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(54) **MODULE FOR REALISING A CONSTRUCTION FOR SUPPORTING A DETACHED SCAFFOLD**

MODUL ZUM ERSTELLEN EINER KONSTRUKTION ZUM UNTERSTÜTZEN EINES FREISTEHENDEN GERÜSTS

MODULE POUR REALISER UNE CONSTRUCTION POUR SUPPORTER UN ÉCHAFAUDAGE DÉTACHÉ

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Description

[0001] According to the invention, a first aspect of the present disclosure relates to a module for realising a construction for supporting a detached scaffold by coupling at least three of said modules with each other.

[0002] According to a second aspect, the present disclosure relates to a construction for supporting a detached scaffold by coupling at least three modules according to the first aspect of the present disclosure.

[0003] According to a third aspect, the present disclosure relates to a detached scaffold or decor wall supported by a construction according to the second aspect.

[0004] According to a fourth aspect, the present disclosure relates to a decor wall comprising a detached scaffold according to the third aspect of the present disclosure.

[0005] Scaffolds known in the art are used for a wide range of applications such as placement along the outside walls of a building, to serve as a support platform on which construction workers carry out work on said building wherein the scaffold is shielded from wind by the building or attached to the building for providing stability to the scaffold. Another common application of scaffolding is for providing a decor wall such as used during outdoor concerts wherein the scaffold is detached or freestanding, i.e. not attached or shielded by a building. A desired stability and strength of the detached scaffold to withstand external forces acting on the detached scaffold is achieved by extending the scaffold in a cube like manner using known scaffolding material. Realising a detached scaffold in this way is however relative time and space consuming. FR 91474 discloses a foldable and dismountable scaffold.

[0006] An objective of the present disclosure is therefore to provide a module for supporting a detached scaffold for realising a construction having a desired stability in a relative short time.

[0007] This objective is realised in that module according to the present invention comprises a first element, a second element and a third element,

wherein said first element is pivotably connected, by a first pivotable connection, to said second element,
wherein said third element is pivotably connected, by a second pivotable connection, to one of said first element and said second element, and wherein said third element is releasably connectable to the other of said first element and said second element,
wherein said third element, when connected to the other of said first element and said second element, is arranged for transferring a force acting on said first element to said second element,
wherein said first element and said second element are provided each with a coupling arrangement for coupling said at least three modules next to each other and above each other for providing said construction. The module according to the first aspect of the present disclosure is arranged for realising a construction for supporting a detached scaffold by coupling at least three of said modules with each other. After connection of said third element to the other of said first element and said second element, the module forms a substantially triangular shape. By placing at least two of these triangular shaped modules next to each other and a third of the triangular shaped modules on top of the first two triangular shaped module a general triangular construction for supporting the freestanding scaffold is obtained in a relative short time period for supporting a detached scaffold such as a decor wall.

[0008] The present invention at least partly relies on the insight that producing a support construction for a detached scaffold is relative time consuming when using standard scaffolding material. Moreover, for realising a desired support functionality a relative large construction needs to be realised making the construction relative expensive due to required manual labour and material.

[0009] Within the context of the present disclosure a detached scaffold is to be understood as a scaffold that is free standing and as such for instance not attached to a wall of a building. Such free standing scaffolds are for instance applied for realising a free standing construction such as used during a concert, opera or presentation.

[0010] Preferably, the first element has a length in the range of 7.5 - 8.5 meters and the second element has a length in the range of 3.0 - 4.5 meters. These dimensions allow the modules to be transported by regular transport means such as a trailer coupled to a truck. Moreover these dimensions allow to realize a relative large construction for supporting a detached scaffold using a relative small number of modules according to the first aspect of the present disclosure while allowing said modules to be transported using regular transportation means such as trucks and trailers without the need for special transport.

[0011] Preferably, said module has a width perpendicular to said length of said first element and said length of said second element wherein said width of said module is in the range of 2 - 2.5 meters. A width in this range allows the modules to be transported by regular transport means such as on a trailer coupled to a truck.

[0012] In an embodiment of the module said first element and said second element are provided each with a coupling arrangement for coupling said at least three modules next to each other and above each other for providing said construction.

[0013] It is advantageous if said first pivotable connection of said first element to said second element is realised by a connection of said coupling arrangement of said first element to said coupling arrangement of said second element. This is advantageous to realise a module having a relative small number of elements for realising a module having a relative low complexity and that can be produced at relative low cost.

[0014] In this regard it is beneficial if said first element and said second element are arranged to extend in a substantially same direction, preferably in a flat virtual plane, when said third element is released from connection from said other of said first element and said second element. The module in the folded configuration can be easily transported to and from the location of construction and comfortably handled in the process of building the construction, due to its reduced volume.

[0015] Preferably, said coupling arrangement of said first element comprises a first coupling body, located at a first end of said first element, and a second coupling body, located at a second end of said first element, wherein said second end is opposite said first end of said first element, wherein said first coupling body of a module of said at least three modules is arranged for coupling with said second coupling body of a further module of said at least three modules. This is beneficial for allowing connection of modules in a relative short time period. Moreover said modules have a relative small number of elements for realising a module having a relative low complexity and that can be produced at relative low cost.

[0016] In this regard it is beneficial if said coupling arrangement of said second element comprises a third coupling body, located at a first end of said second element, and a fourth coupling body, located at a second end of said second element, wherein said second end is opposite said first end of said second element, wherein said third coupling body of a module of said at least three modules is arranged for coupling with said first coupling body of a further module and/or a second coupling body of a further module of said at least three modules and wherein said fourth coupling body of a module of said at least three modules is arranged for coupling with said first coupling body of a further module and/or a second coupling body of a further module of said at least three modules. This is beneficial for allowing connection of modules in a relative short time period. Moreover said modules have a relative small number of elements for realising a module having a relative low complexity and that can be produced at relative low cost.

[0017] In an embodiment of the module according to the first aspect said first coupling body and said second coupling body and/or said third coupling body and said fourth coupling body are provided each with parallel wall elements, wherein said parallel wall elements of said first coupling body are arranged to receive in a receiving space between said parallel wall elements of said first coupling body parallel wall elements of said second coupling body and/or parallel wall elements of said third coupling body and/or parallel wall elements of said fourth coupling body. The provision of parallel wall elements is beneficial for realising a desired alignment of the modules for realising said construction in a relative short time period.

[0018] In this regard it is advantageous if in said receiving space of said second coupling body a coupling element is provided that is arranged for being received in said receiving space of said first coupling body of a further module. Preferably, said coupling arrangement of said first element comprises said coupling element.

[0019] It is advantageous if said coupling arrangements are provided with holes for receiving coupling organs for coupling said at least three modules. This is beneficial for coupling modules for realising said construction in a relative short time period.

[0020] In an embodiment of the module according to the first aspect said first element, said second element and said third element comprise each two mutually coupled longitudinal profiles extending in a longitudinal direction of a corresponding element of said first element, said second element and said third element. This is beneficial for realising a relative large stable and a relative strong module for realising a construction having a desired stability and strength in a relative short time period.

[0021] Preferably, the longitudinal profiles are metal profiles, preferably comprising steel, preferably hollow or channel shaped metal profiles. In a relative light weight embodiment of the module according to the first aspect, the longitudinal profiles are made from hollow aluminium profiles.

[0022] In this regard, it is beneficial if said third element is provided with a translation organ, wherein said translation organ is translatable over a surface in said longitudinal direction of said other of said first element and said second element when said third element is released from said other of said first element and said second element. This is beneficial for bringing said module from a folded towards a triangular configuration in a relative short time period under the application of relative little effort.

[0023] Preferably, said translation organ comprises a roller that is rollable over an outer surface in said longitudinal direction of said other of said first element and said second element when said third element is released from connection from said other of said first element and said second element. Advantage of this is that the longitudinal elements are not damaged in process of detaching and attaching the third element and the subsequent folding of the module. Furthermore the roller can support part of the weight of the assembly, therefore diminishing the load that needs to be lifted for bringing the element from a folded into the triangular position..

[0024] In an embodiment of the module according to the first aspect said first element and/or said second element is/are provided with a plate element for supporting a construction worker, a forklift truck and/or a counter weight. For supporting a forklift truck the plate element is arranged such that it can support a weight in the range of 2000 kg - 3000 kg.

[0025] According to the second aspect the present disclosure relates to a construction for supporting a detached scaffold by coupling at least three modules according to the invention next to each other and above each other. The advantages of the construction are analogue to the advantages of the module according to the

first aspect of the present disclosure.

[0026] It is beneficial if the construction according to the second aspect comprises a levelling arrangement for levelling said construction with respect to a ground surface, wherein said levelling arrangement is coupled to said coupling arrangement of said first element and/or is coupled to said coupling arrangement of said second element. This is beneficial for placing the construction in a relative short time on uneven surfaces or sloped surfaces, such a (grass)fields, cobbled streets or even over the transition between sidewalk and street.

