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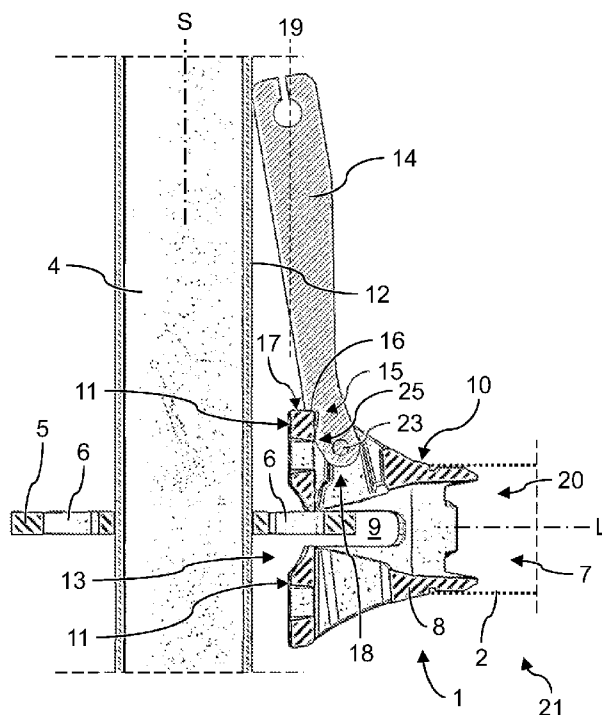


Fig. 4

(57) Abstract: Coupling assembly for coupling a ledger element for a scaffold to a standard element for a scaffold, which standard element is provided with a coupling rosette with rosette openings, wherein the coupling assembly comprises: a main body in which a slot is formed in which a part of the coupling rosette can be received, wherein an outer surface of the main body comprises standard contact surfaces which extend on both sides of the slot in line with each other; and a wedge coupled with the main body, which is movable between on the one hand release positions and on the other hand a coupling position, wherein the wedge in the coupling position traverses the slot so as to extend through one of the rosette openings, wherein the wedge is formed with a recess which is bounded by a hook surface with which the wedge in at least one of the release positions can hook onto a supporting surface of the main body to counteract movement of the wedge towards the coupling position.



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5 FIELD

The invention relates to a coupling assembly for structurally coupling a ledger element for a scaffold to a standard element for a scaffold, which standard element is provided with a coupling rosette extending transversely to a main direction of the standard element, having one or
10 more rosette openings therein. The invention furthermore relates to: a ledger assembly for a scaffold, comprising the coupling assembly; a combination of the ledger assembly and the standard element; a scaffold system for forming a scaffold, comprising the combination; a method for structurally coupling a ledger element for a scaffold to a standard element
15 for a scaffold; and a method for forming a scaffold.

BACKGROUND

A coupling assembly according to the pre-characterizing portion of claim 1 is known, for example from US2013/0330117A1. With such a
20 coupling assembly, a ledger element for a scaffold can be structurally coupled to a standard element for a scaffold, which standard element is provided with a coupling rosette extending transversely to a main direction of the standard element, having one or more rosette openings therein. There is an ongoing need for improvements and alternatives in the field of such
25 coupling assemblies.

SUMMARY

An object of the invention is to provide an alternative coupling assembly for structurally coupling a ledger element for a scaffold to a
30 standard element for a scaffold, which standard element is provided with a coupling rosette extending transversely to a main direction of the standard element, having one or more rosette openings therein. An object is to

provide such a coupling assembly that is relatively user-friendly, robust, economical and/or versatile.

An aspect of the invention provides, to that end, a coupling assembly for structurally coupling a ledger element for a scaffold to a standard element for a scaffold, which standard element is provided with a coupling rosette extending transversely to a main direction of the standard element, having one or more rosette openings therein.

The coupling assembly comprises a main body fixedly connectable with an end of the ledger element, in which main body a slot is formed in which a part of the coupling rosette can be received, in which part at least one of the rosette openings is formed. An outer surface of the main body comprises standard contact surfaces which extend on both sides of the slot in line with each other and which are configured for contact with a sidewall of the standard element when the above-mentioned part of the coupling rosette is received in the slot. The standard contact surfaces define a standard element side of the main body.

The coupling assembly furthermore comprises a wedge which is coupled, at least couplable, with the main body, which wedge is movable relative to the main body between on the one hand a plurality of release positions and on the other hand a coupling position. In the coupling position, the wedge traverses the slot so as to extend through the one of the rosette openings when the above-mentioned part of the coupling rosette is received in the slot and the standard contact surfaces make contact with the sidewall of the standard element for clampingly coupling the coupling assembly with the standard element. In each of the release positions, the wedge is outside the slot to release moving apart of the main body and the coupling rosette.

The plurality of release positions comprises at least one hook-on release position. The wedge is formed with a recess which is bounded by a hook surface with which the wedge in the at least one hook-on release

position can hook onto a supporting surface of the main body to counteract movement of the wedge towards the coupling position.

By thus having the wedge, in the at least one hook-on release position, hang onto the supporting surface of the main body, the main body
5 can easily be moved to the standard element for coupling, without the wedge needing to be actively held up to make it possible for the coupling rosette to be received in the slot. Thus, a user can advantageously remain at a distance from the main body, for instance to be able to support the ledger element at a distance from the main body. Due to the recess, with a
10 relatively simple and lightweight structure an effective hooking-on can be achieved, while, for instance, a part of an outer surface of the main body can be utilized as a supporting surface. In this way, relatively complex, especially arranged supporting structures of known coupling assemblies can be thereby be made superfluous.

15 The wedge may beforehand, for instance by manual engagement of the wedge, be brought to the hook-on release position. In advantageous embodiments, it is moreover possible, prior to the coupling, to bring the wedge into the hook-on release position by one or more rotations of the main body, for instance via one or more rotations of the ledger element, as is
20 further explained in the detailed description.

In advantageous embodiments, the wedge can be moved by contact with the standard element from the hook-on release position to another release position when the coupling rosette is received in the slot, after which the wedge can move to the coupling position for realizing the coupling, as is
25 further explained in the detailed description.

A further aspect provides a ledger assembly for a scaffold, comprising a coupling assembly as herein described and the ledger element, wherein the main body is fixedly connected with an end of the ledger element, in particular on a ledger element side of the main body that is
30 opposite with respect to the standard element side.

With such a ledger assembly, above-mentioned advantages can be achieved.

A further aspect provides a combination of a ledger assembly as herein described and the standard element provided with the coupling
5 rosette extending transversely to the main direction of the standard element.

With such a combination, above-mentioned advantages can be achieved.

A further aspect provides a scaffold system for forming a scaffold,
10 comprising a plurality of standard elements and ledger elements, including at least one combination as herein described.

With such a scaffold system, above-mentioned advantages can be achieved.

A further aspect provides a method for structurally coupling a
15 ledger element for a scaffold to a standard element for a scaffold. The method comprises: providing a combination as herein described; having the part of the coupling rosette in which the at least one of the rosette openings is formed received in the slot, while the wedge is in one or more of the release positions; bringing into contact with each other the standard contact
20 surfaces on the one hand and the sidewall of the standard element on the other hand; and having the wedge move to the coupling position so that the wedge extends through the one of the rosette openings for clampingly coupling the coupling assembly with the standard element.

With such a method, above-mentioned advantages can be achieved.

25 A further aspect provides a method for forming a scaffold, comprising providing a scaffold system as herein described and structurally coupling at least one of the ledger elements to at least one of the standard elements according to a method as herein described.

With such a method, above-mentioned advantages can be achieved.

Optional advantageous further elaborations are provided by the features of the dependent claims, as is further explained in the detailed description hereinbelow.

5 DETAILED DESCRIPTION

In the following, the invention will be further explained on the basis of examples of embodiments and drawings. The drawings are schematic and show only examples. In the drawings, corresponding elements are indicated with corresponding reference signs. For the purpose
10 of clarity of the drawings, some elements are not provided with a reference sign in all of the figures, those elements being nonetheless recognizable to the skilled person in those figures on the basis of one or more of the other figures and/or the description. In the figures:

Fig. 1 shows a perspective view of a scaffold;

15 Fig. 2 shows a top plan view of a coupling rosette;

Figs. 3-7 each show a side view in cross section of a coupling assembly with a ledger element and a standard element, the different figures showing different positions that correspond to successive moments during use;

20 Fig. 8 shows a side view in cross section of a main body of the coupling assembly of Figs. 3-7;

Fig. 9 shows a perspective view of the main body of Fig. 8;

Figs. 10A and 10B each show a perspective view of the coupling assembly with the wedge in the coupling position; and

25 Figs. 11A and 11B each show a perspective view in cross section of the coupling assembly with the wedge in a release position.

