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Remarks:
Amended claims in accordance with Rule 86 (2) EPC.

(54) Stiffened scaffold system with optimal application possibilities

(57) Scaffold system (1) for executing work on outer walls (18) of buildings (17), which is placed before the mentioned outer wall (18) with an intermediate space, and is constructed of the usual system posts (5, 6) with junctions (14), in between which at a multiple of junction distances, the so called stroke height H, longitudinal and cross girders (7, 8) with floorboards (12) are applied, in which adjustable consoles (3, 4) are mounted to the inner posts (5) for bridging the mentioned intermediate space, in which the number of anchorages (2) in a vertical as well as in a horizontal sense of the scaffold system (1) to the building (17) is strongly lessened in order to simplify the work, in which for the usual loads on the floorboards (12) the inner posts (5) are strengthened vertically with couplable stiffening frames (10, 11) and beneath the floorboards a truss of stiffening diagonals (13) is applied, whilst the mentioned consoles (3, 4) are constructed foldable.

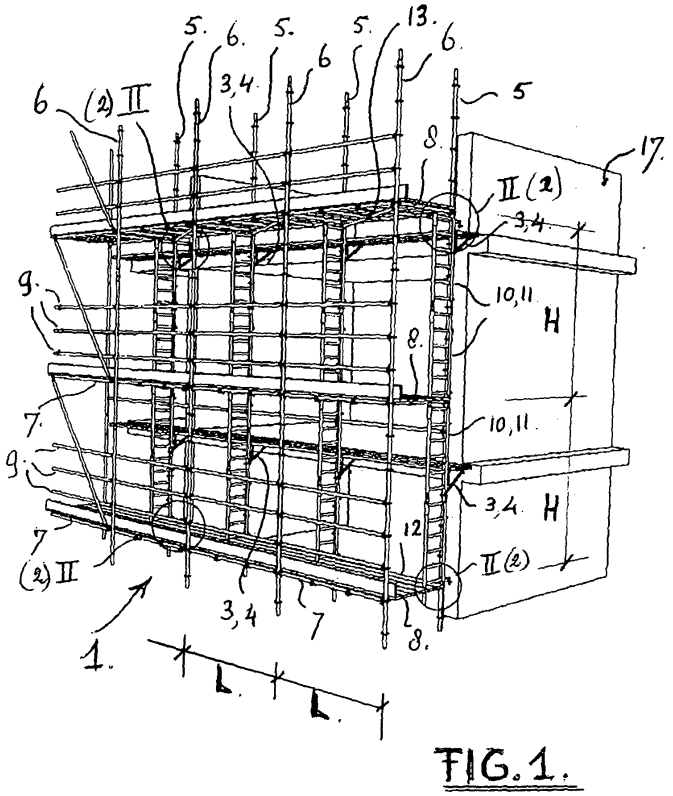

FIG. 1.

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Description

[0001] The present invention relates to a scaffold system for executing work on outer walls of buildings, consisting of modular posts, which are provided with junctions with fixed mutual distances across the length, modular beams for longitudinal and cross girders, in which the mentioned modular posts and beams are constructed in multiple lengths, in which working platforms are applied by means of floorboards on the mentioned cross girders between the modular posts at intermediate distances of a multiple of junction distances of the modular post, in which the scaffold system is attached to the building at intermediate distances by means of anchorage, in which the mentioned intermediate distance is bridged with couplable brackets on the inner posts with floorboards.

[0002] According to the known art, the working scaffolds available on the market do not meet the practical demands anymore. The traditional scaffolds existing of scaffold tubes and couplings demand professional skills in combination with relatively heavy work, for which not many professionals can be found. This causes a long construction time.

[0003] Work on building of new houses, for example brick laying, normally progresses in stroke heights of 1,50 m. For this, in the past scaffolds have been developed with frames with heights of 1,50 m. For the execution of brick laying, the scaffold is raised every time with a stroke height of 1,50 m and each time the mason works on the top stroke. For additional work, such as jointing and painting, the scaffold is constructed or dismantled in phases. With this, the user always has the optimal working height at his disposal. As construction and dismantling goes in relatively small phases, these activities are not executed by the professional scaffold builder but by the present bricklayer's labourer. For larger building projects this construction method is not suitable because the work method does not meet the legislation in the filed of safety at work.

[0004] The conventional modular post systems meet the requirements to let the construction be executed by a professional scaffold builder. For this, the scaffold is mostly constructed up to a large height in one go, which means that a crew of scaffold builders has a full day's work. Also here the disadvantages are established. For the users it is also necessary that the scaffold can easily be reached and walked along on all levels while the demands with regard to working heights are met. For this, the post systems are mostly constructed with a stroke height of 2,00 m in order to create a passage on each level. For executing the work on the outer wall the user can use moveable working platforms, which can be applied at each modular height by means of consoles, which are fixed to the inner post (the post placed nearest to the construction site). This way the user can use each stroke height for the supply of material and execute work on the outer wall, every 1,50 m, and with that meet the present legislation (lifting standards).

[0005] This procedure has a large number of practical disadvantages. The modular post systems, available on the market, are mostly manufactured of tubes with an outer diameter of 48,3 mm in order to be able to connect standard scaffold couplings also. This creates a limitation for the stroke height. For high and heavy loaded scaffolds the maximum stroke height is 2,00 m. As a result of the construction height of the scaffold floors and the presence of anchorage tubes (for functional reasons these must be continuous along the width of the scaffold) the free passage often becomes less than 1,90 m; a passage height which is too small for the construction worker with safety helmet. Working platforms between the scaffold and the building object cannot be attached at each arbitrary height, due to the same load technical reasons. Moreover, the widths of these working platforms are limited. All of this because the mentioned standard tube with diameter 48,3 mm has limitations with regard to the intake of normal forces and bending moments. This problem is even enlarged because the modular post systems need a post buffer, which, for practical reasons, are usually not constructed rigidly. Because of all these reasons the mentioned working platforms cannot be attached at each arbitrary height, while logically also the width of these working platforms are limited by the limited intake moment by the inner post. In the scaffold construction normally a working platform width of 0,60 m is required; here, one must necessarily suffice with a much smaller passage width (often only 0,30 m) while mostly the guidelines with regard to loadability are not met (minimum 1,5 kN/m^2).

[0006] It is the aim of the present invention to provide such a scaffold, which is constructed of modular posts and longitudinal and cross girders, with vertical and horizontal stiffenings, floorboards, adjustable brackets and anchorages, in which the stroke height of the scaffold is 2,5 m or can even be larger, while all requirements with regard to the height to be built, loadability and the application of brackets with working platforms onto the posts can be met. This is done by stiffening the scaffold between the floors with a frame that supports the inner post, by which larger normal forces and bending moments can be taken in by these posts. With this, also the influence of the load bearing capacity limitation of the mentioned post buffer or connection onto the load bearing capacity is lessened.

[0007] The invention further provides in a solution in which the vertical stiffening frame continuous along several strokes. This in order to create vertical anchorage distances for several stroke heights. In an effective way the stiffening frame is therefore positioned beside the cross beams of the scaffold system; the cross beams can then continue without interruption from the inner to the outer post. The modular post system can then be constructed without any limitation, which, especially at the locations of corners and recedings does not impose any limitations to the system. Because the continuous post of the stiffening frame can be a compression bar, due to the bending moments perpendicular to the outer wall surface, it is necessary that this post is secured against buckling at the location of the cross beam. This can

be done, by locking these posts between the floorboards and the cross beam or connect the post with, for example, a belt to the cross beam.

[0008] The modular post systems further usually have the disadvantage that these do not or hardly show any rigidity in the junctions in the horizontal plane. For practical reasons this is a difficult task. This means, that this type of scaffold must be anchored to the outer wall at every post, in order to secure the necessary load bearing capacity. All in all this means, that a loadable executed scaffold must be anchored at approximately each $10m^2$ outer wall surface (for example horizontally every 1,80 m and vertically every 4,00 to 6,00 m). The presence of so many anchorages to the outer wall and the wish to be able to work as pleased on heights other than the top stroke is very conflicting. Besides, it is often required to keep the space between the scaffold and the building locally free for hoisting in wall elements and fronts. Therefore, in practice, anchorages are often obstacles in the way and are accordingly (temporarily) taken out to be able to execute the required work. This causes great risks with regard to the positional security of the scaffold, moreover because the anchorages cannot be put back or one forgets to put them back, also because the professional is not present at that moment.

