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(54) **ANCHORING DEVICE TO SPACE FRAMES**

(57) The present invention refers to an anchoring device to space frames (A), such as gridded floors and walls, which comprises a carrier (2) for a scaffolding (100) to support an equipment for painting treatments and similar and/or to support articles (B) to be carried to those treatments. The carrier (2) comprises a stem (3) having, to one end, a base to be leaning against the space frame (A), in turn at least partially formed by a plurality of rigidly

and mutually interlaced beams (C, D). From the base, and from the opposite side respect to the stem (3), respective gripping units (4) are present. When the base is placed onto the space frame (A) the units (4) can engage firmly and removably interlocking with at least a respective beam (C, D) of the space frame (A) to have the anchoring of the carrier (2) with the space frame (A).

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Description

[0001] The present invention refers to an anchoring device to space frames. As known, paints, paintings, varnishes and solvents release into the surrounding environment toxic substances that can cause serious damages and diseases into the persons with which are in contact (for example for inhalation by the said persons). This problem is so particularly present in some industrial sectors, where the job of specialized operators consists of arranging the painting of different articles, parts and products inside of closed spaces. For example, this working is currently present in the automotive industry, wherein the painting and the treatment of fenders, mirrors, doors, bonnets, rims and other parts of the car body need the action of operators inside of spaces properly equipped. To avoid that the operators are forced to inhale toxic paint fumes (or similar materials) the work rooms into which they work are usually provided with suitable gas suction apparatuses. Precisely in order to permit a complete, constant and timely suction of the harmful substances, in the rooms above described the floor substantially consists of a metal grid. In fact, the grid is suitable to support the weight of the operators, equipment and parts to be painted but, in the same time with its mesh, it determines a plurality of openings through which the air can be sucked, to ensure the recirculation and, above all, the filtering. This embodiment however is not without drawbacks. It is to point out that articles such as rims, fenders and parts of car body in general, so as other different parts which, in other industrial sectors, need to be painted, have bulky sizes and so they need for their transport and support during the same painting special support scaffolding, such as trestles or similar. Scaffolding of the kind above described are also necessary to support the paint spray gun or other painting tools so that the operator can use them in practical way during the work. Moreover it is evident such as these scaffoldings need a stable and durable support of parts and tools often heavy. It is to note also that it is necessary to provide practical ways of moving and/or disassembly, such as often different parts and tools need different scaffoldings, suitable to the specific size and type of the component to be supported. In this situation, it is easy to understand such as a gridded floor was entirely unwelcome and very impractical: the temporary scaffoldings are often supported to support feet that can easily fall into the openings present between the mesh of the grid. This makes unsteady the support: a small bump or a not accurate positioning can determine real accidents, potentially dangerous for the integrity of the parts to be painted or to the equipment but, above all, for the operators. Moreover, the mounting activities of the temporary scaffolding often force the installer to bend down and lean with his knees or hands to the floor that, consisting of a metallic grid, causes pain and discomfort to the same installer. Main task of the present invention is that to solve the above cited problems realizing a device that permits a stable

anchorage to a space frame, such for example a gridded floor. In the context of this task, an aim of the invention is to realize a scaffolding that can be firmly anchored to a space frame, such as for example a gridded floor. An other aim of the invention is to realize a device that permits to anchorage in practical way a scaffolding to reticular floor or to an other fixed reticular structure. An other aim of the invention is to realize a device that can be easily anchored to a fixed reticular structure, for example a floor, without forcing the installer to awkward and strenuous activities. Not last aim of the invention is to realize a device with low costs, of safe application and that assures a high working reliability. Still an other aim of the invention is to realize a device that was easily obtained starting from parts and materials of common commercially available. This task and these aims are achieved by an anchoring device for space frames, such as gridded floors and gridded walls, comprising a carrier for scaffolding to support equipment for painting treatments and similar and/or to support articles to be subjected to such treatments, characterized in that said carrier comprises a stem having, at one end, a base to be rested against the space frame, at least partially formed to a plurality of beams rigidly and mutually intertwined, from said base and from opposite side in comparison to said stem, respectively gripping units are to be present, in correspondence of the support of said base onto the reticular structure, said units being stably and detachably engaged interlocking with at least a respective beam of the reticular structure for the anchoring of said carrier of the space frame. Further characteristics and advantages of the invention are more evident from the description of four preferred embodiments, but not exclusive, of the anchoring device according to the invention, illustrated for a merely indicative way and not limiting in the enclosed drawings. In these drawings figures 1, 2 and 3 show the use of the anchoring device according to the invention in the first embodiment in a first perspective view. Figures 4, 5 and 6 show the anchoring device respective of the figures 1, 2 and 3 in a different perspective view. Figure 7 shows the anchoring device according to the invention in the second embodiment in perspective view. Figure 8 shows the anchoring device of figure 7 in side elevation. Figure 9 shows the anchoring device according to the invention in the third embodiment in side elevation. Figure 10 shows the anchoring device of figure 9 in top view. Figure 11 shows the anchoring device according to the invention in the fourth embodiment in side elevation. Figure 12 shows the anchoring device of figure 11 in top view. Figures 13, 14 and 15 show three support scaffoldings according to the invention in perspective view. With particular reference to the cited figures is globally indicated with the referring number 1 an anchoring device to space frame A, such as gridded floors and gridded walls. It is noted till now that the protection scope here claimed extends to any type of space frame A, to which so can be effectively anchored, on the base of the modalities following illustrated, the device 1 according to the invention. In same way,

it is pointed out that in the preferred embodiment, which sometime makes reference in the following for only an illustrative aim, the device 1 is for the anchoring to a space frame A forming at least part of a floor, or however of the walking surface. Said device 1 comprises a carrier 2 for a scaffolding 100, suitable to support equipment for painting treatments and similar and/or articles B to submit to such treatments. In fact as is known, treatment of the type above described are usually actuated in rooms into which a suction system of the smokes potentially toxic released from the paints is present, that operates through the floor, for this aim realizing (at least partially) by a space frame A. As will be seen below, the device 1 according to the invention permits a fixed anchoring of the scaffoldings 100 necessary to support the equipment used during the painting (or other similar industrial treatment) and/or the same articles B to be painted. For this aim it is to point out that the equipment and the articles B can be different, without for this exit from the claimed protection field. So for example scaffolding 100 anchored to the floor by the device 1 can support articles B of type parts of cars such as rims, fenders, doors, mirrors, bonnets and other parts, so as parts in general of industrial or craft construction. In same way, the scaffoldings 100 can give a practical support for accessories such as sanders, grinders, storage trays, spotlights and/or any other tool to use during the treatment to be actuated over the space frame A, or in any case near it. Moreover it is noted such as in general are considered inside the here claimed protection field all the applications wherein a device 1 (and/or the scaffolding 100) can be used to firmly support (onto gridded floors or however firmly anchoring to space frames A) articles B and components during a treatment of any type, or also simply for drying. According to the invention, the carrier 2 comprises a stem 3 having, at one end, a base to be leaned against the space frame A, in turn at least partially formed (on the base of obviously noted methods) from a plurality of beams C, D firmly and mutually interlocking. It is to be noted such in the different embodiments showed in the enclosed figures, the space frame A was formed from a first bundle of beams C reciprocally parallel, consisting of circular transversal section, rigid and filiform bodies, that perpendicularly interlaces with a second bundle of beams D reciprocally parallel, consisting of flattened hard slats. The device 1 however can be use (without exit from the field of protection of the invention) to permit the anchoring of scaffoldings 100 to any kind of space frame A, in relation to the specific necessities, assuring so maxim versatility to the invention. From the base, and to the opposite side in comparison with the stem 3, gripping units 4 are present, when the base leaned onto the space frame A, the units 4 can engage, stably but removable, interlocking, with at least a respective beam C, D of the space frame A, so to realize the anchoring of the carrier 2 (and of the device 1 according to the invention) to the space frame A. It is to be noted that whereas the base leans onto the space frame A, so without the possibility to fall down between the

openings generated in the same, the gripping units 4, specifically designed for the fixing to a space frame A, permit the anchoring (firmly but removable) of a scaffolding 100 having one or more carriers 2, without rollover risk and falling downs owing to accidental crashes, vibrations, others stresses. In particular, in the preferred embodiment, illustrated in the enclosed figures for simplification aim and not limiting of the application of the invention, each gripping units 4 substantially consists of a claw 5 substantially wedge, which so define, with the said base, a seat 6 (see for this aim the figures 1, 2, 3 or 7). In the seat 6 so can house firmly an removable a respective beam C, D of the space frame A, following to the forced sliding (determined to the operator) of the base onto the space frame A, second an active direction, perpendicular to the respective beam C, D. That is causing the sliding of the base onto the space frame A (in the sequence of the figures 1 and 2, or 4 and 5), the user (the person appointed to the painting, or simply the person appointed to the installation of the scaffolding 100, or other else) determines the forced housing of the beam C, D (of an its part) in the seat 6, so obtaining the firmly anchoring of the device 1 to the space frame A. It is to point out how the preferred choice, to equip the device 1 of the gripping unit 4 consists of claws 5, is not to consider such as limiting of the field of protection here claimed; it is not excluded in fact to realize gripping units 4 of other kind, however part of the field of protection here claimed. For example, it is to consider the possibility that those units 4 consist of hooks or bodies rotating arranged with knobs or cams (to permit their closing onto the respective beams C, D of the space frame A). With further referring to the embodiments described in the enclosed figures with merely illustrating aim, the base substantially consists of a plate 7 placed second a perpendicular plane to the stem 3. Said plate 7 can be, for example, in metal, in metal sheet, in plastic material or composite material, but is important to point out that it is not excluded to realize bases of other kinds, and for example consist of tubular items. The plate 7 (of course choice of bigger dimensions to those of the openings defined to the meshes of which is composed the space frame A) can be applied onto the beams C, D, forming a first firm support for the scaffolding 100; this support is then perfection (and renders fixed) with the units 4. More particularly, from the plate 7 at least four gripping units 4 are grow (both claws 5 or other), equally distributed long at least two rows mutually parallel. In this way, to increase the efficacy of the anchoring, said units 4 can firmly and removable interlocking with at least two respective beams C, D, mutually parallel, of the space frame A. It is to point out that also if in the enclosed figures the plate 7 consists of four claws 5, it is not excluded to realize plates 7 arranged with a number even higher of claws 5 (or other units 4) along two or more rows reciprocally parallel (to engage with a corresponding numbers of beams C, D). Properly, to make easy the installation and anchoring workings, the plate 7 has at least an outer lip