Figs. 3-7, 10A-B and 11A-B show, in different positions, a coupling assembly 1 for structurally coupling a ledger element 2 for a scaffold 3 to a standard element 4 for a scaffold 3, which standard element 4 is provided
30 with a coupling rosette 5 extending transversely to a main direction S of the

standard element 4, having one or more rosette openings 6 therein. Fig. 1 shows such a scaffold 3; Fig. 2 shows such a coupling rosette 5.

The coupling assembly 1 comprises a main body 8, separately shown in Figs. 8 and 9, fixedly connectable with an end 7 of the ledger element 2, in which main body 8 a slot 9 is formed in which a part of the coupling rosette 5 can be received, in which part at least one of the rosette openings 6 is formed. In embodiments, the example shown included, the slot 9 extends from the standard element side 13 towards the ledger element 2, when main body 8 is fixedly connected with the end 7 of ledger element 2.

An outer surface 10 of the main body 8 comprises standard contact surfaces 11 which extend on both sides of the slot 9 in line with each other and which are configured for contact with a sidewall 12 of the standard element 4 when the mentioned part of the coupling rosette 5 is received in the slot 9. The standard contact surfaces 11 define a standard element side 13 of the main body 8.

The coupling assembly 1 further comprises a wedge 14 coupled, at least couplable, with the main body 8, which wedge 14 is movable relative to the main body 8 between, on the one hand, a plurality of release positions, see Figs. 3-5, and, on the other hand, a coupling position, see Fig. 7. In the coupling position, the wedge 14 traverses the slot 9 to extend through the one of the rosette openings 6 when the mentioned part of the coupling rosette 5 is received in the slot 9 and the standard contact surfaces 11 make contact with the sidewall 12 of the standard element 4 for clampingly coupling the coupling assembly 1 with the standard element 4. In each of the release positions, the wedge 14 is outside the slot 9 to release moving apart of the main body 8 and the coupling rosette 5. The position of Fig. 6 can be regarded as an intermediate position which can occur when the wedge 14 falls from a release position as in Fig. 5 to the coupling position as in Fig. 7.

In embodiments, the example shown included, the wedge 14 is coupled with the main body 8 by bulges 23, 27 at respective ends 18, 26 of the wedge 14, for instance as can be seen in Figs. 10A-11B. The bulging direction of the bulges 23, 27 is preferably transverse to the main directions S and L of the standard element 4 and the ledger element 2. In the view of Figs. 3-7, the bulges 23, 27 thus extend perpendicularly to the plane of the paper, in particular from a side surface of the wedge 14. By partial inclusion of the bulge 23 in the main body 8, the bulge 23 counteracts the wedge 14 getting detached from the main body 8 on a side of the main body 8 that corresponds to the supporting surface 17 which, upon coupling, normally faces upwards. The partial inclusion is furnished in the example shown by a narrowing 24 (see Fig. 8, 11A). When the bulge 23 makes contact with the narrowing 24, rotation of the wedge 14 relative to the main body 8 preferably remains possible, in particular about a rotation axis transverse to the main directions S and L of the standard element 4 and the ledger element 2, see for instance the different rotation positions of the wedge 14 in Figs. 3 and 4. Substantially by the same narrowing 24, a further bulge 27, by contrast, is excluded from the main body 8, so that the wedge 14, by the combination of bulges 23, 27 and the narrowing 24, is movably coupled with the main body 8.

The plurality of release positions comprises at least one hook-on release position, see Figs. 3 and 4 for two of such hook-on release positions. The wedge 14 is formed with a recess 15 which is bounded by a hook surface 16 by which the wedge 14 in the at least one hook-on release position can hook onto a supporting surface 17 of the main body 8 to counteract movement of the wedge 14 towards the coupling position.

In Fig. 5 it can be seen that the wedge 14, from the hook-on release positions of Fig. 3 and Fig. 4 in succession, has just reached a different release position, in which the hook surface 16 is not hooked on the supporting surface 17 anymore. From the release position of Fig. 5, the

wedge 14 can move further, in particular drop, to the coupling position, as shown in Figs. 6 and 7 in succession.

Figs. 3-7 also show a ledger assembly 21 for a scaffold 3, comprising the coupling assembly 1 and the ledger element 2, wherein the
5 main body 8 is fixedly connected with an end 7 of the ledger element 2, in particular on a ledger element side 20 of the main body 8 which is opposite to the standard element side 13. The ledger element 2 is indicated in Figs. 3-8 with dotted lines, and may for instance be formed by a scaffold tube such as a scaffold tube by which, in the example shown, the standard
10 element 4 is substantially formed.

Figs. 3-7 also show a combination of the ledger assembly 21 and the standard element 4 provided with the coupling rosette 5 extending transversely to the main direction S of the standard element 4. Such a combination can be part of a scaffold system 22 for forming a scaffold 3,
15 which scaffold system 22 comprises a plurality of standard elements 4 and ledger elements 2, see, for example, Fig. 1.

The figures also illustrate a method for structurally coupling a ledger element 2 for a scaffold 3 to a standard element 4 for a scaffold 3. The method comprises: providing the combination of the ledger assembly 21 and
20 the standard element 4 provided with the coupling rosette 5 extending transversely to the main direction S of the standard element 4; having the part of the coupling rosette 5 in which the at least one of the rosette openings 6 is formed received in the slot 9, while the wedge 14 is in one or more of the release positions; bringing into contact with each other the
25 standard contact surfaces 11 on the one hand and the sidewall 12 of the standard element 4 on the other; and having the wedge 14 move to the coupling position so that the wedge 14 extends through the one of the rosette openings 6 for clampingly coupling the coupling assembly 1 with the standard element 4.

Such a method for structurally coupling can be part of a method for forming a scaffold 3, wherein at least one of the ledger elements 2 of the scaffold system 22 is structurally coupled to at least one of the standard elements 4 of the scaffold system 22.

5 In embodiments, the example shown included, the supporting surface 17 is part of the outer surface 10 of the main body 8.

Thus, in a relatively simple manner, the supporting surface 17 can be furnished, in particular without extra weight of the main body 8.

10 In embodiments, the example shown included, the supporting surface 17 faces up when the coupling assembly 1 is oriented such that the slot 9 is oriented horizontally and the coupling position of the wedge 14 is a lower position than the release positions of the wedge 14.

Thus, an effective hook-on release position for the wedge 14 can be furnished.

15 In embodiments, the example shown included, a distance between the supporting surface 17 and the slot 9 is greater than a distance between the hook surface 16 and an end 18 of the wedge 14, which end 18 traverses the slot 9 when the wedge 14 moves from the release positions to the coupling position.

20 With such a configuration, it can be achieved that the hook-on release position is in actual fact a release position.

In embodiments, the example shown included, the supporting surface 17 is between the standard element side 13 and the wedge 14 when the wedge 14 is in the coupling position.

25 In embodiments, the example shown included, the recess 15 is formed on a side of the wedge 14 which at least in the coupling position corresponds to the standard element side 13 of the main body 8.

In this way, it can be achieved that the wedge 14 in the hook-on release position(s) can extend further towards the standard element 4 than

in the coupling position, as a result of which, for instance, below-specified functionality can be facilitated.

In embodiments, the example shown included, it holds that the wedge 14 in at least one, preferably each, of the at least one hook-on release position extends to beyond a boundary plane 19 defined by the standard contact surfaces 11, so as to be able to enter into engagement with the sidewall 12 of the standard element 4 when the main body 8 is moved to the standard element 4 to bring the standard contact surfaces 11 into contact with the sidewall 12 of the standard element 4.

Thus, the wedge 14, through engagement with the sidewall 12 of the standard element 4, can be moved relative to the main body 8, in particular so as to leave the hook-on release position to be able then to fall to the coupling position. In Fig. 4 it can be seen, for instance, that the wedge 14 is still in a hook-on release position while the standard contact surfaces 11 are at a small distance from the sidewall 12. In Fig. 5 it can be seen that the standard contact surfaces 11 thereupon abut against the sidewall 12 as a result of which the hook surface 16 is pushed off the supporting surface 17 so that the wedge 14 can no longer be in a hook-on release position but instead is moved into a different release position from where the wedge 14 can then fall through (via intermediate positions such as that of Fig. 6) to the coupling position (Fig. 7).

