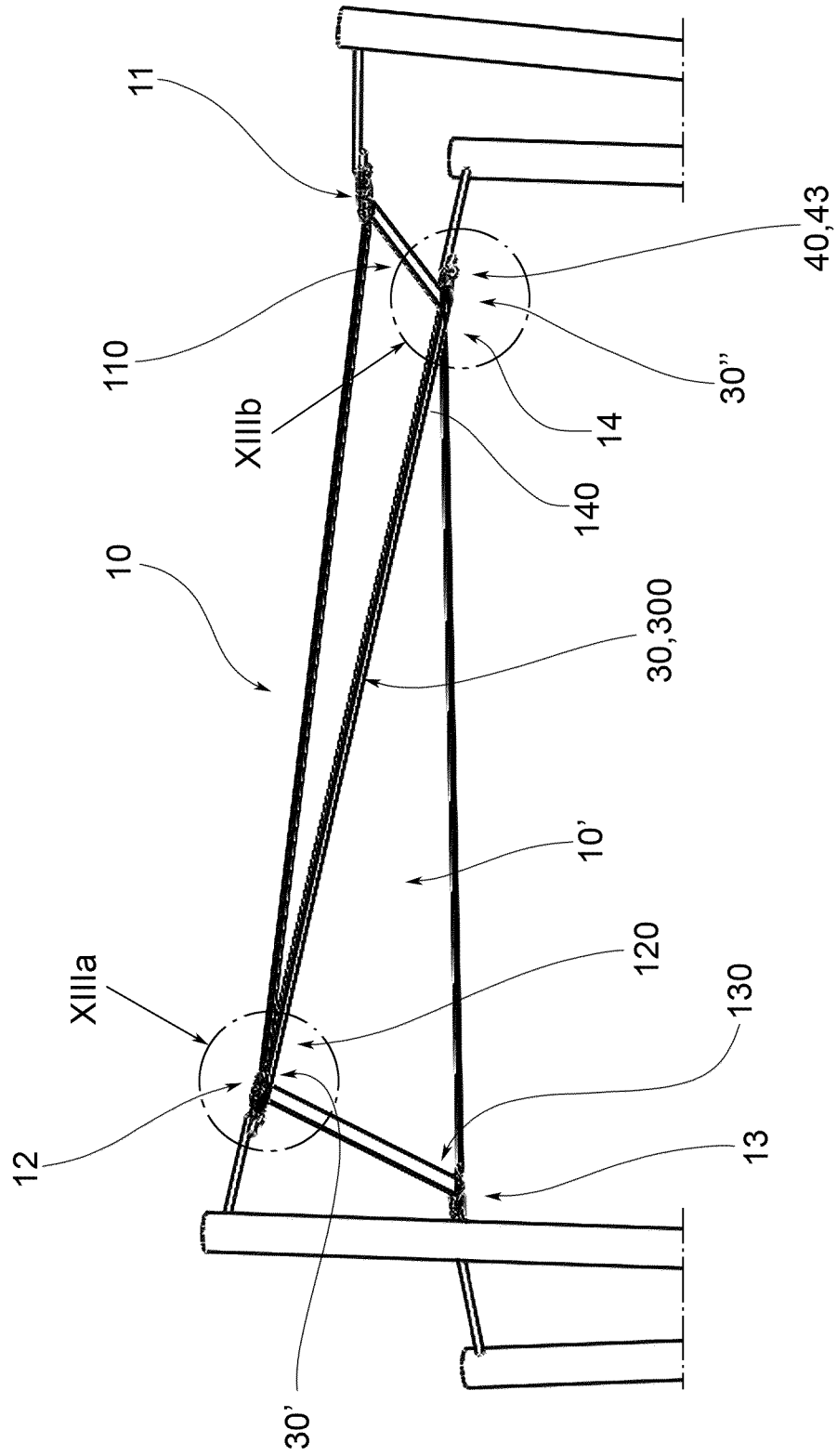


FIG.12

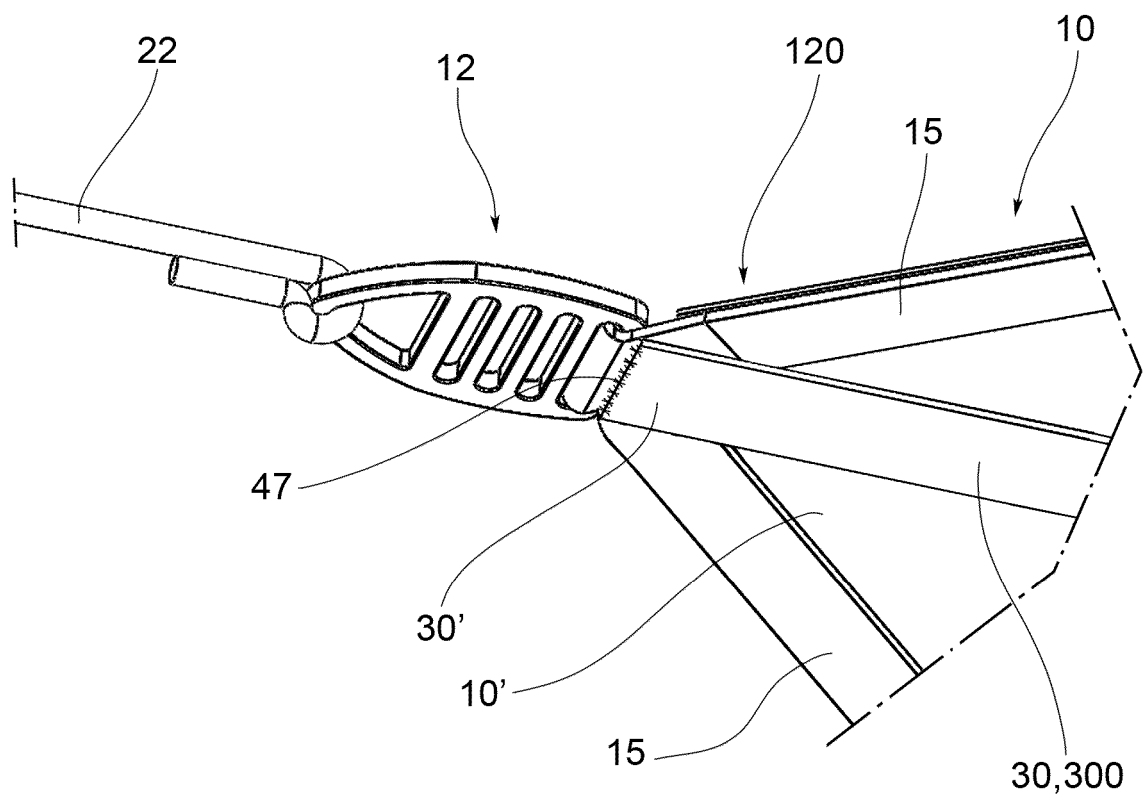


FIG. 13a

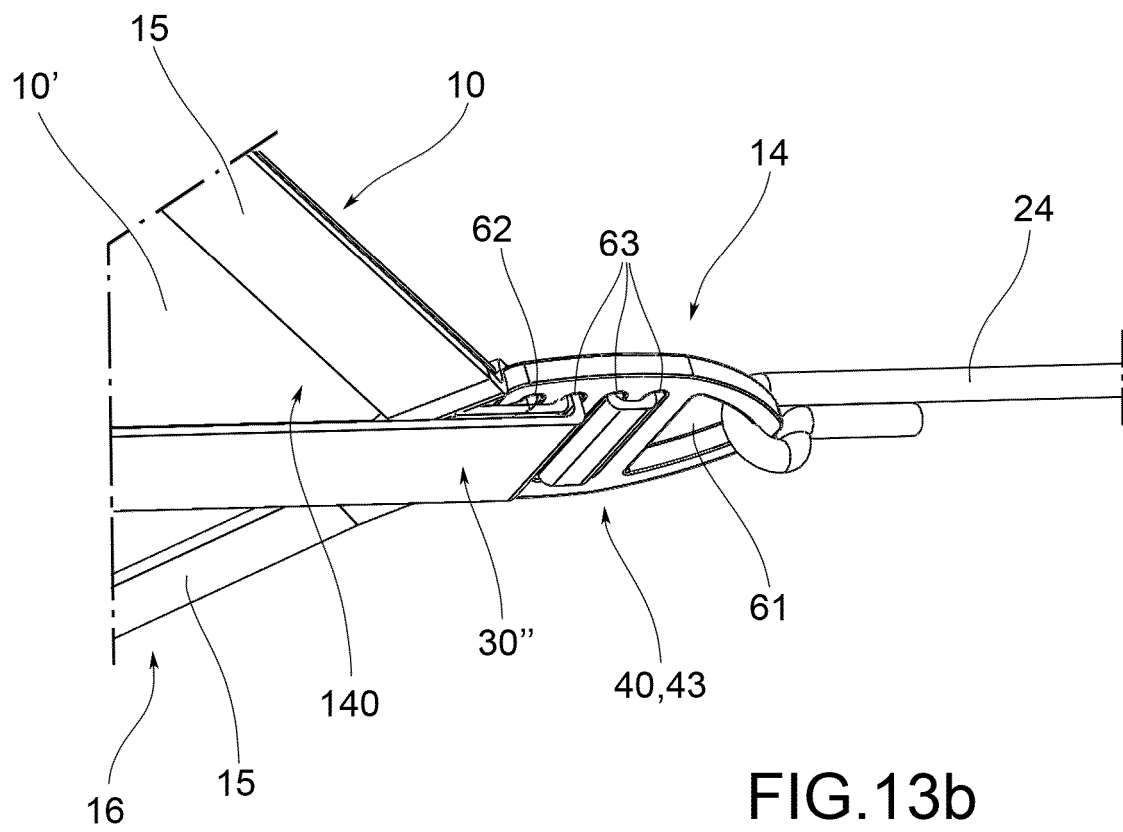


FIG. 13b

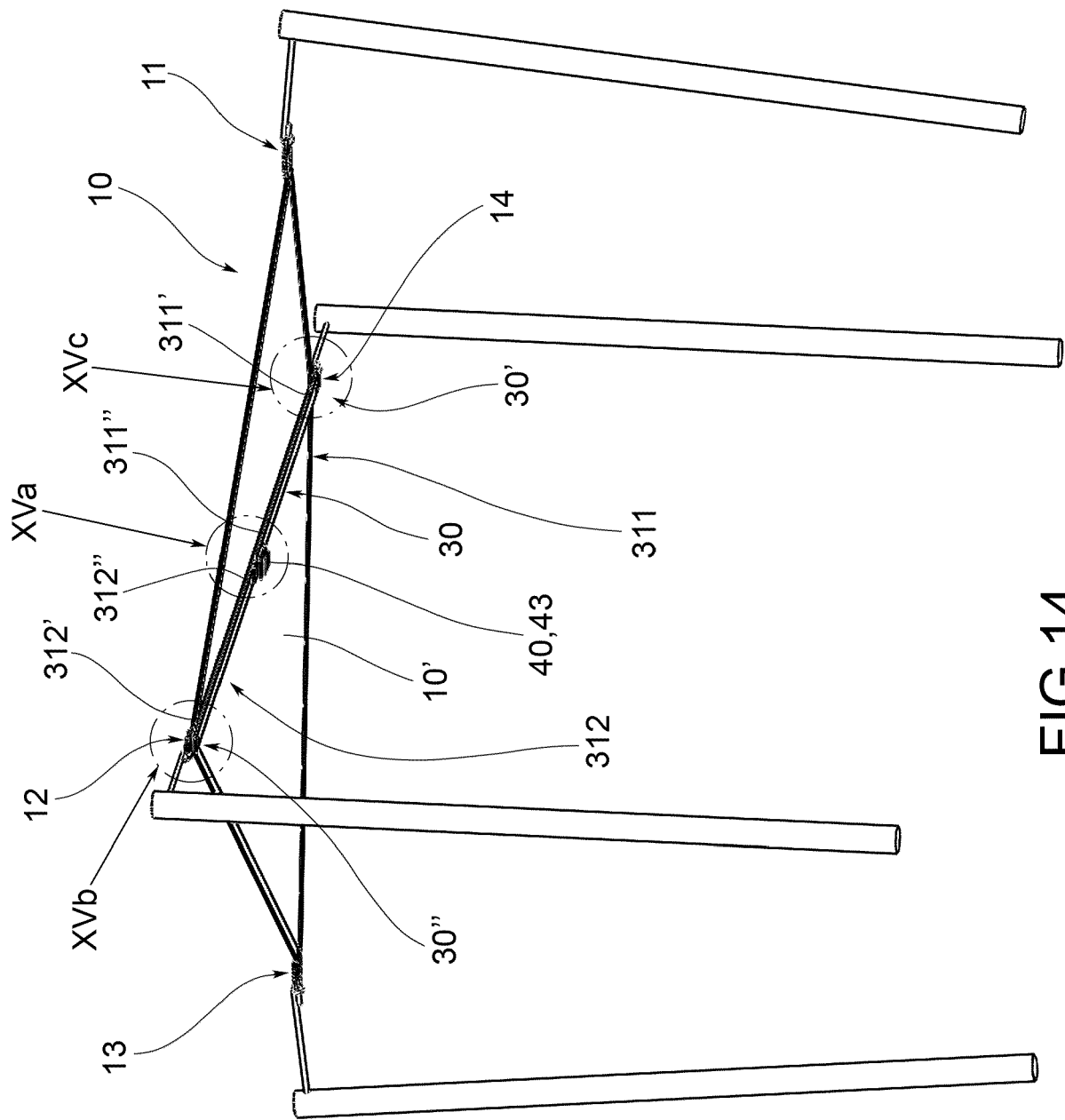


FIG.14

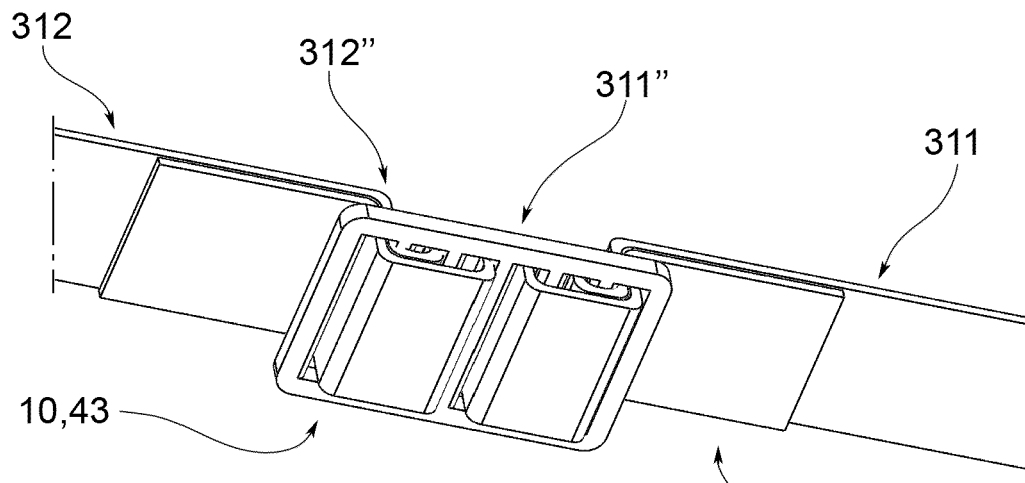


