(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 4 394 143 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
03.07.2024 Bulletin 2024/27

(21) Application number: **23150017.4**

(22) Date of filing: **02.01.2023**

(51) International Patent Classification (IPC):
E04G 5/12 *(2006.01)* ***E04G 21/28*** *(2006.01)*
E04G 21/24 *(2006.01)*

(52) Cooperative Patent Classification (CPC):
E04G 5/12; E04G 21/28; E04G 2005/125;
E04G 2021/248

(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:
KH MA MD TN

(71) Applicant: **S Gear B.V.**
1035 KC Amsterdam (NL)

(72) Inventors:
- **Westerink, Jardo**
  1035 KC Amsterdam (NL)
- **Olie, Eric**
  1035 KC Amsterdam (NL)

(74) Representative: **De Vries & Metman**
Overschiestraat 180
1062 XK Amsterdam (NL)

(54) **SCAFFOLDING ASSEMBLY**

(57) The scaffolding assembly (300) comprising scaffolding (307, 309) for erecting a scaffold (303) for operable positioning at and/or against a portion of a construction and providing a work space for a worker, in particular an elevated work space, and a cover (305) for covering at least part of the work space. The scaffolding assembly (300) further comprises a roller device (317) for reversibly (un-)rolling a rollable portion (305R) of the cover (305) to (from) a rolled-up configuration from (to) an unrolled configuration for (un-)covering the at least part of the work space (W).

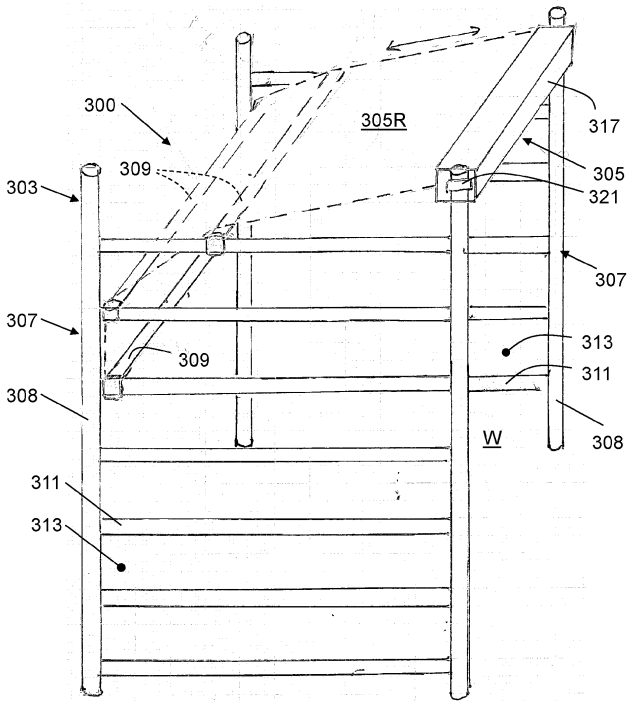

Fig. 3

EP 4 394 143 A1

Description

TECHNICAL FIELD

[0001] The present disclosure relates to the fields of scaffolding and elevated working. he present disclosure relates in particular to the field of protecting a worker's workspace on the scaffolding.

BACKGROUND

[0002] It is well known that working on a structure such as a building such as a house may require use of a scaffold to provide worker's workspaces in elevated positions about at least part of the building. A typical example of a scaffold is a movable scaffold that may be moved by rolling on wheels from one working position to a next working position on the building.

[0003] Scaffolds are structures made of scaffolding, a temporary modular system of tubes and/or beams forming a framework used to support workers and material in construction, maintenance, and/or repair, etc., of buildings and other large structures. Scaffolding modules may comprise flooring members supported on uprights such as ladder-like modules and/or stackable posts provided with connectors. The scaffolding may also comprise horizontal and/or diagonal trusses between uprights. Erected scaffolds are usually anchored with anchors to the building or structure under construction, maintenance, and/or repaired, etc. by workers.

[0004] Workers' working conditions are very important for workers' safety and wellbeing and they a constant concern in the field. Also, for particular types of work such as bricklaying and/or painting operations, environmental conditions may be decisive for an outcome of the operation. E.g. working conditions may be hazardous (heat, sun, storm, hail, snow, sleet, etc.), and/or (application of) fresh paint may be affected and damaged by one or more of rain, hail, snow, sleet, dust, animals (e.g. insects, birds / bird droppings, etc.), etc.

[0005] In view of such concerns, it is well known to attach a cover for at least part of the workspace to the scaffold. Such covers generally are of a wind-breaking and/or at least partly watertight or water-repellent fabric, such as nets, sails, tarpaulins, etc.

[0006] However, a cover may hinder access to the work space, e.g. for transporting tools and/or supplies, so that it should be removable. Also, e.g. in view of wind strengths a cover on a scaffolding may be have to be removed for protection of one or more of the construction, the scaffolding, the cover, and/or for prevention of noise due to flapping material.

[0007] Attachment, removal and storage of such covers are cumbersome and cost significant amounts of time and effort. The covers tend to be fragile, compared to other scaffolding elements.

[0008] Hence, improvements are desired.

SUMMARY

[0009] In view of the above, herewith is provided a scaffolding assembly comprising scaffolding for erecting a scaffold, for operable positioning at and/or against a portion of a construction and providing a work space for a worker, in particular an elevated work space, and a cover for covering at least part of the work space. The assembly further comprises a roller device for reversibly (un-)rolling a rollable portion of the cover to (from) a rolled-up configuration from (to) an unrolled configuration for (un-)covering the at least part of the work space.

[0010] Thus, the cover may be applied and/or removed easily compared to folding the cover. The rolled cover may be stored as a roll. The rolled cover may be stored on and/or in the roller device. The cover may be rollable as a whole.

[0011] The (un-)rolling may relate to only part of a complete rollable portion of the cover. The rolled-up configuration and/or the unrolled configuration may be with respect to each other. In the rolled-up configuration and/or the unrolled configuration a first part of the rollable portion of the cover may be unrolled or rolled up, respectively, while a second part of the rollable portion remains unrolled or rolled up, respectively.

[0012] The cover may protect the work space against external influences such as weather influences, like one or more of sun, wind, precipitation, dust, leaves, debris, bird droppings, etc. Also or alternatively, the cover may protect an environment from (effects of) work performed in the work space, e.g. in case of welding, grinding, drilling, etc. the cover may protect an environment against dust, debris, sparks, hot material, bright light, etc. which are created in the work space, and which may possibly be (sent) flying from the work space.

[0013] At least part of the rollable portion of the cover may be formed as a sheet or web of scaffold cover material. At least part of the rollable portion of the cover may be formed as one or more of a scaffolding fabric, a wind-breaking fabric, a weather protection fabric, a tarpaulin, a fire retardant fabric, a welding fabric. Suitable scaffold cover materials for covering scaffolds are known; the material preferably is a mesh or an open pore fabric like a net and has about 5% or more open fraction, e.g. about 10% or more open fraction such as 15% to 20% open fraction so as to reduce but not to stop wind. One or more parts of the cover may be opaque.

