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

(11) EP 1 197 613 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
17.04.2002 Bulletin 2002/16

(51) Int Cl.[7]: **E04G 1/15**, E04G 1/20

(21) Application number: **01123330.1**

(22) Date of filing: **08.10.2001**

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **12.10.2000 IT PD000237**

(71) Applicant: **C.M.S. S.R.L.**
31031 Caerano di San Marco (Treviso) (IT)

(72) Inventor: **Sartor, Fiorenzo**
31041 Cornuda (IT)

(74) Representative: **Modiano, Guido, Dr.-Ing. et al**
Modiano & Associati SpA
Via Meravigli, 16
20123 Milano (IT)

(54) Movable scaffolding

(57) A movable scaffolding, of the type constituted by one or more adjustable supporting uprights (11) for motorized lifting units, which in turn support beams (13) for supporting the deck (14) and the walkways for operators; the deck (14) can be extended, along a substantially horizontal plane and with a direction of movement that is substantially perpendicular to the alignment of the one or more uprights, by comprising one or more platforms (16) that are slidingly supported and guided by respective beams (13). Each one of the platforms (16) is constituted by a frame (17) that is slidingly associated with guides (18), which are fixed to the corresponding beam (13) and to which the ends of one or more elements for forming a supplemental deck (14a) are fixed.

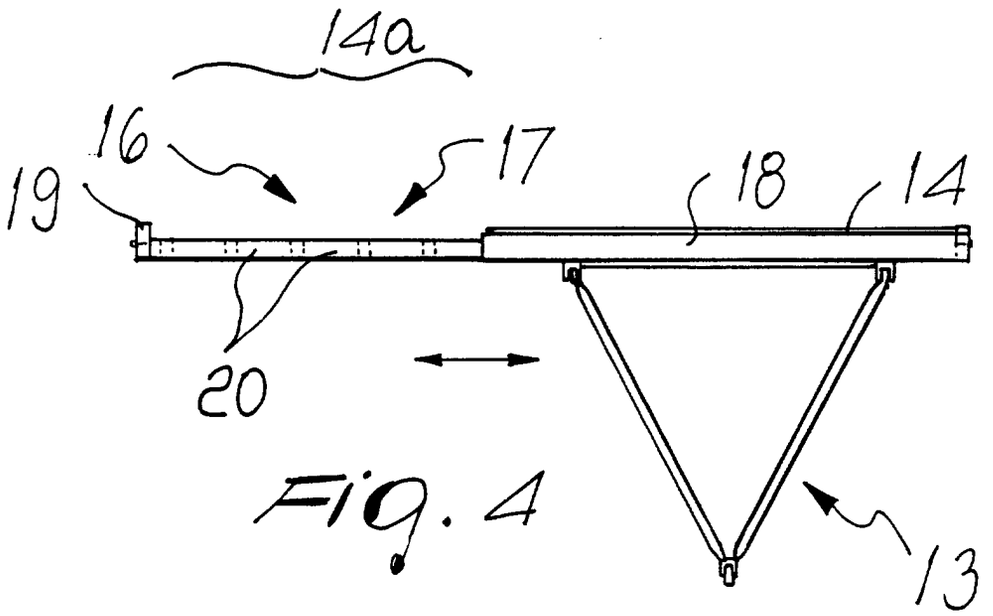

Fig. 4

EP 1 197 613 A2

Description

[0001] The present invention relates to a movable scaffolding with extendible working surface.

[0002] It is known that movable scaffoldings that allow one or more operators to easily and quickly access surfaces (typically building faces) or particular components/portions of structures, even very tall ones (for example buildings), have long been used successfully; however, the approach front of said structures can have a very irregular shape.

[0003] One in fact often encounters buildings with recesses or protrusions that also cause considerable difficulty in adjusting the approach of the scaffolding to the building.

[0004] However, currently commercially available solutions provide individual ledges that can be extracted telescopically from the working platform and are designed to be completed with elements suitable to form the deck.