[0027] It is beneficial if said construction comprises connection elements for providing a connection between said coupling arrangement of said first element to said coupling arrangement of said second element. Benefit is that the modules can be attached quickly and on site.

[0028] According to the third aspect, the present disclosure relates to a detached scaffold or a decor wall supported by a construction according to the second aspect of the present disclosure. The advantages of the detached scaffold are analogue to the advantages of the module according to the first aspect of the present disclosure and/or according to the advantages of the construction according to the second aspect of the present disclosure.

[0029] According to the fourth aspect of the present disclosure, the present disclosure relates to a decor wall comprising a detached scaffold according to third aspect of the present disclosure, wherein said decor wall at a side facing away from said construction according to the second aspect of the present disclosure is provided with a decor layer, wherein said construction is arranged for providing wind resistance of said decor wall. The advantages of the decor wall are analogue to the advantages of the module, construction and scaffold according to the present disclosure. Preferably, the construction according to the second aspect of the present disclosure is arranged to withstand an external force having a horizontal force component in the range of 350 KN to 500 KN.

[0030] According to a fifth aspect the present disclosure relates to the use of the module according to the first aspect of the present disclosure for supporting a scaffold, preferably a detached scaffold or a decor wall.

[0031] According to a sixth aspect, that does not fall under the scope of the claims, the present disclosure relates to a module for realising a construction for supporting a detached scaffold by coupling at least three of said modules with each other, wherein said module comprises a first element, a second element and a third element,

wherein said first element is pivotably connected, by a first pivotable connection, to said second element, wherein said third element is pivotably connected, by a second pivotable connection, to one of said first element and said second element, and wherein said third element is releasably connectable to the other of said first element and said second element,

wherein said third element, when connected to the other of said first element and said second element, is arranged for transferring a force acting on said first element to said second element,

wherein said first element and said second element are provided each with a coupling arrangement for coupling said at least three modules next to each other or above each other for providing said construction. The advantages of the module according to the sixth aspect are analogue to the advantages of the module according to the first aspect.

[0032] Preferably, in an embodiment of the module according to the sixth aspect, the first element has a length in the range of 7.5 - 8.5 meters and the second element has a length in the range of 3.0 - 4.5 meters. Preferably the first element and the second element have a width in the range of 2 - 2.5 meters. Preferably the third element has a width in the range of 2 - 2.5 meters. These dimensions allow the modules to be transported by regular transport means such as a trailer coupled to a truck. Moreover these dimensions allow to realize a relative large construction for supporting a detached scaffold using a relative small number of modules according to the first aspect of the present disclosure while allowing said modules to be transported using regular transportation means such as trucks and trailers without the need for special transport.

[0033] Further embodiments of the module according to the sixth aspect and advantages of these further embodiments of the module according to the sixth aspect are identical to the module according to the first aspect of the present disclosure.

[0034] The present disclosure will now be explained by means of a description of preferred embodiments of a module according to the first aspect of the present disclosure, a construction according to the second aspect of the present disclosure and a scaffold according to the third aspect of the present disclosure, in which reference is made to the following schematic figures, in which:

Fig. 1 - 3: in isometric view a module according to the first aspect is shown;

Fig. 4 - 6: in front view the module from Fig. 1 - 3 is shown;

Fig. 7: in isometric view a construction according to the second aspect is shown;

Fig. 8: a scaffold according to the third aspect is shown;

Fig. 9 - 11: in exploded view details of the construction of Fig. 7 are shown.

[0035] The present invention is described hereinafter with reference to the accompanying drawings in which embodiments of the present invention are shown and in which like reference numbers indicate the same or similar elements.

[0036] Module 1a, 1b, 1c comprises three longitudinal

elements 7, 9 and 11. stretching out in longitudinal directions A, B and C respectively. The longitudinal elements comprise two longitudinal profiles 37, 39 and 41 each. The longitudinal profiles 37 of a first element 7 of the three longitudinal elements 7, 9 and 11 and the longitudinal profiles 41 of a third element 11 of the three longitudinal elements 7, 9 and 11 are mutually connected via cross-members 61 and 63. The cross-members 61 and 63 are welded to the longitudinal profiles and provide the first element 7 and the third element 11 with a relative large stability. One of the longitudinal profiles 37 of the first element 7 is provided with brackets 59. The brackets 59 are distributed at substantially equal mutual distance along the length of the first element 7 and are arranged for guiding cables, wiring and function as a climbing arrangement for workers to climb along the first element in a vertical direction when the first element 7 of the module 1a, 1b, 1c is in use vertically oriented.

[0037] The profiles 39 of the second element 9 are mutually connected via a support structure for supporting a worker when second element 9 of the module 1a, 1b, 1c is in use horizontally oriented. The support structure is formed by a plate element 45 that is connected to the profiles 39 of the second element 9 and provide the second element 9 with a relative large stability. Alternatively it is conceivable that the profiles of the second element are connected via cross-members similar to crossmember 61 and 63. In this configuration of the second element 9 a plate element is releasably connectable to said profiles of said second element.

[0038] The first element 7 is at a first end thereof provided with a first coupling body 17. The first coupling body 17 is attached to the longitudinal profiles 37 and comprises three parallel walls 25 defining a receiving space between said three parallel walls 25. The three parallel walls 25 are manufactured from sheet or plate metal and provided with through-holes 33 for receiving coupling organs 35 such as a bolt or a pen. The through-holes 33 have a diameter of 26 mm. At a second end of the longitudinal profiles 37, the first element 7 is provided with a second coupling body 19. The second coupling body 19 is also provided with three parallel walls 27 and also defines a receiving space between said three parallel walls 27. The three parallel walls 27 of the second coupling body 19 are also provided with said through-holes 33 for receiving coupling organs 35. In said receiving space of said second coupling body 19 a coupling element 28 is provided, wherein the coupling element 28 is arranged for being received in said receiving space of said first coupling body 17 of a further module 1a, 1b, 1c.

[0039] The second element 9 is at a first end thereof provided with a third coupling body 21. The third coupling body 21 is attached to the longitudinal profiles 39 and comprises two parallel walls 29 defining a receiving space between said two parallel walls 29. The two parallel walls 29 are manufactured from sheet or plate metal and provided with through-holes 33 for receiving coupling organs 35 such as a bolt or a pen. At a second end of the longitudinal profiles 39, the second element 9 is provided with a fourth coupling body 23. The fourth coupling body 23 is also provided with two parallel walls 31 and also defines a receiving space between said two parallel walls 31. The two parallel walls 31 of the fourth coupling body 23 are also provided with said through-holes 33 for receiving coupling organs 35.

[0040] The first coupling body 17 of a module 1a, 1b, 1c is pivotably connected to the third coupling body 21. To this end the two parallel walls 29 of the third coupling body 21 are received in said receiving space defined by the three parallel walls 25 of the first coupling body 17 and a pivot element 32 is provided in through-holes 33 of the first coupling body 17 and the third coupling body 21. The pivot element 32 is preferably fixed in either the first coupling body 17 or the third coupling body 21 for reducing the risk that said pivot element 32 releases during use of the module 1a, 1b, 1c and thereby causing the first element 7 of a module 1a, 1b, 1c to separate from the second element 9 of said module 1a, 1b, 1c.

[0041] The third element 11, near a first end thereof, is pivotably connected, via a pivot axis 51, to the first element 7. Said pivot axis 51 extends in a direction transversal to said longitudinal directions A, B and C and is displaced with respect to said longitudinal profiles 37 of said first element 7. This allows said first element 7 and said second element 9 to pivot about a pivot angle such that in a given pivot angle said longitudinal directions A and C of said first element 7 and said third element 11 extend in substantially the same direction. At a second end of said third element 11, opposite said first end of said third element 11, said third element 11 is provided with a fifth coupling body 53 for releasably coupling said third element 11 of a module 1a, 1b, 1c to the second element 9 of said same module 1a, 1b, 1c. The fifth coupling body 53 is provided with a roller 43. The roller 43 is rollable over an outer surface in said longitudinal direction B of the second element 9 when said third element 11 is released from said second element 9. To move a module 1a, 1b, 1c from a folded position, shown in Fig. 3, to an expanded position, shown in Fig. 1, the first element 7 and the third element 11 are raised thereby rolling the roller 43 over the outer surface of the second element 9. In the expanded position the fifth coupling body 53 is connected to said second element 9 via locking pin 57. To this end the locking pin 57 is provided in through-holes provided in the fifth coupling body 53 and through-holes provided in a sixth coupling body 55, wherein said sixth coupling body 55 is attached to said second element 9 adjacent said fourth coupling body 23.