[0014] The construction may be any construction (to be) worked on by the worker, e.g. a building, a technical installation, etc. The portion of a construction may be a wall of a building, such as a house or the like. In some cases, the scaffolding may surround the work space and/or the construction may be at least in part formed by further scaffolding.

[0015] The cover may e.g. be a side cover and/or a top cover.

[0016] The roller device may be mounted or mountable to the scaffolding for, at least when mounted, reversibly

(un-)rolling the rollable portion to (from) the rolled-up configuration from (to) the unrolled configuration.

[0017] Thus the roller device may remain at hand for applying and/or removing the cover. Also or alternatively, a portion of the cover may remain rolled up while an unrolled portion of the cover is used for covering the at least part of the work space.

[0018] The roller device may be configured for reversibly (un-)rolling the rollable portion onto and from a core, respectively, for the rolled-up configuration and the unrolled configuration.

[0019] This may facilitate rolling up the cover; the cover may be attached to the core; attachment of the cover to the core in plural places or along a length of the core may prevent application of local forces onto the cover for rolling the cover; this may prevent damage. A core may help rolling the cover straight, e.g. preventing sideways deviation, folds and/or local build-up of material on the roll. A core may provide fortification to the roll.

[0020] The roller device may comprise a rotatable core and may be configured for (un-)rolling the rollable portion onto (from) the core.

[0021] The core and/or cover may be an integral part of the rolling device or be a separate part so that the rolling device may be used with plural cores and/or covers.

[0022] The core may be a rotatable axle and/or may be a hollow core rotatably mounted about an axle, and/or wherein the core comprises flanges for guiding rolling-up of cover material

[0023] A hollow core, e.g. a tubular body, reduces weight. A hollow axle may facilitate rotation. A hollow core rotatably mounted about an axle may facilitate exchanges of cores and/or rolls of cover on a core. A tubular core may be open on one or both axial ends, with may correspond to a main longitudinal direction of the core. A hollow core, in particular if one or both axially opposite ends of the core are open, may also facilitate transport and/or storage of the core and/or of a roll on such core by insertion of a tool and/or support into the core.

[0024] Note that herein references such as "axial direction" and the like refer to a rolling axis unless otherwise specified.

[0025] The roller device may comprise a housing at least partly enclosing at least part of the rollable portion in the rolled-up configuration.

[0026] The roller device may comprise a housing at least partly enclosing at least part of the rollable portion in the rolled-up configuration. Thus, the rolled-up portion may be protected from external influences.

[0027] The housing may enclose the core and any cover material rolled onto the core. The housing may form an open sleeve surrounding the core and any rolled-up cover part substantially fully, but leaving an opening for passing unwound cover material onto and/or from roll. E.g. the housing may be configured surround the core and/or the roll for more than 270 degrees about the axis, preferably more than 300 degrees more preferably more than 330 degrees e.g. leaving open less than 30 degrees, preferably less than 20 degrees such as about 10 degrees or 5 degrees or less.

[0028] The housing may preferably strong enough to support a worker, possibly adhering to one or more of dimensions, sizes and/or strengths according to one or more (safety) standards.

[0029] The housing may be openable, in axial direction and/or, preferably in a tangential direction e.g. being a multipart housing wherein different parts are hinged together; such latter construction may facilitate access to the rolled-up (portion of the) cover, a core and/or any other structures within the housing.

[0030] The roller device may be configured to urge the rollable portion into an at least partly rolled-up configuration.

[0031] This may facilitate removing the cover and rolling it up. Also, or alternatively it may help arranging the cover on the scaffold and/or tightening the cover to the scaffold.

[0032] The roller device may be provided with at least one resilient element for urging a core and an axle and/or housing to one or more particular relative positions.

[0033] The roller device may comprise one or more of a human-powered drive and a power drive for effecting the (un-)rolling, in particular for driving a core.

[0034] A human-powered drive may comprise a handle, a belt drive, a chain drive, etc. The roller may be formed as a winch. Also or alternatively, a power drive may be provided by a drive comprised in the roller device such as an electromotor, or an external drive such as a power tool, e.g. a powered drill or screwdriver.

[0035] The roller device may comprise a brake and/or stop for determining an amount of (un-)rolled cover, e.g. for determining a position of a core and/or an axle relative to a mounting and/or housing of the roller device.

[0036] This may increase safety and/or may facilitate applying and/or fixing the cover onto the scaffold.

[0037] The roller device may comprise a mounting for operably mounting to the scaffolding and a scaffold cover material on a core rotatable with respect to the mounting.

[0038] Thus, the roller device can be readily included in a scaffold. It is noted that most scaffolding is modular and adheres to standard sizes; the mounting may adhere to the modular system and the roller device be a scaffolding module.

[0039] The assembly may comprise one or more fasteners for fastening an unrolled portion of the cover to the scaffold. The one or more fasteners may be, e.g., one or more of hooks, ties, loops, buttons, etc., and/or may be releasably or permanently attached to the cover.

[0040] Associated with the above, herewith is also provided a roller device for use in a scaffolding assembly as discussed herein, comprising one or more mountings, e.g. axially opposite mountings for operably mounting to scaffolding in a scaffold, and a rollable scaffold cover material on a core rotatable about the mounting.

[0041] The roller device may comprise a housing at

least partly enclosing at least part of the scaffold cover material in the rolled-up configuration.

[0042] Associated with the above, herewith is also provided method of providing a work space for a worker on a scaffold, comprising

providing a scaffold providing the work space for a worker, in particular an elevated work space, and covering or uncovering at least part of the work space by reversibly (un-)rolling a rollable portion of a cover from (to) a rolled-up configuration to (from) an unrolled configuration using a roller.

[0043] The method may comprise mounting a roller device to the scaffold for, when mounted, reversibly (un-)rolling the rollable portion to (from) the rolled-up configuration from (to) the unrolled configuration for covering and/or uncovering the at least part of the work space.

BRIEF DESCRIPTION OF THE DRAWINGS

[0044] The above-described aspects will hereafter be more explained with further details and benefits with reference to the drawings showing a number of embodiments by way of example.

Figs. 1-3A show different embodiments of an assembly comprising a scaffold comprising a roller device and a cover;
Figs. 4-6 show details of different embodiments of a roller device for an assembly as provided herein;
Fig. 7 is a cross section view of a roller device.

DETAILED DESCRIPTION OF EMBODIMENTS

[0045] It is noted that the drawings are schematic, not necessarily to scale and that details that are not required for understanding the present invention may have been omitted. The terms "upward", "downward", "below", "above", and the like relate to the embodiments as oriented in the drawings, unless otherwise specified. Further, elements that are at least substantially identical or that perform an at least substantially identical function are denoted by the same numeral, raised by hundreds to refer to different embodiments (e.g. 101, 201, 301 etc.), and where helpful individualised with alphabetic suffixes.