[0005] This requires very long scaffolding adaptation times, which however often produce insufficient results.

[0006] The aim of the present invention is to provide a scaffolding whose structure solves the above noted drawbacks of known solutions, by particularly ensuring high flexibility of application and quick preparation for use even when working on buildings or other structures that are highly irregular in their approach front.

[0007] Within this aim, an object of the present invention is to provide a scaffolding whose structure is particularly flexible and safe for operators.

[0008] Another object of the present invention is to provide a structure that can be modulated in terms of extent and dimensions so that it can be applied in the most disparate contexts.

[0009] Another object of the present invention is to provide a structure that can be manufactured with known technologies and equipment.

[0010] This aim and these and other objects that will become better apparent hereinafter are achieved by a movable scaffolding, of the type constituted by one or more adjustable supporting uprights for motorized lifting units, which in turn support beams for supporting the deck and the walkways for operators, said scaffolding being characterized in that said deck can be extended, along a horizontal plane and with a direction of movement that is substantially perpendicular to the alignment of said one or more uprights, by comprising one or more platforms that are slidingly supported and guided by the respective beams, each one of said platforms being constituted by a frame that is slidingly associated with guides, which are fixed to the corresponding beam and to which the ends of one or more elements for forming a supplemental deck are fixed.

[0011] Further characteristics and advantages of the present invention will become better apparent from the description of an embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a side elevation view of a scaffolding having the structure according to the invention;
Figures 2, 3 and 4 are three side elevation views of a portion of the scaffolding of Figure 1;
Figure 5 is a perspective view of a detail of the scaffolding of Figure 1.

[0012] With reference to Figures 1 to 5, a movable scaffolding having the structure according to the invention is generally designated by the reference numeral 10.

[0013] In particular, the movable scaffolding is of the type constituted in this case by multiple lattice-like uprights 11 mounted on wheels (only one upright being shown in the figures); said uprights adjustably support motorized lifting units 12, which in turn support beams that in this case are modular and lattice-like and are generally designated by the reference numeral 13, said beams being designed to support the deck 14 for the passage of the operators (in Figure 3, the deck 14 is represented by a dashed line, which leaves exposed the underlying structure).

[0014] Figure 1 also shows schematically, in dashed lines, protective railings 15.

[0015] In the scaffolding 10, the deck 14 can be extended, along a horizontal plane with a direction of motion that is substantially perpendicular to the alignment of said uprights 11, by comprising one or more platforms 16 (prefabricated so as to be complete decks) which are slidingly supported and guided by respective beams 13.

[0016] Each platform 16 is constituted by a frame 17, which is slidingly associated with guides 18 that are fixed to the corresponding beam 13, to which the ends of elements for forming the actual supplemental deck 14a, described hereinafter, are fixed.

[0017] In particular, in this case each one of the frames 17 substantially has a quadrangular outline, is provided by means of tubular elements welded at their ends, and is further provided with bushes 19 for the coupling of railing uprights (see dashed lines 19a).

[0018] Each one of the frames 17 is associated with guides 18, which are constituted in this case by C-shaped profiled elements that are fixed to the corresponding beam 13.

[0019] The elements for forming the supplemental deck 14a are constituted in this case, for each platform 16, by C-shaped stamped plates 20 and by an L-shaped stamped end plate 21.

[0020] In other cases, however, it is possible to provide other elements for forming the supplemental deck 14a for example of the grid-like type.

[0021] In practice, the operation of the present invention is as follows: once the uprights 11 are positioned and therefore the standard basic positioning of the beams 13 and therefore substantially of the deck and walkways 14 of the scaffolding 10 have been performed,

the scaffolding can be extended with the supplemental deck 14a by causing the controlled advancement of the frames 17 and therefore substantially of the forming elements 20 and 21 fixed thereon.

[0022] In this manner, a configuration of the overall deck that precisely and safely follows the contour of the approached building can be quickly obtained.