[0009] It is obvious to also save on anchorages in the horizontal direction by applying horizontal stiffening discs. On a scaffold with vertical stiffenings, horizontal stiffening is the most effective if these discs are attached at anchorage level. Here, it is functional to stiffen the horizontal surface locally with diagonals, which catch in the junctions of the scaffold system. With this, it is most effective to apply these diagonals underneath the working platforms, in which these can be mounted and demounted before or after applying the working platforms. Because a working platform in a scaffold system is mostly situated at junction level, the diagonal must be constructed recessed. This causes a large eccentricity in the diagonal tube by which this, especially when on pressure, can hardly take any load. The invention therefore provides in a horizontal tube, which is constructed recessed, which is applied in the junction from below and at tube level adjoins the posts on both ends. With this, possible pressure forces are directly transmitted centrically onto the post tube.

[0010] Above, the requirement was mentioned to build the scaffold up to a larger height in one go. With the present building methods one often requires to build the scaffold and the structural workfloor at the same time, in order to, for safety reasons, take advantage of the presence of the scaffold during work on the structural workfloor (working safely at heights) when working on floor edges. This is very efficient when at least the working platforms between the scaffold and the building object can be applied at the same height as the structural workfloor in order to create a gallery on location of the concrete walls and such during the structural building phase. For these working platforms, for functional reasons, consoles must therfore be suspendable at each junction of the modular post system and, in addition, be adjustable in small steps or continuously variable in height to be able to apply the working platform at the same level as the structural work floor.

[0011] In connection with the demands with regard to the insulation, the outer leave skin has a total thickness of approximately 25 cm (cavity 15 cm and brick thickness 10 cm). It is therefore required to use a console respectively working platform that can be slided in 25 cm. It may be obvious that the adjustability in combination with a demanded width, during and after the brick laying phase, demands a console width of minimally 75 cm, which puts a too heavy burden on the loadability of the conventional scaffolds.

[0012] A further item of the present invention is to execute the working platforms between the scaffold and the building object in such a way, that these can be folded away, so that at each arbitrary height the demanded passage height can be created. For supporting these working platforms, the consoles are therefore constructed foldable upwards or downwards.

[0013] From the above it appears that, in the practice of building one needs very flexible scaffold systems, which can be used in almost every working and loading situation for work on the outer walls.

[0014] It is the aim of the present invention to provide such a modified, improved and stiffened scaffold system, that has optimal user possibilities with a minimum number of anchorages and fast foldable consoles, so that the work on the outer walls of buildings can be done very efficiently and especially safely, characterized in that, a vertical disc consisting of modular inner and outer posts with mounted in between mentioned modular cross girders is strengthened with a vertical stiffening frame, that a horizontal disc, being the working platform consisting of modular longitudinal and cross girders with floorboards connected to the mentioned modular inner and outer posts, is strengthened from below with horizontal stiffening diagonals, which are applied beneath the floorboards and that on the modular inner posts in the mentioned intermediate spaces at each height and width adjustable fold-up consoles with floorboards are applied.

[0015] The advantage is a clear and well-organized improvement of the stiffening of the scaffold system and its daily use for work on the outer walls of buildings.

[0016] Further, the scaffold system according to the invention is further developed in such a way, that the mentioned vertical stiffening frame is provided with a vertical post with a truss, in which the truss is coupled with the inner post at one or more locations and supports it.

[0017] The advantage is, that the most heavily loaded posts, the inner posts, are highly strengthened by a coupled truss, that can take vertical load as well as bending moments, by which the loads from the extension with consoles for

the intermediate space between the scaffold system and the building are considerably better discharged to the supports of the scaffold system.

[0018] Further, the scaffold system according to the invention is further developed in such a way, that the mentioned vertical stiffening frame is constructed as a ladder frame or that the truss is formed by rungs or steps.

[0019] The advantage is, that by executing the stiffing frame with horizontal elements at regular mutual distances a ladder is formed, through which an additional ladder on the scaffold becomes unnecessary and the scaffold can be climbed on at each location. For this, hatches are placed at the desired locations in the floor as well as protections against falling.

[0020] Furthermore, the scaffold system according to the invention is further developed in such a way, that the rungs are provided with recesses at the top side for inserting the coupling means or hooks of the system floorboards.

[0021] The advantages are, that the thus obtained rungs can be used for supporting intermediate floors for stocking material and/or for locally broadening the working platform between the scaffold and the building object. These rungs can be provided with openings, which can be used to insert coupling means of the system boards. By providing the openings with edges, which point upwards, antislip is created in a purposeful way. Further, the rungs are constructed in such a tubular cross-section, so that floor elements with supporting hooks for a scaffold tube available on the market also fit.

[0022] Furthermore, the scaffold system according to the invention is further developed in such a way, that the coupling between the truss and the inner post is done in one or more connection or junction points of the inner post by means of a welded beam end, or that the coupling between the truss and the inner post is formed by welded half scaffold couplings.

[0023] The advantages are that with the present coupling methods the vertical stiffening frame is fixed to the inner post in an efficient way.

[0024] Furthermore, the scaffold system according to the invention is further developed in such a way, that the mentioned vertical stiffening frame is modularly divided in sub-ladder frames in a vertical sense.

[0025] The advantage is, that the scaffold system can be vertically stiffened with flexible connectable sub-ladder frames with lengths of 1,50m, 1,00m respectively; through which floor heights of 2,50m; 3,00m; 3,50m and such are possible.

[0026] Furthermore, the scaffold system according to the invention is further developed in such a way, that the mentioned modular vertical stiffening frames at the point of the continuous post are connected tensile fixed with a coupling sleeve provided with, for example, a bayonet connection.

[0027] The advantage is, that in a simple way a tensile fixed vertical continuous connection is created by means of bayonet fastening, through which, in a vertical sense, a continuous beam is created with advantageous mechanical qualities.

[0028] Furthermore, the scaffold system according to the invention is further developed in such a way, that the mentioned vertical stiffening frames, constructed as a vertical post with a truss, trusses with rungs or sub-ladder frames are mounted in a plane adjacent to the modular inner posts and cross girders.

[0029] The advantage is, that the stiffening according to the invention can be built-in in each scaffold system due to the vertical positioning adjacent to the inner posts and the cross girders.

[0030] Furthermore, the scaffold system according to the invention is further developed in such a way, that the mentioned horizontal stiffening diagonals are applied recessed from below underneath the working platforms or the floorboards and connect to the junction or rosette of the modular inner and outer post.

[0031] The advantage is, that the diagonals can be mounted directly from below in the already constructed scaffold, by which a larger mechanically horizontal rigidity and strength of the working platform of the scaffold system is created.

[0032] Furthermore, the scaffold system according to the invention is further developed in such a way, that at the ends, the recessed, horizontal stiffening diagonals adjoin the modular posts at the heart of the horizontal stiffening diagonal.

[0033] The advantage is, that with pressure a centric pressure load is created on the stiffening diagonal, which is advantageous when calculating the buckling of the diagonal.

[0034] Furthermore, the scaffold system according to the invention is further developed in such a way, that the working platform between the inner post and the building is carried by fold-up consoles adjustable at each height and width, which brackets are attached to the junctions or rosettes of the modular inner posts, in which the cross girder of the consoles are telescopic in order to support working platforms of different widths.

[0035] The advantage is an optimally horizontally and vertically adjustable console, which is applied to the inner post and thus flexibly bridges the intermediate space between the scaffold system and building.

[0036] Then, the scaffold system according to the invention is further developed in such a way, that the brackets are divided in a vertical sense and that these are foldable, so that the working platform or floorboards can be folded up.

[0037] The advantage is, that always from one inner post till the next inner post the working platform can be folded up for very local work on the outer wall.

[0038] Then, the scaffold system according to the invention is further developed in such a way, that at some places

of the scaffold system the mentioned sub-ladder frames are constructed as a vertical ladder for vertical human movement, through which, for safe access to the next floor a rotatable hatch is applied in the floorboards, in which for the protection of a sideways falling off of the user of the scaffold system besides mentioned sub-ladder frame also couplable safety frames are applied, which can be suspended in longitudinal or cross direction of the scaffold system.

[0039] The advantages are, that people can easily move vertically on the scaffold by the mentioned passage hatches and that it can be done safely due to the couplable safety frames.

[0040] The preferred construction of the invention will be described by way of example, and with reference to the accompanying drawing.