[0046] Further, unless otherwise specified, terms like "detachable" and "removably connected" are intended to mean that respective parts may be disconnected essentially without damage or destruction of either part, e.g. excluding structures in which the parts are integral (e.g. welded or moulded as one piece), but including structures in which parts are attached by or as mated connectors, fasteners, releasable self-fastening features, etc. The verb "to facilitate" is intended to mean "to make easier and/or less complicated", rather than "to enable".

[0047] Figs. 1-3 each show a scaffolding assembly 100, 200, 300 comprising a scaffold 103, 203, 303 for operable positioning at and/or against a part of a construction 201 (to be) worked on, e.g. (a wall of) a building (only shown in Fig. 2), and providing a work space W for a worker (not shown). Each shown scaffold 103, 203, 303 comprises a cover 105, 205, 305 for covering at least part of the respective work space W from an environment of the scaffold 103, 203, 303, and being discussed in more detail hereafter. In Figs. 1-3 cover fabric of the covers 105, 205, 305 is only indicated with broken lines so as to show the respective scaffold 103, 203, 303.

[0048] Each shown scaffold 103, 203, 303 is, as an option, constructed of modular scaffolding, e.g. flooring member F, (only shown in Fig. 1) uprights 107, 207, 307 and horizontal trusses 109, 309 as exemplary scaffolding modules. The shown uprights 107, 207, 307 are formed ladder-like providing beams 108, 208, 308 supporting rungs 111, 211, 311 separated by gaps 113, 213, 313. The flooring member F and horizontal trusses 109, 309 are operably connected to (the rungs 111, 211, 311 of) the uprights 107, 207, 307. Diagonal trusses 214 and/or further scaffolding modules may be provided as well (Fig. 2A). Such scaffold may be provided with wheels 115, 215 (Figs. 1-2). As indicated in (only) Fig. 2, such scaffold may be fixed to the construction 201 by anchors 220.

[0049] As discussed in more detail below, the scaffolding assemblies 100, 200, 300 each comprise a respective roller device 117, 217, 317 reversibly (un-)rolling a rollable portion 105R, 205R, 305R of the respective cover 105, 205, 305 to (from) a rolled-up configuration from (to) an unrolled configuration for (un-)covering at least part of the work space W; see the double arrow in each of Figs. 1-3.

[0050] The scaffolding assembly 100 of Fig. 1 comprises a roller device 117 horizontally mounted to the scaffolding, here, to rungs 111 of uprights 107 opposite each other, using mountings 121. The roller device 117 may serve as horizontal truss to the scaffold 103.

[0051] As indicated in Fig. 1, in an unrolled configuration, the cover 105 may cover a side portion of the scaffold 103 for covering the work space W laterally, e.g. covering a back side of the scaffold 103 opposite the construction (not shown).

[0052] The cover 105 is provided with an optional beam 115B, and hooks 119 are provided as optional fasteners for fastening an unrolled portion of the cover 105 to (a truss 109 of) the scaffold 103.

[0053] Fig. 1A shows the scaffolding assembly 100 of Fig. 1, provided with optional cover members 130 mounted to the scaffold, e.g. the uprights 108 as shown, for closing (potential) gaps between the scaffold 103 and the cover 105. The mounting may preferably be releasable, e.g. using one or more of hooks, clamps, bolts, etc. The cover members 130 may as options (shown), extend outside of the scaffold 103 and outside of the cover 105. Part of the cover members 130 may be provided by fabric portions and/or by rigid members such as plates and/or profiles, as shown, e.g. of metal (steel, aluminium) and/or wood and/or polymeric material.

[0054] As an option, parts 131 of a cover member 130 may be movably connected together, e.g. foldably connected by means of one or more hinges. This may facilitate storage and/or transport.

[0055] The scaffolding assembly 200 of Fig. 2 comprises a roller device 217 vertically mounted to the scaffolding, here, to a beam 208 of an upright 207, using mountings 221. A rollable portion 205R of the cover 205 may be reversibly (un-)rolled in a horizontal direction to (from) a rolled-up configuration from (to) an unrolled configuration for (un-)covering the at least part of the work space, as indicated in Fig. 2. Fig. 2A shows part of the scaffolding assembly 300 from another viewing angle.

[0056] As indicated in Figs. 2 and 2A, in an unrolled configuration, the cover 205 may cover a side portion of the scaffold 203 for covering the work space W laterally e.g. covering a back side of the scaffold 103 opposite the construction (not shown).

[0057] The cover 205 is provided with an optional beam 205B, and optional hooks 219 are provided for fastening an unrolled portion of the cover 205 to a beam 208 of an upright 207; e.g. of same upright 207 (as shown) or an opposite upright 207.

[0058] The scaffold 203 is secured to the construction 201 with optional anchors 220.

[0059] The scaffolding assembly 300 of Fig. 3 comprises a roller device 317 horizontally mounted to the scaffolding, here, to beams 308 of uprights 307 opposite each other. The roller device 317 is mounted to (the uprights 307 of) the scaffold 303 and optionally serves as horizontal truss to the scaffold 303.

[0060] As indicated in Fig. 3, in an unrolled configuration, the cover 305 may be led over and/or along scaffolding members such as horizontal trusses 309. Thus, as an option, part of a top portion and of a side portion of the scaffold 303 are covered for covering the work space W from above and laterally.

[0061] The cover 305 may be provided with an optional beam (not shown) and/or fasteners (not shown) for fastening an unrolled portion of the cover 305 to (a truss 309 and/or beam 308 of) the scaffold 303.

[0062] Hooks 119, 219 and/or other fasteners may be fastened releasably or not to the cover in any suitable manner, e.g. one or more of integrated in the cover, fastened to the beam (if provided), and be passed through the cover material, which may be provided with predetermined openings possibly fortified, e.g. being provided with one or more of doubling of the fabric, additional layers of material, stitching, grommets, etc. Also or alternatively, one or more other scaffolding members may be provided with fasteners for fastening at least part of a cover. Note that the unrolled portion of the cover 105 may also be fastened otherwise to the scaffold 103 and/or that further and/or different fastening techniques may be employed, e.g. one or more of ribbons, ties such as rope or string, buttons, clips, clamps, magnets, etc. Ties and/or ribbons may possibly be at least partly elastic such as bungee cords and may be provided with knots, bobbles, hooks, loops, buttons, buckles, (snap-) shackles, entanglement fasteners (such as Velcro®), etc.

[0063] Figs. 4-6 show details of embodiments of a roller device 417, 517, 617. The roller devices 417, 517, 617 each comprise optional mountings 421, 521, 621 and are mountable to scaffolding to provide assembly as disclosed herein. The roller devices 417, 517, 617 is configured for, when mounted, reversibly (un-)rolling a rollable portion of a cover (not shown) to/from a rolled-up configuration from/to the unrolled configuration. The roller devices 417, 517, 617 comprise a housing 423, 523, 623 partly enclosing a rotatable core 425, 525, 625 for accommodating a rollable portion of a cover (not shown) rolled onto the core 425 in a rolled-up configuration while an unrolled portion of the cover may extend from the housing through an opening in the housing (not indicated).