7a raised and rough. The lip 7a forms a practical support to force with a foot the sliding of the base onto the space frame A: this avoid to the user the necessity of bending over and/or to put the knees onto the space frame A (to avoid the evident discomfort) to manual anchoring to the space frame A the device 1. It is to note as is equipped the base 7 with a second lip 7a, opposed to first, that offers to the user a further practical support, when he wants to extract the beams C, D from the seats 6, with the aim to dismounted the scaffolding 100. Usefully, to increase the stability of the anchoring of the carrier 2 to the space frame A (and consequently the safety of the invention), the device 1 comprises also a blocking subsidiary body 8, that can be put in motion after having realized the housing of the beam C, D (or of the beams C, D) in the respective seat 6 (in the respective seats 6). In fact, the driving determines the reversible passage of the body 8 to an inactive configuration, wherein the same body 8 is disengaged from the space frame A (as illustrated in the figures 1, 2, 4 and 5 for the first embodiment) to a configuration of blocking (figures 3 and 6, or also all those subsequent, for the other embodiments). In the blocking configuration, the body 8 is placed also indirectly in interference to the extraction of at least a beam C, D from the seat 6. More precisely, it is provided both the possibility that the body 8 opposites itself directly to the extraction of the beams C, D already engaged with the claws 5 (as in the enclosed figures and in the embodiments of the following paragraphs), than it is provided to put the body 8 in such a way to hinder the movement of an other beam C, D, however in the extraction way, and so, indirectly the same extraction. It is to point out such as also if in the description of the subsequent pages is made reference more times to the claws 5, the same embodiments of the body 8 can be adopted with different gripping units 4, on the base of realization modality however part of the claimed protection field. Even more particularly, in a first embodiment, corresponding to the figures from 1 to 6 the subsidiary body 8 comprises a foil 9 articulated at the base around an orthogonal axis to the stem 3. The foil 9 can oscillate in reversible way from the inactive configuration to the blocking configuration; in this last one, respectively indents 10 extending from the foil 9 are kept in interference to the sliding of the space frame A in comparison to the plate 7, according to the extraction direction of the beam C, D from the seat 6. It is to noted that to permit the drive of the oscillation of the foil 9 by a foot, in similar way to what observed for the lips 7a of the plate 7 also the foil 9 was preferably arranged with one or two borders 9a. In the embodiment of the enclosed figures, in the configuration of blocking the indents 10 facing and near to the claws 5, so to bite with these last the beam C, D housed in the seat 6. Also already observed, it is not excluded to dimension the foil 9 in different way, so that following to its oscillation till the blocking configuration, the indents 10 are spaced from the claws 5 and opposed to an other beam C, D however having, In indirect way, the wanted obstacle to the extraction. In

a second embodiment, illustrated in the figures 7 and 8, the subsidiary body 8 comprises a rod 11, in parallel supported to the stem 3 and axially sliding between the inactive configuration and the blocking configuration. In the inactive configuration, the rod 11 is substantially faced to the stem 3 and disengaged from the space frame A; vice versa, in the blocking configuration a end part 11 a of the rod protrudes beyond the plate 7, through a hole 7b arranged long this last one. As it is to be noted from the figure 8, the end part 11 a can so be kept in interference to the sliding of the space frame A in comparison with the plate 7, according the extraction direction of the beams C, D to the seat 6. Still, it is to pointed out in relation to the design choices, and to the applicative necessities, that the hole 7b can be arranged near the claws 5, so that the rod 11, aligned to the same hole 7b, can interfere directly with the extraction of the beam C, D housing in the seat 6. However, it is not excluded to aligne the rod 11 at a hole 7b different placed, so that the end part 11 a interferes with the movement of an other beam C, D opposing however, in indirect way, to the extraction. In the third and in the fourth embodiments, respectively illustrated in the figures 9, 10 and 11, 12 the subsidiary body 8 comprises a stick 12 in parallel faced at the stem 3; the stick 12 is inserted in sliding, with its end part, in an eyelet 7c (similar to the hole 7b) realized long the plate 7. The stick 12 is so axially sliding between the inactive configuration, in where a hook 13 conformed to the end part is remote from the plate 7, at the blocking configuration. In this last one (as showed in figures 9 and 11), the hook 13 is kept approached and next at the plate 7, so to engage with a beam C, D of the space frame A, opposes for interference to the sliding of the space frame A in comparison with the plate 7, according to the extraction way of the beams C, D from the seat 6. Analogous as is observed in the previous embodiments, also the stick 12 can be dimensioned and placed in such a fat to anchorate the carrier 2 with space frames A formed of beams C, D firmly and mutually interlocking according different conformations and mutual distances. Whatever be the distance between the two consecutive beams C, D and so with any measures of the space frames A, the user can adapt the device 1 according the invention to the different shape simply dismissing or approaching together the claws 5 (or other units 4) so to have a firm anchoring. To have such result, it is to consider the possibility that the claws 5 were mobile in grooves of guide arranged long the plates 7 or that the base of the carrier 2 consists of two semi-plates, with the possibility of mutual movement, each of whose support respective claws 5. So forming object of the present description also a scaffolding 100, created for the support for equipment of painting and similar and/or to the support of articles B to be put to those treatments. According to the invention, the scaffolding 100 comprises at least an anchoring device 1 with shape frames A, such as gripped floor and gripped walls. As it is described in the previous pages, the device 1 is so provided with a carrier 2 comprising a

stem 3 that has at one end a base (for example consisting of a plate 7). The base can so be leaned against the space frame A, at least in part formed to a plurality of beams C, D firmly and mutually interlocking. Moreover, from the base, and to the opposite side in comparison with the stem 3, respective gripping units 4 are present. When the base is way that the hook 13 engages with the same beam C, D forced housing in the seat 6, as into an other. Moreover, it is to note such as by suitable choices of shape, it is possible to conform the hook 13 in such a way to present suitable shape with the one of the beams C in circular section (so having, for example, the execution form of the figures 9, 10) or in flattened section (having so the execution form of the figures 11 and 12). This given a high versatility to the device 1 according the invention, that can be effectively used for anchoring to space frame A of any shape. It is to note such as the ways with whose the body 8 was kept in blocking configuration can be of any type, in relation to the working necessities, also for this exit from the field of protection here claimed. For example, in the different execution forms of the figures from 7 to 12 it is showed the presence of a spring 14, both of traction or compression, which with its elastic reaction push toward the blocking configuration the body 8 (then to keep it in this position). Said springs 14 may be deactivated with a drive, to permit the return to the inactive configuration or however during the mounting and/or dismounting steps of the scaffolding 100. An elastic element of the kind above cited can also be used to hinder and/or determine the oscillation of the foil 9, in the execution form of the figures from 1 to 6. Advantageously, to increase the versatility of the device 1 according the invention, the gripping units 4 have a adjustable wheelbase: this permits in leaned against the space frame A, the gripping units 4 can engage, in firm and mutual way, in interlocking, with at least a beam C, D of the space frame A, to anchorage the carrier 2 at this last one. In the figures 13, 14 and 15 are showed some examples of scaffoldings 100 according to the invention, with aim merely illustrative and not limiting. As it is to be noted from said figures, in the carrier 2 can for example be inserted in telescopic way one or more extensions 101, together with crosses 102, to define scaffoldings 100 consist of shaped frames also modular, suitable to support accessories, tools, equipment and articles B, such as other shelves 103 (as in figure 14) or other modular items. To permit the higher free in phase of definition of the scaffoldings 100 and so the possibility to realize type also more different of support shaped frames, it is also provided the possibility to combine two or more anchoring devices 1 (as in figure 15) to have so scaffoldings 100 more articulated and more suitable to support tools and equipment of big dimensions. The use of the device according to the invention is the sequent. As it was described in the previous pages, the device 1 permits a practical anchoring to a space frame A, of the type used, for example, for the realization of the floor (decking) of rooms used for the painting of industrial components (and

so equipped with useful suction systems). It is to point out that the device 1 can however be anchored to space frames A placed vertically, for example part of a wall. For having the wanted anchoring, the user must first of all lean onto the space frame A the base of the device 1, taking care to align the claws 5 (or other gripping units 4) to one or more beams C, D. Subsequently, the user must simply determine the sliding of the plate 7 (or other base) onto the space frame A, so having the forced housing of one or more beams C, D into the respective seats 6 of the claws 5 (according the sequence illustrated in the enclosed figures 1 and 2, or 4 and 5). It is to noted such as the sliding can be easily obtained pressing the lip 7a of the plate 7 with a foot, so avoiding for the user the necessity to bend down (the leaning of the knees onto space frames A is in fact evident cause of pain and discomfort). It is so possible obtained the anchoring of the device 1 to a fixed space frame A, for example to a floor, no impose to the user ached and tired activities. After the housing, the stability of the anchoring can be id increased thanks to the subsidiary body 8 which, in the different embodiments present in the previous pages, in the blocking configuration opposes itself to the subsequent extraction of the beams C, D form the seat 6 (till of course to the return to eh inactive configuration arranged a pleasure to the same user). Thanks to the device 1 it is so possible to firmly anchor scaffoldings 100 of any conformation to gridded floors, can freely compose one or more carriers 2 with the extensions 101, the crosses 102 and other modular solutions or accessories (such as the shelve 103), in relation to the specific necessities. More in general, as it is to be noted, the device 1 and the scaffolding 100 can be firm anchored to a space frame A of each type, formed to each type of beams C, D and any shape and dimension, and so assuring the higher versatility and practical of use to the invention. At the end it is to note such as the device 1 (preferably realized in metal) firmly anchored to a space frame A also this in metal material, in positive help the discharge to ground of the static currents, whose usual the parts to be painted, and whose are generated to the airflow of the painting cabin or of the areas of preparation where usual are present gridded floors of the described type. It is in practical tested as the device according to the invention in full solves the prefixed aim, such as the use of a stem having, at its end, a base to be leaned against the space frame and arranged with respective gripping unit that can firmly and mutually engaged, in interlocking, with at least a respective beam of the same space frame, permits a firmly anchoring of this last one. The invention, so created, is possible of different modifications and variations all part of the new concept; moreover, all the details can be changed with other technical equivalent elements. In the examples of realization are illustrated the single characterizations cited in relation to specific examples, whose can be changed with other different characteristics present in other example of realization. In practical the used materials, the dimensions, can be any in base of

the necessity and of the state of the art.