[0041] In which:

Fig. 1	shows a view in oblique projection of the vertically and horizontally stiffened scaffold system with optimal application possibilities with regard to loads, number of anchorages, use of consoles and such, according to a preferred embodiment of the invention;
Fig. 2	shows a view in oblique projection of the anchorage detail II in figure 1;
Fig. 3A up to 3D	show views in oblique projection (figures 3A, 3C) and top views of sub-ladder frames (figures 3C, 3D) with traditional half scaffold couplings for application to the inner post (figures 3A, 3B) or with a beam end of a scaffold system for mounting to the inner post;
Fig. 4A/4B	show views in oblique projection of the upper sub-ladder frame vertically tensile fixed to the bottom sub-ladder frame (figure 4A) and in enlarged scale the matching tensile fixed continuous connection with coupling sleeve and bayonet connection;
Fig. 5	shows a view in oblique projection of the horizontal attachment of the vertical composed sub-ladder frames with coupling element in the form of a tensile fixed belt;
Fig. 6A + 6B up to 6C	show views in oblique projection of the subladder frame with the special rungs (figure 6A) and the hook-on or -in possibilities of the system floorboards with hooks for rungs with rectangular or round cross-section;
Fig. 7A/7B	show views in oblique projection of the stiffening diagonal (figure 7A) and a side view of the adjoining of the head side of the stiffening diagonal with the modular post (figure 7B);
Fig. 8	shows a side view of a horizontally and vertically adjustable console according to a preferred embodiment of the invention;
Fig. 9A/9B	show a view in oblique projection of a divided fold-up console with floorboards according to the invention (figure 9A) and in enlarged scale a side view of the mentioned divided fold-up console; and
Fig. 10A/B	show views in oblique projection of a scaffold system according to the invention with passage hatch (figure 10A) and suspended safety frames (figure 10B).

[0042] Figure 1 shows a view in oblique projection of the vertically and horizontally stiffened scaffold system 1 with optimal application possibilities with regard to loads, number of anchorages 2 (figure 2), use of brackets and such according to the preferred embodiment of the invention. The stiffened scaffold system 1, for example, is constructed of system posts, being inner posts 5 and the outer posts 6 at horizontal distance L and per stroke height H longitudinal and cross girders 7, 8 have been applied. Further, for safety, scaffold tubes 9 are applied. For the vertical stiffening or strengthening, vertical stiffening frames, for example constructed of sub-ladder frames 10, 11, length 1,50 m and/or 1,00 m are applied. For horizontally stiffening of the scaffold system 1, stiffening diagonals 13 are mounted from below underneath the floorboards 12, thus in order to form a horizontal truss per stroke height H. The horizontal stiffening diagonals 13 (see also figure 7) are mounted from below onto the rosettes 14 of the system posts 5, 6 with a pin 15 in the mentioned opening of the rosette 14 or junction and then fixed with a not indicated blocking. The head sides 16 take care of a centric absorbation of the pressure force in the stiffening diagonal, which is advantageous when calculating on buckling. By applying the stiffening diagonals 13 and the vertical stiffening frames in the form of, for example, stacked vertical tensile fixed connected sub-ladder frames 10, 11 a minimum number of anchorages 2 are needed, which makes working on the building 17 much easier. The values L can be, for example, 1,20; 1,80 or 2,40 m. The stroke height H can be 2,50; 3,00 or 3,50 m and can vary in length at each floor. The scaffold is placed in front of the outer wall 18 of the building 17 with an intermediate space T (see figures 2 and 8).

[0043] Figure 2 shows a view in oblique projection of the anchorage detail II in figure 1, in which the anchorage rod 2 with on its end a vertical pin 19 is applied with an eye of a cotter bolt construction in the outer wall 18 of the building 17.

[0044] Figure 3A shows a view in oblique projection (figure 3A) of the sub-ladder frame 10, 11 for attachment to a rosette 14 of the system posts 5, 6 and beam end 20. Figure 3B shows the mentioned sub-ladder frame 10, 11 in top view, in which the mentioned sub-ladder frame is applied adjacent to the system post or inner post 5 and is connected with a belt 21 to the cross girder 8 to lessen the buckling length (see also figure 5). Figures 3C and 3D show the same, but now the attachment of the sub-ladder frames 10, 11 to the inner post 5 is executed by means of traditional half

scaffold couplings 22. The sub-ladder frames 10, 11 have rungs 23 and ladder beams 24 and 25. The vertically tensile fixed connection is formed by a coupling sleeve with bayonet connection 26 to ladder beam 25.

[0045] Figure 4A shows a view in oblique projection of the assembly of the top sub-ladder frame 10, 11 onto the bottom sub-ladder frame 10, 11 with the coupling sleeve and bayonet connection 26.

[0046] Figure 4B shows enlarged the mentioned coupling sleeve with bayonet connection.

[0047] Figure 5 shows in oblique projection the horizontal attachment of the sub-ladder frames 10, 11 with the coupling element in the form of a tensile fixed belt 21.

[0048] Figure 6A shows a view in oblique projection of the sub-ladder frame 10, 11 with more detailed the rungs 23 or 27, in which the rungs 23 have a rectangular cross-section (see figures 6B and 6C) and the rungs 27 have a round cross-section (see figure 6D). The rungs 23 are provided with openings or recesses 28 for coupling in the hooks 29 of the system floorboards 30. For catching around, larger hooks 31 are used, both for rungs 23 and rungs 27.

[0049] Figure 7A shows a view in oblique projection of the stiffening diagonal 13, which is mounted from below underneath the working platform in the opening of the rosette 14 of the system posts 5 and 6.

[0050] Figure 7B shows in more detail the centrically adjoining of the end of the stiffening diagonal 13, in which the interlocking is omitted.

[0051] Figure 8 shows a side view of the horizontally and vertically adjustable console 3 according to a preferred embodiment of the invention. Mentioned console 3 is attached to the rosette 14 of the system post 5 with a welded beam end 20. The horizontally and vertically adjustment possibility is further indicated with arrows A and B. Securing in a certain position can be done with the pin and bore construction 32. Adjustment can thus be done in small steps. The intermediate space T between the scaffold system 1 and the outer wall 18 can thus be flexibly bridged in height and width. In the figure the floorboards are left out for reasons of clarity.

[0052] Figure 9A shows a view in oblique projection of a partly folded-up console 4 with floorboards 12 according to a preferred embodiment of the invention. The partly folded-up console 4 is connected to the inner post 5 with a beam end 20. This way, for example, a mason or another specialist whom executes work on the outer wall 18, can only fold-up a part over a length L at an angle α.

[0053] Figure 10A shows a view in oblique projection of the scaffold system 1 according to the invention with passage hatch 33, through which the scaffold system 1 can easily be climbed on via the sub-ladder frames 10, 11.

[0054] In figure 10B a safety frame 34 is applied adjacent to the sub-ladder frames 10, 11 to be climbed on for when, for example, no brackets 3, 4 with floorboards 12 are mounted in the intermediate space T between the scaffold system and the outer wall 18.

[0055] Finally it has to be emphasized, that the above description constitutes preferred embodiments of the invention and that obviously further variations and modifications are still possible without departing the scope of this patent description.

Claims

1. Scaffold system for executing work on outer walls (18) of buildings (17), consisting of modular posts (5, 6), which are provided with junctions or connections (14) with fixed mutual distances across the length, modular beams for longitudinal and cross girders (7, 8), in which the mentioned modular posts (5, 6) and beams are constructed in multiple lengths, in which working platforms are applied by means of floorboards (12) on the mentioned cross girders between the modular posts (5, 6) at intermediate distances of a multiple of junction distances of the modular post (5, 6), in which the scaffold system (1) is attached to the building (17) at intermediate distances by means of anchorage (2), in which the mentioned intermediate distance is bridged with couplable brackets (3, 4) on the inner posts (5) with floorboards (12), **characterized in that**, a vertical disc consisting of modular inner and outer posts (5, 6) with mounted in between mentioned modular cross girders (8) is strengthened with a vertical stiffening frame, that a horizontal disc, being the working platform consisting of modular longitudinal and cross girders (7, 8) with floorboards (12) connected to the mentioned modular inner and outer posts (5, 6), is strengthened from below with horizontal stiffening diagonals (13), which are applied beneath the floorboards (12) and that on the modular inner posts (5) in the mentioned intermediate spaces at each height and width adjustable fold-up consoles (3, 4) with floorboards (12) are applied.

2. Scaffold system as claimed in claim 1, **characterized in that**, the mentioned vertical stiffening frame is provided with a vertical post with a truss, in which the truss is coupled with the inner post (5) at one or more locations and supports it.

3. Scaffold system as claimed in claims 1-2, **characterized in that**, the mentioned vertical stiffening frame is constructed as a ladder frame or that the truss is formed by rungs (23) or steps.

4. Scaffold system as claimed in claims 1-3, **characterized in that**, the rungs (23) are provided with recesses (28) at the top side for inserting the coupling means or hooks (29) of the system floorboards (12).

5. Scaffold system as claimed in claim 4, **characterized in that**, the mentioned rungs (23) are made of rectangular hollow steel, in which by protruding edges (35) of the recesses (28) an anti-slip surface is created.