[0042] Modules 1a, 1b, 1c are arranged to be connected to each other using the first coupling body 17, the second coupling body 19, the third coupling body 21 and the fourth coupling body 23. The first coupling body 17 is arranged for coupling with a second coupling body 19 of a further module 1a, 1b, 1c provided below said module 1a, 1b, 1c via said coupling element 28. The first coupling body 17 and the second coupling body 19 are releasably

connected via said coupling element 28 by inserting coupling organ 35 in said through-holes 33 of said three parallel walls 25of said first coupling body 17 and through-holes 30 provided in said coupling element 28.

[0043] Preferably, after coupling the first coupling body of a module and a second coupling body of a further module the three parallel walls of both the first coupling body and the second coupling body are in contact with each other along an outer surface of said three parallel walls. Said outer surface of said three parallel walls extend transversal to said longitudinal direction of said first element for realizing upon coupling of said module with said further module that said first element of said module and said first element of said further module extend in a substantially common mutual longitudinal direction.

[0044] The two parallel walls 29 of the third coupling body 21 and two parallel walls 31 of the fourth coupling body 23 are receivable in said receiving space defined by the three parallel walls 25 of the first coupling body 17 and by the three parallel walls 27 of the second coupling body 19. The third coupling body 21 and the fourth coupling body 23 are releasably connected to the first coupling body 17 and the second coupling body 19 by inserting coupling organ 35 in said through-holes 33 of said three parallel walls 25 and 27 and said two parallel walls 29 and 31. At a location where no further module 1a, 1b, 1c is to be connected to the modules 1a, 1b, 1c, shown in Fig. 10, a connecting element 49 is inserted instead of a fourth coupling body. The connecting element 49 is provided with two parallel walls 50 provided with through holes 52. The two parallel walls 50 of the connecting element 49 are receivable in said receiving space defined by the three parallel walls 25 of the first coupling body 17 and by the three parallel walls 27 of the second coupling body 19. The connecting element 49 is releasably connected to the first coupling body 17 and the second coupling body 19 by inserting coupling organs 35 in said through-holes 33 of said three parallel walls 25 and 27 and said through-holes 52 of said two parallel walls 50 of said connecting element 49.

[0045] By coupling three modules 1a, 1b, 1c with a levelling arrangement 47 a construction 3 is realized for supporting a detached scaffold 5. The levelling arrangement 47 is provided with a coupling arrangement 38 for coupling the levelling arrangement 47 to a module 1a, 1b, 1c. The coupling arrangement 38 is similar to the part of a coupling arrangement of a first element of a module comprising the second coupling body 19 at said second end of a first element 7 of a module 1a, 1b, 1c. The levelling arrangement 47 further comprises levelling feet 40 for supporting the construction 3 on a ground surface. The levelling feet 40 are moveable with respect to a main body 42 of the levelling arrangement 47 for overcoming differences in height of said ground surface. For realizing a decor wall at a side facing away from said construction 3 a decor layer is attachable to said detached scaffold 5.

Claims

1. Module (1a, 1b, 1c) for realising a construction (3) for supporting a detached scaffold (5) by coupling at least three of said modules (1a, 1b, 1c) with each other, wherein said module (1a, 1b, 1c) comprises a first element (7), a second element (9) and a third element (11),

   wherein said first element (7) is pivotably connected, by a first pivotable connection (32), to said second element (9),
   wherein said third element (11) is pivotably connected, by a second pivotable connection (51), to one of said first element (7) and said second element (9), and wherein said third element (11) is releasably connectable to the other of said first element (7) and said second element (9),
   wherein said third element (11), when connected to the other of said first element (7) and said second element (9), is arranged for transferring a force acting on said first element (7) to said second element (9),
   characterized in that
   said first element (7) and said second element (9) are provided each with a coupling arrangement (13, 15) for coupling said at least three modules (1a, 1b, 1c) next to each other and above each other for providing said construction (3).

2. Module (1a, 1b, 1c) according to claim 1, wherein said first pivotable connection (32) of said first element (7) to said second element (9) is realised by a connection of said coupling arrangement (13) of said first element (7) to said coupling arrangement (15) of said second element (9).

3. Module (1a, 1b, 1c) according to claim 1 or 2, wherein said first element (7) and said second element (9) are arranged to extend in a substantially same direction, preferably in a flat virtual plane, when said third element (11) is released from connection from said other of said first element (7) and said second element (9).

4. Module (1a, 1b, 1c) according to any one of the preceding claims, wherein said coupling arrangement (13) of said first element (7) comprises a first coupling body (17), located at a first end of said first element (7), and a second coupling body (19), located at a second end of said first element (7), wherein said second end is opposite said first end of said first element (7), wherein said first coupling body (17) of a module (1a, 1b, 1c) of said at least three modules (1a, 1b, 1c) is arranged for coupling with said second coupling body (19) of a further module (1a, 1b, 1c) of said at least three modules (1a, 1b, 1c).

5. Module (1a, 1b, 1c) according to claim 4, wherein said coupling arrangement (15) of said second element (9) comprises a third coupling body (21), located at a first end of said second element (9), and a fourth coupling body (23), located at a second end of said second element (9), wherein said second end is opposite said first end of said second element (9), wherein said third coupling body (21) of a module (1a, 1b, 1c) of said at least three modules (1a, 1b, 1c) is arranged for coupling with said first coupling body (17) of a further module (1a, 1b, 1c) and/or a second coupling body (19) of a further module (1a, 1b, 1c) of said at least three modules (1a, 1b, 1c) and wherein said fourth coupling body (23) of a module (1a, 1b, 1c) of said at least three modules (1a, 1b, 1c) is arranged for coupling with said first coupling body (17) of a further module (1a, 1b, 1c) and/or a second coupling body (19) of a further module (1a, 1b, 1c) of said at least three modules (1a, 1b, 1c).

6. Module (1a, 1b, 1c) according to claim 4 and/or claim 5, wherein said first coupling body (17) and said second coupling body (19) and/or said third coupling body (21) and said fourth coupling body (23) are provided each with parallel wall elements (25, 28, 29, 31), wherein said parallel wall elements (25) of said first coupling body (17) are arranged to receive in a receiving space between said parallel wall elements (25) of said first coupling body (17) parallel wall elements (28) of said second coupling body (19) and/or parallel wall elements (29) of said third coupling body (21) and/or parallel wall elements (31) of said fourth coupling body (23).

7. Module (1a, 1b, 1c) according to any one of the preceding claims, wherein said coupling arrangements (13, 15) are provided with holes (33) for receiving coupling organs (35) for coupling said at least three modules (1a, 1b, 1c).

8. Module (1a, 1b, 1c) according to any one of the preceding claims, wherein said first element (7), said second element (9) and said third element (11) comprise each two mutually coupled longitudinal profiles (37, 39, 41) extending in a longitudinal direction (A, B, C) of a corresponding element of said first element (7), said second element (9) and said third element (11).

9. Module (1a, 1b, 1c) according to claim 8, wherein said third element (11) is provided with a roller (43), wherein said roller (43) is rollable over an outer surface in said longitudinal direction (A, B) of said other of said first element (7) and said second element (9) when said third element (11) is released from connection from said other of said first element (7) and said second element (9).

10. Module (1a, 1b, 1c) according to any one of the preceding claims, wherein said first element (7) and/or said second element (9) is/are provided with a plate element (45) for supporting a construction worker, a forklift truck and/or a counter weight.

11. Construction (3) for supporting a detached scaffold (5) by coupling at least three modules (1a, 1b, 1c) according to any one of the preceding claims next to each other and/or above each other.

12. Construction (3) according to claim 11, wherein said construction (3) comprises a levelling arrangement (47) for levelling said construction (3) with respect to a ground surface, wherein said levelling arrangement (47) is coupled to said coupling arrangement (13) of said first element (7) and/or is coupled to said coupling arrangement (15) of said second element (9).

13. Construction (3) according to claim 11 or 12, wherein said construction (3) comprises connection elements (35, 49) for providing a connection between said coupling arrangement (13) of said first element (7) to said coupling arrangement (15) of said second element (9).

14. Detached scaffold (5) or a decor wall supported by a construction (3) according to any one of the claims 11 - 13.

15. Decor wall comprising a detached scaffold (5) according to claim 14, wherein said decor wall at a side facing away from said construction (3) is provided with a decor layer, wherein said construction (3) is arranged for providing wind resistance of said decor wall.