In embodiments, the example shown included, it thus holds that having the wedge 14 move to the coupling position is at least partly achieved by the engagement between the wedge 14 and the sidewall 12 of the standard element 4 when the main body 8 is moved to the standard element 4 to bring the standard contact surfaces 11 into contact with the sidewall 12 of the standard element 4.

In embodiments, the example shown included, the main body 8 is configured to release movement of the wedge 14 to the slot 9 when the wedge 14 does not hook with the hook surface 16 onto the supporting surface 17.

In this way, it can be achieved that the wedge 14 can automatically move, in particular fall, in the direction of the coupling position to traverse the slot 9, as soon as the wedge 14 is no longer in the hook-on release position(s). Accordingly, for realizing the desired coupling, it can thus be
5 achieved that the wedge 14 automatically falls through to the coupling position after the main body 8 is positioned against the sidewall 12 of the standard element 4.

In embodiments, the example shown included, the main body 8 is configured to guide the wedge 14 under the influence of gravity to the
10 coupling position as soon as the wedge 14 leaves the at least one hook-on release position, in particular by guiding of a bulge 23 at an end 18 of the wedge 14, which end 18 traverses the slot 9 when the wedge 14 moves from the release positions to the coupling position.

Thus, it can be counteracted that the wedge 14 might unintendedly
15 not reach the coupling position after the at least one hook-on release position has been left. In other words, the wedge 14 can thus substantially automatically fall through to the coupling position as soon as the wedge 14 has moved out of the at least one hook-on release position, in particular when the standard contact surfaces 11 make contact with the sidewall 12 of
20 the standard element 4, instead of, for instance, sticking in an intermediate position. Supplementary manual operation of the wedge 14 for realizing the coupling can thereby be made superfluous.

For realizing the guiding mentioned, in the main body 8 for instance a corresponding guiding structure 28 may be provided, for instance
25 as shown in Fig. 8. The guiding structure 28 may for instance be built up from distinguishable successive sections 28a-28f, which, for instance, can each fulfil a different subfunction of a comprehensive guiding function of the guiding structure 28.

For the sections 28a-28f indicated in Fig. 8, for instance the
30 following subfunctions can be named: section 28d can guide a tilting of the

bulge 23 with respect to the main body 8, for instance to a more vertical position, as from the position in Fig. 3 to the position in Fig. 4; section 28f can for instance help counteract the end 18 sticking on a section of the rosette 5 at an edge of the opening 6 instead of moving through the opening 5 6; section 28c can for instance help counteract the hook surface 16 sticking on a structure other than the supporting surface 17; and sections 28b and 28a can for instance promote the wedge 14 being tilted to a more vertical position again, should the wedge 14 have tilted from the tilting positions of Figs. 3-5 beyond a vertical position to a position tilted away from the 10 standard element 4.

The guiding structure 28 is preferably ampler than what would be minimally needed to be able to guide the bulge 23 towards the coupling position, so that a tolerance is provided for different possible paths of the wedge 14 to the coupling position and to counteract the wedge 14 being 15 hindered by friction with the main body 8 from falling through to the coupling position. A further advantage of such an ample guiding structure 28 is that the wedge 14 can thus be moved more easily from the coupling position to a release position, in particular without manual operation of the wedge 14, for instance by rotating of the main body 8 through approximately 20 180 degrees about a rotation axis that corresponds to the main direction L of the ledger element 2. In the example of Fig. 8 it can be seen that the guiding structure 28 will guide the bulge 23 in that case to section 28d, from where the wedge 14 can be brought relatively simply into the at least one hook-on release position, for instance by having the ledger element 2 incline and 25 then rotate it back about its main direction L.

The bulge 23 in the example shown is substantially formed as a convex bulge on a side surface of the wedge 14 (see e.g. Figs. 10B, 11A, 11B), while the rounding can promote a smooth guiding and rotatability. Further, the end 18 of the wedge 14 in the example shown is of rounded 30 configuration, likewise to promote a smooth guiding and to help counteract

the wedge 14 sticking at the end 18, for instance on an edge of the rosette 5, instead of falling through to the coupling position.

In embodiments, the example shown included, the wedge 14 comprises a tilting structure 23, 25 which is configured to determine
5 through contact with the main body 8 in the at least one hook-on release position a tilting position of the wedge 14 with respect to the main body 8 depending on a shifting of the hook surface 16 of the wedge 14 over the supporting surface 17 of the main body 8.

In embodiments, the example shown included (see e.g. Figs. 3 and
10 4), the tilting structure 23, 25 is configured to determine a more vertical tilting position of the wedge 14 as the hook surface 16 is being shifted over the supporting surface 17 in a direction so as to have the wedge 14 move out of the at least one hook-on release position.

What can be achieved in this way is that the wedge 14 can move at
15 least initially with a relatively vertical orientation towards the coupling position after the at least one hook-on release position has been left, which can promote the coupling position being reached smoothly.

In embodiments, the example shown included, the tilting structure 23, 25 comprises at least one of a lower edge 25 of the recess 15 located
20 opposite the hook surface 16 and a bulge 23 on a side surface of the wedge 14 at an end 18 of the wedge 14.

In embodiments of the method, the wedge 14 is thus tilted to a more vertical position under influence of the engagement between the wedge 14 and the sidewall 12 of the standard element 4 when the main body
25 8 is moved to the standard element 4 to bring the standard contact surfaces 11 into contact with the sidewall 12 of the standard element 4.

While the invention has been explained herein on the basis of examples of embodiments and drawings, these do not constitute any limitation of the scope of the invention as defined in the claims. Many
30 variations, combinations and extensions are possible, as the skilled person

having the benefit of the present disclosure will instantly appreciate. Such variants are included in the scope of the invention as defined in the claims.

LIST OF REFERENCE SIGNS

5	1.	Coupling assembly
	2.	Ledger element
	3.	Scaffold
	4.	Standard element
	5.	Coupling rosette
10	6.	Rosette opening
	7.	End of ledger element
	8.	Main body
	9.	Slot
	10.	Outer surface of main body
15	11.	Standard contact surface
	12.	Sidewall of standard element
	13.	Standard element side of main body
	14.	Wedge
	15.	Recess
20	16.	Hook surface
	17.	Supporting surface
	18.	First end of wedge
	19.	Boundary plane
	20.	Ledger element side of main body
25	21.	Ledger assembly
	22.	Scaffold system
	23.	Bulge at first end of wedge
	24.	Narrowing
	25.	Lower edge of recess
30	26.	Second end of wedge

- 27. Bulge at second end of wedge
- 28. Guiding structure for bulge at first end
- 28a-f. Sections of guiding structure
- L. Main direction of ledger element
- 5 S. Main direction of standard element

CLAIMS

1. Coupling assembly (1) for structurally coupling a ledger element (2) for a scaffold (3) to a standard element (4) for a scaffold (3), which standard element (4) is provided with a coupling rosette (5) extending transversely to a main direction (S) of the standard element (4), having one
5 or more rosette openings (6) therein, wherein the coupling assembly (1) comprises:
- a main body (8) fixedly connectable with an end (7) of the ledger element (2), in which main body (8) a slot (9) is formed in which a part of the coupling rosette (5) can be received, in which part at least one of the rosette
10 openings (6) is formed, wherein an outer surface (10) of the main body (8) comprises standard contact surfaces (11) which extend on both sides of the slot (9) in line with each other and which are configured for contact with a sidewall (12) of the standard element (4) when said part of the coupling rosette (5) is received in the slot (9), wherein the standard contact surfaces
15 (11) define a standard element side (13) of the main body (8); and
 - a wedge (14) coupled, at least couplable, with the main body (8), which wedge (14) is movable relative to the main body (8) between on the one hand a plurality of release positions and on the other hand a coupling position, wherein the wedge (14) in the coupling position traverses the slot
20 (9) so as to extend through the one of the rosette openings (6) when said part of the coupling rosette (5) is received in the slot (9) and the standard contact surfaces (11) make contact with the sidewall (12) of the standard element (4) for clampingly coupling the coupling assembly (1) with the standard element (4), wherein the wedge (14) in each of the release positions is outside the slot
25 (9) to release moving apart of the main body (8) and the coupling rosette (5),
characterized in that

the plurality of release positions comprises at least one hook-on release position, wherein the wedge (14) is formed with a recess (15) which is bounded by a hook surface (16) with which the wedge (14) in the at least one hook-on release position can hook onto a supporting surface (17) of the main body (8) to counteract movement of the wedge (14) towards the coupling position,

wherein the recess (15) is formed on a side of the wedge (14) that at least in the coupling position corresponds to the standard element side (13) of the main body (8).