6. Scaffold system as claimed in claim 4, **characterized in that**, the coupling means or hooks (31) of the system floorboards, which are constructed to hook onto scaffold tubes with an outer diameter of 48,3 mm, also fit around the mentioned rungs (27).

7. Scaffold system as claimed in claims 1-2, **characterized in that**, the coupling between the truss and the inner post (5) is formed by welded half scaffold couplings (22).

8. Scaffold system as claimed in claims 1-2, **characterized in that**, the coupling between the truss and the inner post (5) is done in one or more connection or junction points of the inner post by means of a welded beam end (20).

9. Scaffold system as claimed in claims 1-8, **characterized in that**, the mentioned vertical stiffening frame is modularly divided in sub-ladder frames in a vertical sense.

10. Scaffold system as claimed in claims 1-9, **characterized in that**, the mentioned modular vertical sub-ladder frames (10, 11) at the point of the continuous post are connected tensile fixed with a coupling sleeve provided with, for example, a bayonet connection (26).

11. Scaffold system as claimed in claims 1-10, **characterized in that**, the mentioned vertical stiffening frames, constructed as a vertical post with a truss, trusses with rungs or sub-ladder frames (10, 11) are mounted in a plane adjacent to the modular inner posts (5) and cross girders (8).

12. Scaffold system as claimed in claim 1, **characterized in that**, the mentioned horizontal stiffening diagonals (13) are applied recessed from below underneath the working platforms or the floorboards (12) and connect to the junction or rosette (14) of the modular inner and outer post (5, 6).

13. Scaffold system as claimed in claim 12, **characterized in that**, at the ends the recessed, horizontal stiffening diagonals (13) adjoin the modular posts (5, 6) at the heart of the horizontal stiffening diagonal (13).

14. Scaffold system as claimed in claim 1, **characterized in that**, the working platform between the inner post (5) and the building (17) is carried by fold-up brackets (3,4) adjustable at each height and width, which consoles (3, 4) are attached to the junctions or rosettes (14) of the modular inner posts (5).

15. Scaffold system as claimed in claims 1 and 14, **characterized in that**, the mentioned consoles (3) are provided with recesses at the top side for inserting coupling means or hooks (29, 31) of the system floorboards (12).

16. Scaffold system as claimed in claims 1, 14 and 15, **characterized in that**, the cross girder of the consoles (3) are telescopic in order to support working platforms of different widths.

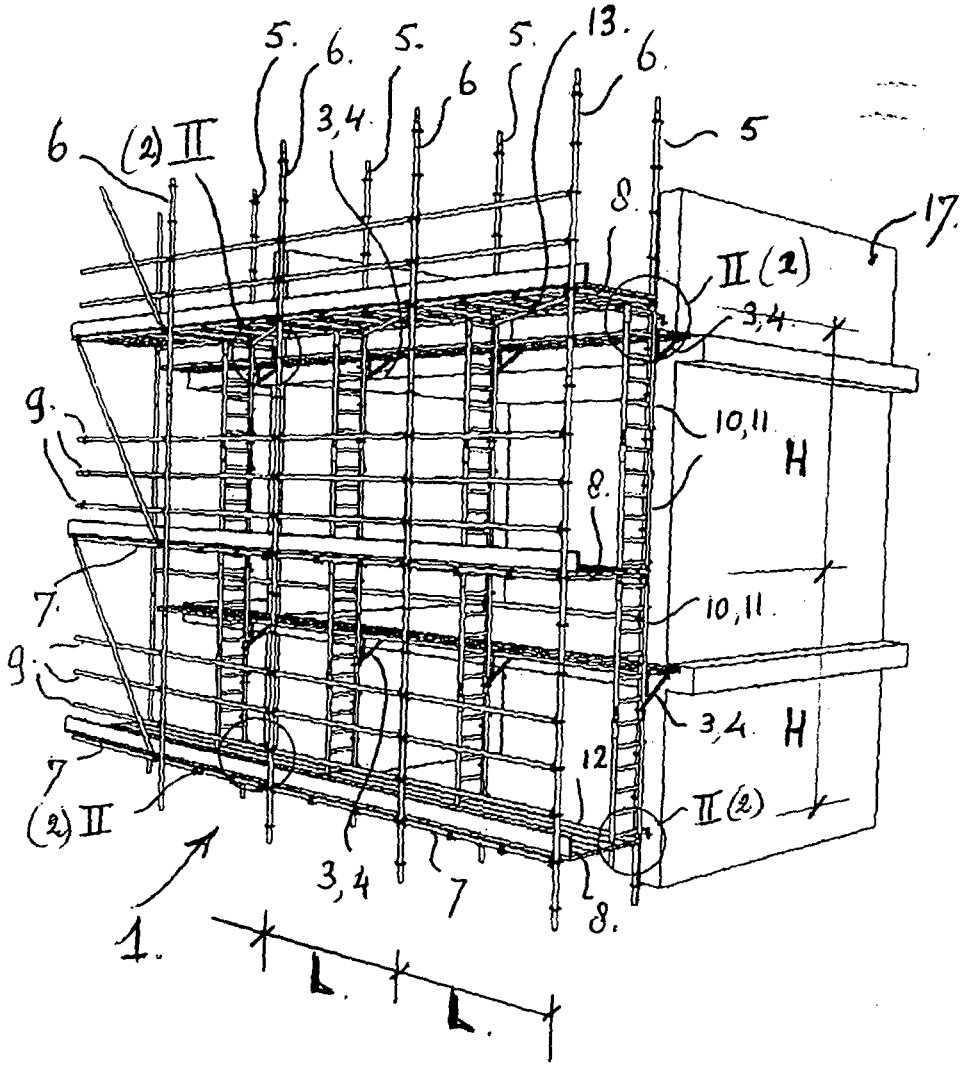
17. Scaffold system as claimed in claims 1, 14, 15 and 16, **characterized in that**, the consoles (4) are divided in a vertical sense and that these are foldable, so that the working platform or floorboards (12) can be folded up.

18. Scaffold system as claimed in claims 1-11, **characterized in that**, at some places of the scaffold system (1) the mentioned sub-ladder frames (10, 11) are constructed as a vertical ladder for vertical human movement, through which, for safe access to the next floor a rotatable hatch (33) is applied in the floorboards (12).

19. Scaffold system as claimed in claims 1-11 and 18, **characterized in that**, for the protection of a sideways falling off of the user of the scaffold system (1) besides mentioned sub-ladder frame (10, 11) couplable safety frames (34) are applied, which can be suspended in longitudinal or cross direction of the scaffold system.

Amended claims in accordance with Rule 86(2) EPC.

1. Scaffold system consisting of sections of vertical rectangular frames with inner and outer modular posts (5, 6) with vertical applied junctions for coupling or connecting cross girders (8), said sections of vertical rectangular frames being interconnected with longitudinal girders (7) to junctions (14) of said modular posts wherein floor boards (12) being applied on the cross girders (8) in order to form a working platform, said sections of vertical rectangular frames being attached to the building (17) by means of a number of anchorages (2) divided over its height (H), the distance (T) to the wall (18) of said building (17) being bridged by coupable or connectable consoles (3, 4), **characterised in that**, the inner posts (5) of said sections of the vertical rectangular frames between the modular cross girders (8) are strengthened with a vertical passing through stiffening frame mounted to that inner post (5) and beneath said working platform horizontal stiffening diagonals (13) are mounted, and that said coupable or connectable consoles are formed by horizontally adjustable fold-up consoles, which are hooked-up at or coupled to the inner posts (5).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5.
13.
6.
6
(2) II
3,4
6
5
8.
17.
II (2)
3,4
9.
10,11
H
8.
7.
10,11
9.
3,4
H
12
7
II (2)
(2) II
3,4
7
8.
1.
L
L

FIG. 1.