Claims

1. Anchoring device to space frames (A), such as grate floors or grate walls, comprising a carrier (2) for a scaffolding (100) to support equipment for painting treatments and similar and/or to support articles (B) to be submitted to these treatments, **characterized in that** said carrier (2) comprises a stem (3) having, at one end, a base to be leaning against the space frame (A), at least partially consists of a plurality of beams (C, D) rigidly and mutually braided, from said base, and to the opposite side in comparison to said stem (3), respective gripping units (4) are developed, in correspondence of the leaning of said base onto the space frame (A), said units (4) being firmly and removably engageable, interlocking, with at least a respective beam (C, D) of the space frame (A) for the anchoring of said carrier (2) at the space frame (A).
2. Anchoring device, according the claim 1, **characterized in that** each of said gripping units (4) substantially consists of an claw (5) substantially cuneiform, determining with said base a seat (6) to house firmly and removably a respective beam (C, D) of the frame space (A), following the forced sliding of said base onto the space frame (A), according an active direction perpendicular to the respective beam (C, D).
3. Anchoring device, according the claim 1 or the claim 2, **characterized in that** said base substantially consists of a plate (7) placed according a perpendicular plane to said stem (3), from said plate (7) at least four of said gripping units (4) are developed, equally distributed along at least two mutually parallel rows, for the engagement stable and removable, interlocking, with at least two respective beam (C, D), mutually parallel, of the space frame (A).
4. Anchoring device, according the claim 3, **characterized in that** said plate (7) has at least an outer lip (7a) raised and rough, forming a practical support to force with a foot the sliding of said base onto the space frame (A).
5. Anchoring device, according to one or more of the previous claims, **characterized in that** to comprise an subsidiary body (8) of blocking to be activated following of the housing of at least a beam (C, D) in the respective said seat (6), for its reversible passing from an inactive configuration, in where it is disengaged from the space frame (A), to a blocking configuration, wherein, also indirectly, is placed in interference to the extraction of at least a beam (C, D) from said seat (6), for an increasing of the stability

of the anchoring of said carrier (2) with the space frame(A).

- 5 6. Anchoring device, according to the claim 5, **characterized in that** said subsidiary body (8) comprises a foil (9) articulated at said base around a axis orthogonal at said stem (3), for its reversible oscillation from said inactive configuration to said blocking configuration, wherein respective indents (10) developed form said foil (9) are kept in interference to the sliding of the space frame (A) in comparison of said plate (7), according to the direction of extraction of at least beam (C, D) from said seat (6).
- 10 7. Anchoring device, according to the claim 5, **characterized in that** said subsidiary body (8) comprises a rod (11) in parallel supported from said stem (3) and axially sliding between said inactive configuration, wherein said rod (11) is substantially facing said stem (3) and disengaged from the space frame (A), and said blocking configuration, wherein a end part (11 a) of said rod (11) protrudes over said plate (7), through a hole (7b) arranged long said plate (7), for the interference at the sliding of the space frame (A) in comparison with said plate (7), according the direction of extraction of at least a beam (C, D) form said seat (6).
- 15 8. Anchoring device, according the claim 5, **characterized in that** said subsidiary body (8) comprises a stick (12) in parallel facing said stem (3) and in sliding inserted, with its terminal part, in an eyelet (7c) arranged long said plate (7), said stick (12) being axially sliding between said inactive configuration, wherein an hook (13) formed to said terminal part is distanced from said plate (7), to said blocking configuration, wherein said hook (13) is approached and next to said plate (7), for the engagement with a beam (C,D) of the space frame (A) and the interference at the sliding of the space frame (A) in comparison to said plate (7), according to the extraction direction of at least a beam (C, D) form said seat (6).
- 20 9. Anchoring device, according to one or more of the previous claims, **characterized in that** said gripping units (4) have adjustable wheelbase, for the anchoring of said carrier (2) to space frame (A) made of beams (C, D) firmly and mutually intertwined according to different mutual conformations and distances.
- 25 10. Scaffolding for leaning for equipment for painting treatments and similar and/or to articles (B) to carry out to these treatments, **characterized in that** it comprises at least a anchoring device (1) for space frame (A), such as gridded floors and gridded walls, provides with a carrier (2) comprising a steam (3) having, at one end, a base to be leaning against the space frame (A), at least partially formed to a plurality
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of beams (C, D) firmly and mutually intertwined, from said base, and from the opposite part in comparison to said stem (3), gripping units (4) are developed, in correspondence with the leaning of said base onto the space frame (A), said units (4) being stable and removable engaged, in interlocking, with at least a beam (C, D) of the space frame (A). for the anchoring of the carrier (2) at the space frame (A).