Patentansprüche

1. Modul (1a, 1b, 1c) zum Erstellen einer Konstruktion (3) zum Unterstützen eines freistehenden Gerüsts (5) durch Koppeln von mindestens drei der Module (1a, 1b, 1c) miteinander, wobei das Modul (1a, 1b, 1c) ein erstes Element (7), ein zweites Element (9) und ein drittes Element (11) umfasst,

   wobei das erste Element (7), über eine erste schwenkbare Verbindung (32), schwenkbar mit dem zweiten Element (9) verbunden ist,
   wobei das dritte Element (11), über eine zweite schwenkbare Verbindung (51), schwenkbar mit einem aus dem ersten Element (7) und dem zweiten Element (9) verbunden ist und wobei das dritte Element (11) lösbar mit dem anderen aus dem ersten Element (7) und dem zweiten Element (9) verbindbar ist,

wobei das dritte Element (11), wenn mit dem anderen aus dem ersten Element (7) und dem zweiten Element (9) verbunden, angeordnet ist, um eine auf das erste Element (7) wirkende Kraft auf das zweite Element (9) zu übertragen,
dadurch gekennzeichnet, dass
das erste Element (7) und das zweite Element (9) jeweils mit einer Kopplungsanordnung (13, 15) zum Koppeln der mindestens drei Module (1a, 1b, 1c) nebeneinander und übereinander versehen sind, um die Konstruktion (3) bereitzustellen.

2. Modul (1a, 1b, 1c) nach Anspruch 1, wobei die erste schwenkbare Verbindung (32) des ersten Elements (7) mit dem zweiten Element (9) durch eine Verbindung der Kopplungsanordnung (13) des ersten Elements (7) mit der Kopplungsanordnung (15) des zweiten Elements (9) umgesetzt wird.

3. Modul (1a, 1b, 1c) nach Anspruch 1 oder 2, wobei das erste Element (7) und das zweite Element (9) dazu angeordnet sind, sich in eine im Wesentlichen gleiche Richtung zu erstrecken, vorzugsweise in einer flachen virtuellen Ebene, wenn das dritte Element (11) von einer Verbindung von dem anderen aus dem ersten Element (7) und dem zweiten Element (9) gelöst wird.

4. Modul (1a, 1b, 1c) nach einem der vorhergehenden Ansprüche, wobei die Kopplungsanordnung (13) des ersten Elements (7) einen ersten Kopplungskörper (17), befindlich an einem ersten Ende des ersten Elements (7), und einen zweiten Kopplungskörper (19), befindlich an einem zweiten Ende des ersten Elements (7), umfasst, wobei das zweite Ende dem ersten Ende des ersten Elements (7) gegenüberliegt, wobei der erste Kopplungskörper (17) eines Moduls (1a, 1b, 1c) der mindestens drei Module (1a, 1b, 1c) angeordnet ist zum Koppeln mit dem zweiten Kopplungskörper (19) eines weiteren Moduls (1a, 1b, 1c) der mindestens drei Module (1a, 1b, 1c).

5. Modul (1a, 1b, 1c) nach Anspruch 4, wobei die Kopplungsanordnung (15) des zweiten Elements (9) einen dritten Kopplungskörper (21), befindlich an einem ersten Ende des zweiten Elements (9), und einen vierten Kopplungskörper (23), befindlich an einem zweiten Ende des zweiten Elements (9), umfasst, wobei das zweite Ende dem ersten Ende des zweiten Elements (9) gegenüberliegt, wobei der dritte Kopplungskörper (21) eines Moduls (1a, 1b, 1c) der mindestens drei Module (1a, 1b, 1c) angeordnet ist zum Koppeln mit dem ersten Kopplungskörper (17) eines weiteren Moduls (1a, 1b, 1c) und/oder einem zweiten Kopplungskörper (19) eines weiteren Moduls (1a, 1b, 1c) der mindestens drei Module (1a, 1b, 1c), und wobei der vierte Kopplungskörper (23) eines Moduls (1a, 1b, 1c) der mindestens drei Module (1a, 1b, 1c) angeordnet ist zum Koppeln mit dem ersten Kopplungskörper (17) eines weiteren Moduls (1a, 1b, 1c) und/oder einem zweiten Kopplungskörper (19) eines weiteren Moduls (1a, 1b, 1c) der mindestens drei Module (1a, 1b, 1c).

6. Modul (1a, 1b, 1c) nach Anspruch 4 und/oder Anspruch 5, wobei der erste Kopplungskörper (17) und der zweite Kopplungskörper (19) und/oder der dritte Kopplungskörper (21) und der vierte Kopplungskörper (23) jeweils mit parallelen Wandelementen (25, 28, 29, 31) versehen sind, wobei die parallelen Wandelemente (25) des ersten Kopplungskörpers (17) angeordnet sind zum Aufnehmen, in einem Aufnahmeraum zwischen den parallelen Wandelementen (25) des ersten Kopplungskörpers (17), von parallelen Wandelementen (28) des zweiten Kopplungskörpers (19) und/oder parallelen Wandelementen (29) des dritten Kopplungskörpers (21) und/oder parallelen Wandelementen (31) des vierten Kopplungskörpers (23).

7. Modul (1a, 1b, 1c) nach einem der vorhergehenden Ansprüche, wobei die Kopplungsanordnungen (13, 15) mit Löchern (33) zum Aufnehmen von Kopplungsorganen (35) zum Koppeln der mindestens drei Module (1a, 1b, 1c) versehen sind.

8. Modul (1a, 1b, 1c) nach einem der vorhergehenden Ansprüche, wobei das erste Element (7), das zweite Element (9) und das dritte Element (11) jeweils zwei miteinander gekoppelte längs verlaufende Profile (37, 39, 41) umfassen, die sich in einer Längsrichtung (A, B, C) eines entsprechenden Elements aus dem ersten Element (7), dem zweiten Element (9) und dem dritten Element (11) erstrecken.

9. Modul (1a, 1b, 1c) nach Anspruch 8, wobei das dritte Element (11) mit einer Rolle (43) versehen ist, wobei die Rolle (43) über eine äußere Oberfläche in der Längsrichtung (A, B) des anderen aus dem ersten Element (7) und dem zweiten Element (9) rollbar ist, wenn das dritte Element (11) von der Verbindung mit dem anderen aus dem ersten Element (7) und dem zweiten Element (9) gelöst wird.

10. Modul (1a, 1b, 1c) nach einem der vorhergehenden Ansprüche, wobei das erste Element (7) und/oder das zweite Element (9) mit einem Plattenelement (45) zum Unterstützen eines Bauarbeiters, eines Gabelstaplers und/oder eines Gegengewichts versehen ist/sind.

11. Konstruktion (3) zum Unterstützen eines freistehenden Gerüsts (5) durch Koppeln von mindestens drei Modulen (1a, 1b, 1c) nach einem der vorhergehenden Ansprüche nebeneinander und/oder übereinan-

der.

12. Konstruktion (3) nach Anspruch 11, wobei die Konstruktion (3) eine Nivellierungsanordnung (47) zum Nivellieren der Konstruktion (3) bezüglich einer Bodenoberfläche umfasst, wobei die Nivellierungsanordnung (47) mit der Kopplungsanordnung (13) des ersten Elements (7) gekoppelt ist und/oder mit der Kopplungsanordnung (15) des zweiten Elements (9) gekoppelt ist.

13. Konstruktion (3) nach Anspruch 11 oder 12, wobei die Konstruktion (3) Verbindungselemente (35, 49) zum Bereitstellen einer Verbindung zwischen der Kopplungsanordnung (13) des ersten Elements (7) mit der Kopplungsanordnung (15) des zweiten Elements (9) umfasst.

14. Freistehendes Gerüst (5) oder Dekorwand, unterstützt durch eine Konstruktion (3) nach einem der Ansprüche 11-13.

15. Dekorwand, umfassend ein freistehendes Gerüst (5) nach Anspruch 14, wobei die Dekorwand an einer Seite, die von der Konstruktion (3) weg zeigt, mit einer Dekorschicht versehen ist, wobei die Konstruktion (3) angeordnet ist zum Bereitstellen von Windwiderstand der Dekorwand.

Revendications

1. Module (1a, 1b, 1c) pour la réalisation d'une construction (3) pour supporter un échafaudage indépendant (5) en couplant au moins trois desdits modules (1a, 1b, 1c) entre eux, dans lequel ledit module (1a, 1b, 1c) comprend un premier élément (7), un deuxième élément (9) et un troisième élément (11),

dans lequel ledit premier élément (7) est relié de manière pivotante, par une première liaison pivotante (32), audit deuxième élément (9),
dans lequel ledit troisième élément (11) est relié de manière pivotante, par une deuxième liaison pivotante (51), à l'un dudit premier élément (7) et dudit deuxième élément (9), et dans lequel ledit troisième élément (11) peut être relié de manière amovible à l'autre dudit premier élément (7) et dudit deuxième élément (9),
dans lequel ledit troisième élément (11), lorsqu'il est relié à l'autre dudit premier élément (7) et audit deuxième élément (9), est agencé pour transférer une force agissant sur ledit premier élément (7) audit deuxième élément (9),
caractérisé en ce que
ledit premier élément (7) et ledit deuxième élément (9) sont pourvus chacun d'un agencement de couplage (13, 15) pour coupler lesdits au moins trois modules (1a, 1b, 1c) l'un à côté de l'autre et l'un au-dessus de l'autre pour fournir ladite construction (3).