[0023] In practice, it has been found that the present invention has achieved the intended aim and objects; in particular, it should be noted that the optimum configuration for approach to the building or structure against which the scaffolding is placed is achieved rapidly and easily, ensuring optimum conditions for working on the building itself in full safety.

[0024] In practice, it has been found that the present invention has achieved the intended aim and objects.

[0025] The technical details can be replaced with other technically equivalent elements.

[0026] The materials and the dimensions may be any according to requirements.

[0027] The disclosures in Italian Patent Application No. PD2000A000237 from which this application claims priority are incorporated herein by reference.

[0028] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A movable scaffolding (10), of the type constituted by one or more adjustable supporting uprights (11) for motorized lifting units (12), which in turn support beams (13) for supporting the deck (14) and the walkways for operators, said scaffolding being **characterized in that** said deck (14) can be extended, along a horizontal plane and with a direction of movement that is substantially perpendicular to the alignment of said one or more uprights (11), by comprising one or more platforms (16) that are slidingly supported and guided by the respective beams (13), each one of said platforms being constituted by a frame (17) that is slidingly associated with guides (18), which are fixed to the corresponding beam (13) and to which the ends of one or more elements (20,21) for forming a supplemental deck (14a) are fixed.

2. The scaffolding according to claim 1, **characterized in that** each one of said frames (17) is provided substantially by means of welded tubular elements or by means of another equivalent prefabricated structure.

3. The scaffolding according to claim 1, **characterized in that** each one of said frames (17) is provided with bushes (19) for the uprights of railings.

4. The scaffolding according to claim 1, **characterized in that** said frames (17) are associated with guides (18) constituted by C-shaped profiled elements that are fixed to the corresponding beam (13).

5. The scaffolding according to claim 1, **characterized in that** said elements (20,21) for forming the supplemental deck (14a) comprise one or more C-shaped plates.

6. The scaffolding according to claim 1, **characterized in that** said elements (20,21) for forming the supplemental deck (14a) comprise one or more L-shaped plates.

7. The scaffolding according to claim 1, **characterized in that** said supplemental deck (14a) is constituted at least partially by a grid-like element or the like.