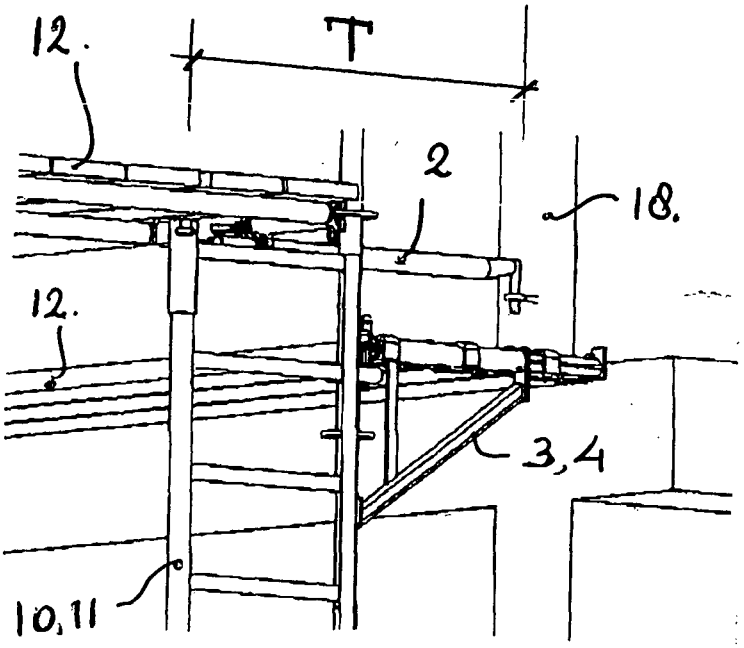

FIG. 2

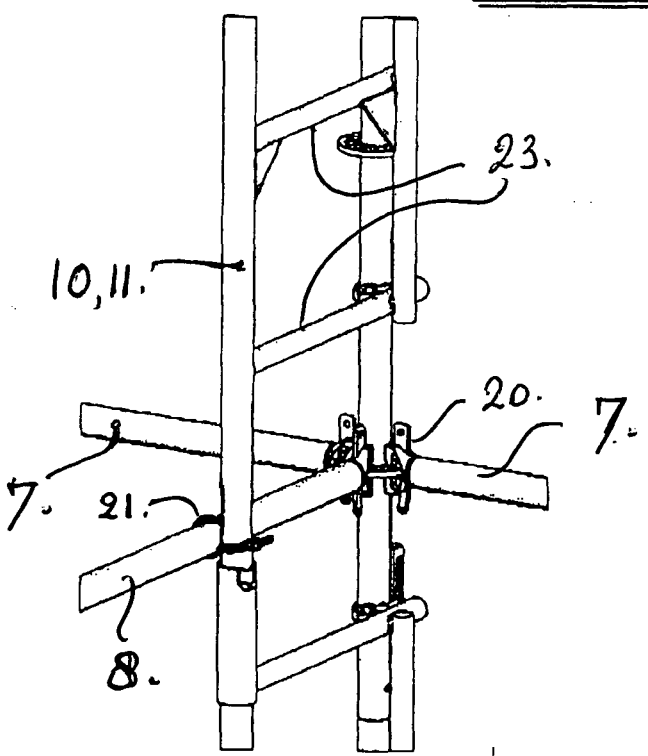

FIG. 5.

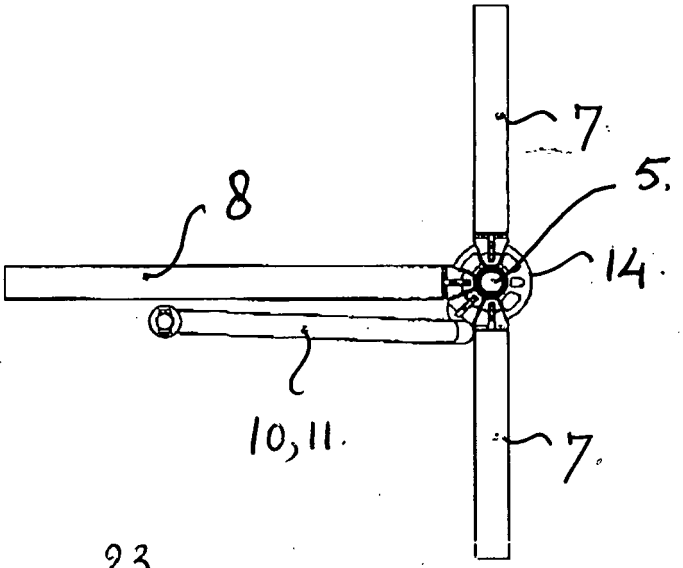

FIG.3B.

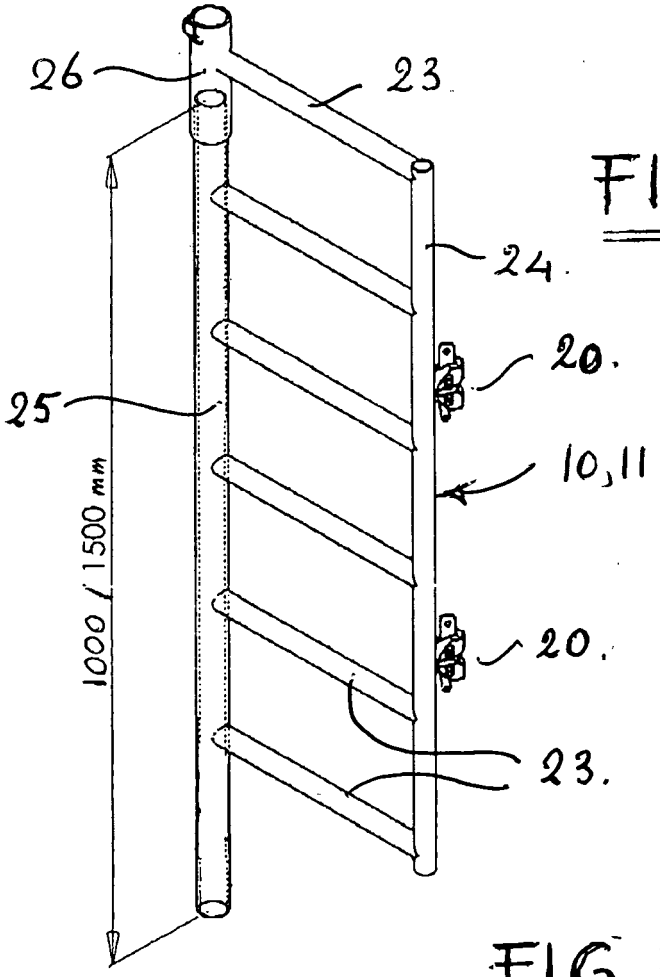

FIG.3A.

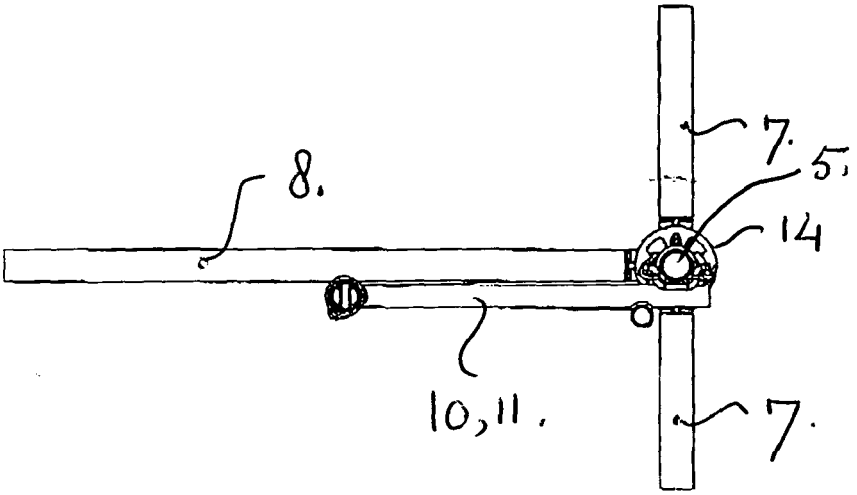

FIG.3D.

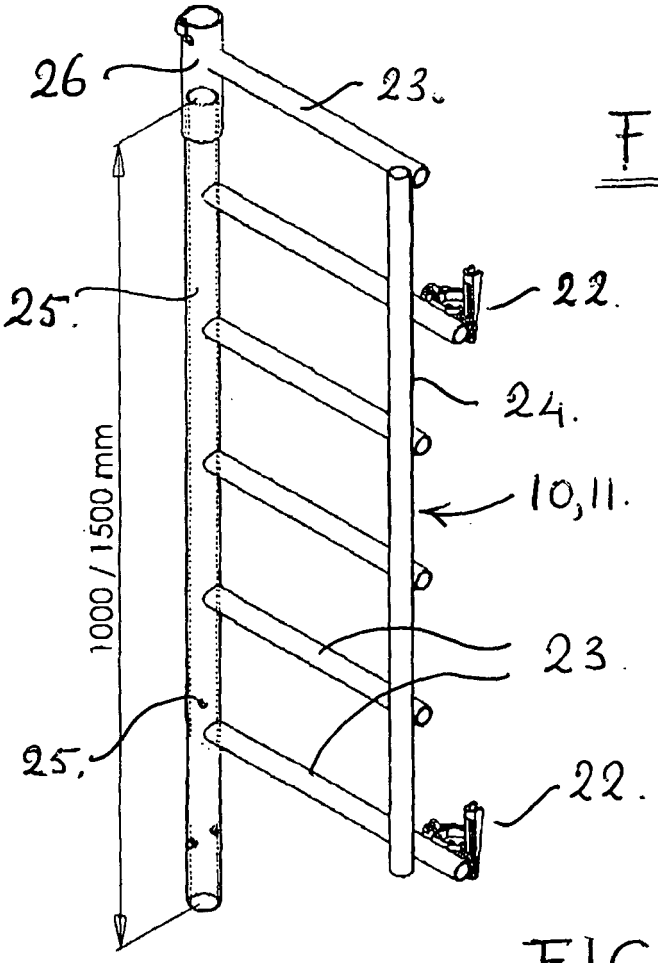

FIG.3C.