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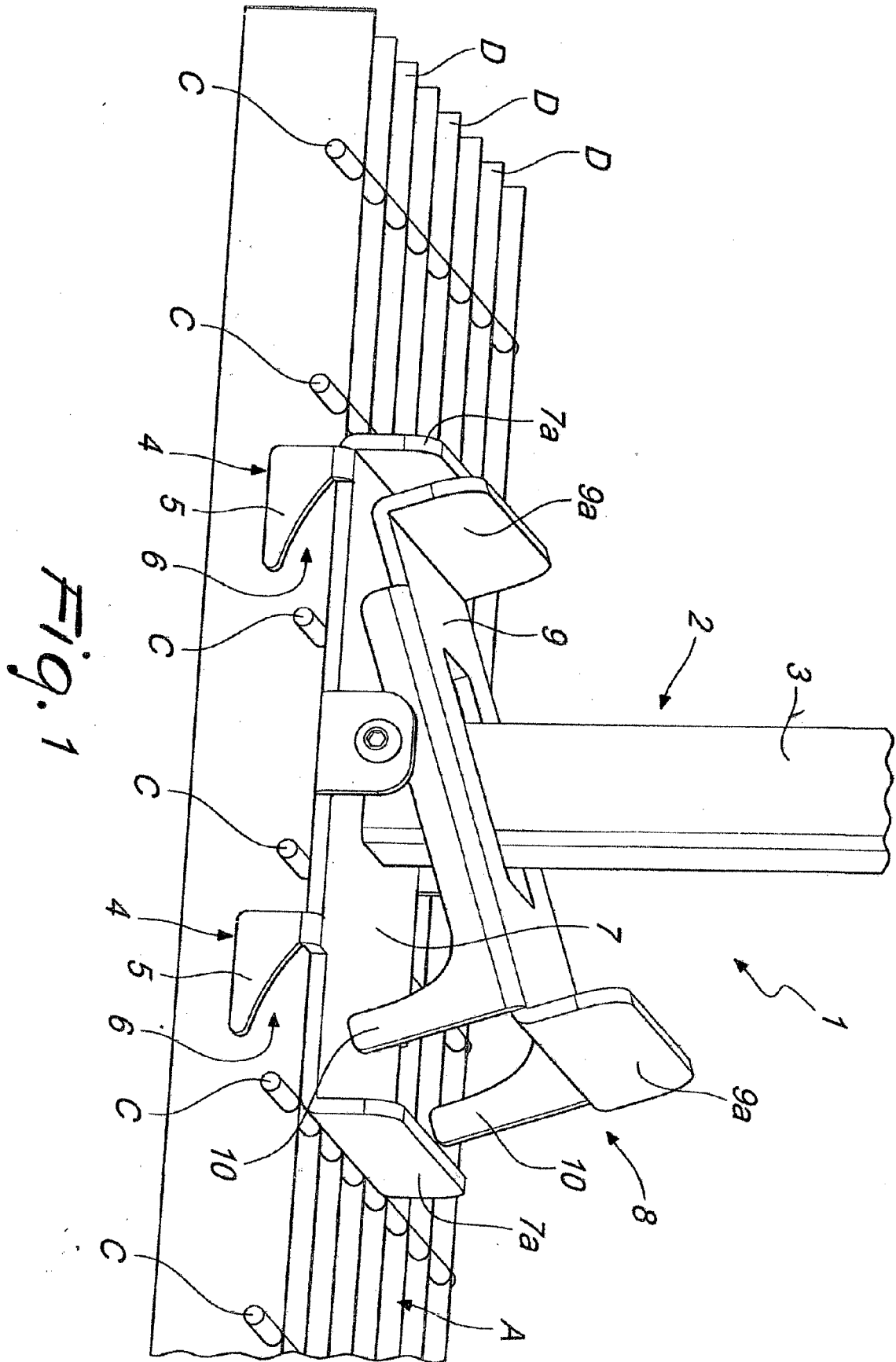
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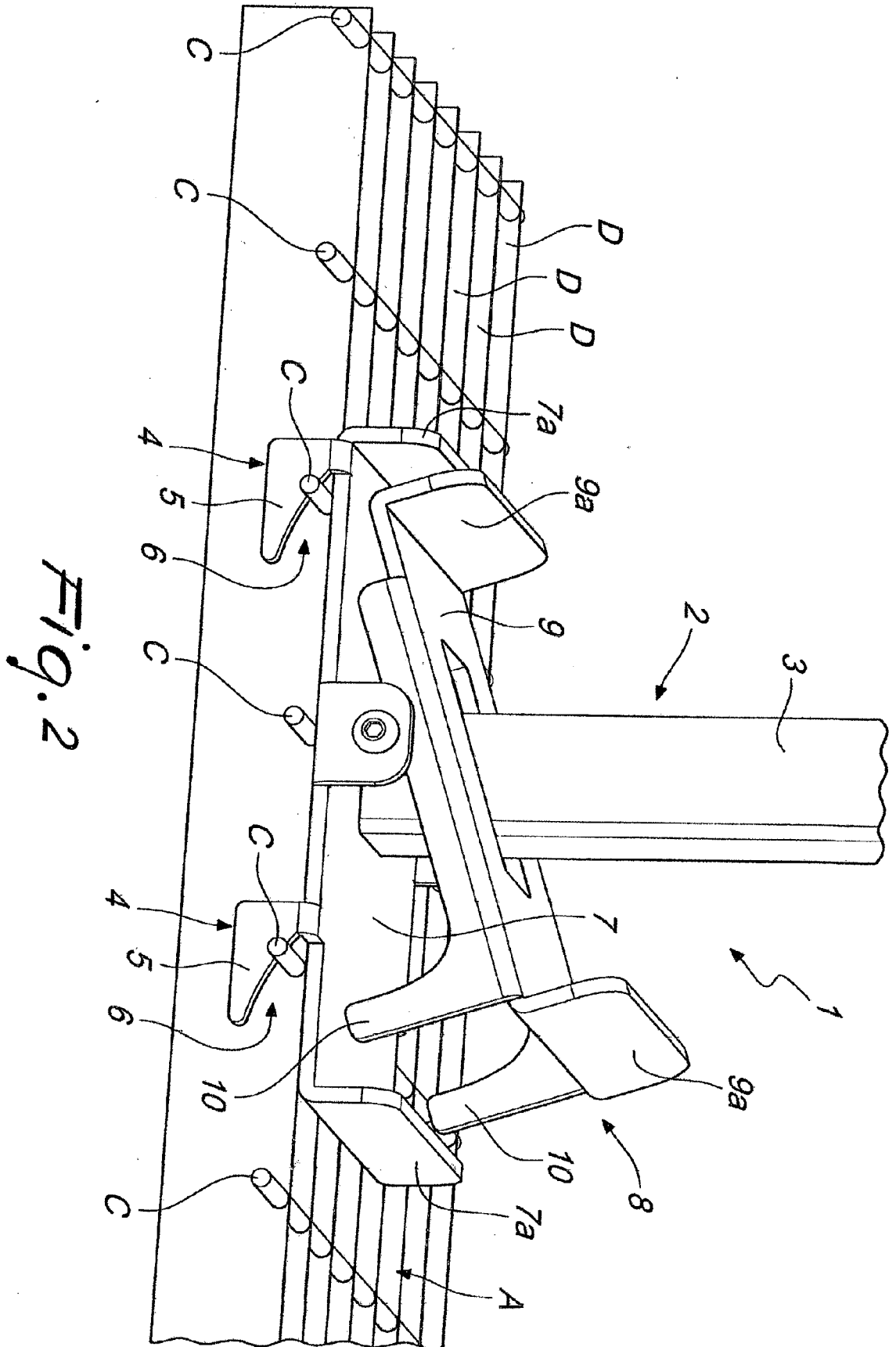
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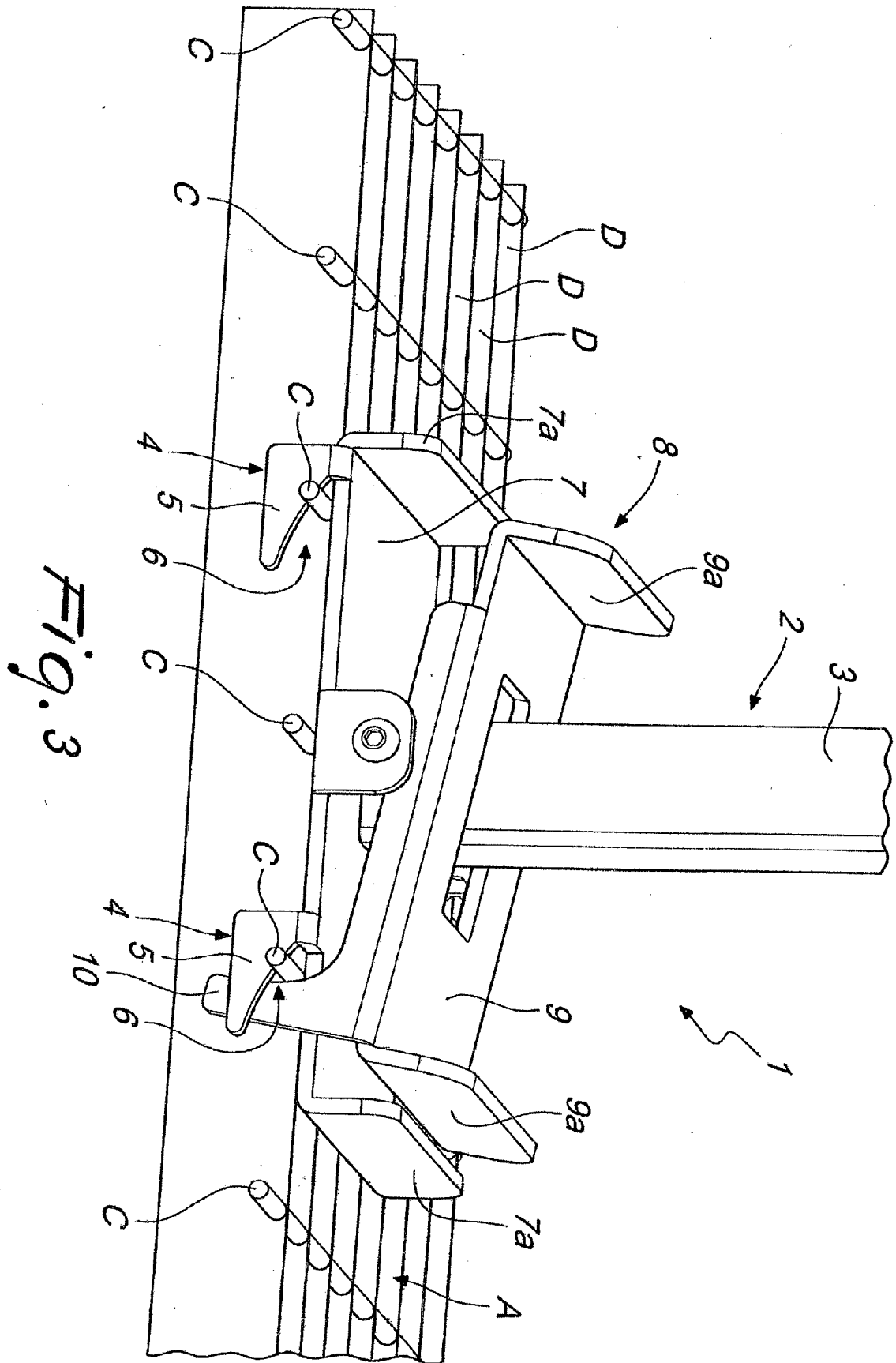