[0064] In Fig. 4, the shown roller device 417 comprises a spring 427 as an exemplary resilient member operably connected between the core 425 and the housing 423 (e.g. by a connector 429) to urge the rollable portion into an at least partly rolled-up configuration by spring action of the resilient member (here: the spring 427). The spring 427 may be arranged adjacent the core 425 and/or be at least partly accommodated within a hollow portion of the core 425.

[0065] In Fig. 5, the core 525 is provided as a rotatable axle and the shown roller device 517 comprises a chain-and-sprocket drive 531 as an exemplary human-powered drive for effecting the (un-)rolling, in particular for driving the core 525 by pulling on the chain or string 533. The core 525 may be hollow.

[0066] Fig. 6 is a cross section view of an embodiment of a roller device 617. Here, the shown roller device 617 comprises a hollow core 625 rotatable arranged about a scaffolding truss 609 with an optional guiding tube 635 in between to reduce friction between the two (core 625 and truss 609). The core 625 is provided with an optional braking system 637, here being provided by a ratchet-and-pawl mechanism provided by a toothed wheel 639 and a spring loaded bolt 641.

[0067] Such braking system may be provided to the embodiments of Figs. 4 and 5 as well, e.g. on an opposite side of the spring and drive, respectively.

[0068] Fig. 7 is a cross section view of an embodiment of roller device 717 comprising a housing 723, accommodating a rotatable core 725 around which a rollable portion 705R of a cover 705 is wound. Part of the cover 705 extends from the housing 723 through an opening 743 in the housing 723. The housing 723 encloses the core 725 and the cover material rolled onto it for about 350 degrees around (an axis of rotation of) the core 725. The cover 705 is provided with a fortified portion 705F through which a hook 719 and/or clamp and/or other mounting is provided to fix the cover 705 to scaffolding.

[0069] The disclosure is not restricted to the above-described embodiments which can be varied in a number of ways within the scope of the claims.

[0070] Elements and aspects discussed for or in relation with a particular embodiment may be suitably combined with elements and aspects of other embodiments, unless explicitly stated otherwise.

Claims

1. A scaffolding assembly (100, 200, 300) comprising

   scaffolding (107, 109, F, 207, 214, 307, 309) for erecting a scaffold (103, 203, 303) for operable positioning at and/or against a portion of a construction (201) and providing a work space (W) for a worker, in particular an elevated work space, and
   a cover (105, 205, 305) for covering at least part of the work space (W), and
   further comprising a roller device (117, 217, 317, 417, 517, 617, 717) for reversibly (un-)rolling at least part of a rollable portion (105R, 205R, 305R, 705R) of the cover (105, 205, 305, 705) to (from) a rolled-up configuration from (to) an unrolled configuration for (un-)covering the at least part of the work space (W).

2. The scaffolding assembly (100, 200, 300) according to claim 1, wherein the roller device (117, 217, 317, 417, 517, 617) is mounted or mountable to the scaffolding (107, 109, F, 207, 214, 307) for, at least when mounted, reversibly (un-)rolling the rollable portion (105R, 205R, 305R, 705R) to (from) the rolled-up configuration from (to) the unrolled configuration.

3. The scaffolding assembly (100, 200, 300) according to any preceding claim, the roller device (117, 217, 317, 417, 517, 617, 717) being configured for reversibly (un-)rolling the rollable portion (105R, 205R, 305R, 705R) onto and from a core (425, 525, 625, 725), respectively, for the rolled-up configuration and the unrolled configuration.

4. The scaffolding assembly (100, 200, 300) according to claim 3, wherein the roller device (117, 217, 317, 417, 517, 617, 717) comprises a rotatable core (425, 525, 625, 725) and is configured for (un-)rolling the rollable portion (105R, 205R, 305R, 705R) onto (from) the core (425, 525, 625, 725).

5. The scaffolding assembly (100, 200, 300) according to claim 3 or 4, wherein the core (525) comprises a rotatable axle and/or a hollow core (425, 525, 625) rotatably mounted about an axle, and/or wherein the core comprises flanges for guiding rolling-up of cover material.

6. The scaffolding assembly (100, 200, 300) according to any preceding claim, wherein the roller device (117, 217, 317, 417, 517, 617, 717) comprises a housing (423, 523, 623, 723) at least partly enclosing at least part of the rollable portion (105R, 205R, 305R, 705R) in the rolled-up configuration.

7. The scaffolding assembly (100, 200, 300) according to any preceding claim, wherein the roller device (417, 517, 617) is configured to urge the rollable portion (105R, 205R, 305R, 705R) into an at least partly rolled-up configuration.

8. The scaffolding assembly (100, 200, 300) according to any preceding claim, wherein the roller device (517) comprises one or more of a human-powered drive (531) and a power drive for effecting the (un-)rolling, in particular for driving a core.

9. The scaffolding assembly (100, 200, 300) according to any preceding claim, wherein the roller device (617) comprises a brake (637) and/or stop for determining an amount of (un-)rolled cover.

10. The scaffolding assembly (100, 200, 300) according to any preceding claim, wherein the roller device (117, 217, 317, 417, 517, 617, 717) comprises a mounting (121, 221, 321, 421, 521, 621) for operably mounting to the scaffolding (107, 109, F, 207, 209, 214, 307) and a scaffold cover material (105, 205, 305, 705) on a core (425, 525, 625, 725) rotatable relative to the mounting (321, 421, 521, 621).

11. The scaffolding assembly (100, 200, 300) according to any preceding claim, comprising one or more fasteners, e.g. hooks, for fastening an unrolled portion of the cover to the scaffolding.

12. Roller device (117, 217, 317, 417, 517, 617) for use in a scaffolding assembly (100, 200, 300) according to any preceding claims, comprising one or more mountings (121, 221, 321, 421, 521, 621), e.g. axially opposite mountings for operably mounting to scaffolding in a scaffold, and a rollable scaffold cover material on a core (425, 525, 625, 725) rotatable about the mountings.

13. Roller device (117, 217, 317, 417, 517, 617) according to claim 12, comprising a housing (423, 523, 623, 723)at least partly enclosing at least part of the scaffold cover material in the rolled-up configuration.

14. Method of providing a work space (W) for a worker on a scaffold (103, 203, 303), comprising

   providing a scaffold (103, 203, 303) providing the work space (W) for a worker, in particular an elevated work space, and
   covering or uncovering at least part of the work space (W) by reversibly (un-)rolling a rollable

portion (105R, 205R, 305R, 705R) of a cover (105, 205, 305, 705) from (to) a rolled-up configuration to (from) an unrolled configuration using a roller device (117, 217, 317, 417, 517, 617, 717).