10

2. Coupling assembly according to claim 1, wherein the supporting surface (17) is part of the outer surface (10) of the main body (8).

3. Coupling assembly according to claim 1 or 2, wherein the supporting surface (17) faces up when the coupling assembly (1) is oriented such that the slot (9) is oriented horizontally and the coupling position of the wedge (14) is a lower position than the release positions of the wedge (14).

4. Coupling assembly according to any one of the preceding claims, wherein a distance between the supporting surface (17) and the slot (9) is greater than a distance between the hook surface (16) and an end (18) of the wedge (14), which end (18) traverses the slot (9) when the wedge (14) moves from the release positions to the coupling position.

5. Coupling assembly according to any one of the preceding claims, wherein the supporting surface (17) is between the standard element side (13) and the wedge (14) when the wedge (14) is in the coupling position.

6. Coupling assembly according to any one of the preceding claims, wherein the wedge (14) in at least one of the at least one hook-on release

position extends to beyond a boundary plane (19) defined by the standard contact surfaces (11) so as to be able to enter into engagement with the sidewall (12) of the standard element (4) when the main body (8) is moved to the standard element (4) to bring the standard contact surfaces (11) into
5 contact with the sidewall (12) of the standard element (4).

7. Coupling assembly according to claim 6, wherein the wedge (14) in each of the at least one hook-on release position extends to beyond the boundary plane (19) defined by the standard contact surfaces (11) so as to be
10 able to enter into engagement with the sidewall (12) of the standard element (4) when the main body (8) is moved to the standard element (4) to bring the standard contact surfaces (11) into contact with the sidewall (12) of the standard element (4).

15 8. Coupling assembly according to any one of the preceding claims, wherein the main body (8) is configured to release movement of the wedge (14) to the slot (9) when the wedge (14) does not hook with the hook surface (16) onto the supporting surface (17).

20 9. Coupling assembly according to claim 8, wherein the main body (8) is configured to guide the wedge (14) under influence of gravity to the coupling position as soon as the wedge (14) leaves the at least one hook-on release position.

25 10. Coupling assembly according to any one of the preceding claims, wherein the wedge (14) comprises a tilting structure (23, 25) which is configured to determine through contact with the main body (8) in the at least one hook-on release position a tilting position of the wedge (14) with respect to the main body (8) depending on a shifting of the hook surface (16)
30 of the wedge (14) over the supporting surface (17) of the main body (8).

11. Coupling assembly according to claim 10, wherein the tilting structure (23, 25) comprises at least one of a lower edge (25) of the recess (15) which is located opposite the hook surface (16) and a bulge (23) on a side surface of the wedge (14) at an end (18) of the wedge (14).
5

12. Coupling assembly according to claim 10 or 11, wherein the tilting structure (23, 25) is configured to determine a more vertical tilting position of the wedge (14) as the hook surface (16) is being shifted over the supporting surface (17) in a direction so as to have the wedge (14) move out of the at least one hook-on release position.
10

13. Ledger assembly (21) for a scaffold (3), comprising a coupling assembly (1) according to any one of the preceding claims and the ledger element (2), wherein the main body (8) is fixedly connected with an end (7) of the ledger element (2), in particular on a ledger element side (20) of the main body (8) opposite to the standard element side (13).
15

14. Ledger assembly according to claim 13, wherein the slot (9) extends from the standard element side (13) towards the ledger element (2).
20

15. Combination of a ledger assembly (21) according to claim 13 or 14 and the standard element (4) provided with the coupling rosette (5) extending transversely to the main direction (S) of the standard element (4).
25

16. Scaffold system (22) for forming a scaffold (3), comprising a plurality of standard elements (4) and ledger elements (2), including at least one combination according to claim 15.

17. Method for structurally coupling a ledger element (2) for a scaffold (3) to a standard element (4) for a scaffold (3), comprising:

- providing a combination according to claim 15;
- having the part of the coupling rosette (5) in which the at least one
5 of the rosette openings (6) is formed received in the slot (9), while the wedge (14) is in one or more of the release positions;
- bringing into contact with each other the standard contact surfaces (11) on the one hand and the sidewall (12) of the standard element (4) on the other hand; and
- 10 - having the wedge (14) move to the coupling position so that the wedge (14) extends through the one of the rosette openings (6) for clampingly coupling the coupling assembly (1) with the standard element (4).

18. Method according to claim 17, wherein the coupling assembly (1) is
15 configured according to claim 7, wherein having the wedge (14) move to the coupling position is at least partly achieved by the engagement between the wedge (14) and the sidewall (12) of the standard element (4) when the main body (8) is moved to the standard element (4) to bring the standard contact surfaces (11) into contact with the sidewall (12) of the standard element (4).

20

19. Method according to claim 18, wherein the wedge (14) is tilted to a more vertical position under influence of the engagement between the wedge (14) and the sidewall (12) of the standard element (4) when the main body (8) is moved to the standard element (4) to bring the standard contact
25 surfaces (11) into contact with the sidewall (12) of the standard element (4).

20. Method for forming a scaffold (3), comprising providing a scaffold system (22) according to claim 16, and according to claim 17, 18 or 19 structurally coupling at least one of the ledger elements (2) to at least one of
30 the standard elements (4).