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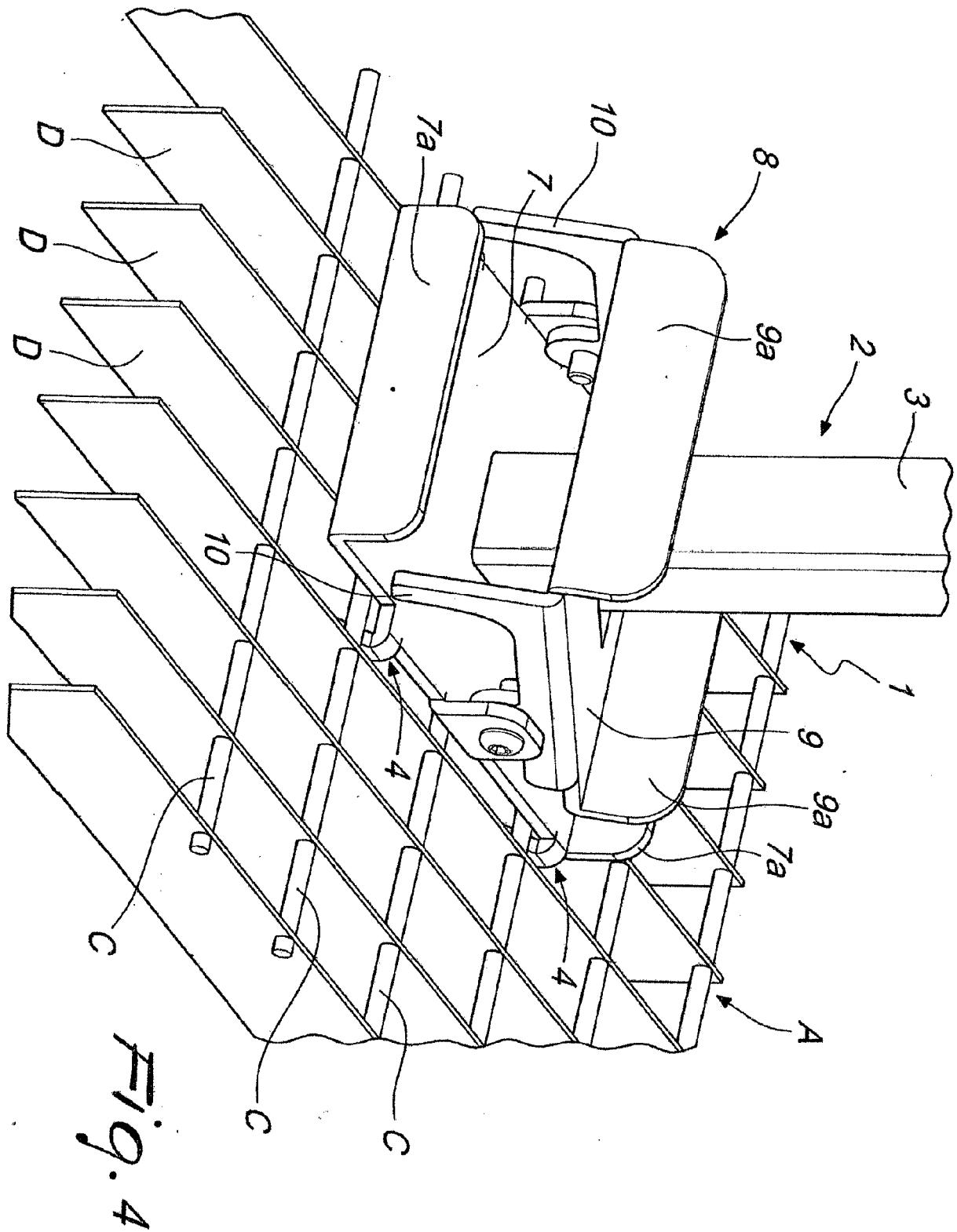
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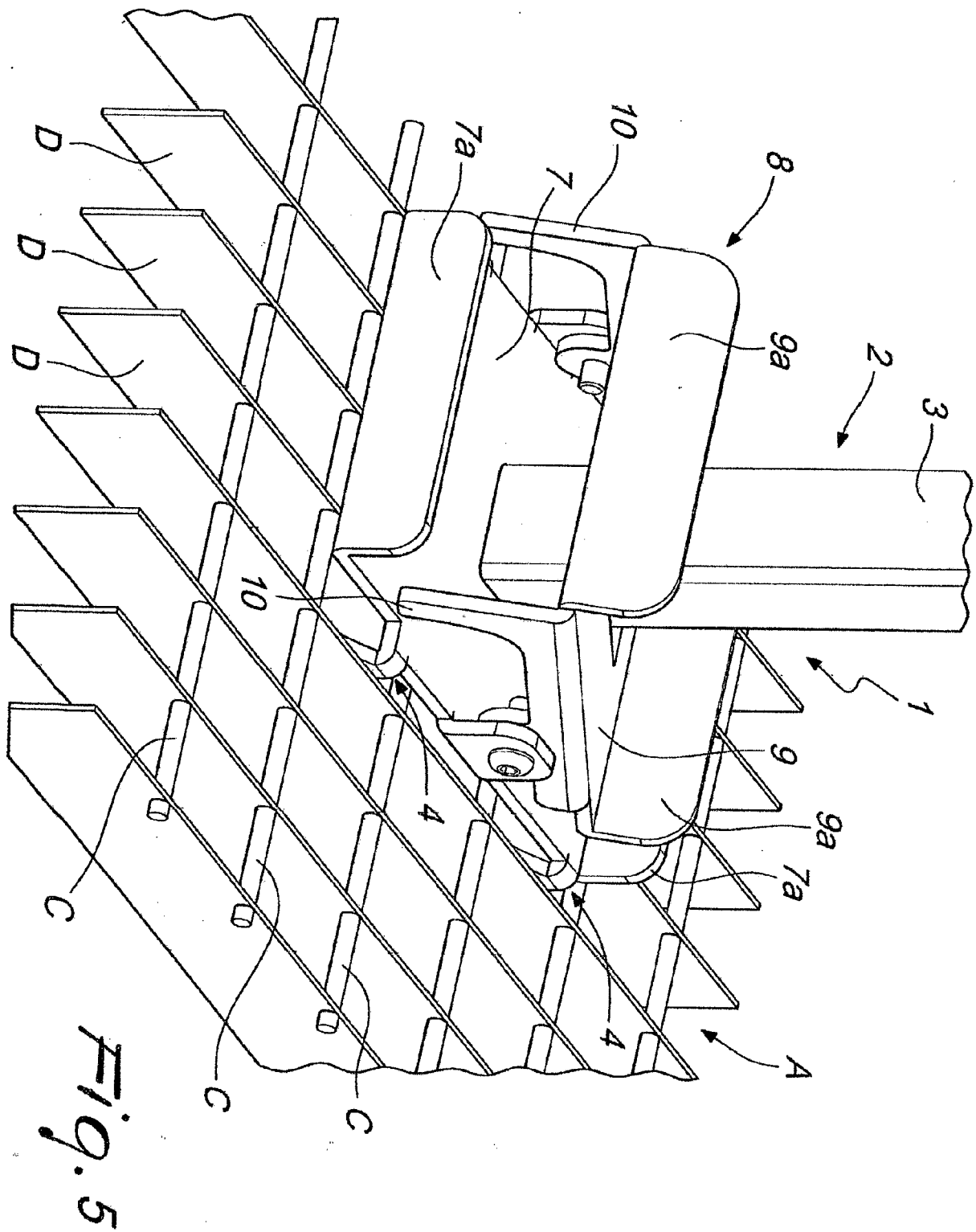
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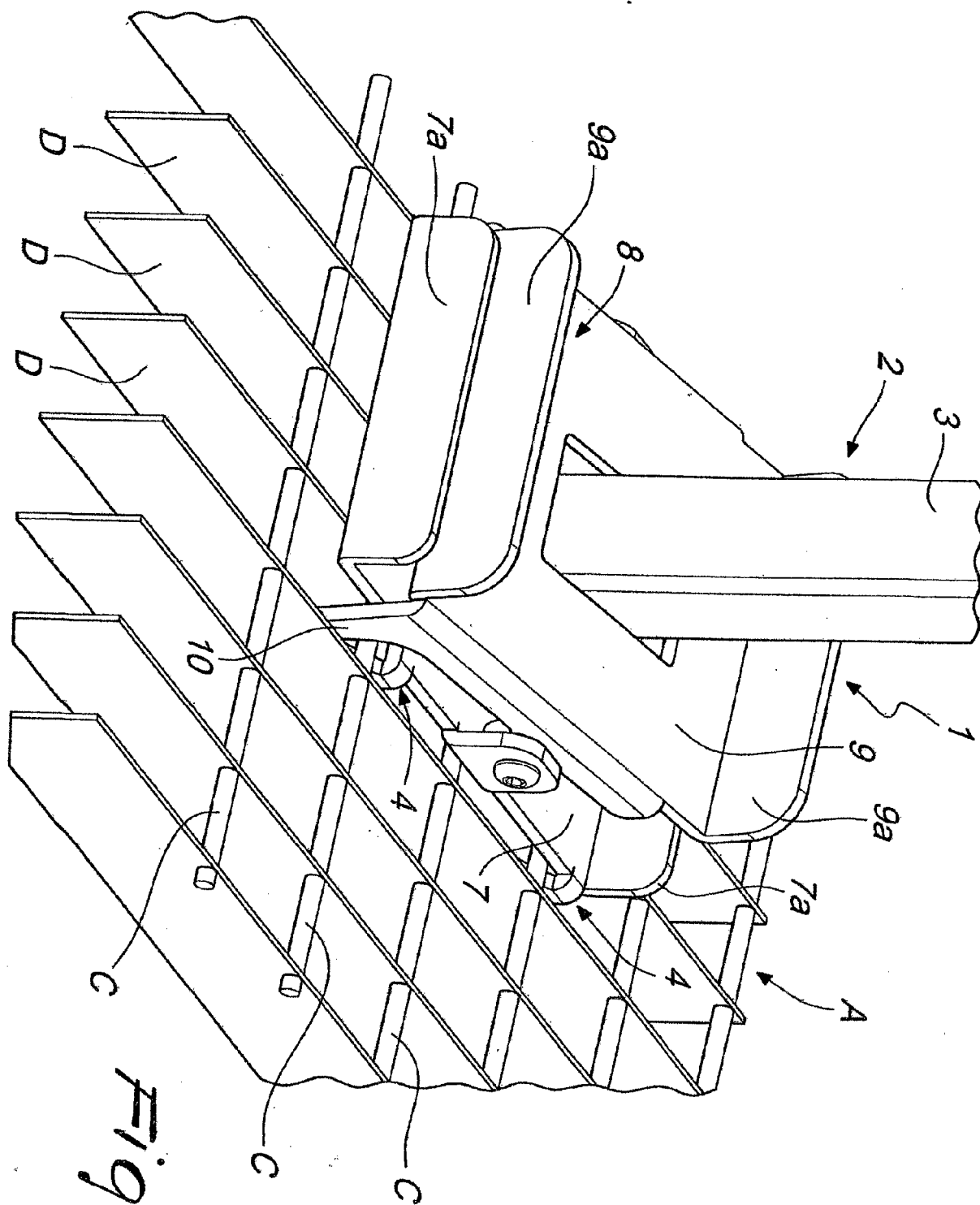