FIG. 15a

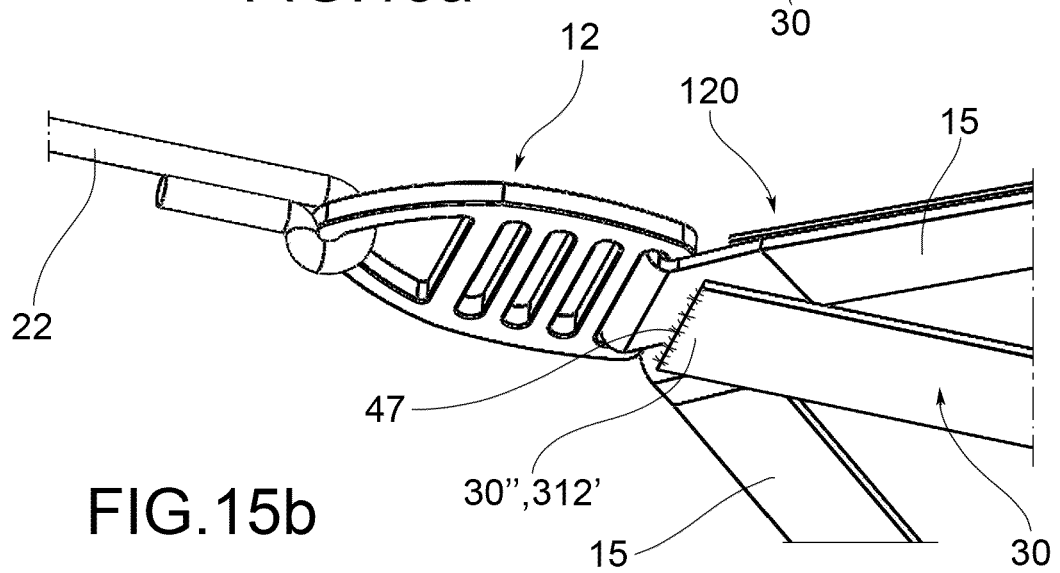


FIG. 15b

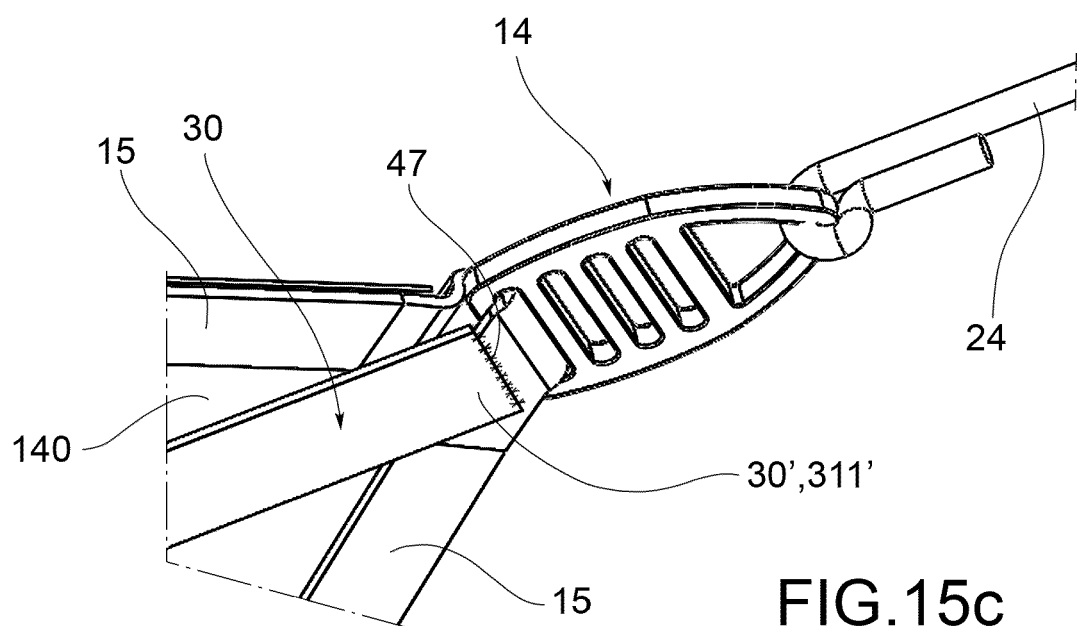
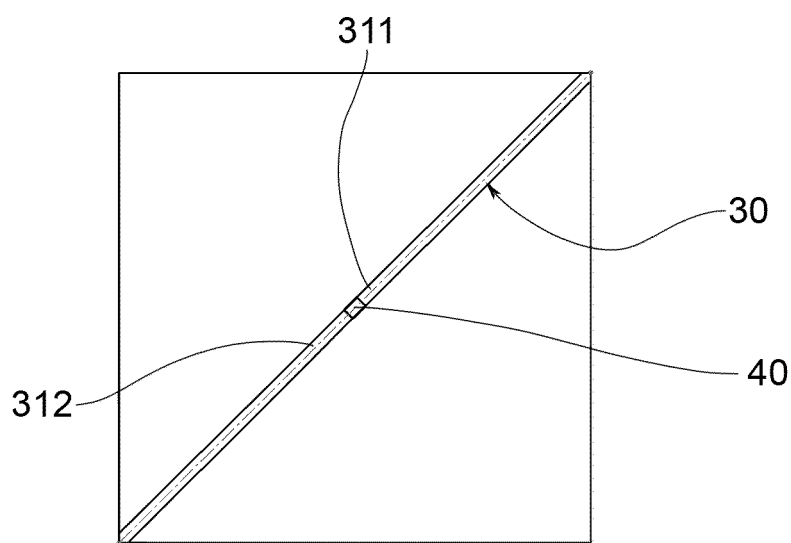
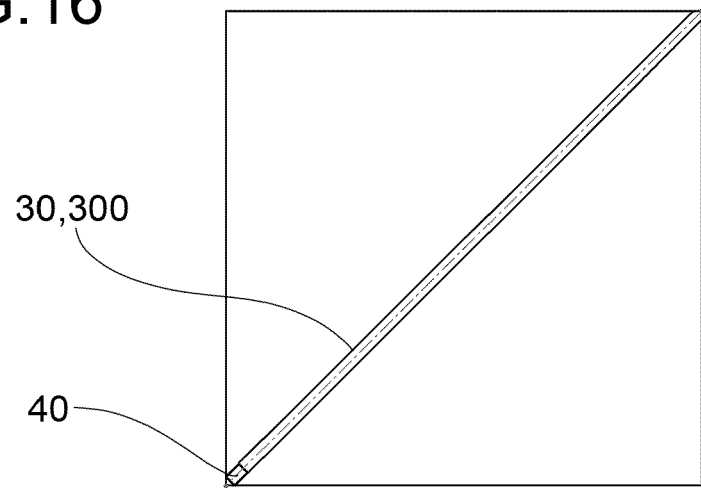
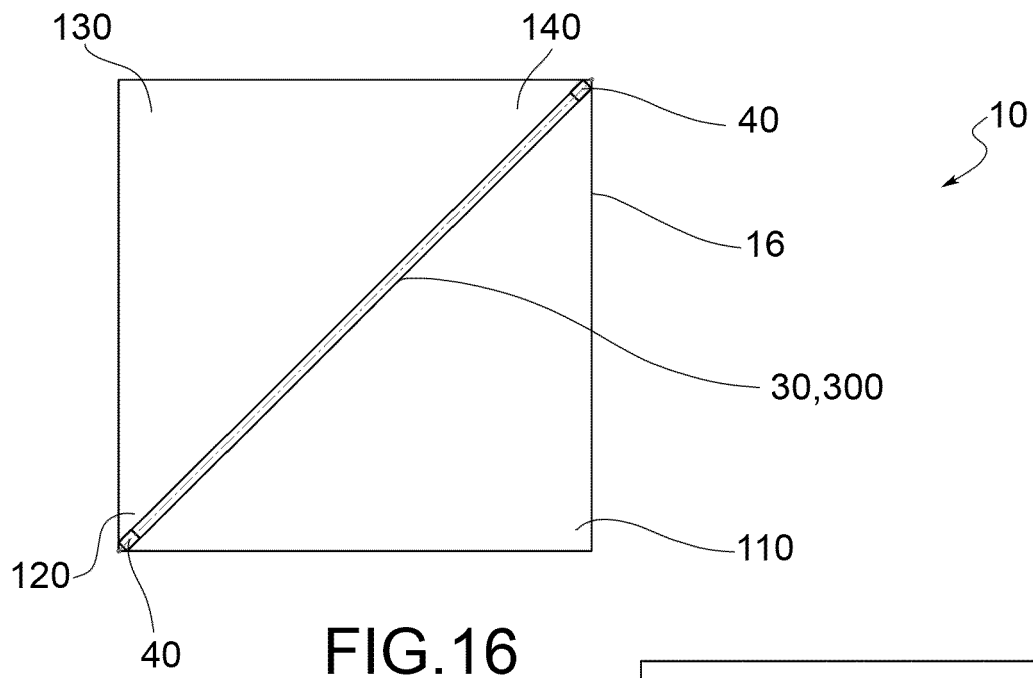


FIG. 15c





EUROPEAN SEARCH REPORT

Application Number

EP 25 18 8829

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	IT VI20 110 193 A1 (BETTEGA ANDREA) 21 January 2013 (2013-01-21) * page 5, line 4 - page 10, line 5; figures 1-9 *	1-13, 18-20	INV. E04H15/58
A	US 5 622 197 A (VALAIRE TREVOR [AU]) 22 April 1997 (1997-04-22) * column 3, line 1 - column 6, line 59; figures 1-7 *	1-20	
A	US 9 849 940 B2 (GREER LAWRENCE A [US]) 26 December 2017 (2017-12-26) * column 3, line 59 - column 8, line 20; figures 1-6,8,9 *	1-7,13, 14	
A	DE 20 2015 007132 U1 (KESSELER MARIO [DE]) 12 November 2015 (2015-11-12) * page 3, paragraph 13 - paragraph 18; figures 1,2 *	1-7,13, 14	
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			E04H E04F
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
Munich		24 October 2025	Stefanescu, Radu
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24-10-2025

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