2. Module (1a, 1b, 1c) selon la revendication 1, dans lequel ladite première liaison pivotante (32) dudit premier élément (7) audit deuxième élément (9) est réalisée par une liaison dudit agencement de couplage (13) dudit premier élément (7) audit agencement de couplage (15) dudit deuxième élément (9).

3. Module (1a, 1b, 1c) selon la revendication 1 ou 2, dans lequel ledit premier élément (7) et ledit deuxième élément (9) sont agencés de manière à s'étendre dans une direction sensiblement identique, de préférence dans un plan virtuel plat, lorsque ledit le troisième élément (11) est libéré de la liaison audit autre élément parmi ledit premier élément (7) et ledit deuxième élément (9).

4. Module (1a, 1b, 1c) selon l'une quelconque des revendications précédentes, dans lequel ledit agencement de couplage (13) dudit premier élément (7) comprend un premier corps de couplage (17), situé à une première extrémité dudit premier élément (7) et un deuxième corps de couplage (19), situé à une deuxième extrémité dudit premier élément (7), dans lequel ladite deuxième extrémité est opposée à ladite première extrémité dudit premier élément (7), dans lequel ledit premier corps de couplage (17) d'un module (1a, 1b, 1c) desdits au moins trois modules (1a, 1b, 1c) est agencé pour être couplé audit deuxième corps de couplage (19) d'un autre module (1a, 1b, 1c) desdits au moins trois modules (1a, 1b, 1c).

5. Module (1a, 1b, 1c) selon la revendication 4, dans lequel ledit agencement de couplage (15) dudit deuxième élément (9) comprend un troisième corps de couplage (21), situé à une première extrémité dudit deuxième élément (9), et un quatrième corps de couplage (23), situé à une deuxième extrémité dudit deuxième élément (9), dans lequel ladite deuxième extrémité est opposée à ladite première extrémité dudit deuxième élément (9), dans lequel ledit troisième corps de couplage (21) d'un module (1a, 1b, 1c) desdits au moins trois modules (1a, 1b, 1c) est agencé pour être couplé audit premier corps de couplage (17) d'un autre module (1a, 1b, 1c) et/ou à un deuxième corps de couplage (19) d'un autre module (1a, 1b, 1c) desdits au moins trois modules (1a, 1b, 1c) et dans lequel ledit quatrième corps de couplage (23) d'un module (1a, 1b, 1c) desdits au moins trois modules (1a, 1b, 1c) est agencé pour être couplé audit premier corps de couplage (17) d'un autre module (1a, 1b, 1c) et/ou à un deuxième corps de couplage (19) d'un autre module (1a, 1b, 1c) desdits au moins trois modules (1a, 1b, 1c).

6. Module (1a, 1b, 1c) selon la revendication 4 et/ou 5, dans lequel ledit premier corps de couplage (17) et ledit deuxième corps de couplage (19) et/ou ledit troisième corps de couplage (21) et ledit quatrième corps de couplage (23) sont pourvus chacun d'éléments de paroi parallèles (25, 28, 29, 31), dans lequel lesdits éléments de paroi parallèles (25) dudit premier corps de couplage (17) sont agencés pour recevoir dans un espace de réception entre lesdits éléments de paroi parallèles (25) dudit premier corps de couplage (17) des éléments de paroi parallèles (28) dudit deuxième corps de couplage (19) et/ou des éléments de paroi parallèles (29) dudit troisième corps de couplage (21) et/ou des éléments de paroi parallèles (31) dudit quatrième corps de couplage (23).

7. Module (1a, 1b, 1c) selon l'une quelconque des revendications précédentes, dans lequel lesdits agencements de couplage (13, 15) sont pourvus de trous (33) pour la réception d'organes de couplage (35) pour coupler lesdits au moins trois modules (1a, 1b, 1c).

8. Module (1a, 1b, 1c) selon l'une quelconque des revendications précédentes, dans lequel ledit premier élément (7), ledit deuxième élément (9) et ledit troisième élément (11) comprennent chacun deux profilés longitudinaux mutuellement couplés (37, 39, 41) s'étendant dans une direction longitudinale (A, B, C) d'un élément correspondant dudit premier élément (7), dudit deuxième élément (9) et dudit troisième élément (11).

9. Module (1a, 1b, 1c) selon la revendication 8, dans lequel ledit troisième élément (11) est pourvu d'un rouleau (43), dans lequel ledit rouleau (43) peut rouler sur une surface extérieure dans ladite direction longitudinale (A, B) dudit autre élément parmi ledit premier élément (7) et ledit deuxième élément (9) lorsque ledit troisième élément (11) est libéré de la liaison audit autre élément parmi ledit premier élément (7) et ledit deuxième élément (9).

10. Module (1a, 1b, 1c) selon l'une quelconque des revendications précédentes, dans lequel ledit premier élément (7) et/ou ledit deuxième élément (9) est/sont pourvu(s) d'un élément plaque (45) pour supporter un ouvrier du bâtiment, un chariot élévateur à fourche et/ou un contrepoids.

11. Construction (3) pour supporter un échafaudage indépendant (5) par couplage d'au moins trois modules (1a, 1b, 1c) selon l'une quelconque des revendications précédentes l'un à côté de l'autre et/ou l'un au-dessus de l'autre.

12. Construction (3) selon la revendication 11, dans laquelle ladite construction (3) comprend un agencement de nivellement (47) pour niveler ladite construction (3) par rapport à une surface du sol, dans lequel ledit agencement de nivellement (47) est couplé audit agencement de couplage (13) dudit premier élément (7) et/ou est couplé audit agencement de couplage (15) dudit deuxième élément (9).

13. Construction (3) selon la revendication 11 ou 12, dans laquelle ladite construction (3) comprend des éléments de liaison (35, 49) pour fournir une liaison entre ledit agencement de couplage (13) dudit premier élément (7) et ledit agencement de couplage (15) dudit deuxième élément (9).

14. Échafaudage indépendant (5) ou un mur décoratif supporté par une construction (3) selon l'une quelconque des revendications 11 à 13.

15. Mur décoratif comprenant un échafaudage indépendant (5) selon la revendication 14, dans lequel ledit mur décoratif sur un côté opposé à ladite construction (3) est pourvu d'une couche décorative, dans lequel ladite construction (3) est agencée pour fournir une résistance au vent dudit mur décoratif.