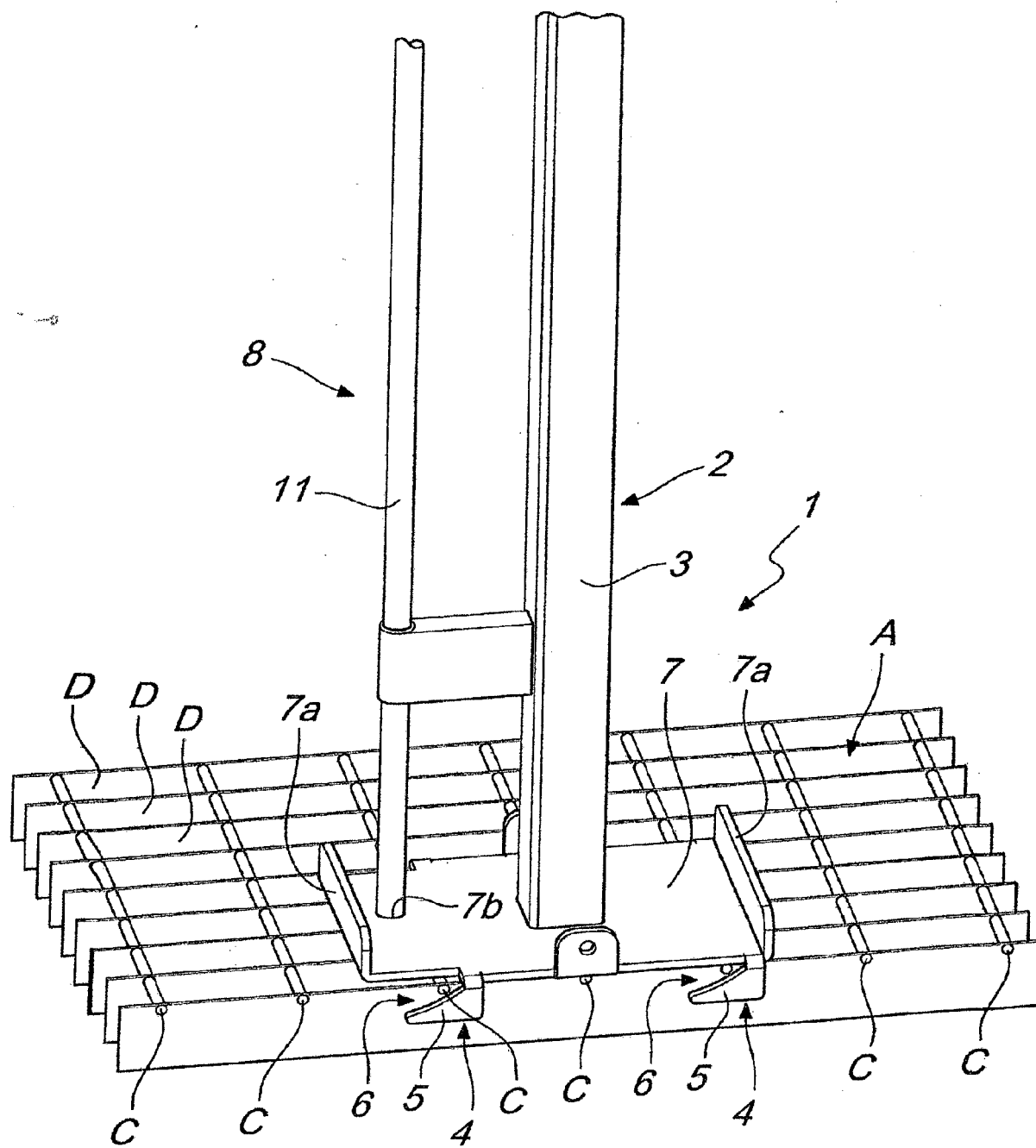
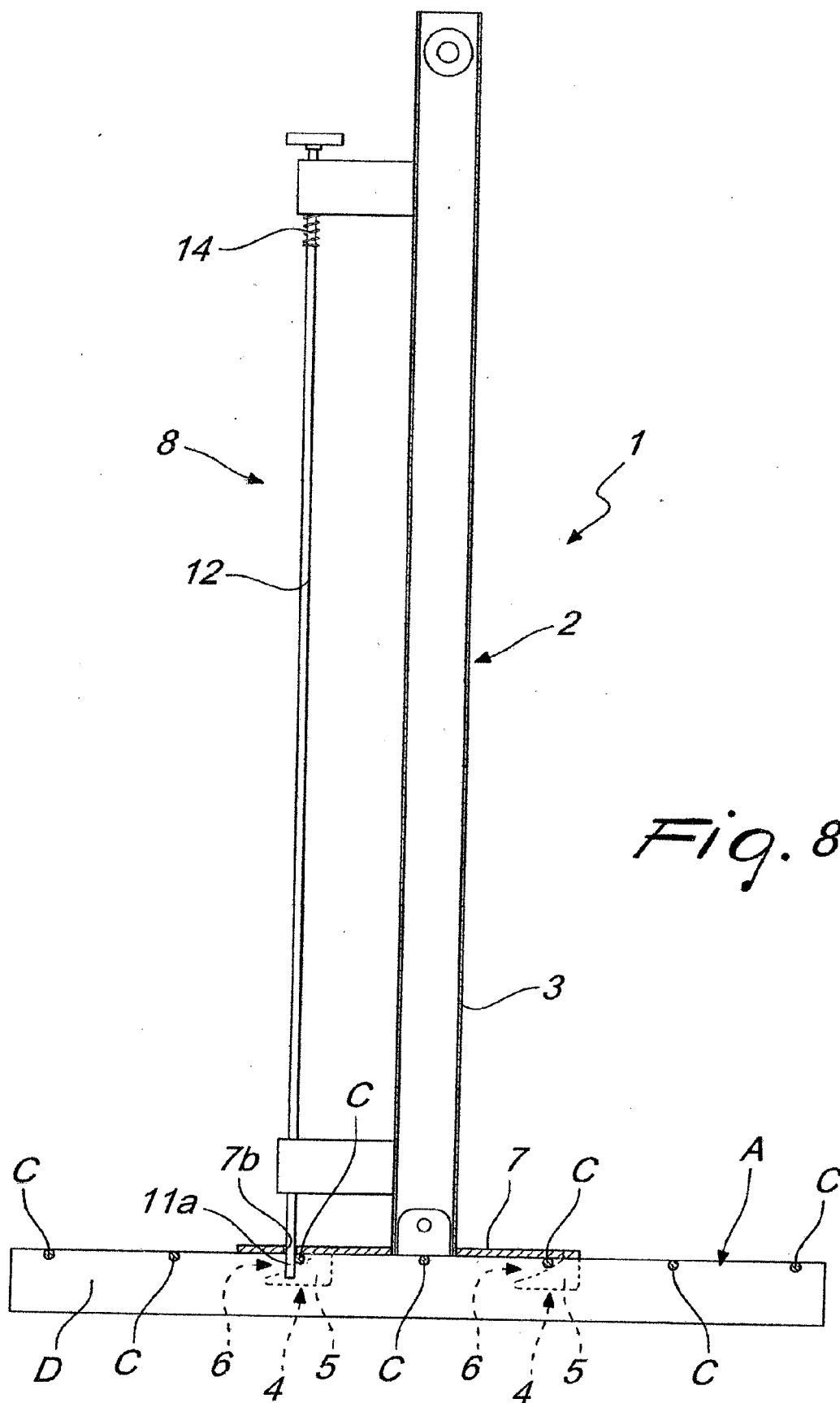
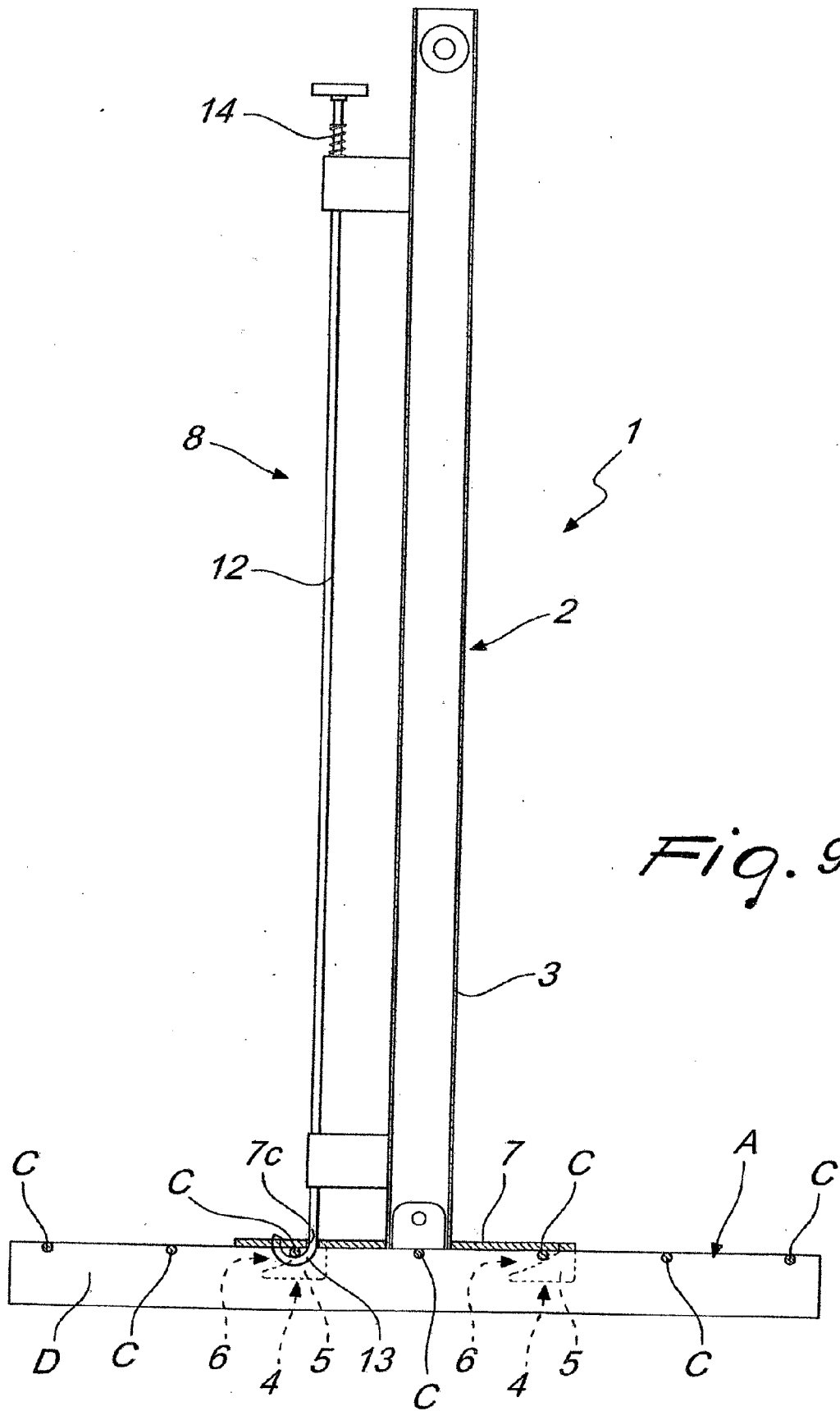