15. Method according to claim 14, comprising mounting a roller device (117, 217, 317, 417, 517, 617, 717) to the scaffold (103, 203, 303), for, when mounted, reversibly (un-)rolling the rollable portion (105R, 205R, 305R, 705R) to (from) the rolled-up configuration from (to) the unrolled configuration for covering and/or uncovering the at least part of the work space (W).

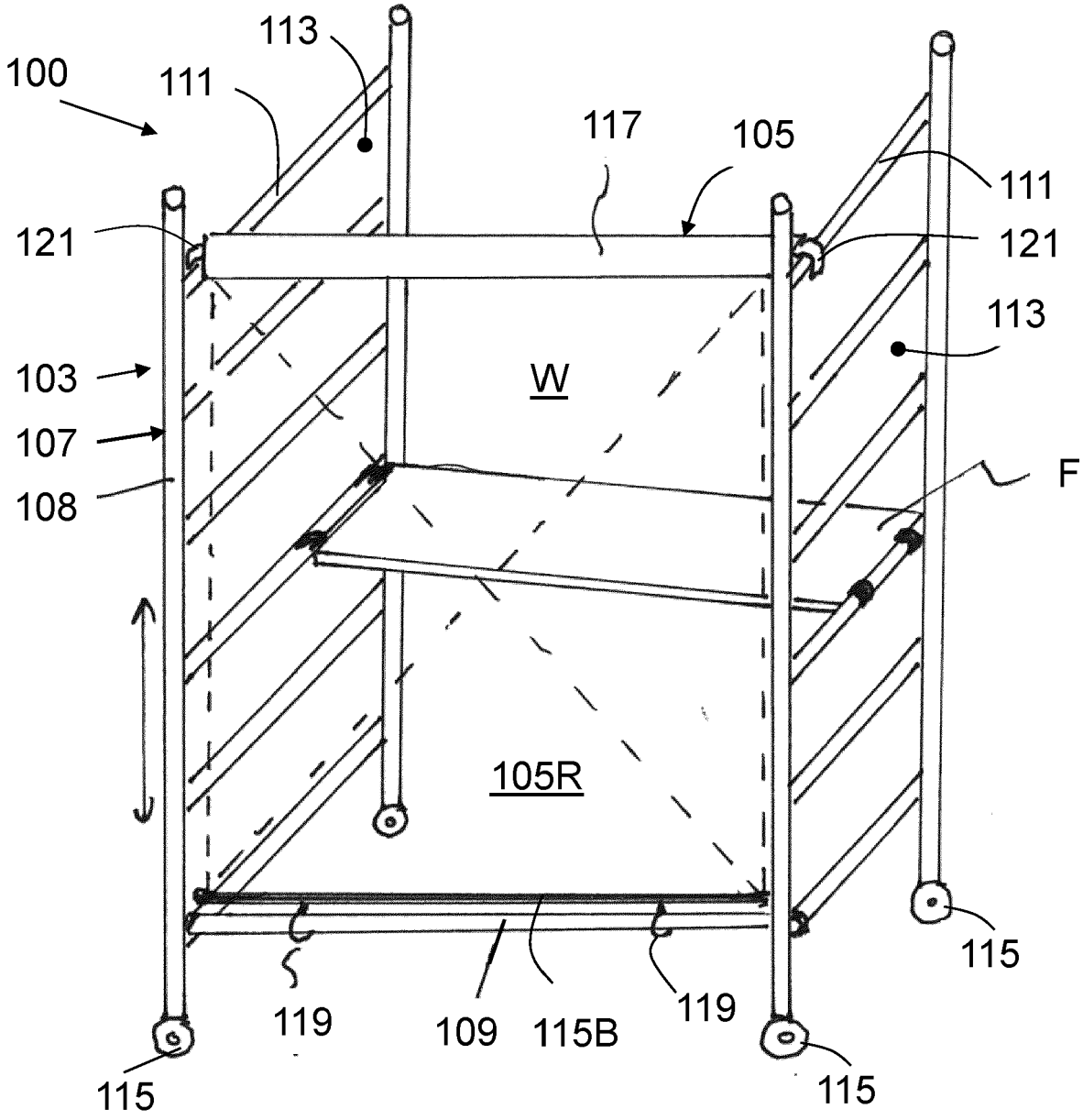
100
111
113
117
105
111
121
121
113
103
W
107
108
F
105R
115
119
109
115B
119
115
115

Fig. 1

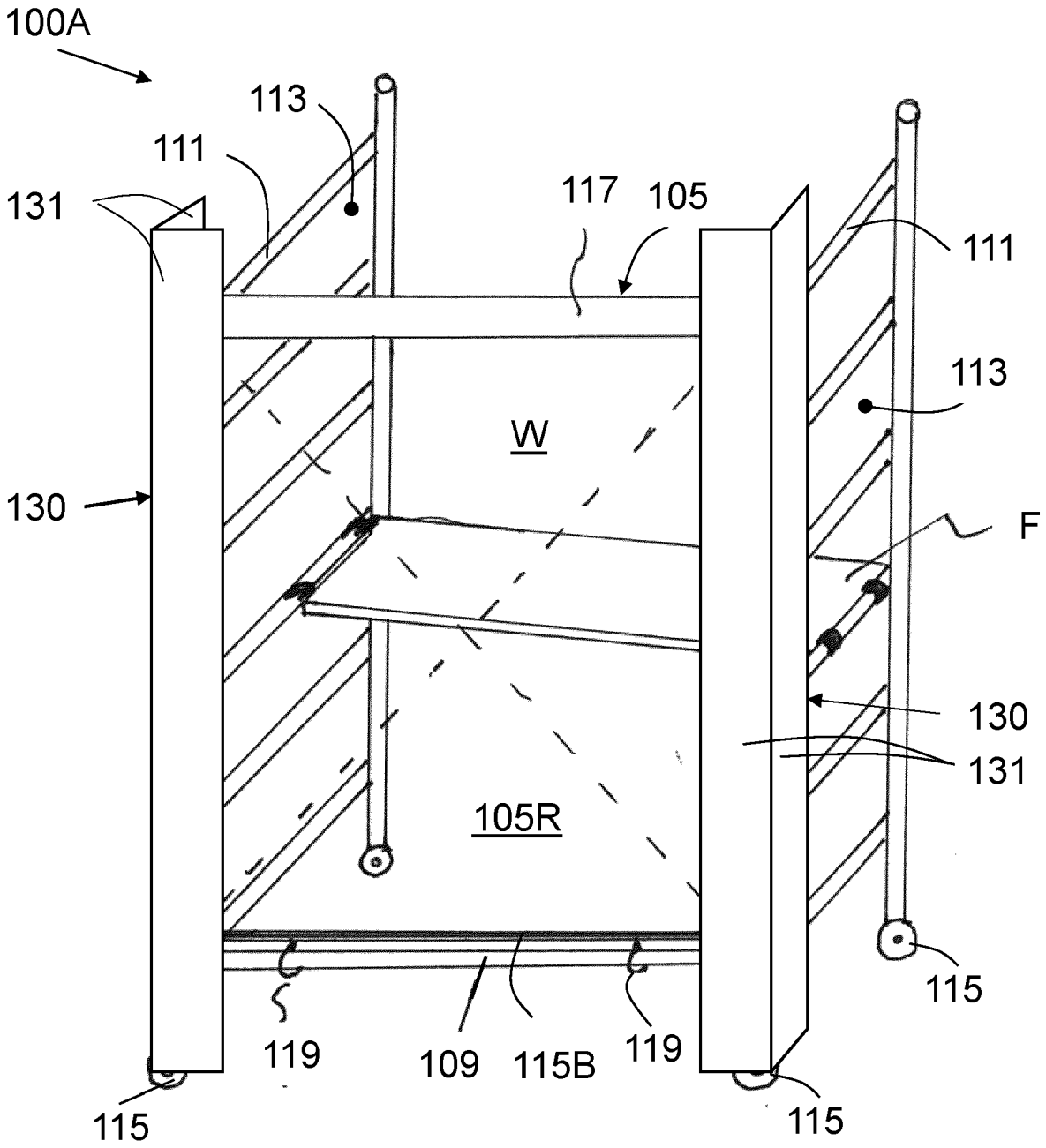
100A
113
111
131
117
105
111
113
W
130
F
130
131
105R
115
119
109
115B
119
115
115