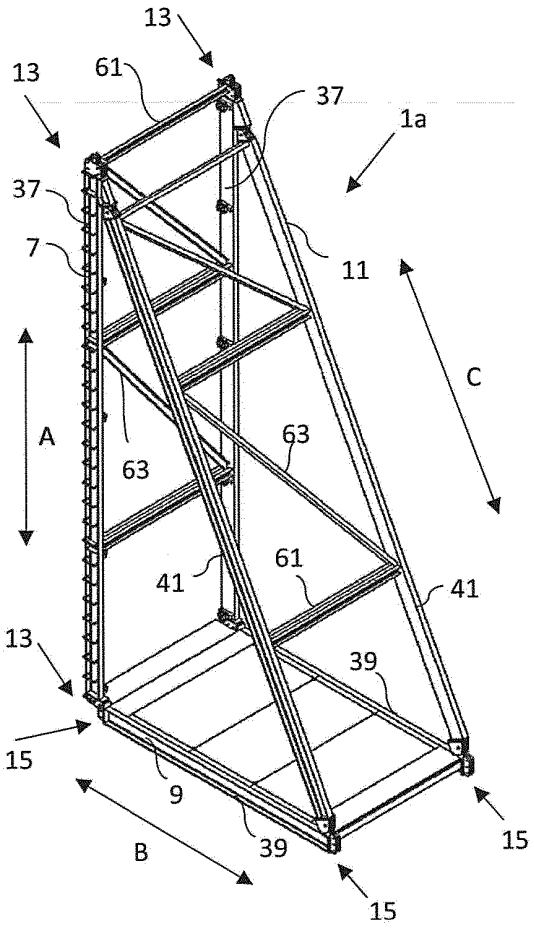


Fig. 1

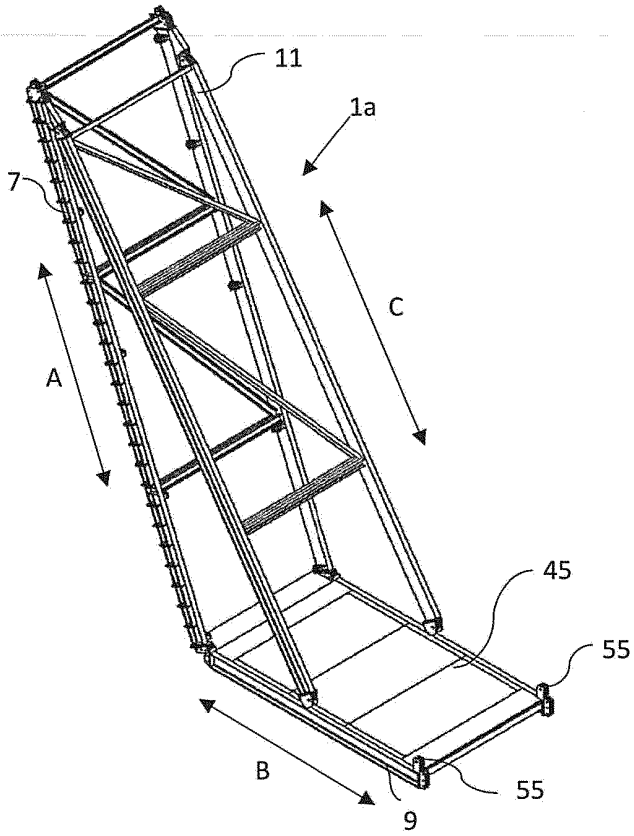


Fig. 2

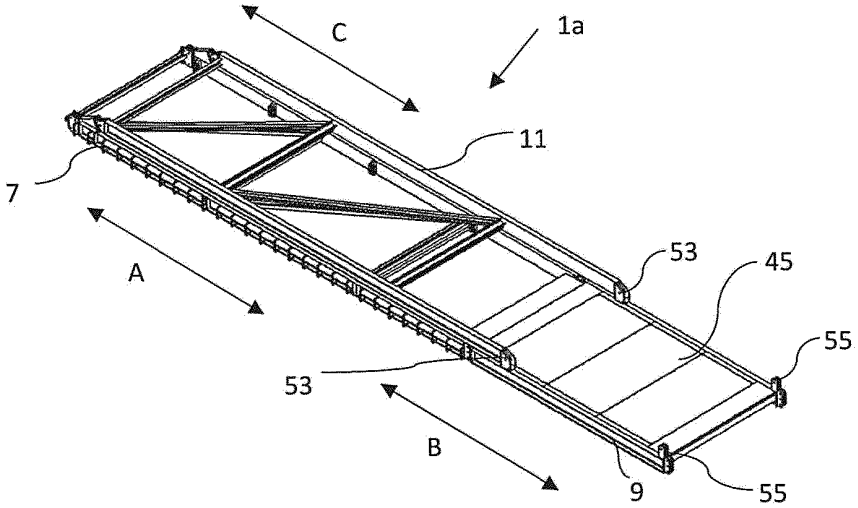


Fig. 3

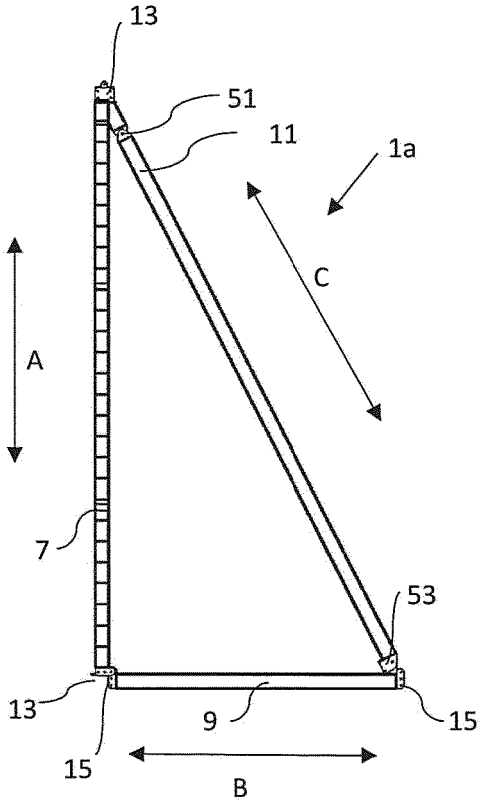


Fig. 4

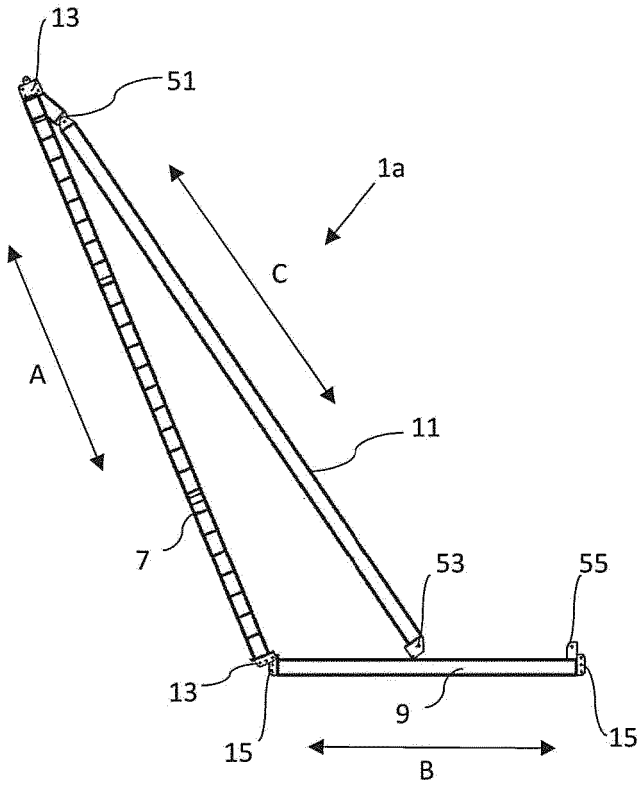


Fig. 5