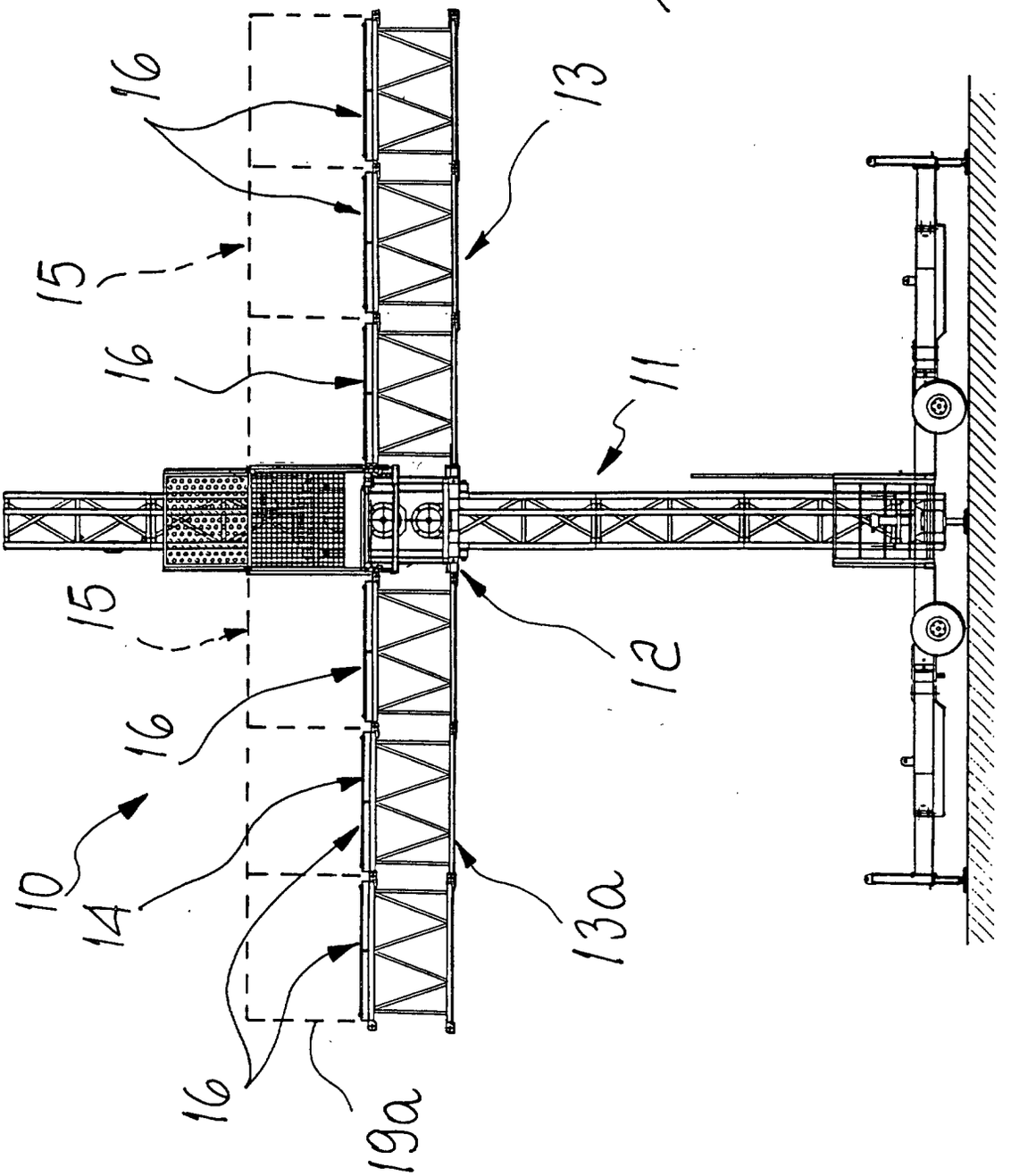

Fig. 1

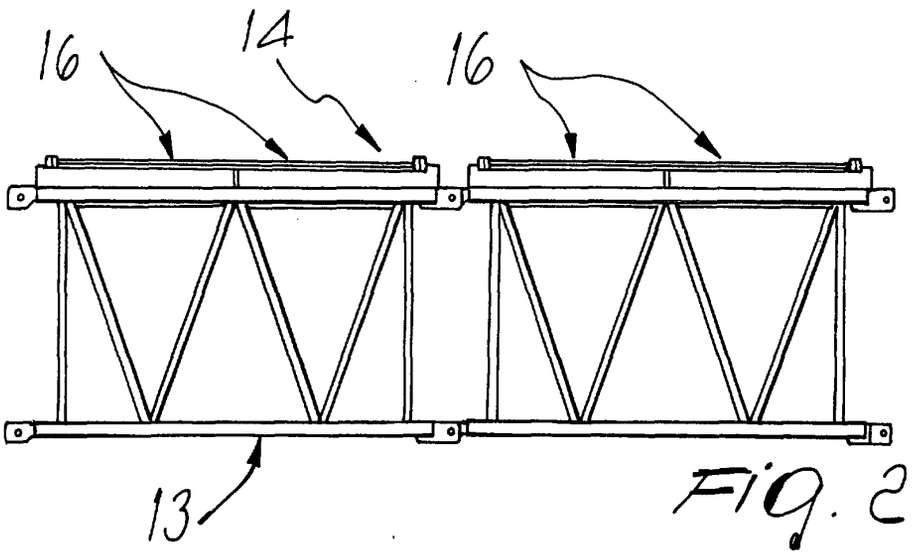