Fig. 1A

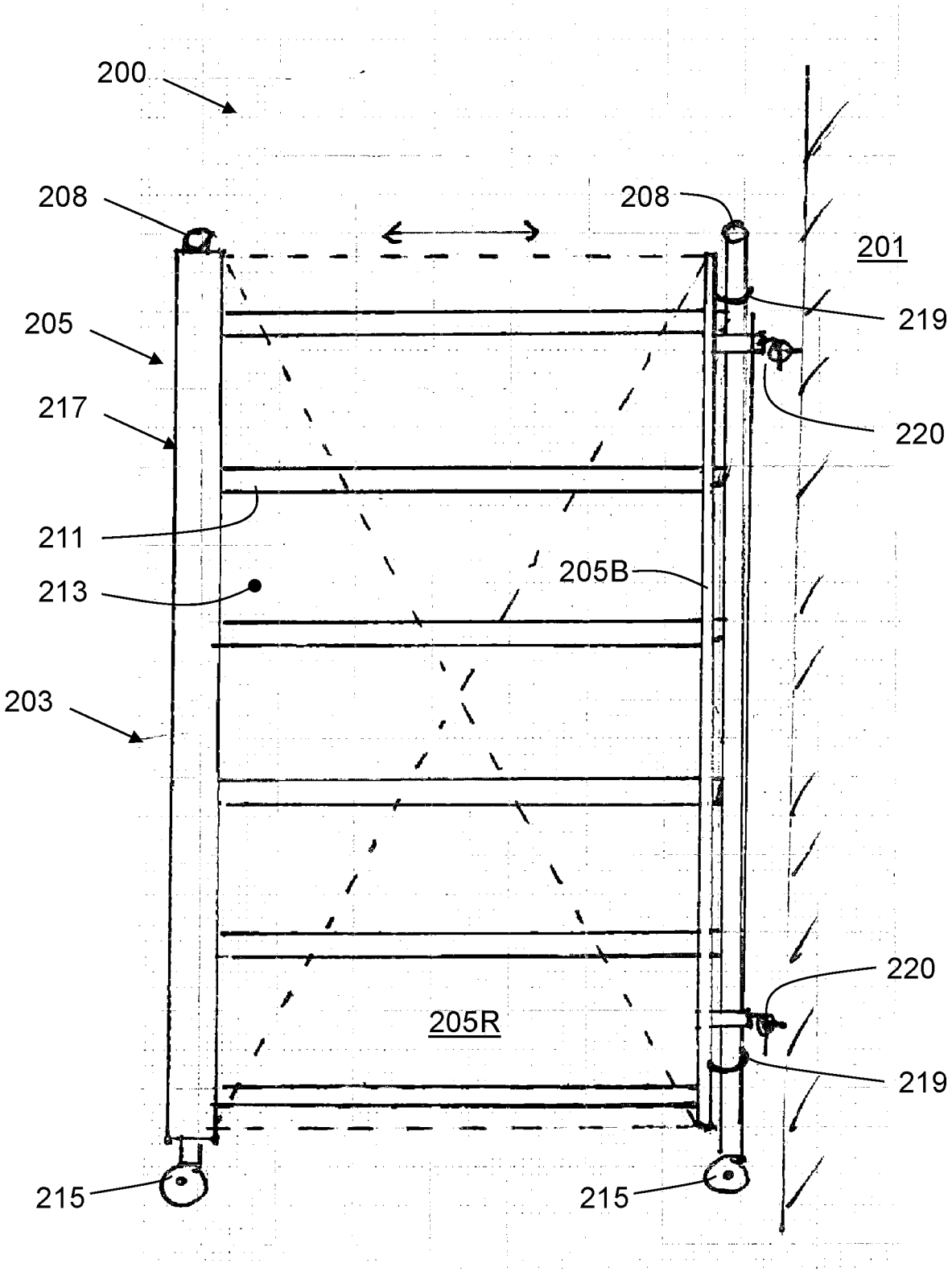
200
208
208
201
205
219
217
220
211
205B
213
203
220
205R
219
215
215