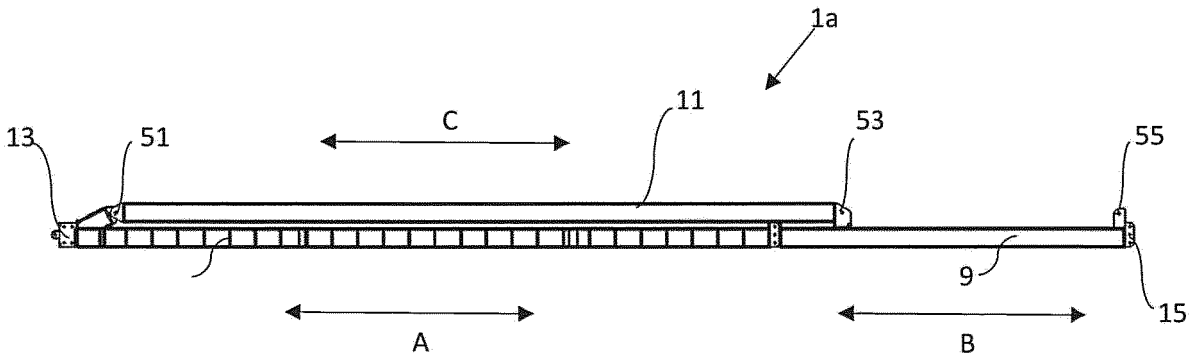


Fig. 6

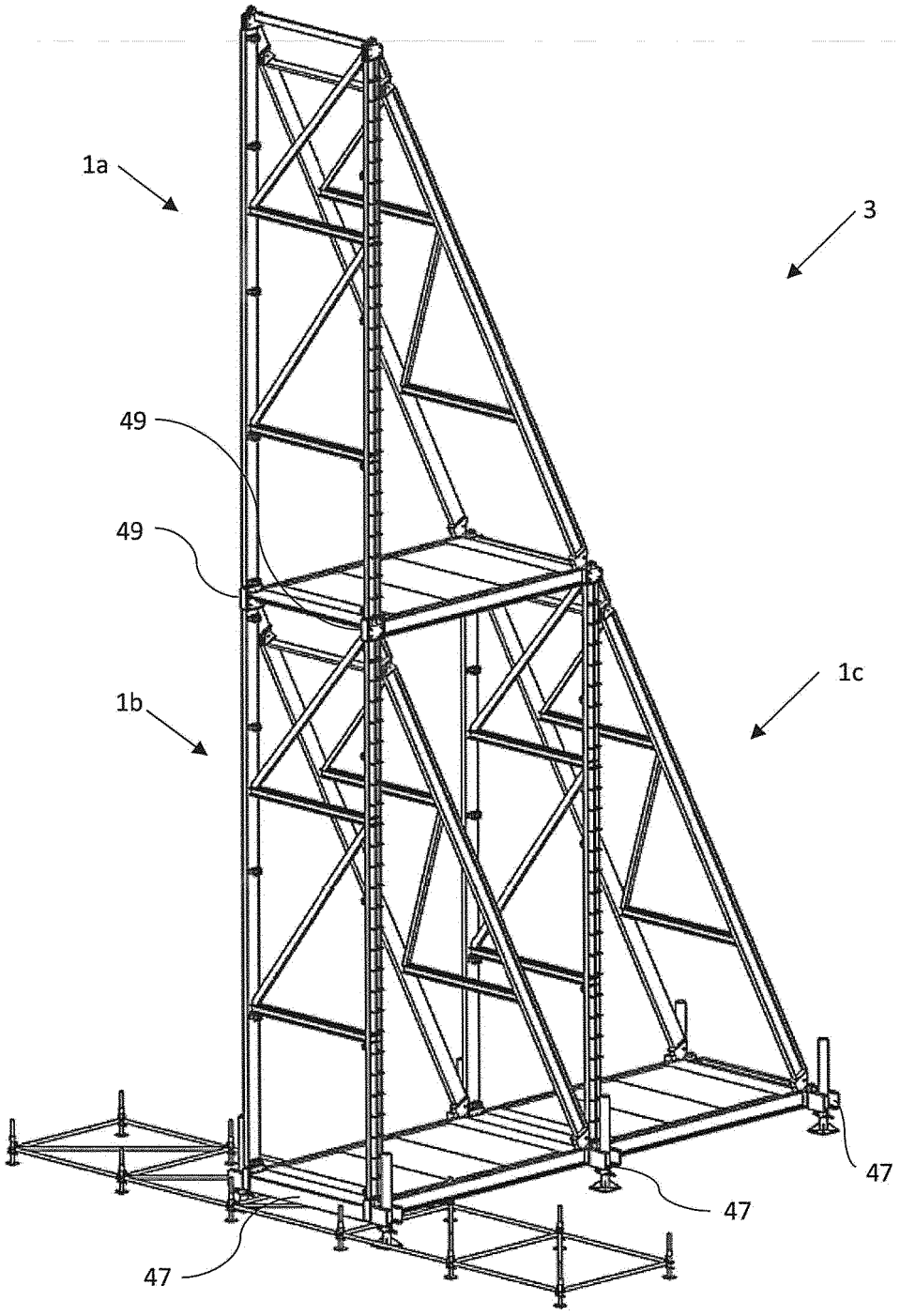


Fig. 7

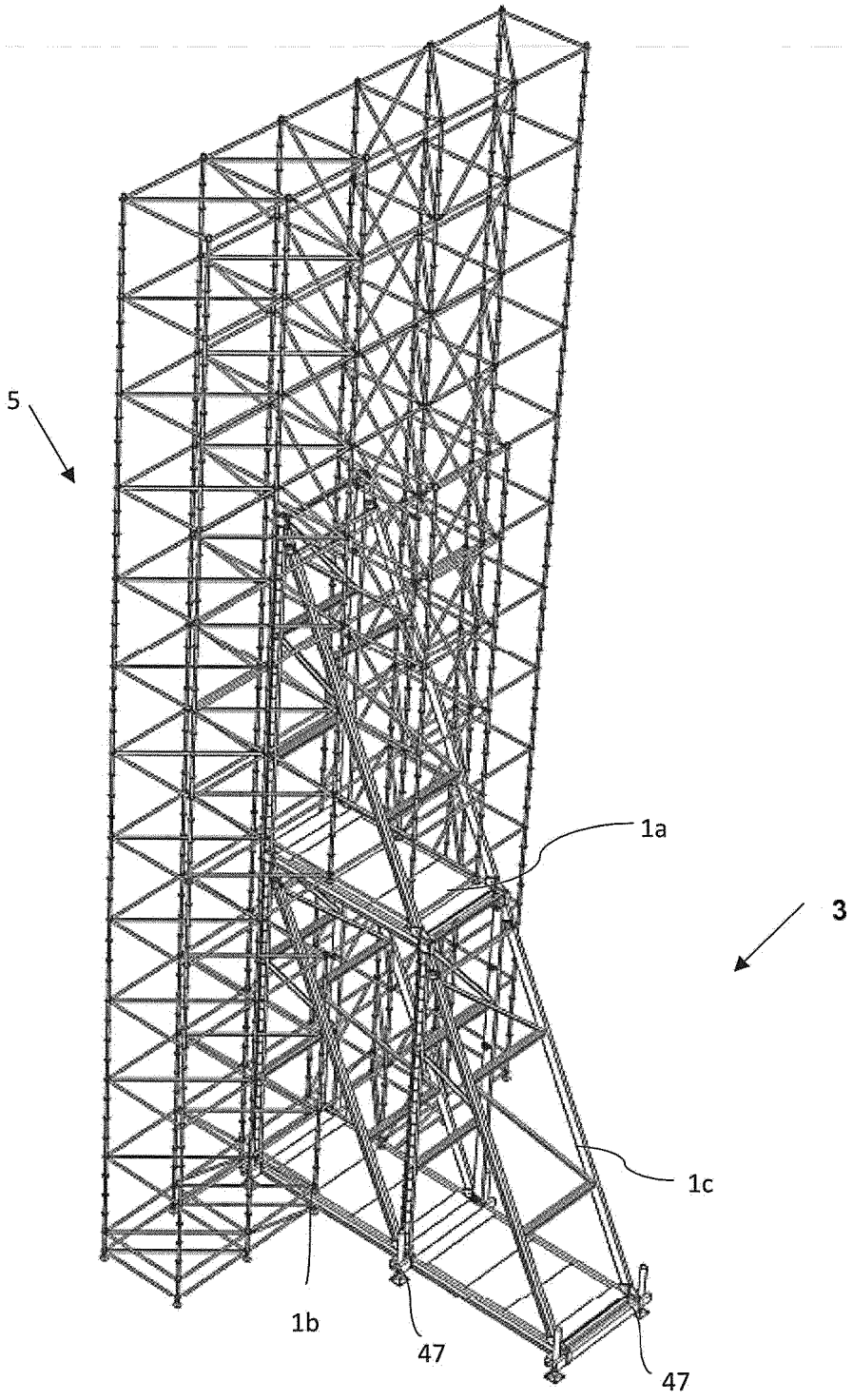


Fig. 8

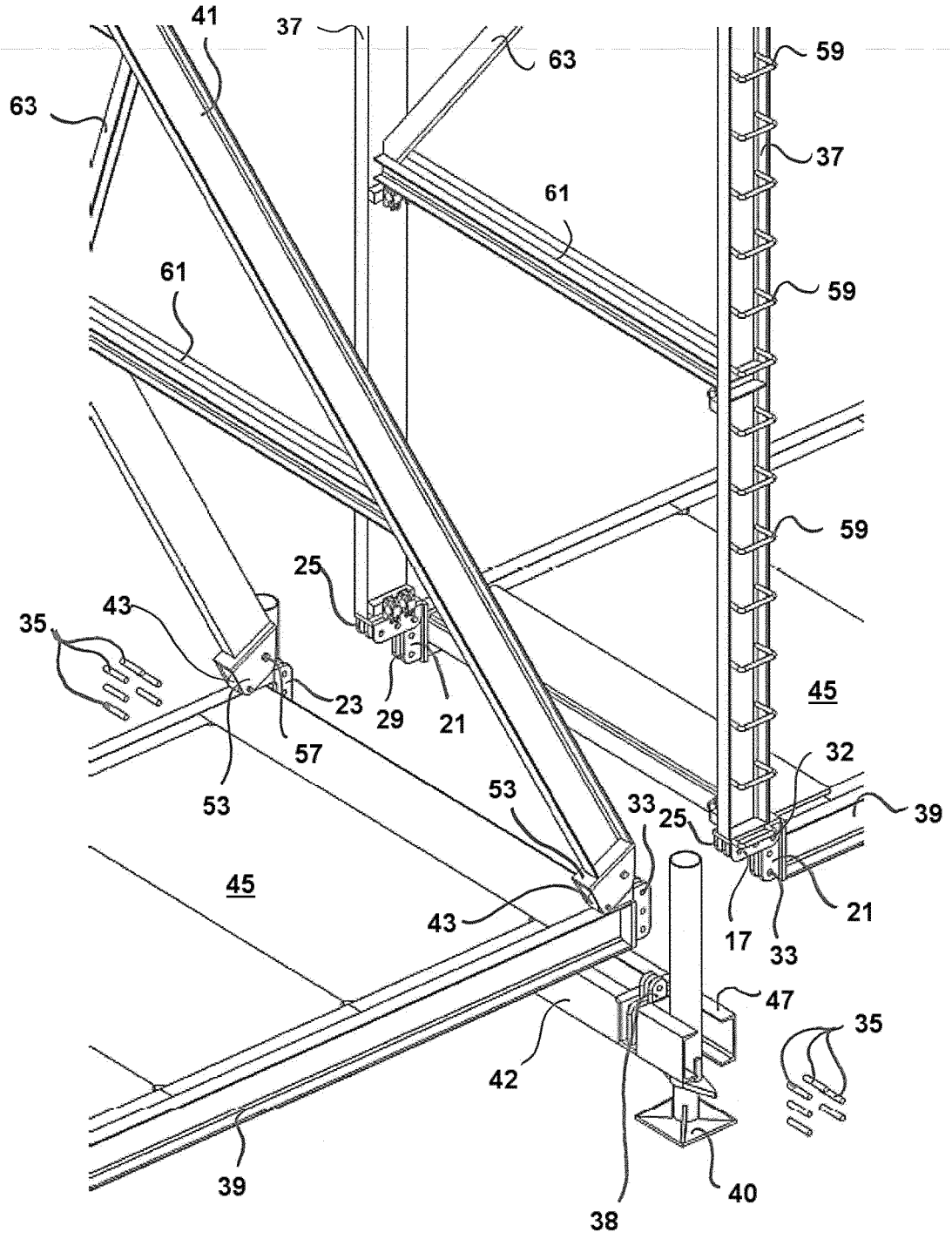

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Fig. 9