Fig. 7





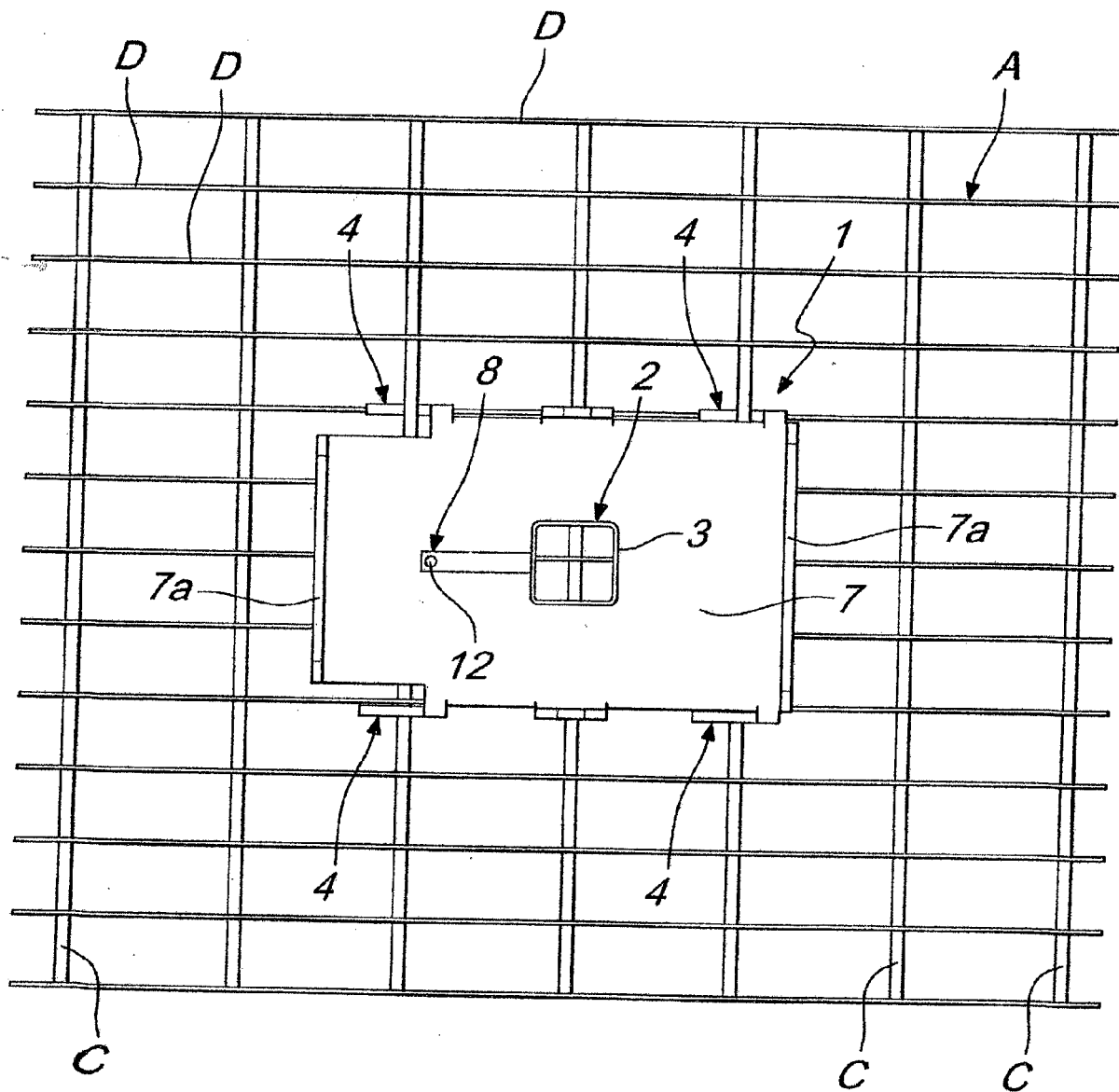
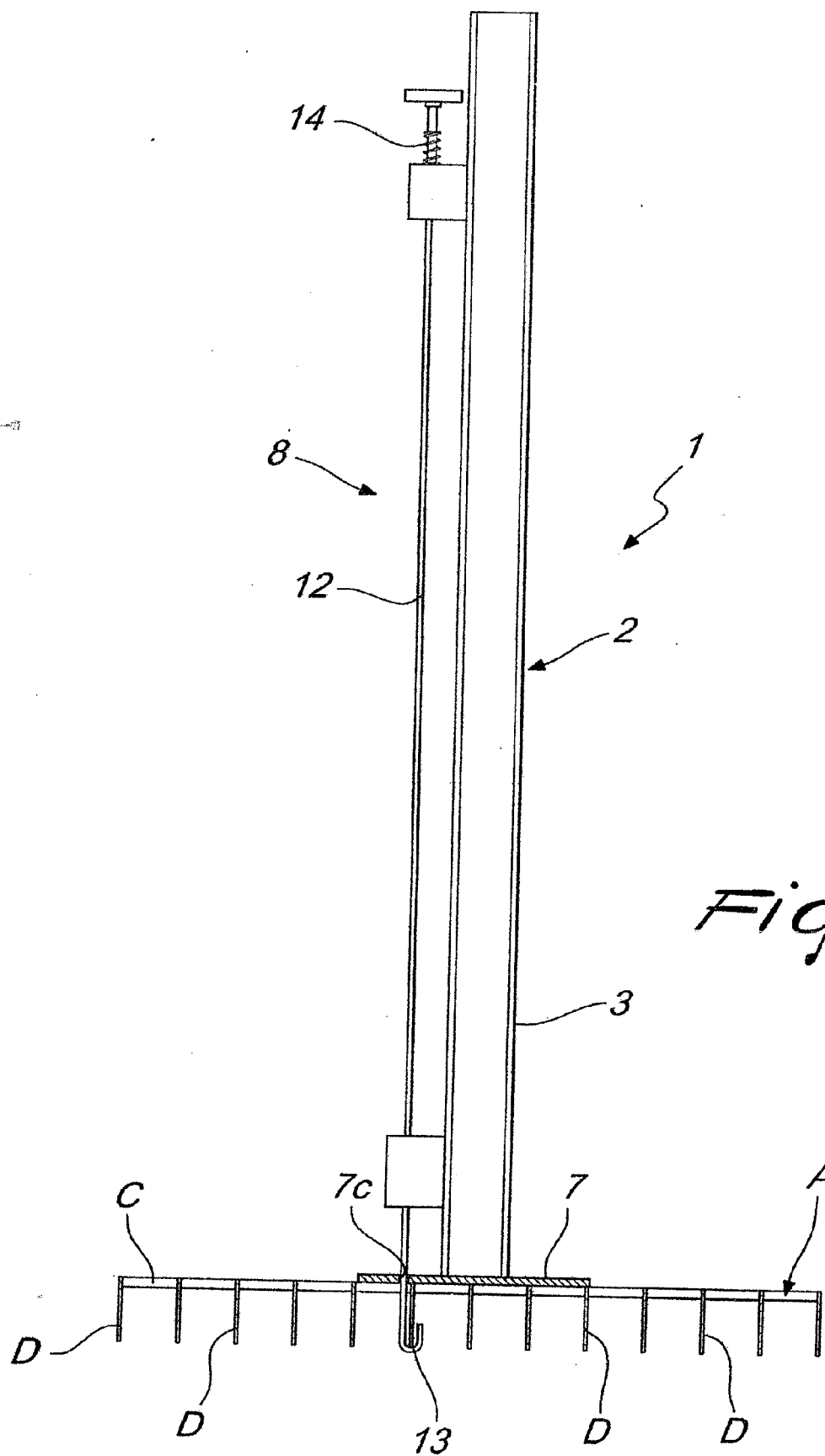