Fig. 2

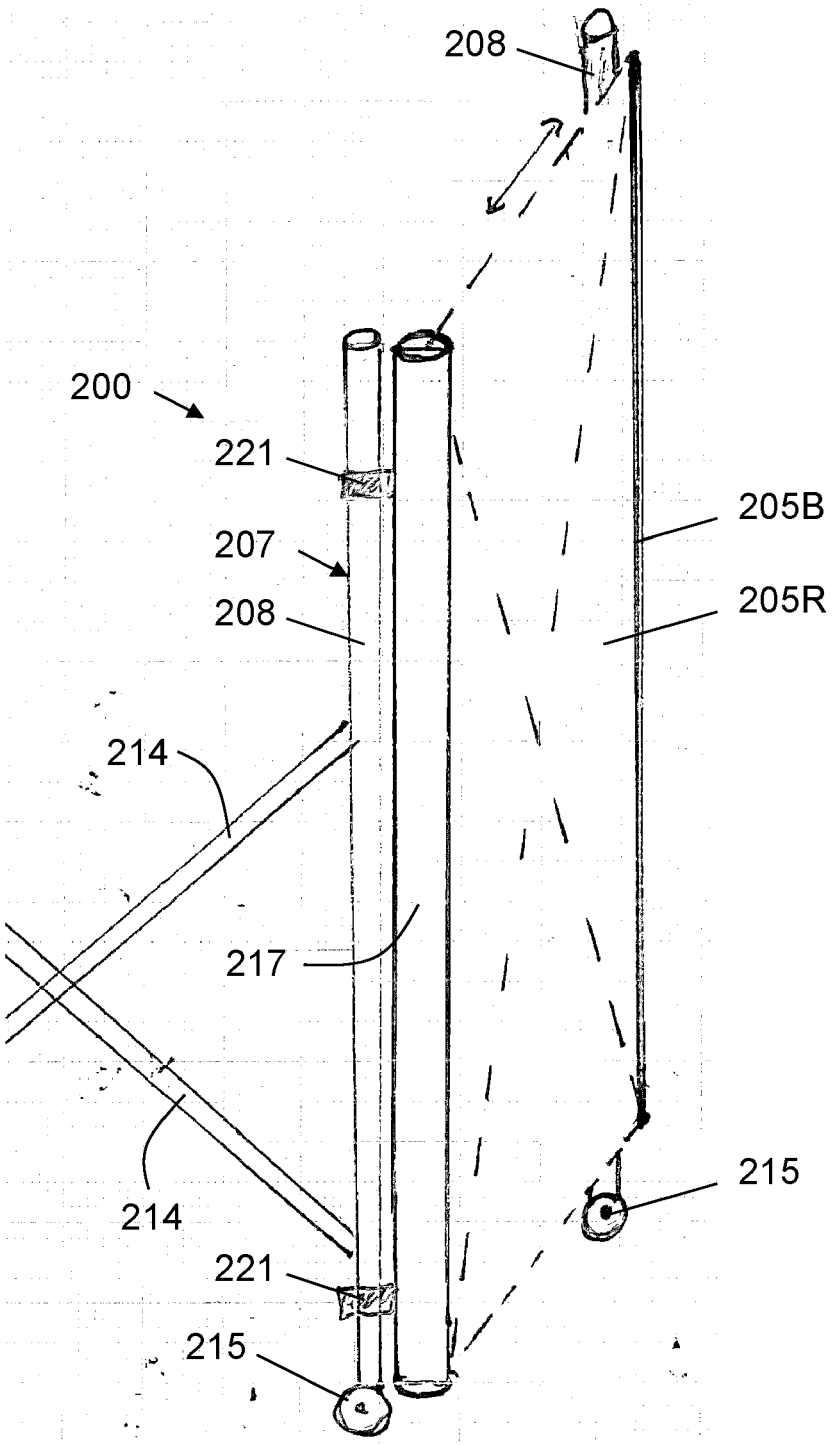

Fig. 2A

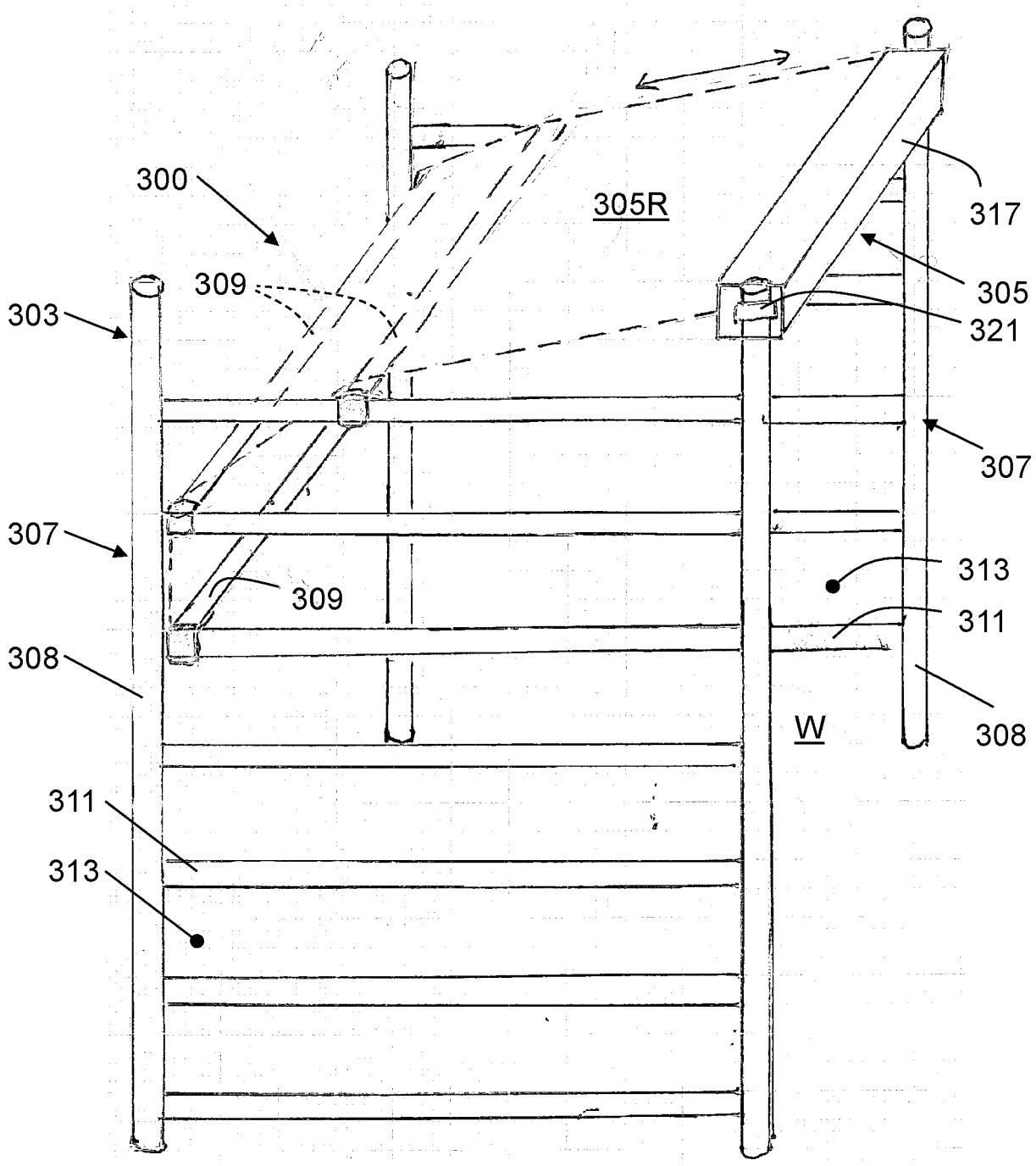
300
305R
317
309
305
303
321
307
307
313
309
311
308
W
308
311
313