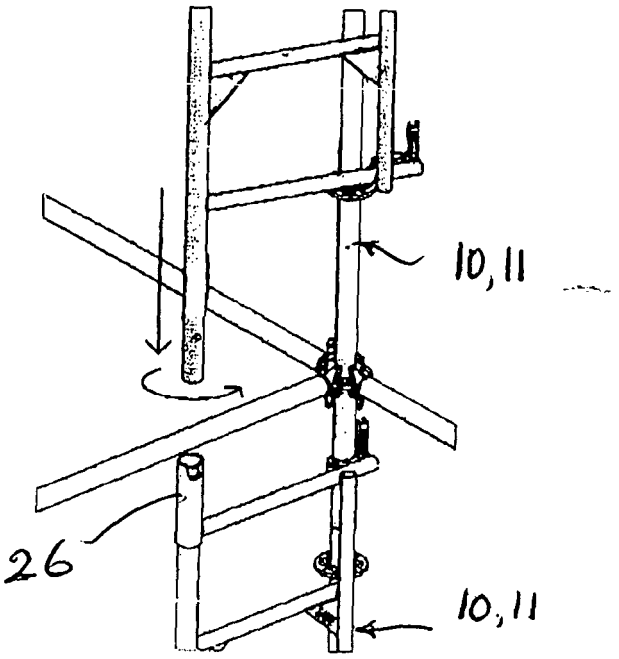

FIG. 4A.

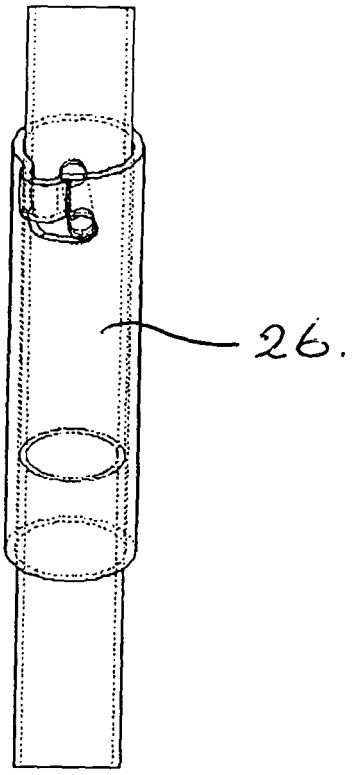

FIG. 4B.

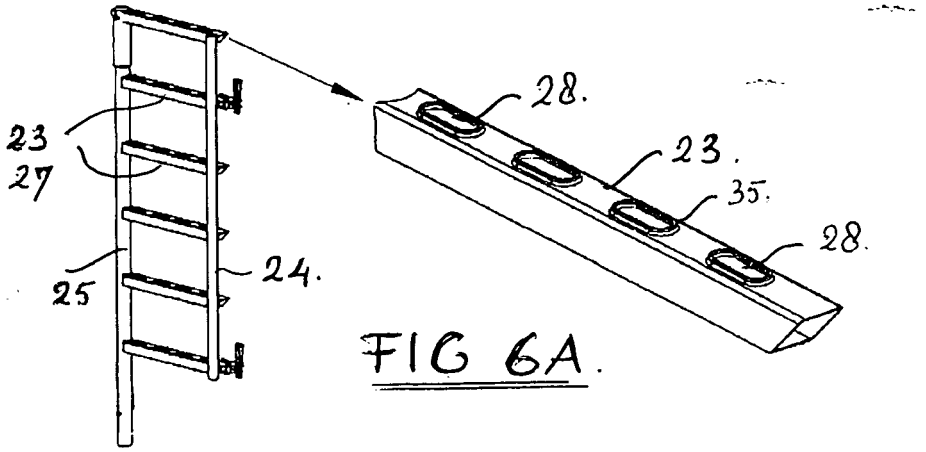

FIG 6A.

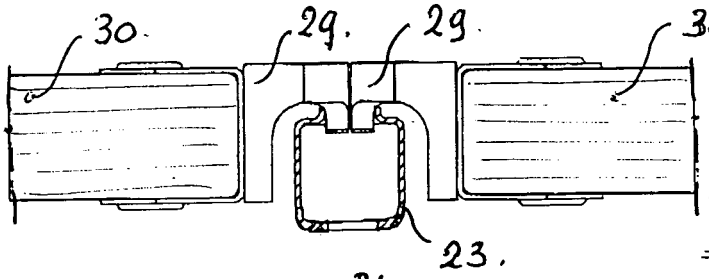

FIG.6B.

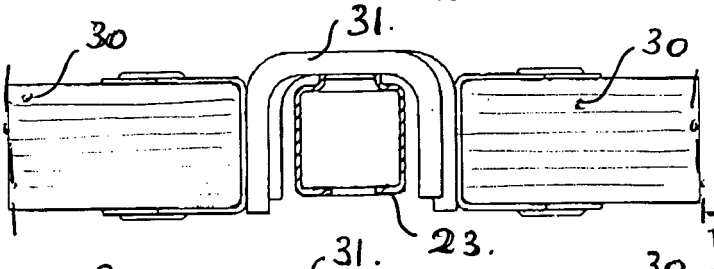

FIG.6C

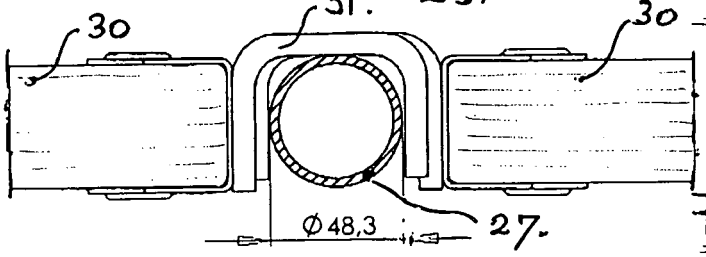

FIG.6D.

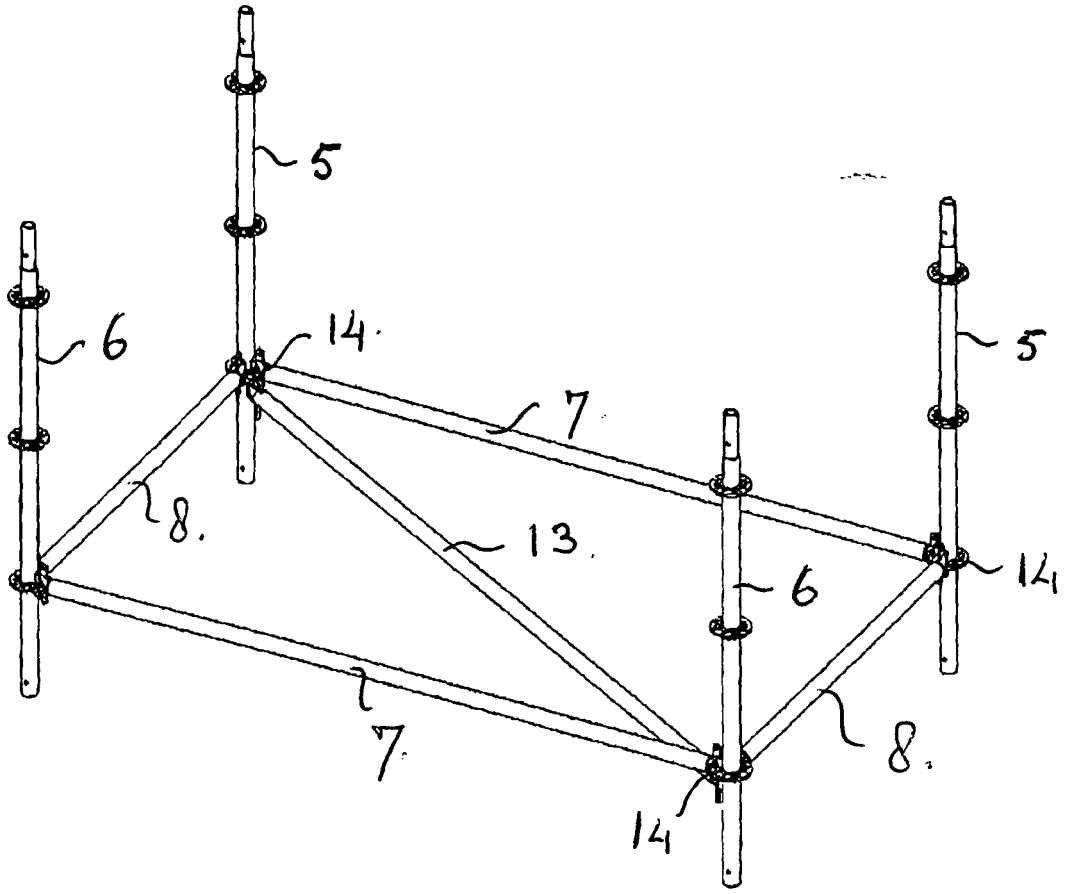

FIG. 7A.