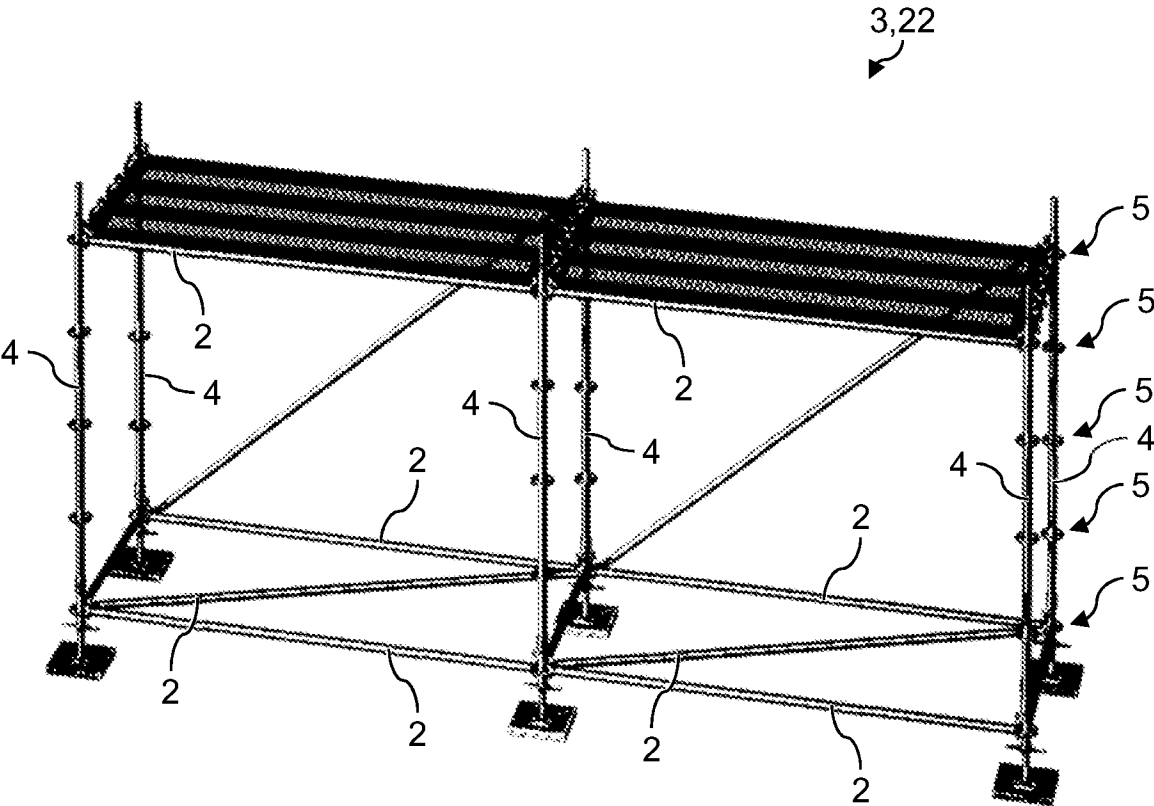


Fig. 1

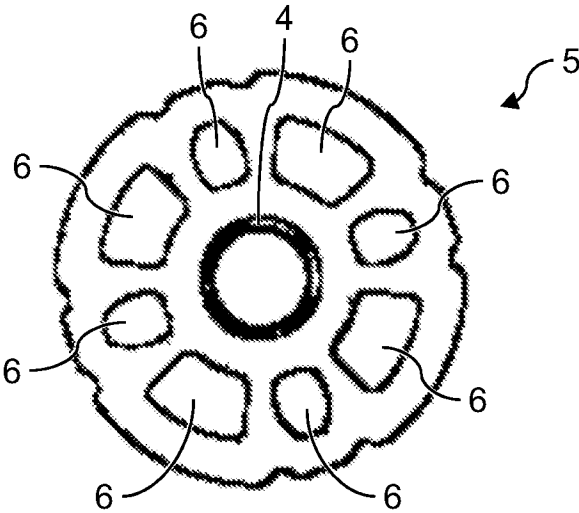


Fig. 2

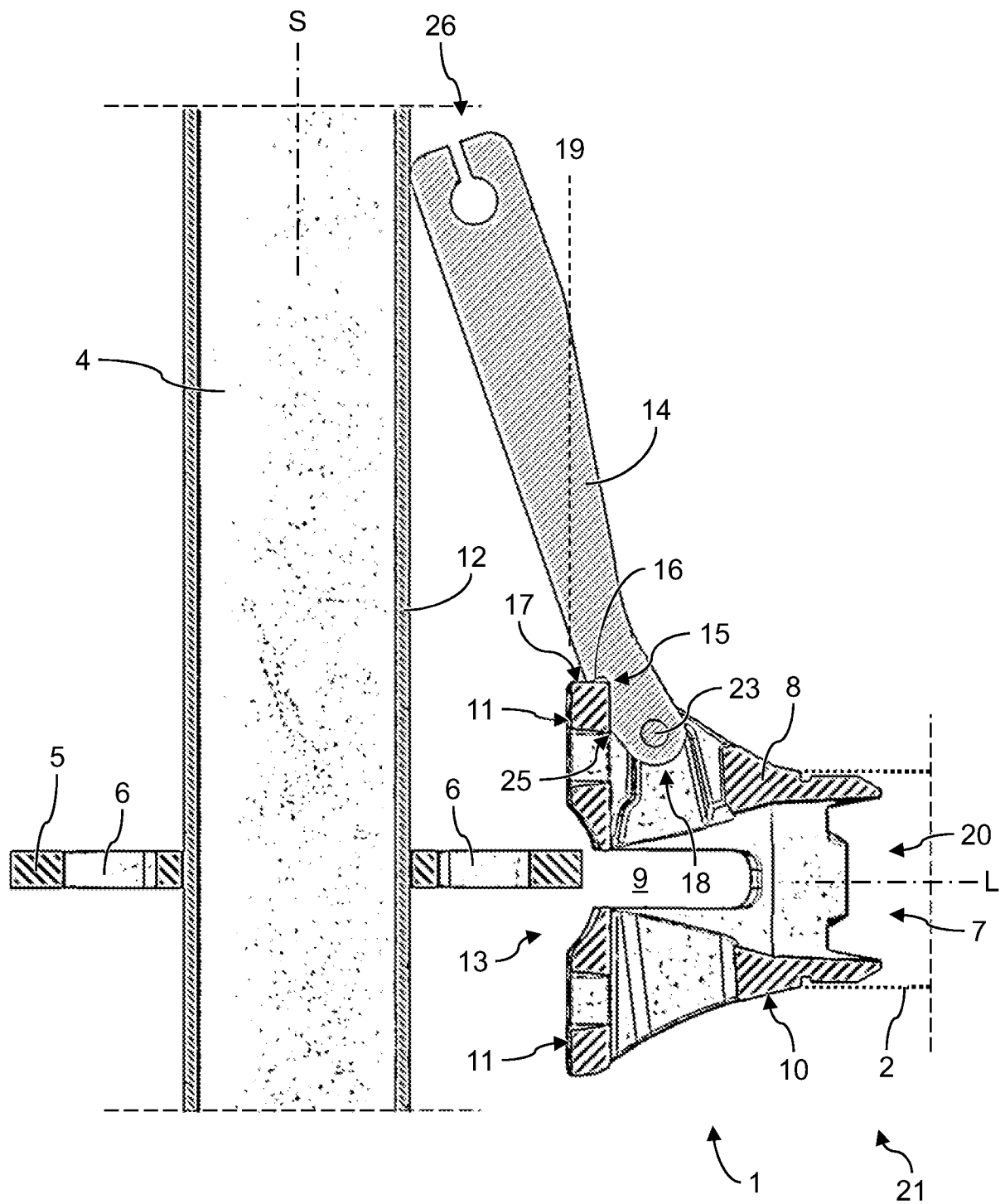


Fig. 3

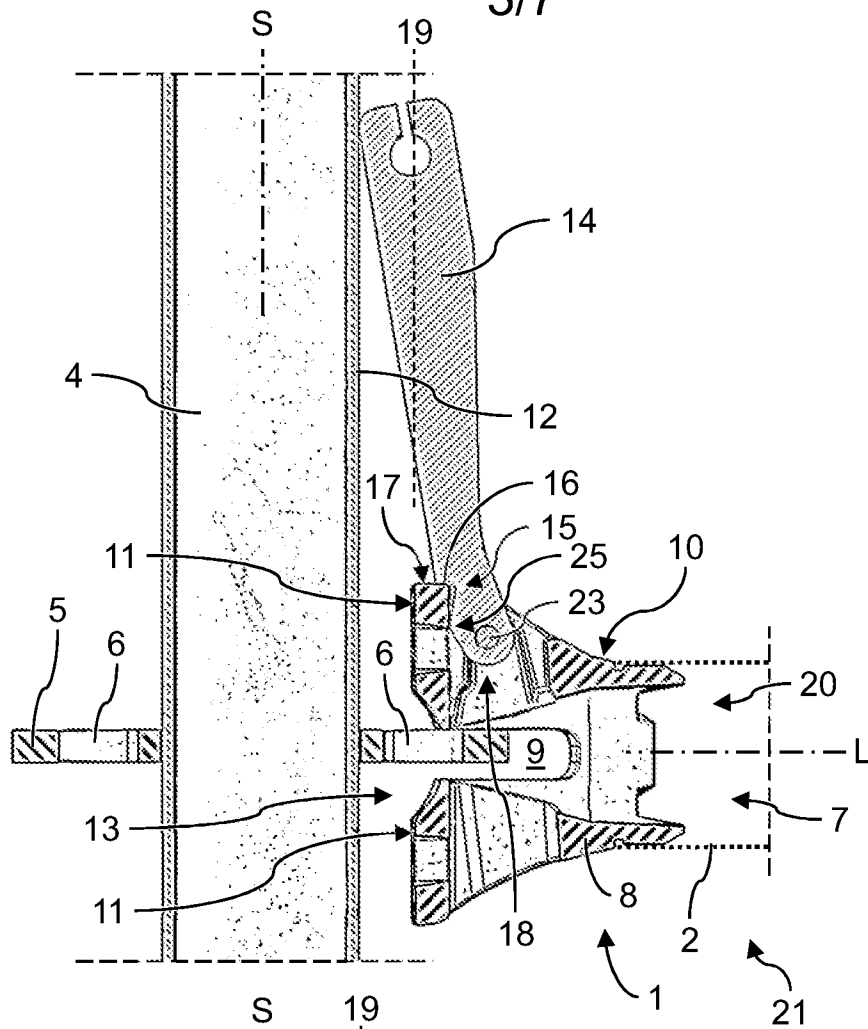


Fig. 4

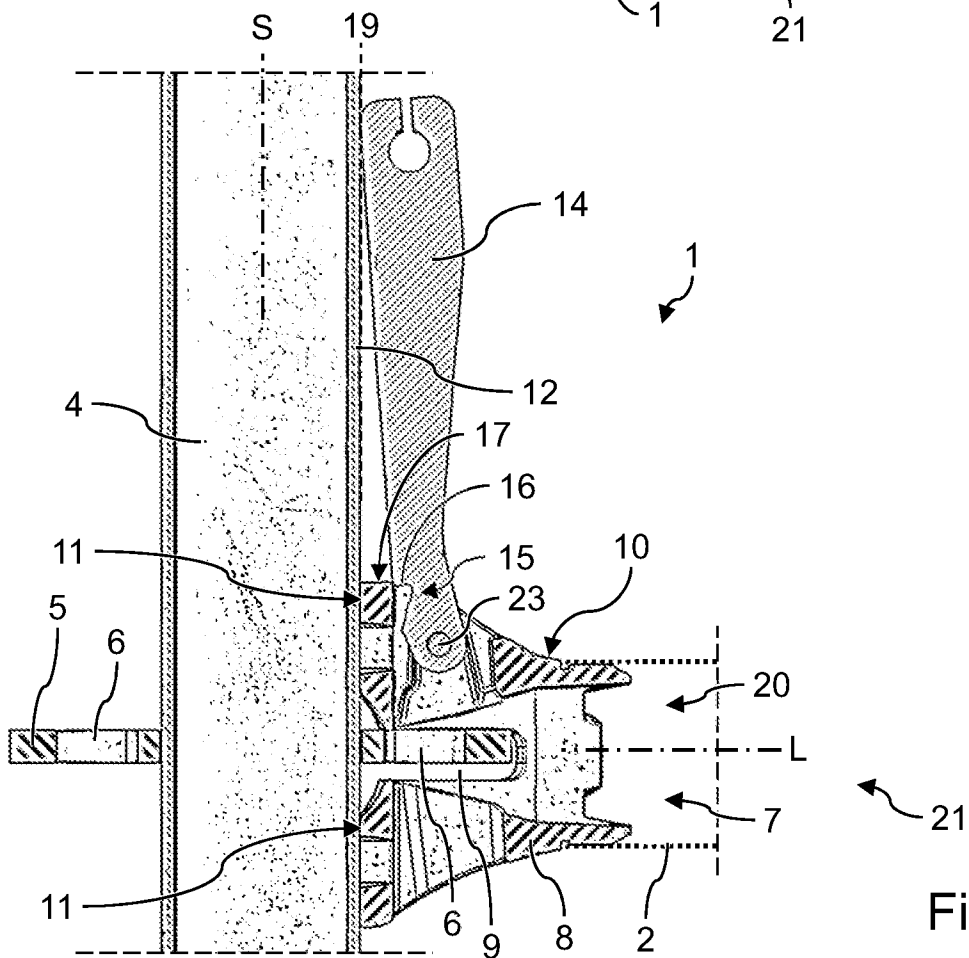


Fig. 5

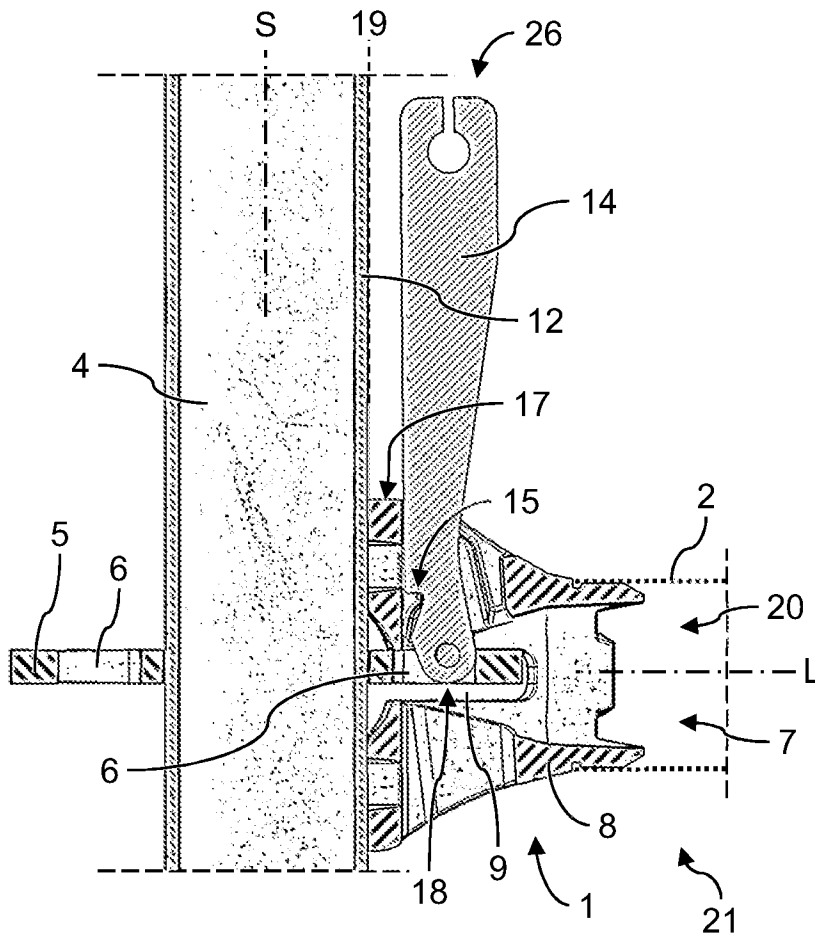


Fig. 6

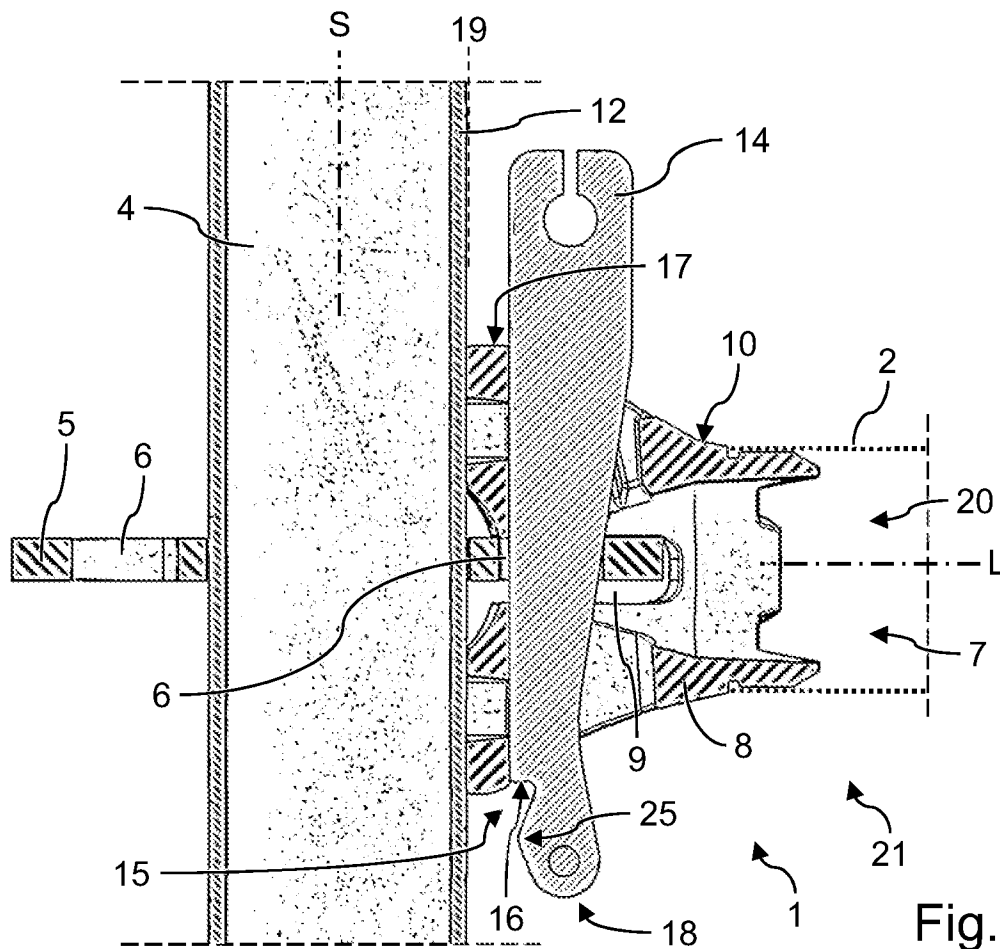


Fig. 7

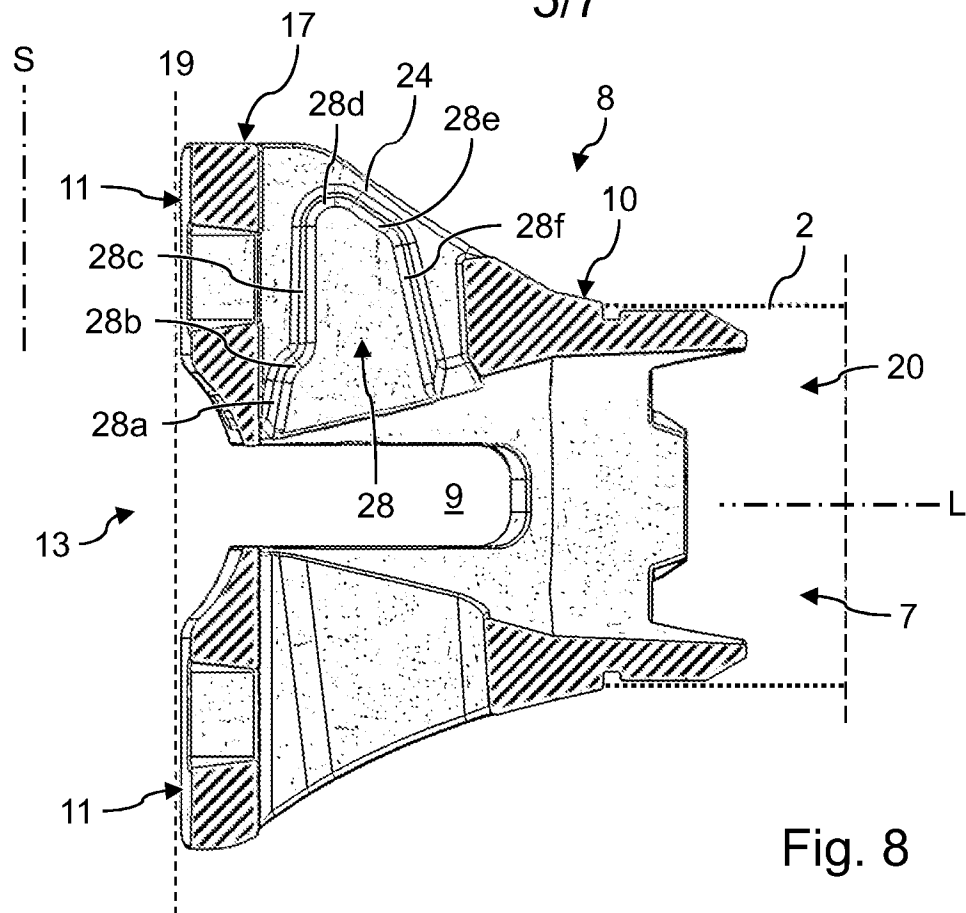


Fig. 8