Fig. 3

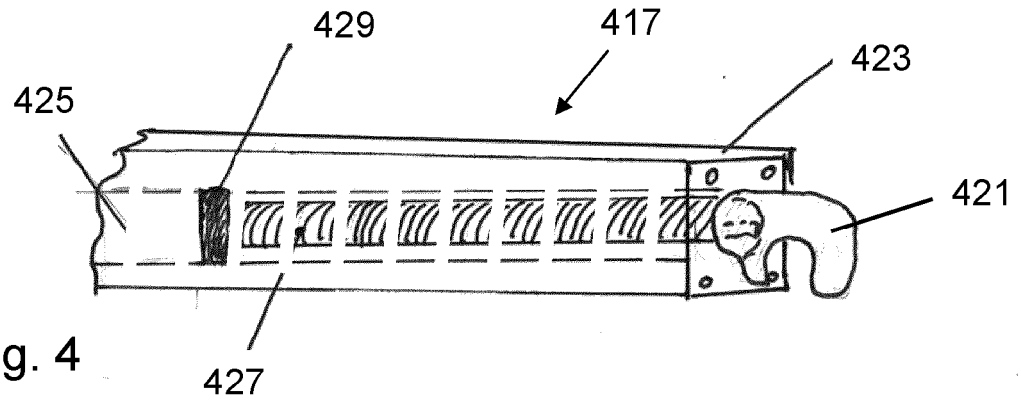

Fig. 4

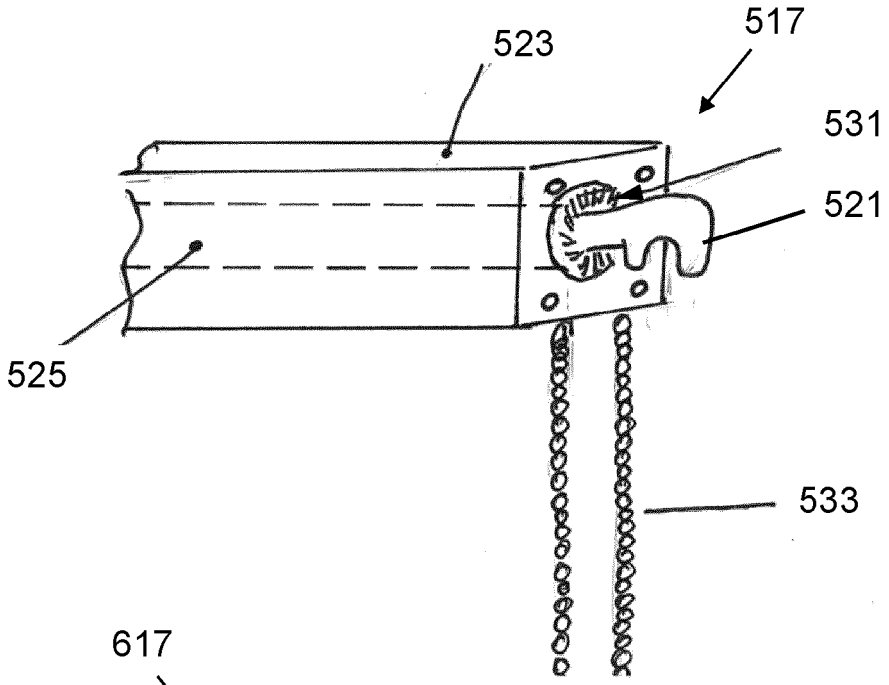

Fig. 5

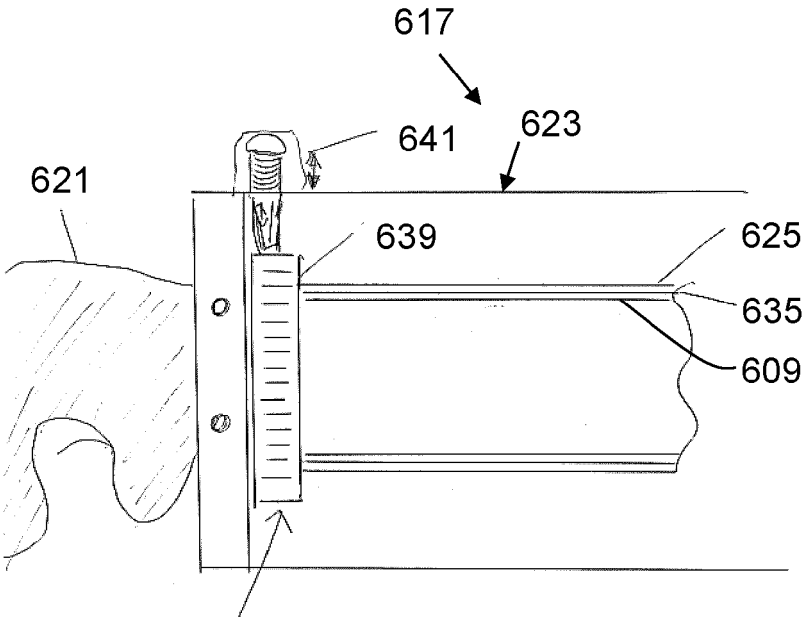

Fig. 6

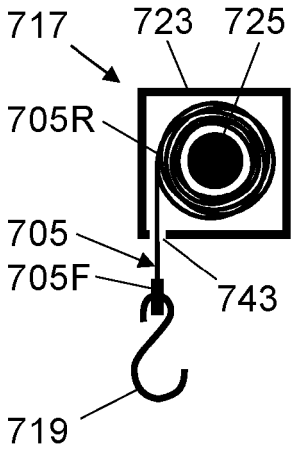

Fig. 7

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 23 15 0017

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 296 11 895 U1 (BRUECKNER HEINZ [DE]) 12 September 1996 (1996-09-12) * page 1, paragraph 1 - page 4, paragraph 4; claims 1-5; figure 1 *	1-15	INV. E04G5/12 E04G21/28 E04G21/24
X	WO 86/03538 A1 (SVENSSON LENNART; WINQVIST RAINER) 19 June 1986 (1986-06-19) * figures 1-11 *	1-15	
X	DE 20 2004 016546 U1 (HOELLER WILHELM [DE]) 16 March 2006 (2006-03-16) * paragraph [0020] - paragraph [0021]; figures 1-5 *	1-15	
X	KR 101 982 334 B1 (PARK JAE SEOP [KR]) 24 May 2019 (2019-05-24)	12,13	
A	* figures 1-8 *	1-11,14, 15	
E	DE 20 2022 106513 U1 (GUELER ISMET [DE]; MUELLER THOMAS [DE]) 26 January 2023 (2023-01-26) * paragraph [0015] - paragraph [0016]; figures 1-5a *	1-7, 10-15	

TECHNICAL FIELDS SEARCHED (IPC)

E04G

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	26 April 2023	Baumgärtel, Tim

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 23 15 0017

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

26-04-2023

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 29611895 U1	12-09-1996	NONE	
WO 8603538 A1	19-06-1986	AU 5231586 A	01-07-1986
		EP 0241466 A1	21-10-1987
		WO 8603538 A1	19-06-1986
DE 202004016546 U1	16-03-2006	NONE	
KR 101982334 B1	24-05-2019	NONE	
DE 202022106513 U1	26-01-2023	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82