Fig. 2

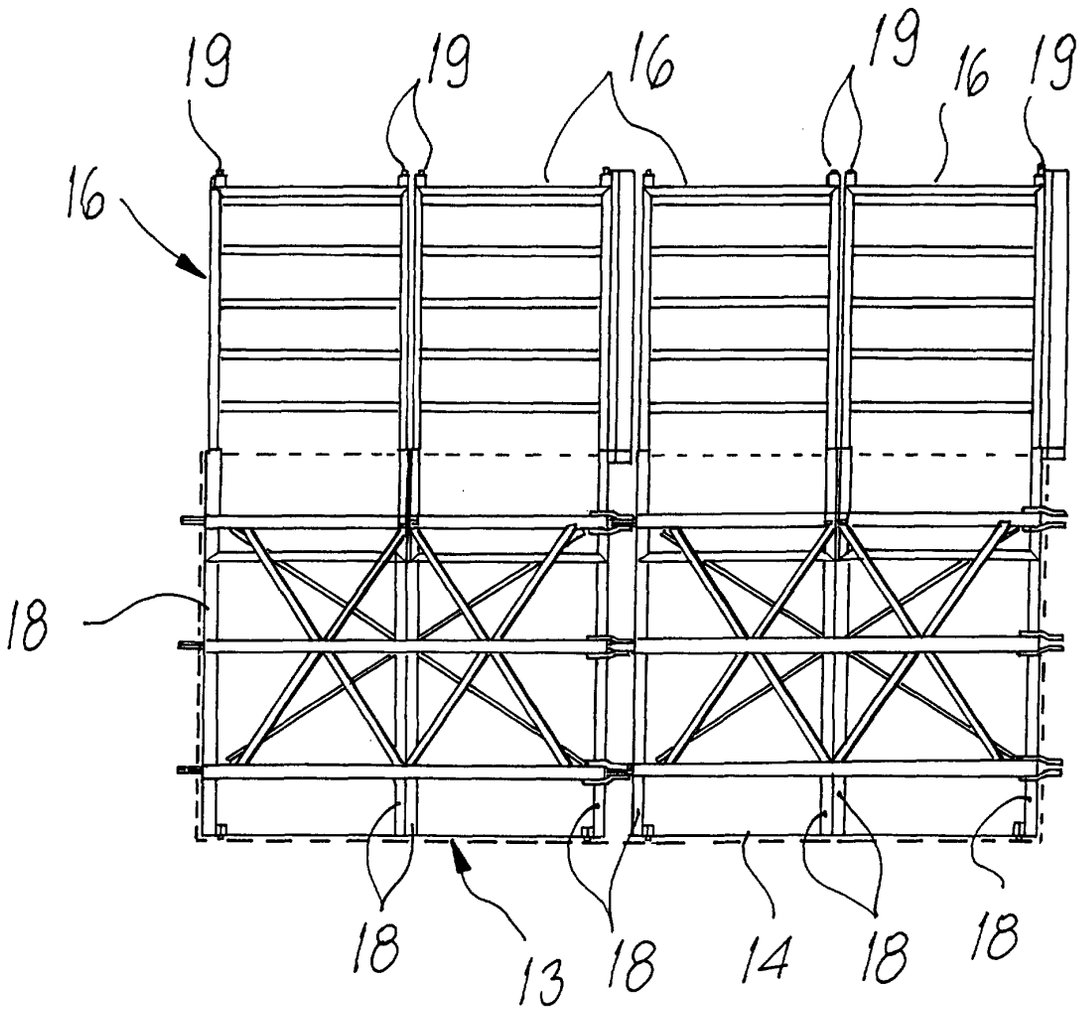

Fig. 3