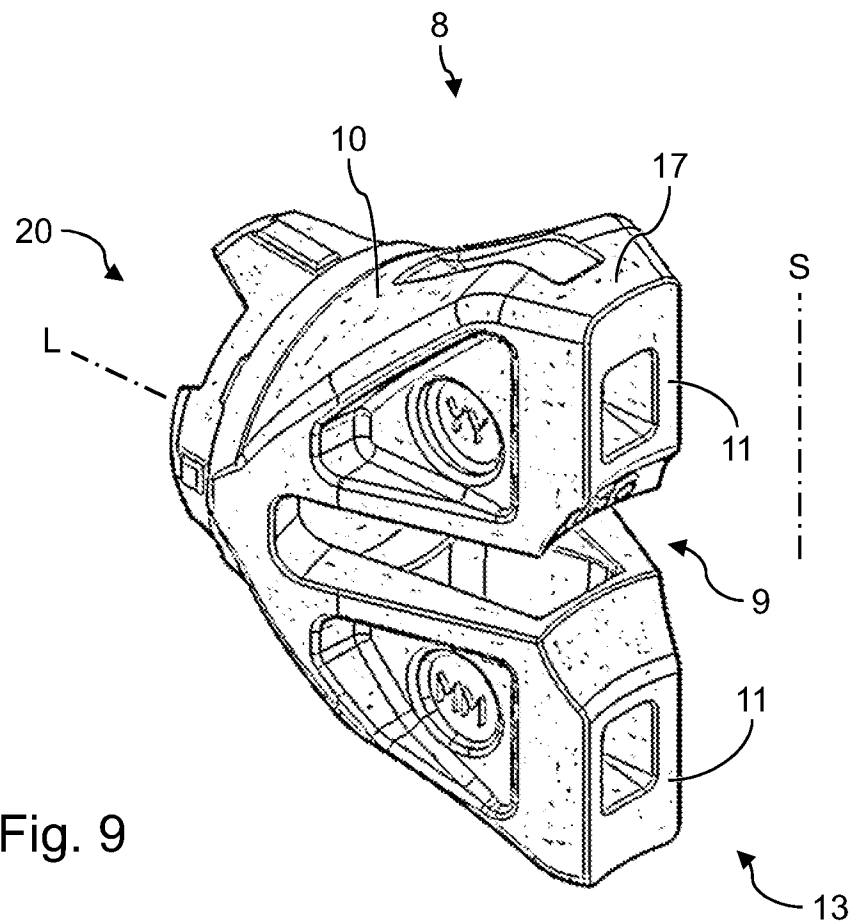
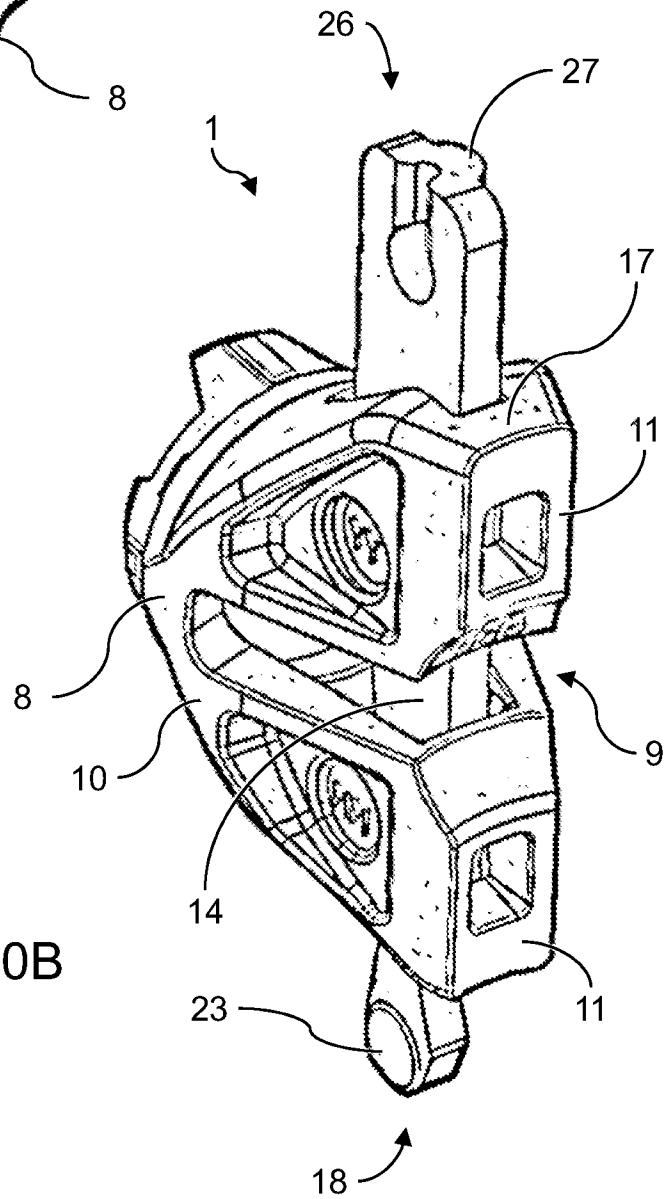
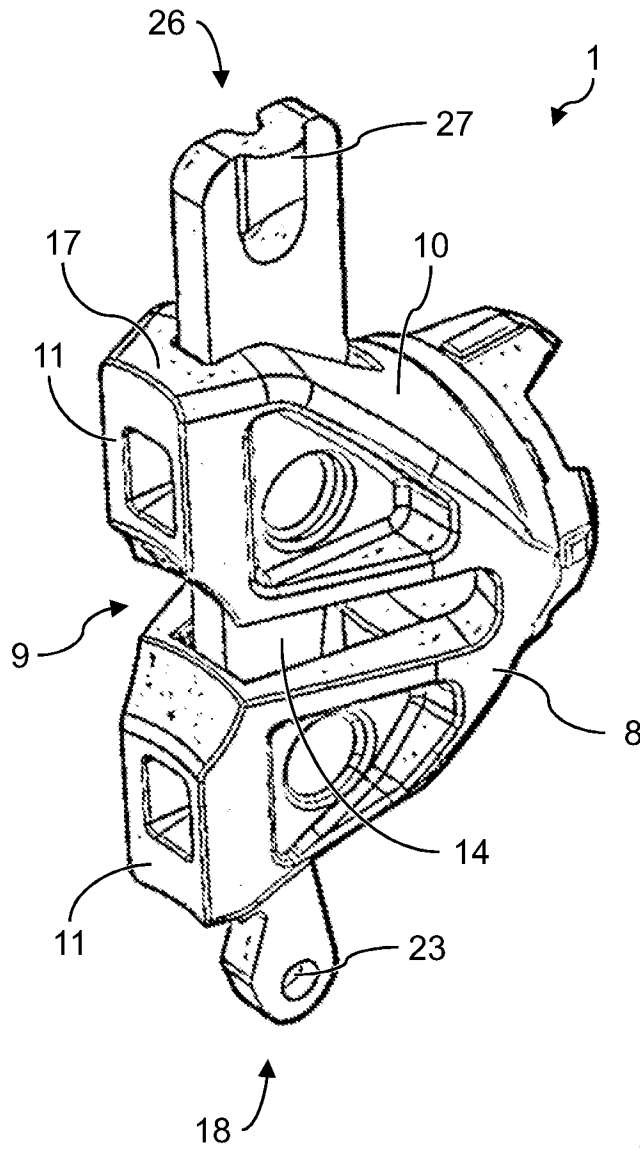
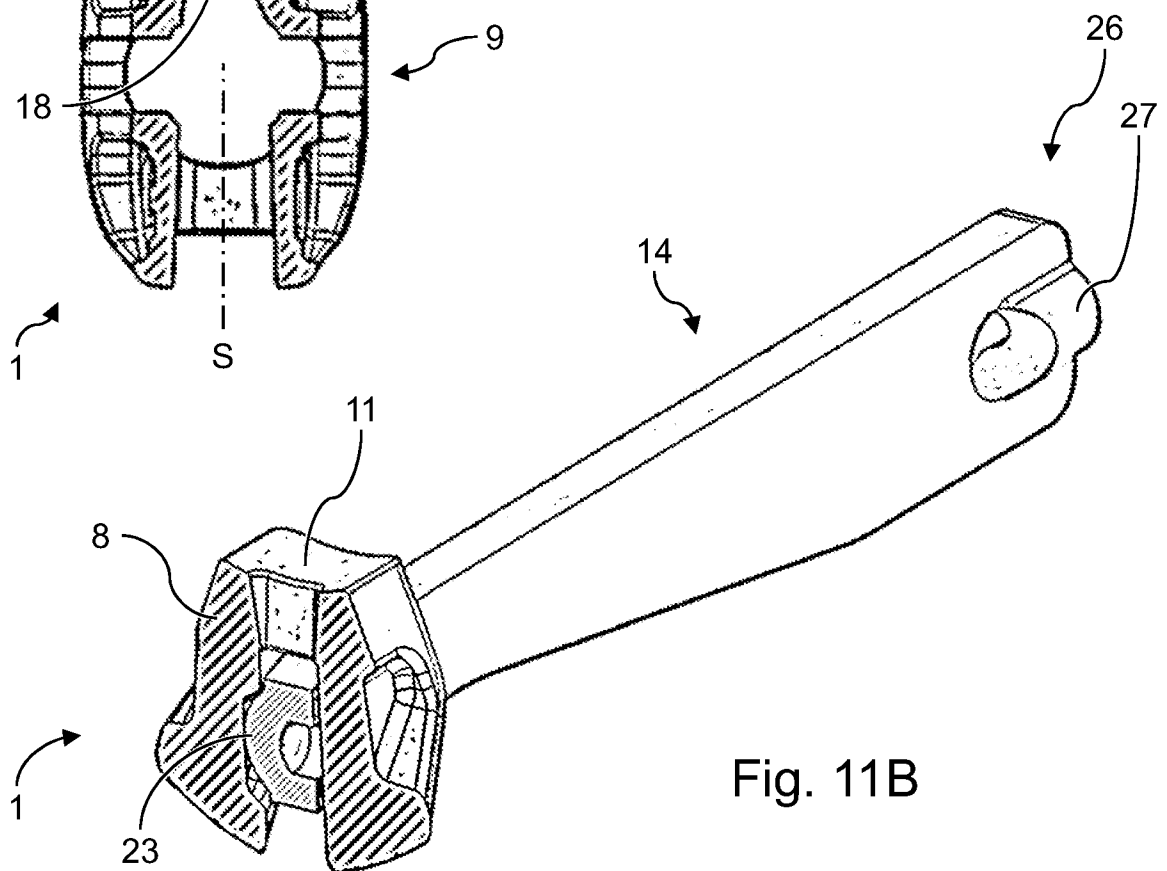
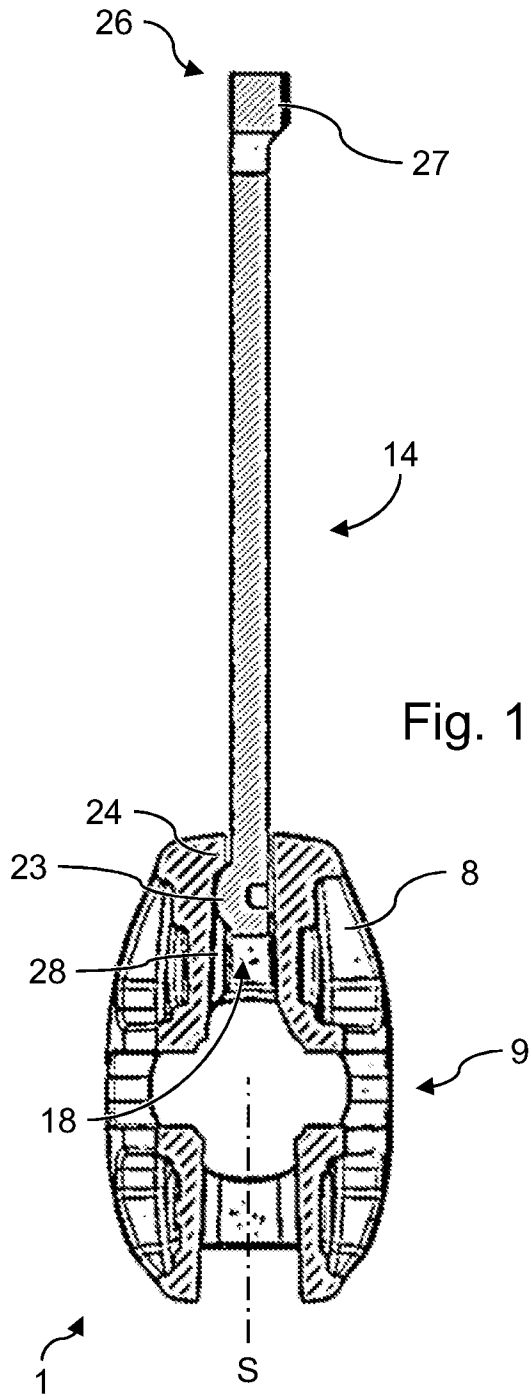


Fig. 9





INTERNATIONAL SEARCH REPORT

International application No

PCT/NL2023/050664

A. CLASSIFICATION OF SUBJECT MATTER

INV. E04G7/32 E04G7/30

ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

E04G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 493 578 A (D ALESSIO MICHAEL S [US]) 15 January 1985 (1985-01-15) column 4, line 33 - line 50; figures 1-11 -----	1-20
A	US 4 840 513 A (HACKETT STEVEN B [US]) 20 June 1989 (1989-06-20) column 5, line 43 - line 49; figures 1-9 -----	1-20
A	US 4 522 527 A (GRANDPIERRE CYRIL M [FR]) 11 June 1985 (1985-06-11) figures 1-11 -----	1-20
A	CA 2 153 574 C (LUBINSKI RONALD [CA]) 5 July 2005 (2005-07-05) figure 2 -----	1-20



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"Y" document of particular relevance;; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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Date of the actual completion of the international search

12 February 2024

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/NL2023/050664

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