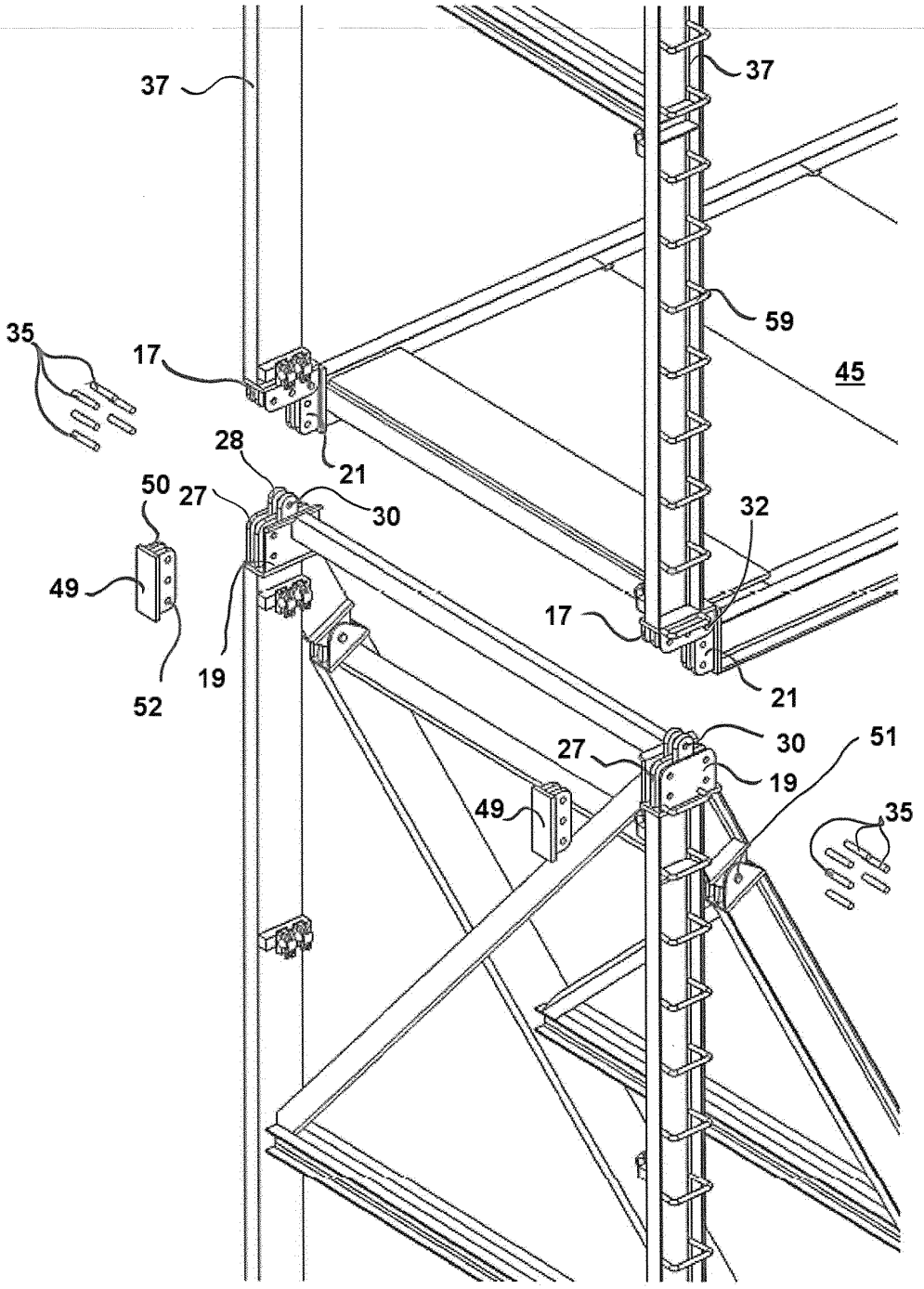


Fig. 10

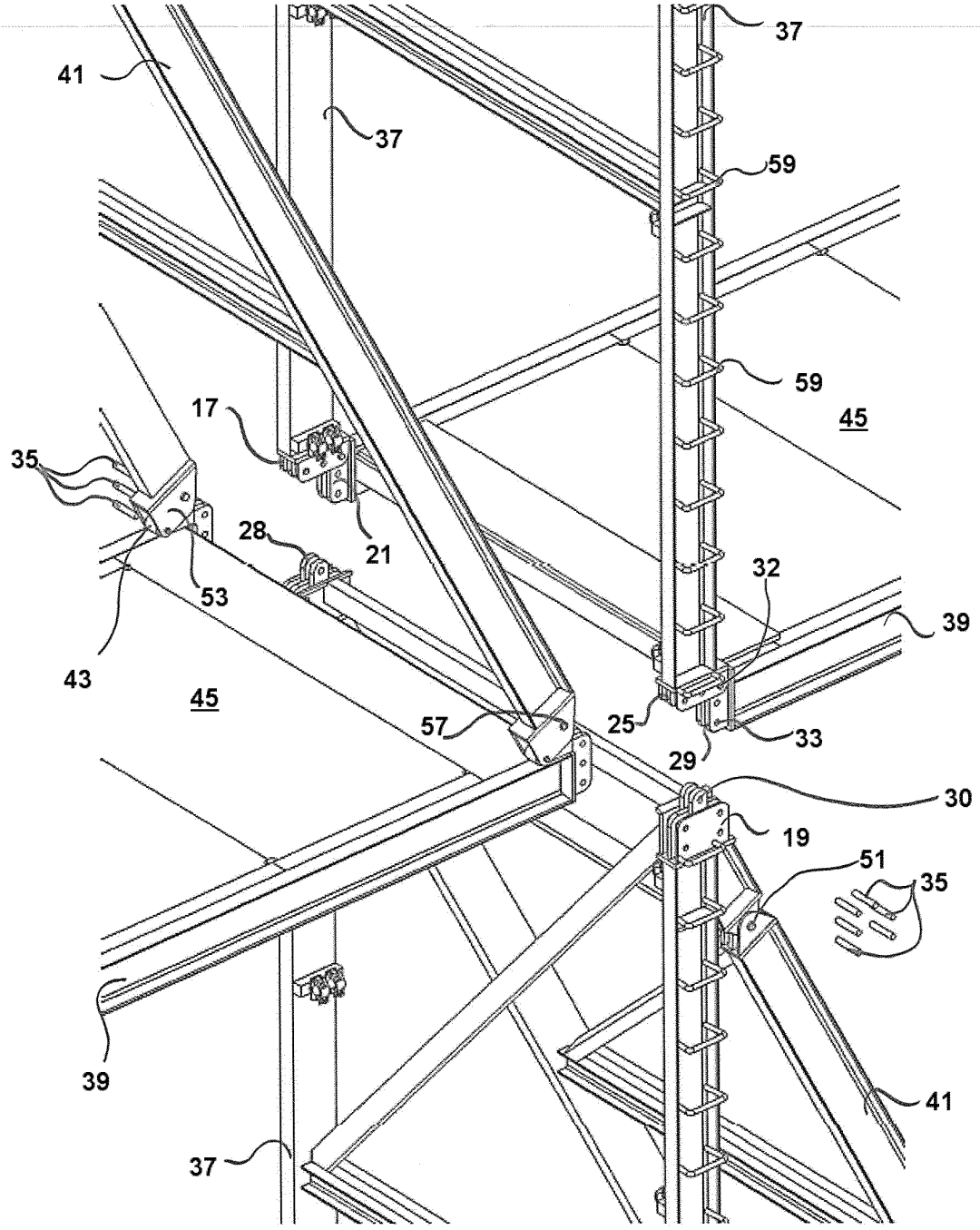

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Fig. 11

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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