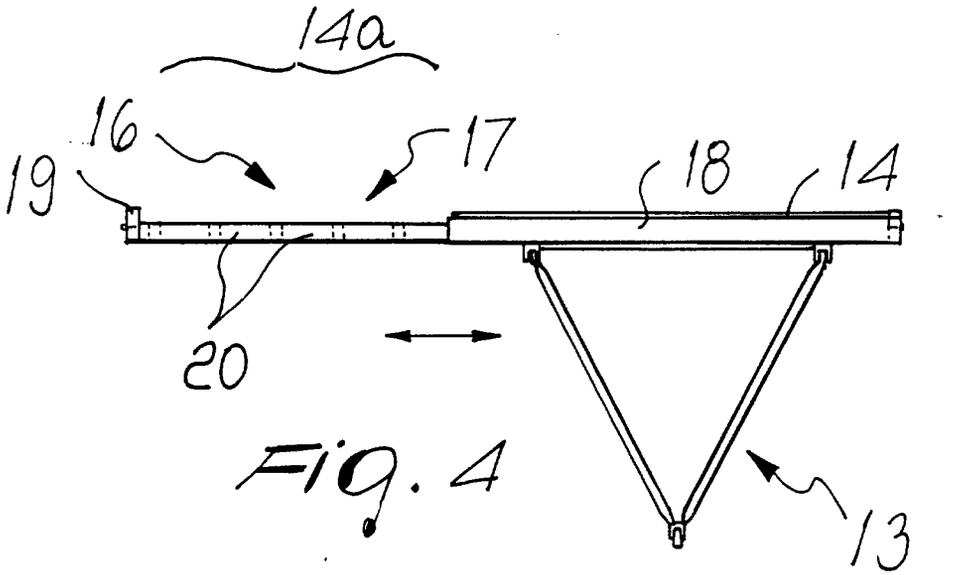

Fig. 4

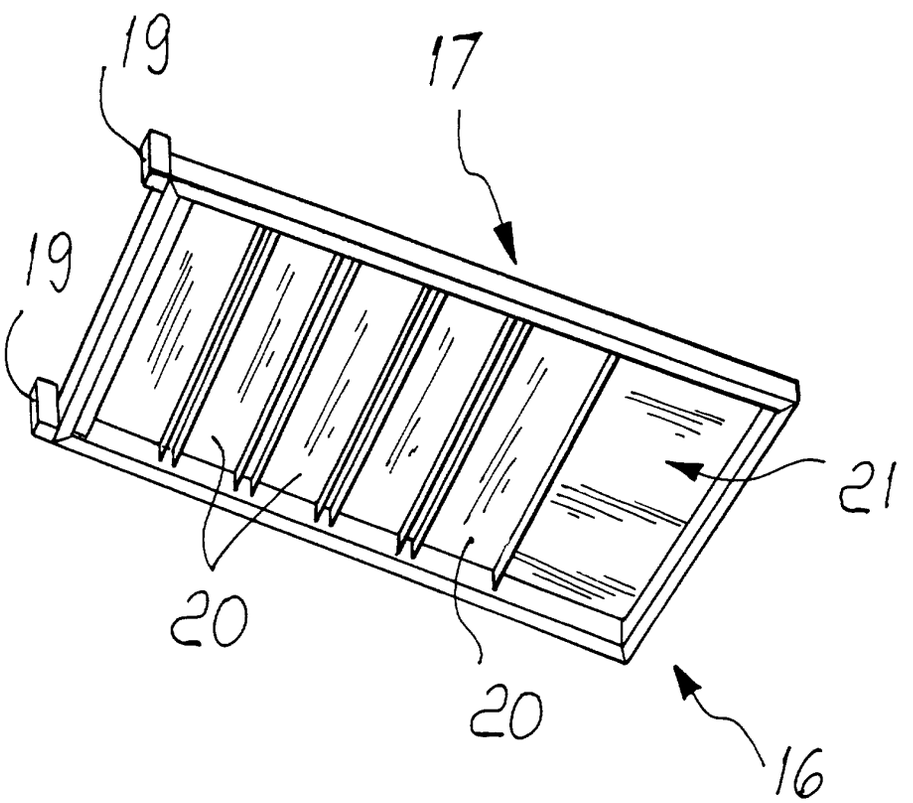

Fig. 5