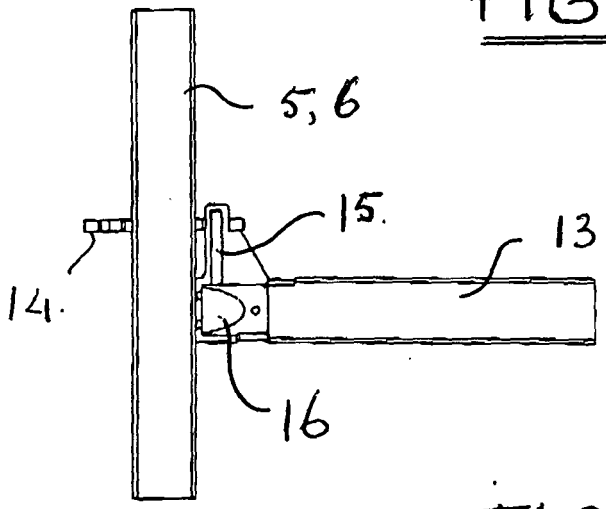

FIG. 7B.

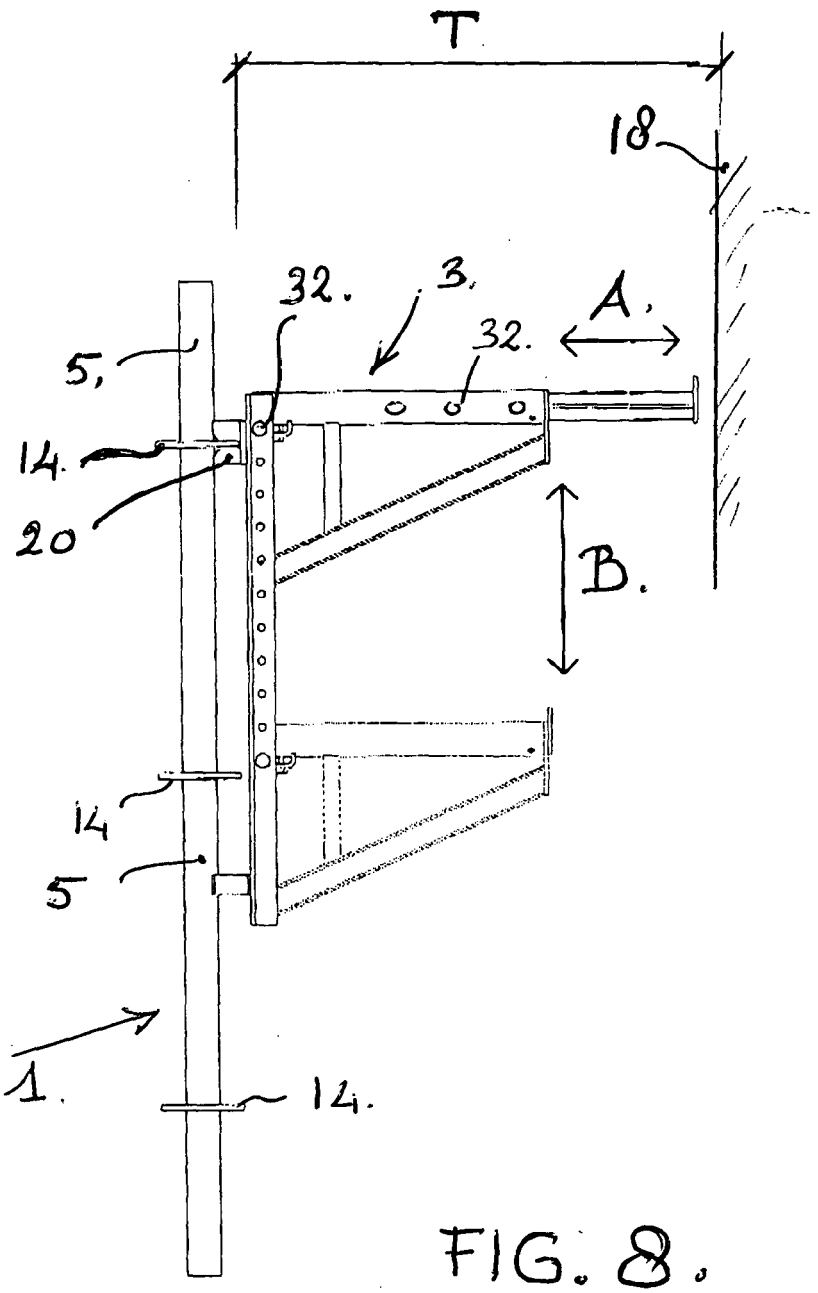

FIG. 8.

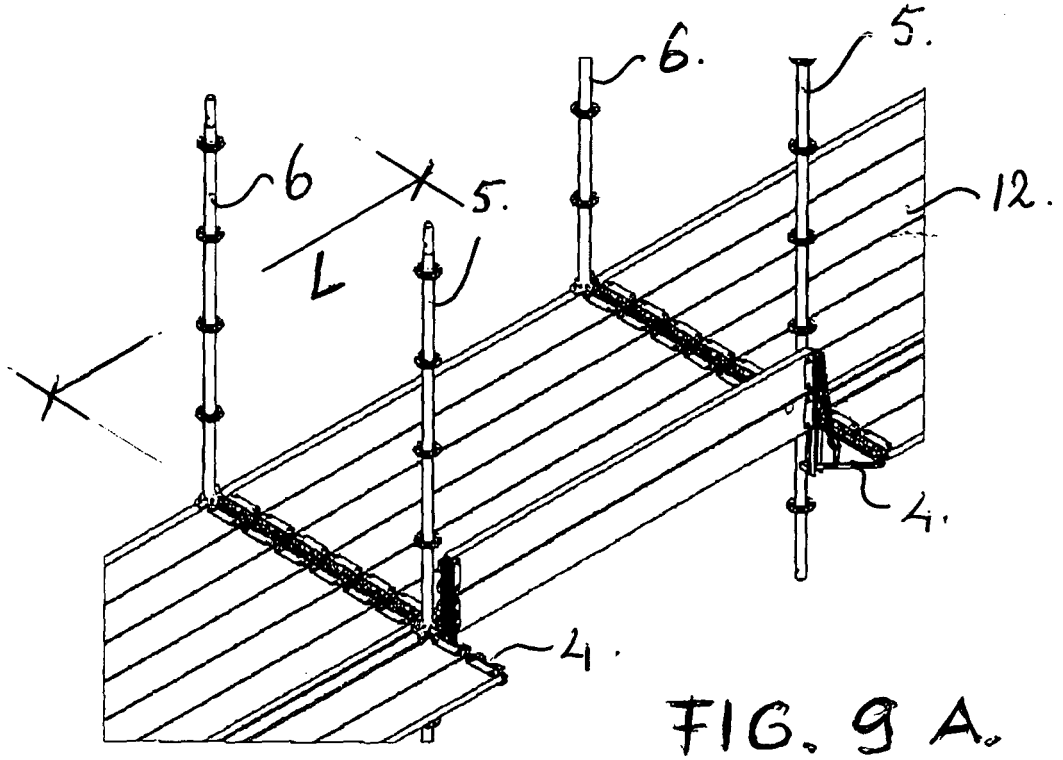

FIG. 9 A.