Fig. 10



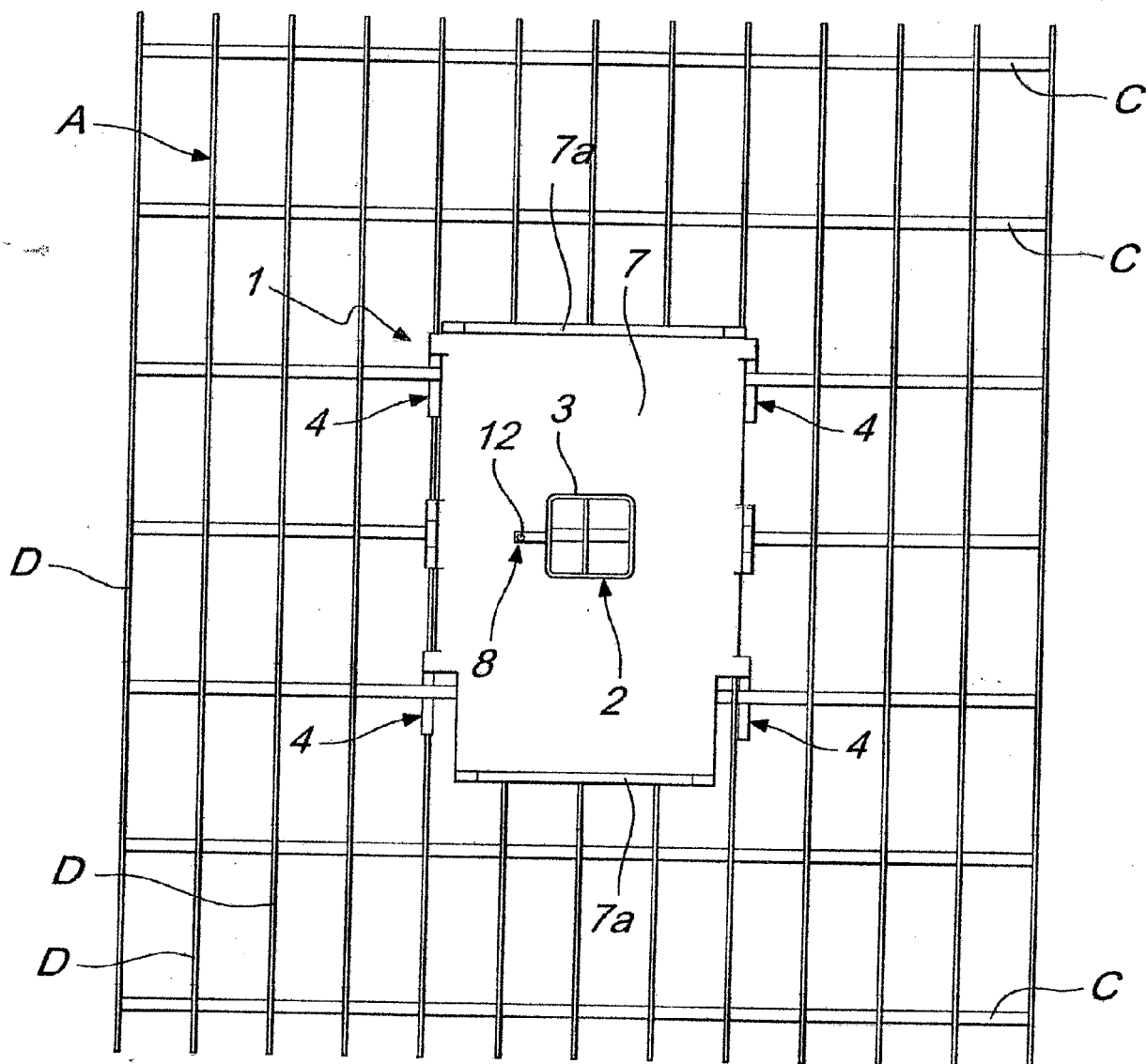
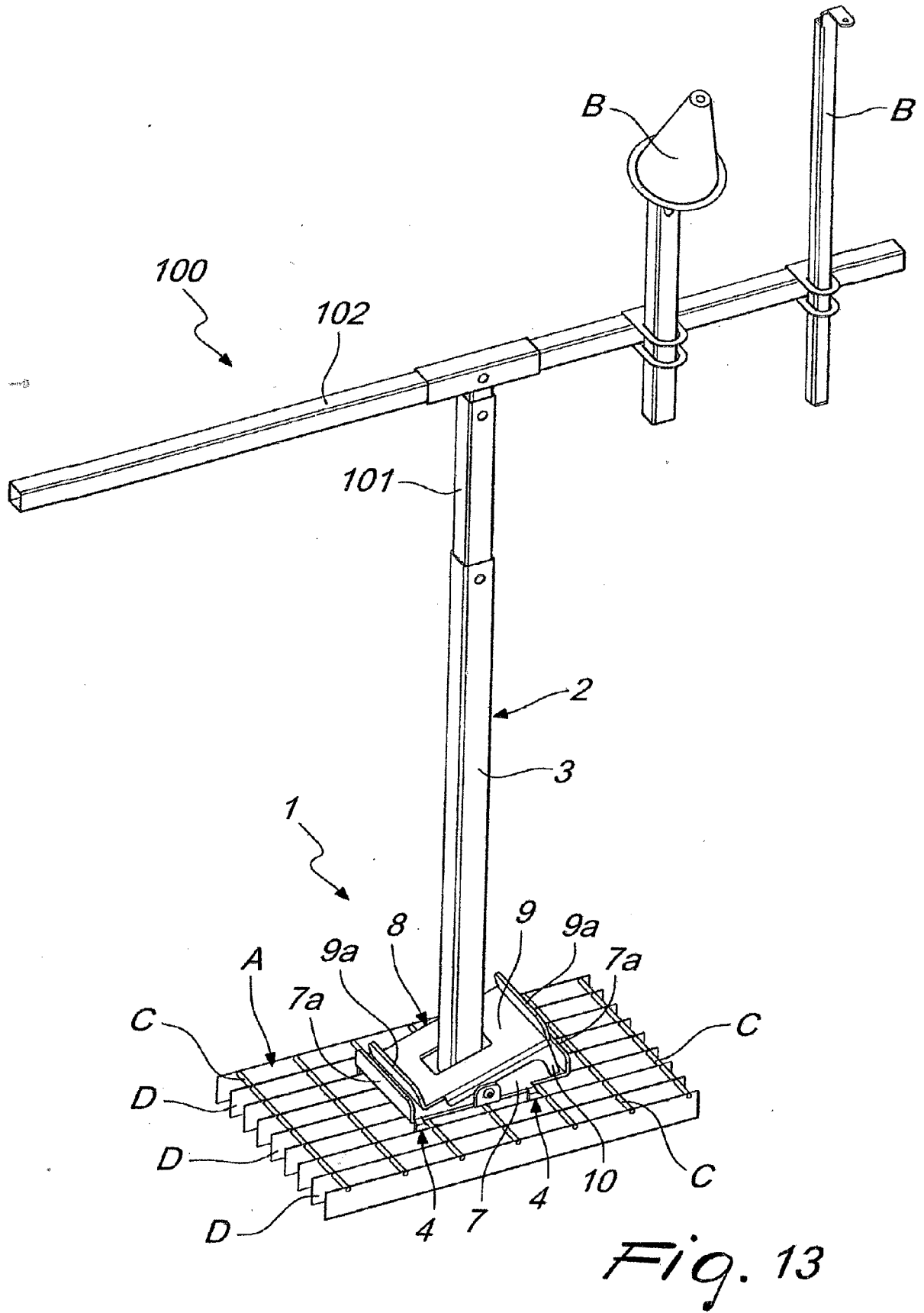
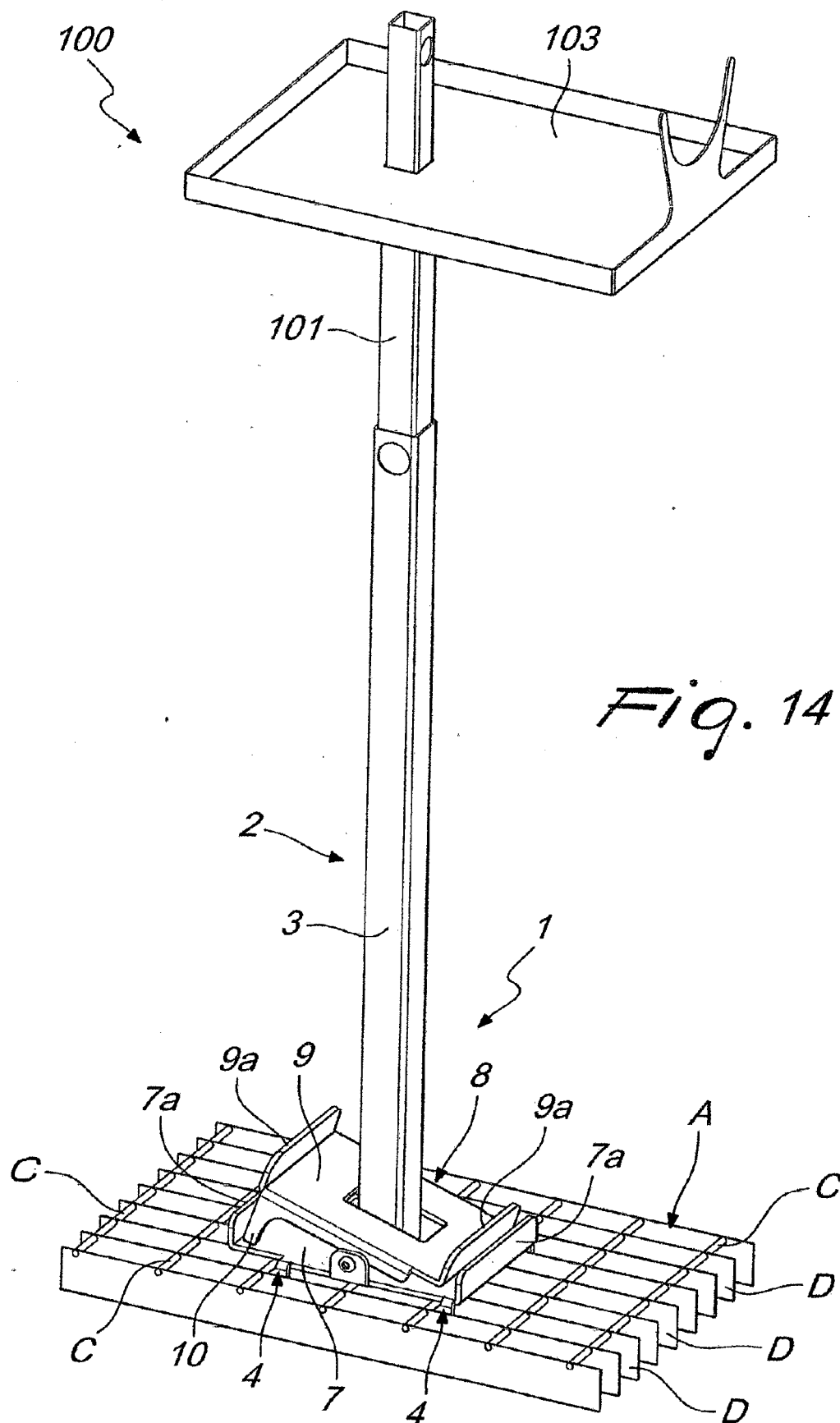


Fig. 12





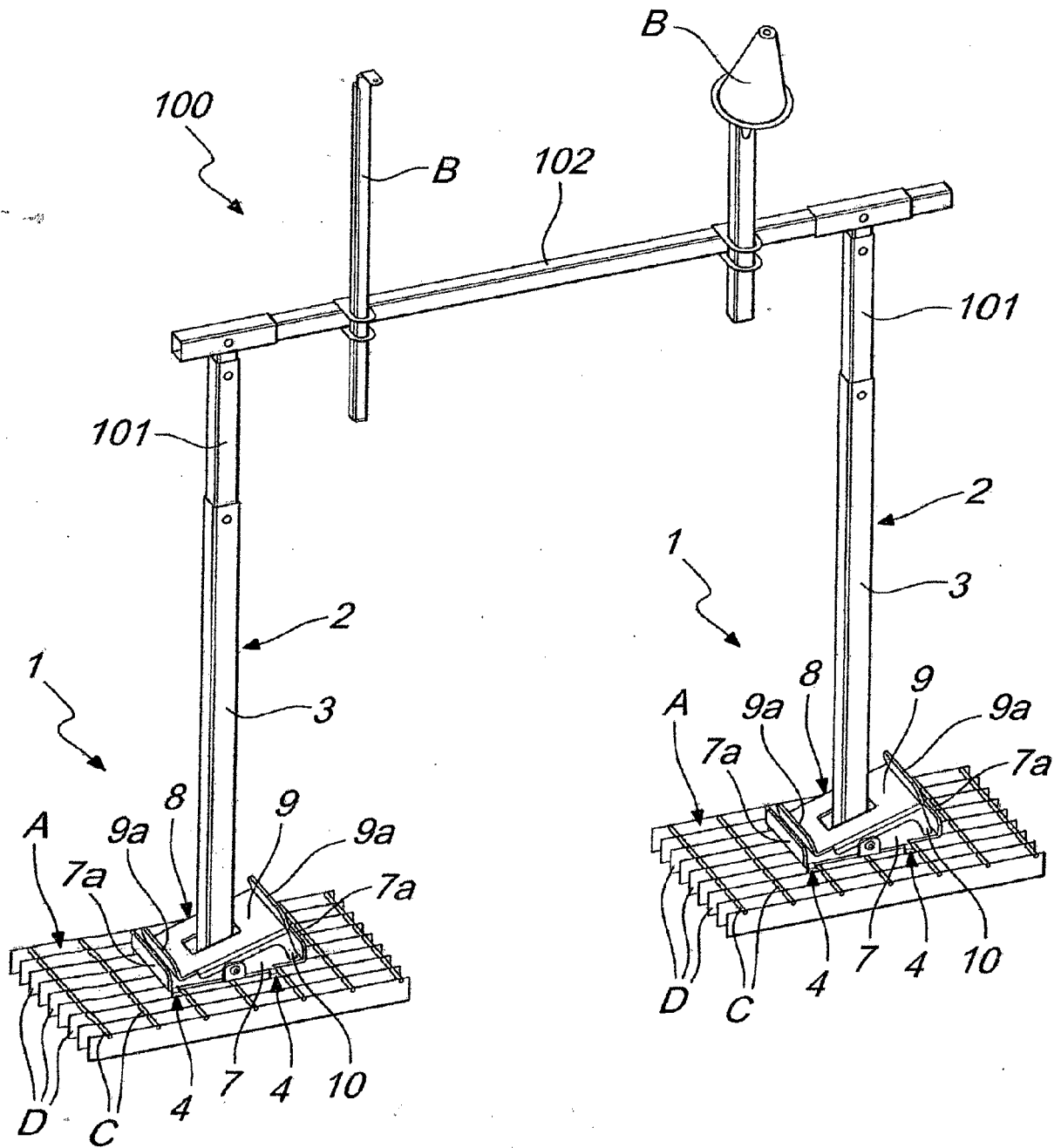


Fig. 15



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