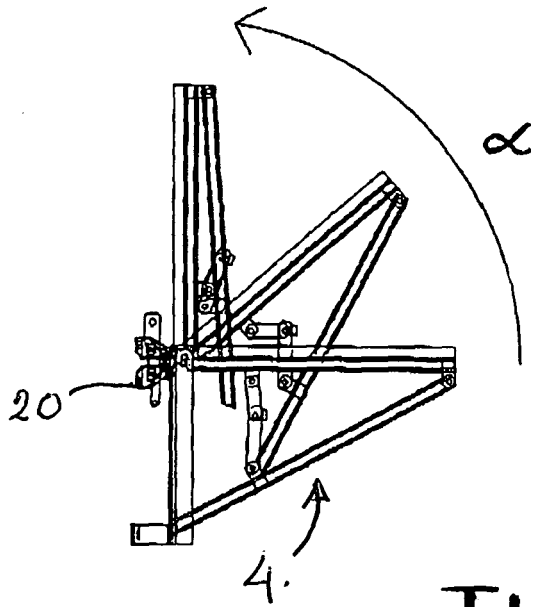

FIG. 9 B.

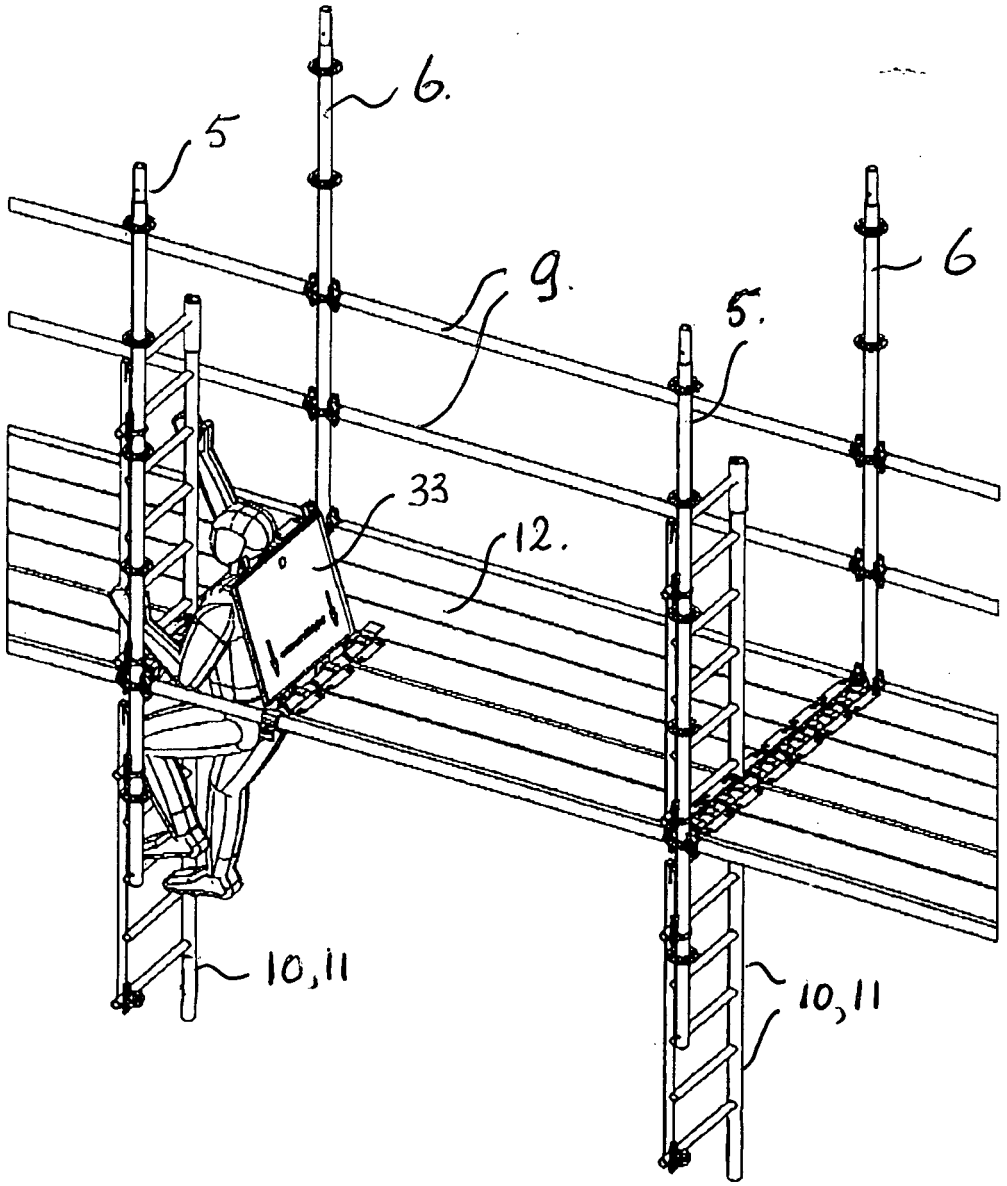

FIG. 10A

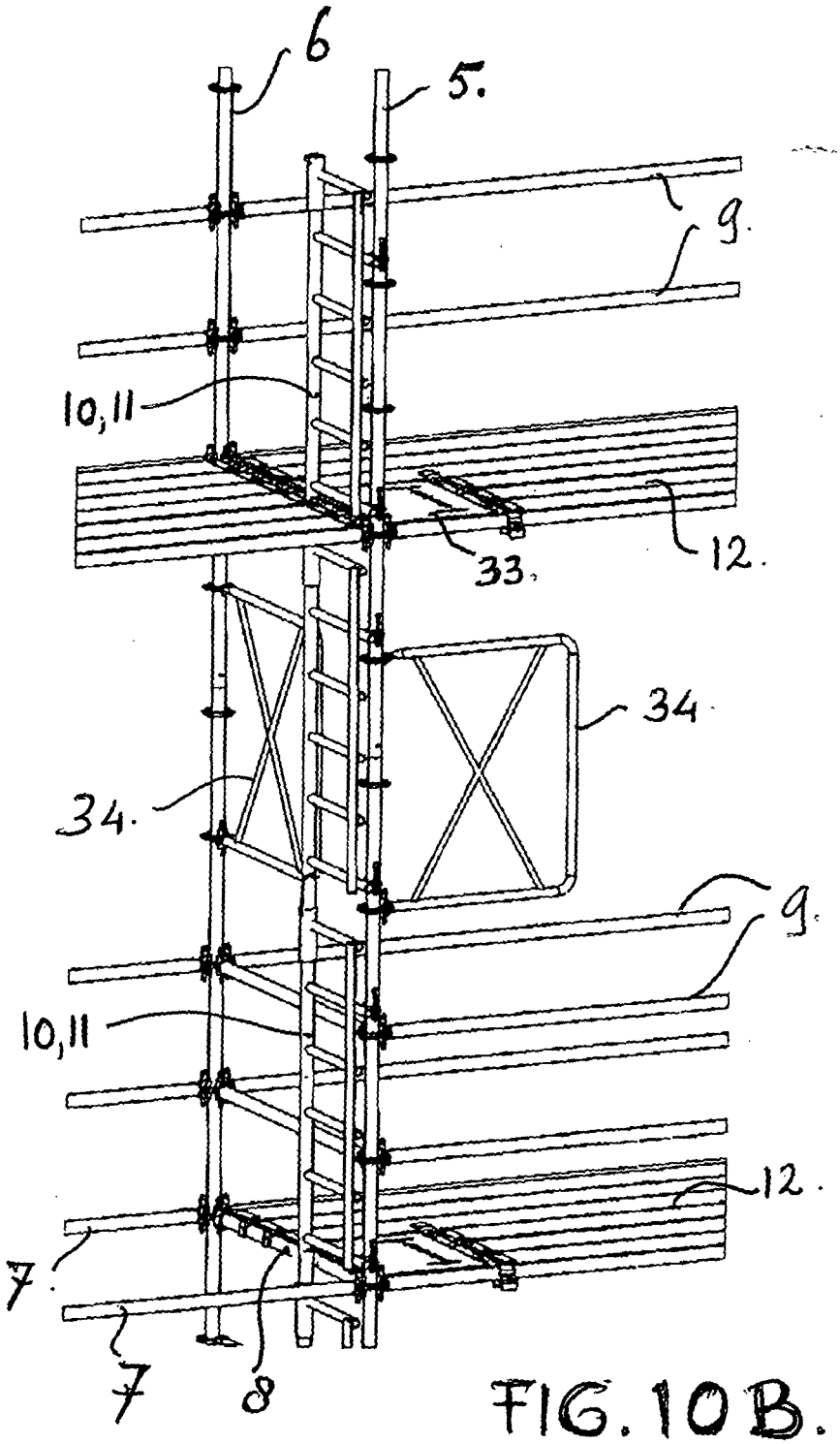

FIG. 10B.

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EUROPEAN SEARCH REPORT

Application Number
EP 05 07 6340

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	15 November 2005	Saretta, G

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